LIST OF FILES

HOUSE SPECIAL COMMITTEE ON ECONOMIC DEVELOPMENT, TRADE AND TOURISM, 2013-2014 (SCOMM 174)

MEMBERS:

REPRESENTATIVE HUGHES, CHAIR
REPRESENTATIVE GATTIS
REPRESENTATIVE HERRON
REPRESENTATIVE HIGGINS
REPRESENTATIVE JOHNSON
REPRESENTATIVE OLSON
REPRESENTATIVE PRUITT
REPRESENTATIVE DRUMMOND
REPRESENTATIVE TARR

Established by HR 1, 2013

LIST OF FILES (PAGE 1)

01/17/13 Committee Organization

01/22/13 Discussion: Alaska's Agenda for the Pacific Northwest Economic Region

01/29/13 Overview: Alaska Seafood Marketing Institute and HCR 1

01/31/13 Overview: Department of Commerce, Community and Economic Development, and HCR 1

02/05/13 Overviews: Alaska Regional Development Organizations and Alaska Minerals Commission

02/07/13 Overview: Film and Tourism Programs by Division of Economic Development, DCCED

02/12/13 Presentation: World Trade Center Alaska

02/28/13 Presentation: Economic Benefit of Combining Industries

03/12/13 Overview: Alaska Water Transportation and Export

03/19/13 Presentations: Importance of Creating an Economic Development Plan and Denali National Park Visitor Center

03/21/13 Presentation: Unmanned Aircraft Systems

HOUSE SPECIAL COMMITTEE ON ECONOMIC DEVELOPMENT, TRADE AND TOURISM, 2013-2014 (SCOMM 174)
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03/28/13	Overview: Arctic Economic Development Opportunities In Alaska
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01/30/14	Update: Alaska State Rail Plan, Haines Railroad Study & 7G7, and Army Corps of Engineers Update on Arctic Ports (heard by HEDT members in HTRA)
02/04/14	Presentation: Alaska Arctic Policy Commission
02/06/14	Presentation: World Trade Center Alaska
02/11/14	Overview: Division of Economic Development, Department of Commerce, Community and Economic Development
02/13/14	Presentation: Alaska Seafood Marketing Institute
02/18/14	Presentation: University of Alaska
02/20/14	Presentations: Center of International Governance Innovation and Marine Exchange of Alaska
02/25/14	Presentation: Matanuska-Susitna Borough
03/03/14	Presentation: Merged Energy Solutions - Multi-Industrial Greenhouse Facility and Transforming Alaska
03/04/14	Presentation: Merged Energy Solutions - Transforming Alaska - Airships

01/17/13 Committee Organi-zation

<TARGET><BILL></BILL><SUBJECT>01-17-13 Committee Organization</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Drummond
Representative Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
January 17, 2013

1. Call to Order
2. Roll Call
    - Introductions stating the district you represent and your committee staff
3. Mission of the Committee
4. Protocols
    - Time
    - Electronics
    - Request to Speak
    - Bill Submission Requirements
5. Standard questions for all testifiers
6. Sneak Preview
7. Calendar Review
8. Homework

Representative.Shelley.Hughes@akleg.gov

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Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: All Legislators and Staff

From: Representative Shelley Hughes, Chair

Date: January 17, 2013

Re: Bill Scheduling Requirements

The House Special Committee on Economic Development, Trade and Tourism (EDT) has scheduled the Resources room 124, on Tuesdays and Thursdays from 10:15am to 12:00pm.

I will be pleased to consider scheduling bills for a committee hearing after the prime sponsor provides the following materials electronically. I request that bill hearing requests and support documentation be provided in an electronic format (preferably in PDF format), which can be e-mailed to the committee aide: Ginger.Blaisdell@akleg.gov .

Please provide:

- Written request for a hearing
- Sponsor statement addressing the current bill version
- Current version of the bill
- Sectional analysis for long or complex bills
- Current fiscal notes and any previous fiscal notes
- Request for teleconferencing, including the names and contact information of witnesses and requested teleconference sites. Please notify the committee aide of any off-net callers, not less than one day prior to the meeting
- Pertinent background information:
    - Research
    - Legal opinions
    - Letters of support and opposition
    - Please note that all materials must include the name of the distributing entity and must be authorized for distribution by the committee aide.

Electronic materials must be provided using the following naming convention:

- HBxxx Sponsor Statement (HB123 Sponsor Statement)
- HBxxx Sectional Analysis (HB123 Sectional Analysis)
- HBxxx ver x - current bill number followed by version (HB123 ver A)
- HBxxx fiscal note title (HB123-CED-CBPL-2-11-10)
- HBxxx summary of changes
- HBxxx supporting documents (HB123 supporting document email Jane Public 1-2-2013)
- HBxxx opposing documents (HB123 opposing document letter John Q Public 1-2-2013)
- HBxxx draft proposed amendment ver x (HB123 draft proposed amendment ver Q)

Deadlines: The deadline for submitting extra materials for inclusion in committee packets or to request special equipment (such as power point technology or screens) for a presentation is no less than 24 hours prior to the time your bill is scheduled for a hearing.

Amendments: Only EDT Committee members may offer amendments in committee. Amendments to the bill should be submitted by a committee member to the committee aide no less than 24 hours prior to the time your bill is scheduled for a hearing. To ensure legality and conformity, whenever possible, amendments should be drafted by Legislative Legal Services.

Thank you for your cooperation. Please feel free to contact either me or the EDT committee aide, Ginger Blaisdell at 465-5265 if you have any other questions or concerns.

Alaska State Legislature

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House Special Committee on Economic Development, Trade and Tourism

AGENDA
January 17, 2013

1. **Call to Order**

~Gavel~ The first meeting of the Economic Development, Trade and Tourism Committee of the 28th Alaska State Legislature and I might add, of the Centennial Class, is called to order. Welcome, everyone.

2. **Roll Call**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx)
- I would like to introduce Debbie Tillinghast, the committee recording secretary
- Ginger Blaisdell is my staff that will be the committee aide for EDT
- I would like to invite each member to introduce yourself stating the district you represent and the name of your staff who will be assisting you with EDT.

3. **Mission of the Committee**

- Thank you, members, for choosing to serve on this committee. I'm grateful and honored to serve alongside each of you.
- I sought out this committee for particular reasons as I'm guessing you all did.
    - We understand the importance of economic growth of the various sectors to the overall health and well-being of Alaska, to a prosperous Alaska.

- Let's drive that down past the concept, to families and individuals, to our children and grandchildren: we want strong communities and a thriving state economy
    - Place where our kids will see opportunities so they'll stay
    - Place where as adults we can succeed and give back
    - Place where our elderly, our elders, will be able to be comfortable and be able to meet their needs
- I feel that the EDT Committee has an important role in Alaska's future as we consider and make recommendations to the full legislature.
- I see this committee supporting new opportunities for Alaska and moving legislation that will improve the business climate and make Alaska a more desirable place for economic growth and diversity.
- In Alaska, because of our natural resource treasures, we have many eggs in one basket
    - EDT may help tend to that basket in some ways but in many ways will be tending to other baskets in our state
- Bottom line: let's make this a committee of relevance, not just one of presentations and learning.
    - When we conclude the 28th legislative session, let's be able to look back and say, this is specifically how in EDT that we helped move Alaska forward.
- Does anyone have anything they'd like to add?

Drummond - tourism CVB
Higgins - econ development in other industries
- Roads to Resources
- Trade

4. **Protocols**
    - **Time**
        - I respect everyone's busy schedules and will begin our committee meetings on time and will work to end them on time.
    - **Electronics**
        - I would like to start the session with allowing the use of electronics in the meeting room.
        - Please turn your phones and computers to silent/no vibrate so not to disrupt others.
        - And if you need to answer your phone, please do not begin speaking until you are in the hallway."

- **Request to Speak**
  - To insure fairness to all committee members, I ask that if you would like to speak during a meeting, please capture my attention quietly.
  - I will write your name on a list in the order I see your request and will call on you in order when an appropriate pause can be taken during the testimony.
- **Voting Standards**
  - To adopt and pass an amendment requires a majority vote of those present.
  - To move a bill out of committee requires a majority of the committee."
- **Bill Submission Requirements**
  - Let's briefly walk through the Bill Submission Requirements memorandum that will be sent to all Legislators and staff later today.

Pruitt left

5. Standard questions for all testifiers

- "I would like all presenters and bill testifiers to be prepared to address the following questions:
  - What is the value added component of your program/legislation?
  - Are there regulation or statute changes that are required in order to make better economic improvements/enhancements in Alaska?
  - What will your program do to improve Alaska's economic future?
- Do any committee members have an additional standard question that may be answered by each presenter who comes before the committee?"

tax structure or incentives?

6. Sneak Preview

- "During this session, I will be inviting presentators from some of our state corporations, such as Alaska Seafood Marketing Institute, Alaska Railroad Corporation, Alaska Energy Authority, to update the committee on their mission and status of projects.

- The Department of Commerce, Community and Economic Development will provide overviews and updates of the economic development programs that it oversees.
- We will hear from certain special groups who may conduct a fly-in such as AML or the travel industry.
- And certainly, the committee will consider legislation as it is assigned to the committee.
- Are there any specific topics that any members would like me to arrange to be heard in EDT? Herron - (Munoz) Philipines trip after Jan 26 Phil Am reception

7. Calendar Review

- "I just learned yesterday that there may be some conflict with schedules and other committee assignments.
- I'd like us to quickly look at our calendars to determine the best time for EDT membership to meet on a regular basis."

8. Homework

- "I invite you to look at the Department of Commerce, Community and Economic Development website.
- It can be found through the Legislative Intranet homepage link titled 'Executive Branch Departments' or through the State of Alaska homepage 'My Government" tab at the top of the page."

Before we adjourn:

- There are no meetings for EDT scheduled next week due to the altered Floor Schedule
- We are supporting the PNWER "Lunch and Learn" on Wednesday, January 23 at noon in the Butrovich Room.
- PNWER is the Pacific Northwest Economic Region and we are anticipating the Premier of the Northwest Territories to be available at the noon gathering as well as Rep Bob Herron and Sen Lesil McGuire providing updates from the Arctic Caucus."

Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

01/22/13 Discussion: Alaska's Agenda for the Pacific Northwest Economic Region

<TARGET><BILL></BILL><SUBJECT>01-22-13 Discussion Alaska's Agenda for the Pacific Northwest Economic Region</SUBJECT><COMM>HEDT28</COMM></TARGET>

Pacific NorthWest Economic Region

Meet your colleagues from Western Canada and the Pacific Northwest including:

- **Hon. Premier Bob McLeod**
  Government of the Northwest Territories
- **Mr. Herb Cox**
  Member of the Legislative Assembly, Saskatchewan
- **Dr. Richard Starke**
  Member of the Legislative Assembly, Alberta
- **Colin Smith**
  Past President of APEG BC, British Columbia
- **Matt Morrison**
  Executive Director, PNWER

The Pacific NorthWest Economic Region (PNWER) is a partnership of ten U.S. states and Canadian provinces and territories, that coordinates economic, energy and environmental strategies throughout the Pacific Northwest.

Join us for free pizza and offer your views on what Alaska's agenda should be for the PNWER region.

Pacific NorthWest Economic Region

PNWER Pizza Luncheon
Tuesday, January 22, 12:00 pm-1:00 pm
Fahrenkamp Room
***Everyone is invited**





Contact for more information: Amy Salzman
E-mail: amy.salzman@legis.state.ak.us

01/29/13 Overview: Alaska Seafood Marketing Institute and HCR 1

<TARGET><BILL>HCR 1</BILL><SUBJECT>01-29-13 Overview Alaska Seafood Marketing Institute and HCR 1</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

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Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: January 24, 2013

Re: Committee Schedule for the Week Beginning January 28, 2013

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm. Please note that this is a time change from the original planned meeting time.

Tuesday, January 29, 2013 11:15am in Room 124

* + HCR 1 State Food Resource Development Group

\+ Presentation by Alaska Seafood Marketing Institute:
ASMI Overview and Seafood Marketing Efforts; Tyson Fick

Thursday, January 31, 2013 11:15am in Room 124

\+ Department of Commerce, Community and Economic Development, Division of Economic Development; Assistant Commissioner Graham, Cathy Jeans and Glenn Haight

- Finance Program Overview
- Overview on Timber, Minerals, Fisheries Development and Made-in-Alaska/Buy Alaska programs

= + Bills Previously Heard/Scheduled

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
\+ Teleconferenced
= Bill was Previously Heard/Scheduled

Ginger Blaisdell

From: Ginger Blaisdell
Sent: Tuesday, January 29, 2013 10:21 AM
To: Clifton Coghill; Deborah Tillinghast; Dirk Craft; Doanh Tran; Erick Cordero-Giorgana; Erin Shine; Ginger Blaisdell; Jessie Knudsen; Konrad Jackson; Kristin Kranendonk; Linda Sylvester; Monica Southworth; Rep. Bob Herron; Rep. Craig Johnson; Rep. Geran Tarr; Rep. Harriet Drummond; Rep. Kurt Olson; Rep. Lance Pruitt; Rep. Lynn Gattis; Rep. Pete Higgins; Rep. Shelley Hughes; Rob Earl
Cc: LIO Kodiak; LIO Mat-Su; LIO Juneau Group
Subject: today's meeting change

Importance: High

Because some members are coming from other committees, we will switch the order of the meeting so that the ASMI overview will be heard first and HCR1 will be heard second. We want to insure a quorum and give all members the opportunity to hear legislation before the committee.

Thanks for your understanding,
Ginger

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development
OFFICE OF COMMISSIONER SUSAN K. BELL
550 West Seventh Avenue, Suite 1535
Anchorage, Alaska 99501
Main: 907.269.8100
Programs fax: 907.269.8125

FOR IMMEDIATE RELEASE
January 31, 2013

Media Contacts:
Jennifer Thompson
Thompson & Co.
907-561-4499
Jennifer@thompsonpr.com

Bravo Media's "Top Chef" Films Two Episodes in Alaska

January 31, 2013, Anchorage, Alaska - Alaska fans of Bravo Media's "Top Chef" might recognize many of the Alaska locations featured in two episodes airing February 6 and February 13. Filmed in Juneau in August, "Top Chef" will feature four locations in the capital city, including the Governor's House with Governor Sean Parnell and First Lady Sandy Parnell for the final dinner.

Bravo Media's "Top Chef" consists of 21 chefs from across the nation competing for the title of "Top Chef," a $125,000 prize, a feature in a gourmet food magazine, and a showcase at a food and wine event in Aspen, Colo. Each week, the participants attempt to top the competition with various dishes that highlight their culinary specialty and craft.

The Department of Commerce, Community, and Economic Development (DCCED) successfully attracted the 10th season of the James Beard Award and Emmy-winning series to Alaska.

"Alaska's tourism and seafood marketing programs work closely with local businesses to coordinate national media events like this," said Susan Bell, DCCED Commissioner. "Alaska has long been successful in attracting this kind of national attention for Alaska, ranging from 'Good Morning America' and Martha Stewart, to the recent live broadcasts of Al Roker's series for the 'Today' show and the 'The Early Show' on CBS."

Bell added the "Top Chef" episodes were filmed in the state's capital at Tracy's Crab Shack, Gold Creek Salmon Bake, Mendenhall Glacier, Jorgenson House, and the Governor's House. "Chef'testants" also used the commercial kitchens at Thunder Mountain High School, as well as many Alaskan agricultural and seafood products. The production also worked with the Juneau Convention & Visitors Bureau, the Office of the Governor, and many local businesses, including,

Alaska Airlines, AVIS Alaska, Westmark Baranof Hotel, Prospector Hotel, Aspen Suites Hotel Juneau, Temsco Helicopters, Era Alaska, Taku Smokeries, Juneau CARRS Safeway, and Alaska Glacier Seafoods.

The final Elimination Challenge of the season took place at the Governor's House as celebrity chef judges Tom Colicchio, Hugh Acheson, Wolfgang Puck, Gail Simmons, Emeril Lagasse and host Padma Lakshmi inched closer to the decision of who would become "Top Chef."

The first Alaska episode airs Feb. 6 on Bravo, with the next episode airing on Feb. 13. For air times, check your local listings.

For more information on "Top Chef," visit www.BravoTV.com.

###

TOP CHEF SEATTLE

YOU'RE INVITED TO A VIEWING PARTY FEATURING *TOP CHEF: SEATTLE'S* ALASKA EPISODE!

Wednesday, Feb. 6 at 8:30 p.m.
Episode airs at 9:00 p.m.
T.K. Maguire's [The Prospector Hotel]
375 Whittier St., Juneau, AK 99801

The hit television show brought chefs and judges to Alaska in August to produce two episodes celebrating Alaska's seafood, splendor and travel opportunities

This opportunity was created through the work of the Department of Commerce, Community, and Economic Development's seafood and tourism marketing programs

Please RSVP by Feb. 4 to Bri Gordon with Thompson & Company at bri@thompsonpr.com or 907-561-4488

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

ALASKA SEAFOOD
www.alaskaseafood.org

Alaska State Legislature

Representative Shelley Hughes, Chair

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House Special Committee on Economic Development, Trade and Tourism

AGENDA
January 29, 2013

1. **Call to Order**

~Gavel~ Economic Development, Trade and Tourism Committee is called to order. The time is _____. Welcome, everyone.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx).
    - Several members will be arriving late due to other committee meetings still underway.
    - For this reason, we'll be flipping the agenda as we need a quorum – in this committee's case, 5 – in order to hear legislation
- Today's agenda includes two items.
    - Today will also have the good pleasure of hearing from the Alaska Seafood Marketing Institute (ASMI) . Tyson Fick, Communication Director, will present an overview.
    - Then we will hear House Concurrent Resolution 1presented by Representative Stoltze and staff, Darrell Breese followed by public testimony.
    - BTW, it will be the general rule of the committee to hear a bill at one meeting and hold it so that members have time to digest the information before moving it out.

3. **Alaska Seafood Marketing Institute - ASMI**

- Welcome Tyson Fick, Communications Director for ASMI. Please introduce yourself for the record and begin your presentation when you are ready.
- I invite members to ask questions during the presentation.

4. **HCR1**

- We are now ready for consideration of House Concurrent Resolution 1. Member ____ can we have the motion? (not necessary
    - HCR1 is the first item before us. To present the resolution is Rep Stoltze and staff Darrell Breese
- Representative Stoltze and Darrell Breese state your name and district representation for the record and introduce the bill.
- Any questions from the committee?
- We will now begin public testimony. ~Gavel~
    - Due to the time constraints and our agenda, public testimony will be limited to 3 minutes each. You will hear a chime when your 3 minutes are up and we will move on to the next testifier.
- Public testimony for HCR1 is now closed. ~Gavel~
- Any further discussion by the committee?
- Possible offer of amendment by another member, conceptual amendment number 1, to add on page 5, line 9 following the words 'Alaska Native regional'; insert "and village" … 'corporations to preserve,'…
- I object for purposes of discussion
- Rep. Herron, will you explain the amendment?
- I remove my objection. Are there further objections?
- The committee adopts the conceptual amendment.
- If I do not hear objection for moving the bill to its next committee of referral, I will bring it up under "bills previously heard" on Thursday Jan 31 to ask the will of the committee.

5. Calendar Review

- I hope that this time slot works for everyone. We tried to allow an overlapping time slot that would allow some members to attend other committee obligations but still have time to participate in EDTT.
- The next meeting of EDTT is Thursday, January 31 at 11:15am in this room
- We will be hearing from the Department of Commerce, Community and Economic Development. They'll provide overviews for their finance, timber, fisheries and Made-in-Alaska programs.
- Do members have any closing comments?
- Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

Alaska Seafood Marketing Institute

Economic Development, Trade and Tourism Committee

Juneau, Alaska January 29th, 2013



Wild, Natural & Sustainable®

With two offices and 19 staff members, here is

ASMI'S WEEK AT A GLANCE... January 21 - 27, 2013

International

- *France*, Pacific Cod Promotion with Casino Supermarkets
- *France*, Sirha Trade Show, Lyon
- *Spain*, Madrid Fusion
- *China*, promotion with BLT Supermarket, Guangdong
- *China*, promotion with Yoo Hoo Hypermarket, Shenyang
- *China*, promotion with BHG Supermarket, Nanjing, China
- *Brazil*, promotion with Circulo Militar Club
- Seafood Technical, Europe tour
- *Staff*, federal funding grant application

Domestic

- *Foodservice*, Foodservice Economic Summit in Sun Valley, Idaho
- *Foodservice*, Worlds of Healthy Flavors conference
- *Foodservice & Retail*, Food Network video shoot
- *Communications*, Alaska State Senate and House of Representative Meetings
- *Communications*, marketing class with Oklahoma University
- *Communications*, Alaska Seafood Photo Contest
- *Communications*, 2013 Annual Report
- Communications, press interviews
- Support staff, upcoming project preparation



Alaska Seafood Marketing Institute

Wild, Natural & Sustainable®

- **a partnership** of public and private sectors to foster economic development
- **guided by Governor-appointed Board of Directors**: five processors, two commercial harvesters
- **Alaska's official seafood promotion arm**

The Alaska Seafood Marketing Institute is a marketing organization with the mission of increasing the economic value of the Alaska seafood resource through:

- ***Increasing positive awareness of the Alaska Seafood brand,***
- ***Collaborative marketing programs that align ASMI and the industry marketing efforts for maximum impact within the food industry,***
- ***Long-term proactive marketing planning,***
- ***Quality assurance, technical industry analysis, education, advocacy and research,***
- ***Prudent, efficient fiscal management.***



ASMI BUILDS 'ALASKA' BRAND

- ASMI promotes all species of Alaska seafood, under the "Alaska" brand.
- AS 16.51.110 prohibits ASMI promoting seafood by geographic origin other than from the state generally, geographic region of the state, or specified brand name.
- Alaska Constitution -Article 8, Section 4
  "Sustained Yield – Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses."

Wild, Natural & Sustainable®

ASMI Funding

.o5% voluntary tax paid by processors

General Funds	$7,772.2
Federal Funds (MAP)	$4,500.0
Industry Funds and Carry Forward	$17,762.6
Total Funding	$29,534.8
Total Spend Plan	$22,500.0





LEAD BY INDUSTRY



Board of Directors

7 members (5 processors, 2 harvesters)

- Joe Bundrant, Chair, Trident Seafoods Corp.
- Kevin Adams, Vice Chair, commercial harvester
- Mark Palmer, Ocean Beauty Seafoods
- Bruce Wallace, commercial harvester
- Barry Collier, Peter Pan Seafoods, Inc.
- Dennis Guhlke, Icicle Seafoods, Inc.
- Jack Schultheis, Kwik'Pak Fisheries

Wild. Natural & Sustainable®

ADVISORY COMMITTEES

Species Committees

- Salmon
- Halibut-Sablefish
- Shellfish
- Whitefish

Operational Committees

- International Marketing
- Seafood Technical
- Foodservice Marketing
- Retail Marketing

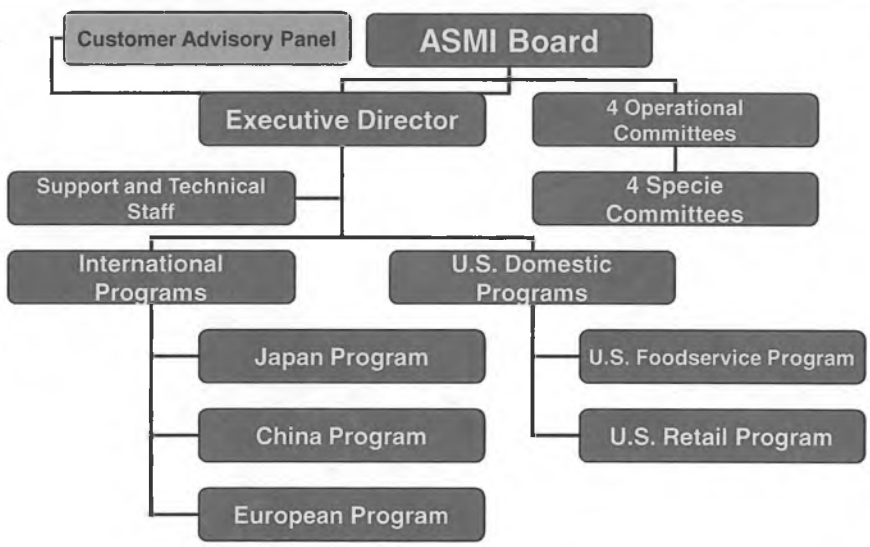








ASMI ORGANIZATION CHART



Alaska Marketing Coordination

- Alaska Tourism Marketing
- Alaska Grown
- Alaska Film Office
- Alaska Businesses

Alaska Airlines

Alaskan Brewing Co.

Alaska Railroad Corporation Est. 1914

Alaska Grown – fresher by far

ALASKA TravelAlaska.com

Alaska Seafood – Wild, Natural & Sustainable

ASMI COMMUNICATIONS



Alaska Seafood Industry

- was worth $4.6 billion in first wholesale value in 2011
- accounted for 52 % of the total US harvest in 2011
- employs over 50,000 commercial fishermen and seafood processing workers each year
- brings in more than $100 million in tax revenue for local and state governments

McDowell Group

Alaska Seafood – Wild, Natural & Sustainable

Impact on Rural Communities

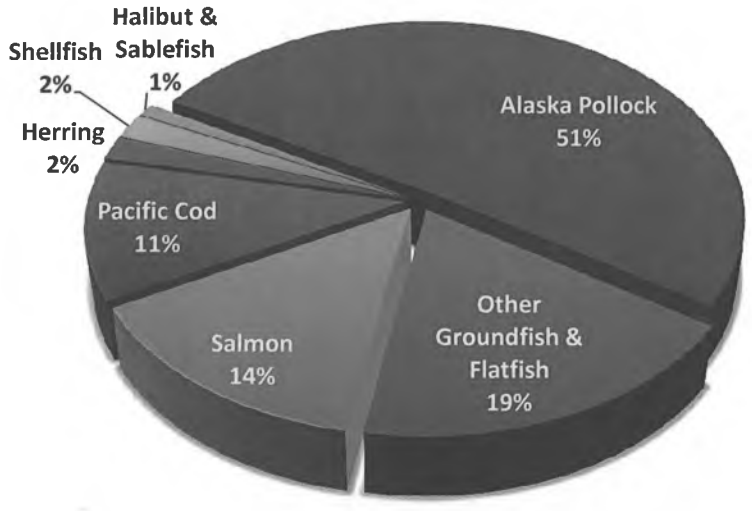
Seafood Industry is a central piece of rural economies, providing:

- Cash infusion to subsistence economies
- Economies of scale that often dramatically reduce the cost of :
  - Utilities
  - Shipping
  - Goods & Services
- Infrastructure essential to non-road communities



Wild, Natural & Sustainable*

Alaska Seafood: Composition by Volume
Total 2011 Harvest: 5.5 Billion lbs.

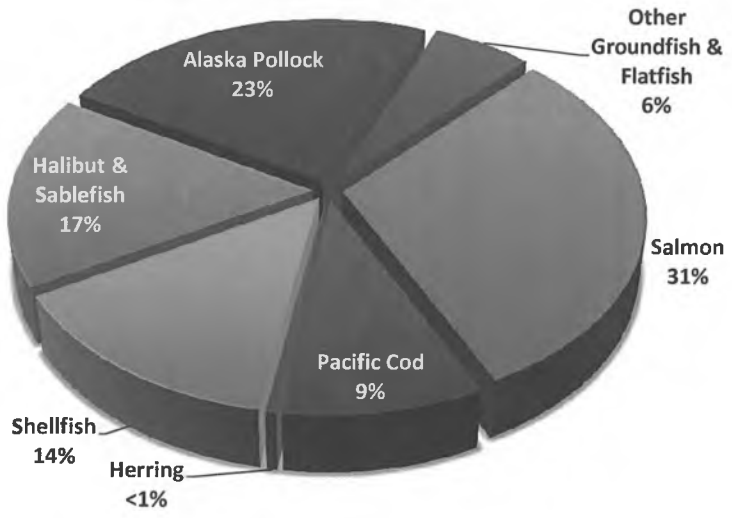


Source: NMFS, ADFG

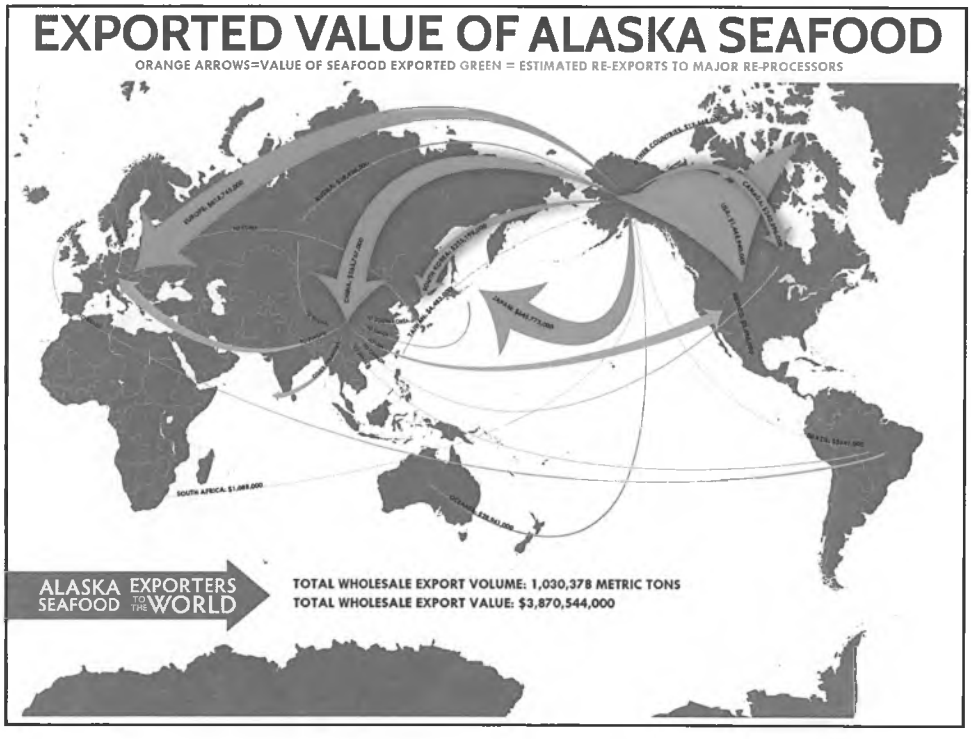
Alaska Seafood: Composition by Ex-Vessel Value

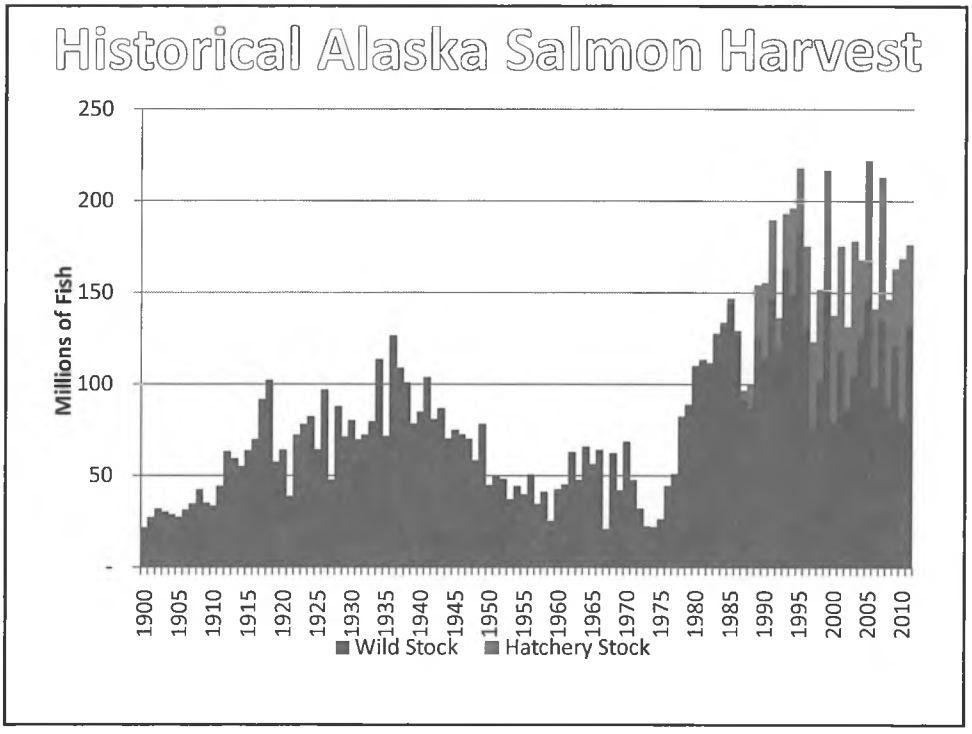
Total 2011 Ex-Vessel Value: $2.1 Billion

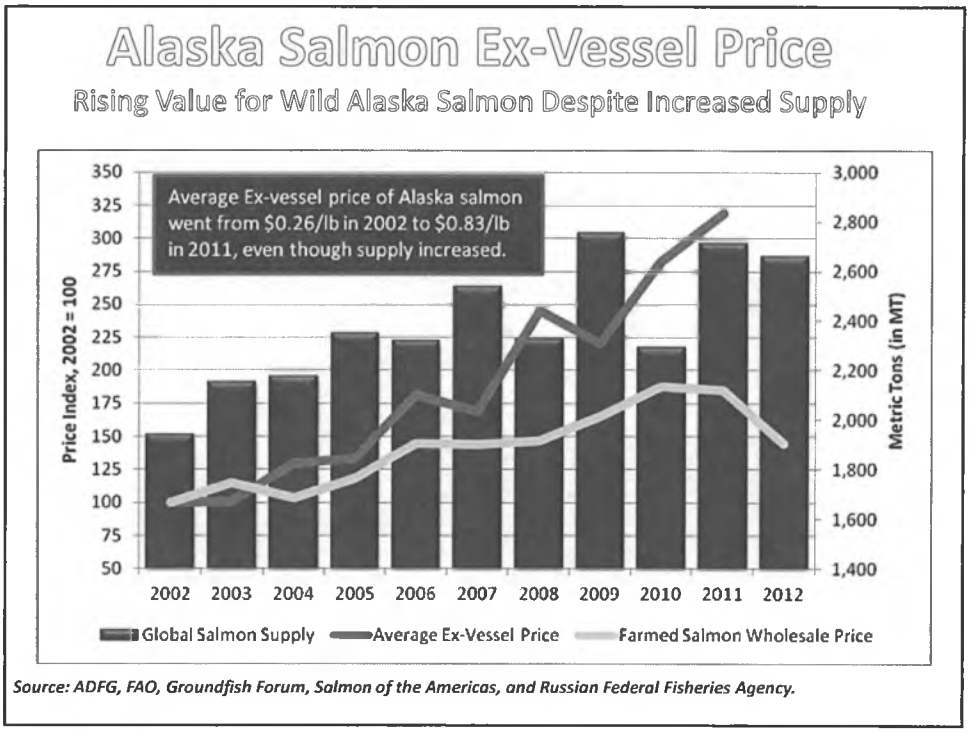
Total 2011 First Wholesale Value: $4.5 Billion



Source: NMFS,ADFG, and ASMI Estimates.



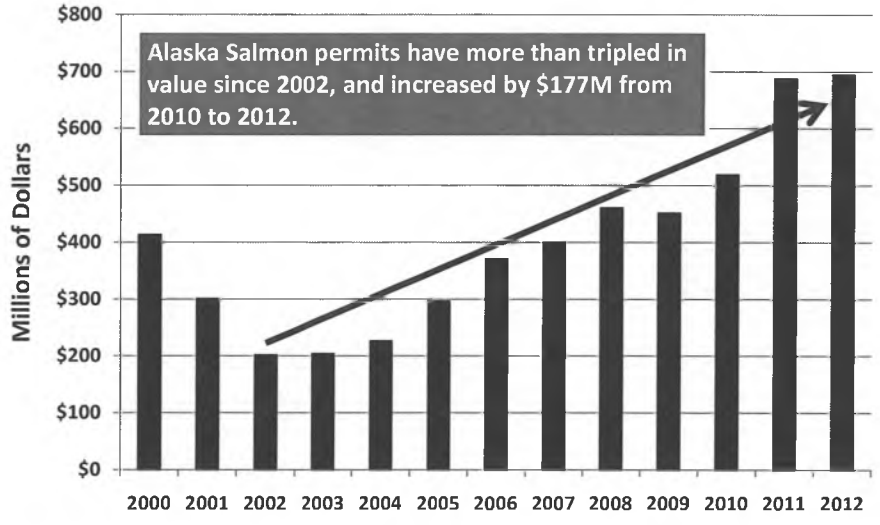




Source: ADFG, FAO, Groundfish Forum, Salmon of the Americas, and Russian Federal Fisheries Agency.

Higher Prices Rebuild Fishing Assets

Total Value of Commercial Salmon Fishing Permits



Source: CFEC, compiled by McDowell Group.

Recent Market Challenges



- Economic Unrest
- IUU Fishing
- Whitefish Supply – Barents Sea Cod
- Farmed Salmon Supply – Chile, Norway, GMO
- Competing Proteins – Imported Seafood, Norwegian Cod Promotions
- Domestic Seafood Consumption Down

- Proliferation of Eco-lables
- Salmon withdrawl from Marine Stewardship Council

Why withdraw? Concerns over:

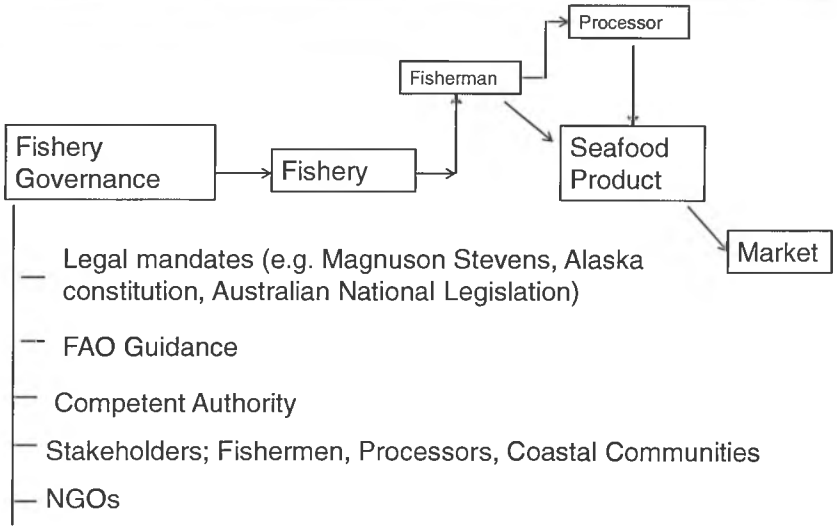
- Maintaining market access
- Potential NGO control of the fishery management process
- Long-term devaluation of the Alaska Seafood brand
- Ongoing and increasing costs of the MSC certification and pay-to-play eco-labeling

MSC Insertion in Fisheries Management

- At the 2005 recertification MSC sought to divide the Alaska salmon into 64 units for certification- going river by river in Alaska
- Language on packaging in the UK claims management
- Alaska hatcheries under attack



What should be the role of the NGO?



Disappearing "Alaska" Brand

- We began to see "MSC" replace "Alaska."
- We are lumped in with competitors, some of whom are only "making progress" toward sustainability.







Things Get Ugly

Wild, Natural & Sustainable



- ***"Alaskans are going to regret the path they are trying to go down"***
- ***"I think we're in a transition period where we are going to see the demise of hatcheries..."***
- ***"...we wrote into that statute that any fishery that wants to bear a California sustainable seafood label has to get certified by the MSC first."***

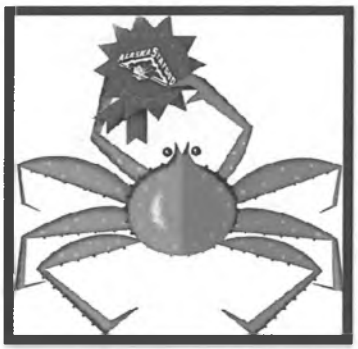
Mike Sutton
Monterey Bay Aquarium
MSC Founder
As quoted in *Intrafish*

Wild, Natural & Sustainable

Current Situation

- Press statements from retailers (some leaked without consent) about only accepting MSC certified salmon
- Letters given to European buyers to send to Alaskan suppliers, threatening to drop them if they cannot supply MSC certified product
- Some retailers are hesitant to evolve marketing strategies beyond MSC promotions after heavily investing in explaining what the MSC is to consumers and placing the logo on packaging
- Retailers accepting of FAO-Based Responsible Fisheries Management Certification

THE ALASKA BRAND



Alaska Seafood remains the second most commonly specified brand on U.S. Menus!

Source: Datassential 2012 – largest menu database in the U.S.

NEW RANKINGS!

1. Angus Beef
2. ALASKA SEAFOOD
3. Oreo
4. Tillamook
5. Reese's
6. Garden Burger
7. Snicker
8. Grand Marnier
9. Haagen Dazs
10. Boursin
11. Amaretto
12. Jack Daniel's
13. Boars Head
14. Kraft
15. Kahlua

Wild, Natural & Sustainable®

ASMI TECHNICAL PROGRAM

- ASMI Program established in statute
- Staff of 1 works with 14 member advisory committee (industry, academia, regulatory)
- Utilizes consulting professionals on a project-by-project basis

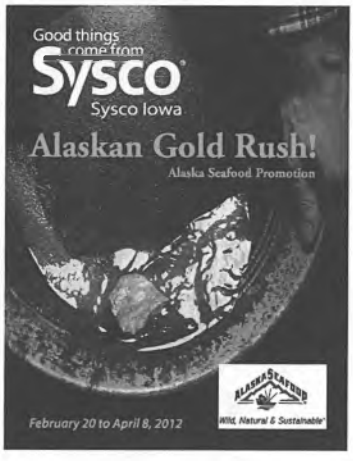
Principal Areas of Activities

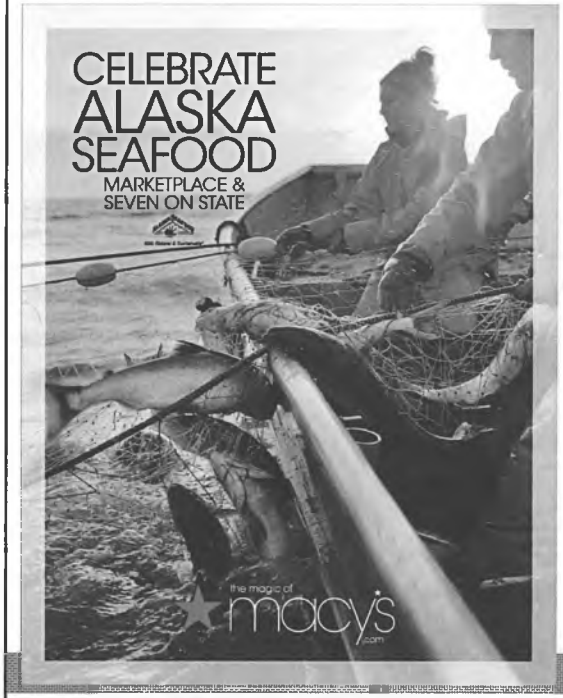
- Seafood Quality
- Food Safety
- Labeling/Regulatory Issues
- Purity/Contaminant Issues
- Ecological Issues/Sustainability/Fisheries Management
- Marketing Programs Support
- Nutrition

ASMI FOODSERVICE MARKETING

Serves a unique role

- The resource for sourcing, handling, training, menuing and promoting wild Alaska seafood.
- Here's how:
  - Identify opportunities for seafood on today's menus, year-round.
  - consumer and seafood menu trend data.
  - Help to successfully menu seafood and build business – customized approach.
  - Assist with technical issues such as sustainability, health and quality issues.





Macy's



WILD ALASKA SALMON

LITE SUGAR-SPICE BBQ SALMON
WITH FRUIT SALSA

7.95 EACH

3/12

ASMI FOODSERVICE MARKETING

EXAMPLE OF RECENT US PARTNERSHIPS

Quick Service and Casual Restaurant Chains



Casual restaurant chain:

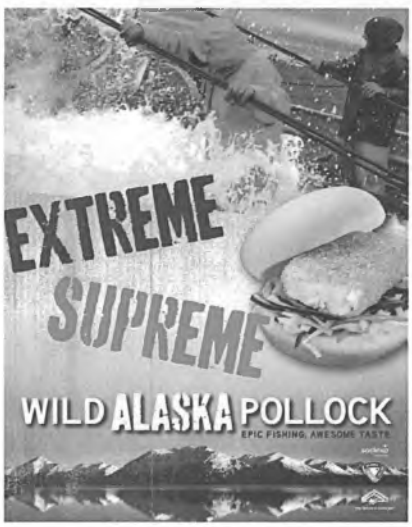
- Typical ASMI funding: $5,000-$15,000
- Promotion materials: called out on the menu as Alaska; Alaska Seafood logo included on the menu, menu inserts .
- Most casual restaurant marketing has shifted to online vehicles, i.e. website and frequent eater clubs, Facebook, Twitter; some wait-staff/incentive programs (win a trip to Alaska).

Jack in the box

RESULTS

- Fish sandwich promotion has led to a product improvement and change. JIB moved to a one piece battered Alaska Pollock with a slightly different build (lettuce and tomato addition) and improved bun.
- Promotion of the Fish Sandwich during Lent continues to increase in the mix: 1.2% during the promotion period.
- Increased sales do not cannibalize sales of other beef, chicken sandwiches.
- Number of franchisees and franchisees with larger number of units requesting marketing support.

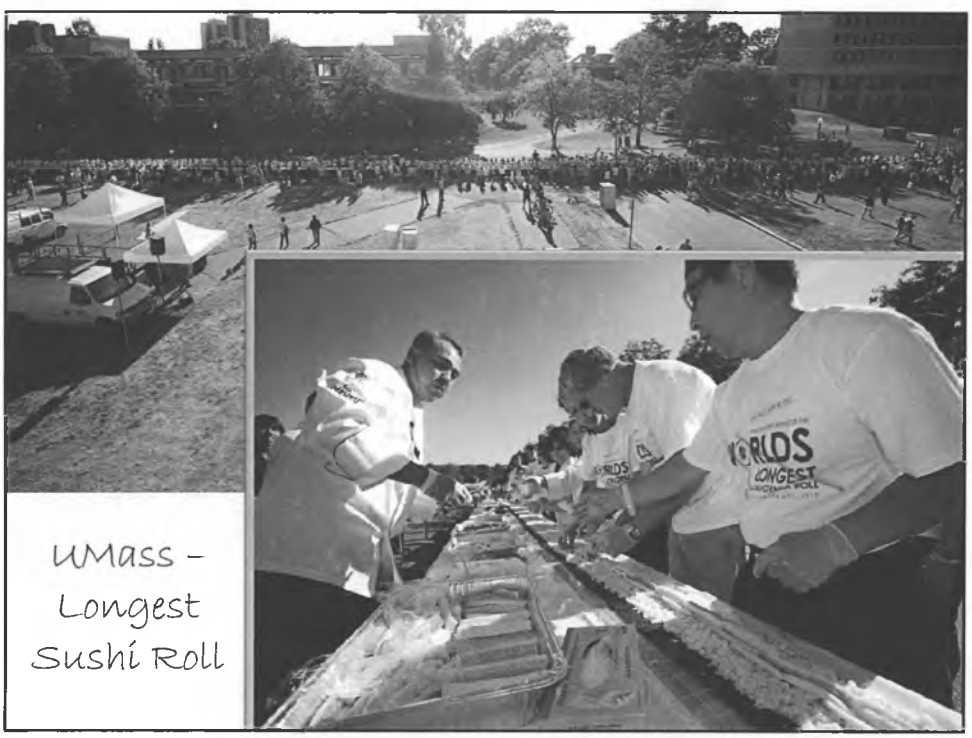
ASMI FOODSERVICE MARKETING





Sodexo k-12 Pilot Project


UMASS AMHERST
Celebrate the best
Alaska has to offer!
OCTOBER 17-20TH
Emory University - Longest Fish Taco


UMass -
Longest
Sushi Roll

Merchandising Materials

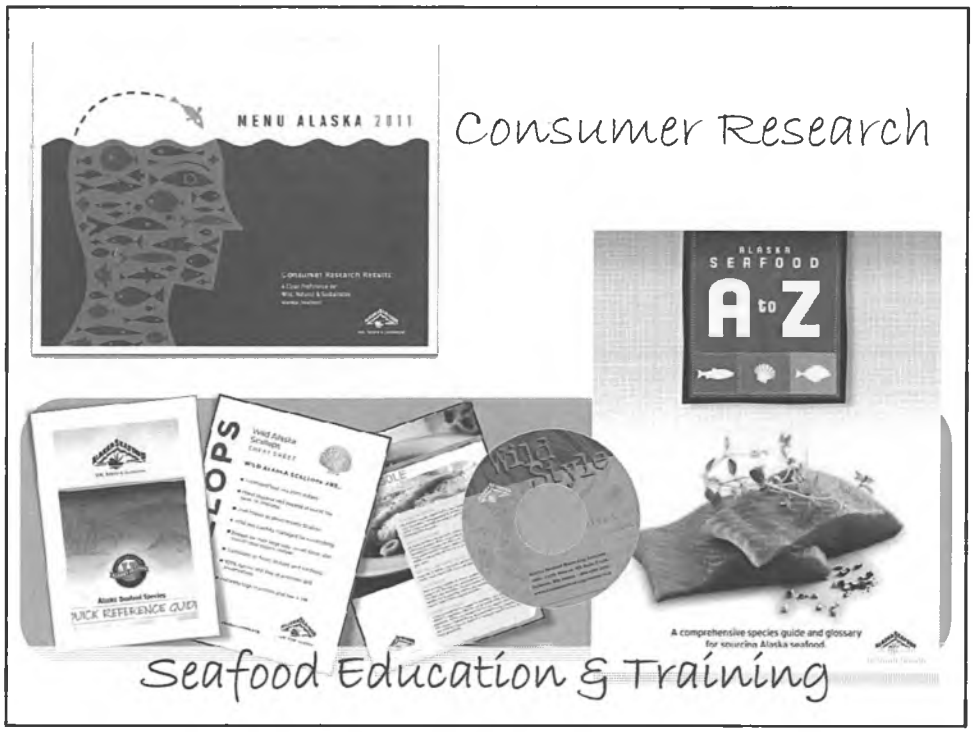


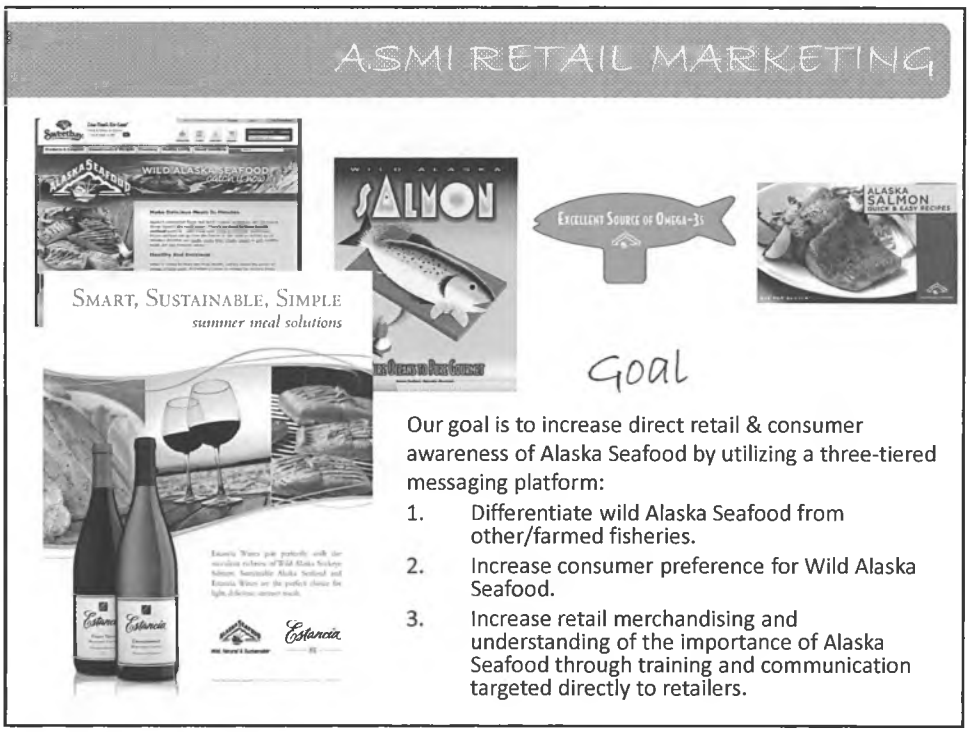
ASMI FOODSERVICE MARKETING

Menuing Ideas



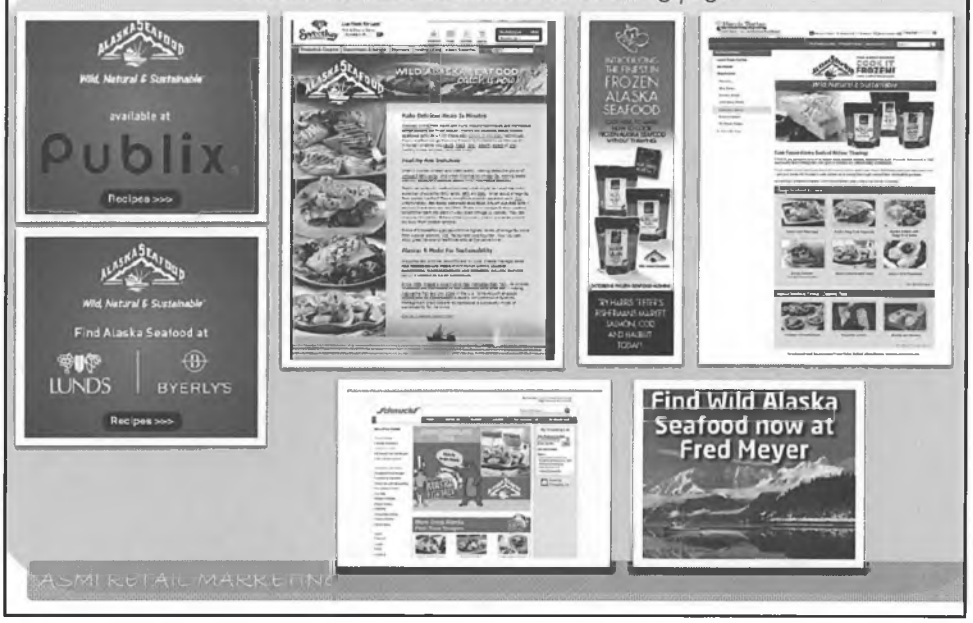
ASMI FOODSERVICE MARKETING


MENU ALASKA 2011
Consumer Research
ALASKA SEAFOOD A to Z
QUICK REFERENCE GUIDE
A comprehensive species guide and glossary for sourcing Alaska seafood.
Seafood Education & Training


ASMI RETAIL MARKETING
WILD ALASKA SEAFOOD
SMART, SUSTAINABLE, SIMPLE
summer meal solutions
WILD ALASKA SALMON
EXCELLENT SOURCE OF OMEGA-3s
ALASKA SALMON QUICK & EASY RECIPES
Estancia
Goal
Our goal is to increase direct retail & consumer awareness of Alaska Seafood by utilizing a three-tiered messaging platform:
1. Differentiate wild Alaska Seafood from other/farmed fisheries.
2. Increase consumer preference for Wild Alaska Seafood.
3. Increase retail merchandising and understanding of the importance of Alaska Seafood through training and communication targeted directly to retailers.

Partnership with Major Retailers

Online banners, customizable landing pages



ASMI RETAIL MARKETING

Co-Promotion Opportunities





Merchandising/POS Development





Case Dividers

EXAMPLE OF RECENT US PARTNERSHIPS



Hy-Vee Alaska King & Snow Crab Promotion

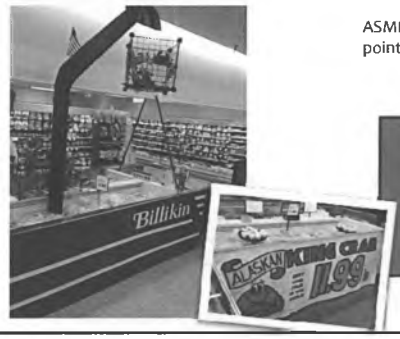
Holiday December 2012 • Hy-Vee Supermarkets 318 stores HQ in Iowa • Featured in 200 stores with full service seafood counters • Major markets: Iowa, Nebraska & Kansas • Decision was made as part of its commitment to Sustainable Fisheries, combined with U.S. Jobs

Told the Alaska story:

- Quality
- Flavor
- Conservation & Sound Fisheries Management

Featured on TV, Radio, Seasons Magazine & Print Ads • Retailer spent in high six figures to support the effort

ASMI Provided: Staff Training, recipes, photography, video footage, copy points, in-store ASMI crab point-of-sale materials



RESULTS

Record sales!

300,000+ pounds of Alaska King Crab sold

50,000+ pounds of Alaska Snow Crab sold

200% Increase over last year



Trade Advertising



ASMI RETAIL MARKETING

Consumer Tradeshows







ASMI RETAIL MARKETING

CONSUMER PUBLIC RELATIONS







Target Audience

- Adults aged 45-64, known as 'Boomers,' earning an annual household income of greater than $100,000.
- Adults aged 25-34, known as 'Generation-Y' or 'Millennials,' earning an annual household income greater than $50,000. This cohort is made up primarily of young professionals.
  - ** Both target audiences are food sophisticates who enjoy cooking, are eco-conscious and prone to considering health implications in their dining decisions.*



Consumer Media Relations





ALSO IN THE NEWS

McDonald's launches more Alaskan pollock Fish McBites

Fast food chain hopes to boost slumping sales with a number of new product offers in the pipeline.

Home ▸ Anchorage Press News

Who's afraid of Frankenfish?

World's processing giants defend Russian MSC pollock certification

The Russian pollock fisheries management system has been scrutinized as much as any other MSC fishery, say Gorton's, High Liner, Iglo, Pickenpac and others.

Sustainable foods expert: McDonald's now has to explain what MSC label means

Educating consumers on what the label means is critical.

Restaurant beef sales grow at the expense of seafood

Beef experienced the greatest share gain, coming primarily at the expense of seafood dishes, and the average beef dish costs 10 percent less than the average seafood dish

Engineered fish are harmful to our state's salmon industry

Researchers explore possible causes of Alaska king salmon crash

WWF calls for global seafood traceability system

'Making commercial fishing sustainable is a critical global challenge,' says WWF.

McDonald's Alaska pollock products to carry 'sustainable' labeling

Published: January 24, 2013

Sainsbury's: We'll stick with the MSC

UK retailer reiterates its commitment to the eco-label group, and is "in discussions" with its Alaska salmon suppliers on the topic

Missing MSC logo no obstacle for Alaska salmon in Europe

In spite of MSC's clout in the European retail scene, Alaskan salmon sales won't slow on the market, buyers say.

Alaska Fish Factor: Final Push to Stop GM Salmo

21 January 2013

Salmon prices up 34% over 2012

Strong markets are lifting salmon prices to new heights in January.

Alaska gov't: We have 'long-term concerns' with MSC salmon recertification

In closed-door meetings Monday, Alaska officials warn PSVOA that MSC recertification could erode Alaska salmon brand and market access.


Patrick Hoogerhyde
Michael Cimarusti
Jesse Ziff Cool
Alaska Seafood Culinary Alliance
Press & Chef trips
CONSUMER PUBLIC RELATIONS


Websites
App Developments
Social Media
THE GREAT ALASKA FISH TACO
HOME
RECIPES
TAQUERIA
SURFING ALASKA
FISH TACO EXPERTS
TAQUERIA
1 SPECIES
2 STYLE
3 FIND MY FLAVOR COMBO!
GRRRRRR
ASIAN SALAD STYLE
TRY 'UM
RECIPE FINDER





Great Alaska Seafood Cook-Off



May 14, 2012
Bill Sheffield
Anchorage
Railroad Depot



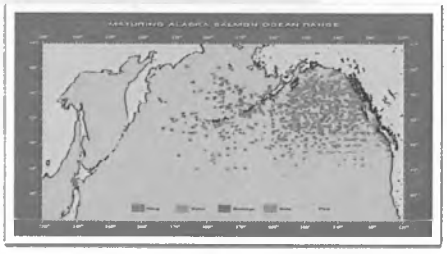




Crisis Communications







GLOBAL FOOD AID





Alaska Global Food Aid Program (AGFAP) was created in 2005 by Alaska Salmon fishermen to help feed the world's food-insecure the same nutritious canned salmon available in the United States from the food banks to school lunches. Since 2008, ASMI has spearheaded this unique humanitarian initiative.



International Activities

- Consumer PR/Advertising
- Retail Promotions
- Trade Shows/Business Development
- Trade PR/Advertising
- Hotel and Restaurant Promotions



Key Aspects of ASMI Promotions

- Wild, Natural, **Sustainable**
- Promoting Alaska Seafood, Promoting Alaska
- Product Diversity
- New Markets, New Products
- Underutilized Species

ASMI INTERNATIONAL


ASMI OVERSEAS & EXPORT MARKETS
Traditional Markets
Japan
Central EU: Austria, Germany,
Northern EU: Ireland, The Netherlands, U.K., Sweden, Den mark
Southern EU: Italy, Portugal and Spain
Western EU: Belgium and France
Emerging Markets
Central EU: Czech Republic, Poland
China
Eastern Europe: Russia and Ukraine
Brazil
Increased Export Value
2011 Alaska seafood export value increased dramatically, rising 27% to total $3.26 billion.
Exports to many of ASMI's primary target markets were even more impressive.
Exports dramatically increased to: China (+53%), U.K. (+41%), Denmark (116%), Finland (+166%), Germany (+33%), Russia (+303%) and Spain (+35%).
ALASKA SEAFOOD
Wild, Natural & Sustainable*


Co-Promoting with Key Partners
JOHN WEST WILD ALASKAN SALMON
STRAIGHT FROM THE COLD CLEAR WATERS OF COASTAL ALASKA
ALASKA SEAFOOD
天然のおいしさを、アラスカから。
アラスカのおいしさを
COOK IT FROZEN!
冷凍のままカンタン調理
Recipe Development



Chef Seminars



ASM INTERNATIONAL





Phil Vickery, ITV (UK)



Consumer PR/Advertising

Wild Cooking Cookbook (UK)



Thank you





Tyson Fick
tfick@alaskaseafood.org
907-465-5560

@ASMIakseafood
Facebook.com/alaskaseafood

ALASKA SEAFOOD
Wild, Natural & Sustainable

ALASKA STATE LEGISLATURE

Co-Chair:
House Finance Committee

Chair:
House Finance Subcommittees for;
Department of Public Safety
Department of Law
Alaska Court System

Member:
Legislative Council
Committee on Committees
Legislative Budget & Audit (alt)

BILL STOLTZE
STATE REPRESENTATIVE
Representative_Bill_Stoltze@legis.state.ak.us

Session:
Alaska State Capitol, Rm 515
Juneau, AK 99801-1182
Phone: (907) 465-4958
Fax: (907) 465-4928

District:
600 E. Railroad Ave.
Wasilla, AK 99654
Phone: (907) 376-4958
Fax: (907) 376-4928

Toll Free: 1-866-465-4958

Memorandum

TO: Representative Shelley Hughes, Chair House Committee on Economic Development, Trade and Tourism

FROM: Rep. Bill Stoltze

DATE: January 22, 2013

RE: Calendar Request for HCR xxx "Relating to the establishment and operation of a state food resource development working group."

Madame Chair,

I request that HCR xxx be calendared for a hearing before the House Committee on Economic Development, Trade and Tourism at the earliest possible time. I appreciate your consideration of this resolution dealing with Alaska's abundant food resources.

Attached is a sponsor statement, and a copy of the legislation for consideration.

Note, the Resolution will be introduced on the House Floor tomorrow, at which time it will be assigned a number.

Contact my staff member Darrell Breese (465-4958) for additional information.

ALASKA STATE LEGISLATURE

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House Finance Committee

Chair:
House Finance Subcommittees for;
Department of Public Safety
Department of Law
Alaska Court System

Member:
Legislative Council
Committee on Committees
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Sponsor Statement for House Concurrent Resolution 1 by Representative Bill Stoltze

The passage of House Concurrent Resolution 1 calls of the Governor to establish a state food resource development working group with the primary goal of producing more locally grown and harvested food items to be consumed in Alaska, by Alaskans.

In addition the resolution calls on the Governor to requests multiple departments of his administration to work closely with the working group and the independent Food Policy Council to increase the production and consumption of local food items in Alaska.

Whether it be agriculture products, seafood or locally produced meat, increased local food products will lead to a healthier Alaska and enhance the economy of the entire state.

The importance and value of creating and maintaining a robust supply of Alaskan food is why the resolution is asking the Governor to establish a state food resource development working group to work with the Alaska Food Policy Council to identify resources and set policies to build a strong, sustainable healthy food system in the state.

In addition to creating the working group, this resolution calls on the governor to request the departments of his administration to work closely with the farmer's, fisherman, cattle ranchers and shellfish growers to produce more locally grown food products to consumption in Alaska, by Alaskans.

HOUSE CONCURRENT RESOLUTION NO. 1

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-EIGHTH LEGISLATURE - FIRST SESSION

BY REPRESENTATIVES STOLTZE, Hughes, Gattis, Keller, Neuman, Thompson, Herron, Costello, Millett, Isaacson, Tuck, Tarr

Introduced: 1/24/13
Referred: House Special Committee on Economic Development, Trade, and Tourism, Resources

A RESOLUTION

Relating to the establishment and operation of a state food resource development working group.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS agricultural and fisheries industries have played a vital role in the state since Alaska was a territory; and

WHEREAS agricultural and fisheries industries are critical to the state's economic future; and

WHEREAS, in 2007, the United States Department of Agriculture reported that residents of the state spend $1,500,000,000 annually on food and estimated that less than five percent of the food consumed in the state is produced locally; and

WHEREAS increasing the amount consumers in the state spend on local food products would help drive economic development in the state's agricultural and fisheries industries; and

WHEREAS access to fresh and nutritious local food would promote and contribute to healthier lifestyles for residents of the state; and

WHEREAS increasing local food production and consumption of local wild seafood

and farm products would improve the health of residents of the state, increase food security, strengthen the local economy, and encourage community development; and

WHEREAS the state's food distribution system has been disrupted in the past and remains vulnerable to disruption in the future; and

WHEREAS the Governor has made economic development and food security critical priorities for the state; and

WHEREAS the Alaska Food Policy Council is an independent organization that was established to provide recommendations for improving access to healthy, affordable, and culturally appropriate foods for residents of the state;

BE IT RESOLVED that the Alaska State Legislature respectfully requests the Governor to establish a state food resource development working group to work with the Alaska Food Policy Council to identify resources and set policies to build a strong and sustainable healthy food system in the state; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature encourages a collaborative relationship among state agencies, the state food resource development working group, and the Alaska Food Policy Council to enhance the access, availability, affordability, and quality of food for residents of the state; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature encourages the state food resource development working group to identify new or expanded economic opportunities for residents of the state in new food production, food processing, and food distribution businesses; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature encourages state agencies to participate actively with the state food resource development working group to review existing or proposed programs, policies, and regulations that affect the state's food system and recommend to policymakers methods to improve the coordination and implementation of the programs, policies, and regulations; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor

to direct the division of agriculture in the Department of Natural Resources to work with the state food resource development working group to protect, preserve, and develop the state's farmland and agricultural industry; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the Department of Fish and Game to work with the state food resource development working group to protect, preserve, and develop the state's subsistence, personal use, and commercial fisheries; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the Department of Commerce, Community, and Economic Development to work with the state food resource development working group to develop marketing and promotional programs to enhance and identify new and expanded opportunities for residents of the state in food production, food processing, and food distribution businesses; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the Department of Health and Social Services to work with the state food resource development working group to develop strategies and educational programs to inform residents of the state of the nutritional value of locally harvested seafood and produce; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the Department of Education and Early Development to work with the state food resource development working group to develop nutrition programs that include locally produced food in school meals, to develop education programs that highlight state food sources, and to work with the National Future Farmers of America organization, the National 4H Council, the Alaska Farm Bureau, the National Grange of the Order of Patrons of Husbandry, and other farming groups to foster future generations of farmers in the state; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor

to direct the Department of Health and Social Services, the Department of Education and Early Development, and the Department of Corrections to work with the state food resource development working group to improve the health of residents of the state by developing nutrition policy standards for congregate meal programs in public facilities; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the division of homeland security and emergency management in the Department of Military and Veterans' Affairs to work with the state food resource development working group to develop a method to use state food sources as part of the Governor's disaster and emergency preparedness food supply program; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the Department of Corrections to work with the state food resource development working group to develop a program to use state food sources as part of the Department of Corrections' institutional food service programs; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the state food resource development working group to work with the University of Alaska, which, in 1917, was founded as the Alaska Agricultural College and School of Mines, to research and develop a sustainable supply of locally produced food; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the Department of Environmental Conservation to work with the state food resource development working group to enhance the health, safety, welfare, and overall economic and social well-being of residents of the state by instituting programs and adopting regulations that encourage the development of the state's food resources; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the state food resource development working group to work with nonprofit organizations, including the Rasmuson Foundation and local food banks, to develop and use the state's food resources; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the state food resource development working group to work with the United States Department of Agriculture to develop programs that encourage the growth and use of the state's food resources; and be it

FURTHER RESOLVED that, if the Governor establishes a state food resource development working group, the Alaska State Legislature respectfully requests the Governor to direct the state food resource development working group to work collaboratively with Alaska Native regional corporations to preserve, enhance, and expand the traditional uses of the state's food resources and to encourage the development of locally produced food resources in the corporations' regional communities.

subsurface

village = surface

insert the words "and village"

Darrell Breese

To: Mary Sullivan
Subject: RE: FBA Supports HCR01

From: Mary Sullivan [mailto:msullivan@foodbankofalaska.org]
Sent: Friday, January 25, 2013 6:35 PM
Subject: FBA Supports HCR01

Greeting Representative Bill Stoltze,

I would like to write and express Food Bank of Alaska's strong support of HCR01. At Food Bank of Alaska we believe that no one deserves to be hungry. We have fought tirelessly for the approximately 105,000 hungry Alaskans to find private sector solutions and work to maximize the efficiency and accountability and impact of available food assistance programs. But we will never find a lasting solution to the problem of hunger in Alaska if we are not working together with all our food supply and distribution stakeholders. That's why Food Bank of Alaska joined the over 200 Alaskans working with the Alaska Food Policy Council (AFPC), including stakeholders from the farming, fishing, business, health, and environmental conservation sectors of our state. We joined because of our shared concerns about the many food challenges we face, and we are looking for a way to tackle them in a comprehensive way. Some of these challenges include:

- **Businesses** see that over a billion dollars a year that Alaskans spend on food is being exported to communities in the lower 48. These "food dollars" could be staying right here in our communities, putting people to work.

- **Health professionals** see skyrocketing rates of obesity, and deaths from diet-related disease, like diabetes, heart disease, and cancer. Families and food safety advocates are worried about death and illness from contaminated food.

- **Teachers** see kids in school performing poorly because they are hungry or eating too many empty calories and junk food.

- **Families** in communities with high fuel prices are **forced to choose between paying for heat or for food**, and food is losing.

We are excited that HCR01 has been introduced and strongly support the formation of a food resources and development working group to help address Alaska's food supply and food security challenges. Thank you,

Mary Sullivan

Director of Advocacy & Agency Relations

Food Bank of Alaska

2121 Spar Avenue

Anchorage, AK 99501

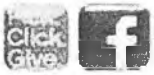
Direct Line: 907-222-3113

Cell: 907-727-8773

Fax: 907-277-7368

Email: msullivan@foodbankofalaska.org

www.foodbankofalaska.org



Last year, with just a click, 1,200 Alaskans helped FBA acquire 365,000 lbs of food! Pick.Click.Give for FBA in 2013, let's make the new year a tough one for hunger in Alaska!

Darrell Breese

From: Marty <marty_langlois@lksd.org>
Sent: Monday, January 28, 2013 11:35 AM
To: Darrell Breese
Subject: re support for HCR01

Dear Representative Stolze,

My name is *Marty Langlois(Bethel Lions Club Food Bank),* and I am writing to express my strong support of HCR01. The vision of the AFPC and our Bush Bethel Lions Club is healthy, secure food systems that feed all Alaskans and its mission is to improve our food systems for the benefit of all Alaskans, and I believe that HCR01 would enable us to accomplish our mission more effectively in our state. This resolution would allow us to see more collaboration between the many interests involved in our state's food supply chain and thereby help us accomplish a more efficient, sustainable, and effective food resource development policy for Alaska that works for *all* Alaskans.

I am pleased to see the Alaska State Legislature support the work of the Alaska Food Policy Council and encourage the Governor to establish a new state food resource development working group. The primary goal of the new working group -- **producing more locally grown and harvested food items to be consumed in Alaska, by Alaskans** -- supports several of the goals of the AFPC. The Alaska Food Policy Council looks forward to collaborating with the new working group and all the state agencies involved in our food system to address Alaska's critical food challenges.

Thank you for the opportunity to provide written testimony to the committee.

P.S. I've been involved in our Bethel Lions Club Food Bank for 15 years and what used to arrive in variety and mass, now has dwindled to a mere shadow of past plenty. Yet, we served 95 families in January and they came with the temp near -20 and many paying the $5 cab fare each way. There is a great need to address the most basic needs of the poor out here and in all of ALASKA, but the Bush has its poverty as well as the road system communities. Just to get the food from the airport to our Food Bank, we use private vehicles. My Caravan's supension, now shot, resembles an upside down "U". One reality of our plight out here. But it is the poor who suffer and with prices in the Bush rising for everything, we need all the State support we can get to even meagerly get what food we can to those in need. Quyana, Marty Langlois, Bethel Lions Club P.o. Box 646, Bethel, AK 99559

Darrell Breese

To: Scott Gruhn
Subject: RE: In support of HCR01

From: Scott Gruhn [mailto:sgruhn@alaska.com]
Sent: Saturday, January 26, 2013 8:36 AM
Subject: In support of HCR01

Hello ~

I'm writing to support HCR01. I am an engineer in Anchorage; my only ties to the issue of food security are that I'm an Alaskan who eats and who cares about others.

Alaska needs greater food security, and HCR01 is the ideal next step in that direction. There are obvious benefits to food security, such as the old adage that every country (or region) is only three meals away from revolution. Here in Alaska, we are at risk of substantial earthquakes and volcanoes, which can completely block transportation and isolate us, just when we are at the moment of greatest need. We are so remote from the rest of the continent that such isolation could claim many lives.

There are other, less obvious benefits to pursuing greater food security, too, such as increased job opportunities, especially in rural Alaska where food costs are at their highest and employment opportunities are at their lowest.

Please do everything in your power to ensure passage of HCR01.

Thank you.

Scott Gruhn,
10501 Lone Tree Drive
Anchorage, AK 99507
cell: 907-632-8626

Darrell Breese

From: Milli <millimom@xyz.net>
Sent: Monday, January 28, 2013 2:32 PM
To: 'Rep.Bill'
Cc: Darrell Breese; 'Rep. Paul Seaton'
Subject: re: HCR 1

Dear Rep. Stoltze,

Thank you for again bringing forward HCR 1, that would establish a State Food Resource Development Working Group. I see this as a very positive way to assist and encourage more local, locally grown and produced products within Alaska. In Homer we have a very active agriculture community, that has grown tremendously over the past years with the access to high tunnels, and, the peony flower industry, alongside the long existing beef and grasslands productions. I believe the State can play a vital role in assisting these growers, to the benefit of all Alaskans, and therefore I strongly support HCR 1.

Thank you.

Sincerely,

Milli Martin
PO Box 2652
Homer, AK 99603
907-235-6652.

701 West 8th Avenue, Suite 230
Anchorage, Alaska 99501
tel 907.263.3800
fax 907.263.3801
www.unitedwayofanchorage.org

United Way of Anchorage

28 January 2013

RE: **Letter of Support for HCR-01 Establishment and operation of a state food resource development working group**

Dear Representative Stoltze:

A strong and secure Alaskan food system is essential to the health and wellness of all Alaskans.

This resolution supports collaboration and intentional integration of resources among the many interests involved in our state's food supply chain to improve our food system. By working together, Alaska will have a more efficient, sustainable, and effective food resource development policy and framework that works for all Alaskans and will

- Deliver a strong and secure food system that can provide jobs, support healthy communities, and increase food security to feed the hungry and insulate us from potential disruptions along the food supply chain.
- Leverage the work of the Alaska Food Policy Council with over 200 Alaskans from the farming, fishing, business, food banking/anti-hunger network, health, and environmental conservation sectors of our state. Stakeholders formed and joined this policy council because of their concerns of the many Alaskan food challenges, and are and will be working to tackle them in a comprehensive way.
- Provide nutritious and affordable, especially local foods, that are part of the solution to support Alaskans in their efforts to have healthy weights and prevent disease.
- Support the goal that 90% of Alaskan students graduate on time by the year 2020. When students are distracted by hunger, they are unable to focus, stay and succeed in school.
- Bend the cost curve on healthy foods so that families don't have to choose between paying for heat or for food.

Thank you for sponsoring this resolution and the opportunity to provide written testimony to the committee.

Sincerely,

Michele Brown
President

LIVE UNITED.

Dear Representative Stolze,

Thank you for introducing HCR01 to coordinate and strengthen Alaska's efforts to create a local food system. Food production and food security must become a top priority of the state. There is less than a week's supply of food in the state. We ship in almost all the food we consume. We are dependent on a food distribution system that has been disrupted numerous times due to natural and man caused disasters.

Farmers and ranchers are thwarted by regulations that prohibit the growth and expansion of the industry. Agencies providing inspection services, veterinary services and the oversight of land issues are currently functions of several different agencies. I believe implementation of HCR01 would help develop a local sustainable food system by coordinating resources of several agencies resources on the mission of providing food for Alaska.

Creation of a strong local food system will greatly strengthen the security of Alaska by stemming the export of food dollars and putting the source of our food 1800 miles closer.

I urge support of the rest of the legislature and passage of HCR01. We also urge its support and implementation by the Governor.

Sincerely,

Bryce Wrigley
President, Alaska Farm Bureau

Darrell Breese

From: Milli <millimom@xyz.net>
Sent: Tuesday, January 29, 2013 7:44 AM
To: Rep. Bill Stoltze
Subject: re: HCR 1

Dear Rep. Stoltze,

Thank you for again bringing forward HCR 1, that would establish a State Food Resource Development Working Group. I see this as a very positive way to assist and encourage more local, locally grown and produced products within Alaska. In Homer we have a very active agriculture community, that has grown tremendously over the past years with the access to high tunnels, and, the peony flower industry, alongside the long existing beef and grasslands productions.
I believe the State can play a vital role in assisting these growers, to the benefit of all Alaskans, and therefore I strongly support HCR 1.

Thank you.

Sincerely,

Milli Martin
PO Box 2652
Homer, AK 99603
907-235-6652.

arrell Breese

From: Marsha Rouggly <mrouggly@xyz.net>
Sent: Tuesday, January 29, 2013 8:28 AM
To: Rep. Bill Stoltze

Dear Rep. Bill Stoltze,
Thank you for supporting agriculture in Alaska. We need all the help we can get. I remember a time when the Seward Highway was closed by avalanche for
2 weeks, with only very short openings before another one came down. The grocery stores had bare shelves in 3 days. I think sometimes the farmers'
markets are seen as a luxury or a trendy thing to do, but we serve an amazing number of people and get the freshest possible food on the plates of Alaskans. Our little Homer Farmers' Market has over a thousand visitors a day.
Thank you for introducing HCR1.

Marsha Rouggly
Homer Farmers' Market President

November 2012

Alaska Food Policy Council
health. self-reliance. prosperity.

Governing Board Members

Co-Chairs:

Amy Pettit
Development Specialist
Alaska DNR, Division of Agriculture

Lisa Sadleir-Hart
Community Nutrition Department Manager
Southeast Alaska Regional Health Consortium, Health Promotion

Secretary/Treasurer

Danny Consenstein
State Executive Director
US Department of Agriculture, Alaska Farm Service Agency

Members:

Victoria Briggs
Owner
Ugashik Wild Salmon Company, Inc.

Mike Emers
Owner
Rosie Creek Farm

Adam & Anabel Galindo
Owners
Taco Loco Products

Hans Geier
Farmer
Alaska Farmers Union

Craig Gerlach
Professor
UAF Center for Cross Cultural Studies

Kelly Harrell
Executive Director
Alaska Marine Conservation Council

Ron Klein
Past-President
Association of Food and Drug Officials

Nick Moe
Sustainable Communities Coordinator
Alaska Center for the Environment

Diane Peck
Community and Evaluation Specialist
Alaska DHSS, DPH, Obesity Prevention and Control Program

Darren Snyder
Agent
UAF Cooperative Extension Services, Agricultural and Horticulture / 4-H

Alaska Food Policy Council
health. self-reliance. prosperity.

FACEBOOK PAGE

AFPC Facebook Page

SEARCH

Search

CONFERENCES & EVENTS

Division of Agriculture Calendar

10-18/19/20-2012 Feeding & Grazing Practices in Alaska PLUS Alaska Fiber Production

AGRICULTURAL AGENCIES

Alaska Division of Agriculture

Alaska Farm Service Agency (USDA)

Cooperative Extension Service, Agriculture & Horticulture

AGRICULTURAL EDUCATION

Alaska Agriculture in the Classroom

Alaska FFA

Alaska Master Gardeners Program

Alaska School Nutrition Association

Calypso Farm & Ecology Center

Good Earth Garden School

Spring Creek Farm

Turning Light Farm

UAF School of Natural Resources & Agricultural Sciences

AGRICULTURAL SUPPORT INDUSTRIES

Alaska Bounty

Alaska Granular Fish

Alaska Mill & Feed

Alaskan Organic Plant Food

Susitna Organics

LAND USE, CONSERVATION, & ZONING

About the Council

Our Food, Our People, Our Future

The Alaska Food Policy Council is open to anyone interested in improving Alaska's food systems. Today, over 175 agencies and individuals representing federal and state agencies, tribal entities, schools, university programs, farmers, fisheries, and food systems businesses are members of the AFPC. The role of the AFPC is to collaborate on mutually beneficial solutions to food systems problems. AFPC's intent is to provide recommendations and information regarding comprehensive policies that improve Alaska's food systems.

GOALS from our Strategic Plan 2012-2015:

Goal 1: All Alaskans have access to affordable, healthy (preferably local) foods.

Goal 2: Alaska's food-related industries have a strong workforce and operate in a supportive business environment.

Goal 3: Food is safe, protected, and supplies are secure throughout Alaska.

Goal 4: Alaska's food system is more sustainable.

Goal 5: Alaskans are engaged in our food system.

COMMITTEES

The Alaska Food Policy Council currently has several groups working on a variety of strategies to improve our food systems:

- Governing Board - AFPC Governing Board Members
- Locally Grown Work Group
- School Programs Work Group
- Disaster Preparedness Work Group
- Public Outreach and Engagement Work Group
- Research and Information Work Group
- Legislative Work Group
- Communications Work Group

PARTNERS

• Alaska Food Safety Advisory Committee – the AFPC partners with the Alaska Food Safety & Sanitation Program's committee on issues and concerns regarding food safety within Alaska.

Home

Subscribe to: Posts (Atom)

FOOD POLICY

APA policy guide on community & regional food planning

Community Food Security Coalition

Food Security Updates

ALASKA FOOD & HEALTH

Alaska DHSS, Obesity Prevention and Control Program

Alaska Food Safety & Sanitation Program

Cooperative Extension Service, Health, Home, & Family Development

ALASKA FOOD DISTRIBUTORS

AK Root Sellers

Alaska Farmers Market Association

Global Food Collaborative

ALASKA FOOD PRODUCERS

Alaska Community Agriculture Association

Alaska Diversified Livestock Association

Alaska Farm Bureau

Alaska Grown

Alaska Grown Online Directory

Alaska State Grange

Division of Agriculture Food & Farm Products Directory

ALASKA FOOD SECURITY & HUNGER

Alaska Food Coalition

Fairbanks Community Food Bank

Food Bank of Alaska

Food Defense

Food Stamps

Kenai Peninsula Food Bank

Plant A Row for the Hungry

Southeast Alaska Food Bank

EATING LOCAL

Alaska Farmland Trust

Division of Agriculture land sales

ALASKA GARDENING

Alaska Botanical Garden

Alaska Master Gardeners Program

Alaska Master Gardeners, Anchorage

Alaska Master Gardeners, Mat-Su

Alaska Master Gardeners, Southeast

Alaska Master Gardeners, Tanana Valley

Georgeson Botanical Garden

Glacier Gardens Rainforest Adventure

Jensen-Olson Arboretum

Jewell Gardens

Mann Leiser Memorial Greenhouse & Horticultural Complex

North Root: Big Lake Gardeners

Palmer Garden

Pratt Museum Botanical Garden

CONTRIBUTORS

Nick Moe

Alaskafood Policycouncil

Deirdre Helfferich

Lisa Sadleir-Hart

UgashikVic

Diane Peck

Anna B

FOLLOWERS

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ACAA: Organic, Local, and Seasonal Eating

ACE's Local Foods Campaign

AK Root Cellar

Alaska Bites

Alaska Food

Alaska Food Challenge

Anchorage Food Mosaic

Eating Alaska

fresh49

Last Frontier Locavores

TRADITIONAL FOODS

Alaska Native Science Commission: Traditional Foods

Alaska Traditional Knowledge & Native Foods Database

Subsistence Food Safety

Traditional Food Guide for Alaska Native Cancer Survivors (ADN article & excerpt)

LABELS

Agriculture in the Classroom (1) Alaska Division of Agriculture (2) Alaska Food Policy Council (4) Alaska Native People (1) children (4) conference (1) conservation (1) crop development (2) diabetes (1) Eat Local Challenge (2) education (12) emergency planning (2) events (10) Farm to School Program (2) farmers' markets (4) farming (12) Food Day (1) food film festival (1) food jobs (2) food recovery (1) food security (10) gardens (4) grants (9) health (4) Interior AK (3) legislation (5) livestock (2) local economies (3) marketing (1) media (1) news (3) permaculture (2) planning (6) policy (4) priorities (7) production (8) publications (4) research (4) school gardens (2) schools (3) Southcentral AK (3) Southeast AK (1) Southwest AK (1) supply chain (3) surveys (3) sustainability (5) Taste of Alaska (1) traditional food (3) VISTA (3) workshops (6)

Representative Herron

I would like to offer conceptual amendment number 1, to add on page 5, line 9 following the words 'Alaska Native regional'; insert "and village" … 'corporations to preserve,'…

01/31/13 Overview: Department of Commerce, Community and Economic Development, and HCR 1

<TARGET><BILL>HCR 1</BILL><SUBJECT>01-31-13 Overview Department of Commerce, Community and Economic Development, and HCR 1</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: January 31, 2013

Re: Committee Schedule for the Week Beginning February 4, 2013

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, February 5, 2013 11:15am in Room 124

\+ Department of Commerce, Community and Economic Development, Division of Economic Development; presentations of the ARDOR Program and the Minerals Commission
Nicole Grewe, ARDOR Program Coordinator, Alaska Department of Commerce, Community, and Economic Development (DCCED)
Andy Varner, Executive Director, Southwest Alaska Municipal Conference (SWAMC)
Shelly Wright, Executive Director, Southeast Conference (SEC)
Bill Jeffress, Chairman, Alaska Minerals Commission (AMC)

Thursday, February 7, 2013 11:15am in Room 124

\+ Department of Commerce, Community and Economic Development, Division of Economic Development; presentations of the Tourism and Film programs

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
\+ Teleconferenced
= Bill was Previously Heard/Scheduled

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: Chief Clerk

From: Representative Hughes

Date: January 30, 2013

RE: Committee Schedule Update for January 31, 2013

Please indicate in BASIS that HCR1 will be brought up under "bills previously heard" at the January 31, 2013 meeting of the House Economic Development, Trade and Tourism Committee meeting.

Alaska State Legislature

Representative Shelley Hughes, Chair

ssion Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
January 31, 2013

1. **Call to Order**

~Gavel~ Economic Development, Trade and Tourism Committee is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to my committee aide, Ginger Blaisdell.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
  - Several members may be coming and going due to other committee meetings underway.
- Today's agenda includes two items.
  - First we will hear House Concurrent Resolution 1presented on Tuesday by Representative Stoltze and staff, Darrell Breese.
  - Second we will have a presentation by the Department of Commerce Community and Economic Development.

3. **HCR1**

- Under "bills previously heard" we will bring up HCR 1. We first heard HCR1 on January 29.
- The committee adopted conceptual amendment to add on page 5, line 9, following the words 'Alaska Native regional'; insert "and village"… 'corporations to preserve,' …
- My office has not received any further comments regarding HCR1 and we heard lots of good testimony on Tuesday.
  - Does the bill sponsor have any further comments?
  - Does any member have further comments to make regarding HCR1?

- What is the wish of the committee? (member reads the motion)
- With no objection, House Concurrent Resolution 1 version 28-LS0131\A as amended with individual recommendations and a zero fiscal note.

Brief AT EASE for signatures and meeting set up

4. Department of Commerce Community and Economic Development

- As we adjust for the presentation, I would like to invite Assistant Commissioner Roberta Graham and staff to come to the table. DCCED will be presenting overviews for their finance, timber, fisheries and Made-in-Alaska programs.
- Please introduce yourself and you can begin your presentation.
- I would like to invite members to add their questions as the presentation is underway if that is OK with Ms Graham.

5. Calendar Review

- The next meeting of EDTT is Tuesday, February 5 at 11:15am in this room

We will be hearing from the Department of Commerce, Community and Economic Development regarding the ARDORS program and we will also have Bill Jeffress from the Alaska Minerals Commission to present their annual report. The ARDORS Annual Summit is meeting in Juneau on February 5 and 6 so we will hear from a couple of the ARDOR representatives from around the state.

- Nicole Grewe, ARDOR Program Coordinator, Alaska Department of Commerce, Community, and Economic Development (DCCED)
- Andy Varner, Executive Director, Southwest Alaska Municipal Conference (SWAMC)
- Shelly Wright, Executive Director, Southeast Conference (SEC)
- Bill Jeffress, Chairman, Alaska Minerals Commission (AMC)

- Do members have any closing comments?
- Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED at ____ (time)." ~Gavel~

Alaska State Legislature

Representative Shelley Hughes, Chair

ssion Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
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Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 7, 2013

1. **Call to Order**

~Gavel~ Economic Development, Trade and Tourism Committee is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, Sam, and our recording secretary, Debbie, and to my committee aide, Ginger Blaisdell. Welcome 8 student guests (see handout)…

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
    - Several members may be coming and going due to other committee meetings underway.
- Today's agenda includes two topics presented by:

Department of Commerce, Community and Economic Development, Division of Economic Development; Director Lorene Palmer

- The Department also distributed via email last night to all legislators, the FY2013 Second Quarter Alaska Tourism Marketing Report. While it's not specifically part of the presentation today, it is an interesting read. And follow up answers to the committee's questions regarding Finance / Minerals / Timber / Fisheries.

3. **Calendar Review**

- The next meeting of EDTT is Tuesday, February 12 at 11:15am in this room

This will be a joint meeting with the Senate Special Committee on World Trade and we'll hear from Greg Wolf of the World Trade Center Alaska.

- We do not have a meeting scheduled for Thursday, February 14th.

Do members have any closing comments?

- Thank you. We are ADJOURNED at 12:___ (time)." ~Gavel~

Ginger Blaisdell

From: Apache <apache@wwwjnu02.legis.state.ak.us>
Sent: Monday, February 04, 2013 10:34 AM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: EDT Committee

Date of Teleconference: February 5, 2013

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: Capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

none

May other LIO's add: yes

Offnet Name(s):

unknown who may call in

Other Information:

MOTION:

I move HCR1 version 28-LS-0131\A as amended, with individual recommendations and attached fiscal note.

Ginger Blaisdell

om: Ginger Blaisdell
Sent: Thursday, January 31, 2013 1:28 PM
To: LAA Legal
Cc: Ginger Blaisdell
Subject: HCR 1 final CS requested

I would like to request a final for HCR 1 as amended by the (H)EDT committee.
"HCR 1 version 28-LS-0131\A as amended, with individual recommendations and attached fiscal note."
The bill passed out of committee and will go to (H)RES.

Please apply the amendment:

I would like to offer conceptual amendment number 1, to add on page 5, line 9 following the words 'Alaska Native regional'; insert "and village" … 'corporations to preserve,' …

Thank you,
Ginger Blaisdell

FISCAL NOTE

STATE OF ALASKA
2013 LEGISLATIVE SESSION

Bill Version: **28-LS0131\A**
Fiscal Note Number: 1
() Publish Date:

Identifier (file name): CSHCR1(EDT)-LEG-01-31-2013
Dept. Affected: Legislature
Title: State Food Resource Development Working Group
Appropriation:
Allocation:
Sponsor: Representative Stoltze
Requester: House Economic Development Trade and Tourism
OMB Component Number:

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY14 Appropriation Requested	Included in Governor's FY14 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY14**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY13) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY14) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? _____

If yes, by what date are the regulations to be adopted, amended, or repealed? _____ Discuss details in analysis section.

Why this fiscal note differs from previous version (if initial version, please note as such)

Prepared by: Ginger Blaisdell, Staff to (H)EDTT Committee
Phone: 907-465-5265
Division: Alaska State Legislature
Date/Time: 1/31/13 12:00 AM
Approved by: Representative Shelley Hughes
Date: 1/31/2013

(Revised 1/15/2013 OMB)

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2013 LEGISLATIVE SESSION

BILL NO. 28-LS0131\A

Analysis

There is no fiscal impact as a result of passage of this resolution.



Division of Economic Development

House Committee on Economic Development, Trade, and Tourism

January 31, 2013

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

Presentation Summary

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Division of Economic Development

1. Division Mission and Core Services
2. Finance Section
3. Development Section
4. Minerals Development
5. Fisheries Development
6. Timber Development
7. Marketing Alaska Brands

Division Mission and Core Services

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Economic Development Opportunities

Financing

- Administers 11 loan programs
- Supports industry and public financing

Marketing

- Leads marketing programs for tourism, wood products, minerals, film production, and Alaska products
- Works closely with Financing Section on cross-promoting business support and collaborates with other state agencies – natural resources, agriculture, transportation, and trade

Research

- Produces industry economic information
- Conducts special research projects

Business Technical Assistance

- Provides businesses direct technical assistance, and coordinates and advises on economic development efforts with state agencies and regions

Financing Section

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

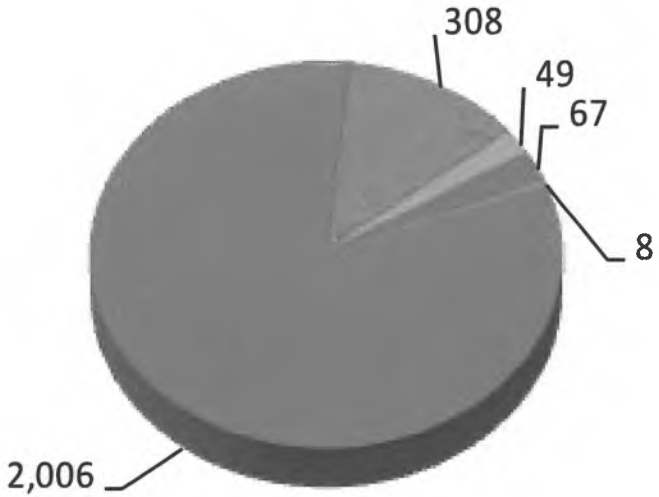
Loan Programs

- **Administers and services 11 loan funds with a total value of $187 million**
  - 5 fishing-related loan programs
  - 1 bulk fuel loan program
  - 1 alternative energy loan program
  - 3 small business loan programs
  - 1 avionics loan program
- **Loan programs were created to achieve:**
  - Jobs for Alaskans
  - Significant economic activity
- **Core Services**
  - Operations Management
  - Lending / Servicing / Collections

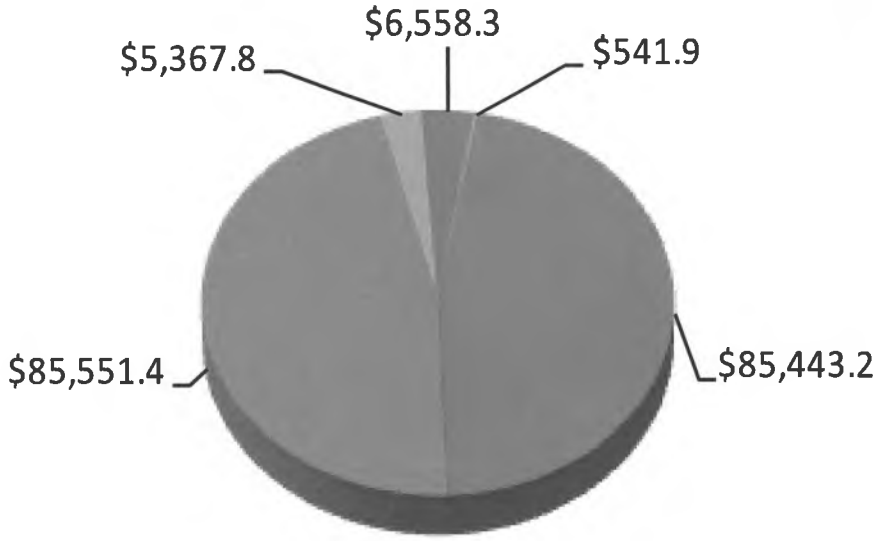
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Loan Fund Balance as of July 1, 2012

Loans and Accounts by Participation



Loans and Accounts by Dollar ('000)



New Revolving Loan Programs

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DEPARTMENT OF
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AND ECONOMIC
DEVELOPMENT

Capitalized in FY 12

- Alternative Energy Conservation Fund

Capitalized in FY 13

- Commercial Charter Fisheries
- Mariculture Fund
- Alaska Microloan Fund
- Community Quota Entity Fund

Financing Section

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Commercial Fishing Revolving Loan Fund enacted 1972

Number of Loans/Accounts – 2,006; Total Loan Value - $85,443,200

Purpose

- Promotes the development of resident fisheries
- Continued maintenance of commercial fishing vessels and gear
- End result: Improves the quality of Alaska seafood products

2012 Accomplishments

- 215 new loans totaling $15.9 million
- 35 loans totaling $2.1 million for upgrading older engines to more fuel efficient models
- 706 jobs were created or saved
- 219 extension requests and 25 refinance applications were processed
- Delinquency and foreclosure rate continue record low at 1.4 percent

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DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Fisheries Enhancement Revolving Loan Fund

Number of Loans/Accounts – 308; Total Loan Value - $85,551,400

Purpose

- Planning, construction, and operation of fish hatchery facilities
- Preconstruction activities to obtain a permit
- Construction activities to build the hatchery facility
- Costs to operate the facility

2012 Accomplishments

- 8 loans totaling $9.6 million
- $5.1 million in repayments received
- 2011 hatchery-propagated salmon provided an estimated $109 million, or 18 percent of the ex-vessel value of the commercial common property harvest
- The Douglas Island Pink and Chum Hatchery (DIPAC), located in Juneau, reached a milestone in FY2012 by paying off its loans
- Became a major economic driver in the region

Small Business Economic Development Revolving Loan Fund

AIDEA

Number of Loans/Accounts – 67; Total Loan Value - $6,558,300

Purpose

- Provides financing for start-up and expansion of businesses that create significant long-term employment
- Serviced fund program for the Alaska Industrial Development and Export Authority

2012 Accomplishments

- In FY2012, 1 loan for $189,000 was made that created or saved 10 jobs
- 127 loans totaling over $15 million have been made, creating/saving 1,054 jobs
- Loans to lodges, dentists, grocery stores, and gas stations

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Rural Development Initiative Fund

Number of Loans/Accounts – 49; Total Loan Value - $5,367,800

Purpose	2012 Accomplishments
▪ Provides financing for start-up and expansion of businesses that create significant long-term employment ▪ Serviced fund program for the Alaska Industrial Development and Export Authority	▪ 11 loans totaling $1.8 million were made, creating or saving 58 jobs ▪ Over the life of the program, 87 loans totaling almost $11 million have been made, creating or saving 592 jobs

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Alaska Capstone Avionics Loan Program

Number of Loans/Accounts – 8; Total Loan Value - $541,900

Purpose

- Provides long-term, low interest loans for purchase and installation of Next Generation Air
- Transportation system avionics equipment for Alaska aircraft; facilitates infrastructure build out

2012 Accomplishments

- In FY2012, 2 loans totaling $80,100 were made to Alaskan aircraft owners
- Over the life of the program, 11 loans totaling more than $746,000 have been made

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Salmon Enhancement Tax Distribution Program

Purpose

- Commercial salmon permit holders organized under Regional Aquaculture Associations (RAAs) self-assess a tax on the harvest
- Funds collected by Department of Revenue and appropriated to finance the RAAs

2012 Accomplishments

- The Salmon Enhancement Tax Distribution program provided $4.8 million to 6 qualified regional aquaculture associations: Prince William Sound, Northern Southeast, Southern Southeast, Chignik, Cook Inlet, and Kodiak

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Volunteer Tax and Loan Program

Purpose

- Volunteer teams of college accounting students, tax supervisors and Alaska Business Development Center provide free tax and financial counseling

2012 Accomplishments

- Visited 71 communities
- Areas included Aleutians, Bering Strait, Bristol Bay, Interior, Kodiak, North Slope, Arctic, Pribilofs, Southeast, Western, and Yukon Delta
- Prepared 3,751 tax returns and assisted 7,118 people
- Provided $5.2 million in tax refunds

Minerals, Fisheries, and Timber Development

Core Services

- Promote development through
  - Marketing
  - Research
  - Technical assistance

Accomplishments

- Conducted a business retention and expansion survey in Alaska Marine Trades
- Assisted 260 inquiries on technical questions related to the seafood industry
- Assisted with researching impacts of the salmon fisheries disaster
- Worked with the Department of Natural Resources (DNR) on Strategic Minerals
- Conducted in-depth analysis to determine timber demand
- Initiated wood products marketing program
- Staffed the Alaska Minerals Commission
- Examined the economic impacts of the Endangered Species Act

Minerals Development

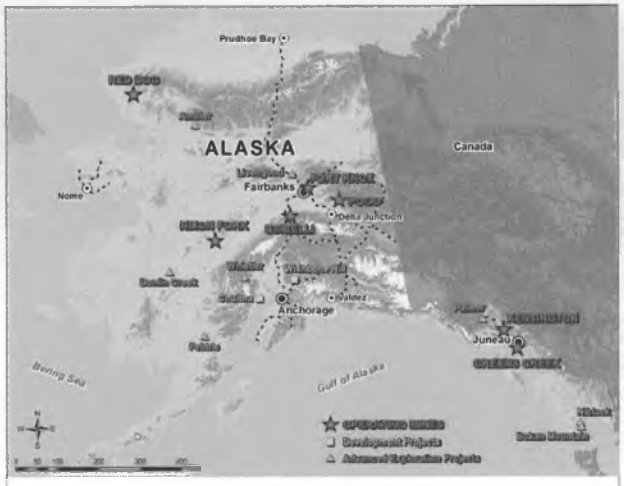
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The Opportunity

- Global minerals prices very strong
  - Alaska minerals production value estimated at over $3.5 billion
- Alaska's interest in rare-earth elements (REE)
  - Working with DNR to study the potential and to open new development
- Opportunities for small miners
  - Small miners account for more $100 million in production value and could increase with strong minerals prices

Minerals Development

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Research Efforts

- Strategic Minerals Resource Assessment
- Alaska Minerals Industry Report
- Small mine business retention and expansion survey



Marketing Projects

- Major presence at Canadian trade shows to showcase Alaska opportunities
- Alaska investor summit



Collaboration

- Working with UAF to evaluate REE processing scenarios
- Working with DNR on Strategic Minerals Conference
- Convening critical minerals working group

Fisheries Development

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The Opportunity

- Maximizing values for commercial fisheries
  - 38 percent of state permits owned in rural Alaska communities
  - Potential to increase value in underutilized / undervalued fisheries
  - Loans to assist fishermen
- Improve the operating environment for seafood processors
  - Double digit growth in pink and chum salmon exports to China for reprocessing
  - Improve workforce training systems
  - Bringing underutilized / undervalued fisheries to market
- Marine Trades Businesses
  - Increase the level of marine trades businesses in Alaska
- Mariculture
  - Potential to unlock undervalued industry

Fisheries Development

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DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



Commercial fisheries

- Support and contribute to the University's Fisheries, Seafood, and Maritime Initiative
- Review of undervalued / underutilized fisheries
- Regional Seafood Development Association development and support
- Research and analysis for 2012 Chinook disaster declaration
- Direct technical assistance on fisheries inquiries
- Business retention and expansion survey for Alaska seafood processing sector

Timber Development

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DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

The Opportunity

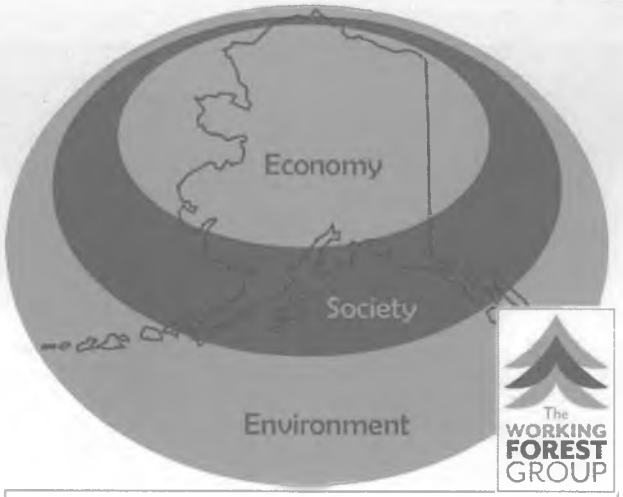
- Working to identify new products and services
  - A spike in demand for woody biomass for energy across the state bringing new opportunities and challenges to the industry
  - Business surveys show how timber industry looks to expand
  - Trade missions could open new markets

Timber Development

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DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



US China BUILD



The WORKING FOREST GROUP

Research Efforts

- Southeast timber industry business retention & expansion survey
- Wood grading standards

Marketing Projects

- Trade show marketing
- The Alaska Home
- Trade missions support

Technical Assistance

- Value added programs
- The Working Forest Group
- Tongass reviews
- Workforce development

Marketing Alaska's Products

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The Opportunity

- Agriculture, Alaska products – coffee, birch syrup, potato chips, water – and ***Buy Local*** movement present new collaborative marketing options
- Survey of Made in Alaska permit holders support greater marketing
- Building markets for Alaska's products can support manufacturing

Alaska's Buy Local Campaigns

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DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Existing Alaskan "buy local" campaigns:

FBKS FIRST
THINK LOCAL

Fairbanks First

- If every household in Fairbanks took $100 dollars that they would normally spend outside of their community and decided to spend $10 of that $100 in Fairbanks the outcome would be dramatic. Over 1,700 new well paying jobs could be created.

anchoragefirst

Anchorage First

- If every household in Anchorage spent an additional $25 a month locally for 3 months, it would generate nearly $10 million dollars!

LOOK LOCAL FIRST

Look Local First - Juneau

- When you choose to look local first in Juneau you are helping to create jobs and opportunity in Juneau – not in some other place in the lower 48.

Marketing Brands

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

MADE IN ALASKA



Alaska GROWN

AUTHENTIC NATIVE HANDICRAFT FROM ALASKA

MADE IN ALASKA

ALASKA SEAFOOD

Wild. Natural & Sustainable

Made in Alaska Program

- Promote and increase sales
- Logo, promotion, training, enforcement
- 1,194 Alaska businesses, est. $134 million

Product Preference

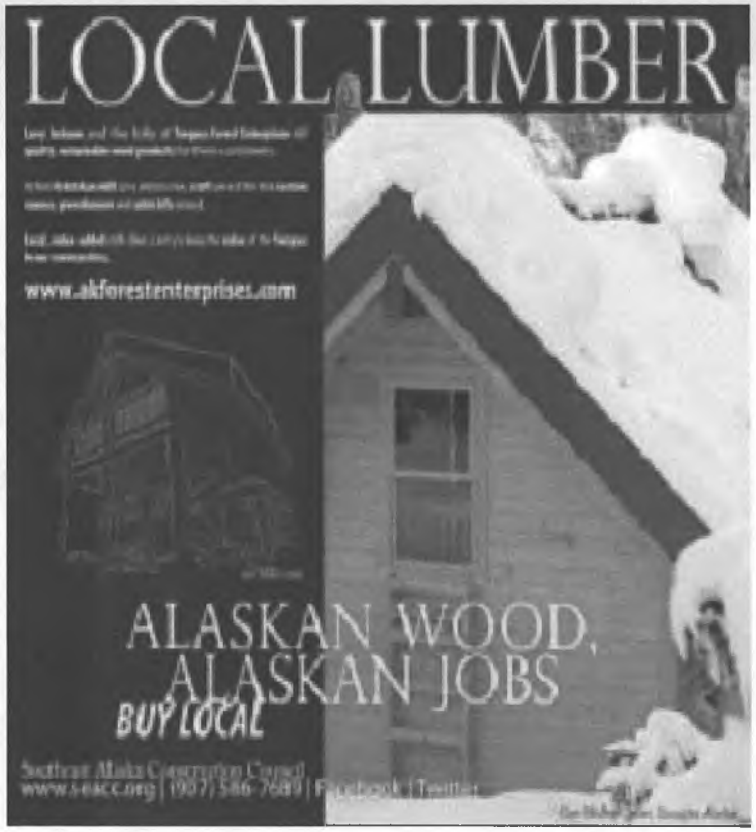
- Price advantage for Alaska businesses in state procurements
- 87 businesses, 264 products

Buy Alaska Campaign

- Branding / messaging
- Buy Alaska website
- Connecting businesses
- Outreach

Made in Alaska Home

- Anchorage Home, Garden & Remodeling Show, March 8-10
- Trade Booth with Alaska-made building/home materials
- Promotes the purchase and use of Alaska-made building materials
- Mobile website/app to connect Alaskans to product purchasing information





Questions?

Roberta Graham, Assistant Commissioner,
269-8100

Cathy Jeans, Finance Operations Manager,
465-2728

Glenn Haight, Development Manager,
465-6144

02/05/13 Overviews: Alaska Regional Development Organizations and Alaska Minerals Commission

<TARGET><BILL></BILL><SUBJECT>02-05-13 Overviews Alaska Regional Development Organizations and Alaska Minerals Commission</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: January 31, 2013

Re: Committee Schedule for the Week Beginning February 4, 2013

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, February 5, 2013 11:15am in Room 124

\+ Department of Commerce, Community and Economic Development, Division of Economic Development; presentations of the ARDOR Program and the Minerals Commission
Nicole Grewe, ARDOR Program Coordinator, Alaska Department of Commerce, Community, and Economic Development (DCCED)
Andy Varner, Executive Director, Southwest Alaska Municipal Conference (SWAMC)
Shelly Wright, Executive Director, Southeast Conference (SEC)
Bill Jeffress, Chairman, Alaska Minerals Commission (AMC)

Thursday, February 7, 2013 11:15am in Room 124

\+ Department of Commerce, Community and Economic Development, Division of Economic Development; presentations of the Tourism and Film programs

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
\+ Teleconferenced
= Bill was Previously Heard/Scheduled



Alaska Regional Economic Assistance Program
Division of Economic Development

House Special Committee on Economic Development, Trade, and Tourism
February 5, 2013

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

HISTORICAL PERSPECTIVE

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

ARDOR
Alaska Regional Development Organizations
CELEBRATING 25 YEARS
1988 – 2013

Through the Years

- Celebrating the Silver Jubilee
- 15th Alaska State Legislature (1988)
- Senate Bill 480
- Established the Alaska Regional Economic Assistance Program and designated the Department of Commerce, Community, and Economic Development as its administrative agency.
- Founding Purpose – Create a network of regionally-driven organizations to plan and support regional and local economic development.

Alaska Regional Economic Assistance Program

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Alaska Statute 44.33.895

1. Encourage the formation of regional development organizations
2. Assist establishing boundaries – size, inclusive, and regional center
3. Gather information about regional economic issues
4. Assist regional development organizations
5. Serve as liaison between organizations and state agencies
6. Grant administration

Encouraging the formation of regional development organizations to prepare and implement regional development strategies.

ARDOR CELEBRATING 25 YEARS

Current ARDORs

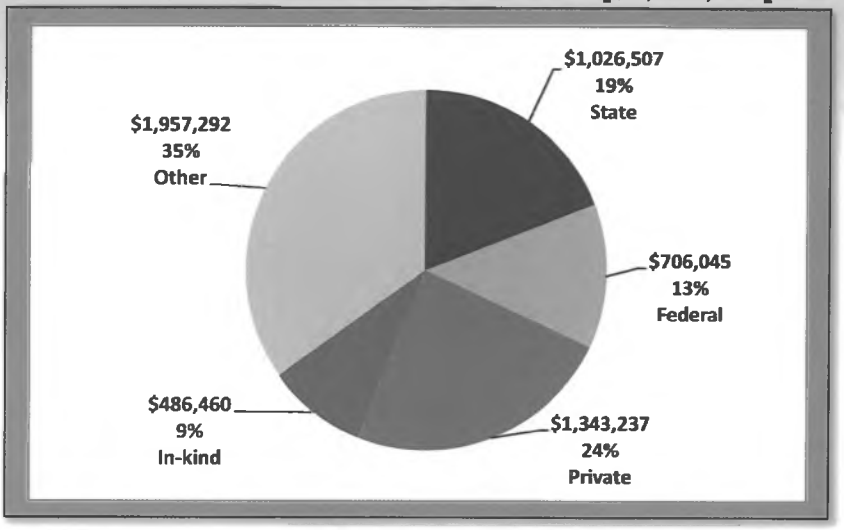
ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



EFFECTIVE LEVERAGING

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Fiscal Year 2012: Total ARDOR Revenue [$5,519,542]

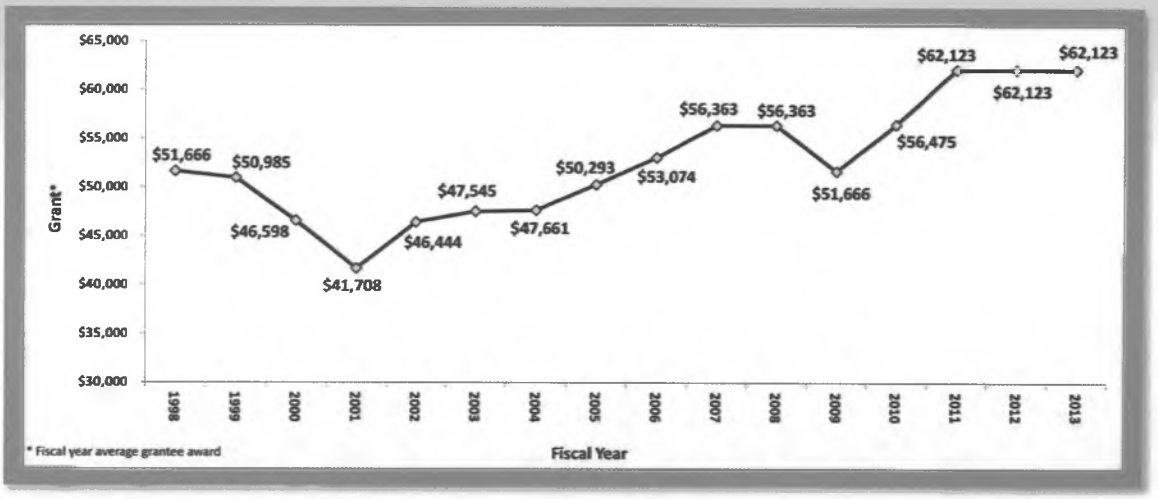


ARDOR CELEBRATING 25 YEARS

STATE INVESTMENT

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Fiscal Year 1998 – 2013: ARDOR Program Annual Grant



ARDOR CELEBRATING 25 YEARS

ARDOR Work Plans

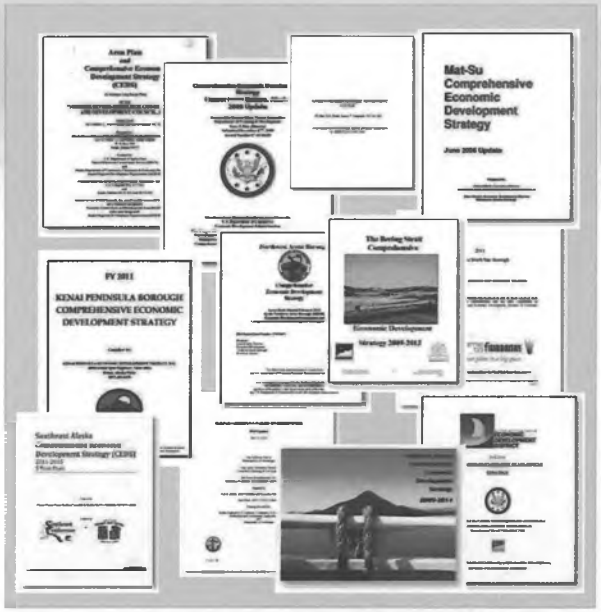
ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

1. Develop and implement an economic development strategy or plan.
2. Identify and work to eliminate economic development barriers.
3. Coordinate regional planning efforts that result in new opportunity.
4. Work to enable communities to collaborate and pool resources.
5. Strengthen partnerships with private, public, and NGOs.
6. Establish boards of directors that represent diverse interests.
7. Provide small business technical assistance.
8. Serve as regional liaison for state and federal government.

ARDOR CELEBRATING 25 YEARS

ARDOR Economic Development Strategies

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



Economic Development Strategy

- Fact gathering to assure region understands current development situation.
- Identification of resources that serve as assets for economic development activities.
- Production of a strategy for regional and local economic development that includes priorities, a work plan, assigned responsibilities, and an implementation schedule.
- Regional and community profiles.

ARDOR CELEBRATING 25 YEARS

Regional Perspective

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Southeast Conference

Working to build a strong economy and health communities while maintaining a quality environment.

- Incorporated in 1958
- Shelly Wright, Executive Director
- 13 Board Members and 5 Staff

Southeast Conference



Southwest Alaska Muncipal Conference

Advancing the collective interests of Southwest Alaska people, businesses, and communities, pomoting economic opportunities to improve quality of life, and influencing long-term responsible development.

- Incorporated in 1988
- Andy Varner, Executive Director
- 11 Board Members and 2 Staff

SWAMC
Southwest Alaska Municipal Conference



ARDOR CELEBRATING 25 YEARS

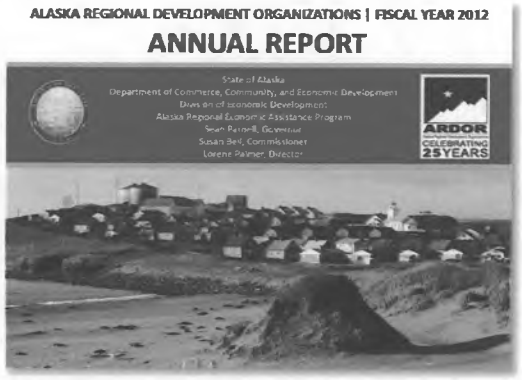
Further Infomation

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



Nicole Grewe, ARDOR Program Coordinator
Division of Economic Development
Direct: (907) 465-3812
Email: nicole.grewe@alaska.gov
www.commerce.alaska.gov/ded/dev/ardor/ardor.htm

ARDOR
Alaska Regional Development Organizations
CELEBRATING 25 YEARS



ANNUAL REPORT

State of Alaska
Department of Commerce, Community, and Economic Development
Division of Economic Development
Alaska Regional Economic Assistance Program
Sean Parnell, Governor
Susan Bell, Commissioner
Lorene Palmer, Director



St. Paul, Alaska

Photo courtesy of SWAMC

ARDOR PROGRAM

ADA COMPLIANCE

The State of Alaska, Department of Commerce, Community, and Economic Development complies with Title II of the Americans with Disabilities Act of 1990. This publication is available in alternative communication formats upon request. Please contact (907) 269-4560 or lorence.williams@alaska.gov to make any necessary arrangements.

Telephonic Device for the Deaf (TDD): (907) 465-5437

ARDOR Program Summary

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ARDOR Overview

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Copper Valley Development Association 13
Fairbanks North Star Borough Economic Development Commission 15
Interior Rivers Resource Conservation and Development Council 17
Kenai Peninsula Economic Development District 19
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Northwest Arctic Borough Economic Development Commission 25
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Southwest Alaska Municipal Conference 31

ARDOR CELEBRATING 25 YEARS 1988 – 2013

2013 is a milestone anniversary for the Alaska Regional Development Organization (ARDOR) Program as it celebrates its Silver Jubilee. Twenty-five years ago, the 15th Alaska State Legislature established the ARDOR Program and designated the Alaska Department of Commerce, Community, and Economic Development (DCCED) as its administrative agency (1988). The founding purpose was to create a network of regionally-driven organizations to plan and support regional and local economic development. In the years following, many regions were empowered to form regional entities that quickly became known as ARDORs and subsequently eligible for annual non-competitive ARDOR Program state grants.

Over the years, the ARDOR Program has provided critical support needed for local leaders to develop economic development strategies, implement initiatives, and provide regional leadership. At minimal expense, the State of Alaska provides support for local leaders to gather, mobilize, and execute initiatives to improve Alaska's statewide, regional, and local economies. The ARDOR Program is the State of Alaska's contribution to regional initiatives for developing Alaska's economy – meeting the founding intent of the 15th Alaska State Legislature. Notably, the ARDOR Program is scheduled to sunset in June 2013 if not reauthorized by the 28th Alaska State Legislature.

After 25 years, several amendments, and multiple legislative reauthorizations, ARDOR Program statutory and regulatory provisions still reflect the State of Alaska's founding principles and perspective regarding community and economic development. Namely, local leaders understand regional and local conditions, challenges, and opportunities and are best suited for leading efforts to improve regional economies and community quality of life.

Copper Valley Development Association:
1st Rural Alaska Governor's Family Picnic

The Copper Valley Development Association was [illegible] to organize the 1st rural Alaska Governor's Family Picnic. With nearly 700 people in attendance, Copper Valley was showcased to Governor Parnell and 11 state department commissioners. The picnic [illegible] suppression infrastructure, limited access to public lands, and high cost of energy.



Photo courtesy of CVDA

Jason Hoke, Gina Hoke, First Lady Sandy Parnell, and Governor Sean Parnell

ARDOR PROGRAM

PROGRAM MISSION

The ARDOR Program's mission has remained consistent throughout the years: to encourage the formation of regional development organizations to prepare and implement regional development strategies (Alaska Statute 44.33.895). Through regional development strategies, local knowledge, and coordinated implementation, ARDORs champion economic development planning for Alaska's regions and communities by leveraging baseline support provided by the State of Alaska. Qualified ARDORs receive an annual operating grant and ongoing technical assistance from DCCED, which serves as the financial and managerial foundation of the ARDOR Program.

Lower Kuskokwim Economic Development Council: *Supporting Artists*

During fall 2012, the Lower Kuskokwim Economic Development Council assisted several local entrepreneurs applying for assistance through the *Best in the West* small business competition, sponsored by the University of Alaska Fairbanks – Kuskokwim Campus, Association of Village Council Presidents, Donlin Gold LTD, and other donors. Moses Tulim, a Chevak artist, applied for funds to purchase ivory and wood carving tools and supplies to start a small business and was awarded $3,470 to begin his first self-employment opportunity. Starting a business in rural Alaska is challenging and the *Best in the West* competition provides critical revenue for jump starting businesses across the Yukon-Kuskokwim Delta. Notably, eight of the past eleven "Best in the West" winners (2009 – 2012) are still in operation.

Since 1988, ARDORs have provided customized economic development leadership, services, and planning resources for Alaska's regions, communities, and businesses. ARDORs have become the primary entities responsible for producing economic development planning documents relied upon by state and federal officials for decision-making and resource allocation purposes. Examples of ARDOR-produced planning documents include:

- comprehensive economic development strategies
- economic development plans
- visioning documents
- economic base analyses
- economic indicators
- community and regional profiles
- community and regional asset maps
- industry impact analyses

Many ARDORs expand economic development services by qualifying for other state and federal government funding. Several ARDORs also generate significant funds via private-sector fundraising and membership dues. ARDORs have achieved additional federal designations including economic development districts (EDD) and resource conservation districts (RCD). ARDORs have also developed municipal and private memberships based on the unique needs, qualities, and capabilities of each region. As the primary regional economic development planning entity and State of Alaska partner, ARDORs deepen state and federal understanding of local needs and expand the economic development capacity of Alaska's communities and regions.



ARDOR PROGRAM

STATE INVESTMENT

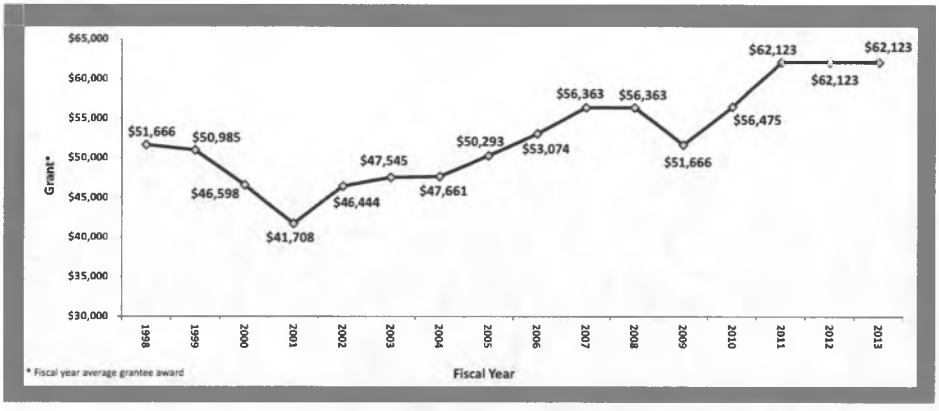
Each year, the Alaska State Legislature appropriates funding to the Alaska Regional Economic Assistance Program. The appropriation is equally distributed to ARDORs as non-competitive grants based on an annual work plan that includes (Alaska Administrative Code 3 AAC 57.080):

- Providing services designed to encourage economic development in local villages, communities, and businesses;
- Collecting and distributing economic information relevant to the region; and,
- Serving as an effective liaison between state government and the region.

For the past 15 years, ARDOR Program annual grant awards have ranged from $41,708 to $62,123 per year to each ARDOR. Notably, as more regional development organizations achieve ARDOR-status and request state grant funds, the total ARDOR Program appropriation is shared by more entities – sometimes resulting in year-to-year funding reductions. Over time, the legislature has steadily increased the total ARDOR Program appropriation to accommodate additional ARDORs, rising managerial and operations costs, and increased demand for ARDOR services.

During fiscal year 2012, each of the 12 ARDORs received $62,123. To qualify for a grant, ARDORs are required to provide an additional 20 percent match funds from non-State of Alaska sources. State funds are combined with federal funds, private-sector funds, and in-kind contributions to create non-profit economic development planning entities that serve as strong regional voices that advance regional economic well-being.

Fiscal Year 1998 - 2013: ARDOR Program Annual Grant



ARDOR PROGRAM

EFFECTIVE LEVERAGING

ARDORs use state government grant funds to leverage federal grants, local grants, tribal contributions, and private-sector sponsorships. During fiscal year 2012, the State of Alaska invested a total of $1,026,507 including ARDOR Program and other state funds. ARDORs used state funds to generate an additional $4,493,035. In short, ARDORs collectively leveraged $4.38 for every $1.00 the State of Alaska invested.

In total, ARDORs generated $5,519,542 for fiscal year 2012, including all public and private-sector revenue. The State of Alaska contributed less than one-quarter of total ARDOR revenue (19%). The private sector contributed more than the State of Alaska at nearly one-quarter (24%) of all ARDOR revenue. In-kind contributions, or the financial equivalent, represents less than ten percent (9%). Notably, one-third of ARDORs combined revenue portfolio includes all other revenue including tribal funds, investment revenue, sponsorships, and conference fees.

Anchorage Economic Development Corporation: *Growing Commercial Activity*

The Anchorage Economic Development Corporation (AEDC) assisted several major national chains looking to enter the Anchorage market. Staff worked with AutoZone, the Lockheed Martin Corporation, Bass Pro Shop, Verizon, and several other national companies by providing research, local connections, event planning, and assistance interfacing with state and local government. These companies committed to creating over a dozen new businesses, thousands of new jobs, and millions of dollars in investment in Southcentral Alaska.



Site selector Alison Benton meeting with Kenai Peninsula College officials

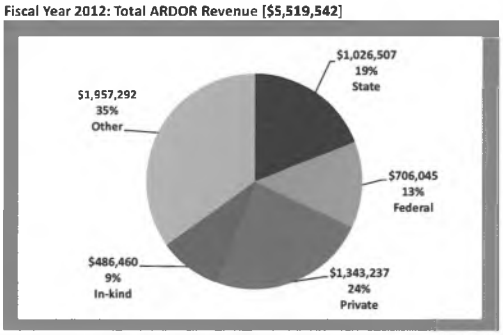
Photo courtesy of AEDC



Southeast Conference 2012 Annual Meeting, Craig High School

Photo courtesy of Southeast Conference

Fiscal Year 2012: Total ARDOR Revenue [$5,519,542]



ARDOR PROGRAM

REGIONS

ARDORs range in size from the Municipality of Anchorage to the sprawling Southwest and Southeast Regions. Notably, several rural regions do not currently have designated ARDOR organizations including the Arctic Slope, large expanses of the Interior, and the lower Yukon sub-region of Western Alaska.

During 2013, it is anticipated the Association of Village Council Presidents (AVCP) will resubmit an application to incorporate the Lower Yukon Economic Development Council (LYEDC) to advocate for the economic well-being of communities and residents in the lower Yukon sub-region of Western Alaska. The addition of this newly-created ARDOR will increase the total to 13 organizations, sharing a $750,000 State of Alaska grant to operate robust economic development planning organizations. Notably, DCCED continues to engage in discussion and promote ARDOR formation for the Interior and Arctic Slope Regions, as envisioned by Alaska Statute 44.33.895.

Alaska Regional Development Organizations Regions



ARDOR PROGRAM

SERVICES

As partners of the State of Alaska and leaders of regional economic development efforts, ARDORs serve as conduits to a network of economic development programs and support services for their regions, communities, and businesses. Services include economic development planning, professional and technical training, business planning, business consultation, and research. ARDORs also serve as a common voice for local and tribal governments.

- ARDORs provide services to Alaskans spanning 325,150-square-miles, or 55 percent of Alaska's total land mass.
- ARDORs represent an estimated 242 communities, or 76 percent of all Alaska's communities.
- ARDORs advocate for the benefit of approximately 581,000 people, or 82 percent of Alaska's total population.

Although ARDORs have much in common and implement similar scopes of work, the form and function of each ARDOR is customized to the region. Decisions are made by elected or appointed boards of directors that reflect the economic diversity and character of the region. ARDORs respond and adapt to local and regional economic development needs and priorities by offering services that are responsive to region-specific opportunities and challenges.

Southwest Alaska Municipal Conference: ***Leading STEM Education Activities***

STEM (i.e., science, technology, engineering, and math) training and education is a valuable strategy, especially in Southwest Alaska where current and future high-paying jobs are largely tied to the physical environment. Southwest Alaska Municipal Conference has been working with school districts to promote mariculture, energy, aerospace, robotics, and environmental science fields with identifiable benefits to students and the local workforce through increased economic opportunity and marketable skills. Through the AmeriCorps VISTA Program, SWAMC's recruited VISTA volunteer encourages public and private sectors to implement hands-on activities that are both valuable and fun for anyone interested in learning.

M/V Susitna at the Ketchikan Shipyard and Drydock



Photo courtesy of Southeast Conference

ARDOR PROGRAM

WORK PLANS

Each ARDOR provides services for its region, as guided by Alaska Statute (44.33.895(a)(5)) and Administrative Code (3 AAC 57.080):

- Provide services designed to encourage economic development in villages, communities, and businesses.
- Collect and distribute economic information relevant to the region.
- Participate in state marketing campaigns and join state trade missions that are relevant to the region.
- Develop and implement strategies to attract new industry, expand international trade opportunities, and encourage tourism.
- Serve as an effective liaison between the State of Alaska and the region.

Bering Strait Development Council:

Facilitating Business Startup

Owner Erin Forton started Nome's Bering Tea Company, a coffee shop that provides a relaxing and inviting atmosphere in which to enjoy tea, coffee, and baked goods. She worked with the Bering Strait Development Council and Kawerak's Community Planning and Development Department to create a business plan and acquire seed money to finance the startup business. Bering Tea Company opened in May 2012 and has enjoyed steady business through catering services around town. The business has already extended its hours and hired additional part-time assistance resulting in additional Nome employment.

Each year ARDORs develop customized work plans that contain goals, objectives, and strategies for addressing regional economic development needs:

- Facilitate development of a healthy regional economy that results in sustainable business growth, new business investment, and economic diversification.
- Identify and work to eliminate regional economic development barriers.
- Develop and implement a comprehensive economic development strategy or participate in the creation and implementation of a strategy.
- Coordinate regional planning efforts that result in new employment and business opportunities.
- Work to enable multiple communities to collaborate and pool limited resources.
- Strengthen partnerships with public, private, and non-government organizations.
- Establish boards of directors that represent regional economic, political, and social interests.
- Provide technical assistance to encourage business startup, retention, and expansion.

Weighing Kuskokwim River salmon for delivery to Coastal Villages Seafoods



Photo courtesy of LKEDC

As provided by Alaska Administrative Code (3 AAC 57.090), ARDORs are required to develop and implement regional economic development strategies or similar economic development plans. These strategies or plans are commonly referred to as comprehensive economic development strategies (CEDS) that satisfy the following requirements:

- Fact-gathering, to assure the region understands the current development situation.
- Identification of potential resources that serve as assets for economic development initiatives.
- Establishment of goals and objectives to guide direction of economic development activities.
- Production of a strategy for regional and local economic development that includes a work plan detailing the methods, resources, responsibilities, and schedules for implementing the strategy.
- Development of a set of regional and local economic profiles for every community within the region.

Anchorage Economic Development Corporation



Bering Strait Development Council



Copper Valley Development Association



Fairbanks North Star Borough Economic Development Commission



Interior Rivers Resource Conservation and Development Council



Kenai Peninsula Economic Development District



Lower Kuskokwim Economic Development Council



Matanuska-Susitna Resource Conservation and Development Council



Northwest Arctic Borough Economic Development Commission



Prince William Sound Economic Development District



Southeast Conference



Southwest Alaska Municipal Conference

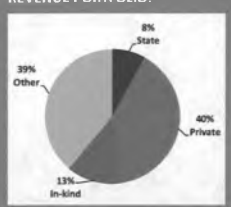


Note: Click on image to view or download the full document.

AEDC
Anchorage Economic Development Corporation

STAFF:
Bill Popp, President and CEO
Jon Bittner, Vice President
Valerie Lindstam, Communications Director
Ruth Glenn, Development Director
Will Kyzer, Business and Economic Development Assistant Director
James Starzec, Research Coordinator
Meaghan Gould, Executive Assistant

REVENUE PORTFOLIO:



CONTACT:
510 L Street, Suite 603
Anchorage, Alaska 99501
(907) 258-3700
www.aedcweb.com

ARDOR SINCE 1989

FOLLOW:

MISSION: *Growing and diversifying the Anchorage economy.*

The Anchorage Economic Development Corporation (AEDC) incorporated in 1987 to advocate for economic development and diversity in the Anchorage bowl. During 1989, it evolved into a member-based 501(c)6 non-profit corporation and is now comprised of more than 230 member companies. Today, AEDC provides a variety of economic development support for the greater Southcentral Region including research, education, business consulting, startup financing, and other assistance focused on encouraging existing businesses, growing new industries, and attracting new businesses.

The ARDOR Program is an important part of AEDC's mission because it links the organization to other ARDORs and it provides a centralized framework from which all ARDORs can operate, share information, and assist each other. ARDOR Program funding allows AEDC to support additional programs and initiatives including regional site selector familiarization tours and other efforts. The ARDOR designation also provides international entities interested in Alaska a measure of reassurance, especially Asian countries where government partnerships are critical to doing business. This has allowed AEDC to significantly expand its international trade offerings and interactions.

Serving Anchorage and partnering with the greater Southcentral Region including the Matanuska-Susitna Borough and the Kenai Peninsula Borough.



ARDOR PROGRAM

MANAGEMENT

Director: Bill Popp



Bill Popp has spent more than 35 years in both the private and public sectors in Alaska. As AEDC's president and CEO, he sets the strategic direction in marketing Anchorage and Alaska to companies and global industries considering Anchorage as a place to do business. Bill is currently chairman of the statewide Broadband Task Force and is a board member of the Anchorage Chamber of Commerce, Anchorage Convention and Visitors Bureau, Anchorage Downtown Partnership, Alaska Partnership for Economic Development, and Anchorage Concert Association.

Board of Directors:

Greg Pearce*
Joseph Everhart*
Timothy Vig*
Marilyn Romano*
Michael Todd*
Dale Wade*
Scott Hansen*
David Hamilton*
Chris Brown*
Suzanne Cherot*
Tom Pennington*
Terry Bailey*
Sheri Buretta*
Sophie Minich*
Bob Heinrich*
Stewart Osgood*
Dale Pittman*
Dale Shaw*
John Hoyt*
Raquel Edelen*
Michael Prozeralik*
Dennis Mitchell*
James Hasle*
Mark Liland*
Lynn Henderson*
Bruce Bustamante*
William Dann*
Kirsten Schultz*
Lon Wilson*
George Lowery*
Jack Sheppard*

*Private Sector

Membership: AEDC is composed of 230 member businesses representing a broad cross-section of Alaska's economy including oil and gas, telecommunications, medical services, transportation, high-tech, film, and many other sectors.

SELECT ACTIVITIES

Research and Analysis

- Created a dedicated research department to assist local and out-of-state businesses with analytics, market analysis, and other research services. In the short time the department has been operating, it has created several advanced research documents and assisted several dozen businesses.

Economic Forecast Luncheons

- Hosted two of Alaska's largest business luncheons, attracting over 1,500 representatives including local businesses, policy makers, and economic development organizations. 2012 featured speakers included Steve Forbes, chairman and editor-in-chief of Forbes Media, and Robert Reich, current University of California – Berkeley professor and former US Secretary of Labor.

Long-Range Planning

- Successfully launched the *Live. Work. Play.* initiative to make Anchorage the #1 place to live, work, and play in the nation by 2025. AEDC and its partners identified more than 30 quantitative metrics used to compare Anchorage to the largest city in each state and the District of Colombia. Community champions have been recruited to implement individual metrics to make Anchorage an even more vibrant and livable city.

Site Selection

- Expanded www.AlaskaProspector.com offerings to include the Fairbanks North Star Borough, Matanuska-Susitna Borough, and the Kenai Peninsula Borough. This Internet tool not only provides a wealth of searchable information on available commercial properties, it also allows users to analyze labor, workforce, and business information using a graphical map interface. The tool is free for users and now covers all of Southcentral Alaska and the greater Fairbanks area.

Lockheed Martin Corporation Assistance

- Hosted a supplier's conference for the Lockheed Martin Corporation to introduce potential local partners for their upcoming Kodiak-based aerospace program. More than 30 suppliers and support organizations attended the all-day conference to learn about Lockheed's projected needs, obtain guidance on how to become an accredited Lockheed supplier, and other useful information.

Site selector Jim Kemp visiting the State of Alaska's Kodiak Launch Complex.



Photo courtesy of AEDC

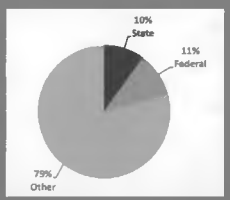
ARDOR PROGRAM

KAWERAK, INC

STAFF:

Bryant Hammond, Program Director
Alice Bioff, Business Planning Specialist
Walter Rose, Energy Specialist
Simon Ellanna Strickling, Planning and Development Specialist
Trisha Walters, E-Commerce Technician
Scott Hinchliff, Regional Grants Specialist

REVENUE PORTFOLIO:



CONTACT:

Kawerak, Incorporated
P.O. Box 948
Nome, Alaska 99762
(907) 443-4248
www.kawerak.org

MISSION: *Improving the quality of life in the Bering Strait Region through employment and economic opportunity.*

The Bering Strait Development Council (BSDC) was established as an ARDOR in 1997 to coordinate economic development planning, encourage business startup, and assist businesses with planning and management challenges. Operating as a part of the larger Kawerak non-profit organization, BSDC delivers business and community planning services, energy development technical assistance, e-commerce coordination and education, and grant writing assistance for Bering Strait communities. Most importantly, BSDC serves as a forum for discussing economic development challenges and provides guidance to Kawerak's Community Planning and Development Department.

BSDC accomplishes its mission through a combination of federal, state, and tribal funding support; ARDOR Program funds account for only ten percent of BSDC's revenue portfolio. With funding from multiple sources and Kawerak's organizational capacity, BSDC provides comprehensive planning services for individual businesses and communities. Notably, BSDC is the only provider of business and economic development planning service in the Bering Strait Region. For more than 15 years, BSDC staff have built relationships with businesses across the region, oftentimes serving as the first point of contact when management challenges arise.

Serving the Bering Strait Region including 20 federally-recognized tribes in 16 isolated communities spanning Norton Sound, the Seward Peninsula, Saint Lawrence Island, and Diomede Island.



ARDOR PROGRAM

MANAGEMENT

Director: Bryant Hammond



Bryant Hammond joined Kawerak in early 2011 as a planning and development specialist and was quickly named director of BSDC. Bryant has a bachelor of arts in literary studies and a master of science in geography.

Board of Directors:

Larry Smithhisler*	Gilbert Tocktoo
John Odden*	Merlin Henry
Scott Johnson*	Axel Jackson
Kevin Zweifel	Kirstin Timbers
Bob Mocan	Jessa Jennetten
Josie Bahnke	Larry Pederson *
Robert Keith	Barb Amarok

*Private Sector

Membership: BSDC is comprised of leaders from public and private sectors, as well as geographic subregions throughout Norton Sound and the Bering Strait Region. BSDC represents diverse interests of the Bering Strait Region, including fisheries and mining interests, tourism and transportation organizations, regional non-profits, Native corporations, financial institutions, the housing authority, and workforce development.

SELECT ACTIVITIES

Economic Development Planning

- Developed local economic development plans for three communities and drafted plan updates for an additional three communities. BSDC works with local and regional entities to develop local economic development plans that serve as roadmaps for local community development.

Business Planning and Assistance

- Responded to more than 100 small business information requests and assisted 20 clients in completing business plans. Coordinated business startup and planning workshops in Nome and on Saint Lawrence Island, as well as youth involvement in Alaska Lemonade Day.

Backhaul and Recycling

- Provided guidance for Kawerak's Backhaul and Recycling Program. Now in its third year, the program has removed more than 20,000 pounds of hazardous materials from the region and increased local capacity in handling hazardous materials while providing one to two jobs in nearly every community in the region.

Energy Advocacy

- Kept Bering Strait stakeholders apprised of energy issues while providing assistance in the development of projects focused on reducing the cost of energy. BSDC is a regional leader in energy planning and is currently undertaking a two-year strategic energy planning project.

Grantsmanship

- Supported community efforts at developing proposals and securing funding for projects identified in local economic development plans through training, financial assistance, and technical assistance.

Edwin Kotongan of Elim, Dora Davis of Golovin, and Virginia Washington of Saint Michael do some preliminary planning for a workforce development project.

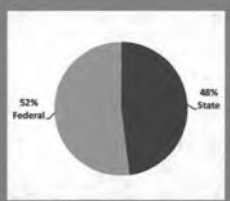


Photo courtesy of BSDC

ARDOR PROGRAM

STAFF:
Jason Hoke, Executive Director
Sandra Wagner, Administrative Assistant

REVENUE PORTFOLIO:



CONTACT:
Mile 111 Richardson Highway
P.O. Box 9
Glennallen, Alaska 99588
(907) 822-5001
www.coppervalley.org

MISSION: *Facilitating public-private partnerships to improve quality of life through promoting economic development while protecting cultural and natural resources.*

Without a regional form of government, the Copper Valley is without a centralized point of coordination for regional economic development activities. The Copper Valley Development Association (CVDA) fills this void by serving as a regional organizer and providing a critical link between federal and state government agencies and regional organizations and businesses. As a state-designated ARDOR, CVDA serves as a public-private partnership to address natural resource and economic development opportunities throughout the Copper Valley by gathering and disseminating information, acting as a liaison between private and public sector entities, and promoting self-sufficiency through development and wise use of sustainable resources.

CVDA assists all Copper Valley businesses, organizations, and residents by promoting funding opportunities, facilitating regional planning, and providing business consultation services. Over the past 20 years, ARDOR Program funds have been used to leverage an additional $1,000,000 from key partners including the US Department of Agriculture, US Economic Development Administration, and various private-sector entities.

Serving the Copper Valley including 22 communities spanning 22,000 square miles.



ARDOR PROGRAM

COPPER VALLEY DEVELOPMENT ASSOCIATION

MANAGEMENT

Director: Jason Hoke



Jason Hoke arrived in Copper Valley in 1996 as a teacher and administrator in Chistochina for the Copper River School District. Jason later served as tribal administrator for Cheesh'na Tribal Council. He has a bachelors of arts in sociology/criminology, masters of science in special education/ behaviorism, and graduate work in behavioral psychology. Jason has experience working with federal, state, municipal, tribal, and private entities throughout the United States, in a multitude of professional capacities. Jason was named executive director of the CVDA during 2010.

Board of Directors:

Gary Hay
Meg Jensen*
Theresa Absher
Sheila Hay*
Pat Anderson*
Kris Winter*

*Private Sector

Membership: As a nonprofit, membership-based organization, CVDA's foundation of support and member participation spans all aspects of Copper Valley community life including small businesses, local organizations, utility companies and services, agricultural enterprises, educational institutions, tribal organizations, medical services, and state and federal organizations. Membership is also open to individuals.

SELECT ACTIVITIES

Energy Leadership

- Assumed lead responsibility for energy planning throughout the Copper Valley. Hosted a regional conference that convened 30 stakeholders to identify strategies to reduce long-term power cost, fuel use, and transportation costs while improving energy system reliability. Regional consensus on priority projects was also built through in-depth community consultation. Notably, several energy audits and renewable energy feasibility studies were funded through CVDA's assistance efforts.

Biomass Development

- Championed development of locally-owned and operated biomass industry to lower residential heating costs and support workforce development. With over 1,000,000 acres of harvestable beetle kill available, equating to 40 to 120 tons of fuel per acre, the Copper Valley benefits from further development of this timber resource. CVDA facilitated numerous stakeholder meetings to stimulate discussion and promote environmentally-sound timber resource harvest.

Agriculture Facilitation

- Worked towards strengthening local production and distribution of Copper Valley produce through partnerships with the State of Alaska and US Department of Agriculture. A distribution network between Matanuska-Susitna Valley, Copper Valley, and Valdez was established to provide local producers with a market and regional residents with access to produce at affordable prices. CVDA is currently conducting an in-depth feasibility study of controlled environment agriculture technology to prolong the growing season and increase farming profitability.

Tourism Promotion

- At the crossroads of the Glenn and Richardson Highways, the Copper Valley has significant potential for Alaska's tourism industry. Working closely with the local chambers of commerce and tourism businesses, CVDA continues to pursue methods of increasing traffic and total visitation throughout the region. Over the past year, CVDA reviewed regional tourism studies and drafted a regional plan to improve marketing efforts and increase the region's visibility in the statewide tourism industry.



Photo courtesy of CVDA

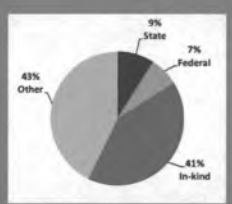
1st annual Copper River Regional Energy Conference, Biomass Panel speakers Thomas Deerfield, Peter Crimp, Bill Wall, and Glenn Holt

ARDOR PROGRAM

FAIRBANKS NORTH STAR BOROUGH ECONOMIC DEVELOPMENT COMMISSION

STAFF:
Chris Storhok, Community and Economic Development Specialist

REVENUE PORTFOLIO:



CONTACT:
P.O. Box 71267
Fairbanks, Alaska 99707
(907) 459-1351
EconomicDevelopment@co.fairbanks.ak.us
www.co.fairbanks.ak.us/mayor/EconomicDevelopment/default.htm

MISSION: *Maintaining a vibrant and sustainable community.*

The Fairbanks North Star Borough was incorporated during 1964. Approximately 15 years later, regional economic development planning was officially integrated into the borough's portfolio of municipal services with the founding of the Economic Development Commission (1980). Today, the Fairbanks North Star Borough Economic Development Commission (FNSBEDC) is comprised of nine commissioners appointed by the borough assembly. The organization is housed in the mayor's office with a full-time dedicated community and economic development specialist.

By municipal ordinance, FNSBEDC is charged with coordinating economic development initiatives that increase employment opportunities and improve the borough's standard of living, quality of life, and overall urban and rural sustainability. Every five years, FNSBEDC develops a comprehensive economic development strategy that is adopted into the borough's long-term regional comprehensive plan. The organization is supported by a combination of federal, state, local, and private-sector investment; ARDOR Program funding represents less than ten percent of total revenue (9%). The ARDOR Program funds FNSBEDC activities and provides a network of regional directors that share information, collaborate on mutually-beneficial projects, and develop partnerships to carry out projects of statewide importance.

Serving Fairbanks North Star Borough communities and businesses including nearly 100,000 residents, two cities, and unincorporated communities spanning more than 7,000 square miles.



ARDOR PROGRAM

MANAGEMENT

Director: Chris Storhok



Chris Storhok has worked for the Fairbanks North Star Borough Mayor's Office since 2004, serving first as the grants coordinator and ascending to directorship of the borough's Economic Development Commission in 2011. Chris holds a master of science degree from the University of Idaho. Prior to relocating to Alaska, Chris served as the rural development director for Latah County, Idaho.

Board of Directors:

Luke Hopkins
Jerry Cleworth
Karen Clark*
Howard "Buzz" Otis
Fred Schlutt
Paul Robinson*
Jeff Bizzarro
John Davies
Matt Want

*Private Sector

Membership: FNSBEDC membership is composed of nine board members appointed by the borough assembly to represent the economic, political, and social interests of the greater Fairbanks area. Commission members generally include borough economic interests including small business, financial institutions, mining industry, transportation, and utilities.

SELECT ACTIVITIES

Agriculture Leadership

- Assumed leadership role in promoting locally-grown agricultural products and supporting an industry cluster. Access to local produce is a food security issue and economic development challenge for Interior Alaska. During fiscal year 2012, FNSBEDC invested significant effort in furthering the development of the agriculture industry across the Interior including multiple projects. FNSBEDC recruited and placed an AmeriCorps VISTA volunteer at Calypso Farms and Ecology Center to examine the potential of expanding sustainable agriculture practices in neighboring rural communities and promoting locally-grown products. FNSBEDC also led efforts to establish an agriculture industry cluster comprised of growers, consumers, and suppliers.

Buy-Local Promotion

- Partnered with the Fairbanks Economic Development Corporation to design and execute a buy-local campaign. Buy-local, as applied in the greater Fairbanks area, consists of promoting local business ownership, consumption of locally-produced goods, social equity, and environmental stewardship. Relying on locally-produced goods also reduces Fairbanks' dependency on imported goods, thereby reducing total transportation costs.

Forest Products Diversification

- Worked to reduce energy costs by completing critical studies and exploring alternative energy options. During fiscal year 2012, the FNSBEDC completed a natural gas distribution study exploring options for rapid expansion of a borough-wide natural gas distribution system. The FNSBEDC also collaborated with the US Department of Energy to explore growth potential for geothermal, wind, and biomass energy. Pellets and other forms of woody biomass continue to offer growth potential as heating costs continue to escalate across the Interior.

Chena Hot Springs Resort greenhouse



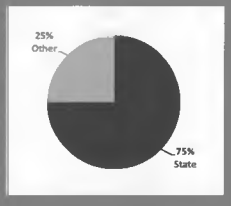
Photo courtesy of FNSBEDC

ARDOR PROGRAM

Interior Rivers R C & D Council, Inc.

STAFF:
Angela Morgan, Executive Director

REVENUE PORTFOLIO:



CONTACT:
P.O. Box 309
Aniak, AK 99557
(907) 675-4599
www.interiorrivers.org

ARDOR SINCE 2001

MISSION: *Creating long-term jobs and improving village living standards on behalf of all residents.*

The Interior Rivers Resource Conservation and Development Council (IRRCDC) incorporated more than ten years ago to guide economic development, protect the environment and subsistence resources, and promote cultural heritage (2001). While the organization has been dissolved and reestablished in recent years, village leaders remain steadfast regarding the overall vision of improving quality of life and creating employment opportunities for 16 Interior Rivers villages. Notably, total regional population is increasing and providing opportunity for long-term community growth. However, local economies are limited and the region suffers from many challenges associated with Alaska's rural and remote places including high energy costs, limited employment opportunities, and workforce development challenges.

As a region without a borough government, Interior Rivers lacks a region-wide community and economic development planning authority. IRRCDC fills this organizational void by providing a forum for village leaders to assemble, discuss economic development challenges, and select community development priority projects. Similar to other ARDORs located in Alaska's rural areas, the ARDOR Program annual grant is important to the organization's viability. Furthermore, ARDOR Program planning and management assistance encourages IRRCDC's long-term success and implementation of an economic development strategy.

Serving the mid-Kuskokwim and mid-Yukon Regions of Southwest Alaska including 15 villages and approximately 2,500 residents.



ARDOR PROGRAM

MANAGEMENT

Director: Angela Morgan

Angela Morgan served as IRRCDC's interim executive director during 2011 and was named executive director during early 2012. She is a resident of Aniak, a member of The Kuskokwim Corporation's board of directors, and an active participant in Association of Village Council President activities. She is married to Carl Morgan, prior member of Alaska State Legislature's House of Representatives. Through multiple local and regional civic volunteer activities, Angela has long contributed to the well-being of Interior Rivers villages.

Board of Directors:

Wayne Morgan*
Cheryl Jerabek
Robert Walker
Jerry Peterson
Dennis Thomas
Rachel Freireich
Eugene Paul
Ursula Graham
Theodore Gordon
Mary Peters
Arnold Hamilton
Pete Mellick
Betty Turner
Cynthia Navarette
Calvin Simeon
Herman Morgan
Rachel Klein

*Private Sector

Membership: As a nonprofit 501(c)3 organization, IRRCDC relies on development of local and regional partnerships to implement mutually-beneficial economic development planning projects. IRRCDC's membership consists of representatives from tribal government, city government, or individuals with a special interest in community and economic development.

SELECT ACTIVITIES

Management Transition

- Executed a management transition and re-engaged members of the board of directors. After several years of leadership, Nicholas Morgan resigned as IRRCDC's executive director and Angela Morgan was hired. 2012 has largely been a year of leadership transition and capacity building. The executive director attended multiple trainings including *Basic Economic Development Course* organized by the University of Alaska's Center for Economic Development, *Comprehensive Economic Development Strategy Workshop* conducted by the US Economic Development Administration, and customized management training and assistance provided by the ARDOR Program.

Farming Assistance

- Provided assistance to multiple regional farms producing a variety of vegetables. Farming activities are increasing across the Interior and IRRCDC continues to provide technical assistance, supplies, and other services for local growers and producers. Increased effort has been invested to match local producers with consumers and to encourage consumption of locally-grown produce.

Community Profiles

- Progressed in creating community profiles for all Interior Rivers villages including a local business inventory, tribal and city government contact information, and additional local contacts. IRRCDC is considering a partnership with The Kuskokwim Corporation to further develop community profiles into comprehensive community descriptions that also include social data, economic data, physical infrastructure needs, and planning priorities.

Networking

- Nurtured and expanded a professional network enabling IRRCDC to maximize limited resources and pursue development activities for the benefit of the region. IRRCDC continues to work closely with the Association of Village Council Presidents and The Kuskokwim Corporation to execute mutually-beneficial projects.

Trading Store, Crooked Creek

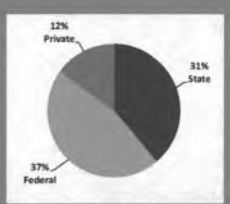


Photo courtesy of IRRCDC

ARDOR PROGRAM

STAFF:
John Torgerson, Executive Director
Carrie Couey, Programs Manager
Heidi Hatch, Administrative Assistant/Bookkeeper

REVENUE PORTFOLIO:



CONTACT:
14896 Kenai Spur Highway, Suite 103A
Kenai, Alaska 99611
(907) 283-3335
www.kpedd.org

ARDOR SINCE 1989
SINCE 1988

MISSION: *Providing leadership to enhance, foster, and promote economic development.*

The Kenai Peninsula Economic Development District is the result of Kenai Peninsula Borough residents and business leaders' desire to create a region-wide economic planning and development organization. An early form of the organization was first incorporated during 1969. This early organization evolved into the Kenai Peninsula Economic Development District (KPEDD) during 1988. Structured to meet criteria prescribed by the US Economic Development Administration, KPEDD gained the Economic Development District federal designation later that year (1988). Notably, KPEDD became Alaska's first state-designated ARDOR one year later (1989).

During its 40-year lifetime, KPEDD has been involved in a variety of projects including public works projects, shellfish industry development, international trade, infrastructure development, and industry recruitment across multiple economic sectors. In recent years, Cook Inlet oil and gas development has increased the demand for a skilled workforce. Historically, Kenai Peninsula residents traveled to Anchorage, Fairbanks, or the Matanuska-Susitna Valley to obtain critical training for high-demand occupations. KPEDD has been a long-time advocate for vocational training and the construction of a facility in the central peninsula sub-region where industry and employers are located. With KPEDD serving as a regional organizer using ARDOR Program support, workforce training is now available in the Kenai Peninsula Borough that will lead to quality jobs for residents.

Serving Kenai Peninsula Borough residents and businesses, including 37 communities and 53,500 residents spanning 16,000 miles.



ARDOR PROGRAM

MANAGEMENT

Director: John Torgerson

John Torgerson has been a Kenai Peninsula resident since 1960. In addition to serving as KPEDD's executive director, John also recently served as chairman of the Alaska Redistricting Board with responsibility for drawing legislative districts. During 2007, John retired from State of Alaska service as deputy commissioner of the Department of Transportation and Public Facilities. Prior to retirement he also served as acting deputy commissioner of the Alaska Marine Highway System, business manager and acting director of the Division of Agriculture, and special assistant to the Department of Transportation and Public Facilities commissioner for labor contract negotiation purposes. Notably, John has also served five years on the Kenai Peninsula Borough Assembly and eight years as a state senator representing Homer, Soldotna, and Seward.

Board of Directors:

Cheryle James *	Fred Esposito *
Bryan Zak	Peter Micciche
Kristine Holdridge *	Hal Smalley
Brendyn Shiflea *	Mike Dye *
Andy Patrick *	Linda Murphy
Tim Dillon	Ristine Casagrande
Diana Spann *	Rick Koch
Jesse Clutts *	*Private Sector

Membership: KPEDD, or an organizational variation, has represented and served in an advisory capacity to the Kenai Peninsula Borough since 1969. The board of directors includes elected officials from the Kenai Peninsula Borough and the cities of Kenai, Soldotna, Seward, Homer, and Seldovia. The board also includes business leaders from across the borough, appointed to represent the region's economic sectors. As a 501(c)4 nonprofit organization, KPEDD provides services to any resident or business entity located within the borough's geographic boundaries.

SELECT ACTIVITIES

Business Advocacy

- The KPEDD business complex includes a 26,000 square foot Business Innovation Center located on 30 acres of land that provides services to small business tenants in a variety of areas including accounting, business development, state regulation compliance, and networking. After several years of low occupancy, the building is now at 100 percent occupancy due to Cook Inlet oil and gas development activities. Tenants include companies that provide training and safety consulting, oil and gas infrastructure construction, platform catering contract workers, drilling site management, pipeline inspection, and several industry support companies.

Workforce Training and Development

- Oil and gas drilling and development in Cook Inlet and the surrounding onshore areas within the Kenai Peninsula Borough have dramatically increased the need for a well-trained workforce. Arctic Safety Training and Consulting and Alaska Technical Training, tenants of the KPEDD Business Innovation Center, offer a variety of safety training. During 2012, approximately 980 individuals received training and/or certification in Cook Inlet training standards, 40-hour hazwoper, confined space entry and rescue, pipeline radiography, welding inspection, radiation safety, and first aid/CPR in preparation for employment in the oil and gas industry.

Increased Employment

- Several pipeline construction projects within the Kenai Peninsula Borough resulted in a need to hire skilled workers. CONAM Construction and NANA Construction, located in the KPEDD Business Innovation Center, hired 125 workers to complete natural gas and crude oil infrastructure projects. KPEDD tenant, All American Oilfield Services, provides drilling operations and management services and hired an additional 110 employees for ongoing on- and off-shore oil and gas projects.

Economic Forums

- Each year KPEDD convenes the Industry Outlook Forum. The 2012 forum was co-hosted by the City of Homer and held at the Land's End Resort. Speakers from local, state, and the federal government provided an update on ongoing economic development projects. In addition, representatives from the oil, gas, mining, and tourism industry presented updates of their respective activities in the Kenai Peninsula Borough. The event was open to business leaders and residents at no cost due to generous industry sponsorships.

Kenai River Brewing Company can seamer



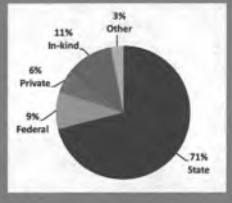
Photo courtesy of KPEDD

ARDOR PROGRAM

LOWER KUSKOKWIM
ECONOMIC DEVELOPMENT COUNCIL

STAFF:
Carl Berger, Executive Director

REVENUE PORTFOLIO:



CONTACT:
640 Radio Street
P.O. Box 2021
Bethel, Alaska 99559
(907) 543-5967
www.lkedc.org

ARDOR SINCE 1991

MISSION: *Strengthening communities through economic development and partnering with local organizations to develop current and future employment opportunities.*

The Yukon Kuskokwim Delta is a region supported by subsistence activities including fishing for salmon, halibut, herring, and whitefish; hunting moose, caribou, and other wild game; gathering tundra plants; and berry picking for salmonberries, blueberries, and cranberries. Fur trapping for beaver, wolverine, mink, otter, and seals provides a source of income for hunters. Commercial fishing also provides significant economic opportunity; however, the region also experiences challenges associated with limited availability of fish and game resources. Over the past decade, the State of Alaska has declared economic disasters when inadequate fish returns led to closures during critical commercial and subsistence seasons.

The ARDOR Program provides opportunity and assistance for local entrepreneurs who are interested in establishing small businesses. Challenges for small business startups include the high cost of energy, fuel, and transportation throughout the region, all significant economic development impediments. Furthermore, renewable resources are oftentimes not cost effective to develop in rural Alaska using currently available technology.

Serving the City of Bethel and 26 tribal communities including lower Kuskokwim River villages, Nunivak and Nelson Island communities, and Bering Sea coastal villages.



ARDOR PROGRAM

MANAGEMENT

Director: Carl Berger



Carl Berger has served as the executive director of LKEDC since the organization was formed in 1991. Carl holds a bachelor of arts degree in economics from California State University, Sacramento. Prior to joining LKEDC, Carl worked for the Yukon Kuskokwim Health Corporation and the Association of Village Council Presidents. During his tenure with LKEDC, Carl established and has maintained the Salmon Quality Enhancement Project, a 15-year effort to improve the quality of local commercial salmon and support higher prices to local fishermen for their catch.

Board of Directors:

Fred Phillip*	Fannie Moore*
Arthur Lake*	Ross Boring
Peter Julius*	Bob Herron*
Alexie Jimmie*	Neal Foster*
Max Angellan*	Lyman Hoffman*

*Private Sector

Membership: As a nonprofit 501(c)3 organization, LKEDC relies on development of local and regional partnerships with municipal and tribal groups, financial institutions, University of Alaska Kuskokwim Campus, and local business organizations. The LKEDC ten-member board is representative of all major interests in the region to ensure all viewpoints are considered and local skills and resources are utilized.

SELECT ACTIVITIES

Planning Collaboration

- Participated in the Alaska Partnership for Economic Development and the Alaska Forward initiative, a private-sector program to identify and promote growth sectors in Alaska's statewide economy.

Broadband Planning

- Participated in planning and mapping for the expansion and utilization of broadband technologies through the terrestrial system currently being installed in Western Alaska. In partnership with Connect Alaska staff, provided monitoring of broadband availability in communities, including readings of signal connectivity times and reliability of connections for Internet and mobile telephone services.

Salmon Enhancement Project Management

- Managed the Salmon Quality Enhancement Project that encourages area commercial fishermen to improve the quality of their catch through better product handling and icing. Improved product quality can demand higher prices, enhancing the value of Alaska-caught salmon.

Partner Organization Networking

- Nurtured an expanded network enabling LKEDC to maximize limited resources and expand understanding of activities and projects important to the Southwest Region.

F/V Eider, Kuskokwim River fish tender



Photo courtesy of LKEDC

ARDOR PROGRAM

Mat-Su, Alaska RC&D
Resource Conservation & Development

STAFF:
Marty Metiva, Executive Director

REVENUE PORTFOLIO:



CONTACT:
991 North Herman Road, Suite 250
Wasilla, Alaska 99654
(907) 373-1016
matsurcd@mataonline.net
www.matsudevelopment.org

ARDOR SINCE 1993

MISSION: *Working to create jobs, expand the economy, and encourage responsible natural resource development to enhance the quality of life for Matanuska-Susitna Borough residents, communities, and institutions.*

The Matanuska-Susitna Resource Conservation and Development Council (MSRCDC) incorporated during 1991 and achieved ARDOR status two years later (1993). MSRCDC's purpose is to provide regional leadership for developing and implementing a plan for the conscientious development, conservation, and use of human and natural resources to increase Matanuska-Susitna Borough economic opportunity. For nearly 20 years, MSRCDC has forged a unique partnership with local, state, and federal agencies and regional private-sector entities to become a leader in community and economic development in the Matanuska-Susitna Valley.

As a non-profit organization, MSRCDC identifies community needs by continuous, informed, and scientific appraisal of local resources and challenges. To resolve challenges, MSRCDC blends government programs with local resources to develop solutions that work. MSRCDC secures funding opportunities to carry out community and economic development work through developing working relationships with numerous public and private-sector organizations. Although ARDOR Program funding is vital to MSRCDC's revenue portfolio, it is a small part of the annual operating budget.

Serving the Matanuska-Susitna Borough with approximately 90,000 residents and 30 communities spanning nearly 25,000 square miles.



ARDOR PROGRAM

MANAGEMENT

Director: Marty Metiva



Marty Metiva has been a voice for community and economic development in the Matanuska-Susitna Valley since arriving in 2003. Prior to joining MSRCDC in 2006, Marty served as a member of the Wasilla City Council and numerous volunteer boards and committees across the region. These wide-ranging relationships and experiences provide Marty with valuable insight to effectively communicate with communities and businesses, assisting in identifying challenges and opportunities that are interwoven with Matanuska-Susitna Borough economic development goals.

Board of Directors:

Darcie Salmon*
Roger Purcell
Nancy Sult
Bonnie Quill
Ralph Renzi
Lynn Gattis*
Lyn Carden
Dan Deedy
Rose Mary Burnett*
DeLana Johnson*
Tiny DePriest
Dick Zobel
Theo Garcia
Jim Huston
Ken Marsh

*Private Sector

Membership: As a 501(c)3 private non-profit, MSRCDC's membership is comprised of organizations which represent non-discriminatory and diverse entities including municipalities, community councils, and chambers of commerce. A large portion of MSRCDC's membership includes at-large members, individuals, private businesses, companies, corporations, or organizations with interest in being actively involved in MSRCDC activities.

SELECT ACTIVITIES

Business Retention

- Partnered with Wasilla and Palmer Chambers of Commerce to develop a formal *Matanuska-Susitna Valley Business Retention and Expansion Strategic Plan* that identifies strengths, weaknesses, opportunities, and threats for businesses across the region. The planning effort produced a focused strategy that will benefit businesses and result in increased local and regional tax base, diversified economy, and new job opportunities.

Regional Collaboration

- Collaborated with Copper Valley Development Association on economic development projects of mutual benefit. A memorandum of understanding was executed with an initial focus on energy and agricultural issues. A draft plan for a valley-to-valley distribution network provides the vision for joint economic development projects and further development of short- and long-term strategic plans.

Recycling

- Assisted ongoing efforts to develop region-wide community recycling outlets. Palmer's Valley Recycling Center currently serves as the hub for Matanuska-Susitna Valley recycling with a small satellite location being developed in Big Lake. MSRCDC provided assistance to develop a long-range business plan and secured funding for the Big Lake recycling location.

Tourism

- Partnered with Knik Community Council and Knik Trail Blazers to identify sections of the historic Iditarod Trail for year-round visitor use. A plan and funding strategy was developed identifying a four-mile section beginning at Knik and ending at the Fish Creek bridge. MSRCDC assisted in securing $200,000 from the Alaska State Legislature for the bridge and recruited project partners to implement trail improvements. Improving the Iditarod Trail for year-round use will create tourism and job opportunities in the fastest growing area of the Matanuska-Susitna Valley.

Salmon Habitat

- Awarded $79,990 by the US Fish and Wildlife Service to restore habitat on multiple school properties, rehabilitate fish habitat on Cottonwood Creek Watershed, create an Alaskan School Habitat Curriculum, and develop a teacher training workshop. Restoration activities provided the foundation for youth to understand the economic importance of salmon. Measureable outcomes included improved habitat for native fish, increased awareness for specie-specific needs, and increased collaboration between students, parents, and community leaders.

Houston Senior Center community garden

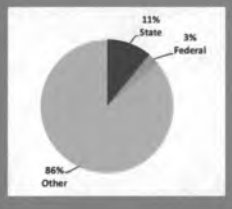


Photo courtesy of MSRCDC

ARDOR PROGRAM

STAFF:
Lincoln Saito, Executive Director

REVENUE PORTFOLIO:



CONTACT:
P.O. Box 1110
163 Lagoon Street
Kotzebue, Alaska 99752
(907) 442-2500
www.northwestarcticborough.org/edc/

MISSION: *Promoting development that is consistent with the region's traditional culture and values.*

The Iñupiat have thrived in Northwest Alaska for thousands of years due to abundant subsistence resources, including clean drinking water, caribou, salmon, sheefish, smelt, crab, moose, wolves, lynx, fox, berries, and other wild plants. Today, activities related to government, mining, health care, transportation, and construction dominate the regional economy. The Red Dog Mine, located 90 miles north of Kotzebue, is the world's largest zinc and lead mine and provides 370 direct year-round jobs and over one-quarter of the Northwest Arctic Borough's wage and salary payroll. Borough residents have the opportunity to participate in the mining industry while also maintaining a subsistence lifestyle.

The Northwest Arctic Borough incorporated during 1986. One year later, the borough established an Economic Development Commission (NWABEDC) to guide economic development planning and activities (1987). For nearly 25 years, NWABEDC has worked to achieve a higher quality of life while protecting Iñupiat cultural values and traditions. As a rural ARDOR located within a borough, the organization is well-situated to develop and implement economic development plans. Federal, state, and borough funds are combined to support NWABEDC activities and projects. Borough assembly and staff serve as a resource for the independent board of directors as they set economic development policy and implement plans. The ARDOR Program is critical to NWABEDC's success because it provides revenue and management support for carrying out economic development activities.

Serving Northwest Arctic Borough residents and businesses, including 7,300 residents in 11 communities spanning 36,000 square miles.



ARDOR PROGRAM

MANAGEMENT

Director: Lincoln Saito



Lincoln Saito has served as the executive director of the NWABEDC for two years. He has resided in the Northwest Region for nearly 25 years. Lincoln first began working with young people of the Northwest Arctic in 1970 as a teacher and counselor at the US Bureau of Indian Affair's boarding school in Wrangell, Alaska.

Board of Directors:

Delores Barr	Colleen Swan
Verna Westlake*	Roberta Jackson*
Tim Gavin	Roy Barr*
Christopher Shockley*	Lincoln Saito
Pauline Harvey	*Private Sector

Membership: NWABEDC membership is composed of nine board members appointed by the borough assembly to represent the economic, political, and social interests of the Northwest Region. NWABEDC members generally include borough economic interests including small business, financial institutions, mining industry, transportation, and utilities.

SELECT ACTIVITIES

Small Business Startup Assistance

- Provided business assistance to residents, located across the region, interested in starting a business. NWABEDC is the region's primary provider of business startup assistance, including coaching new entrepreneurs, providing technical assistance in developing business plans, and providing small grants to support startup activities. During fiscal year 2012, NWABEDC assisted with development of 42 business plans and administration of 48 small grants to fishing enterprises and arts and crafts businesses.

Energy Planning Facilitation

- Facilitated region-wide energy planning. The Northwest Arctic Borough is the region's energy planning leader with the Economic Development Commission providing staff support to carry out planning activities. NWABEDC continues to support the Northwest Arctic Energy Steering Committee, providing data and information gathering services focused on exploring alternative energy resources. NWABEDC also facilitates discussion and planning regarding increased utilization of alternative fuel sources including wind, solar, propane, and ultra low-sulfur diesel. NWABEDC also actively engages with Northwest Region villages to promote a sustainable model of living on local resources, including promotion of innovative cold climate housing and gathering tundra edibles.

Arts and Crafts Promotion

- Expanded the sale of regionally-produced art through continued support for Sulainich (i.e., Kotzebue's Artist Center). NWABEDC provided staff support to complete Sulainich's website, establish a board of directors, and develop policies regarding purchasing, selling, and consignment. During fiscal year 2012, art was purchased for resale from 189 regional artists, representing all 11 borough villages and several neighboring Bering Strait and North Slope Borough Iñupiat communities. Gross sales totaled nearly $250,000 with 100 percent payment made to artists. With Sulainich's early success, NWABEDC is increasing arts and crafts purchases and support for developing artists.

Rainbow Park, Kotzebue



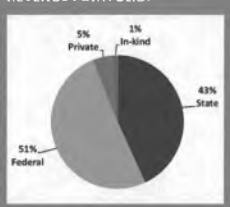
Photo courtesy of NABEDC

ARDOR PROGRAM

Prince William Sound ECONOMIC DEVELOPMENT DISTRICT

STAFF:
Sue Cogswell, Executive Director

REVENUE PORTFOLIO:



CONTACT:
2207 Spenard Road, Suite 207
Anchorage, Alaska 99503
(907) 222-2440
www.pwsedd.org

ARDOR SINCE 1991 SINCE 2001

MISSION: *Providing leadership to enhance, foster, and promote economic development.*

The Prince William Sound Economic Development District (PWSEDD) incorporated more than 20 years ago (1991) to provide economic development leadership for Prince William Sound, including five coastal communities and nearly 7,000 residents. Ten years later, PWSEDD was designated as a federal Economic Development District (EDD) by the US Economic Development Administration (2001). Today, PWSEDD combines federal support, state support, and private-sector investment to provide Prince William Sound with economic development planning services and assistance. The ARDOR Program grant is a critical component of PWSEDD's revenue portfolio and is used to garner additional federal and private-sector support.

As a region without borough government, Prince William Sound lacks a region-wide community and economic development planning authority. PWSEDD fills this organizational void by providing a forum and the capacity for leaders to gather, discuss economic development challenges, and develop economic development strategies. PWSEDD serves as the regional leader for discussing regional economic issues, fostering economic vitality, and job growth through strategic planning and infrastructure development.

Serving Prince William Sound including five communities and nearly 7,000 residents, spanning 15,000 square miles.



ARDOR PROGRAM

MANAGEMENT

Director: Sue Cogswell



Sue Cogswell joined PWSEDD in 1998. She previously served as curator at the Alaska Aviation Museum in Anchorage and as the membership director at the Buffalo Bill Historical Center in Cody, Wyoming. From an aviation family, she is extremely interested in arctic aviation and has traveled to Spitzbergen, Norway to visit landmarks of first polar flights.

Board of Directors:

Dave Dengel*
Dave Cobb*
Marilynn Heddell*
Mark Lynch
Bob Prunella
Chuck Totemoff*
David Totemoff*
Patience Anderson Faulkner*
Jordan Keeler

*Private Sector

Membership: As a nonprofit, membership-based organization, PWSEDD's membership roster includes representatives of major oil and gas companies, utility and communication companies, city and village governmental organizations, visitor and convention bureaus, small businesses, and educational institutions.

SELECT ACTIVITIES

Long-Range Planning

- Completed an update to the *Prince William Sound Comprehensive Economic Development Strategy* (CEDS). The CEDS document guides all regional projects and informs board of directors decision-making. It also provides critical planning guidance for Prince William Sound communities. As the region's primary planning document, it collects public input, prioritizes projects, and provides critical guidance to regional leaders and PWSEDD staff as they pursue projects of economic importance to the region.

Environmental Collaboration

- Collaborated with the Alaska Department of Environmental Conservation, Contaminated Sites Program, to conduct a thorough survey of contaminants in Whittier's General Simon Bolivar Buckner Building. Thorough study is the first step in determining contaminants present in the 280,000-square-foot building and will guide decision-making regarding whether the building should be reclaimed, demolished, or rehabilitated.

Emergency Planning and Preparedness

- Prince William Sound Science Center presented *TsunamiReady* in October 2012, highlighting the basic science of earthquakes and tsunamis, local history, and community preparedness. As follow-up and in collaboration with the Science Center, PWSEDD is working with communities to develop customized emergency response plan toolkits as outlined by the Alaska Department of Military and Emergency Management and endorsed by the Alaska Municipal League.

LNG Port Valdez Promotion

- Promoted Valdez as Alaska's LNG export port. PWSEDD hosted the Alaska Natural Gas Pipeline Summit during September 2012 to focus attention on Valdez as Alaska's most practical and strategic port to export natural gas. As an ice-free and deep-water port, Valdez is ready to become Alaska' LNG export port. The conference was attended by oil and gas leaders, US Senators Lisa Murkowski and Mark Begich, US Representative Don Young, various State of Alaska officials, and potential LNG buyers from Hawaii, South Korea, Indonesia, and Japan.

Buckner Building, Whittier



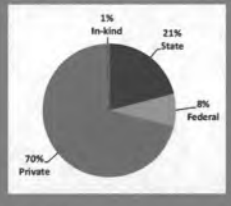
Photo courtesy of PWSEDD

ARDOR PROGRAM

Southeast Conference

STAFF:
Shelly Wright, Executive Director
Cheri Lancaster, Finance Officer
Stacey Skan, Administrator
Elaine Price, Workforce Coordinator
Robert Venables, Energy Coordinator

REVENUE PORTFOLIO:



CONTACT:
612 West Willoughby Avenue, Suite B
Juneau, Alaska 99801
(907) 523-4350
info@seconference.org
www.seconference.org

FOLLOW:

e-news

ARDOR SINCE 1989 SINCE 1989

MISSION: *Working to build a strong economy and healthy communities while maintaining a quality environment.*

Southeast Conference incorporated in 1958, long before the State of Alaska's ARDOR Program was established, to advocate for marine transportation needs of Southeast communities. Southeast Conference became the state-designated ARDOR and the federally-designated Economic Development District, by the US Economic Development Administration, during 1989. Today, Southeast Conference combines state support, federal support, and private-sector investment to become Southeast's economic development planning engine.

The value of Southeast Conference to the region has remained steadfast for more than five decades: it provides a forum and the organizational capacity for Southeast community development leaders to gather, set regional priorities, and implement strategies to improve the social and economic well-being of Southeast Alaska. With Southeast Conference, the region mobilizes, coordinates efforts, and acts with one economic development voice. Although the ARDOR Program grant is a small part of Southeast Conference's annual revenue portfolio, it is meaningful and provides stability for maintaining and supporting organizational operations.

Serving more than 30 communities and spanning more than 450 miles from Yakutat to Metlakatla



ARDOR PROGRAM

MANAGEMENT

Director: Shelly Wright



Shelly Wright has worked for the betterment of Southeast Alaska for nearly 40 years with employment spanning multiple economic sectors including transportation, hospitality, and logging industries. Her experience in Southeast has provided her with a strong connection to the people, knowledge of how they live and work, and the big picture vision. Shelly was named executive director of Southeast Conference in 2007.

Board of Directors:

Janice Hill	Richard Peterson
Gordy Wrobel*	Bryce Dahlstrom*
Tim Rooney	Merrill Sanford
Lori Blood*	Patricia Phillips*
Leo Luczak	Mike Bell
Jim Dinley	Charles Edwardson
Tory Korn*	

*Private Sector

Membership: As a 501(c)6 nonprofit, membership-based organization, Southeast Conference's foundation of contributions and support originates from municipal members, private-sector enterprises, Native organizations, and individual members. Southeast Conference is comprised of 181 members, including 23 unincorporated and incorporated local governments, 32 local economic development organizations, 21 Native organizations and village councils, multiple state and federal agencies, and many businesses and individuals.

SELECT ACTIVITIES

Timber Leadership

- The 2012 Alaska State Legislature awarded $650,000 to Southeast Conference to support ongoing efforts to encourage a fully-integrated and viable Southeast timber industry. Southeast Conference, in collaboration with Alaska Forest Association, is providing regional leadership and organizational capacity to improve workforce quality, advocate for an economic timber supply, and engage in public relations work that promotes the Tongass National Forest as a sustainable timber resource.

Seafood Advocacy

- Southeast Conference continues the long-time tradition of serving as a strong advocate for the fishing industry, providing organizational capacity to convene stakeholder meetings, develop consensus regarding public policy issues, and carry out needed public relations work.

Energy Collaboration

- Collaborated with the Alaska Energy Authority to develop the *Southeast Alaska Integrated Resource Energy Plan*, published during 2012. This regional energy plan provides a vision for energy development in all Southeast communities and will guide energy development in the short- and long-term future.

Solid Waste Assistance

- Assisted Southeast Alaska's Regional Solid Waste Authority with ongoing efforts to develop a solution for region-wide solid waste disposal. To date, a solid waste authority was incorporated and efforts are underway to recruit member communities, select a site, and develop a long-term business plan.

Maritime Facilitation

- Served as a facilitator of Southeast Alaska's maritime industry cluster, comprised of maritime businesses, service providers, and indirect industry support organizations.

Southeast Conference, 2012 Board of Directors orientation



Photo courtesy of Southeast Conference

Oyster pot transport, Peril Strait

Photo courtesy of Southeast Conference

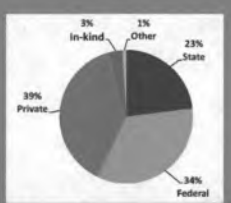


ARDOR PROGRAM

SWAMC
Southwest Alaska Municipal Conference

STAFF:
Andy Varner, Executive Director
Erik O'Brien, Economic Development Specialist
Cameron Dean, STEM Education Coordinator

REVENUE PORTFOLIO:



CONTACT:
3300 Arctic Boulevard, Suite 203
Anchorage, Alaska 99503
(907) 562-7380
www.swamc.org

FOLLOW:

e-news

ARDOR SINCE 1989

SINCE 1992

MISSION: *Advancing the collective interests of Southwest Alaska people, businesses, and communities, promoting economic opportunities to improve quality of life, and influencing long-term responsible development.*

Southwest Alaska Municipal Conference (SWAMC) incorporated in 1988 when municipal leaders forged a partnership to advocate for rural community needs and the responsible development of the region's core economic sector – commercial seafood harvesting and processing. Today, SWAMC remains a critical liaison between state government and regional leaders on matters of economic development planning, with particular regard for commercial fishing, telecommunications, and energy production. SWAMC acts as an economic development facilitator by hosting summits, communicating concerns and opportunities, implementing initiatives, and acting as a unified regional voice.

SWAMC was designated as an ARDOR in 1989 and named a federally-designated Economic Development District (EDD) in 1992. SWAMC leverages ARDOR and EDD support with a membership base consisting of private companies, local governments, and other agencies. Private investors span a wide range of economic sectors, including transport and shipping, aerospace, telecommunications, renewable energy, Native corporations, and oil and gas entities. The ARDOR Program grant is a small portion of the organization's revenue portfolio, but contributes strongly to SWAMC's mission of economic development and advocacy.

Serving more than 50 communities and spanning approximately 1,000 miles from Kodiak to Adak



MANAGEMENT

Director: Andy Varner



Andy Varner joined SWAMC in 2005, and was named executive director in February 2010. Andy has a bachelor of science from the University of Missouri and a master of public administration from the University of Alaska Anchorage. Andy serves as secretary of the Alaska Partnership for Economic Development, chair of Alaska SourceLink's Executive Committee, and member of Alaska Municipal League's Land Use, Resources and Economic Development Subcommittee.

Board of Directors:

Trevor Brown*	Alice Ruby
Lamar Cotten	Louise Stutes
Glen Gardner*	Joe Sullivan*
Patrick Jordan	Kathleen Totemoff
Layton Lockett	Paul Gronholdt*
Shirley Marquardt	*Private Sector

Membership: As a nonprofit, membership-based organization, SWAMC's foundation of contributions, support, and participation originates primarily from municipal members including borough and city governments. Associate members, comprised of for-profit businesses, tribal governments, and other regional organizations, strengthen and broaden SWAMC's role as a public-private partnership.

SELECT ACTIVITIES

Broadband Leadership

- Awarded a USDA Rural Business Opportunities Grant to develop a broadband strategy for Southwest Alaska. SWAMC assembled focus groups across various sectors of the regional economy to discuss broadband limitations and solutions. The resulting strategy identified priority areas for improvement, including formation of a regional technology council, e-commerce training, satellite aggregation among community users, and additional policy recommendations.

Regional Energy Planning

- Signed contracts with the Alaska Energy Authority to develop energy plans for Bristol Bay and the Aleutian/Pribilof Islands. Plans will collect and analyze past energy reports and data, identify stakeholders, inventory and assess available resources, and propose energy alternatives. By working with stakeholders and collecting community input, plans will identify strategies to reduce long-term power costs and dependence on fossil fuels, while improving regional energy systems.

Arctic Opportunities

- Explored the prospect of using the Aleutians as a staging hub for trans-Arctic shipping, stemming from meetings with Lieutenant Governor Mead Treadwell, the Aleut Corporation, and Cities of Adak and Unalaska officials. With the warming of the Arctic Ocean, discussions regarding trans-Arctic shipping are more frequent, but scoping the Aleutians as a hub has yet to be fully explored.

STEM Education Facilitation

- Developed an AmeriCorps VISTA project in which the volunteer serves as the STEM (i.e., science, technology, engineering, and math) coordinator for regional activities. The project's focus is to promote and develop activities and curriculum in schools and communities, and to work with teachers and administrators to make educational programs sustainable. Educational areas of concentration include: ocean sciences, financial literacy and business skills, digital literacy and innovation, and energy education.

Seafood Industry Support

- Served as an advocate, information library, and network collaborator to promote the fishing industry. Participated in activities like the University-Industry Fisheries, Seafood and Maritime Initiative, collaborated with Community Development Quota groups, and monitored state and federal policy discussions to provide a unified voice on important issues. SWAMC also develops economic indicators and resource allocation analyses to inform policy and resource allocation discussions.

SWAMC group, touring the Nikiski LNG Facility.



Photo courtesy of SWAMC

Contributors:
Nicole Grewe, ARDOR Program Coordinator
Division of Economic Development

Jon Bittner, Business and Economic Development Director
Anchorage Economic Development Corporation

Bryannt Hammond, Community Planning and Development Director
Bering Straits Development Council

Jason Hoke, Executive Director
Copper Valley Development Association

Chris Storhok, Economic Development Specialist
Fairbanks North Star Borough Economic Development Commission

Angela Morgan, Executive Director
Interior Rivers Resource Conservation and Development Council

Carrie Couey, Programs Manager
Kenai Peninsula Economic Development District

Carl Berger, Executive Director
Lower Kuskokwim Economic Development Council

Marty Metiva, Executive Director
Matanuska-Susitna Resource Conservation and Development Council

Lincoln Saito, Director
Northwest Arctic Borough Economic Development Commission

Sue Cogswell, Executive Director
Prince William Sound Economic Development District

Shelly Wright, Executive Director
Southeast Conference

Andy Varner, Executive Director
Southwest Alaska Municipal Conference

Editors:
Nicole Grewe, ARDOR Program Coordinator
Division of Economic Development

Dru Garson, Development Specialist
Division of Economic Development

Design:
Gretchen W. Fauske, Business Development Officer
Division of Economic Development



Pelican Harbor

Department of Commerce, Community, and Economic Development
Division of Economic Development
Alaska Regional Economic Assistance Program

Physical Location:
3032 Vintage Park Boulevard, Suite 100
Juneau, Alaska 99801

Mailing Address:
P.O. Box 110804
Juneau, Alaska 99811

Phone: (907) 465-2510
Fax: (907) 465-3767
TDD: (907) 465-5437

Website: www.commerce.state.ak.us/ded/dev/ardor



Report of the 2013 Alaska Minerals Commission



Drill rig on Millrock's Estelle Project, Alaska Range near Rainy Pass
Millrock Resources – Teck American Inc. Joint Venture gold exploration project

The Alaska Minerals Commission

The Alaska Minerals Commission serves in an advisory capacity to the Governor and the Alaska State Legislature. Its role is to recommend ways to mitigate constraints on mineral development in Alaska. This annual report fulfills that mandate.

Commission members are appointed by the Governor, the President of the Senate, and the Speaker of the House.

Current members represent the placer, hard rock, and coal mining industries across the state. Created by the Legislature in 1986, the Commission's authorization continues through 2014.

The Alaska Minerals Commission

Appointed by the Governor

Chairman
William (Bill) Jeffress
bjeffress@srk.com

Bartly Kleven
bartlykleven@lincenergy.com

Karl Hanneman
khanneman@ithmines.com

Charlotte MacCay
cmaccay@aol.com

Larry Westlake, Sr.
westlakel@inutek.net

Appointed by the House

Vice-Chairman
Mark Robinson
mark.robinson1950@gmail.com

Leo Mark Anthony

Gregory Beischer
gbeischer@millrockresources.com

Appointed by the Senate

Dr. Lance D. Miller
lance.miller@nana.com

Robert Retherford
rretherford@alaskaearthsciences.com

Stephen T. Trimble
stephen.trimble@urs.com

Alaska Minerals Commission
2013 Report Introduction

Introduction

The State of Alaska continues to take positive steps to attract mining industry investment. It aggressively defends the state's right to develop its resources, reforms and streamlines regulation, and works with industry to develop transportation and energy infrastructure.

Overall, the actions by the state this past year continue to send the message that Alaska is open for business investment.

These actions signal that responsible mineral resource developers are welcome and will be treated fairly. The state is on the right course and the Commission encourages the administration and Legislature to continue these initiatives.

Alaska Minerals Commission
Recommendations 2013

ISSUE	ACTION ITEM
1. Tax Climate / Resource Revenue Sharing	Reform tax policy for revenue sharing
2. Transportation Infrastructure	Support administration's initiative
3. Education	Support K-12 and college level resource education
4. Federal Intervention	Encourage legislative funding to continue legal relief
5. Division of Geological & Geophysical Surveys (DGGS) Funding	Encourage administrative and legislative funding of DGGS and the Alaska Geologic Materials Center

Tax Climate – Revenue Sharing

Local communities should benefit when a resource-based investment is made in rural Alaska. Whether related to long-term large-scale mining or short-term seasonal prospecting, the economic boost to local economies from mining development is sometimes accompanied by increasing challenges for communities to provide local government services.

Recommendation:

- Portions of the existing statewide mining license tax collected from mining operations, regardless of land ownership, should be allocated to communities near mining developments. Simultaneously, the municipal tax code should be revised to preclude local municipal severance taxes on mineral resources.

Transportation Infrastructure



Roads to Resources

Ports

Leverage private development

Reduces cost of living in rural Alaska

Going in the right direction

Recommendations:

- Continue outreach, environmental studies, engineering studies in northwest Alaska
- Support financing options: public-private partnerships
- Restricted use roads – limited access to subsistence areas
- Investigate transportation corridors

Education







University of Alaska funding, Consolidated Alaska Minerals Initiative (CAMI).

- Build on investment – UA is doing great things and becoming a leading institution
- Provide needed funding for mining engineering and earth science programs
- Collaborative, coordinated, efficient effort needed – support CAMI

Alaska Resource Education – K-12

- Preserve current funding at $100,000 and appropriate $100,000 for Google Earth minerals curriculum

Federal Intervention

Alaskan resource development projects face increasing federal intervention that prevents the State of Alaska from developing its natural resources.

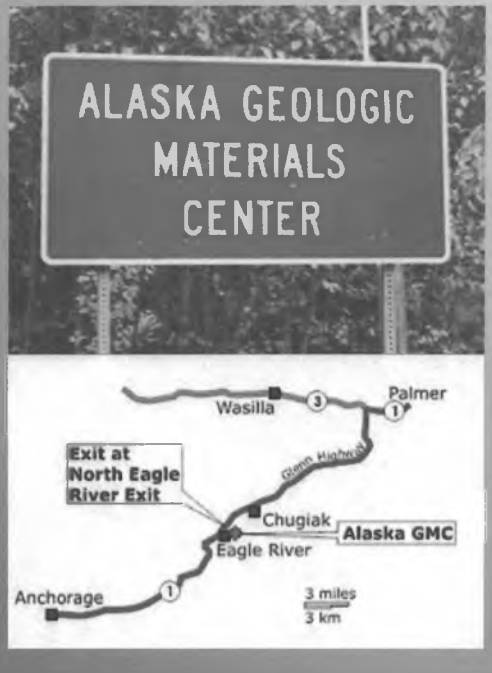
- Federal intervention from legally unprecedented regional assessments targeted at stopping development of large world-class deposits
- The implementation of Emission Control Areas (ECA), which imposes the use of more expensive fuel for all shipping activity within all U.S. coastal waters.

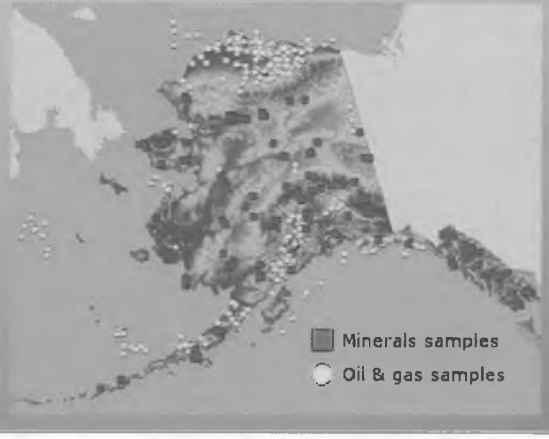
Recommendation:

- To maintain Alaska's right to develop its resources (large and small) and to fend off precedent-setting court cases, the State of Alaska must have funding available for expert witnesses, attorney fees, court costs, and staff resources.

Division of Geological & Geophysical Surveys (DGGS) Funding

There is great value in retaining drill hole samples obtained from mineral and petroleum exploration in Alaska. These specimens provide essential information in the search for ore deposits and petroleum reserves, for re-interpretation of structural and stratigraphic relationships, and for geoscientific research. The current facility in Eagle River is inadequate and cannot expand. A new facility is needed.





Geological & Geophysical Mapping



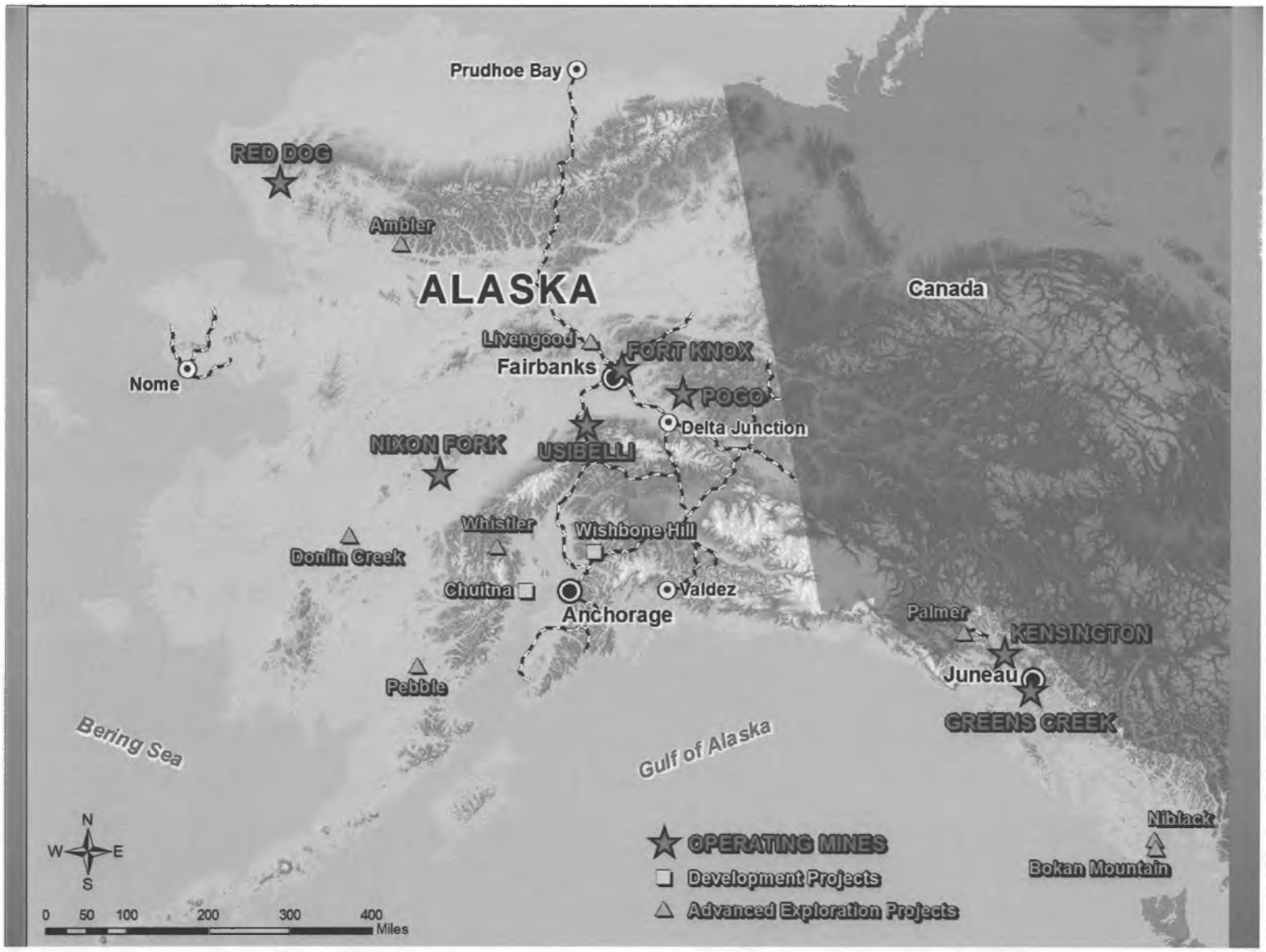


The Airborne Geophysical/Geological Mineral Inventory (AGGMI) program is a multi-year investment to expand the knowledge base of Alaska's mineral resources and catalyze private-sector mineral development. It works. The program products create immediate interest from industry and the state sees direct benefits from mining claim fees.

Issues: Competitive salaries with industry
Funding for surveys

Recommendations:

- Increase DGGS salary levels.
- Encourage administrative and legislative funding of DGGS surveys and materials center.


Prudhoe Bay
RED DOG
Ambler
ALASKA
Canada
Livengood
FORT KNOX
Fairbanks
Nome
POGO
Delta Junction
NIXON FORK
USIBELLI
Whistler
Wishbone Hill
Donlin Creek
Chuitna
Valdez
Anchorage
Palmer
KENSINGTON
Juneau
Pebble
GREENS CREEK
Bering Sea
Gulf of Alaska
Niblack
Bokan Mountain
N
W
E
S
0 50 100 200 300 400
Miles
OPERATING MINES
Development Projects
Advanced Exploration Projects


Mining in Alaska
A growing industry that creates many well-paying jobs in rural and urban areas. It is poised to grow given a supportive business climate.

Report of the 2013 Alaska Minerals Commission



Drill rig on Millrock's Estelle Project
Millrock Resources

Gregory A. Beischer
President & CEO

MILLROCK RESOURCES INC
TSX.V: MRO

Vancouver Office:
Tel: 604.638.3164
Cel: 907.350.9791
Fax: 604.688.9620

750 World Trade Centre
999 Canada Place
Vancouver, BC V6C 3E1

Anchorage Office:
Tel: 907.677.7479
Cel: 907.350.9791
Fax: 907.677.3599

P.O. Box 200867
719 East 11th Avenue, Suite C
Anchorage, Alaska 99520

gbeischer@millrockresources.com
www.millrockresources.com

srk consulting

4710 Business Park Blvd
Suite F-40
Anchorage, AK 99503
USA

www.srk.com

Bill Jeffress
Principal Consultant
(Environmental Management)
T: +1 907 677 3520
C: +1 907 952 6062
F: +1 907 677 3620
E: bjeffress@srk.com

The Alaska Minerals Commission (Commission) serves in an advisory capacity to the Governor and the Alaska State Legislature (Legislature). Its role is to recommend ways to mitigate constraints on mineral development in Alaska. This annual report fulfills that mandate.

Commission members are appointed by the Governor, the President of the Senate, and the Speaker of the House. Current members represent the placer, hard rock, and coal mining industries across the state. Created by the Legislature in 1986, the Commission's authorization continues through 2014.

Appointed by the Governor

Chairman
William (Bill) Jeffress
bjeffress@srk.com

Bartly Kleven
bartlykleven@lincenergy.com

Karl Hanneman
khanneman@ithmines.com

Charlotte MacCay
cmaccay@aol.com

Larry Westlake, Sr.
westlakel@inutek.net

Appointed by the House

Vice-Chairman, Mark Robinson
mark.robinson1950@gmail.com

Leo Mark Anthony

Gregory Beischer
gbeischer@millrockresources.com

Appointed by the Senate

Dr. Lance D. Miller
lance.miller@nana.com

Robert Retherford
rretherford@alaskaearthsciences.com

Stephen T. Trimble
stephen.trimble@urs.com

Introduction

The State of Alaska continues to take positive steps to attract mining industry investment. It aggressively defends the state's right to develop its resources, reforms and streamlines regulation, and works with industry to develop transportation and energy infrastructure. Overall, the actions by the state this past year continue to send the message that Alaska is open for business investment. These actions signal that responsible mineral resource developers are welcome and will be treated fairly. The state is on the right course and the Commission encourages the administration and Legislature to continue these initiatives.

The Commission specifically recommends the following actions on five major issues:

ISSUE:	ACTION ITEM:
1. Tax Climate / Resource Revenue Sharing	Reform tax policy for revenue sharing
2. Transportation Infrastructure	Support administration's initiative
3. Education	Support K-12 and college level resource education
4. Federal Intervention	Encourage legislative funding to continue legal relief
5. Division of Geological & Geophysical Surveys Funding (DGGS)	Encourage administrative and legislative funding of DGGS and the Alaska Geologic Materials Center



Developed wetlands at Fort Knox
Bill Jeffress, SRK

Improve Tax Climate for Mineral Investment and Resource Revenue Sharing

Local communities should benefit when a resource-based investment is made in rural Alaska. Whether related to long-term large-scale mining or short-term seasonal prospecting, the economic boost to local economies from mining development is sometimes accompanied by increasing challenges for communities to provide local government services.

Affected communities should be assisted by a reallocation of the State of Alaska Mining License Tax (AS 43.65). The State of Alaska Mining License Tax applies to all mining operations, regardless of land status, size, or location. Presently there is no uniform mechanism to allocate a portion of the tax revenues back to communities associated with mineral resource development. Such a revenue sharing model is effective in the Alaska fishing industry and the Gulf of Mexico oil and gas industry.

Sharing portions of state revenues from mineral resource development with local communities in a predictable fashion reduces the need for local governments to impose their own industry targeted taxes, such as severance taxes. With uncertainty of the timing and size of a local tax, the threat alone can discourage the very investment needed to advance projects. Moreover, allowing local governments to impose potentially onerous severance taxes inappropriately shifts control of development decisions away from the state. This precludes the state from fulfilling its mandate to manage state-owned resources in a way that maximizes benefits to all Alaskans.

Recommendation:

- Portions of the existing statewide mining license tax collected from mining operations, regardless of land ownership, should be allocated to communities near mining developments. Simultaneously, the municipal tax code should be revised to preclude local municipal severance taxes on mineral resources.



NANA Upper Kobuk Mineral Project
NANA/Chris Arend Photography



Pogo mine pours two-millionth ounce of gold
Judy Patrick Photography

Transportation Infrastructure

The Commission thanks the Governor and the Legislature for supporting the Roads to Resources program, and encourages ongoing support for infrastructure in rural Alaska.

Alaska can leverage private development with statewide transportation plans through partnerships. Transportation investment that supports mineral development expands rural infrastructure, reduces the cost of living, and plays a critical role in lowering energy costs. State participation in the Alaska Industrial Development and Export Authority's (AIDEA) Delong Mountain Transportation System was a key factor in developing the Red Dog Mine. This multi-user haul road and port remains available for other mineral development in the region. Further use of this type of partnership can help advance mine projects and provide benefits to the rural regions hard hit by the high cost of energy.

The increase in activity in the Arctic for shipping, energy, and mineral development necessitates additional supporting infrastructure and an increased presence by the U.S. Coast Guard. The need for deep water ports in the Arctic associated with this increased activity provides an opportunity to coordinate roads to potential ports with mineral development projects.

Critical and strategic minerals, including those bearing rare earth elements, are essential to future Alaska resource development. These elements are crucial to the production of advanced weaponry and a wide array of electronic, automotive, and alternative energy products. China produces most of the world's rare earth elements, controls the market, and retains the bulk of these elements for its own needs. This poses an unacceptable risk to the national and economic security of the United States. Infrastructure planning in Alaska should take into account access to these critical and strategic minerals.

Transportation plans must stem from regional and project specific needs in concert with statewide planning. Local support is critical for projects to advance. A good example is the growing interest from local levels for roads in Northwest Alaska and the coordination between the Alaska Department of Transportation and Public Facilities, AIDEA, industry, and communities on viable projects.

Recommendations:

- Continue public outreach, environmental studies, and engineering studies for roads in Northwest Alaska (i.e., the Ambler Mining District Access) through the Roads to Resources Initiative.
- Support financing options, including public-private partnerships that lead to restricted use roads that facilitate industrial use while recognizing local residents' concern for limited access to traditional subsistence areas.
- Investigate transportation corridors throughout prospective areas of Alaska that facilitate mineral development and access to critical and strategic metals, thereby lowering the cost of living including more affordable energy.



Red Dog Mine
NANA/Chris Arend Photography

Education

Science and engineering education within grades K-12 and at the university level is vitally important to prepare students for careers in the mining industry. The Commission recommends support for two important initiatives in 2013: The University of Alaska (UA) Consolidated Alaska Minerals Initiative (CAMI); and, the Alaska Resource Education (ARE) Google Earth minerals curriculum.

The University of Alaska

UA is uniquely positioned to support the education, training, and research needs of the mining industry. In 2012, the Commission recommended UA further analyze ways to respond to industry needs. UA responded by establishing the University-wide CAMI. The CAMI is an internal committee formed to develop guiding recommendations that shape the University's response to the mining industry. The Commission recommends regular dialogue between the University and industry during this process.

The Commission applauds the effort by UA to create CAMI, but stresses the need for a unified approach that utilizes the strengths and regional connections of each campus to achieve meaningful and lasting results. A single site, center, or campus does not have breadth or reach to address all of the needs of the mining industry, but through cooperation the individual campuses can achieve this goal. The Commission hopes UA also comes to this conclusion and establishes a state-wide Mineral Resource Network with centers of mining excellence at each campus to promote collaboration, resource sharing, and cooperation within the mining, geology, and mine training programs. The Commission recommends support from the state for UA to bring together the mining-related components of its campuses through the CAMI.



Livengood exploration
Melissa Wade, SRK

Alaska Resource Education

ARE provides an invaluable resource to help teachers and parents educate K-12 students in the state about Alaska's natural resources. In 2012, ARE put 66 teachers through its 500 level graduate "Rock & Roll Around Alaska" course. Individually, these teachers educated an average of 60 students on the importance of resources in Alaska.

A new and exciting development is a Google Earth minerals curriculum where teachers and students will be provided an unbiased, scientific, and career centered experience presenting the minerals industry in a cutting edge geospatial format. This curriculum, when developed, will provide virtual quests for students (grades 7-12) to explore the history, economics, environment, safety, property, infrastructure, site life, regional culture and traditions, and possible careers from eight mineral resource locations throughout Alaska.

Directly aligned with the national and state focus on science, technology, engineering, and mathematics (STEM) education, this project launches Alaskan classrooms into applied and relevant academic experiences. Specific STEM centered skills enhanced through this curriculum include 21st century research skills, technologic proficiency, and scientific literacy rooted in real-world contexts. The Commission recommends appropriating an additional $100,000 towards developing a pilot location for ARE's new Google Earth high school curriculum in addition to maintaining its current annual funding of $100,000.

Recommendations:

- Support the University's effort to address the needs of the mining industry through the CAMI.
  - Encourage collaboration and regular dialogue between the mining industry and University through the CAMI and its development of recommendations to the University.
  - Establish a state-wide Mineral Resource Network with centers of mining excellence at each of the UA campuses.
- Preserve ARE's current funding level of $100,000 and appropriate an additional $100,000 to the Google Earth minerals curriculum.

Legislative Funding to Oppose Federal Intervention on Mining Projects

Complex environmental issues require regulations that are broad, all-encompassing, and adjustable as new information is made available. Regional or national environmental issues are often reflected in regulation. Certain issues are regulated at the federal level, others at the state level, and others still at both the state and federal levels. Federal regulations are generally developed around issues and criteria relevant to the lower 48 states. These same criteria and concerns are often not directly applicable to Alaska.

Alaskan resource development projects face increasing federal intervention that prevents the State of Alaska from developing its natural resources. Alaska is facing federal intervention from legally unprecedented regional assessments targeted at stopping development of large world-class deposits. The most current example of this type of federal intervention concerns the Pebble Deposit, where an entire watershed, larger than some states, is under evaluation by the U.S. Environmental Protection Agency for potential closure to natural resource development. This action, which could significantly impede economic development and stability in an economically depressed area, hinges on a report based on outdated mining methods without consideration for current technology, regulations, and/or mitigation practices. Federal intervention is also occurring to small mine operations through federal takings that prevent small mine owners and operators from accessing or developing their claims.

Federal intervention also extends to the recent regulatory act to implement Emission Control Areas (ECA), which imposes the use of more expensive fuel for all shipping activity within all U.S. coastal waters. These control areas are not supported by scientific research and do not consider the economic impact on our state where the shoreline is so extensive and shipping is a crucial form of transporting goods.

Recommendation:

- To maintain Alaska's right to develop its resources (large and small) and to fend off precedent-setting court cases, the State of Alaska must have funding available for expert witnesses, attorney fees, court costs, and staff resources.



Linc Energy's core operations on the West side of Cook Inlet
Mike Hagen, Linc Energy

Division of Geological & Geophysical Surveys Funding

Impacts of Retention and Recruitment Difficulties in State Government

Heightened activity in natural resource exploration and development is welcome news for the state and nation. A healthy economy, creation of high-paying jobs, and maintaining state revenues are the clear results of an active and healthy resource industry.

There are challenges created by an active industry, including much greater demand for baseline scientific information, increased need for timely permitting, and access to the resource base. These critical links of the development chain can only be maintained by experienced, dedicated staff within state government. Large vacancy rates and inexperienced or inadequately trained state personnel can significantly dampen economic activity when it is needed the most.

Jobs within the resource industry historically pay more than government. Until recently, somewhat less cyclical job security, greater benefits packages, and more stable work environment within state service leveled the competitive playing field for employees. However, recent increases in industry salary scales, combined with the reduction in benefits within the state, significantly impact this balance. An example of this is observed in recent staff changes at the Alaska Department of Natural Resources (ADNR) Division of Geological & Geophysical Surveys (DGGS), which provides scientific data for resource exploration and management.

During January 2012, seven DGGS employees resigned from its geologic research staff. That accounted for 35 percent of the research staff leaving the division in one month. Six of those employees left for much higher paying jobs in industry, including two who more than doubled their salaries. Current salaries for minerals geologists in the private sector average 35 percent more than similar jobs at DGGS.

The most concerning shift in vacancies are three positions within the DGGS Mineral Resources section, which is the source of geologic data critical to facilitating industry exploration activity.

The importance of maintaining experienced qualified staff within state government cannot be overstated. The data that is generated from the work links directly to attracting industry investment and ensuring economic success. The state needs to actively address this retention issue through improving salary competitiveness for state geologists within the DGGS. A number of actions can be taken to actively address this issue.

Recommendations:

- Explore means to increase salaries within DGGS to improve competitiveness with industry.
- Implement a more flexible pay system by providing exempt status for minerals section geologists similar to the state's oil and gas geologists.

Alaska Geologic Materials Center

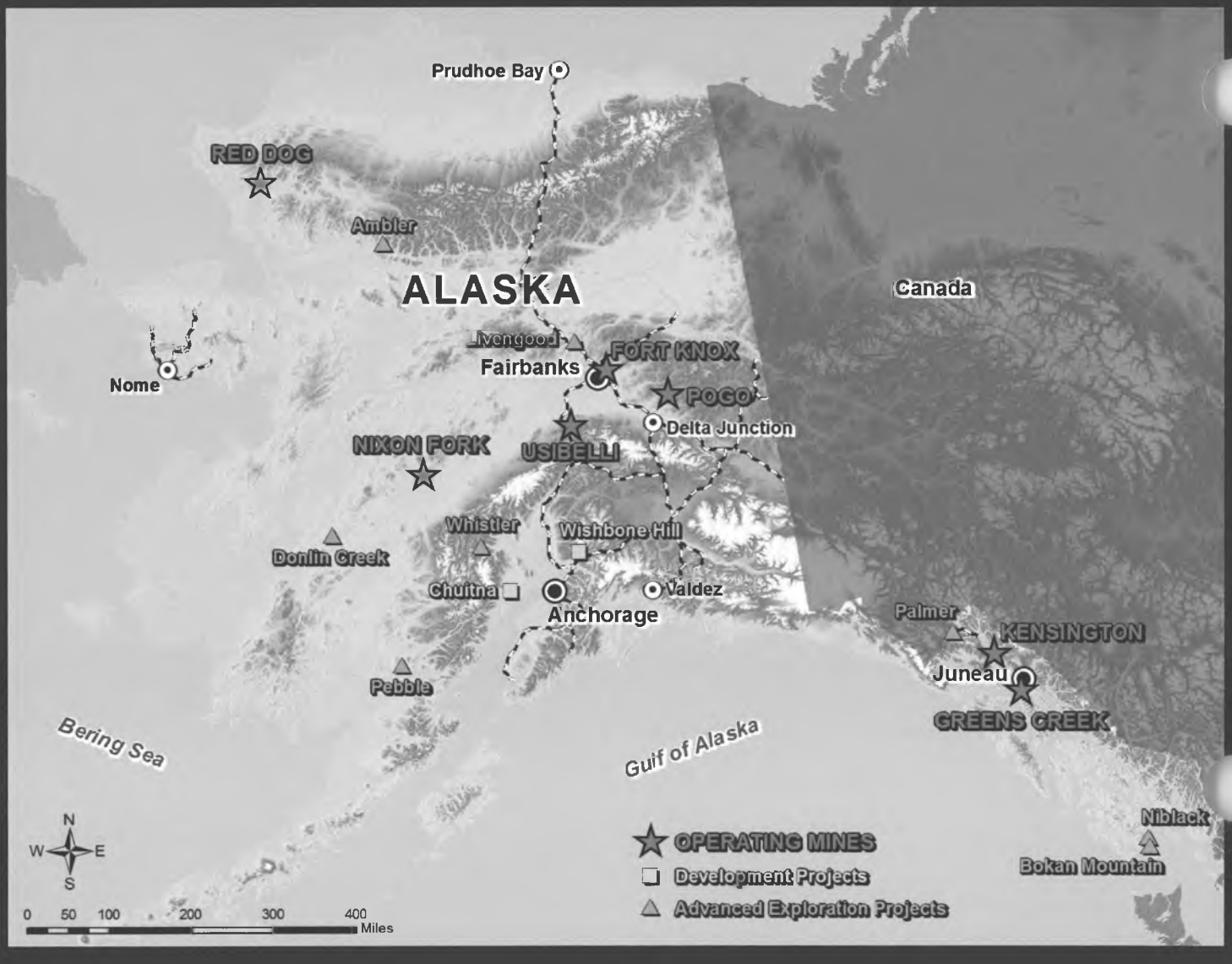
The Alaska Geologic Materials Center (GMC) is the state's archive of geologic samples collected by mineral and oil and gas exploration companies and state and federal agencies since the early 1900s. The facility is used heavily (400-500 visits per year) by industry, government, and academia to support resource exploration, land-use management, and research. The archive contains core samples and cuttings of 12 million feet of oil and gas exploration and production drilling. The collection also includes a quarter million feet of diamond-drill mineral exploration core samples, as well as collections from U.S. Geological Survey, Bureau of Land Management, Minerals Management Service, and the former U.S. Bureau of Mines. New collections are added every year.

For years these materials, occupying roughly 30,000 square feet of storage area, exceeded the capacity of an aging former state fish hatchery in Eagle River. Due to a lack of heated space, approximately half the collection is currently stored outdoors in 60 unheated, unlit portable shipping containers. The facility lacks sufficient space and equipment for proper sample processing, layout, and viewing. Quoting the 2006 GMC Concept Study, "The lack of additional storage capacity coupled with inadequate processing and scientific examination space has resulted in a crisis situation – if a new repository is not developed soon, the State of Alaska, federal agencies, private industry, and the public will be at risk of losing irreplaceable scientific resources."

The sample collection stored at the GMC is an invaluable geologic library – a first stop for nearly all geologic resource exploration projects in Alaska. Replacing the collection, if even feasible, would likely cost hundreds of millions of dollars. A modern facility with proper environmental controls, examination space, and equipment is critical to the state's resource development and will pay for itself many times over in future revenues. The ADNR completed initial scoping and feasibility analysis for facility upgrades and replacement. ADNR also secured partial funding for architectural and engineering design. ADNR must stay diligent in pursuit of the remaining funding in order to mitigate this critical situation as soon as possible.

Recommendation:

- Continue to support and upgrade the Alaska Geologic Materials Center.



The Alaska Department of Commerce, Community, and Economic Development (DCCED) is tasked with facilitating the Commission's work. This publication was released by DCCED as required by AS 44.33.431 (d). This report does not constitute an official position or opinion by DCCED.

The purpose of this publication is to report the findings and recommendations of the Alaska Minerals Commission to the Governor and to the Legislature of Alaska. It was produced at a cost of $2.75 per copy and printed in Fairbanks, Alaska. This publication is required by Chapter 98, Session Laws of Alaska, as amended by Chapter 4, Session Laws of Alaska, 1993.

02/07/13 Overview: Film and Tourism Programs by Division of Economic Development, DCCED

<TARGET><BILL></BILL><SUBJECT>02-07-13 Overview Film and Tourism Programs by Division of Economic Development, DCCED</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

ssion Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 7, 2013

1. **Call to Order**

~Gavel~ Economic Development, Trade and Tourism Committee is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to my committee aide, Ginger Blaisdell. Welcome 8 student guests (see handout)…

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
    - Several members may be coming and going due to other committee meetings underway.
- Today's agenda includes two topics presented by:

Department of Commerce, Community and Economic Development, Division of Economic Development; Director Lorene Palmer

- The Department also distributed via email last night to all legislators, the FY2013 Second Quarter Alaska Tourism Marketing Report. While it's not specifically part of the presentation today, it is an interesting read.

3. **Calendar Review**

- The next meeting of EDTT is Tuesday, February 12 at 11:15am in this room

This will be a joint meeting with the Senate Special Committee on World Trade and we'll hear from Greg Wolf of the World Trade Center Alaska.

- We do not have a meeting scheduled for Thursday, February 14th.

Do members have any closing comments?

- Thank you. We are ADJOURNED at _12:___ (time)." ~Gavel~

AFS Intercultural Programs USA

Connecting Lives, Sharing Cultures

Please Join Us

Pizza Lunch
Friday, Feb. 8th
11:45-12:45
~~Beltz Room~~

We have 8 AFS "Sponsored Program" students spending the year in Alaska, visiting Juneau who are here on full scholarships to help build better relations between the USA and their home countries. Please come meet them and enjoy lunch.

Egypt – Jordan – Lebanon – India- Russia – Malaysia – Cameroon Germany

Welcome our guests

AFS-USA Mission

AFS-USA works toward a more just and peaceful world by providing international and intercultural learning experiences to individuals, families, schools, and communities through a global volunteer partnership.

AFS-USA (formerly the American Field Service), a 501(c)3 nonprofit organization, is a leader in intercultural learning and offers international exchange programs in more than 40 countries around the world through independent, nonprofit AFS Organizations, each with a network of volunteers, a professionally staffed office, and headed up by a volunteer board.

We've been exchanging students throughout the world for 65 years. That's six decades of history and experience in international education with an exemplary record of safety, security, and service to students, parents, and educators.

Contact – Amy Coffman (816) 898-4321 acoffman@afsusa.org



State of Alaska
Economic Development - Tourism & Film

February 7, 2013

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

Economic Development – Tourism Sector

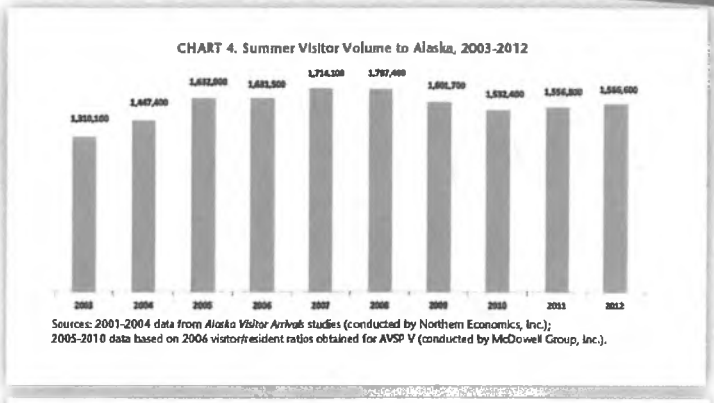
ALASKA
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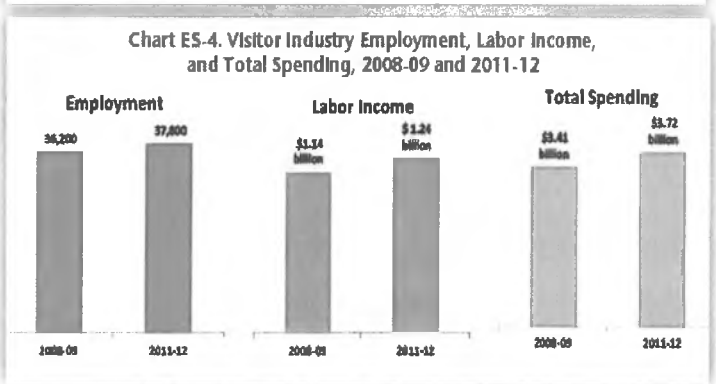
Why Tourism is Important to Alaska's Economy

- Generates $3.72 billion in direct and indirect spending in the state
- Collects $179 million in taxes and fees
- Represents 37,800 full and part-time jobs (8 percent of statewide employment) with 45,000 employed at peak season
- Forecast:
  - Cruise ship visitation is expected to increase in 2013 by up to 7% for total arrivals estimated at 1,005,000
  - Increased air capacity with addition of Icelandair, Jet Blue, United and Alaska Air flights

Alaska Tourism Marketing – Creating Demand

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT





Alaska Tourism Marketing – Creating Demand

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

State Marketing Program	Budget
Advertising	$9,893,525
Mailing Services/Data Management	874,200
Media Relations	1,109,375
Website	760,300
North to Alaska – Alaska/Canada Highway Promotion	590,000
Research	273,400
Cooperative Marketing	281,600
In-State Marketing	150,500
Travel Trade	454,000
International Marketing	1,263,500
DCCED Expenses	349,600
Tourism Support Services Contract	1,050,000
TOTAL:	**$17,050,000**

Alaska Tourism Marketing – Creating Demand

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Public Relations

- Generated 447 stories to date
  - (PR value $31.5 million)
- Media Road Show: 30 journalists
- New York media luncheon
- Monthly e-newsletter: 650 journalists
- Social media
- Special Projects – Top Chef
  - 5.2 million viewers/two episodes
  - $5.4 million in PR value


Los Angeles Times TRAVEL

LOCAL U.S. WORLD BUSINESS SPORTS ENTERTAINMENT HEALTH LIVING TRAV

TRENDING NOW | FISCAL CLIFF | SOUTHBRIDGE KILLINGS | SYRIA | VOYAGER | REMAINS

Villaraigosa says port strike to get federal med

DEALS & NEWS TRAVEL DEALS, TIPS AND ADVICE FILTERED FOR RESTLESS SOUTHERN CALIFORNIA

Portage, Alaska

Alaska Tourism Marketing – Creating Demand

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



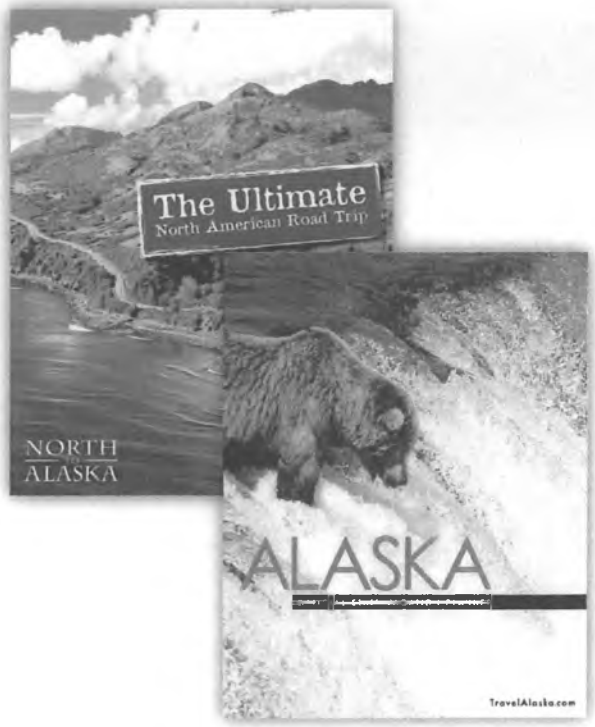


Advertising

- 25 full-page ads in national magazines (circulation: 23.7 million)
- 18 small-space ads in national magazines (circulation: 15.6 million)
- National television advertising:
  - 1,772 30-second ads on cable networks
  - 439 10-second ads on nationally syndicated programs

Alaska Tourism Marketing – Connecting to Private Sector

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



Travel Planning Tools

- Distributing Alaska travel information:
  - Generate 600,000 requests for Alaska travel guides/brochures
  - 100,000 North to Alaska guides

Alaska Tourism Marketing – Connecting to Private Sector

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



TravelAlaska.com

- 2.4 million website visits annually
- 400,000 e-newsletters monthly
- Japanese, German and Korean language websites
- Updating content on state marketing partners, cultural information, and heritage tourism

Creating New Opportunity

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Icelandair/Alaska Marketing

- Sales Manager FAM trip (Oct 15-18) sales managers from Sweden, Norway, France, Germany, Netherlands, Belgium, UK, Ireland, Finland, and Denmark were able to experience Alaska first-hand
- Attending Mid-Atlantic Conference; purpose is to connect with Icelandair executives prior to launch of new Alaska service in May

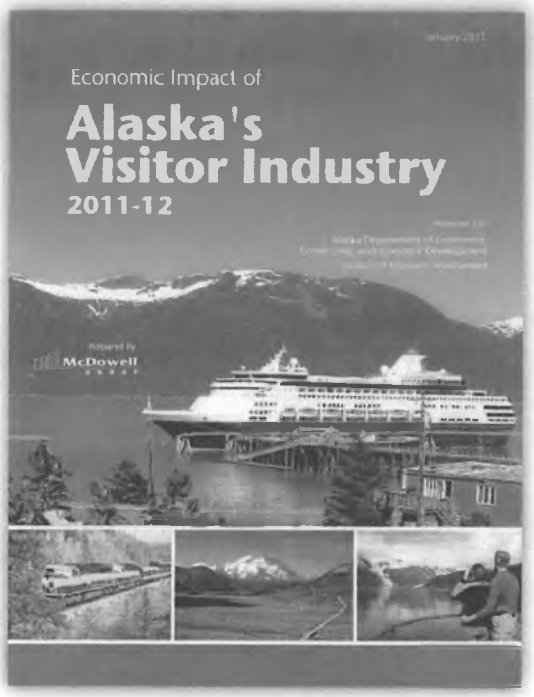
ICELANDAIR

Alaska Tourism Market Research

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Economic Impact of Visitor Industry

- Commissioned by Division of Economic Development
- Shows tourism industry employment, visitor spending, visitor volume, revenues to municipal and state governments
- Report is in final review and will be released soon



Alaska Tourism Market Research

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Alaska Visitor Statistics Report

- Shows visitation volume, visitor volume trends, visitor industry indicators
- Available online



Alaska Tourism – Workforce Development

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Host and Tour Guide Training

- Training Programs:
  - AlaskaHost
  - CulturalHost
  - AlaskaTour Guide Training "Train the Trainer"
  - Navigating Tourism Opportunities in the Alaska Cruise Industry
  - Starting a Bed & Breakfast



Alaska Film Office – Film Sector Development

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT



Photo credit: Bob Crockett

Alaska Film Office – Promotion Activities

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

- Outreach through speaking engagements, targeted contacts, and fielding daily inquiries
- Film Industry trade shows and events
  - AFCI Locations Trade Show
  - Incentives Symposium
  - American Film Market
  - Global Media Update
- Advertising in target film industry publications
- Film Representation RFP









Alaska Film Office – Return on Investment

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Approved Tax Credits - Spending Categories by Fiscal Year

Spending Category	FY10	FY11	FY12	FY13 (thru 1/23/13)	TOTAL
Non-Resident Wages	$284,212	$10,789,238	$34,130,224	$14,620,345	$59,824,020
Alaska Resident Wages	$134,540	$1,992,584	$5,713,981	$2,562,327	$10,403,433
In-state Transportation	$61,730	$959,020	$763,716	$928,544	$2,713,009
Interstate Transportation	$40,722	$431,624	$1,011,181	$585,823	$2,069,350
Location and other Fees	$46,567	$1,596,168	$9,050,337	$2,203,896	$12,896,968
Contract Services	$107,173	$694,356	$1,879,930	$6,193,508	$8,874,967
Food & Lodging	$64,395	$1,883,117	$3,981,572	$1,355,483	$7,284,567
Other	$5,616	$706,779	$859,520	$2,079,158	$3,651,072
Total	$744,955	$19,052,886	$57,390,460	$30,529,084	$107,717,385
	244k	6.2M	18.6 M	9.9 M	$ 35.1 M

Alaska Film Office – Workforce Development

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Training Provider	Program
Talking Circle Media	Crew Academy of Alaska offers training on live sets, locations and studio sound stages of film and television productions. Participants receive career counseling and job placement resources.
Alaska Crew Training (ACT I)	Production Boot Camp 101: Cast and Crew Training is a production overview for entry-level and mid-level positions through classroom and hands-on intensive crew trainings in rural and urban communities.
Alaska Crew Training (ACT I)	ACT I Week Intensive Level I and II Programs will prepare participants for entry-level, on-set opportunities in film and video production, including examining the knowledge and skills expected of a production assistant and teaching attendees to hold entry-level positions in the grip or electric departments.
IATSE Local 918 (International Alliance of Theatrical Stage Employees)	Professional film technician training including classes taught in Anchorage and Fairbanks with video streaming accessible to rural Alaska through the University of Alaska Anchorage. Classes will include fundamentals of filming, grip, electrics, safety and set etiquette.
Affinityfilms, Inc.	Advanced training for script supervising for crew with experience in the film industry. Training focuses on film and commercial shoots in Alaska.
KPU Telecommunications (Ketchikan Public Utilities)	Southeast Alaska Film Training Consortium provides a web-based class for students to learn video production concepts. Emphasis will be on pre-production, camera operation, recording procedures, electronic field production, lighting, and audio.
University of Alaska Fairbanks, Film Program	Film Reel Alaska Mentoring Experience Phase II - Production & Post-Production provides three tiers of training to applicants in pre-production, production, and post-production using live film shoots to mentor students in all departments and positions on a small film set.



Questions?

Director Lorene Palmer
Division of Economic Development

THE STATE
of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development

OFFICE OF COMMISSIONER

550 West Seventh Avenue, Suite 1535
Anchorage, Alaska 99501
Main: 907.269.8100
Programs fax: 907.269.8125

February 6, 2013

Dear Legislator,

I am pleased to provide you with the FY2013 Second Quarter Alaska Tourism Marketing Report including recent accomplishments and activities.

The marketing program's goal is to generate approximately 600,000 inquiries from consumers interested in visiting Alaska. As you will note in the report, we are close to reaching that objective. Advertising campaigns continue to run on television, in magazines, and online. These ads are helping to fuel interest in taking an Alaska vacation this year. In addition, our new social media campaign is generating interest and excitement – to date, the social media campaign has generated over 30,000 fans on Facebook.

This month, two episodes will air on the national cable television show *Top Chef,* which were filmed in Juneau last August. The department's tourism and seafood marketing team worked to bring this James Beard Award- and Emmy-winning series to Alaska for the final two elimination challenges. Contestants and crew boarded a one-way Celebrity cruise from Seattle to Juneau to film at four locations: Tracy's Crab Shack, Norris Glacier, the Gold Creek Salmon Bake and Governor's House with Governor Sean Parnell and First Lady Sandy Parnell for the final dinner. With 2.6 million viewers, the advertising value for each of the *Top Chef* Alaska episodes is approximately $2,755,724. Reruns of the season will bring the total advertising value to more than $35 million.

The department also continues to work collaboratively with the private sector, other tourism organizations and state agencies to add depth to the "Visit Alaska" message that heightens the appeal of Alaska to visitors and to the suppliers who bring clients to our state.

Highlights for the second quarter of FY13 include:

- Top Chef: Seattle's two Alaska episodes
- Launched "Do You Dream of Alaska?" social media campaign
- Hosted Alaska Media Roadshow wherein 36 Alaska businesses met in one-on-one meetings with the country's top travel journalists
- Conducted "Alaska Down Under" sales mission in Australia, providing travel agents with increased understanding on how to sell Alaska and hosted an Alaska evening reception with top US tour operators to increase their awareness of new tourism product in Alaska

- Contracted with the industry trade association to conduct cooperative advertising sales, provide input on program development, and to assist with selected trade and consumer marketing activities

If you have any questions, please do not hesitate to contact me at 907-269-8115.

Sincerely,

Roberta L. Graham
Assistant Commissioner

Enclosure
cc: All legislators



Alaska Tourism Marketing

Second Quarter FY2013 Report

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

Alaska's Tourism Marketing Program

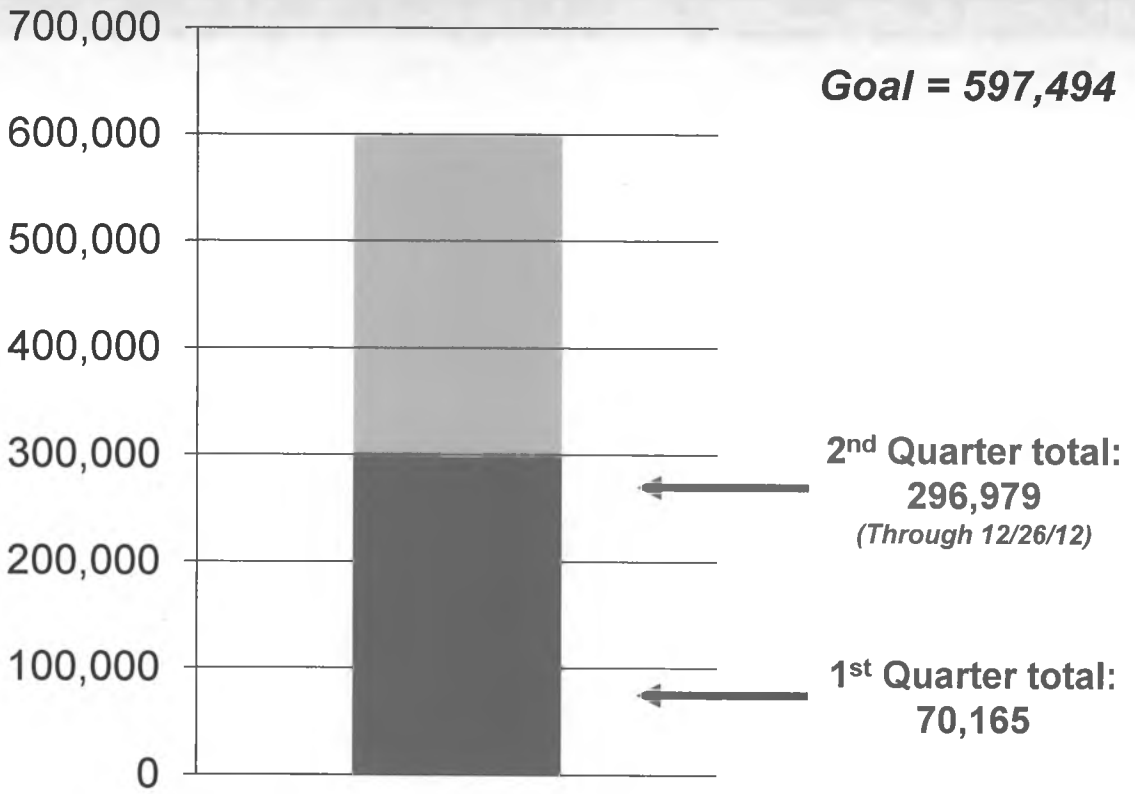
ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

1	Generating Results
2	Reaching U.S. Travelers
3	Presenting Alaska to the World
4	Reaching International Travelers
5	Selling Alaska
6	Creating New Opportunity
7	Connecting with Tourism Industry
8	Alaska's Tourism Marketing Team

Generating Results

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

- **50 percent** of the expected requests for Alaska travel information have been generated



Generating Results

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Generating interest in visiting Alaska

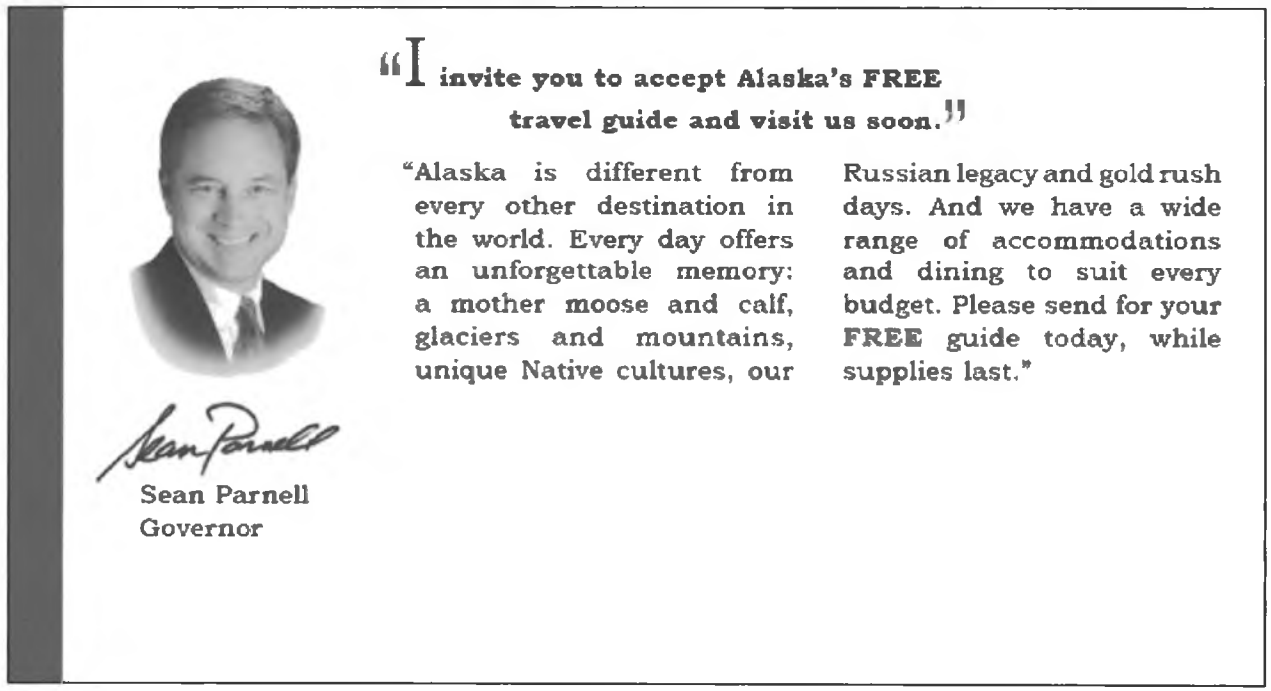
- Research was conducted in December 2012 to determine travel intentions of those requesting Alaska information:
  - 48 percent indicated they would definitely travel or would probably travel to Alaska this year - this is a slight increase over the past year
  - Consumers indicating they will definitely travel this year, plan to finalize their travel plans, make travel arrangements/reservations between Jan- Mar (36%) and Apr-June (18%)

Reaching U.S. Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Personal Invitation from Governor Parnell

- Direct Mail packages have been sent to **1,234,923** U.S. consumers to date
  - 7 percent accepted the Governor's offer for a free travel guide



"I invite you to accept Alaska's FREE travel guide and visit us soon."

"Alaska is different from every other destination in the world. Every day offers an unforgettable memory: a mother moose and calf, glaciers and mountains, unique Native cultures, our Russian legacy and gold rush days. And we have a wide range of accommodations and dining to suit every budget. Please send for your **FREE** guide today, while supplies last."

Sean Parnell
Governor

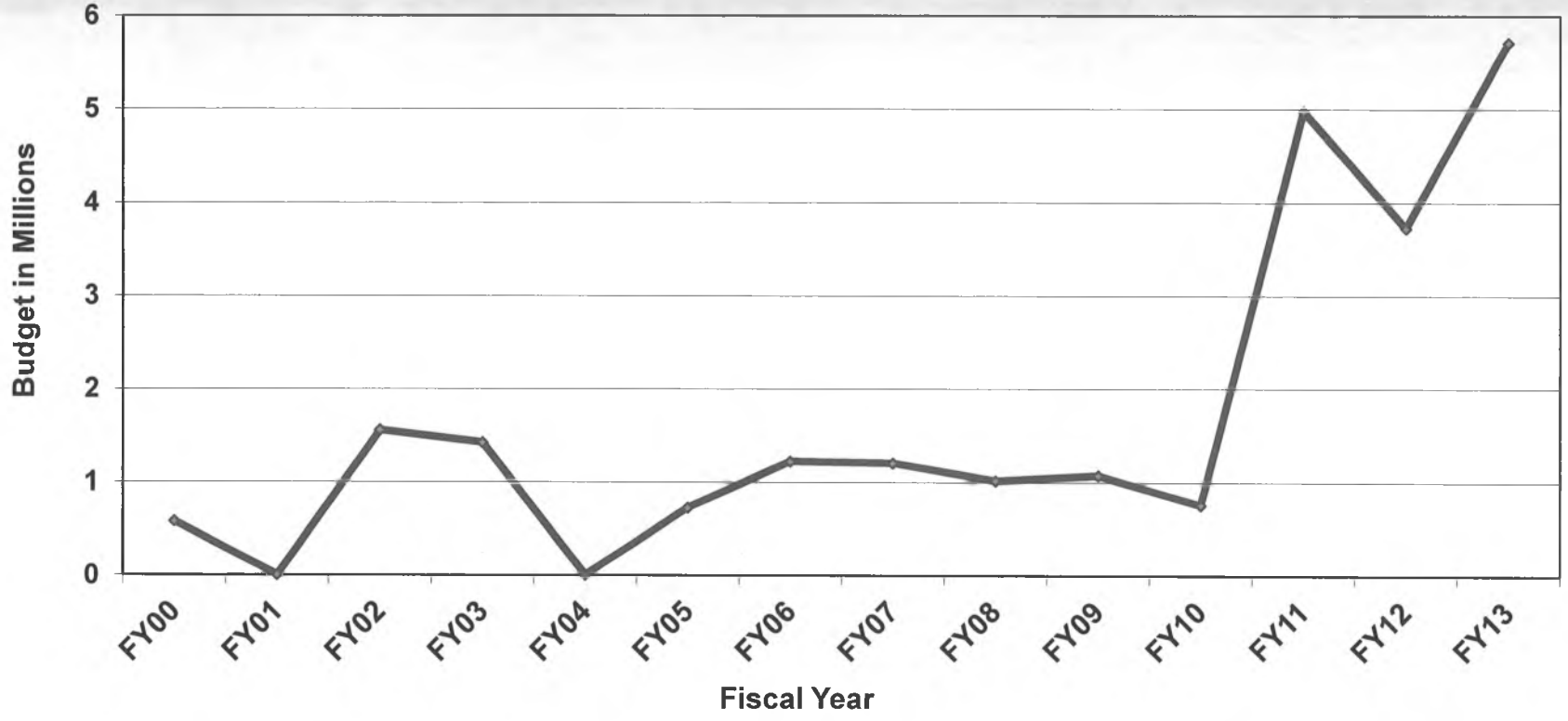
Reaching U.S. Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Alaska's largest TV advertising campaign to date

$5.7 million

investment in TV advertising



Reaching U.S. Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

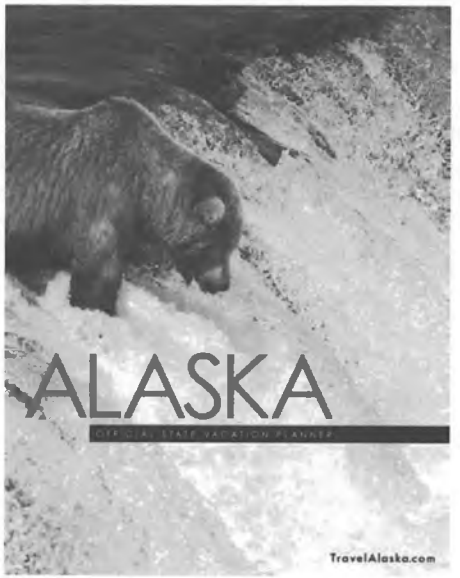
- Alaska television ads are running on major cable networks and on nationally-syndicated programming:
  - Cable Networks:
    - Weather Channel, History Channel, Travel Channel, Discovery Channel, National Geographic Channel, Animal Planet, Destination America Channel
  - Nationally-Syndicated Programs:
    - Fox News, Jeopardy, Judge Judy, Price is Right, Wheel of Fortune, Let's Make a Deal, The Doctors



Reaching U.S. Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

- State Vacation Planner promotes the entire state:
  - Highlights what makes Alaska an intriguing travel destination:
    - Scenic beauty, wildlife, art, culture, history, Alaskan seafood and produce
  - Provides comprehensive travel information











Top Chef films in Alaska; Shows air in February 2013

- As part of the tourism promotion program, Top Chef filmed two episodes in Alaska in August 2012.
- The Emmy-winning series is the No. 1 food show, reaching more than 2.6 million viewers, with each episode airing an average of 12 times.
- The ad value for each airing is $2,755,724.

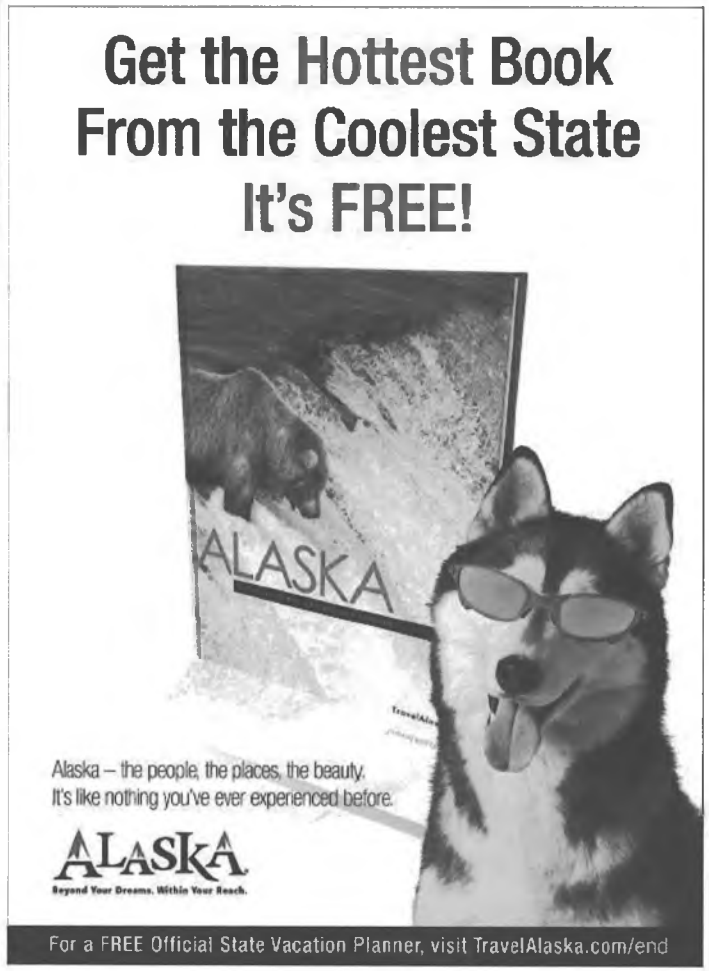
Reaching U.S. Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

National Media continues to run

- Full-page, color ads ran in 16 national magazines (*to date*)
- Online advertising campaigns began running on four travel network channel sites



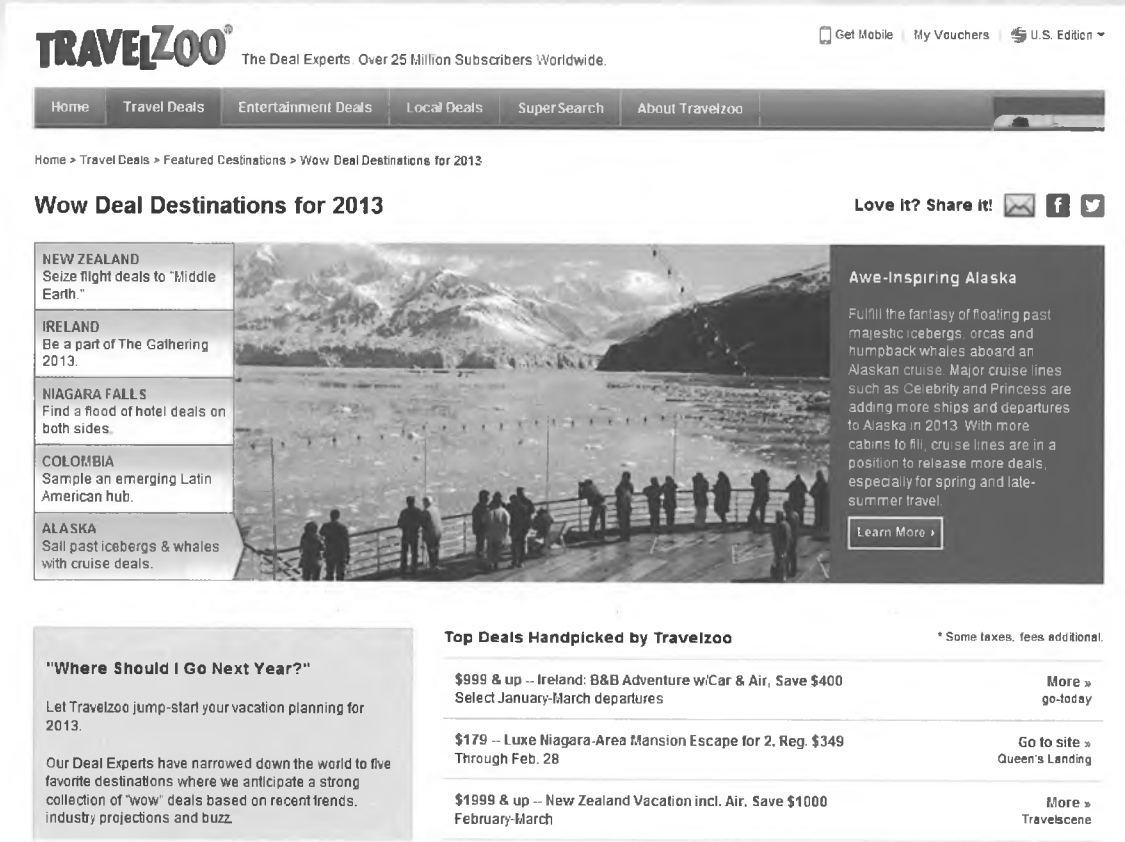


Reaching U.S. Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

National exposure

- Alaska was selected by TravelZoo as one of the top "Wow Deal Destinations" for 2013, and featured on TravelZoo website in November



Presenting Alaska to the World

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Alaska Media Road Show

- October 25-27, 2012
- 36 Alaska businesses met with 38 journalists to pitch Alaska story ideas





Presenting Alaska to the World

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

Alaska Media Road Show

- Generating exposure for Alaska





Presenting Alaska to the World

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Dream of Alaska Social Media Campaign

- Engaging potential visitors in a fun and exciting way





Reaching International Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Alaska Down Under Workshops

- Seven Alaska businesses joined the state in Syndey, Adelaide, Melbourne and Brisbane (Nov 12-15)
  - Met with 286 travel agents, 23 media representatives, and 11 Tour operators/wholesalers





Reaching International Travelers

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

Alaska Down Under Workshops

- Generating exposure for Alaska

eGlobal
TRAVEL MEDIA
AUSTRALIA/NEW ZEALAND
INDIA / ASIA / JAPAN / AMERICA'S

HOTEL DE LA PAIX
CHA AM BEACH · HUA HIN

HOME AVIATION CAREERS CRUISE DESTINATION HOSPITALITY INDUSTRY RATES MICE TOUR OPERATOR

HOME » DESTINATION » HEADLINE NEWS » CURRENTLY READING:

Aussies are tops in Alaska – and they book through agents

November 13, 2012 Destination, Headline News No Comments Print Email

More Australians are visiting Alaska than ever – and at least eight out of every 10 of them book through a travel agent.

Australia and New Zealand, as a region, now constitutes Alaska's number-one international market, supplying about 42,000 visitors annually, or 27% of the total, State of Alaska Tourism Marketing Manager Kathy Dunn told media at Sydney Hilton yesterday.

Dunn, in Sydney with an Alaskan tourism delegation, said 10% of tourists to Alaska were international.



HAPPY VISITORS ON ALASKA'S RUTH GLACIER



ALASKA IS BIG! KATHY DUNN'S MAP SHOWS JUST HOW BIG COMPARED TO AUSTRALIA.

Of the Australian and New Zealand visitors, 84% booked through a travel agent, 92% purchased a package tour, 90% bought a cruise package and 31% of the cruisers spent time on their own before or after the cruise.

After their visit, 72% of the Aussies and Kiwis professed themselves to be "very satisfied" with their experience and 76% said they were "very likely" to return.

Dunn said Australians enjoyed Alaska because they shared a similar mindset and sense of adventure. While Alaska offers plenty of adventure, it's not as cold as many people think and there's no shortage of comfortable activities – it's not just adventure tourism.

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Alaska steps up Australia efforts

13 November 2012 Tara Harrison comments

Tweet 4 +1 0 Pin it

Australia has become Alaska's top international inbound market, Alaska Tourism has revealed.

During its bi-annual visit to Sydney, the tourism body referred to research undertaken earlier this year which showed that Australia had overtaken the UK in terms of market share.

Marketing manager Kathy Dunn said these statistics will prompt a reallocation of funding.

"It used to be $1 million for international marketing, now it's moved to $1.5 million and I think we will continue to see that grow," she said.

A delegation of eight Alaska Tourism partners will meet with industry members in Sydney, Melbourne Adelaide and Brisbane this week.

"Every time we do this the partners want to come, especially now with the numbers trending the way they are," Dunn said.

The research study found that 92% of Australians visit Alaska after the purchase of a package tour and 90% visit during a cruise.



Latest news from Travel Today

- Overseas target for Staywell group
- Hawaiian group Sydney services again
- APT releases small ship program
- NSW tourism unveils fresh China plan
- TA sticks to its guns in Qantas feud

TravelToday

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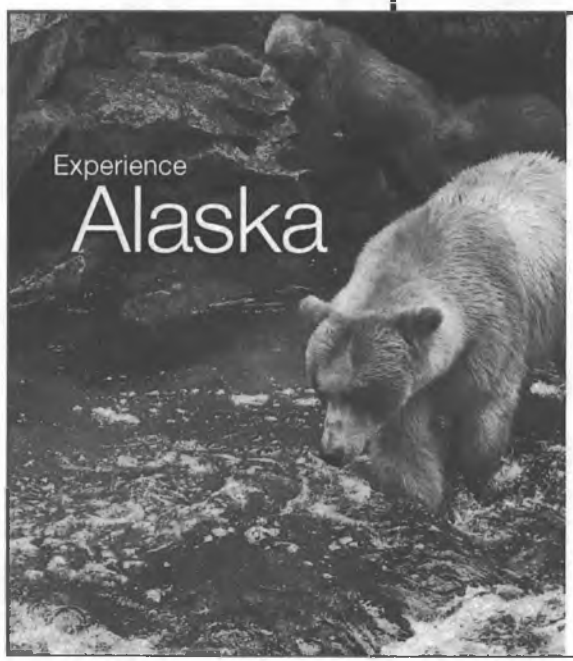
Latest comments Most read

Selling Alaska

ALASKA
DEPARTMENT OF
COMMERCE,
COMMUNITY,
AND ECONOMIC
DEVELOPMENT

US Tour Operators Assocation Conference & Marketplace

- Networked with tour operators at an Alaska-themed evening event
- Conducted one-on-one meetings with tour operators



While visiting the 50th state, cool down with a glacial facial and delicious treats from the 49th state. Alaska and Hawaii have a lot in common. Both have an abundance of natural wonders, gorgeous scenery and a rich cultural heritage. Each is a long-haul dream destination for many Americans. However, it can be intimidating for a person to organize a trip to see Denali, a glacier calving and the northern lights. The research and planning necessary for Alaska tour packages require the expertise and experience of USTOA tour operators. So while you are enjoying the *Spirit of Aloha*, we want to thank you for making the *Spirit of Alaska* accessible to our visitors!

Visit **TravelAlaska.com/trade** for resources and information to help you promote your Alaska tour packages.



Creating New Opportunity

Icelandair/Alaska Marketing

- Sales Manager FAM trip (Oct 15-18) Sales managers from Sweden, Norway, France, Germany, Netherlands, Belgium, UK, Ireland, Finland, and Denmark were able to experience Alaska first-hand
- Registered to attend Mid-Atlantic Conference; purpose is to connect with Icelandair executives prior to launch of new Alaska service in May

ICELANDAIR

Connecting with Tourism Industry

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

- Contract with the tourism industry assocation signed on November 15
- 20 Cooperative Marketing programs have been launched through December, generating $1,213,625
  - More than 500 tourism businesses advertised the state Vacation Planner
  - 19 businesses joined the co-operative magazine program
  - 36 businesses and organizations joined the state at Alaska Media Roadshow
  - 8 businesses joined the state for its trade event in Australia

Support from Tourism Organizations

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

- Alaska tourism organizations report results/benefits to their members on a monthly basis

FAIRBANKS
CONVENTION & VISITORS BUREAU

January 25, 2013

Advertising & Public Relations attended the 2012 Alaska Media Roadshow in Santa Barbara, CA from October 21-23. Director of Communications Amy Geiger and Public Relations Manager Bill Wright, had meetings with 24 U.S. based travel journalists and networked with Alaska tourism partners. Through October, the FCVB www.explorefairbanks.com website had a total of 175,830 unique visits, a 23% increase over the same period in 2011. As of October, the number of Twitter followers was 2,807 and total number of "likes" on Facebook was 2,761. The staff fulfilled media requests from Animal Planet [redacted] cast members for Your Love); Sunset Maga[redacted] with early snow to shoot a television comme[redacted] 2012/13, North Pole, Christmas in Ice, Intern[redacted] (Aurora Ice Museum); Laura Read for VIA M[redacted] (Japanese TV show about Hot Springs in Al[redacted] in ice photos); Kate Siber for Outside Maga[redacted] Alaska). FCVB hosted photojournalist and [redacted] Northwest Fly Fishing, Backpacker Magazine

Mat-Su!

The Bureau Bulletin

A publication of the Mat-Su Convention & Visitors Bureau — Winter 2012

Page 4 — Winter 2012 — The Bureau Bulletin

Aussie mission targets largest international group

The Mat-Su CVB joined seven other Alaska destinations and businesses in promoting tourism to more than 300 travel agents, tour operators and media during the state of Alaska's Down Under sales mission to Australia in early November.

Marketing manager Casey Reuter did presentations in four cities that highlighted the Mat-Su Valley as a destination to include in vacation packages offered by Australian operators and agents.

"Australia is now the top inbound international market for Alaska, and the [redacted] were very [redacted] packages," [redacted] interest in [redacted] Aussies, so [redacted] meet them [redacted] what our [redacted] in Sydney and [redacted] Melbourne and [redacted] suppliers and [redacted] tradeshow, then [redacted] dinner event. [redacted] individual [redacted] were [redacted] outside your [redacted] attended two [redacted] with some of [redacted] to come to the [redacted] Valley next summer," Reuter said.

The state of Alaska holds the Alaska Down Under sales mission every other year, but due to budget cuts, the Mat-Su CVB did not participate in 2010. During November's mission, the Mat-Su CVB was joined by representatives from Visit Anchorage, the Kenai Peninsula Tourism Marketing Council, Fairbanks CVB, Northern Alaska Tour Company, the Alaska Railroad, Alaska Holiday and Alaska Airlines.



Mat-Su CVB's Casey Reuter joined other Alaska representatives in the Alaska Down Under Sales Mission in early November.

Kodiak Island Convention & Visitor Bureau - Kodiak, Alaska -

BEAR TRACKS

Monday, 28 January 2013

100 Marine Way, Suite 200. Kodiak, Alaska 99615 907-486-4782 e-mail: visit@kodiak.org

Upcoming Trade Shows

We are just beginning (and refining) our trade show season. It starts with a bang at the Alaska Media Road Show in Santa Barbara. This show is consistently a high performer as it brings together KICVB director Janet Buckingham with 25 journalists, photographers and filmmakers from across the United States. The KICVB has attended every AMR since 2003 except for 2007. In the past five years, nine journalists who were first contacted at the Alaska Media Road Show have visited Kodiak and a dozen or more articles or blogs have been written by those authors making it a highly profitable show to attend.

Financial Responsibility

ALASKA
DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

PROGRAM	BUDGET	EXPENSES TO DATE
Advertising	$9,943,400	8,432,401
Collateral	923,800	607,295
Coop Leads	281,600	63,974
Highway Marketing	590,000	327,180
Instate Marketing	150,500	3,485
International	1,263,500	409,425
Public Relations	1,059,500	658,242
Research	273,400	234,720
Travel Trade	454,000	121,215
Website	760,300	216,380
DCCED Expenses	300,000	163,969
Tourism Support Contract	1,050,000	0
TOTAL:	$17,050,000	$11,238,286

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development

OFFICE OF COMMISSIONER SUSAN K. BELL

P.O. Box 110800
Juneau, Alaska 99811-0800
Main: 907.465.2500
Programs fax: 907.465.5442

February 6, 2013

The Honorable Shelly Hughes, Chair
House Committee on Economic Development, Trade and Tourism
House of Representatives
Alaska State Capitol
Juneau, Alaska 99801-1182

Subject: Committee Follow-up

Dear Representative Hughes:

Please see the Department's response to the Committee's questions during the January 31, 2013 Division of Economic Development/Finance, Minerals, Timber and Fisheries Overview.

1. **Fisheries Enhancements – do we have more examples of success beside DIPAC?**
   Southern Southeast Regional Aquaculture Association (SSRAA) - capital loans in excess of $750,000 were approved to assist SSRAA to expand chum and coho salmon production. This is anticipated to increase the return of adult chum and coho salmon in Southern Southeast for the common property fisheries.

   Prince William Sound Aquaculture Corporation (PWSAC) - a $2.5 million capital loan was approved to fund the construction of a new dam at Armin F. Koernig (AFK) Hatchery. The original dam was built in the 1930s. This will extend the useful life another 40-50 years as well as providing a stable source of water that supplies the AFK Hatchery.

2. **Loan Activity Summary – Do we have a list of loans and activity?**
   Yes, please see attachments of loan activity reporting. These statutorily required documents were provided to the Speaker of the House and Senate President on January 17, 2013.

3. **Can we keep the committee apprised of the CQE loan demand activity of the course of the session?**
   Yes, we are currently working with a potential CQE client in Southeast Alaska and are happy to update the committee on CQE loan activity.

4. **Small Business Development Loan – What was the purpose of the $189,000 loan?**
   The loan was made in Southeast Alaska for the purchase of commercial condo units to expand an existing service/tourism business.

5. **Volunteer Tax & Loan Program (VTLP)**
The Alaska Business Development Center (ABDC) operates the Volunteer Tax & Loan Program. DED initially contracted with ABDC in 1996 for $200,000 to assist with a backlog of delinquencies and loan extensions for DED borrowers. Over time, the backlog diminished and the extension tasks returned to DED loan and collections staff. DED's current contract amount of $30,000 allows ABDC to continue to provide services to assist clientele in underserved areas and helps DED loan clients meet their financial reporting requirements to the IRS and assists rural Alaskans to collect tax refunds due to them.

6. **Do we track regulatory and statutory complaints?**
We do not maintain an official log of complaints. However the development team notes complaints and forwards on to appropriate Division or Department authorities and incorporates the information into the division's industry analyses. Concerns and complaints are also communicated through the various agency and commission reports distributed to the legislature, as identified by the Alaska Timber Jobs Task Force and the Alaska Minerals Commission.

7. **Cost comparison of Alaska wood products prices to non-Alaska made products**.
Our initial review of pricing information indicates the cost to ship lumber to the Anchorage market is very high and suggests a cost advantage for Alaska manufactured lumber. However, Alaska lumber is difficult to source given an inconsistent timber supply.

8. **How are we promoting Made in Alaska products in retail outlets?**
The Made in Alaska program at this time provides modest marketing support for permit holders. The program stocks display cases of Made in Alaska products in the Anchorage Egan Center, the Ted Steven's Anchorage International Airport, the ferry terminals in Juneau and Whittier, the Office of the Governor in Washington D.C., and the Alaska Public Lands Information Center in Tok. The department provides table tents, window decals, and rack cards for permit holders and retailers. The program also received additional tourism marketing support through an article in the state's official travel planner.

9. **Why did Yummy Chummies locate part of their operation in Arizona?**
Yummy Chummies is an Anchorage-based company, maintains a processing center in Anchorage, and is planning to expand that facility this year. However, due to high freight costs, the company moved its manufacturing to Arizona. COO Michael Burkes said 28 percent of the company's expense is the cost of freight, and with 90 percent of its business in the Lower 48, the company made the decision to lower its freight costs to remain competitive. In addition, business incentives offered by Arizona were a consideration. The company employs seven fulltime staff in Arizona and seven fulltime staff in Anchorage, which increases to 35 during the fishing season.

10. **The Committee requested information on The Working Forest Group.**
The Working Forest Group initiative is also a recommendation in the Governor's Timber Jobs Task Force's report. A comprehensive report on the Timber Jobs Task Force and more information may be found at DNR Division of Forestry website http://forestry.alaska.gov/aktimber_jobs_taskforce.htm.

Note: DED staff inadvertently stated the wrong interest rate for the microloan program; the correct interest rate is six percent, not five percent as was discussed in the hearing.

Thank you again for the opportunity to provide information to the committee. We look forward to working with you more in the future.

Sincerely,

Roberta L. Graham
Assistant Commissioner

02/12/13 Presentation: World Trade Center Alaska

<TARGET><BILL></BILL><SUBJECT>02-12-13 Presentation World Trade Center Alaska</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

sion Address:
laska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 12, 2013

1. **Call to Order**

~Gavel~ Welcome to the joint hearing of House Economic Development, Trade and Tourism Committee and Senate World Trade. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aides, Ginger Blaisdell and Katrina Matheny.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!) Senator Stevens, please introduce the senate members in attendance.
    - Several members may be coming and going due to other committee meetings underway.
- Today we are hearing from Greg Wolf, Executive Director of the World Trade Center Alaska.

3. **Calendar Review**

- We do not have a meeting scheduled for Thursday, February 14th.

Do members have any closing comments?

- Thank you. We are ADJOURNED at _12:___ (time)." ~Gavel~

Are there any state statutes or regulations that inhibit your ability to further develop international economic development? Or changes that would better encourage economic development in Alaska?

Do you have a long range plan?

What industry are other states or countries asking of Alaska that we have not developed enough to support the request?

Representative.Shelley.Hughes@akleg.gov

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development

DIVISION OF ECONOMIC DEVELOPMENT

P.O. Box 110804
Juneau, Alaska 99803-0804
Main: 907.465.2510
TDD: 907.465.5437
Fax: 907.465.3767

February 11, 2013

The Honorable Shelley Hughes, Chair
Special Committee on Economic Development, Trade, and Tourism
House of Representatives
Alaska State Capitol
Juneau, Alaska 99801-1182

Subject: Committee Meeting Follow-Up

Dear Representative Hughes:

As follow-up to the ARDOR Program overview at the February 5th meeting of the Committee on Economic Development, Trade, and Tourism (EDTT), the Division of Economic Development would like to offer clarification regarding committee member questions.

1. **What percent of the Division of Economic Development's budget is attributable to the ARDOR Program?**

   For fiscal year 2013, the ARDOR Program is 2.9 percent ($807,593) of the Division of Economic Development's $28 million budget. Notably, the ARDOR Program is primarily a pass-through grant with the regional development organizations as the beneficiaries.

2. **What was the original value of the ARDOR Program annual grant to regional development organizations?**

   During discussion, one of the ARDOR directors erroneously noted state statutes have always allowed for up to $100,000 to each ARDOR since the founding of the program. Senate Bill 480 established the Alaska Regional Economic Assistance Program during the 15th Alaska State Legislature (1988). Original state statutes provided "the total amount of grant money provided to an organization during a fiscal year may not exceed $50,000." During the past 25 years, the $50,000 maximum grant amount has increased to $100,000; however, ARDORs have never received more than approximately $62,000 per year.

Thank you again for the opportunity to provide information to the committee. We look forward to working with you more in the future.

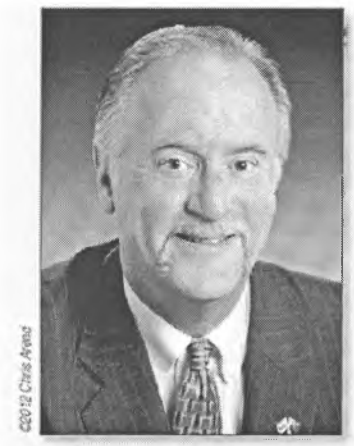
Sincerely,

Lorene Palmer
Director, Division of Economic Development



The Communiqué (week of October 15, 2012)

Letter from the Executive Director



Greg Wolf
Executive Director
World Trade Center Alaska

Welcome to another edition of **The Communiqué**. As the fall season makes the all too quick transition to winter, the Trade Center is busy working with members pursuing business opportunities overseas. We are also in full-swing making preparations for a number of events occurring this winter and spring. I want to thank all of you that participated in our **6th Annual Trade is Transportation Conference** last week. The conference featured eighteen presentations covering many aspects of transportation and logistics statewide. I especially would like to thank **U.S. Senator Mark Begich** for making the closing remarks at the event.

If your company is considering doing business in China, you won't want to miss our upcoming **8th Annual Alaska-China Business Conference** taking place on Tuesday, 11 December 2012 at the Hotel Captain Cook. Alaska's exports to China are booming -- from $102 million in 2000, to $1.4 billion last year -- and the prospects for expanding these exports are excellent.

This conference brings together Chinese and U.S. trade officials, Alaskan business people already "on the ground" in the China market who will share their experiences, China-focused business consultants, and other experienced "*China Hands*." For anyone interested in developing contacts and learning more about commercial opportunities in the Middle Kingdom, this once-a-year event is a 'must do.' Visit our website for registration information.

World Trade Center Alaska is a statewide organization. Our board directors and members hail from all parts of the state. Many of you are aware, of course, of the major business events we conduct in Anchorage, but less may know of the events we conduct in other cities and towns across the state. For example, every January our annual **Statewide Economic Forecast Luncheons** take place in **Fairbanks** and **Juneau**, in addition to Anchorage. Just recently we conducted an **Executive Briefing Series** event in **Kodiak** that focused on export finance programs available through the Small Business Administration and the Export-Import Bank of the United States. In 2013, we plan to expand our reach into other communities around the state.

I encourage you to take part in our programs and keep in touch with our office. **These are exciting times for Alaskans to explore opportunities abroad**. So much of the world needs what we have to offer. Let's work together to pursue these opportunities. Membership with WTCAK is your passport to being Local...and Global!

Best Regards,

Greg Wolf
Executive Director

A World of Opportunity:

An Update on Alaska's International Trade. Trends and Outlook Moving Forward

Presented by Greg Wolf, Executive Director, World Trade Center Alaska

12 February 2013

Presented at the Joint Meeting of

- House Special Committee on Economic Development, Trade & Tourism
- Senate Special Committee on World Trade

WORLD TRADE CENTER ALASKA

History of the Trade Center

- Established in 1987 by the University of Alaska
- In 1998, transitioned to private, non-profit corporation
- Governed by 18-member, statewide board of directors
- Since 1998, annual partnership with the State of Alaska
- Since 2008, representing U.S. Department of Commerce for Trade in Alaska
- Since 2009, annual partnership with the University of Alaska
- Approximately 100 members statewide

A World of Opportunity:

An Update on Alaska's International Trade. Trends and Outlook Moving Forward.

I The Numbers

II The Trends

III The Outlook

IV The Trade Center

International Trade is Big Business for Alaska

- Overseas Exports estimated $4.5 billion in 2012
- This represents nearly 10% of the Alaska's Gross State Product (GSP)
- New Money into Economy
- Thousands of Direct and Indirect Jobs
- Results in stronger, more diversified economy
- How We Rank?
  - Alaska ranks 40th among all states by the value of exports
  - As a percent of GSP, Alaska ranks 14th
  - On a per capita basis, Alaska ranks 4th

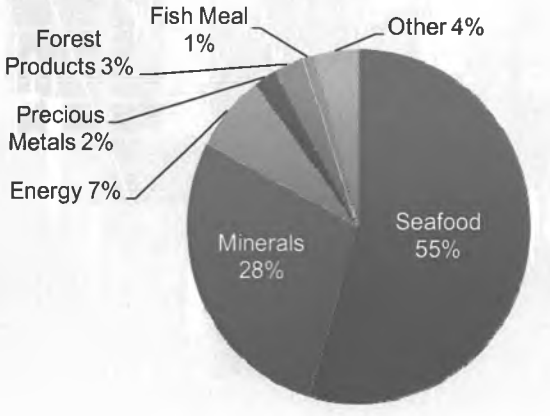
Why Trade Matters?

- Substantial component of Alaska's economy. Exports typically account for approximately 10% of the GSP. Export total does not include the export of services from Alaska — such as construction, engineering and oil & gas services.
- Exports now bring between $4 and $5 billion of new money into our economy. New money, not recycled money. Also, exports account for nearly $2 billion in induced and indirect economic benefits, according to a study by Northern Economics.
- Exports allow companies to become larger through expanded markets and customer base.
- For some Alaska companies, their best bet for growth is overseas markets.

Exports = Jobs

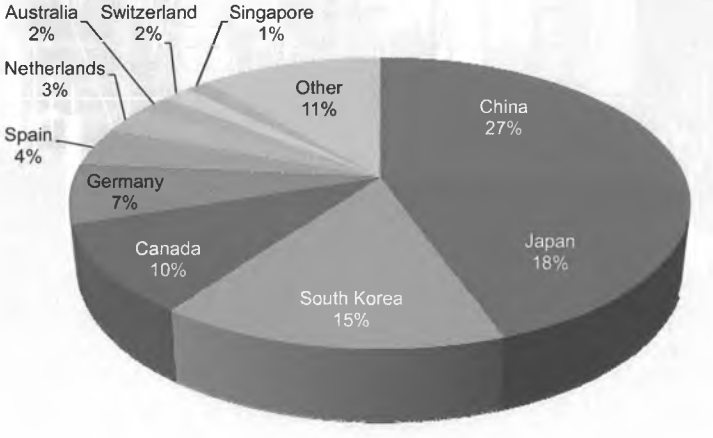
- Exports support nearly 15,000 direct and 10,000 indirect and induced jobs in Alaska
- Export jobs are high paying jobs. Export-related jobs typically pay 13-16% more than jobs tied solely to domestic economy
- According to the U.S. Department of Commerce, there are approximately 300 companies that export from locations in Alaska. 75% are considered SMEs.

Alaska's Top Export Commodities,
January–September 2012



Source: U.S. Census Bureau

Alaska's Total World Exports
January-September 2012 ($3.47 Billion)



Source: U.S. Census Bureau

Alaska Worldwide Exports 1994 -2012

USD Billions

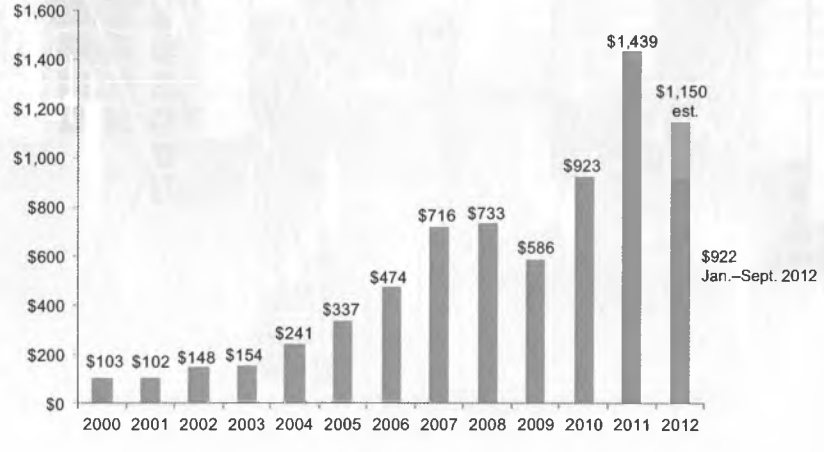


Source: U.S. Census Bureau

Alaska's China Era Continues

(2000 – 2012 Full Year Comparison)

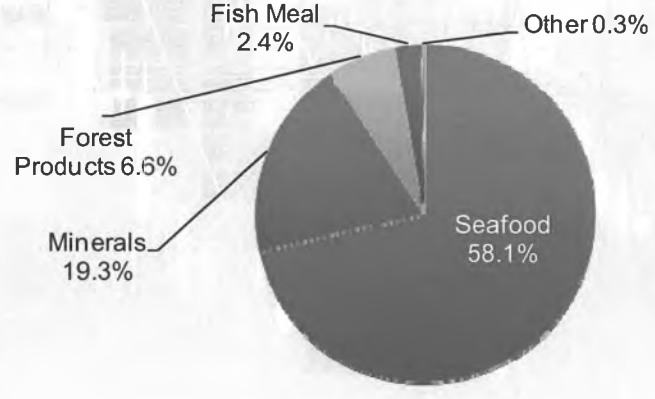
USD Millions



Source: U.S. Census Bureau

Alaska's Exports to China
(by Commodity), January-September 2012





Source: U.S. Census Bureau, SOA, Governor's Office of International Trade

The Trends: The Three "Rights"

- Right Place

  Alaska's geographic location on the Pacific Rim. Fast growing economies and populations.
- Right Time

  Economic liberalization and modernization. Migration to the cities and growth of the middle class.
- Right Commodities

  Alaska has world-class reserves of natural resources. The building blocks of economic development. What people need versus what they want.

The Outlook

- **Why am I optimistic?**
  - We have what the world needs
  - We have fast-growing economies and populations in our backyard
  - Commercial development of the Arctic presents significant opportunities for Alaska

The Outlook (continued)

- Many resources remain untapped – for example, minerals & metals:
  - Coal – 17% of the world's coal; 2nd most in the world
  - Copper – 6% of the world's copper; 3rd most in the world
  - Lead – 2% of the world's lead; 6th most in the world
  - Gold – 3% of the world's gold; 7th most in the world
  - Zinc – 3% of the world's zinc; 8th most in the world
  - Silver – 2% of the world's silver; 8th most in the world
- North Slope natural gas

2013 Trade Forecast

- Exports to be $4.5 – 4.7 billion in 2013, consistent with 2012 level
- Primarily commodity price driven (seafood, minerals, metals)
- Watch the dollar – a weaker dollar makes U.S. exports relatively cheaper
- Watch Pacific Rim economies (China, Japan, Korea) for strength or weakness

WORLD TRADE CENTER
ALASKA

About the Trade Center

- WTCAK is a private, non-profit membership organization providing international business services to members and community partners across the state
- Our mission is to assist Alaskans to successfully compete for trade and investment in the global market place
- WTCAK is a part of a global network of over 300 WTCs around the world

WORLD TRADE CENTER
ALASKA

Core Functions

- Trade Capacity
  - Help Alaska Companies to become export ready through information, seminars, conferences, and other technical assistance.
- Trade Development
  - Research foreign markets and identify trade opportunities for Alaska companies.
- Trade Services
  - Support Alaska companies with the information and hands-on assistance needed to make trade happen. Connect Alaska sellers with overseas buyers.
- Trade Facility
  - Make available office and conference room setting to facilitate business meetings and events.
- Trade Network
  - Provide members with access to facilities and support in more than 300 cities around the world.

"Boots On The Ground" Strategy



During the past 10 years, WTCAK has led missions to a variety of countries, including: China, Korea, India, Taiwan, Singapore, and Canada

WTCAK Trade Development Programs





Phone: (907) 27-TRADE
web: www.wtcak.org

WORLD TRADE CENTER
ALASKA

Serving Alaska's Business Community Since 1987

a proud partner of the following organizations:



UAA
UNIVERSITY *of* ALASKA
ANCHORAGE

US COMMERCIAL SERVICE
United States of America
Department of Commerce



WTCAK IS...

A Special Thanks To Our Premium Level Members

- Alaska Business Monthly
- Alaska Railroad Corporation
- BP Exploration Alaska
- FedEx Express
- Lynden International
- Sealaska Corporation
- Trident Seafood Corporation
- United Parcel Service
- Usibelli Coal Mine
- Wells Fargo Bank Alaska

How do you become a WTCAK member?

Contact: info@wtcak.org
Tel: 907-27-TRADE Fax: 907-278-2982
http://www.wtcak.org
431 West 7th Avenue, Suite 108,
Anchorage, Alaska 99501, USA

World Trade Center Alaska is a private, non-profit membership organization providing international business services to members and community partners across the state.

Our mission is to assist Alaskans to successfully compete for trade and investment in the global market place.

WTCAK is a part of a global network of over 300 World Trade Centers around the world.

WTCAK pursues its mission through five core functions

Trade Capacity

Help Alaska companies to become export ready through information, seminars, conferences and other technical assistance

Trade Development

Research foreign markets and identify trade opportunities for Alaska companies

Trade Service

Support Alaska companies with the information and hands-on assistance needed to make trade happen. Connect Alaska sellers with overseas buyers

Trade Facility

Make available office and conference room setting to facilitate business meetings and events

Trade Network

Provide members with access to facilities and support in more than 300 cities around the world

Growing Alaska's Economy Through International Trade

International Trade Means Big Business for Alaska:

- In 2011, Alaska's exports to overseas markets reached a record high of $5.2 billion, placing us 40th among the states.
- In 2011, Alaska ranked 4th among the states in the value of state exports on a per capita basis.
- Exports are a significant driver of some of the largest companies in Alaska. Our exports support nearly 25 thousand jobs statewide and these are some of the highest paying jobs in the state.
- 75% of the nearly 300 companies that export from Alaska are considered small and medium sized business. These smaller firms, however, account for 21% of Alaska's total exports (2009).

Overseas Companies Have Made Significant Investments in Alaska:

- As of 2007, cumulative foreign direct investment in Alaska reached $34 billion, the 9th highest total in America.
- Foreign companies (majority-owned US affiliates) operating in Alaska generate 12,800 jobs. This represents approximately 5.3% of the state's private-sector workforce (2009).

Sources: U.S. Census Bureau,
U.S. Department of Commerce

Alaska's Top 5 Export Markets:

1. China ($1,439 million)
2. Japan ($1,085 million)
3. South Korea ($644 million)
4. Canada ($584 million)
5. Germany ($261 million)

Alaska's Top 5 Exports:

1. Seafood ($2.5 billion)
2. Minerals ($1.8 billion)
3. Energy ($388 million)
4. Precious Metals ($266 million)
5. Wood ($119 million)

How We Rank

Ranking for Value of US Exports by State, 2011

Rank	State	Annual Export Value (USD Millions)	Percent Change in the Value of Exports, 2010-11
1	Texas	$249,860.0	17.30%
2	California	$159,354.4	10.09%
...	...	...	...
39	Delaware	$5,508.8	9.87%
40	Alaska	$5,238.3	20.74%
41	Vermont	$4,327.8	-1.11%

Top US States
by Value of Exports
on a Per Capita Basis, 2011

Rank	State	Exports per capita
1	Louisiana	$12,049
2	Texas	$9,732
3	Washington	$9,463
4	Alaska	$7,248
5	Vermont	$6,909

Ranking for Export Value
as a Percentage of GSP, 2011

Rank	State	Exports as a Percentage of GSP
1	Louisiana	22.25%
2	Texas	19.10%
3	Washington	18.20%
...	...	...
13	Alabama	10.34%
14	Alaska	10.20%
15	Idaho	10.18%

WTCAK Trade Development Programs

WTCAK has five focused trade development programs...

These programs are designed to give members and community partners the ideas, information and hands-on assistance to identify and pursue business opportunities in Alaska's major markets.

Four of the programs are country specific: *China Calling, Japan Focus, Korea Connection, and Canada: Opportunities Next Door.*

These countries represent the state's four largest trading partners.

Another program, *New Markets-New Customers*, is focused on new, high potential markets that are experiencing rapid economic growth.











What our clients say about us...

We encourage businesses with an interest in expanding to international markets to become a member of WTCAK and discover the benefits of being a part of this dynamic group.
Dennis L. Mitchell - Vice President Oil and Gas, Lynden International

WTCAK has helped us develop long-term relationships with Alaskan businesses that are just entering the global marketplace or expanding their horizons.
Richard Strutz - Regional President, Wells Fargo Bank Alaska

Through my business career, and several business endeavors, WTCAK has been vital to connecting and selling in markets worldwide.
Gregory Galik - Founder & Chairman, Alaska Brands Group, Anchorage

Over the years, Usibelli Coal Mine and WTCAK have successfully partnered to market Alaska coal to a variety of international customers on the Pacific Rim.
Bill Brophy - Vice President, Customer Relations, Usibelli Coal Mine, Inc.

They helped us in every corner of the process from linking us with the appropriate contacts abroad to answering my many travel and visa questions.
Angelina Skowronski - Marketing Development, The Auction Block Co.

With WTCAK's help, and through their excellent South Asian regional network connections, we have developed key relationships that we are using to create some new and very exciting export items from Alaska to South Asia.
Samuel Pelant - Managing Director, PolyEarth Construction International, LLC

WTCAK staff apply their expertise where it matters, while their professional relationships throughout the world put global commerce at the fingertips of all Alaskan businesses.
Ryan B. Gilbert - Business Advisor and International Trade Specialist, Alaska Small Business Development Center

World Trade Center Alaska
Makes Trade Happen for You
Join Today!

Open doors of opportunity for your business:

Expand your business through access to 320 World Trade Centers located in 95 countries serving more than 750,000 businesses worldwide. In addition, our U.S. Commercial Service partnership offers access to trade professionals in more than 75 countries.

Receive international business leads and introductions that will help your business grow.

Get customized professional trade consultation and access to our meeting facilities. Benefit from market intelligence and market entry or expansion research.

Stay up to date on trade events and opportunities with a subscription to our announcements and e-newsletters: *TradeLine* and our periodic newletter, *The Communiqué*.

Gain valuable new contacts:

Conferences, luncheons and briefings. We host some of the largest and most anticipated business events in Alaska.

Worldwide network of our partners. Alaska, national, and international business-oriented organizations.

Trade missions. Travel with us to overseas markets and meet prospective business partners.

Members-only receptions. Our events are attended by local business and government leaders, international business partners, visiting foreign executives, and US and foreign government officials.

With 25 years of experience, WTCAK can help your company find markets and customers around the world. Membership in WTCAK enables you to be local and global!

WORLD TRADE CENTERS IN ALASKA'S TOP 5 EXPORT MARKETS:



GERMANY
Berlin; Bremen; Dresden; Frankfurt

CHINA
Beijing; Changzhou; Binzho City; Chongqing; Macau; Bengbu; Zhejiang (Hangzhou); Hong Kong; Kunming; Qingdao; Quanzhou; Shanghai; Shenyang; Shenzhen; Tianjin; Wuxi; Xi`an; Yiwu; Zhengzhou; Erdos (Inner Mongolia); Xuzhou; Jiaxing; Hefei

JAPAN
Okinawa; Tokyo

SOUTH KOREA
DaeJeon (Seoul); Suwon; Seoul

CANADA
Edmonton; Atlantic Canada-Halifax; Montreal; Vancouver; Winnipeg; Toronto

We'll help put your company on the global map!

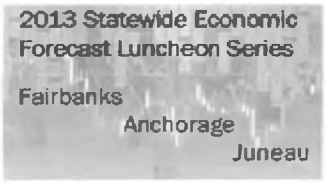
Take advantage of a world of opportunities
CALL TODAY 907.27.TRADE

WTCAK Fall 2012 – Spring 2013 Upcoming Major Events



8th Annual Alaska-China Business Conference
(December 11, 2012)

Seven years ago we conducted our 1st Alaska-China Business Conference. Since then Alaska's trade with China has more than quadrupled and reached a record high $1.4 billion in 2011. Each year a group of experienced "China-Hands" gather in Anchorage to give their presentations at the conference. Among the speakers are U.S. and Chinese government officials, local businesspeople that share their experiences with "from the trenches" reports, academic faculty members presenting their research, and many others. WTCAK's Alaska-China Business Conference is one event that a person interested in China should not miss. The conference takes place at the Hotel Captain Cook.



Statewide Economic Forecast Luncheon
January 15th (Fairbanks)
January 16th (Anchorage)
January 17th (Juneau)

Come find out what's in store in 2013! This is a unique opportunity to gain a statewide perspective on the prospects in 2013 for Alaska's major industries, state and federal government spending, and how this will affect communities and jobs. You will also hear about the international picture and how it impacts Alaska. The luncheon is conducted in Fairbanks, Anchorage and Juneau.



A New Look at Alaska-Russian Far East Opportunities
(February 19, 2013)

With this half-day event, we will take a new, fresh look at potential business opportunities between Alaska and the Russian Far East region. It will feature six speakers, a mix of both U.S. and Russian trade specialists. Much has transpired since the 1990's when Alaskans actively explored commercial opportunities in the RFE. Recent developments include Russia's ascension to the World Trade Organization (WTO), in August this year, and the recent launch of direct air passenger service (seasonal) between Anchorage and Kamchatka (and points beyond in the RFE). Stay tuned for details.



Arctic Ambitions II
(February 19-20, 2013)

This annual conference concentrates on the theme of international trade and business opportunities that flow from commercial development in the Arctic. Working from a context of who stands to benefit most - which regions, countries, industries and companies - panel discussions address issues such as supply chains, innovation, markets, commerce, and transportation. While policy and research inform the discussion, Arctic Ambitions concentrates on global markets, international trade and Arctic logistics. The inaugural conference in May 2012 brought together presenters from Canada, Finland, Korea, Norway, Russia, and Alaska.



The Communiqué (week of October 15, 2012)

Letter from the Executive Director



Greg Wolf
Executive Director
World Trade Center Alaska

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If your company is considering doing business in China, you won't want to miss our upcoming **8th Annual Alaska-China Business Conference** taking place on Tuesday, 11 December 2012 at the Hotel Captain Cook. Alaska's exports to China are booming--from $102 million in 2000, to $1.4 billion last year--and the prospects for expanding these exports are excellent.

This conference brings together Chinese and U.S. trade officials, Alaskan business people already "on the ground" in the China market who will share their experiences, China-focused business consultants, and other experienced "*China Hands*." For anyone interested in developing contacts and learning more about commercial opportunities in the Middle Kingdom, this once-a-year event is a 'must do.' See below for registration information.

World Trade Center Alaska is a statewide organization. Our board directors and members hail from all parts of the state. Many of you are aware, of course, of the major business events we conduct in Anchorage, but less may know of the events we conduct in other cities and towns across the state. For example, every January our annual **Statewide Economic Forecast Luncheons** take place in **Fairbanks** and **Juneau**, in addition to Anchorage. Just recently we conducted an **Executive Briefing Series** event in **Kodiak** that focused on export finance programs available through the Small Business Administration and the Export-Import Bank of the United States. In 2013, we plan to expand our reach into other communities around the state.

I encourage you to take part in our programs and keep in touch with our office. **These are exciting times for Alaskans to explore opportunities abroad**. So much of the world needs what we have to offer. Let's work together to pursue these opportunities. Membership with WTCAK is your passport to being Local...and Global!

Best Regards,

Greg Wolf
Executive Director



U.S. Senator Mark Begich and WTCAK Executive Director Greg Wolf, at the 6th Annual Trade is Transportation Conference on 10 October 2012. Senator Begich made the closing remarks at the event.



Dale Wade, Vice President of Business Development for the Alaska Railroad Corporation making a presentation at the 6th Annual Trade is Transportation Conference.



A full room of conference attendees as Jeanine St. John, Vice President of Lynden Logistics, presents at the 6th Annual Trade is Transportation Conference. Lynden was one of the event sponsors.

WTCAK NEWS

New and Renewing Members:

- Ted Stevens Anchorage International Airport
- Consul of Mexico in Anchorage
- Consular Office of the Republic of Korea
- Consulate General of Canada in Seattle
- UPS

Upcoming Events 2012-2013

8th Annual Alaska-China Business Conference (December 11, 2012):

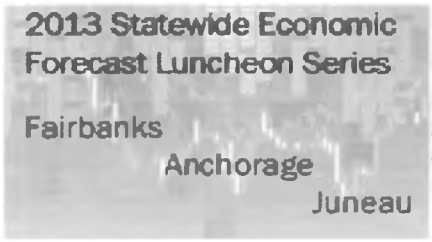


Seven years ago we conducted our 1st Alaska-China Business Conference. Since then Alaska's trade with China has more than quadrupled and reached a record high $1.4 billion in 2011. Each year a group of experienced "China-Hands" gather in Anchorage to give their presentations at the conference. Among the speakers are U.S. and Chinese government officials, local businesspeople that share their experiences with "from the trenches" reports, academic faculty members presenting their research, and many others. WTCAK's Alaska-China Business Conference is one event that a person interested in China should not miss. The conference takes place at the Hotel Captain Cook.

Please click below to register for the conference: Registration Form
(note: conference registration fee includes keynote lunch)

To become a sponsor of the event, please click here.

Statewide Economic Forecast Luncheon (January 2013)



Come find out what's in store in 2013! This is a unique opportunity to gain a statewide perspective on the prospects in 2013 for Alaska's major industries, state and federal government spending, and how this will affect communities and jobs. You will also hear about the international picture and how it impacts Alaska. The luncheon is conducted in Fairbanks, Anchorage and Juneau.

A New Look at Alaska-Russian Far East Opportunities (February 19, 2013)



With this half-day event, we will take a new, fresh look at potential business opportunities between Alaska and the Russian Far East region. It will feature six speakers, a mix of both U.S. and Russian trade specialists. Much has transpired since the 1990's when Alaskans actively explored commercial opportunities in the RFE. Recent developments include Russia's ascension to the World Trade Organization (WTO), in August this year, and the recent launch of direct air passenger service (seasonal) between Anchorage and Kamchatka (and points beyond in the RFE). Stayed tuned for details.

Arctic Ambitions II (February 19-20, 2013)



This annual conference concentrates on the theme of international trade and business opportunities that flow from development of resources in the Arctic. Working from a context of who stands to benefit most - which regions, countries, industries and companies - panel discussions address issues such as supply chains, innovation, markets, commerce, and transportation. While policy and research inform the discussion, Arctic Ambitions concentrates on global markets, international trade and Arctic logistics. The inaugural conference in May 2012 brought together presenters from Canada, Finland, Korea, Norway, Russia, and Alaska.

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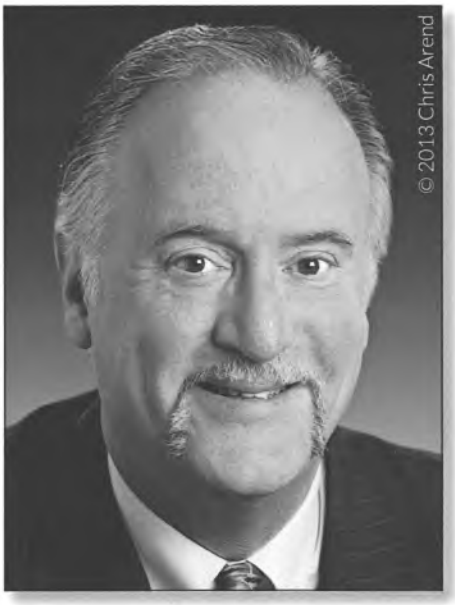
Q & A with Greg Wolf

Q *Starting with the big picture, why is international trade important to Alaska and what kind of impact does it have on the economy?*

A When we talk about international trade for Alaska we are almost always referring to exports. In other words, Alaska commodities, goods and services sold to customers in overseas markets. Alaska's exports now hover close to $5 billion on an annual basis, having reached a record high of $5.2 billion in 2011. Export revenues represent new money coming into our economy, creating much needed diversification and sustaining thousands of jobs. A few years ago, we commissioned Northern Economics, a leading Anchorage-based consulting firm, to measure the impact that trade has on the Alaska economy. What they found is impressive: in addition to the export revenues themselves, that now are in the $5 billion range, another $2 billion is generated by these export activities. At these levels, exports represent about 10 percent of Alaska's Gross State Product, a measure used to gauge the size of a state's economy, and based on exports as a percentage of GSP, Alaska ranks 14th among all states. If you consider exports in relation to the size of our population, Alaska is fourth in the country. Relatively speaking, trade is more important to Alaskans than it is to people living in other states. Here, there is a very good chance that your paycheck, or your neighbor's, results from trade.

Q *You mentioned jobs. How many Alaska jobs are supported by international trade?*

A In the study conducted by Northern Economics, one of the things they looked at, of course, is the number of jobs that are created or sustained as a result of export operations. They determined that there are about 15,000 jobs, statewide, that flow directly from export



Greg Wolf

activities. In addition, there are another 10,000 indirect or induced jobs generated by exports. Taken together, then, trade accounts for about 25,000 jobs in Alaska. I think that is significant. It should also be noted that jobs tied to exports pay more than jobs connected solely to the domestic economy. The U.S. Census Bureau did a study about this several years ago and reported that export-related jobs typically pay about 15 to 17 percent more versus jobs found elsewhere in the economy. One doesn't have to look around too much in Alaska to find ample evidence of this finding. Indeed, some of the highest paying jobs in the state are tied to trade.

Q *Why is the export business important to Alaska and Alaskans?*

A Well, we would certainly have a much smaller economic base and fewer high paying jobs. Without question, some of the biggest players in our economy would not be active in Alaska were it not for the existence of significant export markets for their production. We must remember that Alaska itself is a very small market. With a population of some 730,000 it could be, literally, a suburb of many major cities around the world. In order to attract resource industries to Alaska, exports markets are a necessity.

For example, so far the only natural gas to leave Alaska has been the LNG exports to Japan. The only coal to leave the state has been overseas to customers in markets like Korea and Chile. Almost all of the minerals and precious metals are destined for overseas customers and about 50 percent of Alaska's annual seafood catch is sold to buyers overseas.

Thus, export markets are very important to Alaska. In many cases, the most viable and attractive markets for Alaska are overseas, primarily in Asia. In a typical year, around 70 percent of the state's exports are destined for Asian markets. There are several reasons for this concentration: first, many nations in the region are resource-poor while Alaska is resource-rich; second, Alaska is a neighbor in the Pacific Rim and there are well-established shipping routes by sea and air; third, and often overlooked, is the political stability that Alaska offers as part of the United States. This is important—indeed, a comfort—to countries that rely upon imports for such critical resources as energy, minerals and food.

Of course, Canada is long-standing major customer of Alaska exports and several European countries, including Germany, Spain and Switzerland are also important trading partners. However, it is the large Asian markets that dominate the state's export picture.

Q *Where is Alaska's biggest export market?*

A The headline story for Alaska's international trade economy has certainly been the dramatic growth of China as an export market. In what I've described as the "Dragon Decade," during the past 10 years Alaska's exports to the Middle Kingdom have soared from $102 million to $1.4 billion. That's more than a 10-fold increase in just a decade. Alaska

has never had a major trade market grow so significantly and in such a short period of time. It's really unprecedented. In 2011, China became Alaska's largest export market, a distinction held for many decades by Japan, and was again in 2012. China buys a variety of Alaska exports, led by seafood, but also including minerals, forest products, precious metals and fish meal. There are, of course, concerns about the Chinese economy and its ability to sustain what has often been double-digit annual growth during the past several decades. Frankly, I believe these concerns are somewhat overblown and, coming from some critics, may be more wishful thinking than economic reality. While the Chinese economic juggernaut may experience slowdowns or stall from time to time, it is likely to enjoy high single-digit growth for decades to come. That's good news for Alaska since they need and are active buyers of the natural resources and seafood Alaska has in abundance.

Q *Can you give our readers an idea of the number and size of businesses exporting from Alaska to the world market?*

A According to the most recent information available from the U.S. Department of Commerce, there are approximately 300 companies that export from Alaska and, of these, 75 percent are considered to be small or medium-sized businesses. That being said, clearly it is the very large companies, some of them multinationals, which produce the lion's share of exports. These large firms generate about 80 percent of Alaska's export volume.

Q *Do opportunities exist for expanded exports from Alaska?*

A Absolutely. While it is sometimes easy to be pessimistic about our prospects in the short-term, I am really quite optimistic about our long-term future. Five billion dollars annually in exports is significant, but in many ways it is only scratching the surface of what is possible, if Alaska is allowed to responsibly develop our vast natural resources. If we can muster the will and the approvals to move some of the major projects that are currently on the drawing boards to actual construction and, ultimately, to the production phase, we'll look back at $5 billion as being a small number. When you consider: we haven't even begun to export any of our North Slope natural gas, for which there are large and growing markets overseas; while Alaska possesses as much as 20 percent of the world's coal resources, today we have only one active mine; our mineral (such as zinc and lead) and precious metal (like gold and silver) deposits are among the top 10 in the world and opportunities to develop new mines and expand existing ones are multifold; and, we are just learning how much of the so-called rare earth elements, those metals critical for modern technologies, that Alaska may discover under its feet. These are just several examples of very real opportunities that can fuel our economic growth and provide gainful employment for current and future generations.

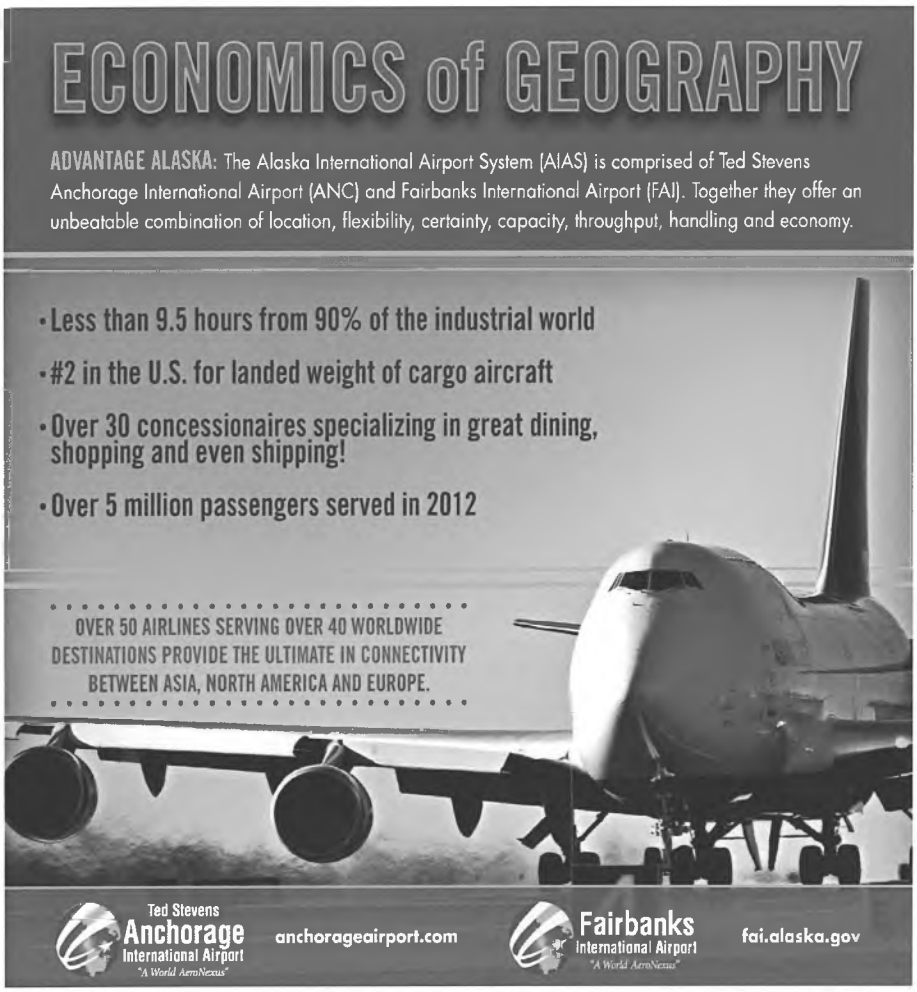
Q *What does the World Trade Center Alaska do to help Alaska businesses and promote international trade?*

A The Center works directly with Alaska companies to identify and pursue overseas business opportunities. Mainly, our work is with small and medium-sized companies that often do not have the experience or manpower to research the various markets and find customers or partners to do business with. That's where we come in: We become their extended staff, if you will, and do a lot of the leg work for them.

Some of these companies are "new to export," meaning that they will be selling to overseas customers for the first time. Others will have some overseas customers, say in Japan, but are now looking to expand their sales to China, for example. In this case, they fall into the category of "new to market." We also, of course, have members who are not directly involved with exports but who provide important services to those companies that are exporting. Examples would include freight forwarders, customs brokers, law firms, banks and transportation companies.

We normally work with companies that are export ready, meaning they already have a product or service to export and can adequately respond to customer orders.

In addition to our one-on-one work with individual firms, we organize and conduct trade missions, conferences,



seminars and other international business events that are attended by thousands of Alaskans each year. Through these efforts we are able to provide Alaskans with up-to-date information and analysis about business opportunities, and inform potential customers overseas about Alaska's export capabilities.

We are also fortunate to have strong, long-standing partnerships with the State of Alaska, the U.S. Department of Commerce, and the University of Alaska that enable us to carry out our mission.

Q: *What global trends are working in Alaska's favor? What new markets should Alaska businesses be paying attention to?*

A: I believe that Alaska has and will benefit from three global megatrends that I refer to as "The Three Rights." Our geographic position on the Pacific Rim puts us close to the fastest growing economies in the world. It is also home to some of the largest and fastest growing populations. This proximity to growth puts Alaska in the "Right Place." We are living in a time when people in these emerging markets are moving up the economic ladder and, in record numbers, are both migrating from the rural areas to the cities and becoming consumers, really for the first time. This puts us at the "Right Time" in history to take advantage of the opportunities flowing from this rising tide of new wealth. As an exporter of natural resources, we have the "Right Commodities" to respond to the needs of this economic growth and modernization occurring in Asia and other parts of the world.

We always keep an eye out for new market opportunities for Alaska. One part of this approach is to go where the growth is. We look for markets that are on a long-term upswing, have import needs that match up with Alaska's export capabilities, and where Alaska companies can successfully compete.

We are currently researching the Southeast Asia region and a couple of nearby markets that could hold significant potential for us, including India. At present, Alaska does very little trade with India, but the country, much like China, is on a rapid growth trajectory. Like China, India also has more than 1 billion people. Their economy is consistently growing at high single-digit rates, and the growing middle class has higher consumer expectations. As they continue to grow and modernize, this could represent the next big opportunity for Alaska.

Some of our work to get to know this market better and for India to know Alaska better, has been the Alaska-India Business Conference we conducted in Anchorage in 2006 and a trade mission of private and public sector executives to New Delhi in 2010.

Q: *What's the bottom line on the export business in Alaska?*

A: I've been in this business for 25 years and this allows me some perspective. In many ways, there are now more things working in our favor than not. I'm not suggesting that progress will be easy nor without those who oppose any progress at all! But, many of the stars are aligned for Alaska to move forward. It will take focus, determination and a lot of work. We have so much of what the world needs. This can be Alaska's season in the sun. ☼

Greg Wolf is the Executive Director for World Trade Center Alaska.

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2002 - Dennis Bird
2006 - Joseph Henri

Dear Alaskan Executive:



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Rick Pollock

I am proud to serve as the chairman of World Trade Center Alaska board of directors during 2013, the organization's 26th year. It's an exciting time to be involved with the Center. Alaska's international trade economy continues to grow and the state's exports are hovering in the $5 billion range. These export activities support thousands of high-paying jobs, generate significant investments in our natural resource industries, and help to diversify the state's economic base.

Since it was founded, WTCAK has worked with its members and community partners to explore and pursue international trade opportunities. On a daily basis, we are involved with companies from across the state, small and large, that share an interest in building their businesses by exporting products or services to customers overseas. In addition, companies that provide services to the exporting community, such as banks, freight forwarders, law firms and customs brokers, also benefit from Trade Center membership.

Over the years, we have helped introduce Alaskans to new markets, such the Russian Far East and, more recently, to China—Alaska's fastest growing, and now largest, trading partner. With an eye toward the future, the Center has recently made initial forays into high-potential new markets for Alaska, including India and Singapore, among others.

To carry out our mission of assisting Alaskans to succeed in the global marketplace, WTCAK has fostered a skilled staff and important partnerships. Led by Greg Wolf, our long-time executive director, the hard-working staff at WTCAK has years of international experience, passion and a strong commitment to serve our membership at a very high level. We have also forged strategic partnerships with the State of Alaska, the U.S. Department of Commerce, and the University of Alaska. In a unique and effective way, these relationships bring together the resources of the private and public sectors to bring focus and coordination to Alaska trade promotion.

We are proud of our past and confident of our future. We look forward to more successes in the years ahead and I encourage you to join with us as we work to build a strong international trade economy for Alaska.

Sincerely,

Rick Pollock
Chairman, Board of Directors
World Trade Center Alaska

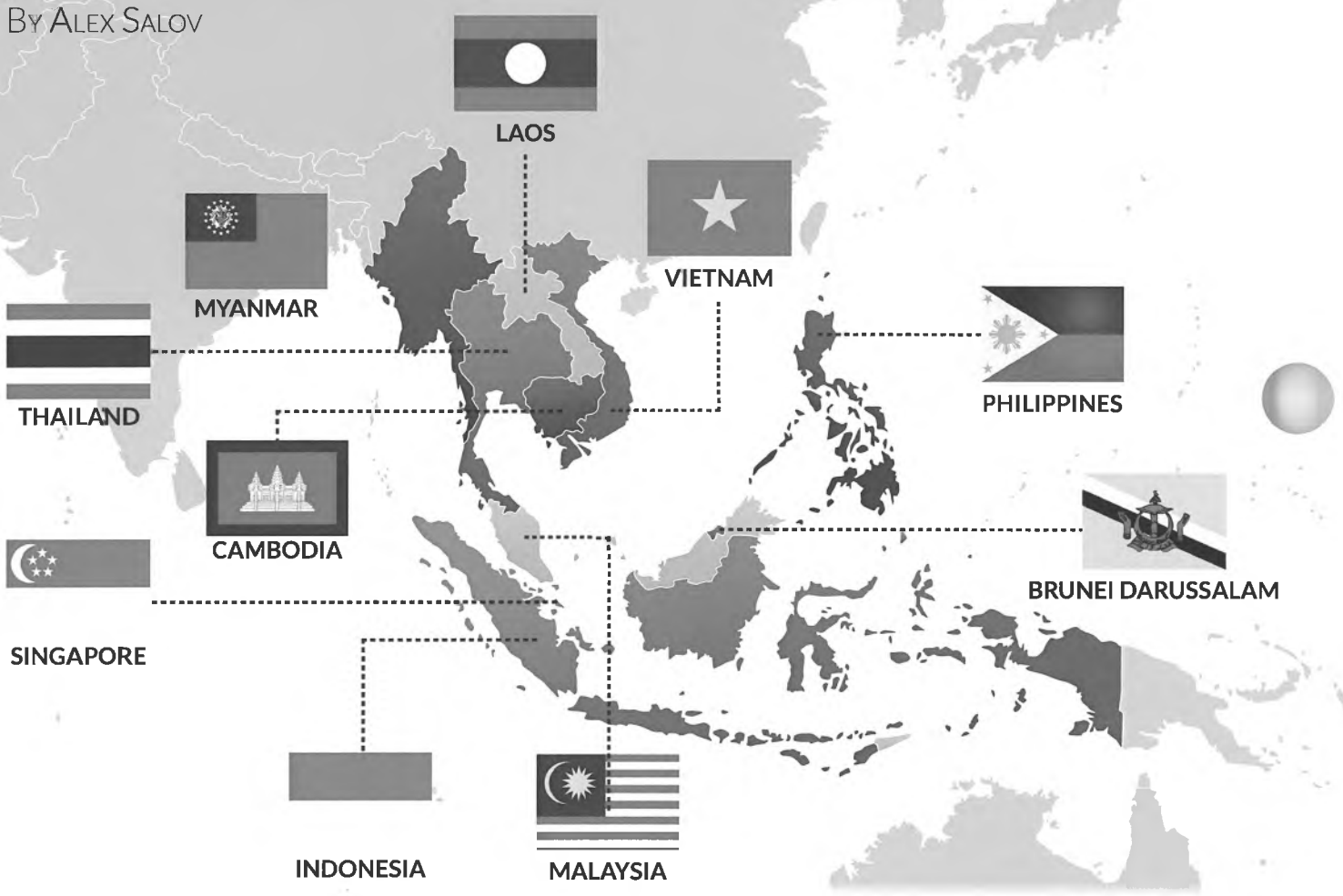
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20 WORLD TRADE CENTER ALASKA twenty-years

Southeast Asia New Markets— New Customers

Why ASEAN, why now?

By Alex Salov



Southeast Asian countries are sometimes more familiar to adventure travelers than to business people—but they are filled with opportunities for Alaskan companies to do business. Ten of these countries are members of the Association of Southeast Asian Nations—a political and economic union of these nations. The members of ASEAN are: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar (Burma), Philippines, Singapore, Thailand and Vietnam.

With a total population of around 600 million and steady GDP growth of 5 percent on average in 2011 (compared to 3 percent or less average growth of developed countries worldwide), ASEAN countries have become one of the most important growing markets for the United States. U.S. exports to ASEAN reached $76.24 billion in 2011 and, if considering ASEAN as a single country, it would be the fourth largest U.S. trading partner after Canada, China and Mexico.

Several ASEAN countries follow an export-led growth strategy with which they identify and focus on specific commodities for export. To do that, they select commodities that can be produced cheaply and with a competitive advantage. For example, Indonesia is a large exporter of minerals and the world's

leading producer and exporter of thermal coal (used for power generation). It currently supplies half of China's coal imports. Thailand is becoming a center for automobile manufacturing in Southeast Asia and is among the top ten automobile exporting nations in the world.

The total population of ASEAN countries is about 600 million people. Indonesia is the world's fourth most populous nation (248.5 million people) and the world's third largest democracy.

Overarching Trends

China is an active player in the ASEAN region. China and ASEAN established a free trade agreement in 2010: the ASEAN-China Free Trade Area—the third largest free trade bloc in the world after the European Union and NAFTA. In 2012, ASEAN overtook Japan to become China's third largest trading partner after the EU and the United States. China-ASEAN trade increased 24 percent to $362.3 billion in 2011 and is expected to exceed $500 billion by 2015. According to China Daily, Chinese officials expect the ASEAN region to become China's top trading partner within the next several years.

Members of ASEAN are very diverse in their political, economic and cultural aspects; however, there are several features that most of them share: relatively young populations, urbanization, growing middle class, rapid industrialization and strong demand for infrastructure. These overarching trends make ASEAN members attractive export markets for Alaska.

Let's focus on these trends. As mentioned above, the total population of ASEAN countries is about 600 million people. Indonesia is the world's fourth most populous nation (248.5 million people) and the world's third largest democracy. Vietnam has a population of 90 million people of which 25% are 14 years old or younger. This young age group is representative of most countries in the region. When paired with available urban employment opportunities, this age group will have disposable income and will attract new consumer goods and services. Since American products are typically considered popular in ASEAN markets, there may be opportunities for Alaskan companies to meet some of this growing demand.

GDP Growth

GDP per capita in Singapore and Brunei is already on par with the world's leading nations. Meanwhile, in other countries of the region the growth of GDP per capita is significant. In 2010, the region's average GDP per capita was 322 percent higher than in 1998. This increase is only second to China (536 percent). By comparison, the United States 2010 GDP per capita was 148 percent of the 1998 figures. It may be unfair to compare the U.S. growth numbers to these countries directly because the U.S. economy is so large. However, in order to attain the current growth rates, ASEAN nations have been investing heavily in infrastructure and industry development as well as growing their export capabilities. The result of these efforts is their growing middle class with higher disposable income, education



Last year, ASEAN assembled $485 million as part of the ASEAN Infrastructure Fund to help finance major infrastructure projects. The fund plans to finance $13 billion in infrastructure spending by 2020.

and standard of living. According to the U.S. Department of Commerce, 60 million Indonesians are projected to move up into the middle class in the next 10 years. Another current trend is that governments in the region are beginning to drive their economy with domestic spending rather than relying solely on exports.

Several ASEAN countries position themselves in a somewhat similar way to Anchorage—a transportation crossroads of the world. Since ancient times, the Strait of Malacca, which connects the shipping lanes of the Indian and Pacific oceans, has been a vital trans-Asian trade route. Indonesia, Malaysia, Singapore and Vietnam, as well as other countries in the region, are strategically located between Australia, South America and Northeast Asia. Singapore, for example, is a world renowned logistics hub: it is one of the busiest container ports in the world, the busiest transshipment port of the world, and one of the major cargo airports in the world. Approximately 60 percent of all exports to Singapore are re-exported to the ASEAN region. Other countries have ambitious infrastructure projects being developed both to take advantage of their locations and to prevent falling behind the region-wide industrialization that is taking place.

Consider the following examples:

- **Vietnam** Long Thanh International Airport is designed to serve 100 million passengers annually when construction is finished.
- **Malaysia-Singapore** An agreement is expected this year on the proposed Malaysia-Singapore Rapid Transit System, which would add a link between the two nations via either an above ground or undersea tunnel route across the Johor Strait. The link is part of a larger plan to link the two countries via high-speed rail.
- **Indonesia** in addition to expanding the country's main international airport in Jakarta (which is handling far more than double its original design capacity), Indonesia will be constructing Karawang International Airport, which is expected to have the capacity for up to 70 million passengers per year. In addition to Karawang International, there are about 15 new airports on Indonesia's drawing board as part of its Expansion of Indonesian Economic Development program. Indonesia is planning on spending $45 billion in 2012 alone on multiple infrastructure projects with a combination of public-private partnerships. These projects would represent about 4.5% of Indonesia's GDP. The government plan extends to 2025 and could total up to $450 billion in infrastructure investment.



The Trans-Asian Railway Network TARN has been growing in multiple phases since the 1960s with the long-term goal of linking together Southeast Asia in a massive rail network. It is divided into four geographic sections that will ultimately be connected through Iran and Pakistan to Turkey. The completed rail network would connect Northern Europe to Singapore. Currently the TARN has more than 65,000 miles of interconnected rail in operation. Twenty-three nations have signed the United Nations Intergovernmental Agreement on the Trans-Asian Railway, which lays out a framework for completion of the project. According to the U.N., constructing the remaining interconnecting links will require an estimated $25 billion.

Financing Infrastructure

Last year, ASEAN assembled $485 million as part of the ASEAN Infrastructure Fund to help finance major infrastructure projects. The fund plans to finance $13 billion in infrastructure spending by 2020. This is a fraction of the money it conceives of mobilizing in the coming years. According to the Asian Development Bank, which administers the fund, over the next decade ASEAN nations will require approximately $60 billion a year to fully address the region's infrastructure needs. With these substantial sums in the air and the possibilities for massive global investment in Southeast Asian infrastructure, Alaska companies should keep a close eye on the ASEAN region not only for opportunities in design and construction, but also selling goods and services in the growing economies that will benefit from these projects.

Currently, Alaska companies do very little business with ASEAN countries. The secular trends previously discussed make ASEAN countries good potential customers for Alaska businesses. In 2011, China became Alaska's largest trading partner surpassing Japan. The recent growth of China as a market for Alaska's products and services was based on similar trends we are seeing in ASEAN now. As we have seen with China, Alaska can expect a significant growth in trade with ASEAN in the next decade.

Since 2006, World Trade Center Alaska has pioneered trade development work to open Southeast Asian opportunities for Alaska businesses. We conducted a conference on business opportunities in India and Singapore in 2006 and the first Alaska trade mission to Southeast Asia in 2010. In addition, WTCAK, through its extensive network within the U.S. Department of Commerce and World Trade Center Association, produces market reports, generates business leads for our members and Alaska companies interested in doing business in Southeast Asia. Contact World Trade Center Alaska | Alaska U.S. Export Assistance Center if you are interested in further exploring new opportunities in this rapidly developing region. ☼

Alex Salov is the Business Operations Manager at World Trade Center Alaska and has been working at the Center since 2004. He has a master's degree in global supply chain management from University of Alaska Anchorage. Also, since 2005 he works as an adjunct instructor of Japanese Language at UAA.





Trade Missions

Gathering here or there to make things happen

By Greg Wolf

Trade missions are an important element of any successful trade promotion effort. But, what exactly is a trade mission?

Businessdictionary.com provides this definition:

"Coordinated overseas visit by a group of business executives to meet potential buyers or agents, usually after market research by a chamber of commerce, industry or trade association, or the visitors' embassy."

So, a trade mission is more than just a group of people making a trip to a foreign country. It is travel with the intent of promoting trade opportunities or, in some cases, involves the participating companies meeting with potential customers in the country being visited by the mission. Their purpose may be to introduce their company and its product or services or, in some cases, it may be to conduct business with a new or existing customer.

Trade missions are typically organized by either a private sector trade organization, as in the case of World Trade Center Alaska, or a government entity, such as state or local government. At the state-level, for example, it may be a mission led by the Governor or a department commissioner. At the federal level, the Secretary of Commerce often leads trade missions abroad that are industry focused.

Mission participants frequently include both private sector executives and public sector officials. Both can play an important role in the successful conduct of a mission. While the business executives have their own products or services to sell, the policy makers can deliver the message about a positive business environment and highlight particular opportunities or legislation that supports trade activities. The presence of government officials is especially valuable in certain parts of world. Asia comes to mind, for example, where governments play a more direct role in business. Indeed, in some cases, major companies in those countries may be wholly or partially owned by the government.

Trade missions can be conducted in two directions: outbound or inbound. The first would be, for example, a group of Alaska companies visiting China on a trade mission. In other words, outbound means from Alaska to a foreign country. An inbound mission represents the reverse scenario: a group of companies or trade officials visiting Alaska from a foreign country. Sometimes they make the visit at the invitation of an entity in Alaska or they are making the visit on their own initiative.

Missions can be either vertical or horizontal. A vertical mission is one where all of the participants are involved with a particular industry. For example, a mission consisting of just seafood companies. In contrast, a horizontal mission will include participants from a variety of industries. In this case, you may have several mining companies, a couple of seafood companies, and a construction firm, and so on.

World Trade Center Alaska has a long history, and much experience, in organizing trade missions. In the past

several years, the Center has led groups to various parts of the world in pursuit of trade expansion. These include three trade missions to China, a mission to Canada to learn about business opportunities associated with development of the oil sands in Alberta, and a mission to India to introduce Alaska export capabilities and to learn more about India's import needs. During the past decade, Center-conducted missions have also promoted Alaska trade opportunities in Korea, Taiwan, Hong Kong and Singapore. A mission to Asia is planned for fall 2013.

There are a number of benefits to be gained by participating in a trade mission. While modern telecommunications enables one to research global markets via the Internet and communicate with potential customers via email, this does not replace the need, or reduce the importance, of face-to-face meetings. Nor, does it diminish the advantage of having first-hand experience in a market where you hope to do business. Experience also informs us that a preconceived view of a particular economy or market may not always be what it is in actuality. This is another reason that a "boots-on-the ground" strategy is part of an effective overall trade promotion effort.

Export operations now bring more than $5 billion into the Alaskan economy and are a major source of employment for people across the state. As trade continues to flourish, we anticipate that both inbound and outbound trade missions will occur in greater frequency. These will serve the very useful function of introducing what Alaska has to offer the world in terms of commodities, products and services—and, likewise beneficial, enable Alaskans to gain a first-hand perspective of opportunities around the world and the one-on-one contacts necessary to make trade happen. ☼



Greg Wolf is the Executive Director for World Trade Center Alaska.



Trans-Pacific Partnership

Free trade agreement would dwarf NAFTA

By Aaron Weddle

At this point in time, it is unclear how the TPP will ultimately affect Alaska, but WTCAK will keep Alaskans up to date as negotiations unfold. Some of Alaska's top trade partners will likely be impacted by the TPP.

The Trans-Pacific Partnership is an Asia-Pacific regional free trade agreement currently under negotiation between the United States and about a dozen countries surrounding the Pacific Ocean. If completed, this trade bloc would dwarf NAFTA in value of U.S. international trade. For Alaskans, this could be an important development because Alaska typically does about 70 percent of its annual overseas export business with Asia.

The TPP is designed to liberalize trade and investment among its partner nations, which currently consist of: Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, the U.S. and Vietnam. It is anticipated that additional Asia-Pacific nations will join in once the agreement is finalized.

Japan and China

Two principal Asian economies are not part of TPP negotiations: Japan and China.

Japan is undergoing strong domestic political debate on whether to join the TPP. The greatest opposition concerns protection of its heavily subsidized—and politically influential—agricultural sector. In the past, this tension has led Japan to require agricultural exceptions in its free trade agreements. Former Prime Minister Yoshihiko Noda was in favor of joining the TPP and had hoped to finalize Japan's negotiations by the end of 2012. Japan was on track to join TPP negotiations but, in part because of the economic effects of the March 2011 earthquake, decided to delay membership. Japan recently held elections in which Noda's Democratic Party of Japan lost power to the Liberal Democratic Party headed by Prime Minister Shinszo Abe. It remains to be seen whether Abe will have the domestic political support needed to move forward with joining the TPP. His support may rest on whether he can negotiate tariff exceptions to protect Japan's agricultural sector. Japan is also negotiating a trilateral free trade agreement with China and South Korea; however, the escalating tensions with China over disputed Senkaku islands may shift Japanese political support toward a U.S. led trade agreement and away from one involving China.

China has thus far not been included in TPP negotiations. There are a number of reasons for China's exclusion but several are worth noting here. China is concerned that some provisions of the agreement would adversely affect its state-owned companies, and that the TPP is part of U.S. efforts to undermine China's regional influence. Some Chinese analysts argue that the true U.S. motives behind promoting the TPP are to contain China's growing economic influence in Asia and to create a U.S. dominated trade bloc that would compete with the Association of Southeast Asian Nations. Further complicating the matter, China has its own free trade agreement with ASEAN called the ASEAN-China Free Trade Agreement, which is currently the third largest trade bloc in the world, behind the EU and NAFTA. A strong TPP trade agreement could give member countries, which make similar products to China, an economic competitive advantage in the region.

Evolved Agreement

The TPP evolved from a series of free trade agreements among four Asia-Pacific nations—New Zealand, Chile, Singapore, and Brunei—that entered into an earlier agreement in 2005 known as the Trans-Pacific Strategic Economic Partnership. In 2008, President George W. Bush announced U.S. intentions to join TPP negotiations. U.S. participation was initiated in part due to the collapse of the World Trade Organization Doha Round that year. In 2009, President Barak Obama affirmed U.S. intentions to continue these negotiations.

According to the President's Office of the Trade Representative: "With the addition of Mexico and Canada, the TPP countries will be by far the largest export market for the United States. U.S. goods exports to the broader Asia-Pacific totaled $895 billion in 2011, representing 60 percent of total U.S. goods exports. U.S. Exports of agricultural products to the region totaled $98 billion in 2011, 72 percent of total U.S. agricultural exports. U.S. private services exports totaled $205 billion in 2001 (latest data available), 39 percent of total U.S. private services exports to the world. By comparison, NAFTA countries (Canada and Mexico) were the top two purchasers of U.S. exports in 2010. (Canada $248.2 billion and Mexico $163.3 billion.)"

From the perspective of U.S. exports, the TPP is likely to have more of a strategic and political importance rather than producing a dramatic expansion of trade. The U.S. already has bilateral free trade agreements between Australia, Canada, Chile, Mexico and Singapore. However, U.S. involvement in the TPP adds significant diplomatic weight to the success of negotiations and in influencing its final architecture. American participation is also a signal

of the Obama Administration's efforts to demonstrate a renewed emphasis on Asian affairs. In 2009, during a speech in Tokyo, President Barack Obama stated that: "The growth of multilateral organizations can advance the security and prosperity of this region. I know that the United States has been disengaged from these organizations in recent years. So let me be clear: those days have passed. As an Asia-Pacific nation, the United States expects to be involved in the discussions that shape the future of this region and to participate fully in appropriate organizations as they are established and evolve."

Easing Political Resitance

The fact that the U.S. already has free trade agreements with five of the member states might ease political resistance in the U.S. Congress where a majority support of both houses will be necessary for final passage. Unlike a treaty, which requires a two-thirds approval of the U.S. Senate, Congress permits entry into a trade agreement negotiated by the president with a simple majority vote of both the House and Senate. One crucial element to passage of the TPP is Trade Promotion Authority, also known as Fast Track. It allows a trade agreement to be voted on quickly without amendments that might otherwise slow down or stall its final passage. In exchange, Congress is given an expanded role in the president's trade negotiations. This authority expired in 2007 and has not yet been renewed.

The TPP's draft language is currently being negotiated confidentially by member states, which held the 15th round of talks in Auckland, New Zealand last December. The next round of negotiations will take place March of this year in Singapore. From information that is publicly available, it appears that the TPP both dramatically reduces duties and tariffs, as well as establishes among its members standards of: rules of origin, customs procedures, government procurement, intellectual property, labor and environmental standards, and investment and financial services.

While the details of these provisions are in flux, the final product will likely have a significant impact on the economies of some member states. Much of the controversy over TPP has to do with the investment and financial services portion of the agreement. For example, the TPP will create a framework by which a corporation can seek economic redress from a foreign government by appealing to a TPP member tribunal rather than suing within a national court.

Impact on Alaska

At this point in time, it is unclear how the TPP will ultimately affect Alaska, but WTCAK will keep Alaskans up to date as negotiations unfold. Some of Alaska's top trade partners will likely be impacted by the TPP. As Alaska contemplates liquefied natural gas exports to Asia, one issue merits attention. Applications for LNG exports require approval by the Department of Energy. Under federal law, licenses for LNG exports to countries that share a free trade agreement with the U.S. go through an expedited process. This could have an impact on future efforts to export Alaska LNG to Japan and other countries that become party to the TPP.

Our current focus on emerging markets in Asia parallels the development of the TPP. We have been closely watching Southeast Asian nations such as Singapore, Malaysia and Vietnam. In 2010, WTCAK organized and conducted Alaska's first trade mission to the region, which included a stop in Singapore. We will continue our work to identify opportunities as they emerge as a result of TPP negotiations. Several negotiating nations share common development trends including rapid urbanization, substantial infrastructure expansion and a growing middle class. We foresee an increased demand for Alaskan resources and expertise as these development trends in the region continue to rise. ☼



Aaron Weddle is a Business Development Consultant to World Trade Center Alaska. He has a Master of Science in Global Supply Chain Management from the University of Alaska Anchorage.





All the Right Stuff

Four ways Alaska is primed for export success

By Greg Wolf

Alaska is in something of a "sweet spot" these days as we benefit from what I call the "Three Rights" of export success: We are in the Right Place, at the Right Time, with the Right Commodities.

Alaska has always been blessed by its geographic location. Our strategic location on the Pacific Rim has placed us along the "great circle" route for marine shipping between Asia and North America.

Location has also enabled Anchorage to become one of the most important air cargo hubs in the world, poised, as it is, equidistance between Asia, Europe and North America. Add to this, we are neighbors on the Pacific Rim with some of the world's fastest growing economies and most rapidly growing populations. All of this puts us at the Right Place on the map.

Political and economic transformation during the past several decades has resulted in formerly centrally planned economies becoming more or less free market in nature, in some cases, now allowing private ownership of property, companies and resources. With this has come the establishment of commercial laws and recourse. Some countries are now permitting, if not encouraging, foreign direct investment in their resources and industries. At the same time, major Asian countries with huge currency reserves are scouring the world's natural resource jurisdictions to secure vital supplies and, increasingly, to also invest in the projects that produce these supplies.

Asian Diaspora

Economic liberalization and modernization has led to the hundreds of millions of people migrating from the rural areas of their countries to the major cities, attracted by jobs and other opportunities to raise their standard of living. Consider China and India, two Asian giants who are leading the wave of urban expansion: According to McKinsey and Company, by 2025, China will add 400 million people to its urban population and India will see 215 million new residents to its cities. This mass movement of people from the countryside to the cities is unprecedented. The same report notes that never before in history have two of the largest nations (in terms of population) urbanized at the same time, and at such a rapid pace.

These developments have lifted many people out of poverty and, in the process, created billions of new consumers. Brookings Institution reports that between 2005 and 2010, sustained economic growth in emerging markets around the world has enabled nearly half a billion people to rise from poverty lev-

els. They note that never before have so many people been lifted out of poverty in such a brief period of time. The simultaneous rural to urban migration, coupled with continuing economic growth and rising standards of living, is helping to drive staggering demand for the natural resources that Alaska sells. This puts Alaska at the Right Time in history.

Helping Develop World Economies

Home to world-class reserves of natural resources, including energy, minerals, metals, forest products and seafood, Alaska has what so much of the world needs to fuel their economic expansion and to feed their growing populations. What Alaska has to offer the world are what I consider the building blocks of economic development: energy to generate power, minerals and metals for industrial production, forest products for construction and manufacturing, seafood to provide sustenance to people. In other words, we are providing the necessities for modern life, rather than the latest technological gadget. So, we are selling the Right Commodities.

These "Three Rights" help to explain the strength and growth of Alaska's exports to overseas markets. In 2011, Alaska exports reached $5.2 billion, a new all-time high, coming off the previous record of $4.2 billion set in 2010.

Unique Position

Looking to the future, geography may again prove to be a blessing for Alaska. I'm referring now to the commercial development of the Arctic. As America's Arctic state, we are uniquely positioned to benefit from opportunities that will arise from increased shipping along the Northern Sea Route as well as the development of roads, railroads and ports that will enable heretofore "stranded" resources to be developed and transported from source to port to customer in an efficient manner.

These were some of the ideas presented and discussed at the first Arctic Ambitions conference in Anchorage last May. The event was co-organized by World Trade Center Alaska and the Institute of the North. Shipping companies from Norway, Finland and Russia made presentations having to do with current and future transportation opportunities along the Northern Sea Route. They talked about significantly reduced transit times and improved access to otherwise isolated locations.

We also heard commercial perspectives from government officials, including representatives from Alaska, Canada and Russia. The conference was well attended, and there was active dialogue between speakers and attendees. While tempered with the understanding that commercial development of the Arctic will certainly not occur overnight, there was clearly a sense of excitement about the possibilities and the future outlook.

It may turn out then that Alaska will have not three but four "Rights" that drive our economic development and export growth. The ability to access our treasure trove of natural resources, and move them from here to customers around the world, will be further enhanced by shipping routes, traffic and infrastructure resulting from development in the Arctic. So, we may need to add the fourth Right: we (and now the world) are heading North, the Right Direction! ☼

Greg Wolf is the Executive Director for World Trade Center Alaska.

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Alaska's North Slope and LNG

North America's energy bridge to Asia

By Sourabh Gupta and Ashok Roy

The views expressed herein are the authors' own and not those of Samuel International and/or the University of Alaska.

When the first modern shale well was drilled a couple of miles north of Fort Worth, Texas in the late-1990s, few would have believed what a global energy market game-changer it would turn out to be barely a decade removed. At the time it was anticipated the United States would be, during the first half of the 21st century, one of the largest global importers of liquefied natural gas (LNG); today the U.S. domestic natural gas market is oversupplied and prices barely a fraction of that which they fetched just a couple of years earlier.

It is now foreseen that increased production of natural gas (and oil, as the U.S. is slated to dethrone Saudi Arabia soon as the largest producer of black gold) will make the U.S. energy self-sufficient, on net, within 25 years. Along the way, it is expected to provide a foundation for a domestic manufacturing renaissance, supply billions of dollars in revenue to federal and state governments, lessen the pressures on the current U.S. account deficit (via reduced oil and gas imports) and provide upward support to the value of the dollar. Broader geo-political benefits are also likely to accrue.

Meanwhile, on the global demand side, as per the International Energy Agency's most recent World Energy Outlook 2012, natural gas is expected to be the only fossil fuel for which global demand is anticipated to persist—in fact, increase—in any-and-all policy scenarios and contingencies over the next 25 years. Unconventional gas (particularly shale gas) will fulfill nearly half of this increase in demand, much of it arising from Asia's seemingly unquenchable thirst for energy to fire its unstoppable economic engine.

During 2000-2011, more than half the increase in demand for liquefied natural gas came from Asia with imports from China and India growing as much as 30 percent and 52 percent, respectively, in 2011. Active policy support and regulatory reforms are expected to ensure that China's consumption expands from its current 130 billion cubic meters (bcm) to 545 bcm in 2035. In the interim until 2020 though, Japan is expected to be Asia's leading importer of LNG, due to its need to find a quick and dependable substitute fuel source in the wake of the Fukushima disaster and the subsequent and continuing nuclear plant shutdowns.

Furthermore, a key driver of Asia's demand dynamics arises from its need to secure diversified fuel choices and sources. Disproportionate amount of current Asian energy consumption is concentrated in greenhouse gas-intensive coal and oil-based sources—an environmentally unsustainable proposition in the long run. Equally, Asia remains overly dependent on the Middle East for oil and on regional production (from Australia, Indonesia, Malaysia and the Russian Sakhalin Peninsula) in the case of LNG. Contracts for LNG further tend to typically be of a long duration and price-inflexible variant. The appearance across of the horizon of seemingly inexhaustible North American shale oil resources thus embodies the latent potential for Asia to significantly improve its energy security, even as it diversifies supply sources, pricing formulas and contractual terms.

Clearly, a demand-supply "match-made-in-heaven" scenario between North American production and Asian consumption beckons on the near horizon—one that is mutually stable, remunerative, and in the long run economically integrative. For Alaska, these developments could not have arrived at a more opportune time. Foremost among its continental peers, Alaska stands poised at the forefront to become North America's energy bridge to Asia and reap the profits of this reciprocally beneficial trans-Pacific relationship.

In 2009, an updated study by the U.S. Department of Energy (DOE) assessed the discovered technically recoverable natural gas resources on Alaska's North Slope to be to the tune of approximately 35 trillion cubic feet. Geological evidence suggests that gas fields of sufficient size are available to support economically and environmentally viable extraction. Because a pipeline to carry the gas to (export) market had hitherto been missing, in recent weeks, a consortium of energy companies including Exxon Mobil Corp., ConocoPhillips Co. and BP PLC have signaled their intention to build an 800 mile-long such pipeline from Alaska's North Slope to its coast. For good measure, a gas liquefaction plant is also envisaged at shore which will enable the consortium—and Alaska—to profitably arbitrage the huge price differential that currently exists between the Asian and North American gas markets.

If this all sounds too good to be true, well, that is indeed the case in some ways. Issues ranging from land access to marine mammal protection, especially the bowhead whale which is on the Endangered Species Act list, to water and gravel availability to construct roads and production facilities, have the potential to stymie the development of North Slope oil and gas resources. While some of these hindrances are amenable to solutions, including further advances in technology, an altogether more troubling stumbling block is the existence of an archaic and unnecessarily retrograde federal law that has been on the books since the late-1930s. However, it is prudent to remember the somber uncertainties to Alaska's pros-

pects of having its LNG in the market by 2023 also emanate from exogenous factors, such as: whether Japan restarts its nuclear plants and relies on LNG for power; Russia builds new pipelines to move gas from East Siberia to the Pacific; if efficient LNG tankers costs less than the cost of building the 800 mile new pipeline from the North Slope; if shale gas can be exported as LNG; and if China expands its LNG imports.

As per the Natural Gas Act of 1938, all exports of natural gas from the United States require the Department of Energy (DOE) to make an affirmative determination that the permit to export is consistent with the American "public interest." As a practical matter, this "public interest" determination is limited to those countries with which the U.S. has not entered into a free trade agreement (FTA). The U.S. however has very few such FTAs in force—only 20 totally, many of them with minnows, and none with a large, dynamic Asian economy (save South Korea).

Such a discretionary, nonautomatic licensing authority is not only an investment-chiller, it might also be noncompliant with the U.S.' international commitments. International trade lawyers and U.S. Chamber of Commerce officials alike have charged that the requirement to secure government approval to export LNG amounts to a possible export restraint that violates the U.S.' obligations under the 1994 General Agreement on Tariffs and Trade (GATT). Although GATT rules allow limited exceptions from this general prohibition on export restraints, such prohibitions or restrictions need to be either:

(a) temporary

(b) related to essential products that are in short supply

(c) applied in conjunction with other conservationist objectives, or

(d) made with an express national security objective in mind.

Discretionary nonautomatic export licensing authority (for LNG) interpreted under the guise of being in the "public interest" does not appear to comport to these above criteria—in turn, calling into question the U.S.' fidelity to international trade law and obligation on this matter.

Regardless of this consistency/inconsistency, protectionist voices in Congress have latched onto this provision to lobby for denial of LNG exports abroad—both, to artificially benefit domestic manufacturing via the differential in (energy) input prices as well as to crimp the broader development of the U.S.' onshore and offshore gas resources in the name of environmental considerations. However, fully participating in global energy markets is the most appropriate way to reward domestic producers, incentivize investments in economical domestic production, and keep costs low for consumers, while simultaneously encourage the use of off-the-shelf technologies that enhance efficiency and conservation goals. Ultimately, in the absence of development of the North Slope LNG bounty, it is in Alaska—and in lost revenues—where the price will be paid.

Going forward, the offending provision in the Natural Gas Act needs to be reinterpreted in such way that LNG exports are denied to none but the most egregious few rogue state actors. Allies such as Japan, which currently have significantly reduced their intake of Iranian

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crude in spite of the Fukushima disaster, ought not to be punished by such exclusions, which were written in an altogether different time and age. In passing, it bears noting that even at the height of the Cold War the U.S. conducted agricultural trade with the Soviet Union. Equally, the discretionary authority embedded in the Natural Gas Act needs to be stripped so that predictability and security of tenure to justify the large, capital-intensive investment in a pipeline and gas liquefaction facility can be assured. Federal law ought to embrace such extraction, development, transport and export, so long as it is conducted in a market-friendly and environmentally responsible fashion.

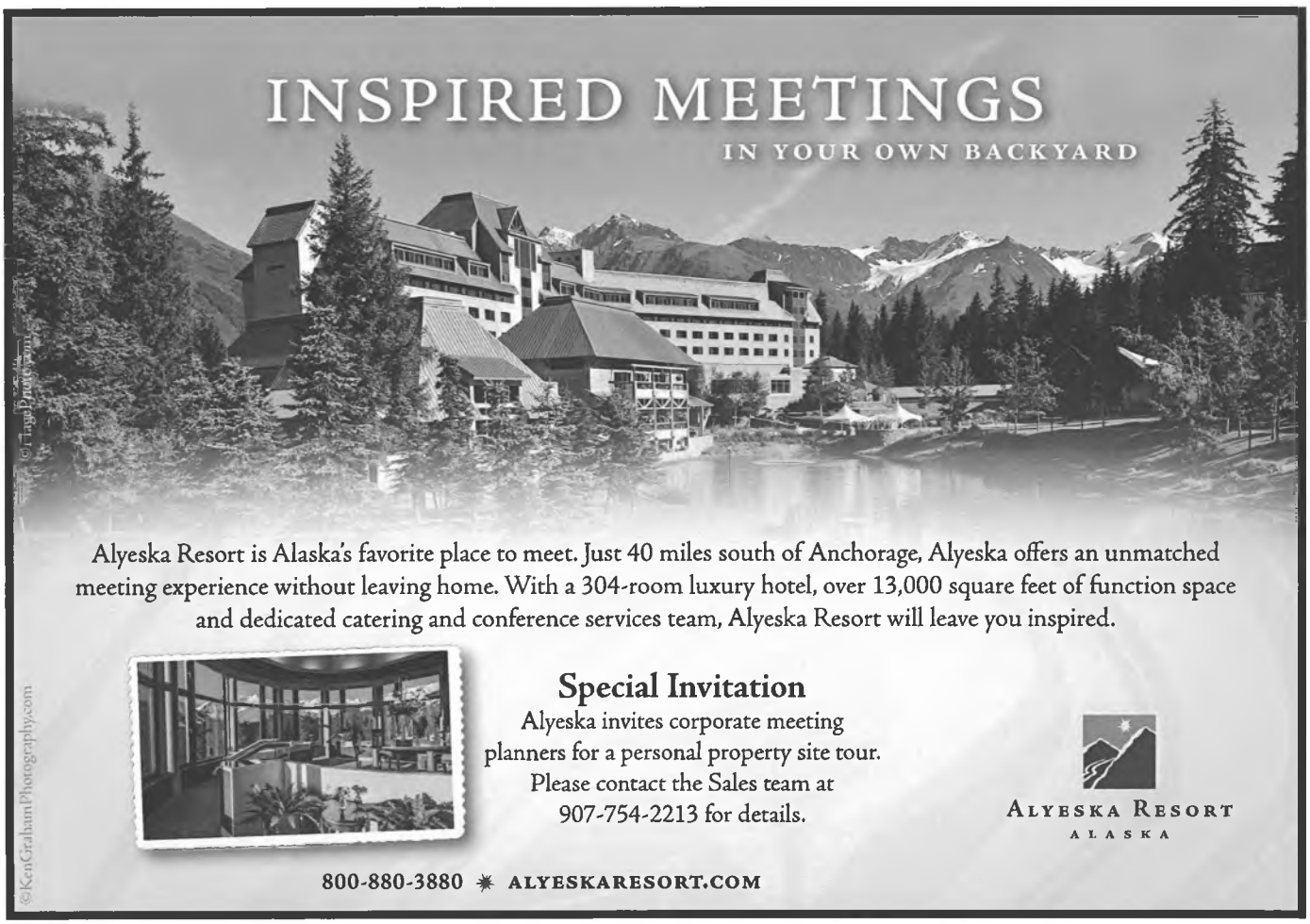
In early December 2012, an ice-class LNG tanker chartered by the Russian oil and gas giant Gazprom traversed the Arctic route to Asia to deliver a cargo of Norwegian gas at the Japanese port of Kitakyushu. The number of such crossings has been on the rise in recent times—the number of vessels making the Arctic passage having risen steadily from four in 2010 to 34 in 2011 to 46 as of December 2012. Russian president Vladimir Putin has vowed to transform this route into a future "international transport artery" in terms of fees, safety and quality. The seemingly unquenchable thirst for LNG on the Asian continent will, one way or the other, be sated. The question is: will it be U.S.—and Alaska-based—capital and producers at the head of this queue? Or will this opportunity be fumbled by way of pious pronouncements that cater—and serve as a cover—to the interest of more protectionist-minded lobbies in Washington, D.C. The road ahead for Alaska, in the years to come, has some numerous detours and riddles. ☼



Sourabh Gupta is a Senior Research Associate at Samuels International Associates Inc., a strategic international trade and political advisory firm based in Washington, D.C. He holds master's degrees in international security studies and international relations from the Walsh School of Foreign Service at Georgetown University and the Maxwell School at Syracuse University, respectively. He is currently a 2012 East Asia Forum Distinguished Fellow.



Dr. Ashok K. Roy is the Vice President for Finance & Administration/ Chief Financial Officer for the University of Alaska system. Dr. Roy has significant experience, at senior management levels, at three other large universities, local government, and in the private sector. Dr. Roy was educated in the USA and India, and holds six university degrees and five professional certifications. He has authored 67 publications in academic and trade journals.



Arctic Ambitions II Conference

Development of the Arctic is a hot topic around the world and is the subject of international conferences—forums that take place each year. Last May in Anchorage, World Trade Center Alaska, along with the Institute of the North, conducted the inaugural Arctic Ambitions Conference. The gathering concentrated on the theme of international trade and business opportunities that flow from development of the Arctic.

Working from a context of who stands to benefit most—which regions, countries, industries and companies—presenters addressed issues such as international supply chains, markets, commerce, marine transport and other subjects associated with Arctic development.

While policy and research informed the discussion, the conference concentrated on global markets, international trade and decision-making. Discussion was framed by several key Arctic industries. It addressed the two-way nature of exports and imports in the Arctic.

It's not just a question of what Arctic nations can develop and export—equally important is who has a market for those resources. Government officials and business executives from Canada, Finland, Japan, Korea, Norway, Russia and the United States participated in the conference and discussed their roles as development unfolds in the region.

With the accelerating rate of polar ice melt, massive natural resources are becoming accessible in the Arctic. According to the U.S. Geological Survey, one-quarter of the world's undiscovered, technically recoverable oil and gas resources may be in the Arctic: oil (90 billion barrels); natural gas (1.7 trillion cubic feet); and natural gas liquids (44 billion barrels). Resource exploration in the Arctic requires significant technical assistance. For example, Arctia Shipping, a Finnish operator of an icebreaking fleet, provides service and support of offshore oil and gas exploration. The company's icebreakers are capable of supporting offshore drilling rigs in Alaska and elsewhere in the Arctic. The president of Arctia Shipping was one of the featured speakers at the inaugural Arctic Ambitions Conference in May last year.

At the same time, there was a significant increase in maritime cargo movements through the Arctic shipping routes. The summer season of 2011 showed a rise of commercial transit via the Northern Sea Route—34 ships carried 820,000 tons of cargo. By comparison, in 2010, only 4 ships transited through the NSR and carried 111,000 tons. All but one of these vessels required an icebreaker escort. Rosatomflot, a Russian company operating a fleet of nuclear-powered icebreakers in the Arctic, provided these escorts. Rosatomflot also participated in Arctic Ambitions.

With the growth of Arctic maritime infrastructure, there exists a potential for usage of Alaska ports. Ships passing through the Bering Strait could be served by ports such as Adak and Unalaska. These ports could become transshipping hubs for cargo as it passes from new Arctic shipping lanes to existing commercial routes. Currently, the Norwegian port of Kirkenes serves this function on the European side of the Northern Sea Route. One of the operators of this transshipping hub, Tschudi Shipping Co., came to Anchorage to present at Arctic Ambitions last year.

This year's Arctic Ambitions II Conference will provide an important update on commercial activities in the Arctic and a venue for Alaska companies to hear the latest news directly from government and business leaders in the region. The conference will take place at the Hotel Captain Cook in Anchorage on Feb. 19-20: for registration information visit wtcak.org or call (907) 27-TRADE. ☼



New Realistic Russian Opportunities

Promoting business with Alaska companies

By Alex Salov and Aaron Weddle



With the events surrounding the fall of the Berlin Wall in 1989, Alaska and Russia began exploring economic and cultural relations. Businesspeople, students and cultural exchange groups visited their counterparts and several organizations were established to promote bilateral relations. Sister-city relations were established between Alaskan and Russian cities, such as Magadan, Vladivostok, Yakutsk, Petropavlovsk-Kamchatsky and others.

The excitement grew with the announcement of several Sakhalin oil and gas development projects in the 1990s. Since the Russian Far East is a resource-rich region, Alaska has not been a large exporter of commodities to the region. Rather, Alaska companies have been exporting technical and professional expertise and services. Several firms have garnered contracts in transportation, construction and other fields. Some participated in joint development projects in Sakhalin and continue their operations in the region to this day. For example, Lynden Inc. is a provider of transportation and logistics services in Sakhalin, and Alaska Interstate Construction LLC is involved in road construction, oil well pad installation, and other oilfield infrastructure development projects.

In the same period, the University of Alaska established close ties with its counterparts in the Russian Far East. Many students from Magadan, Khabarovsk, Vladivostok, as well as other cities in the region, enjoy resident tuition at the University of Alaska. At one point in time, the University of Alaska had more Russian students than any other university in the United States. Also, the American-Russian Center at the University of Alaska Anchorage was one of the principal technical assistance organizations between the U.S. and the Russian Far East. It had branch offices in eight Russian cities and several thousand Russians participated in its courses and educational exchange programs.

Both Aeroflot and Alaska Airlines started direct service between Alaska and the Russian Far East in 1991. By the early 2000s direct flights stopped. Since then there have been a few unsuccessful attempts on both the U.S. and Russian sides to resume regular service. Last summer regional Russian air carrier Yakutia Air started seasonal service from Petropavlovsk-Kamchatsky to Anchorage and conducted 10 roundtrip flights. In 2013, Yakutia Air will expand service to 14 roundtrips and provide a direct connection from Petropavlovsk to Khabarovsk, which is served by several airlines connecting with other Russian and Asian destinations. Successful operations could lead to a decision by the carrier to expand from seasonal to year-round service in the future.

In 2012, Russia acceded to the World Trade Organization. As a result of this accession, Russia's average tariff rate will decline and conditions for foreign trade and investments will be liberalized. U.S. manufacturers and exporters will now have more favorable market access than in previous years. In addition, WTO accession includes stronger intellectual property rights enforcement and more transparency in trade-related legislation.

In September 2012 another development saw the entering into force of an historic visa agreement between the U.S. and Russia. Thanks to this agreement, three-year, multiple-entry visas will become the standard terms for U.S. citizens visiting Russia and Russian citizens visiting the United States. The agreement also eliminated official letters of invitation and standardized visa processing time to 15 days. In previous decades, visa issuance and terms were inevitable obstacles for U.S.-Russia business travel and tourism.

On Feb. 19, World Trade Center Alaska will conduct the half-day conference entitled "A New Look at Alaska-Russian Far East Opportunities." With this half-day event, the Trade Center will take a new, fresh look at potential business opportunities between Alaska and the Russian Far East region. It will feature six speakers, a mix of both U.S. and Russian trade specialists. Much has transpired since the 1990's when Alaskans actively explored commercial opportunities in the Russian Far East. Considering the history of Alaska-Russian Far East relations and the new developments listed above, new market opportunities for Alaska companies may emerge in the near future. ☼

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Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: February 14, 2013

Re: Committee Schedule for the Week Beginning February 18, 2013

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, February 19, 2013 11:15am in Room 124

No meeting scheduled

Thursday, February 21, 2013 11:15am in Room 124

No meeting scheduled

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
+ Teleconferenced
= Bill was Previously Heard/Scheduled

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: February 21, 2013

Re: Committee Schedule for the Weeks Beginning February 25 and March 4, 2013

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, February 26, 2013 11:15am in Room 124
No meeting scheduled

Thursday, February 28, 2013 11:15am in Room 124
+ Economic benefits of combining industries discussion by:
Usibelli LLC, Alaska Railroad Corporation, and Holland America Line

Tuesday, March 5, 2013 11:15am in Room 124
No meeting scheduled

Thursday, March 7, 2013 11:15am in Room 124
No meeting scheduled

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
\+ Teleconferenced
= Bill was Previously Heard/Scheduled

Alaska State Legislature

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House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 28, 2013

1. **Call to Order**

2. **Agenda**

- Presentations from three Alaskan industries
    - Lorali Simon, Vice President of External Affairs for Usibelli Coal Mine is online while we operate her power point slides here in the room;
    - Dale Wade, Vice President of Business Development and Tom Brooks, Vice President of Engineering with Bill O'Leary, CFO on line from the Alaska RailRoad;
    - Ralph Samuels, Vice President of Community and Government Relations for Holland America Line.
- Each of the three industries will give a 10-15 minutes overview of their business and then we will open up forum style for Q&A.

3. **Calendar Review**

- We do not have a meeting scheduled for the next week.

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
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House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 28, 2013

1. **Call to Order**

~Gavel~ Welcome to the joint hearing of House Economic Development, Trade and Tourism Committee and Senate World Trade. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aide, Ginger Blaisdell.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
    - Several members may be coming and going due to other committee meetings underway.
- Today we are hearing from representatives of three important industries in our state: Lorali Simon, Vice President of External Affairs for Usibelli Coal Mine is online while we operate her power point slides here in the room; second is Dale Wade, Vice President of Business Development and Tom Brooks, Vice President of Engineering with Bill O'Leary, CFO on line from the Alaska RailRoad; and wrapping up the presentation portion of the meeting is Ralph Samuels, Vice President of Community and Government Relations.
- Each of the three industries will give a 10-15 minutes overview of their business and then we will open up forum style for Q&A.

3. **Calendar Review**

- We do not have a meeting scheduled for the next week.

Do members have any closing comments?

- Thank you. We are ADJOURNED at _12:___ (time)." ~Gavel~

Are there any state statutes or regulations that inhibit your ability to further develop international economic development? Or changes that would better encourage economic development in Alaska?

Do you have a long range plan?

Representative.Shelley.Hughes@akleg.gov

The Impact of Usibelli Coal Mine, Inc. on Economic Development, Trade, and Tourism.

House Special Committee on
Economic Development, Trade, and Tourism

Lorali Simon
Vice President, External Affairs

USIBELLI COAL MINE, INC.

UCM History





1943 - Emil Usibelli at age 50, founded UCM in Healy, Alaska.

1964 - Emil's 25-year old son, Joe became President and now serves as Chairman of the Board of Directors.

1987 - Joe Usibelli Jr. assumed duties as President.

USIBELLI COAL MINE, INC.

Four Generations



- Emil Usibelli and his son, Joe Usibelli



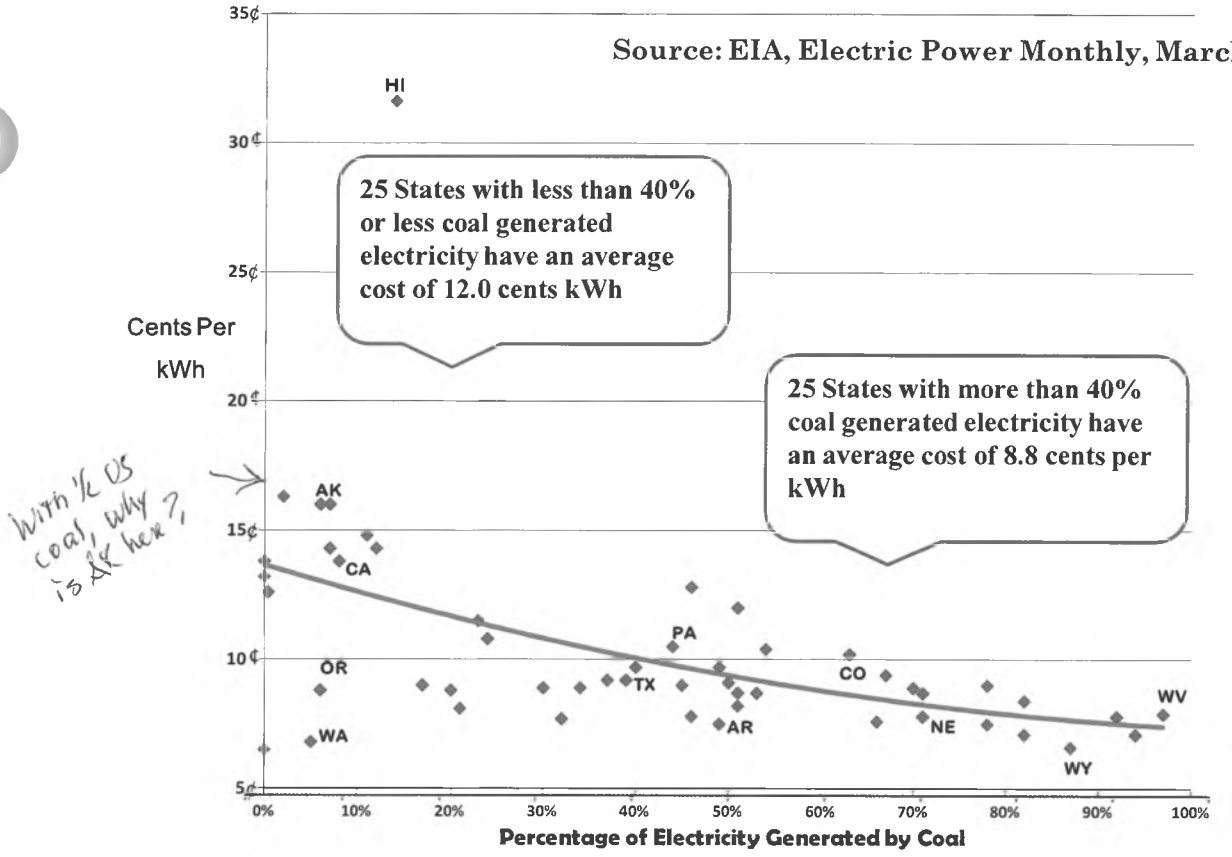
- Joe Usibelli Jr. and his daughter, Lexi Usibelli

UCM
USIBELLI COAL MINE, INC.

Coal Facts

- The U.S. has 25% of the world's coal reserves.
- Alaska has 50% of the U.S. coal reserves.
- Railbelt >1,000 years reserve at current consumption.

UCM
USIBELLI COAL MINE, INC.



Economic Development:

Jobs

- Full-time employees – 130
- Avg # years with UCM – 17
- Employees over 30 yrs – 10
  - 20-30 yrs – 24
- Operations – 92
- Administration – 38
- 2nd, 3rd, 4th Generation – 48 (37%)
- Average Age – 44



UCM
USIBELLI COAL MINE, INC.

Economic Development:

Jobs

- Engineer
- Surveyor
- Finance and Accounting
- Personnel Management
- Safety Management
- Laboratory Technician/Chemist
- Maintenance Management
- Marketing
- Public Relations
- Environmental Management
- Heavy Equipment Operator
- Truck Driver
- Dragline Operator
- Welder
- Electrician
- Warehouse Management
- Fabricator
- Diesel Engine Mechanic

UCM
USIBELLI COAL MINE, INC.

Economic Development:

Lifestyle

- Year-round employment
- Urban lifestyle – not a remote camp
- Stable, long-term employer
- Highest Per-Capita Income in Alaska
- Average Annual Wage in Mining Industry: $100,000 *(Reference: Alaska Miners Association)*

UCM
USIBELLI COAL MINE, INC.

Economic Development:
New Projects – Wishbone Hill

- Wishbone Hill is located about 10 miles north of Palmer
- Early Mining: 1916 to 1982
- Roughly 7 million tons mined from 18 mines
- 1983 - exploration drilling started on WBH project
- By 1992 all permits for Wishbone Hill mine were obtained
- 14 million tons of surface minable coal identified
- The only Bituminous coal deposit on Alaska's road system

UCM
USIBELLI COAL MINE, INC.

Economic Development:
New Projects – Wishbone Hill

- 75 to 125 mine jobs at full production
- High paying stable jobs
- Year-round operation
- Money that stays in Alaska's economy
- Local Vendors & Contractors



UCM
USIBELLI COAL MINE, INC.

Coal Industry Jobs - Direct

UCM	130
Alaska Railroad Corp. (coal trains)	20
Seward Coal Terminal	15
State and Federal Agencies	17
Power Plants:	
Fort Wainwright	42
Eielson AFB	55
Clear AFS	34
Aurora Energy	26
GVEA Healy #1/HCCP	34
University of Alaska	35
Total	408

USIBELLI COAL MINE, INC.

Export News

Short Tons of Coal Production Per Year

2007 – 1.25 million

2008 – 1.5 million

2009 – 1.9 million

2010 – 2.0 million

2011 – 2.2 million

2012 – 2.0 million

dollars associated?

1 million tons domestic & 1 million tons export

USIBELLI COAL MINE, INC.

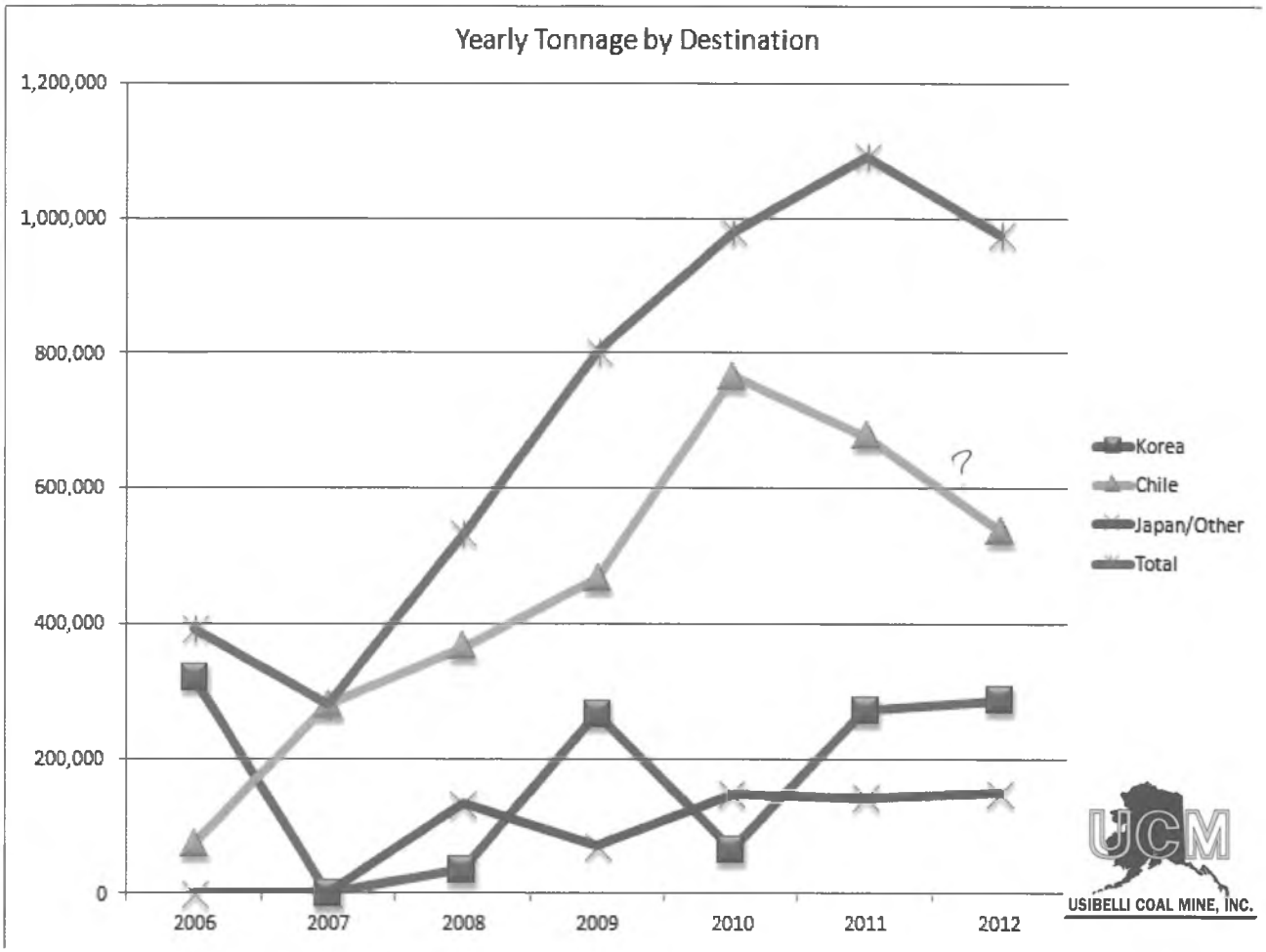
Current Alaskan Coal Customers

* cogeneration



- Ft Wainwright*
- Eielson AFB*
- Clear AFS*
- UAF*
- Aurora Energy*
- GVEA
  - *Coming soon: HCCP*

USIBELLI COAL MINE, INC.



USIBELLI COAL MINE, INC.


Seward Coal Terminal
• Owned by Alaska Railroad Corporation
• Operated by Aurora Energy Services, LLC


Seward Coal Terminal

Tourism

- Denali National Park
- Local Small Business Owners
- Many Seasonal Employees in Tourism
- Requests for Tours of the Mine





USIBELLI COAL MINE, INC.

Lorali Simon

Usibelli Coal Mine, Inc

(907) 745-6028

lorali@usibelli.com

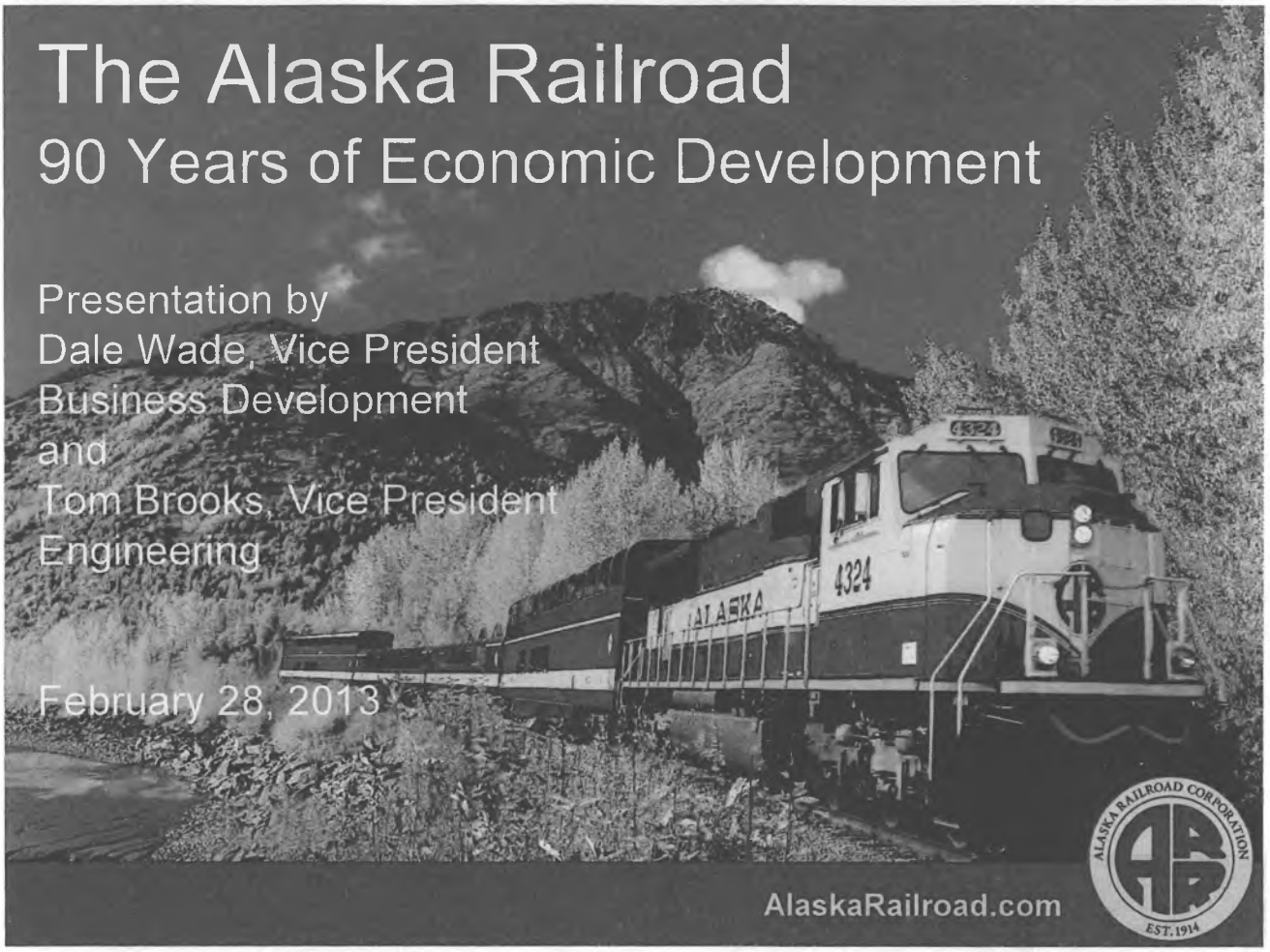
www.facebook.com/usibellicoalmine

@Usibelli

USIBELLI COAL MINE, INC.

The Alaska Railroad

90 Years of Economic Development



Presentation by
Dale Wade, Vice President
Business Development
and
Tom Brooks, Vice President
Engineering

February 28, 2013

AlaskaRailroad.com

ALASKA RAILROAD CORPORATION EST. 1914

Dale - business econ
Tom Brooks engineer
Bill O'Leary

Alaska Railroad Quick Facts

Organization (following State purchase)

- Independent corporation owned by State
- Managed by a seven-member board of directors appointed by Governor
- Mandated to be self-sustaining, responsible for financial and legal obligations

Operating Data

- 656 Total miles of track
- 1,381 Freight cars (owned & leased)
- 45 Passenger cars
- 51 Locomotives



Operating Statistics (Jan - Dec 2012)

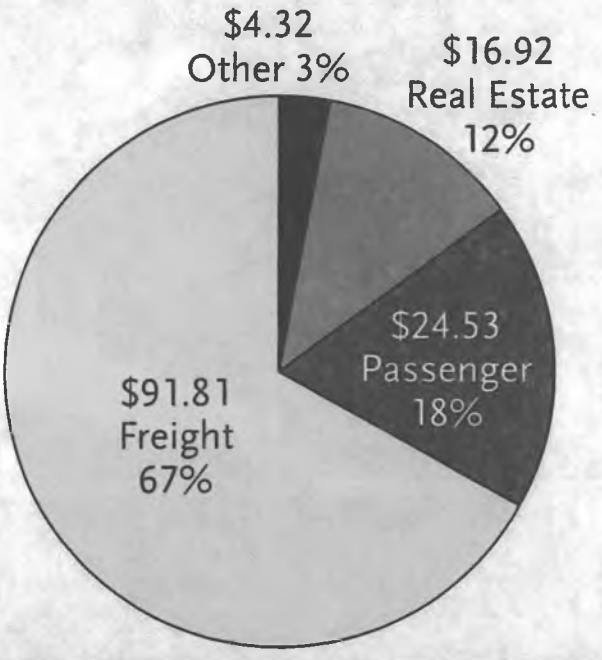
- 415,279 passengers
- 5.56 million tons of freight
- $190.4 million total revenue (preliminary unaudited)

Employees (January 2013)

- 626 year-round employees
- 456 members of 5 unions

2013 Budget Revenue Sources

(millions of dollars)



Enabling Act of 1914

- Congress empowered President Woodrow Wilson to locate, construct, and operate a railroad in Alaska.
- Purpose: open Alaska Territory for economic development
- Established as an independent authority



Seward track-laying gang

Transfer to the State

- Purchased by the state in January 1985 for $22.3 million.



Chapter 42.40 ALASKA RAILROAD CORPORATION
Sec. 42.40.010. Establishment of the corporation.

There is established the Alaska Railroad Corporation. The corporation is a public corporation and is an instrumentality of the state within the Department of Commerce, Community, and Economic Development. The corporation has a legal existence independent of and separate from the state. The continued operation of the Alaska Railroad by the corporation as provided in this chapter is considered an essential government function of the state.

FREIGHT SERVICES



Oilfield Supplies



Petroleum Products



Military



Coal



TOFC/COFC

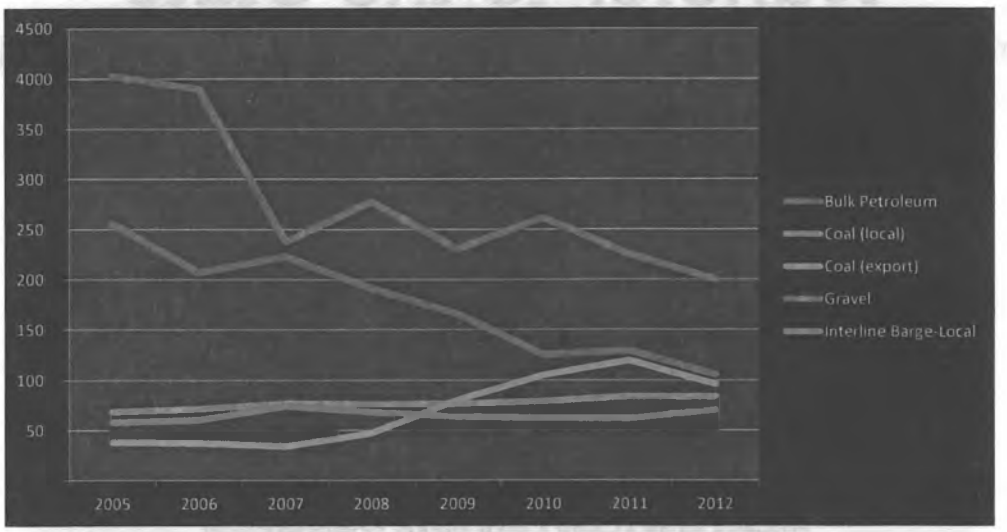


Gravel



Intermodal

Freight 2005-2012 (thousands of tons)



Tons	2005	2006	2007	2008	2009	2010	2011	2012	% Chg 2011-12
	in thousands of tons								
Bulk Petroleum	2,555	2,068	2,230	1,910	1,657	1,254	1,292	1,057	-18.2%
Coal (local)	683	713	766	761	762	791	836	838	0.2%
Coal (export)	384	374	342	471	801	1,051	1,195	961	-19.6%
Gravel	4,024	3,900	2,377	2,776	2,306	2,614	2,252	2,003	-11.1%
Interline Barge/local	580	607	742	681	637	622	619	702	13.4%
TOTAL	8,226	7,662	6,457	6,599	6,163	6,332	6,194	5,561	-10.2%

2012 Freight Facts

- 57,250 railcars moved 5.6 million tons
- Accounted for 67% of customer revenue
- Intermodal, Interstate, Interline and International
- Longest Rail-Haul in North America
  - Alaska Railroad from Seattle to Fairbanks
    - 1815 Miles
  - Interline service from Panama City, Florida to Fairbanks
    - 4842 Miles



Intrastate Freight

Within Alaska

- TOFC & COFC
- Scrap Metal
- Coal (Local & Export)
- Construction Materials
- Gravel
- Jet Fuel











Interstate Freight

Lower 48 to Alaska

Alaska Railbelt Marine



- Seattle – Whittier
- BNSF & Union Pacific
- 52 Voyages/Year
- 7 Day Transit
- 45 – 50 Railcar Capacity
- Railcar Tracking
- Safe, Reliable, Affordable Service

International Freight
Canada to Alaska

Canadian National Railroad



- Prince Rupert – Whittier
- 30+ Voyages/Year
- 4 Day Transit
- 45 – 50 Railcar Capacity

PASSENGER SERVICES

Summer



Winter



Daily Service
Mid-May to Mid-September

Weekend Service
Mid-September to Mid-May

Regularly Scheduled Year-Round Passenger Service

- Full summer schedule of ARR trains and support to cruise passengers
- Hurricane Turn and Aurora winter train
  - Flag stop service
  - Provides critical access for Alaska residents living and playing where there are no roads
- Provides eligibility for federal formula funds



Additional Summer Passenger Service

- Transport over 400,000 visitors a year
- Most trips start and/or end in Anchorage
  - *Coastal Classic* from Anchorage to Seward
  - *Glacier Discovery* from Anchorage to Whittier and Chugach National Forest
  - *Denali Star* from Anchorage to Denali National Park and on to Fairbanks



Access to the parks

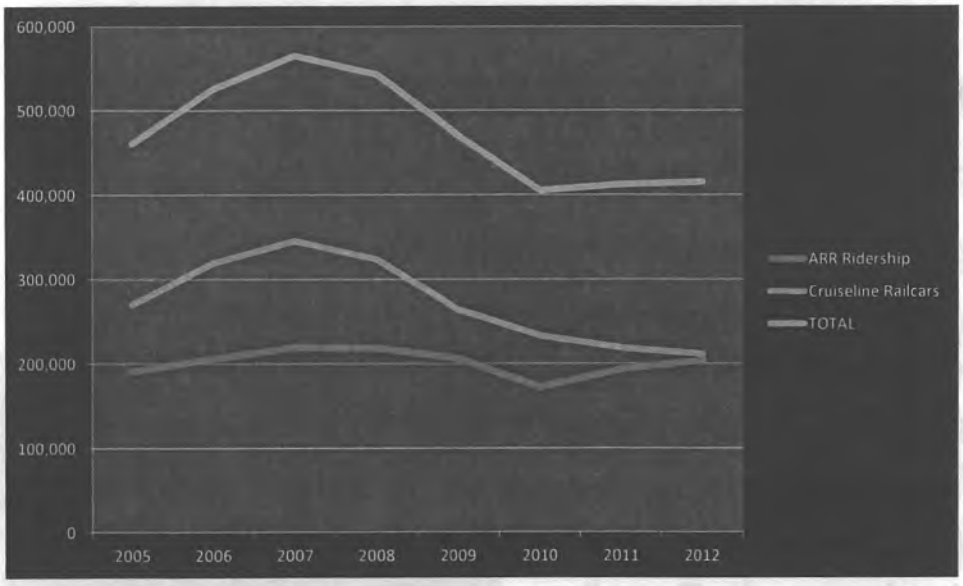
- Chugach National Forest
  - Transit in the Parks Program
    - Partner with U.S. Forest Service in 2007
    - Grants for DMU & construction of 5 whistle stops
    - Promote access to Chugach without increasing traffic



- Denali National Park & Preserve
  - Premier Alaska Destination
  - 2004 $5 million Depot Upgrade



Passengers 2005-2012



Passengers	2005	2006	2007	2008	2009	2010	2011	2012	% Chg 2011-12
ARR Ridership	190,963	205,924	219,370	218,833	206,410	171,975	193,293	204,120	5.6%
Cruiseline Railcars	270,155	319,369	345,430	323,838	264,376	233,160	218,916	211,159	-3.5%
TOTAL	**461,118**	**525,293**	**564,800**	**542,671**	**470,786**	**405,135**	**412,209**	**415,279**	**0.7%**

Real Estate

- Property Development
- Leases and Permits
- Dockage and Wharfage
- Facilities Maintenance and Management
- Approximately 36,000 acres



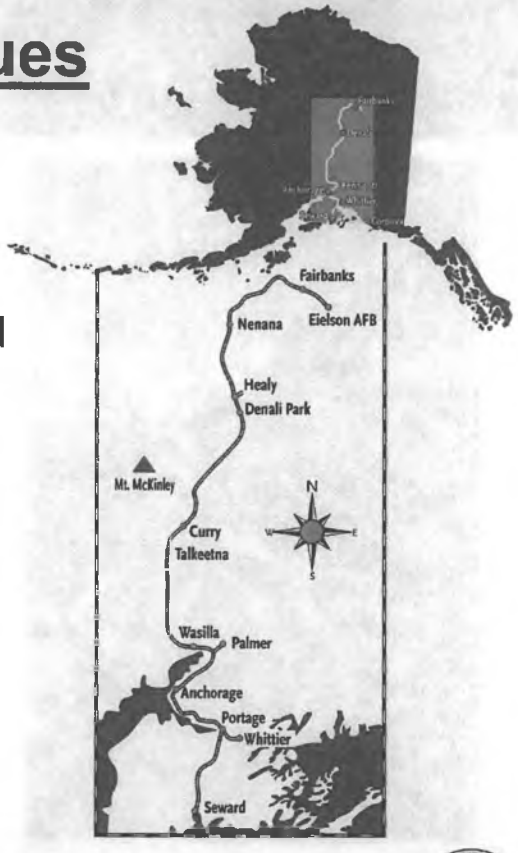




Clockwise from bottom left: Fairbanks depot; Ship Creek basin includes highly valuable leasable land; upland from the Seward freight dock is being developed

State Issues

- State Rail Plan
  - In process, to be completed in 2013
  - First since transfer to state
- Transportation Infrastructure Fund
  - If created ARRC would like to be included
- 95-Year Lease
  - Developers appreciate it as a tool
  - No requests yet.
- System Expansion
  - Northern Rail Extension
  - Port MacKenzie Rail Extension



Federal Issues

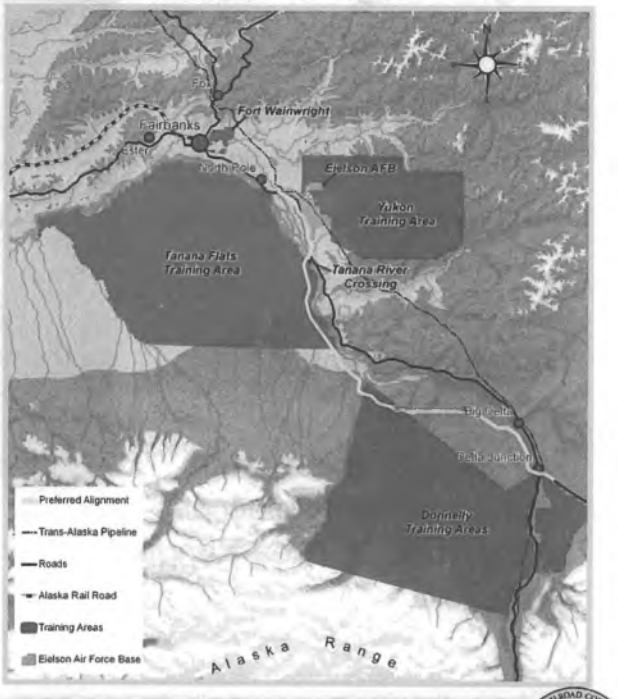
- FTA Formula Funding
  - Significant reduction for 2013 and moving forward
  - Will be up again in 2014
- Positive Train Control
  - Unfunded Federal Mandate
  - Unattainable deadline Dec. 2015
  - $15 million+/year to 2018 for construction
  - $5 million+/year for maintenance
  - Would prohibit passenger service if not implemented



ARRC Project News

Northern Rail Extension
4 Phase Project

- 80+ miles of rail from North Pole to Delta Junction
  - **Phase 1 : Bridge over Tanana River, approach road and levee near Salcha**
  - Phase 2 : 13 miles of rail from Moose Creek / Eielson AFB to Tanana River Crossing
  - Phase 3 : 30 miles of rail from Tanana River Crossing to Donnelly Training Area
  - Phase 4 : 38 miles of rail from Donnelly Training Area to Delta Junction



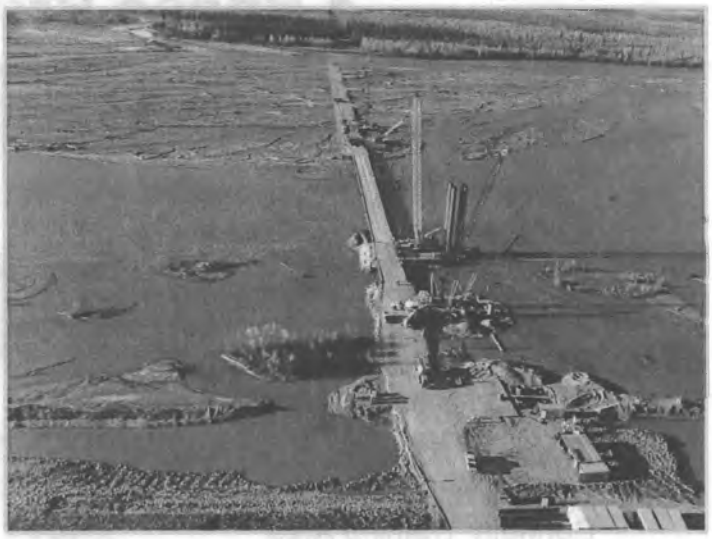
Northern Rail Extension
Project Benefits

- Commercial freight and passenger service supporting communities
- Transportation alternative to Richardson Highway
- Connects military at JBER, Wainwright, Eielson, Clear and Delta Junction by rail to each other and to 3 Alaska ports
- Support regional tourism
- Economic and Resource Development Potential
- Future Canadian Connection?



Phase 1 – Tanana River Crossing

- Longest bridge in Alaska
  - 3300 Feet
- Levee to direct river flow
- $188.2 million total cost
  - $84.0 million State of Alaska
  - $104.2 million Department of Defense
- Provide US Military with year round vehicle access to Joint Pacific Area Range Complex



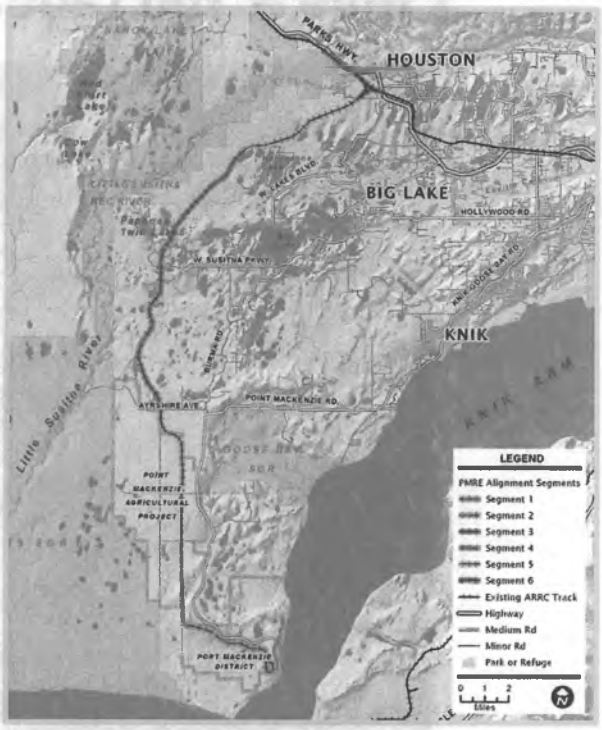
Phase 1 – Tanana River Crossing

- Keeping Alaskans Working
  - 70% Alaskan Hire on Project (2012 3rd Qtr. 86 out of 123)
  - Alaskan Companies Providing Services
- Kiewit Infrastructure West Co. – Construction Management/General Contractor
- HDR Alaska, Inc. – Project Management

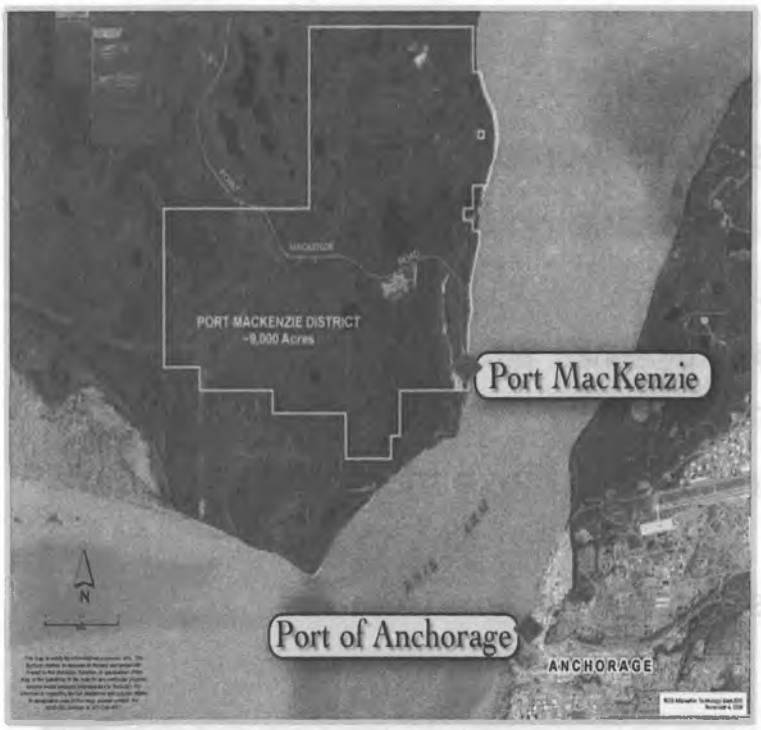
- Rolling Stone Construction
- Alaska Quality Insulators
- Statewide Clearing, Inc.
- Dimond Electric
- Alaska Drilling
- JD Steel
- HC Redimix
- Code 3 Logistics
- Bighorn Enterprises
- Arctic Surveys Company
- Alaska Industrial
- HansonAlaska
- Shannon & Wilson
- PDC, Inc.
- MAPPA
- Northstar Terminal and Stevedore
- Maynard's Mill & Small Buildings
- Warwick Surveying
- Carlile Transportation
- Accupoint, Inc.
- Brice, Inc.
- Brown's Hill Quarry

Port MacKenzie Rail Extension

- 32 mile rail extension
  - Houston to Port MacKenzie
  - ARRC serving as program manager to Mat-Su Borough
- All funding from State of Alaska



Port MacKenzie Rail Extension



- 4th Alaska Port served by Alaska Railroad
- 14 square mile Port MacKenzie District
- Staging, storage and industrial area
- Largest port reserve area in Alaska



Port MacKenzie Rail Extension
1 mile – 100 railcar industrial loop



Potential Growth

- East to Canada – Continue NRE
- West to Nome – Access to resources
- North to Prudhoe Bay – Pipeline on Rails
- Corridors to resources
  - Include rail, road, utilities, pipelines, etc.
  - Can build road to railroad geometry
- Development of large resources move more efficiently by rail
- Cross continental passenger service

Economic Development Partner

- Intermodal, Interstate & International Shipping
  - Supplies for exploration, drilling and development
  - OCS, ANWR, NPR-A Pipelines
  - Natural Gas Pipeline
- Pipeline on Rails
  - LNG
  - Crude Oil
  - Refined Oil
- Renewable Energy Development
  - Watana-Susitna Dam
  - Future Wind Projects
- New Coal







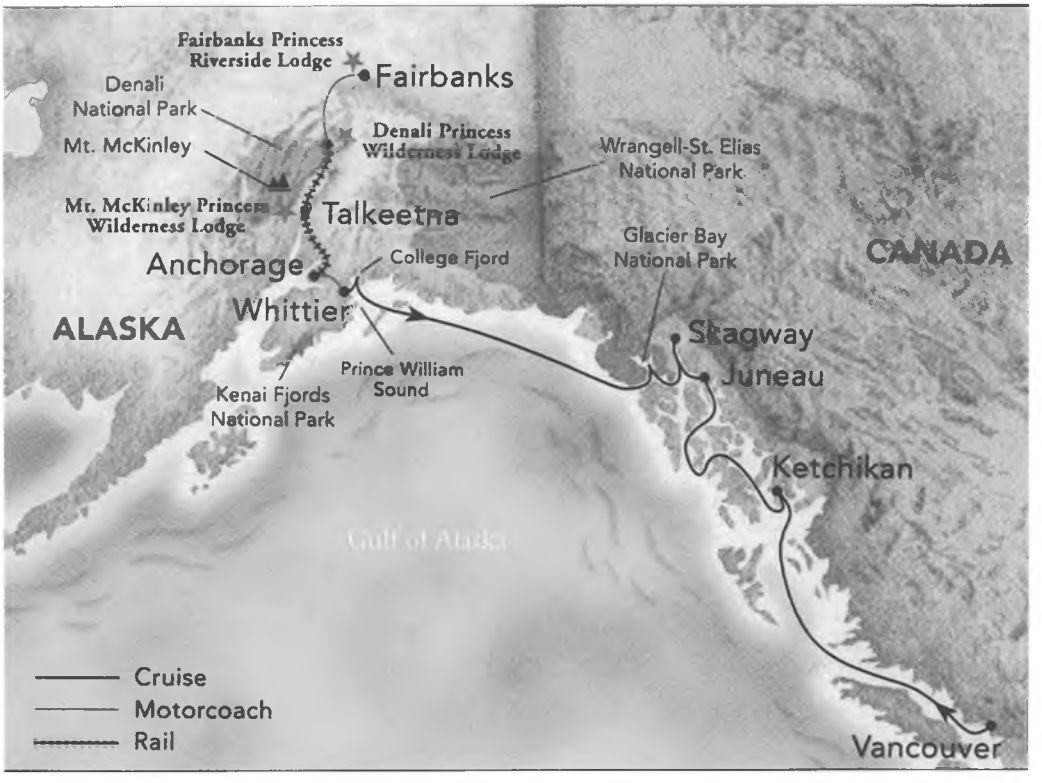
Overview on tourism & travel patterns for the Alaska State Legislature

2-28-2013

Presented by Ralph Samuels
Vice President, Community & Government Relations

Holland America Line
A Signature of Excellence

Typical travel patterns



In-state travel options









Alaska product use – F&B







Alaska Marine Conservation Council (AMCC) - Kodiak Bairdi crab
Hot Licks Ice Cream – blueberry and specialty ice cream
Indian Valley Meats - reindeer sausage
Alaska Jacks - fireweed syrup
Alaska Chip Company - specialty chips
Arctic Cuts- cut & washed local produce and fruit
Basically Basil - organically grown local produce/herbs
Copper River Seafoods - fresh halibut, salmon, cod
Ditomaso's Produce - local produce when in season/available
Tenth & M Seafoods - fresh salmon, scallops, cod
Fisherman's Express - King crab, crab cakes, scallops
AK Brewing Co. - beer
Glacier Brewhouse - beer
Midnight Sun Brewery - beer
Silver Gulch Brewing Co. - beer
Alaska Distillery - flavored local vodka
Kahiltna Birch Works - birch syrup
Kaladi Bros./Silverhook - espresso and drip coffee
Heritage Coffee Company - espresso and drip coffee
Taco Loco - tortillas, chips
Alaska Chi - made by the Homer Brewing Company, Inc.
Food Services of America - Local produce, local meats

Travel experiences are endless









Working with local vendors



- Alaska Nature Guides
- Alaska Travel Adventures
- Aramark Sports & Entertainment Services LLC
- Black Bear ATV Adventures
- Black Diamond Resort
- D & S Trail Rides
- Denali Air
- Denali ATV Adventures
- Denali Backcountry Guides
- Denali Fly Fishing Guides
- Denali Jeep LLC
- Denali Southside River Guides
- Denali Tundra Tours
- Denali Wilderness Safari
- ERA Helicopters, LLC
- Jeff King, Inc.
- K2 Aviation
- Mahay's Jet Boat Adventures
- McKinley Flight Tours
- Nenana Raft Adventures
- Talkeetna Fishing Guides
- Talkeetna River Guides
- Terry Boyd Photography Tours, LLC
- Trapper Creek Tours



Economic impact of tourism to State: $3.72 billion

Table 6. Total Visitor Industry Labor Income, and Spending, By Region, 2008-09 and 2011-12 (including direct, indirect, and induced effects)

	2008-09 Labor Income	2008-09 Spending	2011-12 Labor Income	2011-12 Spending
Southcentral	$514 million	$1,751 million	$580 million	$1,966 million
Interior	205 million	519 million	240 million	605 million
Southeast	373 million	1,004 million	370 million	1,003 million
Southwest	41 million	115 million	42 million	116 million
Far North	10 million	25 million	11 million	29 million
Total	$1.14 billion	$3.41 billion	$1.24 billion	$3.72 billion

- *McDowell Group, Inc. – Economic Impact of Alaska's Visitor Industry, 2011-12*

Revenue to local governments: $71+ million

Revenues to Municipal and State Governments

	2008-09	2011-12
Municipal Revenues	**$69.8 million**	**$71.1 million**
Sales tax revenues	$28.9 million	$29.2 million
Lodging tax revenues	$23.5 million	$26.7 million
Dockage/moorage revenues	$17.4 million	$15.2 million

- *McDowell Group, Inc. – Economic Impact of Alaska's Visitor Industry, 2011-12*

Revenue to the State: $107 million

Table 7. Selected Revenues to Municipal and State Governments 2008-09 and 2011-12

	2008-09	2011-12
Municipal Revenues	**$69.8 million**	**$71.1 million**
Sales tax revenues	$28.9 million	$29.2 million
Lodging tax revenues	$23.5 million	$26.7 million
Dockage/moorage revenues	$17.4 million	$15.2 million
State of Alaska Revenues	**$136.6 million**	**$107.8 million**
Commercial Passenger Vessel Tax	$46.4 million	$32.0 million
Passenger Gambling Tax	$6.3 million	$5.8 million
Ocean Ranger Program	$4.0 million	$3.6 million
Commercial Passenger Vessel Environmental Compliance Program	$1.0 million	$0.8 million
Fish & Game licenses/tags	$17.1 million	$17.8 million
Alaska Marine Highway System revenues	$15.4 million[1]	$18.4 million
Alaska Railroad Corporation revenues	$19.4 million	$20.2 million
Vehicle rental tax	$5.6 million	$5.7 million
Corporate income tax	$21.4 million	$3.5 million
Total Selected Revenues	**$206.4 million[2]**	**$178.9 million**

up

– big drop

down

- *McDowell Group, Inc. – Economic Impact of Alaska's Visitor Industry, 2011-12*

Partnerships

- National Parks: 60+ employees from Denali Princess Wilderness Lodge worked on trail restoration along Rock Creek Trail (2012)
- State Parks: 12+ employees from McKinley Princess Wilderness Lodge worked on the Byers Lake Trail (2010-11)
- Roadside clean up: employees from Anchorage to Talkeetna to Healy adopt sections of road as part of annual clean up efforts





Visitor flow

- 150,000 passengers ride the rail
- 170 HAP motorcoaches
  + 90 others within the Denali corridor
- 20 HAP rail cars
  + 10 from Alaska RR on busy days





Rail vs. motorcoach capacity

- Most rail cars hold 72-88 people

- It would take more than
50 additional motorcoaches
to take the place of rail traffic,
adding to congestion in downtown,
as well as the entire Denali corridor



- Replacing rail cars with motorcoaches would require about 30 more coaches on the Parks/Glen Highway

February 2013

Economic Impact of

Alaska's Visitor Industry

2011-12

Prepared for

Alaska Department of Commerce,
Community, and Economic Development

Division of Economic Development



Prepared by

McDowell GROUP







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Alaska's Visitor Industry 2011-12

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Prepared for:

STATE OF ALASKA

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Executive Summary

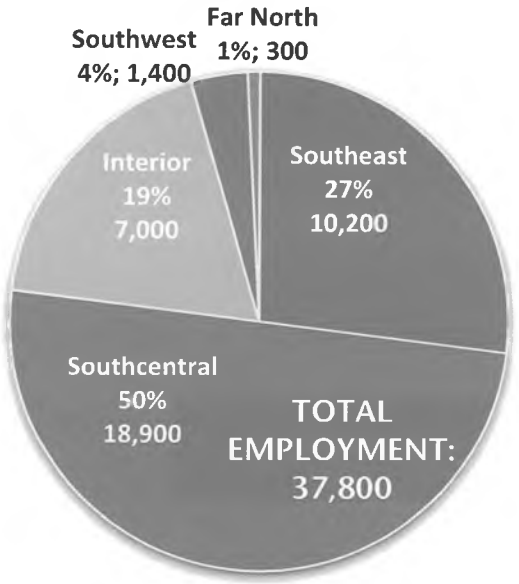
This study measures the economic impact of Alaska's visitor industry for the period of May 2011 through April 2012 in terms of employment, labor income, and total spending. Both direct and indirect (including induced) impacts are estimated based on visitor industry-related spending. The report also shows estimated revenues to state and municipal governments during the study period. The source for estimated visitor volume and spending is the *Alaska Visitor Statistics Program VI* (AVSP). Additional sources for this study include cruise lines, municipalities, the U.S. Bureau of Economic Analysis, and various departments of the State of Alaska. This report includes comparisons to a previous study, which covered the October 2008 through September 2009 period.

Employment

Alaska's visitor industry accounted for an estimated 37,800 full- and part-time jobs during the 2011-12 study period, including all direct, indirect, and induced impacts. Peak employment is estimated at 45,000. These jobs resulted in total labor income of $1.24 billion.

Half (50 percent) of visitor industry-related employment occurred in Southcentral Alaska, 27 percent in Southeast, 19 percent in Interior, 4 percent in Southwest, and 1 percent in Far North. Although Southeast and Southcentral draw a similar number of visitors annually, Southcentral draws a much greater proportion of overnight visitors, leading to greater spending per person, and a higher degree of economic impacts.

Chart ES-1. Total Visitor Industry-Related Employment in Alaska, 2011-12

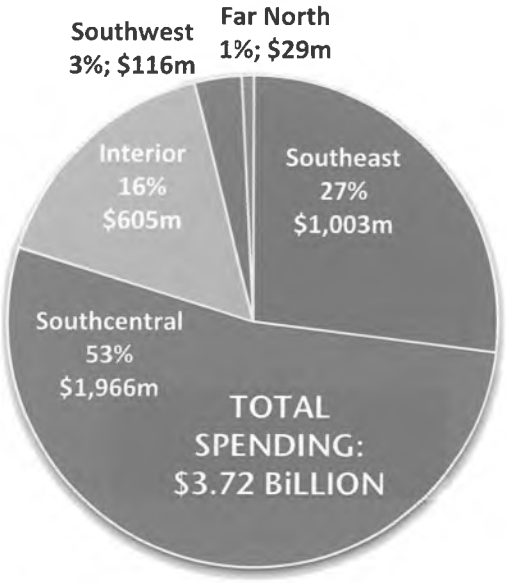


Spending

The visitor industry generated $3.72 billion in spending during the 2011-12 study period, including all direct, indirect, and induced impacts. The spending is distributed throughout the state similarly to employment, with 53 percent attributable to Southcentral, 27 percent to Southeast, 16 percent to Interior, 3 percent to Southwest, and 1 percent to Far North.

Spending, labor income, and employment impacts are derived from applying economic multipliers by region and sector to visitor industry spending (visitor spending, cruise line spending, cruise line payroll, crew member spending, and spending on air and ferry tickets to enter/exit the state).

Chart ES-2. Total Visitor Industry-Related Spending in Alaska, 2011-12

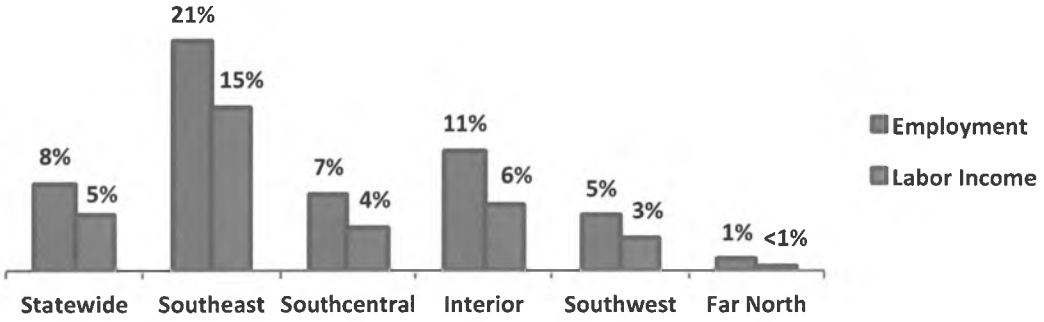


The Role of the Visitor Industry in the Economy

Visitor industry-related employment (37,800 jobs) represented 8 percent of statewide employment in 2011-12, and 5 percent of statewide labor income. Employment is higher than labor income due to the seasonal nature of many visitor industry jobs.

Although visitor industry-related employment and labor income are highest in Southcentral, the industry plays the greatest role in Southeast, accounting for 21 percent of employment and 15 percent of labor income. In Southcentral's much larger economy, the visitor industry accounts for 7 percent of employment and 4 percent of labor income. The visitor industry accounts for 11 percent of employment and 6 percent of labor income in the Interior, for 5 and 3 percent in Southwest, and for 1 and less than 1 percent in the Far North, respectively.

Chart ES-3. Visitor Industry-Related Employment and Payroll as Percentage of Total, 2011-12



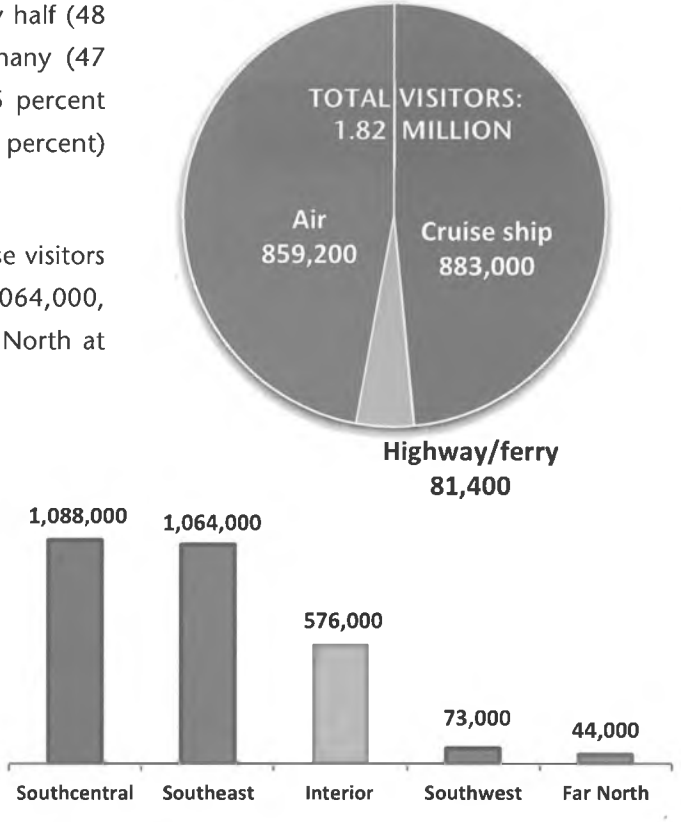
Visitor Volume

An estimated 1,823,600 out-of-state visitors traveled to Alaska between May 2011 and April 2012. Roughly half (48 percent) were cruise ship passengers; nearly as many (47 percent) traveled to and from Alaska by air; and 5 percent were highway/ferry visitors. The vast majority (85 percent) traveled during the May through September period.

Southcentral received the largest proportion of these visitors at 1,088,800, followed closely by Southeast at 1,064,000, Interior at 576,000, Southwest at 73,000, and Far North at 44,000.

The visitor volume of 1.82 million is 1 percent lower than volume measured for the previous study period (October 2008-September 2009). However, the composition of the visitors changed, with cruise volume decreasing by 14 percent and non-cruise volume increasing a similar amount.

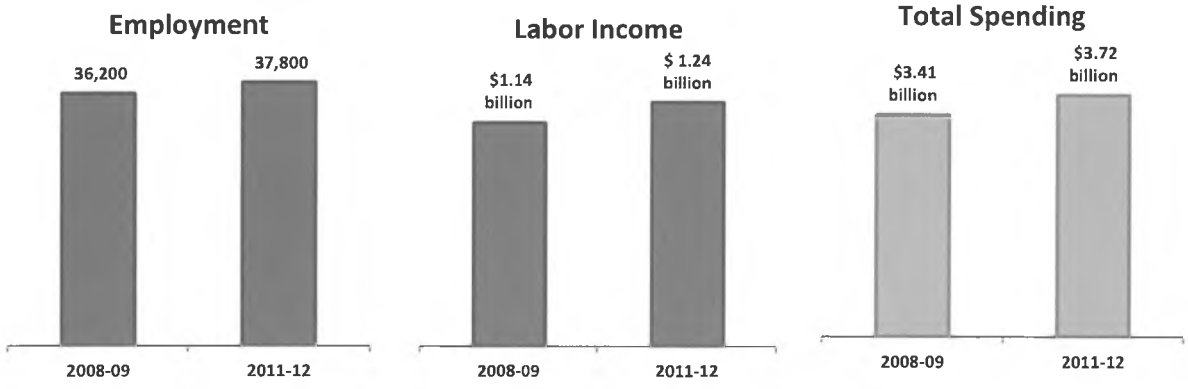
Chart ES-4. Alaska Visitor Volume by Transportation Market and Regions Visited, 2011-12



Trends in Total Impacts

Total visitor industry-related employment of 37,800 jobs is 1,600 above the total measured in the 2008-09 study, a 4 percent increase. Labor income increased $100 million between the two study periods, a 9 percent increase. Total visitor-related spending also increased by 9 percent, adding $310 million. Though both labor income and total spending are 9 percent above 2008-09 levels, after adjusting for inflation the increase in real dollars matches the employment increase of approximately 4 percent. Dollar values in the following chart are nominal values, i.e., not adjusted for inflation.

Chart ES-5. Visitor Industry Employment, Labor Income, and Total Spending, 2008-09 and 2011-12



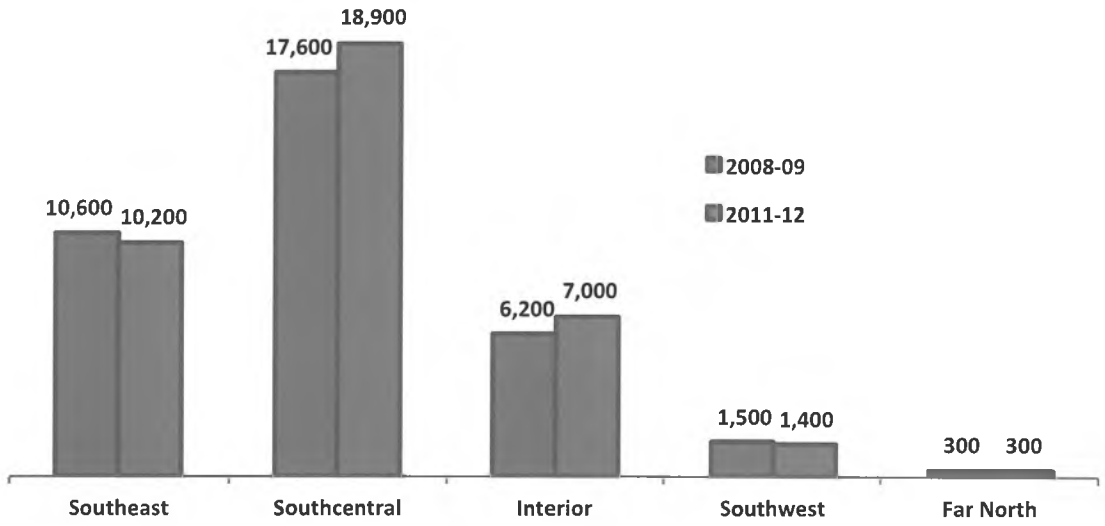
The increase in visitor industry economic impacts between the two study periods occurred despite a 1 percent decrease in visitor volume. The increase is attributable to two major factors. The composition of visitors changed, with cruise visitor volume dropping by 14 percent and air visitor volume increasing a similar amount. Because air visitors spend more on a per-person basis than cruise visitors, overall spending increased. In addition, the improved economy in 2011-12 translated to higher per-person spending levels.

Trends in Regional Impacts

On a regional basis, Southcentral added 1,300 visitor industry jobs, a 7 percent increase. The Interior added 800 jobs, a 13 percent increase. These regional increases are largely attributable to the growth in the air visitor market. Visitor-related employment in Southeast actually declined, losing approximately 400 jobs (about 4 percent). The loss reflects the region's dependence on cruise ship traffic. Visitor industry-related employment in the Southwest declined by about 100 jobs while Far North employment related to the visitor industry was flat between the 2008-09 and 2011-12 periods.

See chart, next page

Chart ES-6. Visitor Industry-Related Employment by Region, 2008-09 and 2011-12



Revenues to Municipal and State Governments

The visitor industry contributed an estimated $178.9 million to municipal and state governments during the May 2011 to April 2012 period, including $71.1 million to municipalities and $107.8 million to the State of Alaska.

Compared to the previous study period, revenues to municipalities increased slightly (from $69.8 million to $71.1 million). An increased number of air visitors translated to higher lodging tax revenues. Sales tax revenues were about flat, generally reflecting spending patterns in Southeast (Anchorage and Fairbanks do not have a sales tax). A decrease in cruise traffic led to lower dockage/moorage revenues.

State revenues decreased from $136.6 million to $107.8 million. Most of the decrease is attributable to lower corporate income tax payments in the tourism sector, but the decrease in cruise passenger traffic and lower Commercial Passenger Vessel Tax on passengers also led to lower cruise line payments.

Table ES-1
Selected Revenues to Municipal and State Governments, 2011-12

	Estimated Revenues
Municipal Revenues	**$71.1 million**
Sales tax revenues	$29.2 million
Lodging tax revenues	$26.7 million
Dockage/moorage revenues	$15.2 million
State of Alaska Revenues	**$107.8 million**
Cruise line payments	$42.2 million
Fish & Game licenses/tags	$17.8 million
Alaska Marine Highway System revenues	$18.4 million
Alaska Railroad Corporation revenues	$20.2 million
Vehicle rental tax	$5.7 million
Corporate income tax	$3.5 million
Total Selected Revenues	**$178.9 million**

Introduction

The Alaska Department of Commerce, Community, and Economic Development (DCCED) contracted with McDowell Group to measure the regional and statewide economic impact of Alaska's visitor industry for the 12-month period of May 2011 through April 2012, including direct, indirect and induced effects. In addition to estimating visitor-related spending, employment, and payroll, the report shows visitor-related impacts on state and municipal governments over the same period. This study represents an update to the previous report on visitor industry impacts in 2008-09, completed for DCCED by McDowell Group in March 2010.

Methodology

Visitor Volume and Spending

Visitor volume and spending estimates were based on the *Alaska Visitor Statistics Program VI* (AVSP) reports for summer 2011 and fall/winter 2011-12, conducted by McDowell Group for DCCED.

Visitor volume estimates were based on visitor/resident tallies of 92,620 travelers exiting Alaska at major exit points between May 2011 and April 2012. The resulting ratios were applied, by month and by location, to traffic data (highway border crossings and airport enplanements) to arrive at visitor volume estimates. Cruise passengers were assumed to be 100 percent visitors.

Visitor spending estimates were based on results from 8,111 surveys of out-of-state visitors who were exiting Alaska at major exit points between May 2011 and April 2012. The survey collected information on the total amount spent in Alaska as well as the amount spent in each community visited, by spending category (lodging, tours/activities/entertainment, gifts/souvenirs/clothing, food/beverage, transportation/rental cars/fuel, packages, and other). Spending figures exclude cruise packages and transportation used to enter and exit the state.

To arrive at total visitor spending estimates, several adjustments were made to the spending figures from the survey. Tour commissions were extracted from passenger spending estimates because they accrue directly to travel agents, tour operators, and cruise lines at the time of the sale. In addition, spending by non-cruise visitors in the "overnight package" category was distributed among sectors and regions (as respondents are not able to categorize their package spending for purposes of the survey).

Final spending estimates were derived from applying average spending by season, by category, and by region to visitor volume estimates.

More detail on visitor volume and spending methodology is available in the AVSP reports at the following link:

http://commerce.alaska.gov/ded/dev/toubus/research.htm

Additional Visitor Industry Spending

Additional visitor industry spending includes cruise line spending, crew member spending, and visitor spending on air and ferry tickets to enter and exit Alaska.

Cruise Line Spending

Cruise line spending was based on 2011 purchasing data provided by four major cruise lines: Princess Cruises, Holland America Line, Royal Caribbean International (which operates both Royal Caribbean Cruises and Celebrity Cruises) and Carnival Cruise Lines. Together, these lines represent 80 percent of 2011 cruise passenger traffic. Data was not available from Norwegian Cruise Line, Disney Cruise Line, or other (smaller) lines. Spending by other lines in Alaska was estimated using Carnival's spending data as a proxy, as the other lines most closely resemble Carnival in terms of their Alaska operations. (That is, the other lines do not operate land-based tours like Princess, Holland America, and Royal Caribbean.)

Data referring to nearly 2,000 vendors (excursions, products, and services) was reviewed and categorized by economic sector and region. All payments from cruise lines to excursion providers were excluded from the final spending estimates, as this spending is already accounted for in visitor spending data. For example, payments to Mt. Roberts Tramway were excluded, because passengers reported that spending in the AVSP survey; therefore it is included in the Passenger Spending category.

Crew Member Spending

Crew member spending for 2011 was based on previous surveys of crew members conducted by McDowell Group, modified to account for changes in crew member volume by port and inflation. Spending estimates were corroborated by crew spending estimates provided by cruise lines.

Spending on Air and Ferry Tickets

Since spending on air and ferry tickets to enter and exit Alaska is excluded from AVSP visitor spending estimates, these figures are estimated and added to total visitor industry spending figures. Spending on air tickets was based on average Seattle-Alaska airfares, estimated volume by location, and an assumption that roughly half of spending on air tickets to enter and exit Alaska actually stays in Alaska. Spending on ferry tickets by out-of-state visitors to enter and exit the state between May 2011 and April 2012 was provided by the Alaska Marine Highway System.

Economic Impact Analysis

McDowell Group maintains a visitor industry economic impact model for assessing the effects of visitor industry-related spending in Alaska. Estimates of direct visitor industry employment and payroll are derived from visitor industry spending estimates, and verified using employment and payroll data from the Alaska Department of Labor and Workforce Development and U.S. Bureau of Economic Analysis. The model incorporates modified IMPLAN multipliers to estimate indirect and induced impacts. IMPLAN is a predictive input-output model of local and state economies, and is widely used to measure the economic impact of industries and industrial/commercial development. Indirect effects include those jobs and income created as a result of visitor industry businesses purchasing goods and services in support of their business operations.

Induced effects include jobs and income created as a result of employees of the visitor industry spending their payroll dollars in support of their households. Together, indirect and induced impacts are often termed "multiplier effects."

Visitor Industry Tax Revenues

The report includes estimates of tax revenues to municipalities and state government from out-of-state visitors, to the extent possible.

Regional sales tax revenue estimates were calculated based on visitor industry spending and visitor volume at the community and regional level. To arrive at lodging tax revenues estimates, each community's tax revenues were assigned a different "percentage out-of-state visitors" rate, based on rates calculated for the previous (2009) economic impact study, which were derived from a 2009 business survey and previous visitor research. For both lodging and sales tax estimates, tax rates and total taxes collected by community (from the *Alaska Taxable* report, 2011) were taken into account in the analysis. Total calendar year 2011 taxes were assumed as a proxy for the study period of May 2011 through April 2012. Cruise ship dockage/moorage revenues were collected from municipalities.

Cruise line payments to the State of Alaska were reported by the Department of Revenue. Fishing and hunting licenses and tag revenues were reported by the Department of Fish and Game. Vehicle rental taxes were reported by the Department of Revenue, adjusted to account for out-of-state visitors. The Department of Revenue also reported corporate income taxes associated with the visitor industry. The Alaska Marine Highway System provided revenues associated with out-of-state visitors. The Alaska Railroad Corporation reported passenger-related revenues, and McDowell Group estimated the percentage attributable to out-of-state visitors.

Comparisons to Previous Study

This study represents an update to the previous report on visitor industry impacts, completed for DCCED in March 2010 and covering the period of October 2008 through September 2009. The current study refers to the May 2011 through April 2012 period. Although the exact months differ between the two studies, each set of findings covers a 12-month period. Trend data is provided for many results in this report.

While findings presented in the two studies are generally comparable, some caution is warranted in interpreting trends reported in this 2011-12 report. Total spending and economic impact estimates presented in the 2011-12 report are based on more timely data than was available for the 2008-09 study. The current study draws on AVSP data collected during the 2011-12 study period. The 2008-09 study used AVSP spending data collected in 2006-07, which was updated using a variety of methods, primarily a survey of Alaska visitor industry businesses, in addition to indicators such as lodging tax revenues and inflation rates. The 2008-09 study was further complicated by the fact that between 2006-07 and 2008-09 the country experienced a major economic recession, significantly affecting Alaska visitor volume and spending. In addition, cruise line spending data available for the 2008-09 study was for the 2007 cruise season and required updating to 2009 via various methods. Cruise line spending for the 2011-12 study was for the 2011 cruise season. As such, while trend analysis is provided in this report, it is important to recognize that some of the change may be due to utilization of better data sources in the current study.

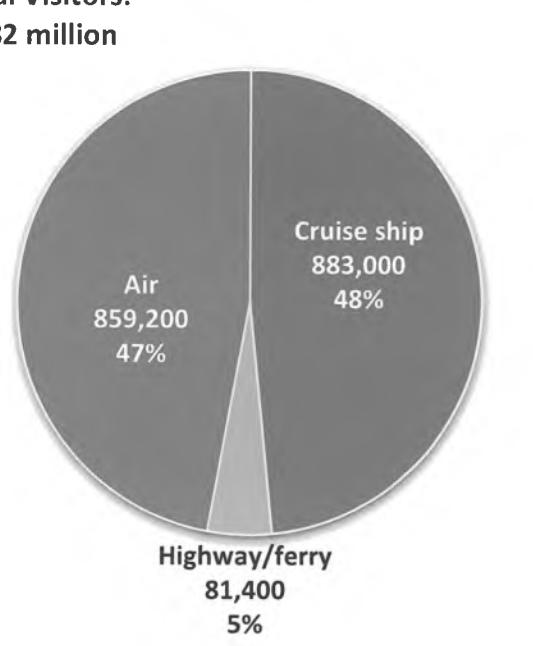
Visitor Volume, 2011-12

An estimated 1.82 million out-of-state visitors came to Alaska between May 2011 and April 2012. Nearly half of these visitors (48 percent) were cruise ship passengers; nearly as many (47 percent) entered and exited the state via air; and 5 percent entered or exited the state via highway or ferry.

The vast majority of Alaska's annual visitor volume (1,556,800, or 85 percent) is attributable to the summer months of May through September, while 266,800 (or 15 pecent) traveled to Alaska in the fall/winter period of October through April.

Visitor volume for 2011-12 was determined in the *Alaska Visitor Statistics Program VI* (AVSP). Estimates are derived from applying visitor/resident ratios to traffic statistics (in the case of highway and air travelers). Actual numbers of visitors are provided for cruise and ferry passengers.

Chart 1.
Alaska Visitor Volume, May 2011-April 2012
By Transportation Market

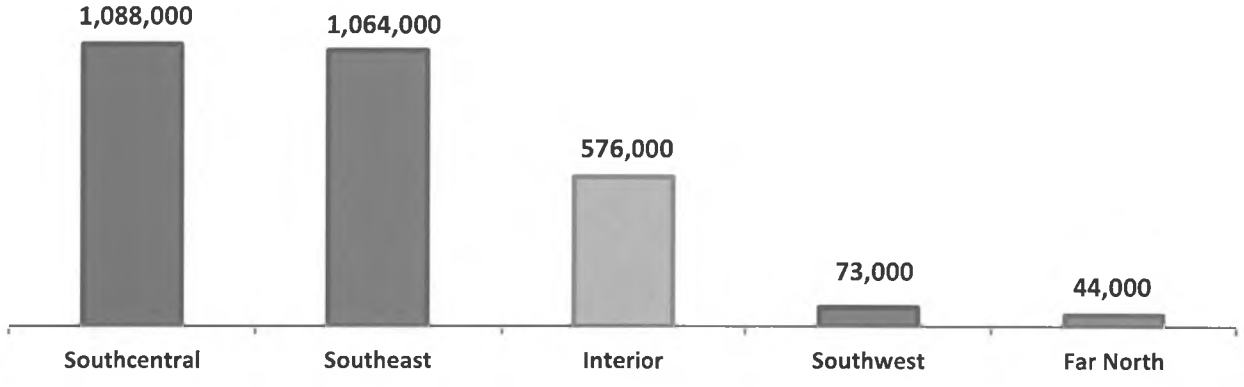


Source: *Alaska Visitor Statistics Program VI, Fall/Winter 2011-12*, prepared by McDowell Group for DCCED.

Visitor Volume by Region

The region that drew the highest number of visitors to Alaska during the study period was Southcentral at 1,088,000, followed closely by Southeast at 1,064,000. The Interior attracted about half that number at 576,000. The two regions of Southwest and Far North drew much lower numbers of visitors at 73,000 and 44,000, respectively.

Chart 2. Alaska Visitor Volume, May 2011-April 2012, By Region

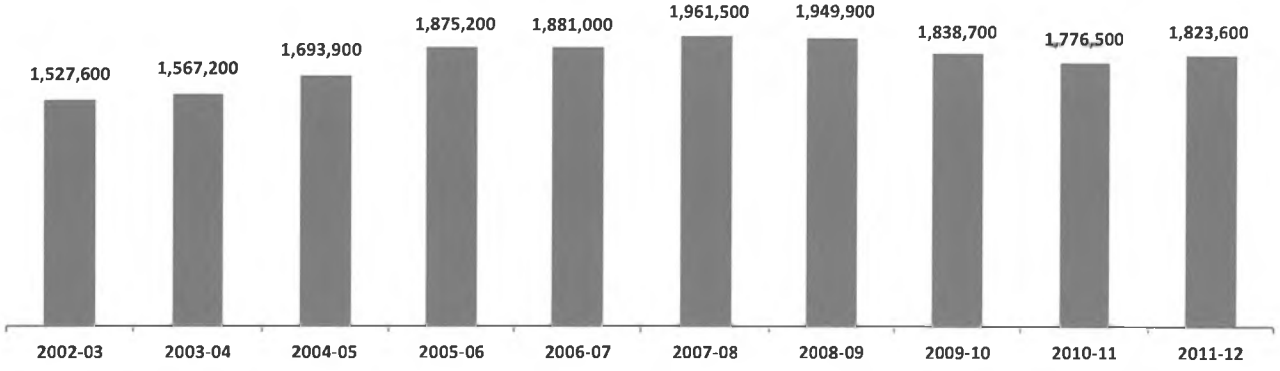


Source: AVSP VI. Regional visitation from the Summer and Fall/Winter studies were added together.

Visitor Volume Trends

Alaska visitor volume for 2011-12 (1,823,600) represents the first increase in annual visitation in four years (up 3 percent over 2010-11). After steadily increasing between 2002-03 and 2007-08, the Alaska visitor market plateaued, then declined in response to the nationwide economic recession and declining cruise traffic. The 2011-12 visitor volume is still 7 percent below the peak volume (1,961,500) of 2007-08.

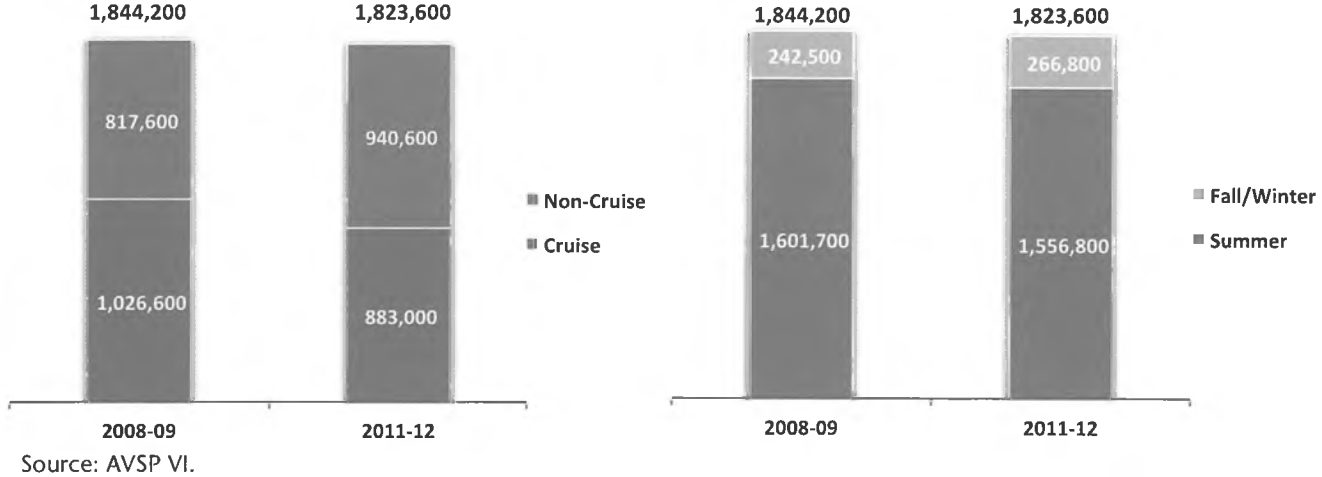
Chart 3. Annual Alaska Visitor Volume, 2002-03 to 2011-12



Source: AVSP VI.
Note: Each 12-month period refers to May through April.

The previous economic impact report covered the period of October 2008 through September 2009, during which time 1,844,200 visitors traveled to Alaska. (This number differs from the 2008-09 figure in Chart 3 because it covers the October through September period, rather than May through April.) The volume for the current study period of 2011-12 (1,823,600) is only 1 percent lower than that of the previous study period of 2008-09 (1,844,200). However, the composition of the visitors was significantly different: cruise volume was down by 14 percent, while non-cruise traffic was up a similar amount. Also, summer visitation was down by 3 percent (summer 2009 to 2011), while fall/winter visitation was up by 10 percent (fall/winter 2008-09 to 2011-12). These changes in visitor composition affected visitor spending between the two time periods, particularly on a regional basis, and is addressed in subsequent chapters.

Chart 4. Alaska Visitor Volume, 2008-09 and 2011-12, By Cruise/Non-Cruise and Season



Source: AVSP VI.

Visitor Spending

Out-of-state visitors to Alaska spent an estimated $1.7 billion in Alaska between May 2011 and April 2012. This figure includes instate spending only, excluding the cost of transportation to and from the state, such as air tickets, cruise or cruise/tour packages, and ferry tickets.

While cruise visitor spending on cruises and cruise/tour packages is excluded from this figure, cruise line spending in Alaska is accounted for in the economic impact analysis, and is addressed further, below. This spending includes payments to hotels, motorcoach companies, the Alaska Railroad Corporation, and other components of land tours that are included in the cruise package price.

For the purposes of this study, tour commissions were extracted from passenger spending data because they accrue directly to travel agents, tour operators, and cruise lines at the time of the sale.

Visitor Spending by Region and Sector

In the 2011-12 AVSP survey, respondents were asked to estimate their purchases in each community they visited, by spending category. Chart 5 (above right) shows how total, full-year visitor spending is distributed throughout the state. Southcentral accounts for the largest percentage at 45 percent, followed by Southeast at 31 percent, Interior at 18 percent, Southwest at 5 percent, and Far North at 1 percent.

Visitor spending is widely distributed by sector (see Chart 6, right). About one-fifth is attributable to each of the following categories: lodging (20 percent), tours/activities (19 percent), gifts/souvenirs (18 percent), and food/beverage (18 percent). The "other" category (primarily lodge packages) accounts for 14 percent of spending. Transportation is the smallest category at 11 percent.

Chart 5. Total Visitor Spending in Alaska 2011-12, By Region

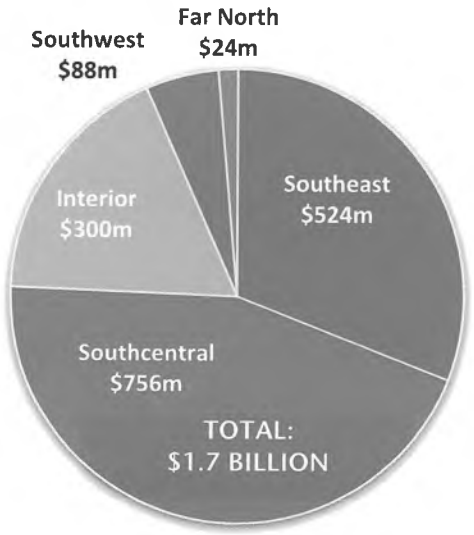
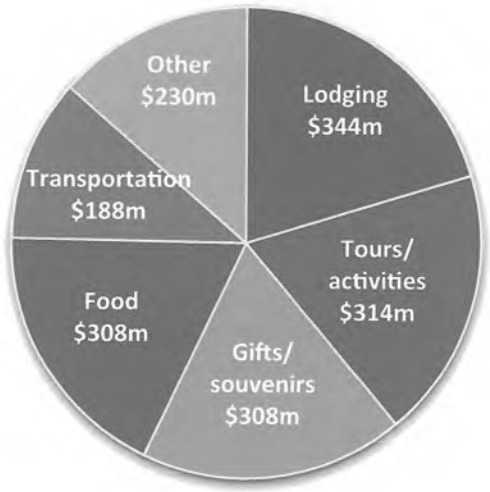


Chart 6. Total Visitor Spending in Alaska 2011-12, By Sector



Notes: Spending figures cover the period of May 2011 through April 2012. Spending on cruise packages, transportation to enter/exit the state, and tour commissions are excluded.

Visitor Spending Trends

Visitor spending increased from $1.503 billion in 2008-09 to $1.692 billion in 2011-12. This represents a 13 percent increase, while the total number of visitors to Alaska was down by 1 percent between the two 12-month study periods (October 2008-September 2009 and May 2011-April 2012).

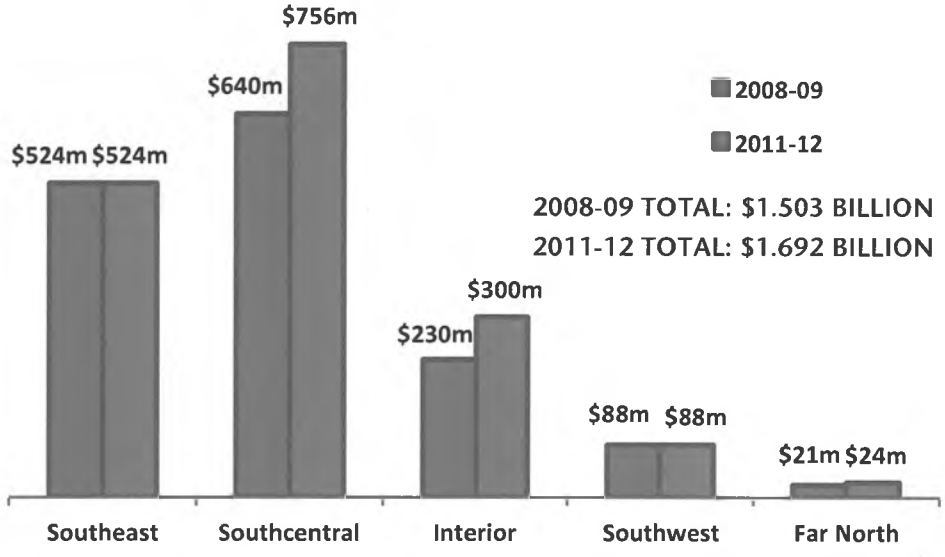
The number of cruise passengers to Alaska dropped by 14 percent between the two periods, while air visitors increased by roughly the same amount. Cruise passengers spend much less in Alaska on a per-person basis: $632, compared to $1,455 among summer air visitors in summer 2011. (Spending on cruise packages is excluded from the $632 figure.) Therefore an increase in air visitors relative to cruise visitors translates to increased visitor spending. In addition, a certain amount of increase is attributable to the effects of inflation.

On a regional basis, the increase was primarily focused in Southcentral (from $640 million to $756 million) and Interior (from $230 million to $300 million). The increase in air visitors between the two periods, as well as an improving economy, likely led to increased spending in these two regions. In addition, the number of cruise ship passengers calling directly at Anchorage increased from 300 in 2009 to 15,000 in 2011.

Southeast visitor spending was flat at $524 million between the two periods. The region was disproportionately affected by the drop in cruise passenger volume, compared to Southcentral and Interior. While there were fewer cruise passengers between 2009 and 2011, those that came spent more on a per-person basis, allowing spending levels to be maintained.

Spending in the Far North is estimated to have increased from $21 million to $24 million between the two study periods, while spending in the Southwest was the same between the two study periods at $88 million.

Chart 7. Visitor Spending in Alaska, By Region, 2008-09 and 2011-12



Additional Visitor Industry Spending

Cruise Line Spending and Payroll

Cruise lines and their subsidiaries spent an estimated $267 million on goods and services from Alaska businesses as well as tax payments during the 2011-12 study period. This estimate is derived from detailed 2011 purchasing information provided by four major cruise lines: Princess Cruises, Holland America Line, Royal Caribbean International (which operates both Royal Caribbean Cruises and Celebrity Cruises) and Carnival Cruise Lines. Together, these lines represent 80 percent of 2011 cruise passenger traffic. Spending by the other cruise lines was assumed to resemble those of Carnival on a per-passenger basis. While Princess Cruises, Holland America Line, and Royal Caribbean International all operate land tours and therefore show much higher spending on a per-passenger basis, Carnival and all other cruise lines operate cruises exclusively.

Cruise line spending data was adjusted to exclude payments to tour vendors, which are already accounted for in the visitor spending. (Many cruise passengers purchase shore excursions from their cruise line, then the cruise line pays the operator on behalf of the passenger.)

In addition to making purchases in Alaska, cruise lines directly employed approximately 1,900 workers in Alaska on an annual average basis, and 4,000 during the peak month of July. Total payroll for these employees is estimated at $18 million. These figures are based on employment and payroll data provided by the three lines that operate land tours and/or have hotel properties in Alaska: Princess Cruises, Holland America Line, and Royal Caribbean International. In addition, other cruise lines employ a small number of Alaska-based employees on a seasonal basis.

Table 1. Cruise Line Purchases, Payroll, and Employment in Alaska, 2011-12

	Spending and Employment
Cruise line purchases/payments	$208 million
Cruise line payroll	$59 million
Total cruise line spending	**$267 million**
Cruise line employment (annual)	1,900
Cruise line employment (peak)	4,000

Cruise line purchases were estimated at $250 million for 2009. The large drop in spending is attributable to two factors: a 14 percent decrease in passenger traffic, and a decrease in the tax rate levied by the State of Alaska on large commercial passenger vessels, from $50 to $34.50 per passenger. Estimated payroll dropped slightly, from $62 million to $59 million, between 2009 and 2011, while employment was about the same.

Crew Spending

Approximately 22,500 crew members visited Alaska in 2011, spending an estimated $15.7 million in the state. Each crew member generally sails on 10 to 20 individual voyages, visiting multiple communities on each voyage. Crew members make a wide variety of purchases while in port: they visit restaurants and bars; they purchase communication-related items such as phone cards, Internet, and postage; and they visit retail outlets such as Fred Meyers, Costco, and Wal-Mart. Estimated spending by crew members in 2011 was based

on previous surveys of crew members conducted by McDowell Group, modified to account for changes in crew member volume by port and inflation. Spending estimates were consistent with figures provided by cruise lines.

The total spending estimate of $15.7 million is down from the 2009 figure of $16.4 million due to fewer cruise ships, and thus fewer crew members (from 25,000 to 22,500).

Visitor Spending on Air and Ferry Travel

Air Travel

Spending by visitors on plane tickets to enter and exit Alaska is estimated at $299 million for the May 2011 through April 2012 period. This figure refers not to total ticket purchases, but to the proportion of ticket purchases assumed to impact Alaska.

The AVSP survey does not collect spending on airplane tickets to enter and exit the state. Because some of that spending accrues to Alaska, a rough estimate is necessary to complete the picture of visitor spending in the state. Visitor spending on air travel impacts the state's economy in the form of landing fees, fuel purchases, airline employee wages, and other purchases in support of airline operations.

To estimate visitor spending on air travel, the estimated number of air visitors was multiplied by average Seattle-Alaska round-trip fares. One-half of the total ticket spending was assumed to stay in-state. Spending was distributed by region based on exiting air traffic volume. This methodology is inexact: passengers fly to and from various destinations with various pricing, and many passengers fly to or from points other than Seattle. In the absence of more specific data, this provides a reasonable and conservative estimate of impacts from visitor spending on airfare in and out of the state.

The total estimate of $299 million represents an increase from the 2008-09 estimate of $271 million. While the number of total visitors to Alaska was roughly the same between the two periods, the number of air visitors increased (while cruise visitors decreased), which translated to more spending on air tickets.

Ferry Travel

Visitors to Alaska spent a total of $13 million on ferry tickets to enter and exit the state between May 2011 and April 2012, according to the Alaska Marine Highway System. Similar to airplane tickets, spending on ferry tickets to enter and exit Alaska is not measured in the AVSP survey. For purposes of the economic impact analysis, all ferry spending is attributed to Southeast because all ferries entering and exiting Alaska sail between Southeast ports and Bellingham or Prince Rupert (though visitors sailing to Southcentral and Southwest ports clearly have economic benefit to those regions).

The figure of $13 million differs from the $18 million shown in the final chapter of this report (showing State of Alaska revenues) because it refers only to tickets to enter and exit the state; $18 million includes all revenues from out-of-state visitors to the Alaska Marine Highway System.

The 2008-09 estimate of ferry spending was $11 million, lower than the 2011-12 estimate of $13 million. Exact spending data was not available for the 2008-09 study; that estimate was based on AVSP survey data, so may not be directly comparable to the 2011-12 figure.

Table 2. Visitor Spending on Air and Ferry Travel to Enter/Exit Alaska, 2011-12

	Air Travel	Ferry Travel
Southcentral	$224 million	n/a
Southeast	$30 million	$13 million
Interior	$44 million	n/a
Total	**$299 million**	**$13 million**

Note: Rows do not add to total due to rounding.

Total Visitor Industry Spending

The table below shows full year (May 2011 through April 2012) visitor industry spending. Combined spending by visitors, cruise lines, and crew members, along with spending on air and ferry tickets to enter/exit Alaska, totaled $2.29 billion.

Table 3. Alaska Visitor Industry Spending by Category, 2011-12

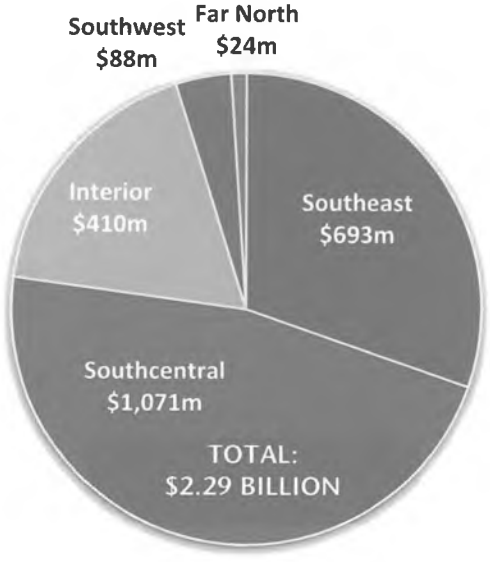
	Spending
Visitor spending	$1,692 million
Cruise line spending/payroll	$267 million
Crew member spending	$16 million
Air tickets	$299 million
Ferry tickets	$13 million
Total spending	**$2.29 billion**

Visitor Industry Spending by Region

The chart at right shows how visitor industry spending is distributed by region. Nearly half of 2011-12 visitor industry spending (47 percent) occurred in the Southcentral region. Southeast accounted for 30 percent of all spending, Interior for 18 percent, Southeast for 4 percent, and the Far North for 1 percent.

Note that the total spending figures for Southwest and Far North are the same as those reported for visitor spending in Chart 5. This is due to the fact that virtually no other visitor *industry* spending (cruise line spending, crew spending, spending on air/ferry tickets) is attributable to these more remote areas.

Chart 8. Alaska Visitor Industry Spending 2011-12, By Region



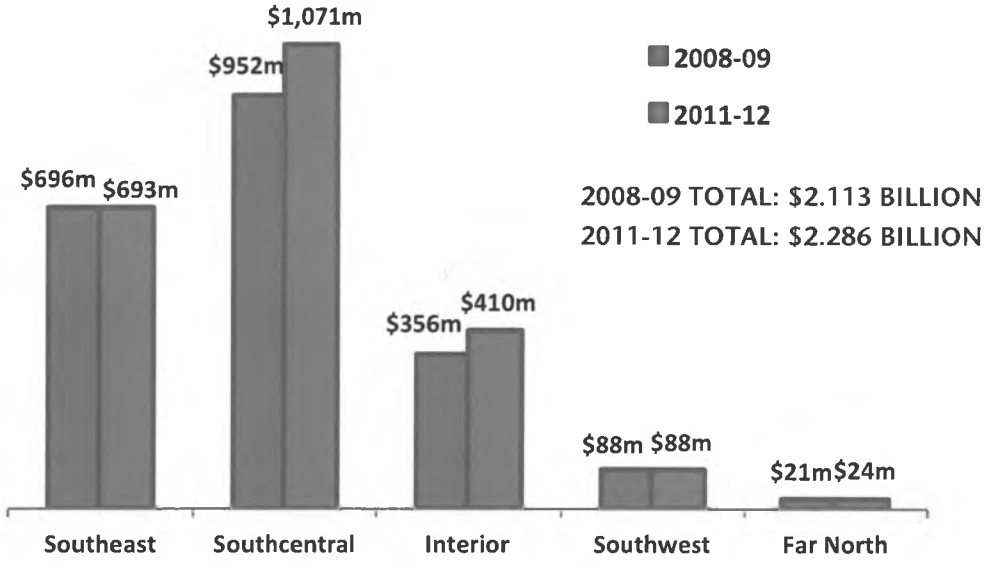
Visitor Industry Spending Trends

Visitor industry spending increased from $2.113 billion in 2008-09 to $2.286 billion in 2011-12, an 8 percent increase. Visitor industry spending increased at a slightly lower rate than visitor spending (which grew by 13 percent) due to decreased cruise line spending, associated with fewer passengers and a lowered rate in the statewide Commercial Passenger Vessel Tax.

The increase of 8 percent between 2008-09 and 2011-12 occurred for the same reasons discussed in the previous section: an increase of air visitors (and simultaneous decrease in cruise visitors) translated into higher per-visitor spending. The improved economy also contributed to higher per-visitor spending.

The increase was not evenly distributed across regions, with Southcentral (+13 percent) and Interior (+15 percent) accounting for the bulk of the growth. Spending in Southeast and Southwest was flat, while spending in Far North increased slightly.

Chart 9. Alaska Visitor Industry Spending by Region, 2011-12



Economic Impact Analysis

Spending in Alaska by visitors and by the businesses that serve those visitors creates jobs, income, and secondary spending throughout the Alaska economy. Visitor spending creates jobs and payroll with tour companies, hotels and lodges, retail establishments, transportation providers, and a range of other business. Visitor industry businesses and their employees in turn re-spend a portion of that money with other Alaska businesses (some is spent outside Alaska).

This chapter describes the regional and statewide employment and labor income effects of visitor industry-related spending. The analysis includes direct employment and labor income, as well as indirect and induced employment and labor income (the "multiplier effects").

Employment, Labor Income, and Spending Impacts

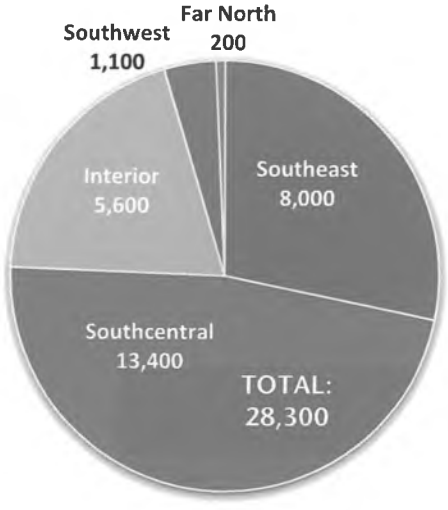
The visitor industry's direct economic impacts include the jobs and income created by:

- Non-resident visitor spending on all goods and services purchased while in Alaska.
- Half of visitor spending on air travel to Alaska (based on fares for travel from Seattle to Alaska destinations) and all visitor spending on Alaska Marine Highway System tickets. None of the expenditures made by cruise passengers on their cruise package is included, though some of that money flows through the state in the form of cruise line purchases of goods and services.
- Spending in Alaska by cruise lines in support of their operations, including payroll for their shoreside employees in Alaska and all taxes and fees paid to state and local governments.
- Spending by cruise ship crew while in Alaska.

Direct Employment and Labor Income

As described in the previous chapter, direct visitor industry spending totaled approximately $2.3 billion in the 12-month study period. This spending directly generated 28,300 full- and part-time jobs in Alaska, and $860 million in labor income, based on McDowell Group's economic impact modeling. Approximately half (47 percent) of direct visitor industry employment occurred in the Southcentral region, over one-quarter (28 percent) in Southeast, 20 percent in the Interior, 4 percent in Southwest, and 1 percent in Far North (see Chart 10).

Chart 10. Direct Visitor Industry Employment in Alaska, 2011-12



Total Employment, Labor Income, and Spending

Direct employment and labor income estimates do not include multiplier effects, i.e., those jobs and income created in Alaska as the visitor dollar is re-spent by visitor industry businesses and their employees. This secondary spending is estimated to total approximately $1.4 billion during the 2011-12 study period. Adding that secondary spending to the initial direct spending of $2.3 billion indicates total direct, indirect and induced spending of approximately $3.7 billion (see Table 4).

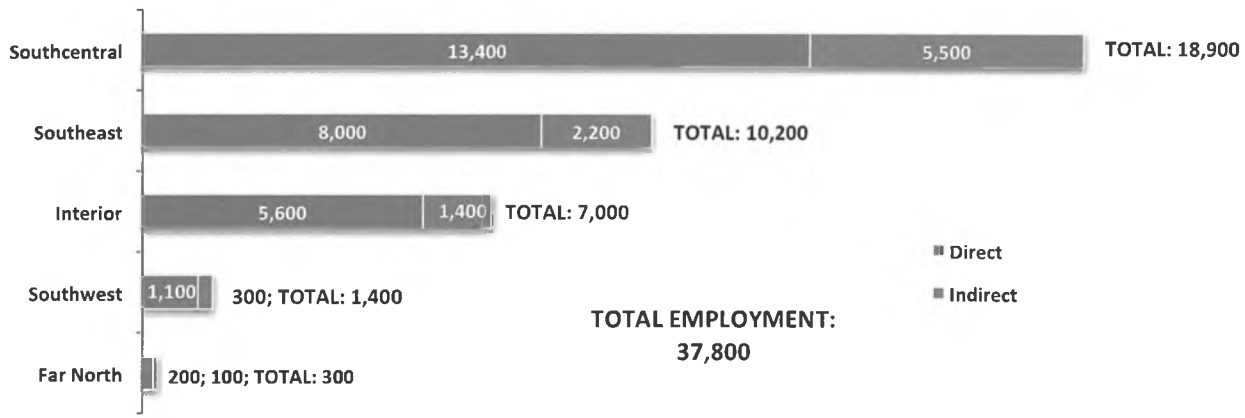
Statewide employment and income effects of $1.4 billion in secondary spending are estimated at 9,500 jobs and $383 million in labor income. Therefore, including all direct, indirect and induced effects, Alaska's visitor industry accounted for a total of 37,800 jobs during the 2011-12 study period, and over $1.24 billion in labor income. This estimate is a tally of the total number of full- and part-time jobs linked to non-resident visitor travel to Alaska. It includes annual average wage and salary employment, and total proprietors' employment (the total number of sole proprietorships or partnerships active at any time during the year).

The regional distribution of total visitor industry-related employment, labor income, and spending is summarized in the following table and graphs.

Table 4. Total Visitor Industry Employment, Labor Income, and Spending in Alaska, 2011-12 (including direct, indirect, and induced effects)

	Employment	Labor Income	Spending
Southcentral	18,900	$580 million	$1,966 million
Southeast	10,200	370 million	1,003 million
Interior	7,000	240 million	605 million
Southwest	1,400	42 million	116 million
Far North	300	11 million	29 million
Total	**37,800**	**$1.24 billion**	**$3.72 billion**

Chart 11. Direct, Indirect, and Total Visitor Industry Employment in Alaska, by Region 2011-12



Note: The figures for Far North show 200 direct jobs and 100 indirect jobs.

Chart 12. Direct, Indirect, and Total Visitor Industry Labor Income in Alaska, by Region 2011-12



Note: The figures for Far North show $9 million in direct labor income and $2 million in indirect labor income.

Though non-resident travel to Alaska occurs year-round, the visitor industry is strongly seasonal, with the vast majority of visitation occurring between May and September. Because of the seasonal nature of the industry, estimates of annual average employment understate the total number of people directly employed in the industry during the peak of the visitor season. For example, in the accommodations sector, wage and salary employment averaged about 7,800 jobs in 2011. Peak employment that year, in July, totaled 11,000 jobs. Alaska's "scenic & sightseeing transportation" sector is even more seasonal, with annual average employment of about 1,500 and peak employment of about 3,000, according to Alaska Department of Labor and Workforce Development data. While this study measured 37,800 full- and part-time jobs related to Alaska's visitor industry, because of the seasonal nature of the industry, the total number of workers whose jobs are directly or indirectly connected to the industry was likely around 45,000 in 2011-12.

Importance in Regional and Statewide Economies

Statewide, visitor industry-related employment of 37,800 accounted for 8 percent of all employment. Total statewide visitor industry-related labor income of $1.24 billion represented 5 percent of all labor income in Alaska. In 2011, the Alaska economy included 454,000 jobs and $27 billion in labor income, according to U.S. Bureau of Economic Analysis data.

In terms of relative contribution to the regional economy, visitor industry employment is most important in Southeast Alaska. Visitor industry-related employment of approximately 10,200 represented 21 percent of the region's 49,000 full- and part-time jobs. Total visitor industry-related labor income of $370 million was 15 percent of total Southeast region labor income of approximately $2.4 billion.[1]

Southcentral visitor-related employment of 18,900 represented approximately 7 percent of total employment in the region (about 274,000 full- and part-time jobs) and 4 percent of total labor income (approximately $16.8 billion).

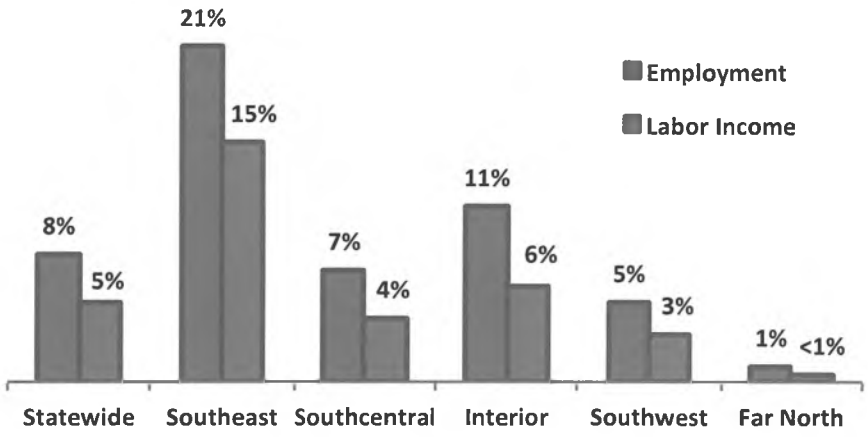
[1] Based on U.S. Bureau of Economic Analysis employment and labor income data for the Southeast region in 2011.

[2] "Adjusted gross income" refers to gross income, minus prizes awarded and federal and municipal taxes paid on the gaming income.

In the Interior region the visitor industry accounted for about 11 percent of employment (7,000 out of a regional total of 65,000 jobs) and 6 percent of labor income ($240 million out of a regional total of $4.0 billion).

The visitor industry accounted for 5 percent of employment in Southwest, and 3 percent of payroll. The percentages are lowest for the Far North at 1 and less than 1 percent, respectively.

Chart 13. Visitor Industry-Related Employment as Percent of Total, 2011-12



Employment and Labor Income by Sector

Jobs created as a direct result of visitor spending are concentrated in five sectors of Alaska's economy. In the accommodations sector, visitor spending directly accounted for 4,800 jobs in 2011-12. Direct spending accounted for 3,700 jobs in firms providing tours and other visitor activity services. Approximately 4,000 retail jobs were created by visitor spending. Visitor spending also directly generated 5,200 jobs in restaurants/bars and 3,200 jobs with transportation providers. Another 2,700 jobs in a variety of other sectors of the Alaska economy are a direct result of visitor spending.

Spending by cruise lines is also broadly distributed throughout the Alaska economy, creating jobs in the same sectors as those affected by visitor spending, plus jobs in professional and business services, wholesale businesses, and construction, among others, and in the government sector as a result of tax payments to state and local governments.

Indirect and induced jobs linked with the visitor industry are the most broadly distributed throughout the Alaska economy and includes all of the sectors that provide goods and services to Alaska businesses and households – virtually the entire service and support sector.

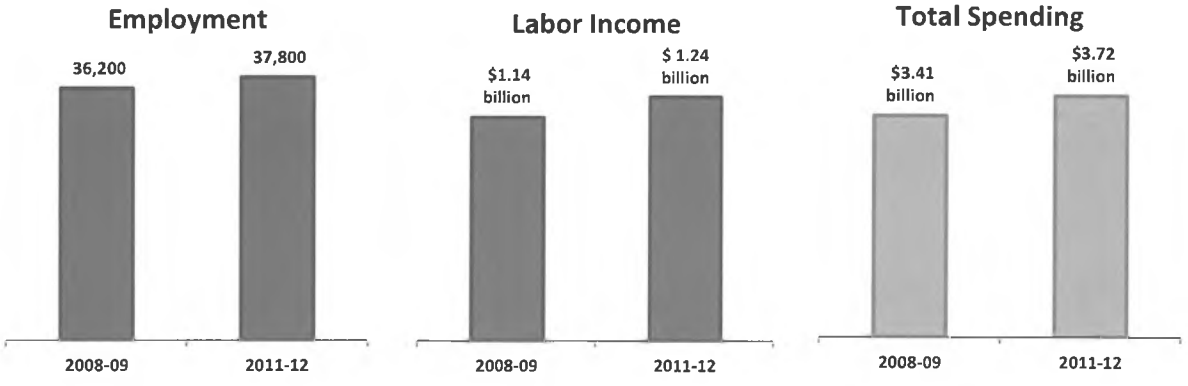
Table 5. Visitor Industry Employment and Labor Income, with Sector Detail, 2011-12

	Employment	Labor Income
Direct jobs from visitor spending	**23,600**	**$702 million**
Accommodations	4,800	$122 million
Tours & Activities	3,700	157 million
Retail	4,000	95 million
Food/Drink Services	5,200	115 million
Transportation	3,200	137 million
Other	2,700	76 million
All other direct jobs	**4,700**	**$158 million**
All indirect and induced jobs	**9,500**	**$383 million**
Total visitor industry-related employment and labor income	**37,800**	**$1.24 billion**

Trends in Total Impacts

The economic impact of the visitor industry in Alaska has increased since the date of McDowell Group's previous study, which examined the 2008-09 period. Statewide, visitor industry employment increased by approximately 4 percent, an increase of about 1,600 jobs. Labor income and total spending both increased 9 percent (approximately $100 million and $310 million, respectively, in nominal dollars). After adjusting labor income and spending totals to account for the effects of inflation, the real-dollar increase between the 2008-09 and 2011-12 period is approximately 4 percent.

Chart 14. Visitor Industry Employment, Labor Income, and Total Spending, 2008-09 and 2011-12



Growth in Alaska's visitor industry was not uniform throughout Alaska. Visitor-related employment in Southeast actually declined slightly (by about 4 percent), losing approximately 400 jobs. Southeast Alaska is particularly dependent on cruise traffic, which in 2011 remained well below summer of 2009. Among other regions, Southcentral added 1,300 visitor industry jobs, a 7 percent increase. Interior gained 800 jobs, a 13 percent increase. Visitor industry-related employment in the Southwest declined by about 100 jobs while the best available data suggests that Far North employment related to the visitor industry was flat between the 2008-09 and 2011-12 periods.

Chart 15. Visitor Industry Employment, By Region, 2008-09 and 2011-12

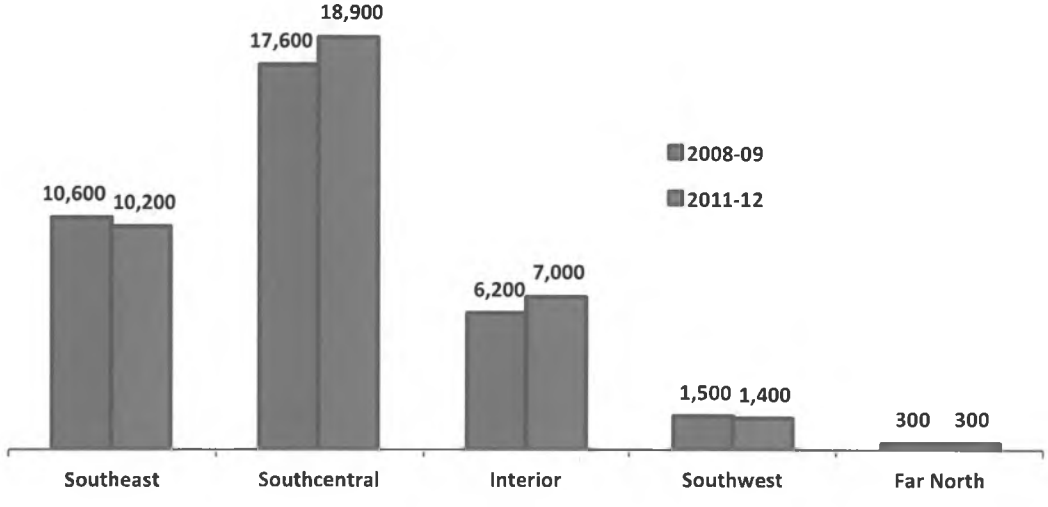


Table 6. Total Visitor Industry Labor Income, and Spending, By Region, 2008-09 and 2011-12 (including direct, indirect, and induced effects)

	2008-09 Labor Income	2008-09 Spending	2011-12 Labor Income	2011-12 Spending
Southcentral	$514 million	$1,751 million	$580 million	$1,966 million
Interior	205 million	519 million	240 million	605 million
Southeast	373 million	1,004 million	370 million	1,003 million
Southwest	41 million	115 million	42 million	116 million
Far North	10 million	25 million	11 million	29 million
Total	**$1.14 billion**	**$3.41 billion**	**$1.24 billion**	**$3.72 billion**

Revenues to Municipal and State Governments

The visitor industry generates significant revenues for state and local governments in Alaska. User fees, sales taxes, lodging taxes, property taxes, income taxes and other payments all flow to state and local governments in Alaska directly or indirectly from the visitor industry. This chapter details, to the extent possible, state and local government revenues that can be attributed to out-of-state visitors.

Summary

Visitor-related tax revenues to municipalities in 2011-12 totaled $71.1 million in sales and lodging tax revenues and cruise line payments. Sales tax revenues are estimated at $29.2 million, and lodging tax revenues are estimated at $26.7 million. In addition, cruise lines paid $15.2 million in dockage, moorage, and municipal passenger fees in 2011.

Visitor-related revenues to state government during the 2011-12 study period included $107.8 million in cruise line fees, fishing/hunting licenses, vehicle rental taxes, corporate income taxes, and revenues to the Alaska Marine Highway System and the Alaska Railroad Corporation. Cruise lines alone paid $42 million in commercial passenger vessel fees, gambling taxes, Ocean Ranger Program fees, and Environmental Compliance Program fees. Additional revenues to the State of Alaska from the visitor industry not included in this total are airport fees, State Parks user fees, and State Museum revenues, among others.

Table 7. Selected Revenues to Municipal and State Governments 2008-09 and 2011-12

	2008-09	2011-12
Municipal Revenues	**$69.8 million**	**$71.1 million**
Sales tax revenues	$28.9 million	$29.2 million
Lodging tax revenues	$23.5 million	$26.7 million
Dockage/moorage revenues	$17.4 million	$15.2 million
State of Alaska Revenues	**$136.6 million**	**$107.8 million**
Commercial Passenger Vessel Tax	$46.4 million	$32.0 million
Passenger Gambling Tax	$6.3 million	$5.8 million
Ocean Ranger Program	$4.0 million	$3.6 million
Commercial Passenger Vessel Environmental Compliance Program	$1.0 million	$0.8 million
Fish & Game licenses/tags	$17.1 million	$17.8 million
Alaska Marine Highway System revenues	$15.4 million[1]	$18.4 million
Alaska Railroad Corporation revenues	$19.4 million	$20.2 million
Vehicle rental tax	$5.6 million	$5.7 million
Corporate income tax	$21.4 million	$3.5 million
Total Selected Revenues	**$206.4 million[2]**	**$178.9 million**

[1] Alaska Marine Highway System revised their previous estimate of 2009 out-of-state passenger revenues from $17.6 million to $15.4 million.
[2] The figure of $206.4 million is different from the total in the 2009 report due to revised figures from the Alaska Marine Highway System.

Trends

Municipal revenues increased slightly from $69.8 million in 2008-09 to $71.1 million in 2011-12. Sales tax revenues were about flat. Lodging tax revenues increased from $23.5 to $27.0 million, reflecting the higher number of air passengers between the two time periods. Some of the increase may also be attributable to higher room rates. Dockage/moorage revenues were down from $17.4 million to $15.2 million, attributable to the decrease in cruise ship traffic.

Revenues to the State of Alaska decreased significantly between the two study periods, from $136.6 million to $107.8 million. The decrease is largely due to lower corporate income taxes and lower cruise line payments (resulting from fewer passengers as well as a decrease in the statewide Commercial Passenger Vessel Tax).

Further details on these revenues are provided below.

Municipal Tax Revenues

The visitor industry contributes to municipalities in a variety of ways, primarily in the form of sales tax revenues, lodging tax revenues, and cruise line payments for dockage and moorage. (Although property taxes are also paid by visitor industry businesses, it is not possible within the scope of this study to estimate those taxes.)

Sales Tax Revenues

Total sales tax revenues associated with visitor industry spending are estimated at $29.2 million for the May 2011 to April 2012 study period. Visitor-related sales tax revenues are particularly important in communities such as Juneau, Ketchikan, and Skagway, where visitor spending provides a significant portion of total (resident and non-resident) spending in each community.

Visitor-related sales tax revenues were higher in 2011-12 ($29.2 million) compared with 2008-09 ($28.9 million). Revenues in Southeast were about flat – although cruise visitor traffic dropped by 14 percent between the two time periods, the improved economy in 2011 led to higher per-passenger spending. Revenues in Southcentral stayed the same at $9.8 million. This is not necessarily reflective of visitor spending in Southcentral, as the most popular destination in the region (Anchorage) charges no sales tax. Revenues in all other regions combined increased slightly (from $0.8 million to $0.9 million). A number of visitor destinations outside of Southcentral and Southeast (such as Fairbanks and Denali) do not charge sales taxes.

Regional sales tax totals were calculated based on visitor industry spending and visitor volume at the community and regional level. Tax rates and total taxes collected by community were taken into account in the analysis (total calendar year 2011 taxes were assumed as a proxy for the study period of May 2011 through April 2012).

See table, next page

Table 8. Sales Tax Revenues from Out-of-State Visitors By Region, 2008-09 and 2011-12

Region	2008-09	2011-12
Southeast	$18.3 million	$18.5 million
Southcentral	$9.8 million	$9.8 million
Other regions combined	$0.8 million	$0.9 million
Total	**$28.9 million**	**$29.2 million**

Sources: McDowell Group estimates based on sales tax rates and revenues from Alaska Taxable 2009 and 2011 (DCCED); and AVSP visitor survey and volume data.

Lodging Tax Revenues

Out-of-state visitors paid an estimated $26.7 million in lodging tax revenues over the 12-month study period. Southcentral received two-thirds of the revenues ($18.4 million); Anchorage has the highest lodging tax rate in the state (12 percent) and is the most-visited community in the state in terms of overnight stays. The Interior received $6.0 million in lodging tax revenues, largely attributable to Fairbanks and Denali. Southeast received $2.0 million; Southwest received $0.5 million; and Far North received $0.1 million. Readers are reminded that these tax figures represent only a portion of total lodging taxes collected; Alaska residents account for significant lodging tax revenues as well.

Estimated lodging tax revenues related to the visitor industry increased between the two study periods, from $23.5 million for 2008-09 to $26.7 million for 2011-12. While roughly the same number of out-of-state visitors came to Alaska during the period, cruise passengers (the majority of whom overnight onboard only) fell by 14 percent. Over the same period, air visitors increased by roughly the same amount, leading to increased lodging tax revenues for many locations.

Over 30 different communities with lodging taxes were considered in this analysis. Total calendar year 2011 taxes were assumed as a proxy for the study period of May 2011 through April 2012. Each community's tax revenues were assigned a different percentage to represent the proportion attributable to out-of-state visitors, based on rates calculated for the previous (2009) economic impact study, which were derived from a 2009 business survey and previous visitor research.

Table 9. Lodging Tax Revenues from Out-of-State Visitors By Region, 2008-09 and 2011-12

Region	2008-09	2011-12
Southcentral	$15.6 million	$18.4 million
Interior	$5.6 million	$5.8 million
Southeast	$1.7 million	$1.9 million
Southwest	$0.5 million	$0.5 million
Far North	$0.1 million	$0.1 million
Total	**$23.5 million**	**$26.7 million**

Sources: McDowell Group estimates based on lodging tax rates and revenues from Alaska Taxable 2009 and 2011 (DCCED); and AVSP visitor survey and volume data.

Cruise Ship Revenues

Some municipal governments in Alaska's cruise port communities receive revenues from cruise lines in the form of moorage and docking fees, primarily Juneau, Ketchikan, Sitka, and Haines. (The docks in Skagway, Whittier, and Icy Strait Point are privately owned. Seward's dock is owned by the Alaska Railroad Corporation.) Juneau has both private and public docks. Sitka has a deep-water dock, but it is privately owned. A majority of large cruise ships lighter in Sitka, for which the city charges fees.

Each community has its own system of charging cruise lines for using port facilities. Dock charges are generally assessed on a per foot/per day basis. Additional charges may include tonnage fees, passenger fees, lightering fees, and water supply fees, depending on the community.

Total revenues for 2011 were $15.2 million, most of it collected in Southeast. This figure is down slightly from 2009, when municipalities collected $17.4 million. The lower figure reflects fewer cruise passengers in 2011.

Table 10. Cruise Ship Dockage/Moorage Revenues to Municipalities, Summer 2011

Port	Revenues
Juneau	$7,507,000
Ketchikan	$7,561,000
Sitka	$65,000
Haines	$42,000
All other ports	$50,000
Total	**$15,225,000**

Sources: City and Borough of Juneau; City of Ketchikan; City and Borough of Sitka; City and Borough of Haines.
Note: Docks in Skagway, Whittier, and Icy Strait Point are privately owned. Seward's dock is owned by Alaska Railroad Corporation.

State of Alaska Revenues

Direct Payments from Cruise Lines

The State of Alaska receives several forms of direct payments from cruise lines: the Commercial Passenger Vessel Tax (Departments of Revenue and Environmental Conservation), the gambling tax (Department of Revenue), the Commercial Passenger Vessel Environmental Compliance Program (Department of Environmental Conservation) and state corporate income tax (Department of Revenue).

Commercial Passenger Vessel Tax

At the end of December 2006, a Commercial Passenger Vessel Tax (CPV) was established for passengers on large vessels that operate in Alaska waters. As of FY 2011, the tax was $34.50 per passenger per voyage (down from the original amount of $50 per passenger). According to the Alaska Department of Revenue, the department received $32.0 million in FY 2011 from this tax, down from $46.4 million in 2009. The decrease is attributable to the lower tax rate and fewer passengers.

The Department of Revenue deposits all the money into the Commercial Passenger Vessel Tax Account in the General Fund. For each voyage of a commercial passenger vessel providing overnight accommodations, the Commissioner of the Department of Revenue must identify the first seven ports of call and the number of passengers on board the vessel at each port of call. Subject to appropriation by the legislature, the commissioner distributes $5 per passenger of the tax revenue to each port of call.

CPV revenue for the Department of Environmental Conservation is estimated to be $3.6 million for FY 2011, down from $4.0 million in 2009. This revenue is used to operate the Ocean Ranger program, which requires U.S. Coast Guard licensed marine engineers on board vessels to act as independent observers monitoring State environmental and marine discharge requirements, and to ensure that passengers and crew are protected from improper sanitation, health, and safety practices.

The large passenger vessel gambling tax was also introduced in December 2006. This tax applies to the use of playing cards, dice, roulette wheels, and coin-operated instruments or machines designed for gaming or gambling activities aboard cruise ships operating in Alaska waters. The tax is 33 percent of the adjusted gross income from these gambling activities.[2] Gambling taxes are payable to the Department of Revenue and deposited into the CVP Tax Account. The Department of Revenue reports gambling tax revenues of $5.8 million in FY 2011, down from $6.3 million in 2009.

Commercial Passenger Vessel Environmental Compliance Program

The Commercial Passenger Vessel Environmental Compliance (CPVEC) Program was established in July of 2001. This program requires all large passenger vessels to register and comply with quality control regulations. The program is operated with fees collected from large and small passenger vessels ($1 per berth). In 2011, $843,000 was collected for the Commercial Passenger Vessel Environmental Compliance Program.

Corporate Income Tax

Alaska's corporate income tax rates are graduated from 1 percent to 9.4 percent in increments of $10,000 of taxable income. The 9.4 percent maximum rate applies to taxable income of $90,000 and over. Multistate corporations apportion income using the standard apportionment formula of property, payroll, and sales.

Tax payments by individual corporations are confidential; however, the Department of Revenue reports total corporate income taxes in the "tourism" category, including payments by cruise lines and other visitor industry businesses, of $3.5 million in FY 2011. This figure represents a significant decrease from the FY 2009 amount of $21.4 million. Because the study team does not have access to tax returns for individual visitor industry businesses, it is not possible to identify specific causes for the large decrease. However, it should be noted that corporate taxation is based on a company's nationwide revenue (not just Alaska earnings).

Vehicle Rental Tax

Alaska levies a 10 percent passenger vehicle tax as well as a 3 percent recreational vehicle tax. In FY 2011, the Department of Revenue collected a total of $8.3 million in vehicle tax revenues. Survey results indicate that approximately 70 percent of rental vehicle revenues are attributable to out-of-state visitors. Visitor-related tax

[2] "Adjusted gross income" refers to gross income, minus prizes awarded and federal and municipal taxes paid on the gaming income.

revenues from vehicle rental are therefore estimated at $5.7 million. This figure is up slightly from $5.6 million estimated for 2009.

Fishing License and Tag Revenues

Non-residents are required to purchase fishing, hunting, and trapping licenses as well as various species-specific tags. According to Alaska Department of Fish and Game (ADF&G) data, non-residents spent $17.8 million on licenses and tags in calendar year 2011. This figure is up slightly from 2009, when non-residents spent $17.1 million. For the purposes of this report, these figures are assumed to represent the study periods of May 2011 through April 2012, and October 2008 through September 2009.

Revenues to Alaska Marine Highway System and Alaska Railroad Corporation

While not in the category of fees or taxes, out-of-state visitors account for significant revenues to two transportation providers operated by the State of Alaska: the Alaska Marine Highway System (AMHS) and the Alaska Railroad Corporation.

AMHS reports that in calendar year 2011, out-of-state residents accounted for $20.2 million in revenues to AMHS. For purposes of this report, this figure is assumed to represent the study period of May 2011 through April 2012. (This figure is higher than the $13 million reported in the Visitor Spending section because it is *total* spending, rather than spending only on passage to and from Alaska.) The reported total of $18.4 million represents an increase from the 2009 total of $15.5 million. (The $15.4 million figure for 2009 is revised from the original estimate of $17.6 million, provided in the previous economic impact report.)

The Alaska Railroad Corporation reports total passenger-related revenues of $22.4 million in 2011. McDowell Group estimates that 90 percent of this revenue is related to out-of-state residents, resulting in an estimate of $20.2 million in visitor-associated revenue.

03/12/13 Overview: Alaska Water Transportation and Export

<TARGET><BILL></BILL><SUBJECT>03-12-13 Overview Alaska Water Transportation and Export</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
March 12, 2013

1. **Call to Order**

~Gavel~ Welcome to House Economic Development, Trade and Tourism Committee. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aide, Ginger Blaisdell.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
    - Several members may be coming and going due to other committee meetings underway.
- Today we are hearing from representatives from a few water production companies around the state:
    - Committee Aide Ginger Blaisdell will provide a few statements regarding water as an export industry and then show a short clip from a CNBC interview with Garry White, Sitka Econ Dev Association
    - Greg Wolf, World Trade Center Alaska will briefly talk about some of the water export initiatives he's been involved with
    - Terry Trapp, True Alaska Bottling, Sitka bulk water
    - Tony Cange, Aleut Real Estate, Adak bulk water
    - Lynn Allingham, Alaska Brands, Anchorage bottled water
    - Greg Wolf, on behalf of the owner of Alaska Glacier Products bottled water
    - Michael Walton, State DNR Water Permitting – for questions

- Each of the presenters will give a 5 minute overview of their business and then we will open up forum style for Q&A.

3. **Calendar Review**

- We do not have a meeting scheduled for Thursday this week.

Next week we will meet to discuss the value of an economic development plan with a guest speaker on Tuesday and Thursday we will hear from the Alaska Center for Unmanned Aircraft Systems Integration from the University of Alaska Fairbanks as they present the economics of unmanned aircraft systems (drones).

Do members have any closing comments?

- Thank you. We are ADJOURNED at _12:___ (time)." ~Gavel~

WATER EXPORT QUESTIONS

What are some of the greatest hurdles you have overcome to advance your business to its current functionality?

Once the water is transported out of Alaska, what infrastructure is required by the recipient to be able to accept the water? Have there been problems with completing the export due to the lack of infrastructure by the receiver? Does the State of Alaska need to do something to overcome this hurdle?

What export methodologies have you considered for bulk water:

- Spragg Bags
- Water membranes
- Tankers
- Other?

What are the most significant hurdles to consider for bottled water export?

- Recycling efforts for the plastic bottles
- Bottled water competition
- Shipping costs

Are there any state statutes or regulations that inhibit your ability to further develop international economic development? Or changes that would better encourage economic development in Alaska and the United States?

Representative.Shelley.Hughes@akleg.gov

Ginger Blaisdell

From: Apache <apache@wwwjnu02.legis.state.ak.us>
Sent: Monday, March 11, 2013 12:13 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: EDT Committee

Date of Teleconference: 3/12/2013

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: Capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

Greg Wolf, Exec Dir World Trade Center Alaska
Terry Trapp, True Alaska Bottling Co; Sitka – bulk water
Garry White, Sitka Economic Development Council (tentative) – bulk water
Tony Cange, Aleut Real Estate; Adak – bulk water
Lynn Allingham, Alaska Brands; Anchorage – bottled water
Michael Walton; State DNR Water Permitting – for questions

Ginger Blaisdell

From: Ginger Blaisdell
Sent: Tuesday, March 12, 2013 8:19 AM
To: Clifton Coghill; Deborah Tillinghast; Dirk Craft; Doanh Tran; Erick Cordero-Giorgana; Ginger Blaisdell; Jessie Knudsen; Konrad Jackson; Kristin Kranendonk; Linda Sylvester; Monica Southworth; Rep. Bob Herron; Rep. Craig Johnson; Rep. Geran Tarr; Rep. Harriet Drummond; Rep. Kurt Olson; Rep. Lance Pruitt; Rep. Lynn Gattis; Rep. Pete Higgins; Rep. Shelley Hughes; Rob Earl; Yasmine Habash
Subject: UPDATE today's Water Export EDTT Meeting
Attachments: Water Export National Geographic article.pdf

Update for today's water export meeting:

I will present a short clip from a CNBC interview with Garry White, Sitka Econ Dev Association
Greg Wolf, World Trade Center Alaska will briefly talk about some of the water export initiatives he's been involved with
Terry Trapp, True Alaska Bottling, Sitka bulk water
Tony Cange, Aleut Real Estate, Adak bulk water
Lynn Allingham, Alaska Brands, Anchorage bottled water
Greg Wolf, on behalf of the owner of Alaska Glacier Products bottled water
Michael Walton, State DNR Water Permitting – for questions

The attached handout is an article from National Geographic entitled "Alaska Town Eyes Shipping Water Abroad" June 25, 2010.

Each water producer will provide a 5 minute overview of their business and allow for questions from committee members.

Ginger Blaisdell

Office of Representative Shelley Hughes
Room 409 State Capitol
Juneau, AK 99811
907-465-5265

THE WATER INITIATIVE

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USAGE OF WATER

1) 2 billion people lack access to safe potable drinking water.

2) 31 countries face chronic drinking water shortages today.

3) By 2025, 48 countries will face potable water shortages affecting nearly 3 billion people.

4) Less than 1% of the world's fresh water (or about 0.007% of all water on earth) is readily accessible for direct human use.

5) Oceans store most of earth's water – approximately 97%.

6) Only 2.5% of earth's water is fresh water.

7) Over 61% of the world's fresh water is located in Antarctica

8) The overall amount of water on our planet has remained the same for two billion years.

9) The earth's total amount of water has a volume of about 344 million cubic miles.
- 315 million cubic miles is seawater.
- 9 million cubic miles is groundwater in aquifers.
- 7 million cubic miles is frozen in polar ice caps.
- 53,000 cubic miles of water pass through the planet's lakes and streams.
- 4,000 cubic miles of water is atmospheric moisture.
- 3,400 cubic miles of water are locked within the bodies of living things.

10) A quarter of the world's population is without safe drinking water.

11) Most of the world's people must walk at least 3 hours to fetch water.

12) The single largest freshwater resource suitable for drinking is Lake Baikal in Siberia, which has a very low salt and calcium content and is very clean.

13) The World Water Assessment Program indicates that, in the next 20 years, the quantity of water available to everyone is predicted to decrease by 30%.

14) Only about 3% of the water on our planet is freshwater. Groundwater accounts for about 14% of that 3%, while ice sheets and glaciers account for about 85%. The rest is in lakes, streams, reservoirs, the air and soil, and rivers. In the United States, groundwater supplies about 50% of our drinking water, 40% of the water used for irrigation, and about 25% of the water used by various industries.

15) The Great Lakes have 80 percent of the United States fresh water supply.

16) By 2025 2.4 billion will be living without fresh water

17) About 1/3 of the water that falls to Earth runs off the surface in streams rather then soaking into the Earths soil. A drop of water finding its way to a stream will spend two weeks there on average before rejoining the ocean..

18) There may be as much water locked in the Earths minerals as there is in the Earths oceans.

"Anyone who can solve the problems of water will be worthy of two Nobel prizes - one for peace and one for science." - John F.Kennedy

"When the well is dry, we know the worth of water." - Benjamin Franklin

"Water is the one substance from which the earth can conceal nothing, it sucks out its innermost secrets and brings them to our very lips." - Jean Giraudoux

"We used to think that energy and water would be the critical issues for the next century. No we think water will be the critical issue." - Mostafa Tolba, former head of the U.N. Environment Program

19) Brazil has the worlds largest fresh water supply. The US has the worlds 4th largest fresh water supply.

20) Where the worlds Fresh water supply is used:
8%- Domestic and municipal
22%- Industrial
70%- Agriculture

21) The leaves in one acre of broad leafed forest may release as much as 8,000 gallons of water a day into the air as water vapor through the tiny pours in their leaves.

22) The Aral Sea has lost 75% of its volume and more than half its surface area between 1973 and 2004 as a result of cotton farmers.

23) In 27 developing countries, most of them in Asia and Africa, clean relatively convenient water is unavailable to over 900 million people.

24) The average American individual uses 100 to 176 gallons of water at home each day – the average African family uses about 5 gallons of water each day.

25) 2 in 3 people lacking access to clean water live on $2 a day.

26) Poor people living in the slums often pay 5-10 times more per liter of water than wealthy people living in the same city.

27) The only way to ensure pure, contaminant-free drinking water is through the use of a point-of-use filtration system.

28) It takes 25 gallons of groundwater to irrigate each 2 square foot area of wheat field.

29) It takes 1,851 gallons of water to refine one barrel of crude oil.

30) It takes 25 gallons of water to make one pound of plastic.

31) More than 60% of the worlds rivers have been dammed or diverted.

32) Today, Dams generate 20% of the worlds electric power and provide needed water for irrigation to cities.

33) It takes 700 gallons of water to make a Cheeseburger.

The Christian Science Monitor

About these ads

Forget OPEC. The next cartel may export drinking water.

Already, companies are locking up resources and selling abroad.

His Vancouver, British Columbia, company says it has acquired exclusive rights to 4.8 billion gallons of glacier water a year for 30 years under a license granted by Alaska and the city of Sitka. So far, Global has been selling premium bottled "glacier-fed water" - but is eyeing bulk shipments to Asia and the Middle East. In September, the company announced it had been approved to build a loading pier in Sitka, capable of handling 50,000-ton ships.

Adak -
DNR permitting process hurtles.

~~Gary White~~ - Sitka -
Gary White

Bottled water presents another challenge. Business is booming: Sales have soared to $50 billion worldwide in the past decade and are still growing about 10 percent a year, estimates Peter Gleick, coauthor of "The World's Water," a biennial report released last month on the state of the world's fresh water. Just 10 nations guzzled nearly 29 billion gallons of bottled water in 2003, according to the Beverage Marketing Corp.

The irony, as Dr. Gleick sees it, is that much of the growth in bottled water sales is occurring in developing nations. China's consumption, for example, nearly quadrupled between 1997 and 2002 - to 2.6 billion gallons, according to Beverage Marketing estimates. For that same amount of money, clean tap water could be provided for all those who don't have it, he says.

Yet, there are signs that some developing nations may opt not to spend the millions of dollars required to build an infrastructure for fresh tap water, Gleick says.

Instead, they may rely on the private sector, which is bringing clean water more quickly to needy areas than public systems are - albeit at a much higher price. Lack of access to clean drinking water threatens the lives of some 35 million people in the coming decade, he adds.

"I'm less worried about a cartel situation, as we have with oil, than about local conflicts over private manipulation of resources," Gleick says. He points to disputes over groundwater, particularly in the United States, between bottled-water companies and local residents.

The bottled-water industry counters that it's being targeted unfairly. "Dr. Gleick's focus ... singles out the bottled-water industry from among the thousands of industrial water users for scrutiny," said Stephen Kay, vice president of the International Bottled Water Association, in a statement last month. "That will do nothing to protect and preserve renewable groundwater resources."

It's unlikely the controversy will go away soon. "Where water is in short supply, people are desperate and will do anything for it," says Barlow of the Council of Canadians. "So we see an evolving merging of different interests - bottled water companies, private municipal service providers, shipping companies, and pipeline companies will start moving water in bulk."

For these reasons Barlow's group, along with Public Citizen, the Washington-based advocacy group, and other environmental and nongovernmental organizations, are

Alaska Town Eyes Shipping Water Abroad



Private companies are looking to sell water from the Blue Lake reservoir to thirsty customers in the Middle East and other water-stressed places around the world.

Photograph by Hannah Keller

by Eliza Barclay

for National Geographic News

Published June 25, 2010

This story is part of a special series that explores the global water crisis. For more, visit National Geographic's Freshwater website.

Can Alaska, with its deep, wide lakes, and sparse population, quench the world's thirst? An opportunistic American company thinks it can, despite many logistical hurdles and questions about transporting freshwater in bulk across the seas.

The town of Sitka in Southeastern Alaska features a distinctive cobalt jewel: the Blue Lake reservoir, a lake fed by abundant rain, snow and glacial runoff, connected by pipeline to the local

deepwater port. For nearly a decade, the town has tried to turn this ample, pure freshwater resource into a commodity for thirsty buyers in the lower 48 states—and even overseas. It has offered contracts to sell up to 9.5 billion gallons a year, or about 8 percent of the reservoir's volume, to interested buyers at a rate of one cent per gallon.

Several companies have tried and failed to make the venture profitable. But Terry Trapp, a Colorado businessman who is partnering with San Antonio-based S2C Global Systems, believes he may have a willing market in the Middle East.

"There are water shortages and people who need water all over the world," said Trapp. "But the people in the most dire straits are in the Middle East."

Trapp's True Alaska Bottling Company already has a water bottling plant in Sitka and now the partnership, Alaska Resource Management, is trying to be the first company in the world to sell bulk water. It currently has an annual contract for 9.1 million gallons per day—about a third of Sitka's available water—and is developing hubs to receive ocean-going water ships and distribute water to the Persian Gulf States. S2C Global Systems says the first hub will be an Indian port on the Arabian Sea.

The cost and logistics of shipping, receiving and distributing bulk water are formidable. Trapp says he is looking to ship water in tankers across the oceans, but is also considering floating it in polyethylene bags.

"Anytime you do something that's never been done before, you're going to have a lot of challenges," said Trapp.

Though no one has attempted to ship this quantity of bulk water before, the possibility of selling off the freshwater of water-rich northern countries has tantalized many. The Canadian government has been embroiled in debates over bulk water projects for years, and the conservative Fraser Institute of Vancouver released a report this month highlighting the benefits of water exports.

But the Council of Canadians, a civic organization promoting progressive policies, has vilified bulk water exports and generated a powerful public awareness campaign around them.

Meera Karunananthan, a national water campaigner for the council, says bulk water projects like the one in Sitka will not solve the water crises in India or countries in the Middle East that may be targeted for bulk sales.

"There are more sustainable solutions like rainwater harvesting," Karunananthan said. "This [Sitka] project will not serve the environment in any way."

But Garry White, executive director of the Sitka Economic Development Association, argues that removing 8 percent of the watershed flow every year will not harm the environment because much of it is already being lost to the ocean.

"This water is falling into the ocean less than a mile from the lake," said White. "The community sees an opportunity to take this resource that flows out into the ocean and make it a driver for us."

Plus, water is a renewable resource.

"Unlike oil, water is replenished," said Trapp.

But even if Sitka's water is plentiful and the climate continues to feed the reservoir at a steady rate, others doubt that bulk water will ever be a viable business, because of the challenges created bytransporting it long distances.

"If that water sits in the hold of a tanker for weeks traveling across the ocean, when it arrives it's not spring water anymore; you're going to have to clean it up," said James McNiven, a professor of public administration at Dalhousie University in Nova Scotia who has studied the potential of Canada's bulk water industry. "As a business proposition this gets to be very expensive and chances are the economics don't work."

circleofblue.org http://www.circleofblue.org/waternews/2010/world/north-america/bulk-water-companies-face-challenges-before-shipments-start/

Original text

S2C Global and its partner are trying to pioneer bulk water shipments, a venture in which many companies have failed.



Photo via CC by Harvery McCool.

By Brett Walton
Circle of Blue

UPDATE FROM JULY 11,2010: S2C Global Systems–one of two companies involved in exporting bulk water in tankers from Sitka, Alaska to India– is facing significant hurdles before exports commence.

In its press release, S2C claimed that water distribution from the hub would begin within six to eight months. However, a ship-to-shore component still needs to be constructed at the Sawmill Cove port in Sitka. Acquiring building permits from the city, state and U.S. Army Corps of Engineers could take as much as six months, said Garry White, director of the Sitka Economic Development Association. White said floating a pipe from the shore to a tanker could start relatively soon, but a permanent structure would take much longer.

S2C's president Rod Bartlett has declined to provide any information beyond what is given in the company's press releases.

Despite S2C's announcement, there are concerns about whether the company and its partner, True Alaska Bottling, have the resources to complete their export plans.

S2C is a small company with five employees, and its stock is considered a penny stock and traded with restrictions on what are known as 'over the counter' boards. Penny stocks are loosely defined as companies with small market capitalizations that sell at less than $5 per share on lesser-known markets. These companies are considered riskier investments and have trading restrictions placed on them by the Securities and Exchange Commission.

The company began in 2001 as Sun Vacation Club, but after no activity it changed its name to United Athletes one year later. In 2005 after a reverse merger with S2C Global Systems, a private Canadian business, the new company was incorporated in Nevada and British Columbia, and began to focus on technologies to reduce the cost as well as the carbon footprint of water distribution. S2C owns intellectual property rights to the AquaDuct water vending system, which reduces labor costs in water distribution, but it is unclear if it will play a role in the water hub.

In 2008 the company launched its bulk water division by forming Alaska Resource Management in partnership with True Alaska Bottling, a private company. TAB used to bottle water from Sitka's Blue Lake under the True Alaska label until 2008, when it couldn't make lease and utility payments. As a result, the company transferred its assets to its financer, Oregon-based Cove Partners LLC, which has resumed bottling, said plant owner Greg Miller.

TAB has kept its bulk water export contract with Sitka, but it must move 50 million gallons by the end of the year or face a possible contract termination. Meanwhile the Sitka assembly has extended this deadline for TAB two times.

According to its first quarter 2010 SEC filings, S2C estimates that building the water hub will cost $45 million. The company is in discussions with lenders about how to raise the money.

So far S2C has financed most of its business through equity and debt securities and sale of future earnings. According to its 2009 annual filings with the SEC, S2C is operating at a loss of $5.2 million dollars since it became incorporated in 2004. The company earned just $1,848 in revenue during the same time period and had no revenue at all in the 12 months to December 31, 2009. No sales were recorded by Alaska Resource Management either, which lost $100,000 in 2009.

S2C's executives come from a range of business backgrounds. Its president Rod Bartlett has spent more than 30 years in business and real estate development with stints as chief executive of Resorts Management Unlimited and Quest Oil, while the company's chief financial officer Joseph F. Dickson has been the chief operating officer for Innovation Fuels and Integrated Defense Systems as well as the director of entrepreneurship at Syracuse University. S2C vice president for business development Shahhid Vohra began his career in the shipping industry in 1975 with Sai Shipping with a head office in Mumbai and developed his own yacht building and sales company Platinum Super Yachts.

All three men are also members of the management team for TransAct Energy, a company focusing on geothermal power projects in the Middle East, South Asia, Brazil and Canada.



Brett Walton is a Seattle-based reporter for Circle of Blue. Reach Walton at brett@circleofblue.org. Read

more about bulk water exports in Alaska and globally on Circle of Blue.

TAGS: Alaska, bulkwater-features, Business/Finance, Cove Partners LLC, Garry White, India, Joseph F. Dickson, Rod Bartlett, S2C Global Systems Inc., Securities and Exchange Commission, Shahhid Vohra, sitka, Sitka Economic Development Association, Sun Vacation Club, True Alaska Bottling, United States

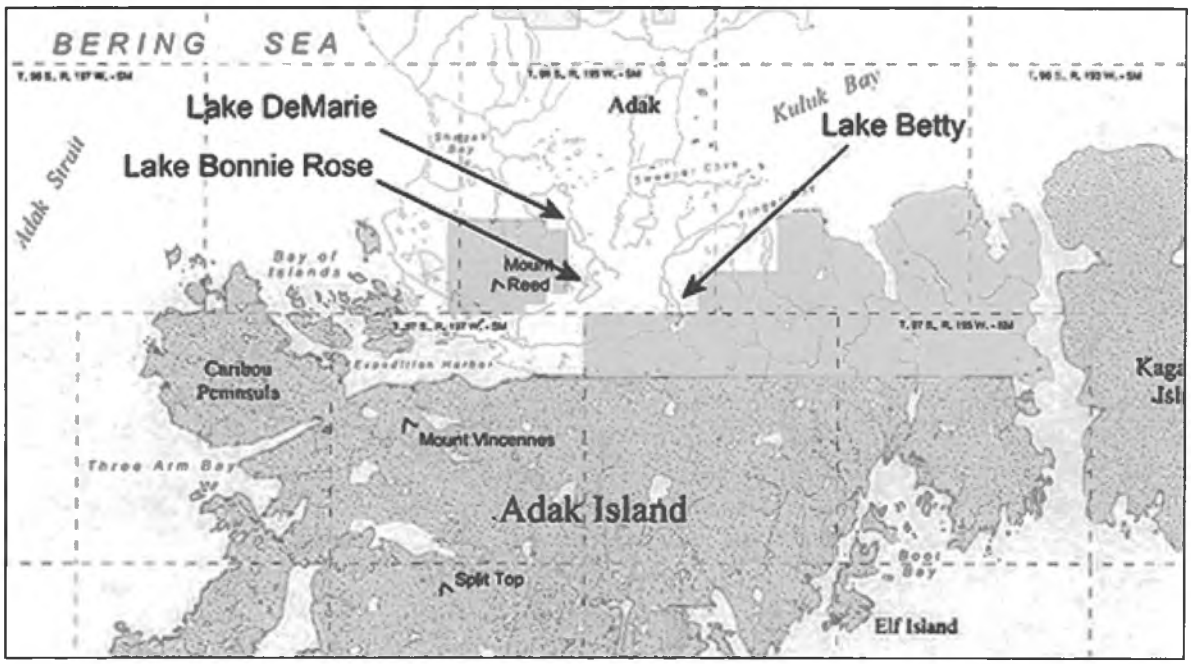
This entry was posted on Thursday, July 22nd, 2010 at 8:50 pm and is filed under Business, Drought, North America. You can follow any responses to this entry through the RSS 2.0 feed. You can leave a response, or trackback from your own site.

circleofblue.org http://www.circleofblue.org/waternews/2010/world/north-america/alaska-receives-new-applications-for-bulk-water-removal/

Original text

While bulk water sales haven't been completed, three new applications show interest is still strong.

By Brett Walton
Circle of Blue



Adak Island. Alaska Maritime and National Wildlife Refuge. *Click image to see full size.*

The Alaska Department of Natural Resources received three applications Tuesday from the Aleut Corporation for bulk water removal from Adak Island, according to Gary Prokosch, the state's chief of water resources.

It will take up to one year to determine if bulk removal permits will be issued, Prokosch told Circle of Blue. The ADNR will determine if the water requested is surplus water that can be used and still leave enough in the lakes and rivers for fish as well as hydrologic functions. Prokosch said the department will also evaluate future alternate uses of the water.

Adak Island, located 2,000 km (1,240 mi) southwest of Anchorage on the Aleutian chain, was the site of a naval air station that closed in 1997. The Aleut Corporation, which was established as a native Alaskan-owned corporation in a 1971 federal land claims settlement, acquired the naval base property in a land swap. Fewer than 300 people live on the island, now mainly used as a fishing supply hub.

Included in the deal were three reservoirs the navy used for water supply, said Tony Cange, the president of Aleut Real Estate, an Aleut Corporation subsidiary that's handling land transactions. The company has applied for bulk water removal permits of 500,000 gallons per day for each of the three reservoirs on the

former base, including lakes Betty, Bonnie Rose and DeMarie.

Related Stories
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Public Opinion on Bulk Water Sales

Sitka's Resource Piggy Bank Is Water

Alaska to Ship Water to India

"One of the advantages Adak has is the infrastructure for a deepwater port and a location to make the economics work," Cange said.

The corporation is in discussions with an investor from Vancouver, British Columbia about a contract for moving the water, but no agreement has been reached yet and the financial details are still being vetted, Cange told Circle of Blue. Revenue from the water sales would help fund economic development projects on the island, he added.

The first time Aleut Corporation considered bulk water was in 2000, but the company subsidiary never finished the application process, Cange said.

Water investors have long looked at Alaska as a potential source for global water shipments, but no company has been able to complete a bulk water sale. Many of the Alaskan proposals have focused on the southeastern city of Sitka. Alaska Resource Management LLC is negotiating to build a water bottling and distribution facility near Mumbai, India so that it can export water it has under contract from the city's Blue Lake reservoir.

Aqueous International, another company with water exporting ambitions, submitted bulk removal applications to the ADNR in June but the applications were returned because they were missing a coastal management questionnaire, Prokosch said.

The chairman and majority shareholder of Aqueous, Ric Davidge, told Circle of Blue the company is continuing to do hydrological studies and does not know when or if it will submit bulk removal applications.

Davidge, a former chief of Alaska water resources, has tried unsuccessfully for a decade to develop bulk water for export in places such as Humboldt County and Mendocino County in California as well as Alaska. His company has also approached Sitka about purchasing water rights.

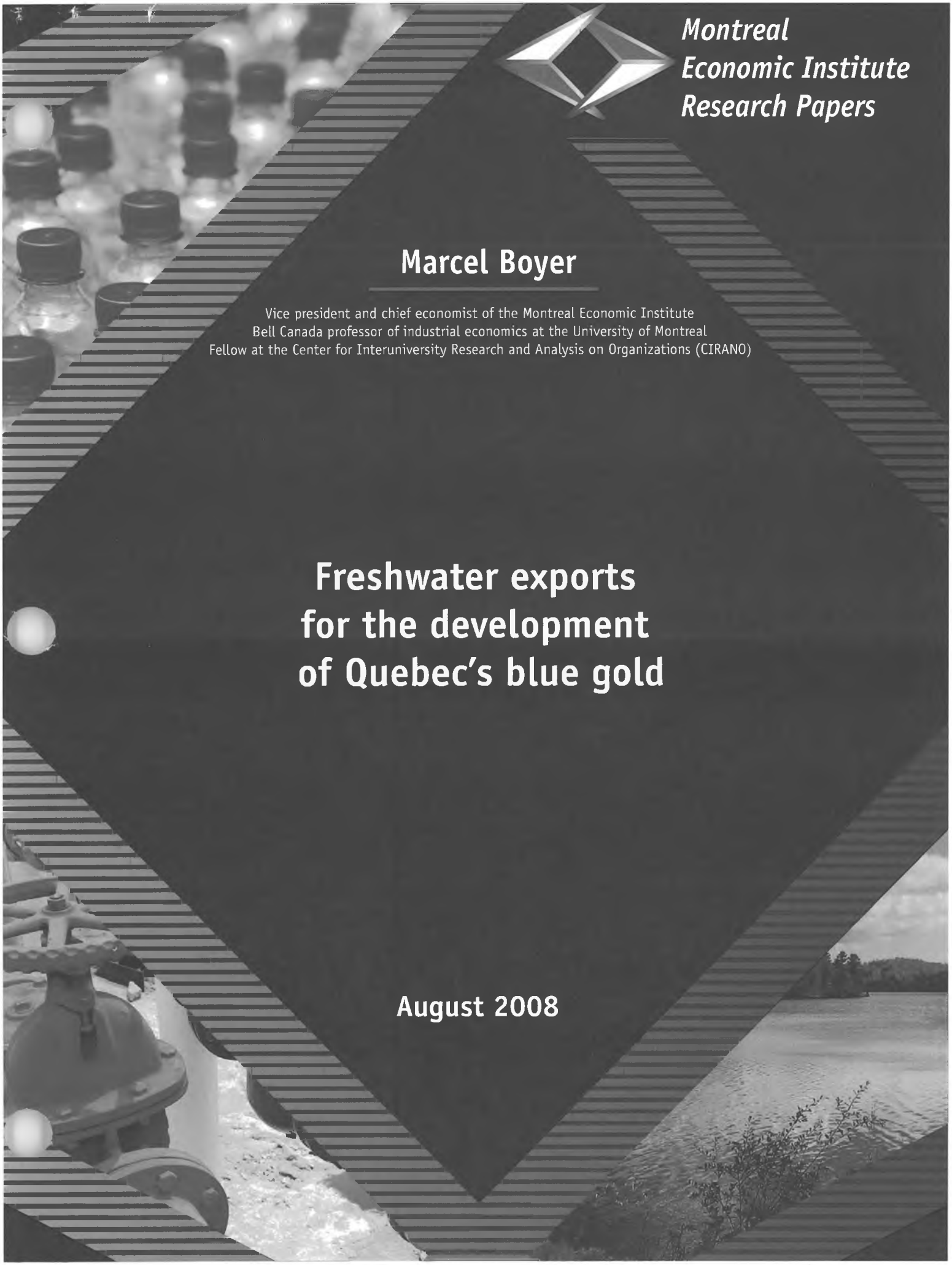
Brett Walton is a Seattle-based reporter for Circle of Blue. Reach him at brett@circleofblue.org.



TAGS: Adak Island, Alaska, Alaska Department of Natural Resources, Alaska Resource Management LLC, Aleut Corporation, Aleut Real Estate, Aleutian Islands, Aqueous International, bulk water export, bulkwater-features, Business/Finance, Gary Prokosch, navy, Ric Davidge, sitka, Tony Cange, water_security_consumption

This entry was posted on Thursday, July 8th, 2010 at 11:45 am and is filed under Business, North America. You can follow any responses to this entry through the RSS 2.0 feed. You can leave a response, or trackback from your own site.

1 Comment



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Vice president and chief economist of the Montreal Economic Institute
Bell Canada professor of industrial economics at the University of Montreal
Fellow at the Center for Interuniversity Research and Analysis on Organizations (CIRANO)

Freshwater exports for the development of Quebec's blue gold

August 2008

Marcel Boyer
Vice president and chief economist of the Montreal Economic Institute
Bell Canada professor of industrial economics at the University of Montreal
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August 2008

Montreal Economic Institute
Ideas for a More Prosperous Nation

Montreal Economic Institute
Ideas for a More Prosperous Nation

6708, Saint-Hubert Street
Montreal (Quebec)
Canada H2S 2M6

Phone: (514) 273-0969
Fax: (514) 273-2581

Web site: www.iedm.org

Chairman of the Board: Hélène Desmarais
Vice president and chief economist: Marcel Boyer

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Graphic Design: Valna Graphisme & Impression

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ISBN 978-2-922687-23-1

Legal deposit: 3th quarter 2008
Bibliothèque et Archives nationales du Québec
Library and Archives Canada

Printed in Canada

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Executive Summary



Fresh water is a product whose relative economic value has risen substantially and will keep rising in the coming years. It has become a growing source of wealth and an increasingly worthwhile investment opportunity. Without better management of this resource, the emergence of water distress can be expected in many highly populated areas of the world.

This study aims to present a general portrait of the possibilities open to Quebec in selling and exporting fresh water, to assess Quebec's competitive advantage and potential in this regard and to define the role and responsibilities that the existence of this potential imposes.

The planet's inventory of water consists 97% of salt water, and more than two-thirds of the rest is difficult or impossible to reach because it is trapped in polar icecaps, glaciers or deep rock. Thus, less than 1% of the water inventory exists in the form of accessible fresh water. Each year, agriculture consumes nearly 70% of accessible fresh water, industry consumes another 20%, and the remaining 10% goes to local or municipal use for domestic consumption and other direct uses. In the past century, annual use of fresh water has risen twice as quickly as population. Canada constitutes an important renewable freshwater reserve in the world with 100 000 m^3 annually per inhabitant and 130 000 m^3 in Québec compared to less than 10 000 m^3 for the United States.

The commercial value of water and the profitability of investing in the infrastructure needed to commercialize it will be determined, when all is said and done, by the cost of desalinating sea water. This will be the most likely and most realistic alternative to long-distance imports. Interest in desalination has grown constantly over the last 50 years. Desalination costs may drop as higher-performance technologies are developed, but despite advances in technology, desalinated water remains expensive and is very sensitive to increases in energy costs and environmental regulation. The equivalent annual cost of desalination is estimated now at a minimum of $0.65 per m^3.

Transferring water between watersheds is not a recent phenomenon: it has existed for thousands of years. The ancient Egyptians and Romans build impressive aqueducts and dams, some of which still stand today. In the 10th century, the French diverted the Satis River to the town of Douai and diverted the Scarpe River to make it navigable. Today, in the face of shortages, water transfer projects are often presented as an inevitable solution to the problems caused by growth in demand for potable water, and they can also be seen from the perspective of economic development.

A number of projects have been adopted in the past, and others are currently under study to meet problems of potable water scarcity. These projects involve building large dams, as well as immense aqueducts or pumping stations, for water to be sent from places where it is abundant to areas where demand exceeds the natural supply. Transport by floating bags or membranes, a technology which is less expensive and less risky, seems to be on the verge of commercial viability. The process for assessing and adopting such projects must be based on technical feasibility, economic justification, social value, fairness, environmental impacts and legal integrity.

But why do these projects stir up such opposition from various groups in society? Water clearly is a resource that is essential to life, and turning it into a business may arouse fears that it could one day be overexploited. But these fears can be calmed if a legal and regulatory framework is established. Regardless of the fuss, it is not necessary to prohibit trade in water. If parts of the world were to suffer from serious water distress, they will have to be supplied with fresh water, which is just as important to life there as it is in regions that are well supplied with water. Moreover, determining a competitive price for water could be a major incentive for more efficient and economical use of water both in areas where it is abundant and in regions where it is especially scarce, for water suppliers and users alike. Of course, pricing must effectively be competitive.

It is true that NAFTA could create new constraints and impose them on us if fresh water were to be sold commercially. But such constraints would be likely to push the trade partners into developing and adopting water management models that are more efficient and thus socially more acceptable. The constraints of national treatment, reciprocity and protection of foreign investments in international trade agreements create wealth and well-being for societies on a worldwide basis by forcing companies to innovate, increase their productivity and become more competitive, as well as by limiting the discretionary, distortion-creating power of governments, especially through price and market manipulation.

Quebec must reflect on the role it could play were markets for water to be created as a preferred means of meeting the imminent necessity of sharing water resources through trade with people elsewhere on the North American continent and eventually around the world. If the province exported, for example, 10% of its one trillion m^3 of its renewable fresh water per year at a price of $0.65 per m^3, this would generate $65 billion in gross annual income. Even if only 10% of this amount is collected in royalties, and even if the technological, economic and environmental difficulties to be overcome are substantial, the amounts involved are considerable.

Quebec must be imaginative in exploiting its water resources. Implementing its freshwater export potential and protecting the environment will pose great challenges, but the biggest danger on the horizon would be to get cold feet in designing and implementing the governance mechanisms for the major infrastructure projects that will be needed for this exploitation.

Introduction: background and issues

Fresh water is a product whose relative economic value has risen substantially and will keep rising in the coming years. It has become a growing source of wealth and an increasingly worthwhile investment opportunity. The reason is simple: as with other natural resources, world consumption of fresh water is growing rapidly, requiring the deployment of ever more costly reserves and procedures for water purification and wastewater treatment. We appear headed for a rather orderly creation of markets for water, first regionally and then on a continental and, eventually, planetary level, with the potential to lead to large-scale transfers of this essential resource.

Without better management of this resource, the emergence of water distress can be expected in many highly populated areas of the world. The United Nations estimates that only a few countries, including Canada, will not be suffering from water stress in 2025 (UN, 2000).

In June 2008, three events reminded us that Quebec cannot avoid looking seriously at its freshwater resources for very much longer. First, Quebec's minister of Sustainable Development, Environment and Parks submitted legislation (Bill 92) affirming the collective nature of water resources and aiming to strengthen protection of these resources, thereby ensuring some control over pollution of rivers and lakes and over water use. The bill sets out the user-pay principle, which seems to leave the door partly open to a system of water royalties, mainly for institutional, agricultural, commercial and industrial users.

These developments are not spelled out clearly in the proposed bill, but there is reason to think that the principle of resources being collective in character, something to be protected and preserved sustainably, together with the user-pay principle and the idea of royalties, indicates an intention to attach greater value to these freshwater resources. To achieve this, citizens, institutions, farmers, businesses and industries will have to be brought to use resources responsibly for the greater well-being of the entire population.

The best way to reach this goal is to inform citizens as water users, along with future operators of freshwater supply services, commercial and industrial water providers and wastewater treatment operators, of water's value and thus of its cost. To convey this information and encourage users and operators to make efficient use of available resources, they will have to be informed of the price of a litre of water and thus of its opportunity cost, meaning the value of this litre of water in its best alternative use. This suggests, in a somewhat distant future, establishing markets for water where buyers and sellers will be called upon to exchange large quantities of water based on competitive prices that can send the correct scarcity signals to users and suppliers alike.

The second event was the Great Lakes Conference held in Toronto in April 2008. Milton Clark, the senior health and science adviser to the U.S. Environmental Protection Agency (EPA), stated that we are headed toward large-scale water wars. Lee Fisher, Ohio's lieutenant governor, said at the same conference that, within 10 years, the states bordering on the Great Lakes could start selling water to neighbouring states in the south, although he later retracted this remark and said he had misspoken (CBC, April 24, 2008)!

The third event was a speech by Angel Gurría, secretary general of the Organization for Economic Cooperation and Development (OECD) at the Conference of Montreal in June 2008, in which he said: "Water is managed contrary to common sense, and its use today is not viable. [...] All countries – OECD and developing countries alike – need to introduce policy reforms and scale up best practices to avoid dire consequences. [...] We need to attract them

[private investors] back to the sector rather than chase them away. As with climate change, energy and all the rest, most investment will have to come from the private sector. [...] Water is scarce. [...] Through a suitable mechanism for establishing prices, you obtain better allocation and better use for everyone." (*Le Devoir*, June 11, 2008).

These three events should sound the alert. The purpose of this paper is specifically to suggest that Quebec take the initiative and step into the forefront as a manager of freshwater resources. This study aims to present a general portrait of the possibilities open to Quebec in selling and exporting fresh water. In other words, our goal is to assess if it is possible to benefit sustainably from Quebec's competitive advantage in fresh water. To this end, we shall allude to the various market mechanisms that can be considered and to the basic conditions for these markets to ensure efficient resource allocation.

More comprehensive studies on the hydrological particularities of the Quebec context, on the various features and details of markets for water, and on measures or technologies for shipping water for export will be needed if Quebec is to take advantage of the opportunities that could arise for exporting water at the national, continental or world levels. There will have to be particular concern regarding water collection points – ideally, though not exclusively, at the mouths of rivers to avoid disturbing lake and river ecosystems – and also regarding techniques for transfer and shipment. We will return to this briefly further on, but it is not this paper's main focus. Our aim is rather to emphasize Quebec's extraordinary potential, the role and responsibilities that the existence of this potential imposes on Quebec, and the fact that responsible exploitation of these water resources is becoming a continental and even planetary matter and could thus represent a major opportunity for development and wealth creation.

It is important to keep in mind the three interrelated issues we are looking at here: first, flawed water management in Quebec (and North America generally) resulting from inappropriate charges for water resources and leading to unbridled waste by agriculture and heavy industry, among other users; next, Quebec's outstanding potential in water resources, only a tiny fraction of which is used or exploited, thus representing a loss of potential wealth; and finally the chance to develop in Quebec a state-of-the-art industry and advanced expertise in water services and to export these services abroad. These issues can be dealt with independently or jointly. The approach taken here is to look at them jointly as three aspects of the same program for bringing optimal value to Quebec's water resources.

A warning is required here. Matters related to development of Quebec's water resources can easily inflame passions. As much as possible, we shall attempt here to present the issues and challenges posed by developing water resources while remaining aware of the diametrically opposed opinions and visions that clash continually on these topics.

A few very important facts

The planet's inventory of water consists 97% of salt water, and more than two-thirds of the rest is difficult or impossible to reach because it is trapped in polar icecaps, glaciers or deep rock. Thus, less than 1% of the water inventory exists in the form of accessible fresh water.

Each year, agriculture consumes nearly 70% of accessible fresh water, industry consumes another 20%, and the remaining 10% goes to local or municipal use for domestic consumption and other direct uses (Rain Bird Corporation, 2003). In the past century, annual use of fresh water has risen twice as quickly as population. A predictable result is that the value of water has climbed and will keep climbing, continuously and substantially. Furthermore, the government sector remains today the main direct supplier of consumed water: 65% in Europe, 85% in the United States, 95% in Asia and nearly 100% in Canada.

Renewable freshwater reserves in Canada and Quebec

Canada has the world's greatest renewable freshwater reserves, with 9% of world inventory, or 100,000 cubic metres (m^3) annually per inhabitant (FAO).[1] Quebec is especially rich in water resources. With 3% of world reserves (CRECQ, 2001) or 130,000 m^3 annually per inhabitant, it has a relatively large share of the planet's freshwater reserves. Also, the province's topography is such that it is endowed with an impressive number of lakes and rivers. Because of its climate, evaporation rates are relatively low. Also, Quebec accounts for just 0.1% of world population.

The wealth of lakes and rivers is not synonymous with an endless renewable supply of potable water. If a lake's water is drained continuously, it will end up drying out. Lake water is thus not always renewable. Since the aim is not to empty Quebec's lakes and rivers but rather to determine whether it is possible to benefit sustainably from Quebec's competitive advantage in fresh water, it is imperative to define clearly what is meant by the term "renewable resource" so as to produce a realistic picture of the quantity of water available for the purposes of eventual export.

The World Resources Institute defines renewable fresh water as fresh water that is replaced entirely each year by rain and snow and that flows through rivers and various waterways to empty into the ocean (Sprague, 2002). According to the OECD, *total renewable water resources* correspond to the net result of the amount of precipitation minus evapotranspiration (internal resources) plus the contribution of water flows from neighbouring countries, including the underground flow of surface water (OECD, 2006). This definition ignores any storage effect and represents the maximum quantity of fresh water available on average each year. Thus, sustainable use of these renewable resources for purposes of exploitation or export would have very little impact on Quebec's freshwater reserves.

Canada has more than 3,000 cubic kilometres (km^3) of renewable water per year on its territory (FAO; UN, *Environment Statistics*; Allard, 1997). According to the UN, the quantity of renewable water in Canada is 11 times greater than in the United States. In terms of renewable fresh water, Canada can call upon 109,000 m^3 annually per inhabitant compared to 9,800 in the United States (TED, 1999). In Quebec, renewable water is around 1,000 km^3 a year (CRECQ, 2001).

1. The difficulty in measuring freshwater reserves, consumption and withdrawals means that evaluations may vary by source. But the orders of magnitude remain the same.

A portion of this quantity of renewable water infiltrates deep into the subsoil, filling all pores, fissures and ground fractures with water. Quebec has abundant high-quality groundwater. According to the Department of the Environment and Wildlife, Quebec's inventory of groundwater reserves stands at 2,000 km³, and these reserves are fed by flows of about 15 km³ of precipitation per year, of which 0.43 km³ is effectively collected. This represents just a fraction (0.3%) of availability of renewable resources (Arcand *et al.*, 2002). In fact, the total volume of groundwater collected annually in Quebec for all uses, whether domestic or industrial, comes to just 3% of the natural recharge in inhabited areas. This suggests that 97% of the natural recharge remains unused and pours into rivers, seas and oceans. It is obviously used by marine ecosystems, but the water, whether or not it is collected, stored and used, always ends up flowing into seas and oceans.

The Department of the Environment and Wildlife says that, if Quebec alone provided the world's entire production of bottled water (154 billion litres in 2004, according to World Water (2007)), this would represent less than 1.04% of the precipitation that recharges the groundwater layers in Quebec's inhabited areas.

In other words, the volume of *renewable* fresh water in Quebec represents 130,000 m³ per inhabitant per year, or eight times more than the average volume of renewable fresh water per inhabitant on the planet and 13 times more than in the United States. Overall, this represents nearly a trillion cubic metres of renewable fresh water per year. Quebec uses only 0.5% of its available renewable fresh water, compared to 18.9% in the United States (Latraverse, 1997).

The value of water

The commercial value of water and the profitability of investing in the infrastructure needed to commercialize it will be determined, when all is said and done, by the cost of desalinating sea water. This will be the most likely and most realistic alternative to long-distance imports. A region or country in water distress and able to get sea water could build a desalination plant and produce the fresh water its populace requires. Interest in desalination has grown constantly over the last 50 years. In both economic and technical terms, its feasibility is improving thanks to new and more efficient technologies. In 2005, there existed more than 10,402 desalination units in the world producing 35.6 million m³ of water a year (WWF, 2007), an appreciable quantity but far less than what is needed. According to the OECD, "these processes use high amounts of energy and discharge concentrated brine effluents that can impact adversely on ecosystems. [...] Currently there are more than 7,500 such plants worldwide, 60% of them in the Middle East. [At] a plant for a medium-sized city, such as Santa Barbara (United States) ... unit costs are of the order of US$1 per cubic metre of water produced ... which is up to ten times the cost from other sources." (Ashley and Cashman, 2006).

Desalination costs may drop as higher-performance membrane technologies are developed, allowing for greater efficiency, especially in the reverse osmosis process.[2] But, despite advances in technology, desalinated water remains expensive and is very sensitive to increases in energy costs and environmental regulation (Larbi Bouguerra, 2005). In effect, desalination creates a number of environmental problems. It causes

2. Reverse osmosis is a purification system for water that contains dissolved material. It uses a very fine filtration system that lets only water molecules pass through. As an example, let us take water that includes solutes, especially salt. If two solutions with different concentrations are placed on each side of a filtering membrane, the water goes through it until the concentrations are balanced: this is the phenomenon of osmosis. By applying hydrostatic pressure (50 to 80 bars), the osmotic pressure is exceeded and the water is forced to go through the membrane in one direction, providing on one side for a greater volume (about 70% starting from ocean water) of water with solutes that are more dilute (thus purer water) and, on the other side, a smaller volume of more concentrated water that serves as a piston. This process was first used by the U.S. Navy to provide potable water to submariners. It is used today on an industrial scale for water purification and desalination of sea water.

substantial greenhouse gas releases because of the fact that it is a highly energy-intensive technology. In addition, plants have to be built on coastal lands that are often ecologically fragile and very expensive. Finally, the impact on local marine ecosystems of taking large quantities of sea water may be problematic, and briny releases from desalination plants also pose serious ecological problems since these releases consist of a concentrate of all substances found in sea water and not retained, in addition to the various chemical substances added in the treatment process (Klymchuk, 2008). Discharging these materials into the ocean, if they are not sufficiently diluted, may modify the natural system of water flows, increase the level of salinity, degrade water quality and disturb ecosystems (IOWater, 1998).

The equivalent annual cost of desalination is estimated now at a minimum of $0.65 per m^3 in California (Rain Bird Corporation, 2003) and at Tampa Bay in Florida, which in 2006 became the first large U.S. urban area to adopt desalination as a source of potable water (Klymchuk, 2008).

Technologies and options allowing for water shipment

The idea of selling fresh water to the United States is far from new. The call for bulk water exports from Canada to the United States goes back to the 1960s, specifically to the signing of the Columbia River Treaty between Canada and the United States in 1961 (Clarke, 2008).

Historically, techniques for moving water relied on building aqueducts or canals. As noted by Lasserre (2005a, pp. 3-4), "the industrial revolution, by developing far more efficient construction techniques but also extensive energy needs, provided for projects of a new magnitude to be built: the movement of large volumes over great distances exceeding hundreds of kilometres." The author continues by giving a partial list some 70 works providing for bulk water transfers, including some with a transfer capacity of many thousands of millions of cubic metres per year. Examples of this have taken shape in the United States but also in Canada, Central Asia, India, China and Italy. These projects were seen as powerful economic levers to which public authorities were sensitive and even favourable.

Today, diversions via aqueducts or canals have been supplemented by other techniques for water exports. Each of them has advantages but also limits. We will look at the most important of them.

Bulk water transfers

Transferring water between watersheds is not a recent phenomenon: it has existed for thousands of years. The ancient Egyptians and Romans build impressive aqueducts and dams, some of which still stand today. In the 10th century, the French diverted the Satis River to the town of Douai and diverted the Scarpe River to make it navigable.

Today, in the face of shortages, water transfer projects are often presented as an inevitable solution to the problems caused by growth in demand for potable water, and they can also be seen from the perspective of economic development. A number of projects have been adopted in the past, and others are currently under study to meet problems of potable water scarcity. These projects involve building large dams, as well as immense aqueducts or pumping stations, for water to be sent from places where it is abundant to areas where demand exceeds the natural supply. This apparently simple technical solution is characterized, however, by high costs that make projects financially risky, and also by major social and environmental impacts.

The process for assessing and adopting such projects is the same as for any other large-scale infrastructure investment. Projects are judged according to criteria of technical feasibility, economic justification, social value, fairness, environmental impacts and legal integrity. The many examples of bulk transfers enable us today to identify the shortcomings of previous projects so that the negative consequences can be better controlled.

Exporting by tanker ship

Although some attempts have been made and some contracts signed, no company is currently exporting water commercially in large tanker ships. However, small tankers are used regularly to export water over short distances.

Tankers can be modified to transport large quantities of water over long distances. This practice is used intermittently in Japan, Taiwan, Korea, some Greek Islands and the Bahamas in emergencies (Lasserre, 2005b). This technology has even been used at time of war. During the Gulf War, U.S. troops were supplied with water from Turkey. Examples of exports over long

periods also exist, but such situations are exceptional.

In Canada, a number of projects have been drawn up in recent years to use tankers for exports. Nova Group Ltd. planned to export three billion litres of water from Lake Superior to various Asian markets. After approving the project, Ontario withdrew the permit it had issued, fearing it would create a precedent enabling U.S. companies to take water from the Great Lakes. The McCurdy Group planned to export 52 billion litres taken from Lake Gisborne, in Newfoundland (Mayrand *et al.*, 2002), but the project was abandoned when a feasibility study showed the project might not be financially feasible (Government of Newfoundland and Labrador, 2001).

At present, the costs of long-distance shipment by tanker make this option disadvantageous, especially when compared to other options such as desalination. On the other hand, this option should not necessarily be rejected. The price of water simply has to go high enough for such projects to become profitable.

Exporting by floating membrane

One of the most promising techniques for transporting water, from a commercial standpoint, is to use floating bags or membranes. This technology seems to be on the verge of commercial viability: it may be feasible and profitable in just a few years to transport water over long distances using these bags.

This technology has many advantages over competing technologies. The greatest advantages stem from the fact that this option is more economical, faster to adopt and environmentally safer. In addition, floating membranes require less capital investment and have much lower operating costs than the main alternatives such as desalination, waterway diversions or pipelines. Compared to desalination, this technique is not only much less expensive to adopt but also releases far less greenhouse gas (Edmonds, 2007).

Two North American companies, California-based Spragg Waterbags and Calgary-based Medusa Corporation, are pursuing efforts to show that export projects using floating membrane can be viable and competitive. The cost of making the bags varies between $125,000 and $275,000 (Lasserre, 2005b), far less than tankers, and their upkeep is less costly. In this case, investment in ships is limited to tugs. But water bags do have a drawback, which is that they need infrastructure for filling and pumping, the scope of which is proportionate to the volume of water shipped.

It is obvious that exporting water by floating bags or membranes, tanker trucks or tanker ships is not a solution that will easily eliminate the problems linked to growth in world demand for potable water. On the other hand, this approach would enable immediate assistance in emergencies and would help urban zones in dry areas get supplies from nearby regions. Recent developments in these export technologies, along with anticipated innovations, illustrate clearly the type of creative solutions that can be developed when needs are recognized, especially if researchers and entrepreneurs are put to work.

A history of water export projects in Canada

In Canada, some large-scale projects were studied in the 1960s. These projects covered some of the main water basins in Canada and the United States. Among them was the Great Recycling and Northern Development project, better known by the name GRAND Canal, which involved Quebec more particularly. This project consisted of building a dam separating the southern part of James Bay from Hudson Bay, thereby converting James Bay into a freshwater lake by relying on the many rivers that flow into it. This water could then have been pumped south for human use with power from Quebec's hydroelectric plants.

Similarly, the North American Water and Power Alliance (NAWAPA) suggested diverting 308 billion m^3 of water per year from Canada and Alaska to the United States and Mexico. This project was developed in 1964 by a California company, but for political and financial reasons it was never adopted.

Probably because of the costs and the difficulties involved in exporting water by diversion or bypass, and with water shortages imminent in the United States, other projects have been dreamed up by various promoters. In the early 1980s, projects for export by tanker ship were drawn up, especially in British Columbia (Ross, 1999). Six Canadian companies obtained permits to export 55.5 million m^3 of water annually. These companies were planning to move this water in tankers to distant markets such as Saudi Arabia. Because of widespread opposition, the government withdrew the export permits. The main criticisms were that the environmental impacts had not been assessed correctly, that the permits had been granted at very low prices, and that the exporters were not assuming the full cost of the deal.

Various projects were also proposed in Quebec. For example, in 1985 a company called Canwex 2000 International suggested exporting excess potable water from water purification installations in Sept-Îles (Ross, 1999), using tanker ships. According to the promoters, the company could have shipped one-and-a half billion litres of fresh water per month to the United Arab Emirates.

In 1998, Nova Group Ltd. obtained authorization from the Ontario government to export 600 million litres of water a year from Lake Superior. Protests in both Canada and the United States followed this announcement, and in 1999 the Ontario government was forced to withdraw the permits previously awarded to the company and to prohibit bulk water exports.

A recent study explores the possibility of building a pipeline from northern Manitoba to the United States border to supply the south-western states (Klymchuk, 2008). The sale of just 1% of the fresh water pouring from Manitoba's territory into James Bay and Hudson Bay could generate an annual profit of US$1.33 billion and make Manitoba a "rich" province in Canada with no significant measurable effect on the system's ecology.

At present, the issue of bulk water exports in North America remains a rather explosive subject of debate. In 2004, Thomas Mulcair, then Quebec's minister of the Environment, had to confront the wrath of public opinion, of the official opposition and of part of his own government when he edged open the door to bulk water exports, casting doubt on a major element in the *Quebec Water Policy* of that era.

The main conditions for exporting water

But why do these projects stir up such opposition from various groups in society? Water clearly is a resource that is essential to life, and turning it into a business may arouse fears that it could one day be overexploited. But these fears can be calmed if a legal and regulatory framework is established. Regardless of the fuss, it is not necessary to prohibit trade in water. If parts of the world were to suffer from serious water distress, they will have to be supplied with fresh water, which is just as important to life there as it is in regions that are well supplied with water. Moreover, determining a competitive price for water could be a major incentive for more efficient and economical use of water both in areas where it is abundant and in regions where it is especially scarce, for water suppliers and users alike. Again, pricing must effectively be competitive and kept independent from monopoly power. A parallel can be drawn here with the establishment of market mechanisms and competitive pricing in the matter of greenhouse gases, with carbon exchange, carbon taxes and emission quota systems accompanied by cap-and-trade mechanisms that have already been well tested for sulphur dioxide emissions. Furthermore, selling and exporting fresh water must be assessed like all other projects, with explanations of their advantages and costs and of their options and risks.

Three main premises underlie the arguments in favour of water export projects. First, it is important to emphasize that bulk water transfers already exist in North America, in Canada especially. This is something Canadian public opinion is often unaware of. It is not the United States that has diverted the largest quantities of water: Canada comes first by far in the volume of water transferred (Lasserre, 2005b). Moreover, Canada already exports municipal water from British Columbia to Point Roberts in Washington state, and from Coutts, Alberta, to Sweetgrass, Montana. But these arrangements are viewed more as friendly agreements for the efficient provision of municipal services than as water exports.

Second, water is abundant and underused in Canada, with a substantial surplus. For example, the total volume of groundwater collected annually in Quebec for all uses (domestic and industrial) comes to only 3% of the natural recharge in inhabited areas. Thus, 97% of the natural recharge goes unused and flows into rivers, seas and oceans. This natural recharge should be put to better use and should lead to consideration by researchers and entrepreneurs in the search for clean, environmentally sound procedures that can generate a substantial premium. There is no reason to believe that prohibiting renewable freshwater exports, the zero solution, is what should really be sought. According to a study from the Policy Research Initiative:

"The amount of water that can be removed by a tanker is small relative to the amount of water available – a large tanker load would be about one day's flow of a small river. For example, the all-time minimum flow recorded for Manitoba's Burntwood River is over 200,000 m^3 per day, and Quebec's Rivière aux Outardes has a minimum daily flow of over 900,000 m^3 per day. A large river, such as the Niagara, has a minimum flow greater than 350,000,000 m^3 per day, and, even on a bad day, could fill more than 700 of the largest super-tankers. Therefore, provided the source is selected with moderate care, the taking of the water by itself need not pose any environmental threat." (PRI, 2005b, p. 3).Third, it is commonly admitted that the United States, or at least some areas of the country, like many other regions of the world, will soon be facing a water crisis, and this will create a demand that Canada can turn to profit. An opening to trade in fresh water, with prices set competitively, would promote innovation in technologies for collection, transfer and use as well as more efficient residential, commercial and industrial consumption.

In addition to sociological and political constraints, certain economic characteristics of water may explain the relatively slow development of markets for water (Howitt and Hansen, 2005). First, water has several characteristics that are associated with public services: the cleanliness of rivers and lakes is essentially public, and their exploitation in a particular spot is likely to create impacts on the downstream population, leading to a potential source of conflict if the market mechanisms ensuring balanced compensation for the negative effects on the people living there are not yet operational and functional. Second, fluctuations in water supply can result in the market occasionally narrowing, in other words having relatively few buyers, relatively few sellers, or both at the same time. Finally, water transfers often involve substantial costs and risks as well as major public sector investments in infrastructure for water retention and shipment, requiring an adequate regulatory environment.

Even in the presence of interested buyers and sellers, markets for permanent rights over fresh water are not often sanctioned by the authorities because they lead to substantial benefits for various population segments, for example on employment in sectors that have traditionally benefited from the absence of markets for water and thus of competitive pricing for its use. Agriculture is an example that often comes up in this regard, but other industries that are major users of nearly-free or unmetered water could also be affected.

The technical and financial constraints associated with the trade in fresh water, as well as the possible presence of alternatives at comparable cost in domestic markets, are factors holding back the development of a structured market for fresh water at the world level. It is certainly possible to consider managing domestic demand better, for example with more efficient pricing for consumption and other commercial and industrial uses of water, such as agriculture, but these considerations, despite an obviously vast potential when differences in freshwater use in various countries or regions are taken into account, are not reason enough to ignore the hardships some regions will face in the near future. There have already been many cases listed of potable water exports to communities or businesses that have no valid alternatives at comparable cost but that do have the financial resources to pay the costs of buying and shipping the resource.

The development of markets for water, especially for export purposes, poses problems both in their conception and in their regulation (legal framework). Some of these problems come up in a report from the Public Research Initiative (PRI, 2005a, p. 19):

"We need to better understand what specific objectives water markets can foster most efficiently, and in what context given the existence of other management regimes. Markets reduce state responsibility for prices and allocation, and may thus be more politically acceptable than direct intervention in some circumstances. At the same time, the state has to intervene to ensure environmental or other social goals are met, for example by determining the total amount of water that can be part of trading."

But again, these difficulties are more an opportunity to show imagination in finding solutions to the challenges they pose.

To alleviate resistance to the international trade in water, it is imperative for the potential gains from this trade to be reflected more effectively in pricing. Some analysts hold the view that, to make this pricing more interesting and representative of the value of water, there is a need to implement policies that could enable individuals, in addition to government authorities, to benefit directly from these gains and thus to cope with the opportunity cost of not exporting water (Anderson and Landry, 2001).

For example, a company in British Columbia, Global Water Corporation, has signed an agreement with the town of Sitka, in Alaska, giving the town the right (but not the obligation) to export up to 18,500 m^3 of water annually for the next 30 years. The agreement stipulates that the Canadian firm will pay the town $25,000 a year for the first five years and $75,000 for the subsequent years. In addition, the town will receive royalties based on an ascending scale per gallon when the water is exported. Despite some fears within the community, the fact remains that the project has the support of a majority of inhabitants. In the town's latest referendum on this topic, they backed the project by a ratio of three to one (Anderson and Landry, 2001).

Canada's obligations under the NAFTA

Beyond the reasons blocking the development of markets for water mentioned in the previous paragraphs, one of the main objections in Canada from opponents of exports is that any bulk water export project would create a legal precedent that would later be difficult to challenge. For the moment, water in its natural state (in lakes and rivers) is not subject to NAFTA obligations. The terms of trade agreements apply only insofar as water is viewed as merchandise. Water becomes a *product* when it is collected, stored, bottled or conditioned. Once water becomes a form of merchandise, three major issues arise: national treatment, proportionality and investors' rights.

The North American Free Trade Agreement stipulates that "each Party shall accord national treatment to the goods of another Party in accordance with Article III of the General Agreement on Tariffs and Trade" (Article 301). The concept of national treatment means that American and Mexican companies must be treated the same as Canadian companies regarding access to products and markets. In the field of water exports, this implies that, if water were viewed as merchandise and exports were begun to the United States, it would become impossible for Canadian authorities to reduce or suspend exports unless it also reduced access to products and markets by Canadian companies. If the government decides to give import or export permits to Canadian businesses, it cannot refuse a permit to an American or Mexican business. Canada would thus lose a certain degree of autonomy with respect to management of the resource.

NAFTA further stipulates that the signatory governments can impose restrictions on the export of a product only if "the restriction does not reduce the proportion of the total export shipments of the specific good made available to that other Party relative to the total supply of that good of the Party maintaining the restriction" (Article 315). In other words, were bulk exports of Canadian fresh water to start up, the United States would see itself to some extent as owners of a right over Canadian water resources. The volumes exported could be reduced only if water were rationed proportionately or similarly for Canadian businesses and consumers. Moreover, the export price could be reduced or raised only if the domestic price changed similarly.

It is true that NAFTA could create new constraints and impose them on us if fresh water were to be sold commercially. But such constraints would be likely to push the trade partners into developing and adopting water management models that are more efficient and thus socially more acceptable. The fact that electricity produced by Quebec's hydroelectric plants can be exported is a potential impetus for seeking to be more efficient and effective in producing, transporting and consuming electricity. Why would it not be the same for renewable fresh water? The constraints imposed on the various member countries of the World Trade Organization by international trade and investment agreements are substantial, although no country has expressed the desire to withdraw from the WTO. On the contrary, countries that were not members have sought and applied pressure to get in and become subject to the constraints of national treatment, reciprocity and protection of foreign investments. Apart from the farming sector and its lobby groups, very few industries are fighting for trade to be tightened. The reason is obvious: the rules and constraints of international trade create wealth and well-being for societies on a worldwide basis by forcing companies to innovate, increase their productivity and become more competitive, as well as by limiting the discretionary, distortion-creating power of governments, especially through price and market manipulation.

In addition, according to jurists with the Great Lakes Joint Commission, "the provisions of the NAFTA and the WTO agreements do not prevent Canada and the United States from taking measures to protect their water resources and preserve the integrity of the Great Lakes Basin ecosystem where there is no discrimination by decision-makers against individuals from other countries in the application of those measures," and "NAFTA and the WTO agreements do not constrain or affect the right of a government to decide whether or not it will allow natural resources within its jurisdiction to be exploited and, if a natural resource is allowed to be exploited, the pace and manner of such exploitation" (Johansen, 2001).

Since 1999, the bulk removal of water, including removal for export, from major Canadian water basins has been prohibited following adoption of a strategy aimed at protecting Canadian waters. This strategy reaffirmed the federal government's long-standing position against bulk water removal and was consistent with the 1993 statement of the NAFTA countries that, "unless water in any form has entered into commerce and become a good or product, it is not covered by the provisions of any trade agreement including the NAFTA" (Johansen, 2001). Accordingly, Canada's federal government seeks to focus its approach on protecting water in its natural state to make it a resource management and environmental issue rather than a trade matter.

Despite the federal government's intention to prohibit water exports, it nonetheless remains the case that the provinces have primary responsibility for managing water on their territory, whereas the federal government has responsibility for boundary waters within the limits set out by the *International Boundary Waters Treaty* of 1909.

In Quebec, the *Water Resources Preservation Act* prohibits water taken in Quebec from being transferred outside the province. The act applies to surface water and to groundwater. The Quebec government nonetheless reserves the right to deviate from the law in certain cases such as: 1) the production of electric energy, 2) the marketing of water for human consumption, if it is bottled in Quebec in containers of 20 litres or less, 3) the supply of potable water to establishments or dwellings located in a border zone, and 4) the supply of vehicles (Joint International Commission, 2000). It is also possible, in emergencies, for humanitarian reasons or for any other reason considered to be in the public interest, to lift the prohibition on water taken in Quebec being transferred outside the province.

A few examples of water transfer agreements

As we have mentioned previously, there already exist several examples of water being transferred beyond national boundaries, but these cases remain isolated, and such transfers often respond to particular crises. These transfers, usually by tanker truck, are very expensive and are not normally seen as a viable long-term solution. However, proposals for large-scale, long-term international water transfer projects are viewed increasingly as a solution to water shortages in several parts of the world, essentially for deviations by means of canals. Here are several examples.

Lesotho and South Africa

Water transfer between Lesotho and South Africa (intra-basin) has been in place since 1998 and is seen as the first major transfer at the international level. The main aim of the project is to transfer water from the mountains of the Kingdom of Lesotho to the industrial heartland of South Africa (Gauteng province). The Lesotho Highlands Water Project (LHWP) also includes a hydroelectric component for Lesotho.

This ambitious four-phase project is intended to transfer 2.2 billion m^3 a year to South Africa by 2020. The first phase, begun in 1989, was fully completed in 2004. The agreement between Lesotho and South Africa stipulates that the latter is responsible for the costs related to water transfer, regardless of whether the work is located in Lesotho or in South Africa. These costs account for 95% of the project's total cost. Lesotho is responsible for the costs linked to hydroelectric generation on its territory, accounting for the remaining 5% of the project's total cost. The agreement states that South Africa agrees to share the net benefit with Lesotho, by means of royalty payments shared between Lesotho (56%) and South Africa (44%).

The particularity of this agreement lies in the fact that these two countries do not view water as merchandise. They consider that it is not the water itself that is exported or marketed (usually arising from an approached based on rights or permits). Instead, it is the "economic spin-offs" from the common exploitation of the waterway that are shared.

This project may be quite interesting because it brings into play mechanisms that are analogous to market mechanisms without making water the object of a transaction between buyer and seller. Beyond the fact that this is a water transfer model, it is a worthwhile example of cooperation based on needs and on common management rather than on an approach based on exports as such or on usage rights. Moreover, financing of the infrastructure work needed to implement this cooperation is done in a way analogous to what would emerge from market mechanisms.

Israel and Turkey

The recent agreement between Israel and Turkey on the transfer of water from the Manavgat River also represents a turning point in international water management. This treaty, signed on March 25, 2004, is the first international agreement for the systematic sale of bulk water from one country to another. Turkey and Israel agreed to the export of 50 million m^3 of water a year from the Manavgat River in Turkey for 20 years. The agreement sets out in the longer term the building of a channel that could substantially increase possibilities for water exports from Turkey. An author (Ganem, 2005, p. 188) wrote on this subject:

"Turkey's Manavgat waters lie at the centre of this regional cooperation project. Israel is thus the first buyer of Turkish water resources. [...]

The water resources of countries in the region are expected to decrease considerably in the near future [...] whereas consumers and their needs will undergo a large increase. [...] Turkey could benefit from this and fulfil an essential role in resolving this problem even partially, thereby enhancing its place in the concert of Middle East nations. The Israel-Turkey cooperation model is creating imitators, and Lybia, upon announcement of the 'water rapprochement' between the partners, said it was interested [in importing Turkish water]. Today, this perspective is taking shape, and Turkey is preparing to improve its facilities on the Manavgat River. While these facilities provide now for the export of 180 million m^3 of water, the river's capacities are enormous, and better installations could multiply the quantity of exportable water."

France and Spain

A major project for transferring water from the Rhône between France and Spain is current under study. This project has been promoted since 1995 by the French company BRL, which holds a concession from the French government and a right to Rhône water up to 2056. It calls for the construction of an underground channel 330 km long, intended to transfer 15 m^3 a second (1.3 million m^3 a day) from Arles in France to Barcelona in Spain. One especially interesting aspect of this project is that it is presented as an act of European solidarity. It would in fact be the first link in a future pan-European network for managing and transferring water.

Considering the sizable freshwater requirements for consumption, agriculture and industry, as well as the growing number of large-scale water transfer projects on the international scene it seems reasonable to expect that such transfers will develop further in the near future.

Intra-national transfers

In addition to growth in international transfer projects, there already exist a considerable number of intra-national transfers. Some countries have even established national markets for the exchange of water permits.

The western states in the United States have markets for freshwater resource exploitation permits that are among the most efficient and best organized in the world. Colorado, for example, has one of the most active markets. Tens of thousands of acre-feet of water[3] are exchanged annually through private, voluntary transactions. Benefits go to those who ensure sustainable development and higher-value use of the resource on these markets. In recent years, the market has grown significantly, providing a reliable source of water for farmers and for residents of Denver, Fort Collins and Colorado Springs. California, for its part, is poised to catapult to the top rank of water markets following a single agreement for the transfer of over 250,000 acre-feet (or 106 million m^3) of water from the Imperial Irrigation District, one of the country's richest farming areas, to the city of San Diego. The various parties are currently negotiating details of the agreement.

As for Australia, it has the longest and most extensive experience in inter-regional water trading (Craik, 2006). In the 1970s, the states in the Murray-Darling basin conducted a vast reform in the management of their water resources. In the first 10 years after the reform, the trading of permits spread widely among all states in the basin. Meanwhile, water shortage problems continued to grow in the rest of the country. This situation led to expansion of the market, with permits then becoming exchangeable between all the states in the country. The first water transfer from one state to another took

3. An acre-foot of water is a measure of the quantity of water that would fill a basin an acre in area to a depth of one foot; 1 acre-foot = 1,233 m^3 = 325,851 U.S. gallons. One megalitre = one million litres = 1,000 m^3 = 0.81 acre-foot.

place in 1992 in the form of a five-year lease for the transfer of nearly 10 million m³ a year of water from a river in New South Wales to a cotton farm in the south of the country, Since that first initiative, inter-regional trade in Australia has continued to develop.

In 1998, a pilot project was presented to allow trading in permanent water use permits within the Murray-Darling basin. The project is led by the Murray-Darling Basin Commission, which coordinates all administrative and legal procedures between the participating states. Implementing permanent permits avoids the complications that can result from permit trading involving different legal rights and restrictions. These reforms led to the trading of more than 3.43 million m³ of water between the three states taking part in this pilot project. The Murray-Darling Basin Commission notes that most water transfers take place between users for whom water has a low marginal value and other users for whom water has a high marginal value such as horticultural or wine-growing businesses. The pilot project was so successful, within a relatively short period, the Commission is considering various strategies that would extend this model to other parts of the country.[4]

Changes in the trading of water use permits could serve as an example for the United States, Canada and Mexico. Instituting a tripartite commission (like the Murray-Darling Basin Commission) would provide a single political authority that could specify or suggest a definition of property rights or rights to removal and use and ensure their application, set out the details for transfers and eventually promote adequate legislation for water use in a given watershed. This type of organization could take several forms, but at a minimum it would harmonize water use rights, making them transmittable and enforceable throughout North America.

4. Similar institution changes – the creation of markets, transferable rights, and royalties – are also under study in New Zealand (Martel, 2006).

Conclusion, analysis and recommendations

In conclusion, we should recall some parameters and estimates of the potential scope of a well planned program for bringing value to our freshwater resources.

As mentioned in the introduction, water is becoming a precious product, a source of wealth and a major investment opportunity. Demographic growth and agricultural development have caused substantial pressure on water resources as on other natural resources. World consumption is rising rapidly and has required putting increasingly expensive potable water reserves into production. Sooner or later, these pressures will bring about a reasonably orderly creation of markets for water, first on a regional basis and then, in the not too distant future, on a continental and eventually planet-wide basis to increase effectiveness and efficiency in the supply and consumption of fresh water and potable water, by means including large-scale transfers of this essential resource.

Less than 1% of the water on our planet exists in the form of accessible fresh water. Agriculture consumes nearly 70% of the accessible fresh water and industry another 20%, with the rest used for consumption. The use of fresh water and its sectoral allocation, along with its ubiquitous waste, stem from pricing rules that are not only obsolete but above all unsustainable because they create considerable inefficiency and inefficacy while the great majority of human beings and inhabited regions are already suffering from water distress.

Quebec has on its territory 3% of the world's renewable fresh water but represents just one-tenth of one per cent of the world's population. This represents a thousand billion m^3 a year, eight times more on a per-capita basis than the average worldwide volume and 13 times that of the United States. Quebec can use only a very small percentage (less than 1%) of its available fresh water and should seriously consider the best way to manage and exploit it. The ever-increasing value of this resource may soon become too high for Quebec to go it alone in its exploitation. It seems highly probable that the pressures to share this fresh water with neighbours both near and far will keep growing. Sharing must mean trading.

The challenges of sustainable inter-regional development

The anomalies, inefficiencies and inefficacies currently found in the water sector are due to a number of causes. First is inequality in the natural geographic allocation of freshwater resources. Next are phenomena linked to demography: high world population growth, significant differences in population growth rates at the regional level, and strong growth in worldwide per-capita water consumption caused in part by industrial development. Finally comes the inefficiency of current regulation and controls instituted by governments, first and foremost the traditionally inadequate pricing of water, both for potable water supply services and for wastewater treatment. We should also mention the direct and indirect subsidies provided by governments, especially to agriculture and the oil industry, which artificially swell demand for water. Charges for water, when they exist, are based most often on a highly flawed calculation of operating costs and are diluted in municipal taxes with no direct link to actual consumption levels rather than being based on the opportunity cost and thus on the resource's value in its best alternative use. For the best outcome, the correction of anomalies, inefficiencies and inefficacies that are particular to the freshwater sector should be accompanied by similar corrections in other areas of the economy.

Despite the official talk of desired goals for sustainable development, it must be said that

actual policies have not always contributed to the long-term preservation of freshwater resources or to enhancement of their value. Freshwater use, both sectoral and territorial, largely reflects pricing rules that are not only obsolete and based on principles that have very little to do with exploiting or conserving the resource but that, more than anything else, are becoming ever less acceptable or ethical because they lead to sharp gaps in the relative consumption of the resource. These differences in consumption are not based on a competitive valuation. It is inevitable that the competitive price of fresh water will vary from one region to the next, with problems such as transportation preventing perfect price harmonization at the inter-regional or international level. If prices differ, consumption can also be expected to differ. It will also differ if prices are the same because of other characteristics such as geography, climate and living standards. But the current differences seem to go well beyond what could result from this sort of partial harmonization, with Quebec and Canada generally being areas where per-capita freshwater use is among the highest in the world – double the level in France, three times as high as in Norway or China, four times Switzerland's level and five times that of Denmark or Israel.[5]

As water resources begin to run short in many parts of the world, Quebec has such resources in abundance. Water is worth too much for us to let ourselves keep using it with relative inefficiency. This situation cannot last very long, and international pressure is likely to intensify. Quebec must take the initiative and prepare to exploit its water resources rationally and responsibly with a view to wealth creation based on sharing it and thus trading it.

Considering the perspective of what water shortages in some parts of the world could produce, Quebec must reflect on the role it could play were markets for water to be created. Quebec must act and start looking seriously into the possibility of helping set up markets for water as a preferred means of meeting the imminent necessity of sharing water resources through trade with people elsewhere on the North American continent and eventually around the world. The idea is not to start granting exploitation and export permits now but rather to study the various mechanisms and potential examples of markets. The organization, operation, advantages and disadvantages of the various exploitation models must be analyzed, and there is also a need to devise the laws and regulations that must be instituted to ensure the adequate functioning of these markets. In addition, major modifications to water pricing, for residential, commercial, agricultural and industrial consumers alike, are within our reach. A new pricing system would produce behaviour more in line with developing our freshwater resources in a perspective of wealth creation for all of society.[6]

Trading water and pricing it competitively are the most effective means of bringing more value to our water resources. Determining a competitive price for water is also a way to ensure the efficient and equitable sharing of the resource among the various types of users – residential, commercial, agricultural and industrial. Selling water can finance the investments needed to ensure efficiency in use of the resource. Making it marketable would also force inefficient users to find the capital needed to improve their activities, change their behaviour or modify their actions.

5. According to FAO data for 2006, available at http://www.fao.org/nr/water/aquastat/dbases/index.stm and http://www.fao.org/nr/water/aquastat/data/query/index.html.

6. The Task Force on Fees for Public Services (Montmarquette *et al.*, 2008) came out in defence of this.

However, for markets to be able to function optimally, governments must set clear rules that reflect economic and environmental realities. Regulations must be more supple and flexible: they need to safeguard legitimate regional environmental interest while not unduly blocking trade in water.

Quebec's enormous potential

It is hard to come up with exact figures on Quebec's potential for freshwater exports, for two key reasons. One is that, at present, there exists no complete register of the quantity of water in Quebec. To make up for this shortcoming, Line Beauchamp, Quebec's minister of Sustainable Development, Environment and Parks, proposes creating a Quebec Water Knowledge Bureau (MDDEP, 2008). This initiative would help identify more precisely the quantity and quality of the resource on Quebec territory. Also, it is hard to establish or estimate precisely the price at which water will be exchanged over the next 25 years, even though we already have a cautious estimate ($0.65 per m^3 for desalinated water).

Nonetheless, some specialists have attempted to estimate the benefits that would result from the various scenarios. One of them suggests exporting floodwaters (a renewable resource), intercepting these waters above the falls just south of Matagami before they flow toward James Bay and diverting them to the U.S. market through a series of dikes, canals and pumping stations on various rivers in Quebec, including the Ottawa River. This project would allow for the shipment of 800 m^3 of water per second to the Great Lakes for transfer to the United States. At $0.65 per m^3, the project would generate more than $16 billion in annual income.

Markets for water and thus its export, handled with transparency, flexibility and solid regulation, could improve substantially the way water is managed and used in Quebec. This could create strong incentives for conserving water and would allow for the fair and efficient reallocation of available water to meet our needs. It would also promote innovations and changes in behaviour that would help reduce our consumption considerably without harming our living standards.

Companies in Quebec, with its per-capital potable water reserves that are among the highest in the world, have been almost absent from the international scene both in the supply of potable water to communities and in wastewater treatment. Up to now, the abundance of freshwater resources, along with technological constraints and restrictions on its trade, has resulted in our showing little concern for conserving or developing water. The abundance of our reserves and the limited possibilities of exploiting them have made us poor managers in a certain sense. But this environment is changing quickly, and we need to be prepared now to develop leading expertise in freshwater conservation and commercialization.

Developing and marketing this expertise requires a strategic plan to enable Quebec to become a water management leader. Such a plan involves not only essential collaboration between the public and private sectors but also investment in scientific fields (technology, economics, biology, computer science, etc.) likely to enhance the effectiveness of water management by shaping efficient markets or equivalent mechanisms, both internally – within municipalities, within Quebec as a whole in a given watershed or between watersheds – and externally – between Canadian provinces and between Quebec and the United States or other countries. The huge investments that will be needed worldwide to ensure water supply, wastewater treatment and systematic recycling amount to very large sums, around $180 billion a year up to 2025 (Ashley and Cashman, 2006). Quebec could be in the forefront, helping bring to fruition this vast water infrastructure development effort, and it could benefit from it enormously.

The respective roles of the public and private sectors

The great financial potential of these markets could attract new private-sector investment. But despite these advantages, developing and establishing this type of market presents a certain number of challenges. The success of these markets relies in the end on the legislative framework and the ability of government to establish clearly defined and transferable water use rights that would provide incentives for conservation of the resource and thus for sustainable development.

The government must set out the regulatory framework for the trade in water, sharing of the advantages and costs, and granting of rights to various players. These user rights, which may be limited in quantity over time and space, must make their owners or concession-holders sensitive to the benefits and costs associated with the various uses of water under their governance.

These restrictions must be accompanied by realistic pricing that would encourage consumers and other users to apply the resource responsibly and producing companies to ensure a stable supply. The absence of prices and markets, a ubiquitous situation today in Quebec, leads to waste, makes for development of a less efficient economy and keeps people in the dark as to the value of this resource, thereby holding back fulfilment of a substantial potential for wealth creation.

Two observations already seem beyond question: in all likelihood, Quebec's water export potential is considerable, and harmonious development of this sector will require collaboration between the public and private sectors with clearly defined roles for each of them to maximize effectiveness (fulfilling goals successfully) and efficiency (doing so at the lowest cost). It is precisely because this resource is essentially a collective resource that its development must be watched over. For this to occur, an enlightened partnership between the public and private sectors is desirable.

Wealth and drawers of water

If Quebec exported, for example, 10% of its one trillion m^3 of its renewable fresh water per year at a price of $0.65 per m^3, this would generate $65 billion in gross annual income. Even if only 10% of this amount is collected in royalties, and even if the technological, economic and environmental difficulties to be overcome are substantial, the amounts involved are considerable. It is our duty, as exceptionally well endowed holders of freshwater resources, to study realistically and openly the various options regarding their development.

Some will argue, perhaps correctly, that the United States, our natural market and the most profitable outlet for our fresh water, is a very poor manager of its own freshwater resources and that for this reason we should not sell them our water. Meanwhile, it seems others would favour our exporting water to the countries that are the poorest and most deficient in water resources as a form of international assistance. The way to cut this Gordian knot of "dubious" but wealthy consumers and "virtuous" but poor and deficit-ridden consumers is to sell our water to the former and devote part of the profits from the operation to potable water supply operations (digging wells and recovering rainwater) among the latter, a potential annual transfer of billions of dollars. Thus, Quebec water exports would go *indirectly* to the chosen countries without having to consider the feasibility of the transfer in question.

Quebec must be imaginative in exploiting its water resources. Implementing Quebec's freshwater export potential and protecting the environment will pose great challenges, but the biggest danger on the horizon is that Quebec could get cold feet in designing and implementing the governance mechanisms for the major infrastructure projects that will be needed for this exploitation.

Quebec must take the initiative and prepare to exploit this resource rationally with a view to wealth creation based on sharing it and thus trading it. Quebec should act now with the aim of becoming a leader in water trading and eventually in the management not only of water resources themselves but also of potable water supply and wastewater treatment. It must not hesitate to go well beyond statements of intention, and it must avoid the temptation of a policy of isolation.

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Biography

Marcel Boyer, vice president and chief economist of the Montreal Economic Institute, is one of Canada's best known economists. He holds a Ph.D. in economics from Carnegie Mellon University and teaches at the economics department of the University of Montreal, where he currently occupies the Bell Canada Chair in industrial economics. He is also a fellow of the Center for Interuniversity Research and Analysis on Organizations (CIRANO) and sits on the board of the Quebec agency for public-private partnerships. In 2002, he obtained the Marcel Vincent Prize awarded by the Association francophone pour le savoir (ACFAS) for the exceptional quality of his work in social science. He was elected to the Royal Society of Canada and has served as president of the Canadian Economics Association and of the Société canadienne de science économique.



ISBN 978-2-922687-23-1

03/19/13 Presentations: Importance of Creating an Economic Development Plan and Denali National Park Visitor Center

<TARGET><BILL></BILL><SUBJECT>03-19-13 Presentations Importance of Creating an Economic Development Plan and Denali National Park Visitor Center</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: March 14, 2013

Re: Committee Schedule for the Weeks Beginning March 18, 2013

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, March 19, 2013 11:15am in Room 124
+ Development of an economic development plan
    Don Dyer, Economic Development Director, Matanuska-Susitna Borough

Thursday, March 21, 2013 11:15am in Room 124
+ Presentation on Unmanned Aircraft Systems
    Ro Bailey, Dpty Dir, AK Center for Unmanned Aircraft Systems Integration – RDT&E
    Invited testimony

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
+ Teleconferenced
= Bill was Previously Heard/Scheduled

Alaska State Legislature

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House Special Committee on Economic Development, Trade and Tourism

AGENDA
March 19, 2013

1. **Call to Order**

~Gavel~ Welcome to House Economic Development, Trade and Tourism Committee. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aide, Ginger Blaisdell.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
    - Several members may be coming and going due to other committee meetings underway.
- First up today, we are hearing from Don Dyer, Economic Development Director for the Matanuska-Susitna Borough regarding the statewide impact of some significant projects and the importance of developing an economic development plan.
    - Don Dyer, MSB Economic Development Director
    - Chris Gates, economic development consultant

- I believe Don's presentation will flow easily into the second part of the presentation regarding the statewide benefit of the South Denali Visitors Center. Presenters will be:

    - Ben Ellis, Dept of Natural Resources, Division Director for State Parks
    - Visit Anchorage: David Caster and James Minton
    - John Bitner, Anch Economic Development Council

3. **Calendar Review**

- I am looking forward to Thursday's meeting. We will hear a presentation by Ms. Ro Bailey, Retired Air Force Brigadier General and Deputy Director of the Alaska Center for Unmanned Aircraft Systems Integration – RDT&E.
- Her presentation will provide the preliminary information for the resolution scheduled for hearing on Tuesday, March 26.
- She is also scheduling to bring an unmanned aircraft with her – kind of a show and tell.

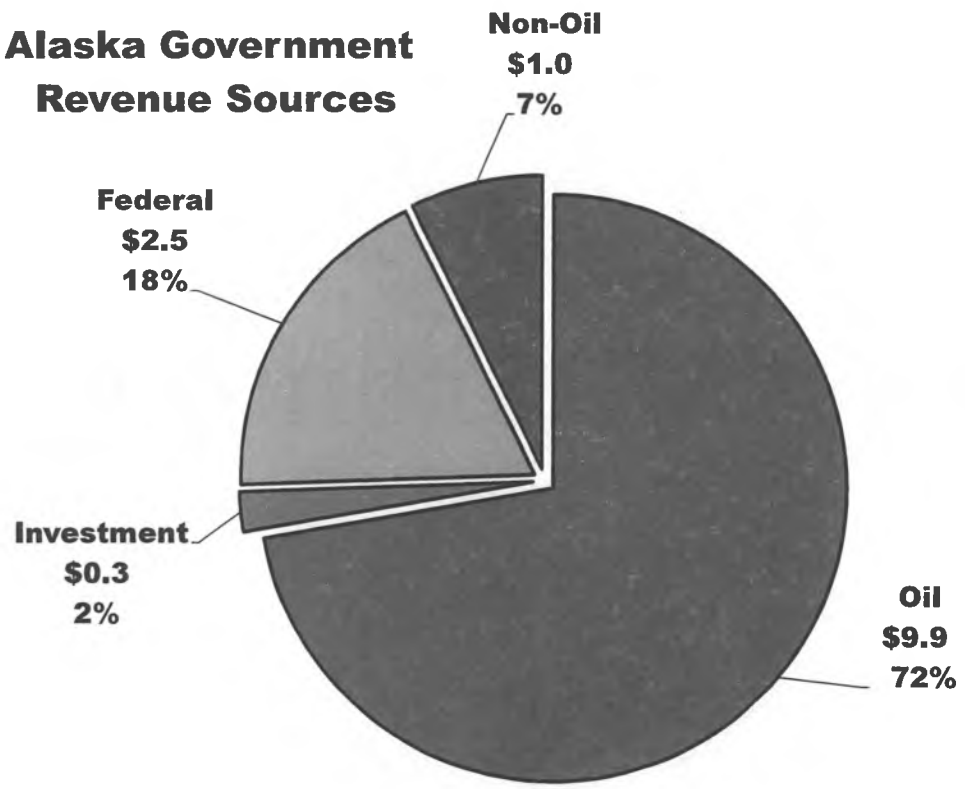
4. **EDTT committee Tour of Alaska**
    - June 4-6 (Tuesday through Thursday
        - Tuesday early morning – Anchorage bus to Talkeetna
        - Talkeetna optional river raft, flight seeing, etc.
        - O/N Denali Princess hotel
        - Wednesday morning free
        - Afternoon tour of Usibelli
        - Dinner on Riverboat Discovery
        - O/N Fairbanks Princess or flight to Anchorage
        - Thursday optional tour of Fairbanks or flight to Anchorage
    - How many members, spouces and family, and committee staff?
    - Is this week impossible for most members? Is another Tu-Th week in June better?

Do members have any closing comments?

- Thank you. We are ADJOURNED at 12:___ (time)." ~Gavel~

Matanuska-Susitna Borough Economic Development Overview

March 19, 2013



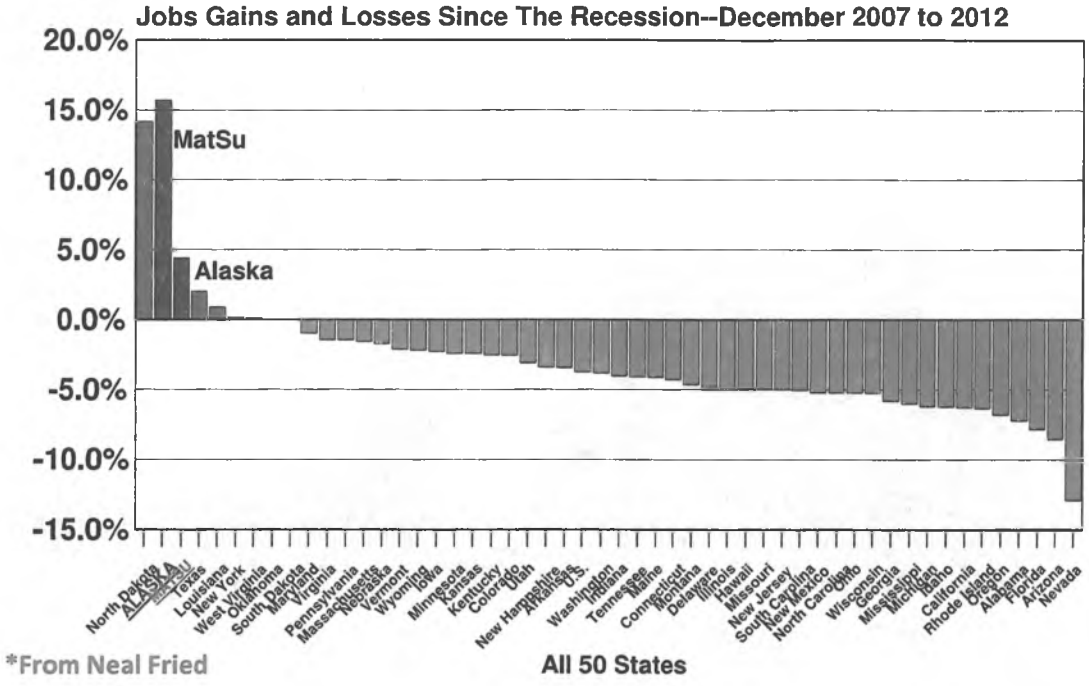
Fall 2012 *Revenue Sources Book*

90%

Federal Programs & Oil Tax Revenue

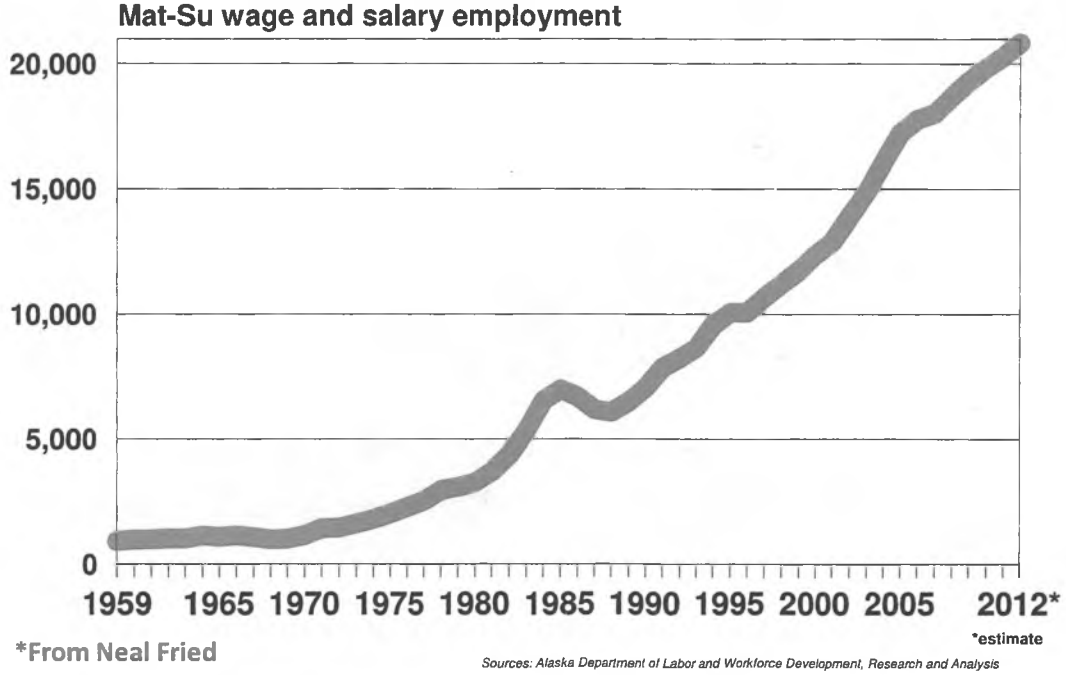
Post-Oil Economy

We Remain In Very Rare Company



*From Neal Fried

A History of Strong Growth-No Dip

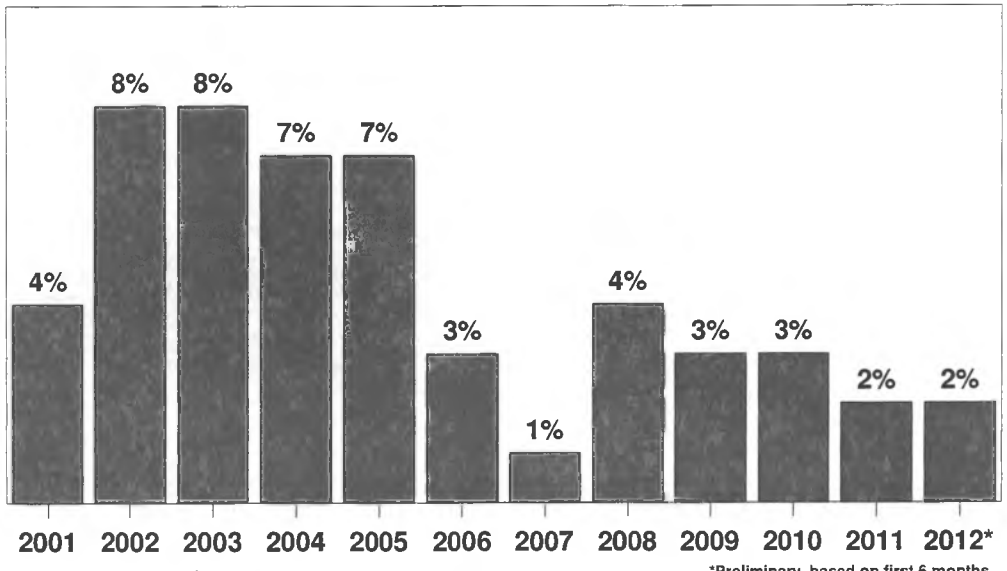


*From Neal Fried

Sources: Alaska Department of Labor and Workforce Development, Research and Analysis

Employment Never Faltered In The Mat-Su

Annual employment growth

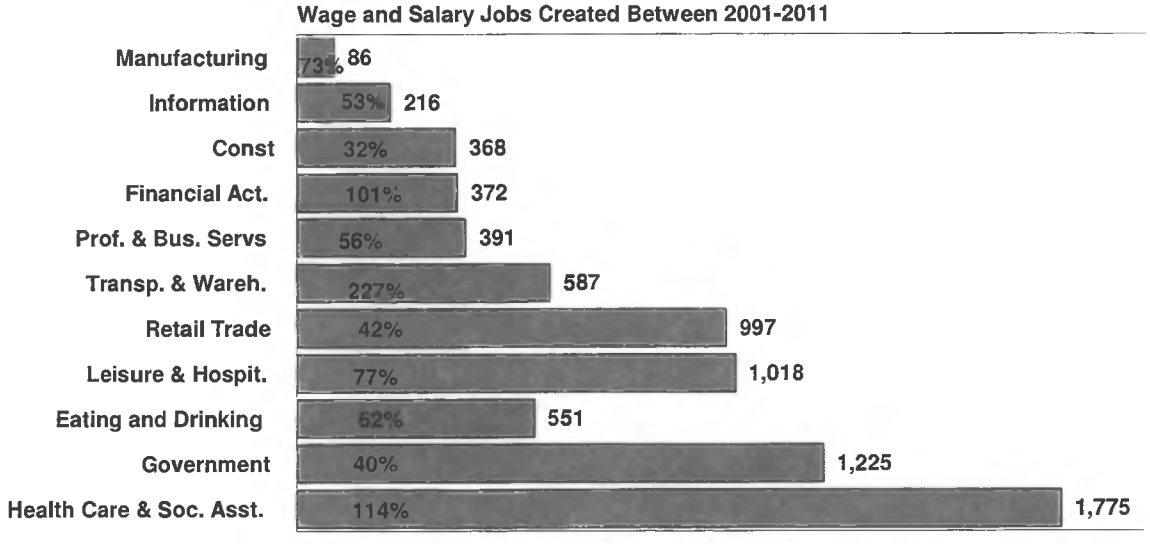


*From Neal Fried

*Preliminary, based on first 6 months

Sources: Alaska Department of Labor and Workforce Development, Research and Analysis

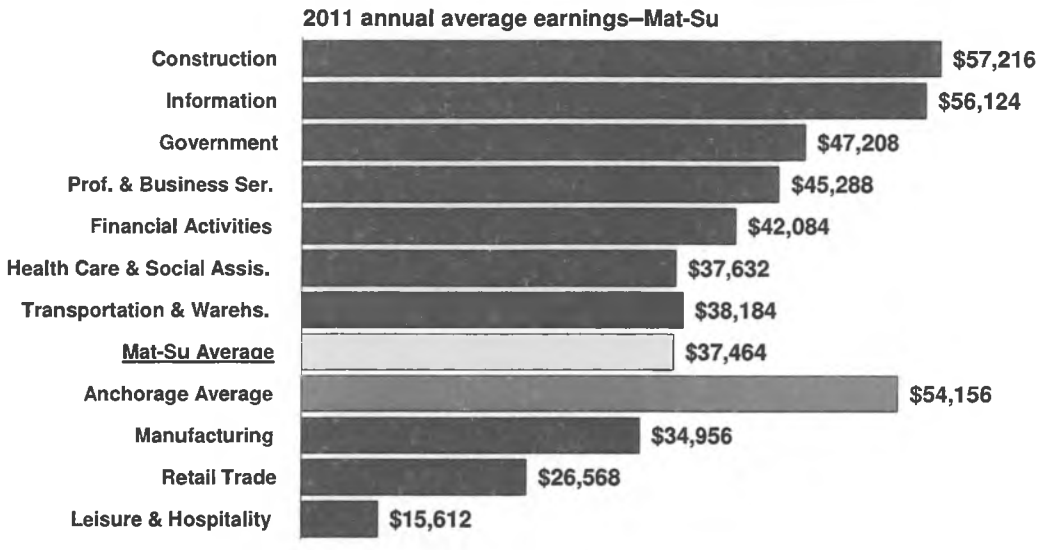
Where The Jobs Were Created In The Mat-Su During The Past Decade (7,400 in all)



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section.

*From Neal Fried

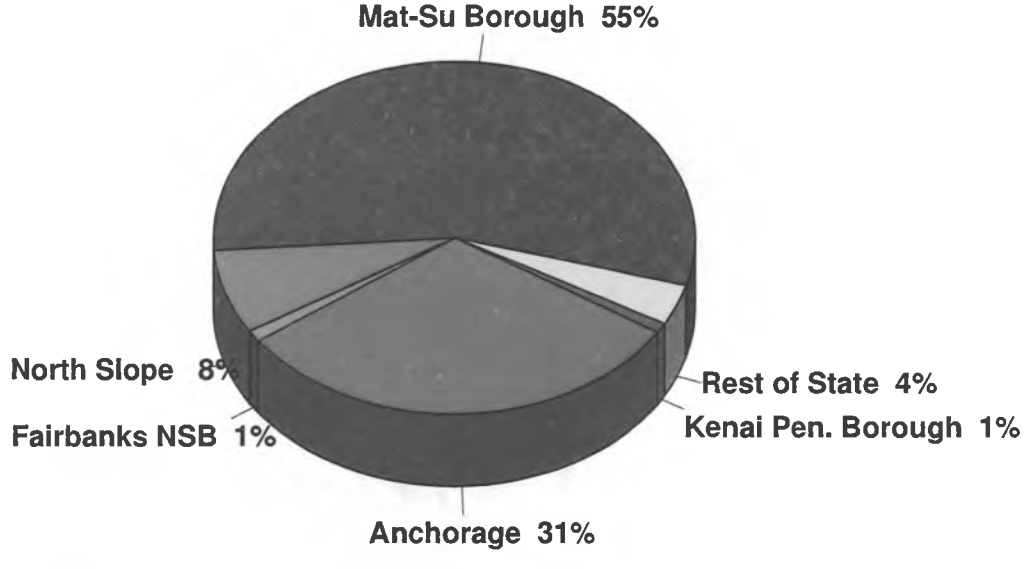
How the Mat-Su's Average Annual Earnings Stack Up



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section.

*From Neal Fried

Where Mat-Su Residents Work

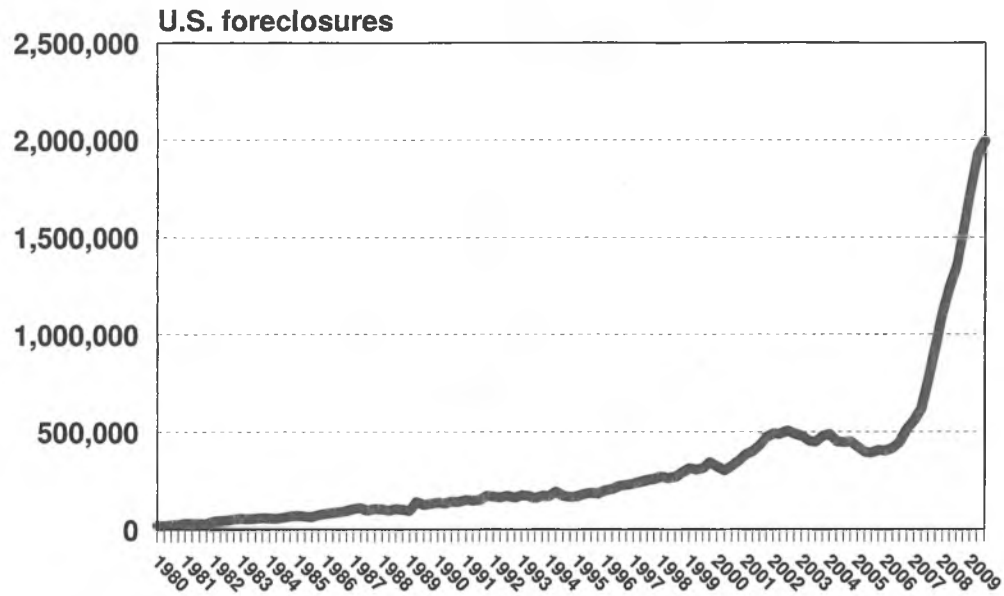


[1]Excludes uniformed military, federal and self-employed workers, 2010.

Sources: Alaska Department of Labor and Workforce Development, Research and Analysis

*From Neal Fried

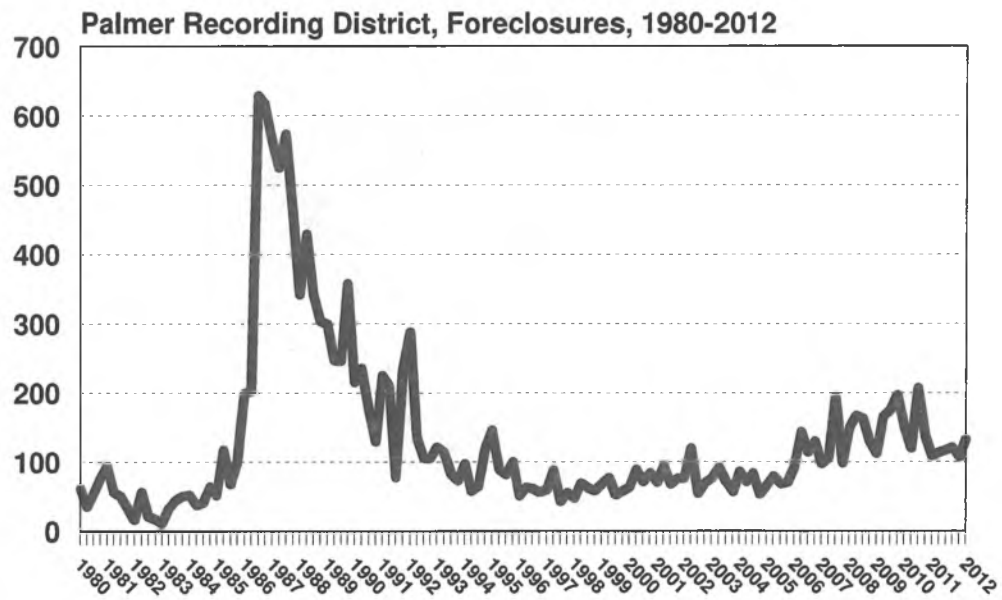
The U.S. Story



*From Neal Fried

Sources: Mortgage Banking Association.

Foreclosures, Up A Little But Nothing Like The 80s



*From Neal Fried Sources: Alaska Department of Natural Resources and Alaska Department of Labor and Workforce Development, Research and Analysis.

So… where does all of this good news come from?

2012 Oil Tax Revenue Impact

SOA Revenue	**$13,600,000,000**
Oil = 72%	**$9,792,000,000**
Households	**253,000**
Oil Tax Revenue / Household	**$38,704**
Residents	**725,000**
Oil Tax Revenue / Individual	**$13,506**

What if Oil Tax Revenue Was Cut 25% and Replaced by Another Tax?

Need	**$9,792,000,000**
Revenue	**$7,344,000,000**
Shortfall	**$2,448,000,000**
Households	**253,000**
Taxes per household	**$9,676**
Individuals	**725,000**
Taxes per individual	**$3,377**

What is the MatSu Borough doing about all of this?

MATANUSKA-SUSITNA BOROUGH, ALASKA

Economic Development Strategic Plan

Prepared for:

The Mat-Su Borough



Prepared by:

T·I·P STRATEGIES, INC

APRIL 22, 2010

MSB Economic Development Plan Workgroups

Goal #1
Position Mat-Su for sustainable economic growth and vitality

- Strategy 1A: Develop professional & technical services sector
- Strategy 1B: Support the local expansion of the healthcare and education sectors
- Strategy 1C: Support the retention and expansion of existing businesses in the Borough
- Strategy 1D: Pursue developing opportunity sectors
- Strategy 1E: Promote entrepreneurship and small business development
- Strategy 1F: Support the preservation and expansion of the agricultural sector in the Borough
- Strategy 1G: Promote the sustainable development of Mat-Su's natural resources

Goal #2
Build capacity to conduct economic development within the Borough

- Strategy 2A: Expand internal resources for economic development
- Strategy 2B: Establish a Borough-wide business partnership to support economic development
- Strategy 2C: Expand regional economic development cooperation
- Strategy 2D: Link sub-regional economic plans to the MSB Economic Development Plan
- Strategy 2E: Develop the sport fishing& hunting business sectors for sustainable growth and stability.

Goal #3:
Expand Mat-Su's economic development infrastructure

- Strategy 3A: Continue developing multimodal transportation and industrial infrastructure at Port MacKenzie
- Strategy 3B: Increase the availability of commercial and industrial land
- Strategy 3C: Continue expanding basic tourism infrastructure
- Strategy 3D: Continue improving and expanding Mat-Su's transportation system
- Strategy 3E: Support the expansion and enhancement of technology infrastructure and services in the Borough
- Strategy 3F: Support the expansion and enhancement of the aviation infrastructure and industry in the Borough?

Goal #4
Attract, retain, and engage talent

- Strategy 4A: Expand business and education partnerships
- Strategy 4B: Retain and engage military veterans and retirees.
- Strategy 4C: Leverage post-secondary instruction and research activities

Goal #5
Raise awareness of economic development opportunities

- Strategy 5A: Initiate a local campaign to promote a more positive image of Mat-Su
- Strategy 5B: Enhance the image of Mat-Su throughout Southcentral Alaska
- Strategy 5C: Increase tourism marketing efforts
- Strategy 5D: Leverage tourism marketing for talent attraction, entrepreneurship, and economic development
- Strategy 5E: Focus on quality development to improve the appearance of the Borough's built environment

ACTIVE WORKGROUPS

02/15/2013

2012 ALASKA TAX MODEL COMPARISON

Property***	MSB	Wasilla	Palmer*	Houston*	FNSB	Fairbanks*	Juneau	Anchorage
Real Estate & Business Property	0.9956%	0.9956%	1.2956%	1.296%	1.297%	1.724%	1.051%	1.572%
Property Tax Score	1	1	3	4	5	7	2	6
Business Assets								
Infrastructure? (aka: Personal Property)	No	No	No	No	No	No	Yes	Yes
Inventory?	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Exempt $	$1,000,000	$1,000,000	$1,000,000	$1,000,000	N/A	N/A	$100,000	$20,000
Tax on $50K of Infrastructure?**	$0	$0	$0	$0	N/A	N/A	$526	$786
Tax on $500K of goods?	$0	$0	$0	$0	N/A	N/A	$4,204	$7,546
Total Asset Tax Burden	$0	$0	$0	$0	N/A	N/A	$4,730	$8,332
Asset Tax Score	2	2	2	2	1	1	3	4
Commerce								
Sales Tax	0.00%	2.00%	3.00%	2.00%	0.00%	0.00%	5.00%	0.00%
Purchase Cap	N/A	$500.00	$1,000.00	$500.00	N/A	N/A	0.00	N/A
Commerce Tax Score	1	2	3	2	1	1	4	1
Tourism								
Bed	5.00%	5.00%	5.00%	5.00%	8.00%	8.00%	7.00%	12.00%
Car Rental	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%
Marine Passenger Fee	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	$5.00	0.00%
Tourism Tax Score	1	1	1	1	3	3	2	4
A&T Taxes								
Alcohol	0.00%	0.00%	0.00%	0.00%	5.00%	5.00%	3.00%	0.00%
Tobacco	5.50%	5.50%	5.50%	5.50%	8.00%	8.00%	$1.00	$1.48
Wholesale Value of Tobacco/non Cigarette	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.00%
A&T Tax Score	1	1	1	1	3	3	2	5
Overall Score	6	7	10	10	13	15	13	20
Business Friendly Rank	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***

Rank: #1 Most Friendly - # 8 Least Friendly
Taxes in $ are per sales unit

*Borough and City rate combined
** Assumes 100% of exemption used on inventory
*** There is a wide variation in services delivered. Some jurisdictions may have additional fees.



What are some strategies the SOA can use to prepare for a Post Oil Economy?

Strategies

- Invert the business model / paradigm
- Learn lessons from the past
- Keep a state wide focus
- Manage for Abundance
- Reasonable Tax & Permitting Policies

Invert the business model / paradigm

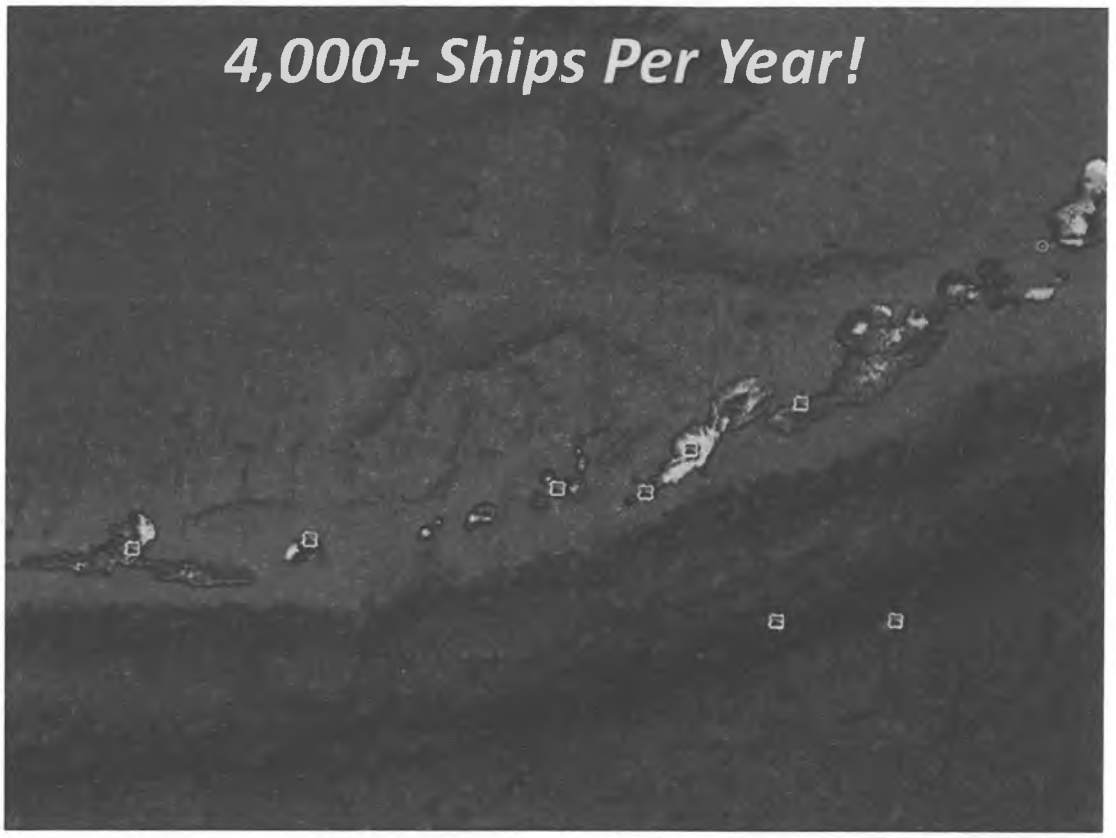
That phrase again… "Economies of Scale"

- Accept that, as is, Alaska does not have an consumer population large enough to support most industries.
- Move on from using the Alaska consumer model.
- ***Think Global!*** Use the global export market as the consumer "economy of scale" model, with Alaskan consumers getting their share.

Alaska's Competitive Advantages in Asia

- Proximity to… Hong Kong
  - Los Angeles = 7,253
  - San Francisco = 6,939
  - Seattle = 6,381
  - Vancouver = 6,367
  - Prince Rupert = 5,994
  - **Pt. Mac/Anchorage = 5,083 - 30% Closer Than LA!**

4,000+ Ships Per Year!



- Joint Ventures w countries of SOA for agricultures
- ANWR

2000 Cargo Aircraft Per Month!

- DOW Shell Consortium petrochemical
- ARDOR



- WS Dam
-

Agriculture

Pork



- **Ractopamine Free Pork**
- **Absence of Swine Diseases**

Vegetables



- **Alaska Pure – *this is a biggie!***
- **Alaska Sweet**
- **We grow best what Asians like**

Ractopamine - $600 Million Loss

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U.S. Meat Exporters Call Russia Ban 'Significant' Sales Loss

By Elizabeth Campbell - Feb 7, 2013 12:56 PM GMT-0500

0 COMMENTS

Russia's proposed ban on U.S. meat exports next week will mean a "signific business in a market that was the sixth largest for beef sales, an industry gr

The sales halt set to start Feb. 11 will be "a hard kick in the you-know-what," U.S. Meat Export Federation's chief executive officer, told reporters today at conference in Tampa, Florida. Russia imposed the ban on U.S. pork and bee month that the meats may contain a feed additive known as ractopamine, wi lean muscle in livestock.

"The loss in Russia is significant," Seng said. "This is a regrettable situation was hopeful that we could have improved relations with Russia, especially ir

Banned in 160 Nations... Yet U.S. FDA Regards it as Safe?

March 06, 2010 | 121,730 views | + Add to Favorites

2,015 | 19 | 6 | 791 | 2 | 1.6k

Share | Tweet | Pin it | Share | +1 | Email | Print

A livestock drug banned in 160 nations and responsible for hyperactivity, muscle breakdown and 10 percent mortality in pigs has been approved by the FDA.

The beta agonist ractopamine, a repartitioning agent that increases protein synthesis, was recruited for livestock use when researchers found the drug, used in asthma, made mice more muscular

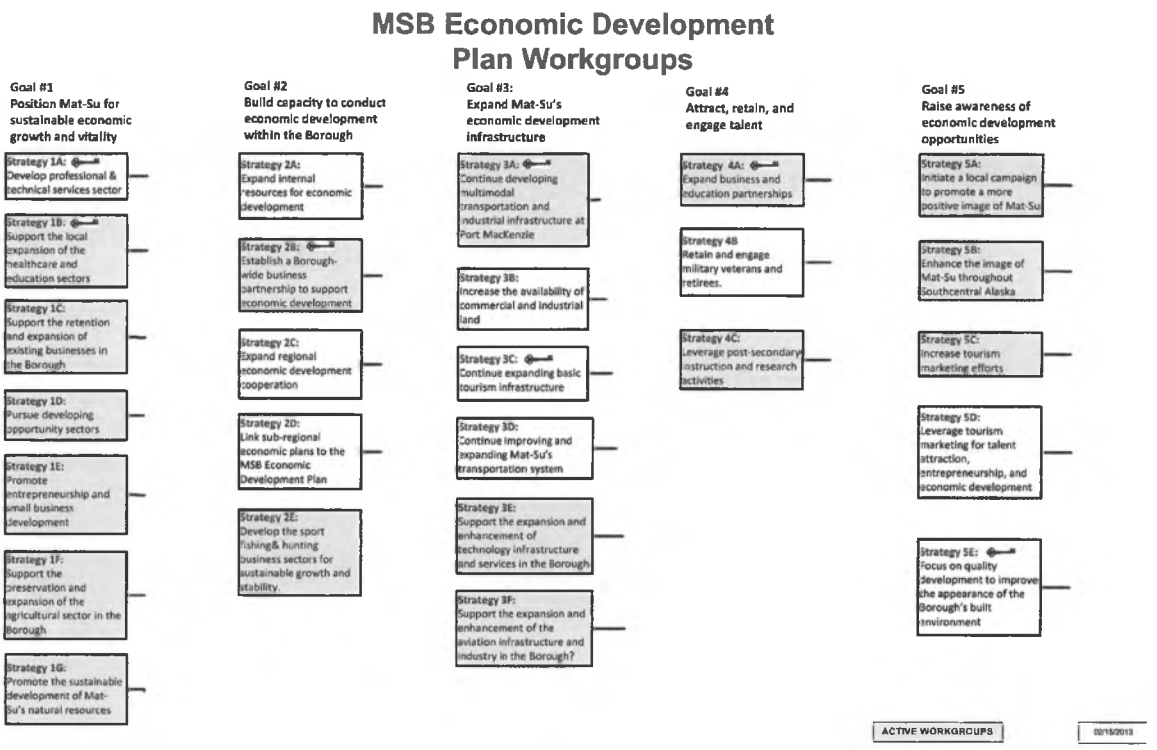


Learn Lessons From the Past

- Study Successes
  - Clean natural resource development
  - Seafood Marketing
- Analyze Failures
  - Dairy
  - Grain
- Alaska's share – *In-Kind?*

Keep an *Alaska Wide* Focus – How?

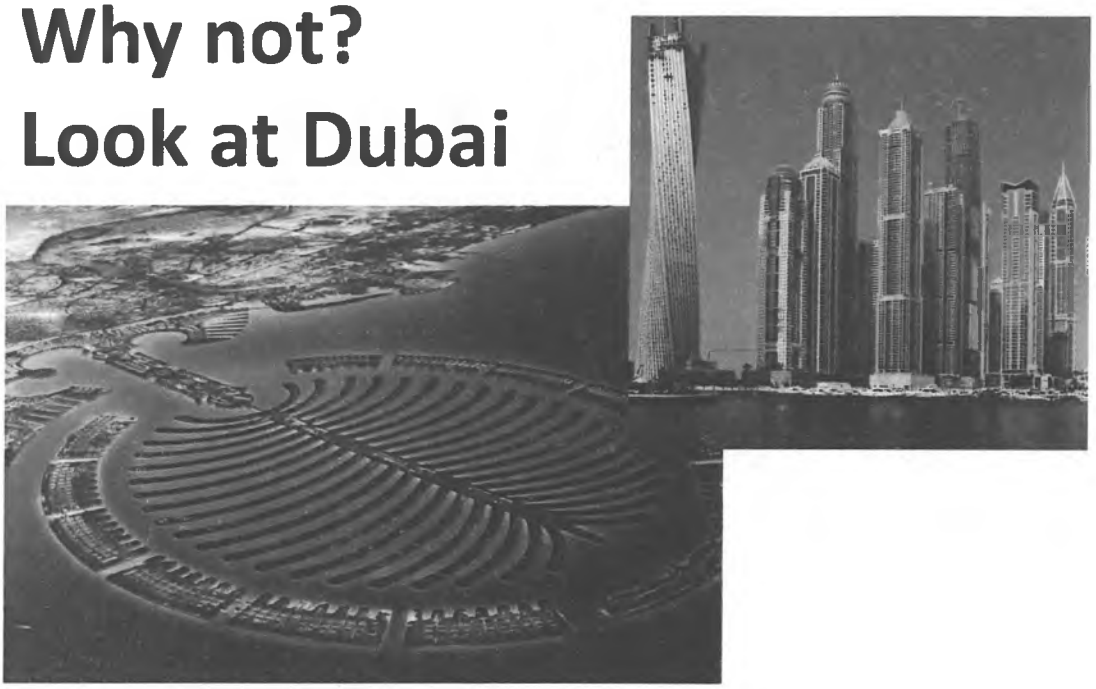
- Think of Alaska as a Country. The Lower 48 does!
- Make a State Wide Econ. Dev. Plan
- Grass roots buy-in is a *MUST*.
- Remember- it is not the SOA's plan. ***It belongs to the private sector.***
- Economic plans from the State to the local level need to follow the same formatting to assist roll-up/ drill-down reporting.



Invest in Abundance

- **4,260,810,716 Asian/Middle Eastern consumers right now.**
- **300,000,000 new consumers will be born in Asia in the next five years.**
- **Alaska has *MASSIVE* capacity to produce both renewable and non-renewable products for these markets.**

Can it happen here?
Why not?
Look at Dubai



Reasonable Tax & Permitting Policies

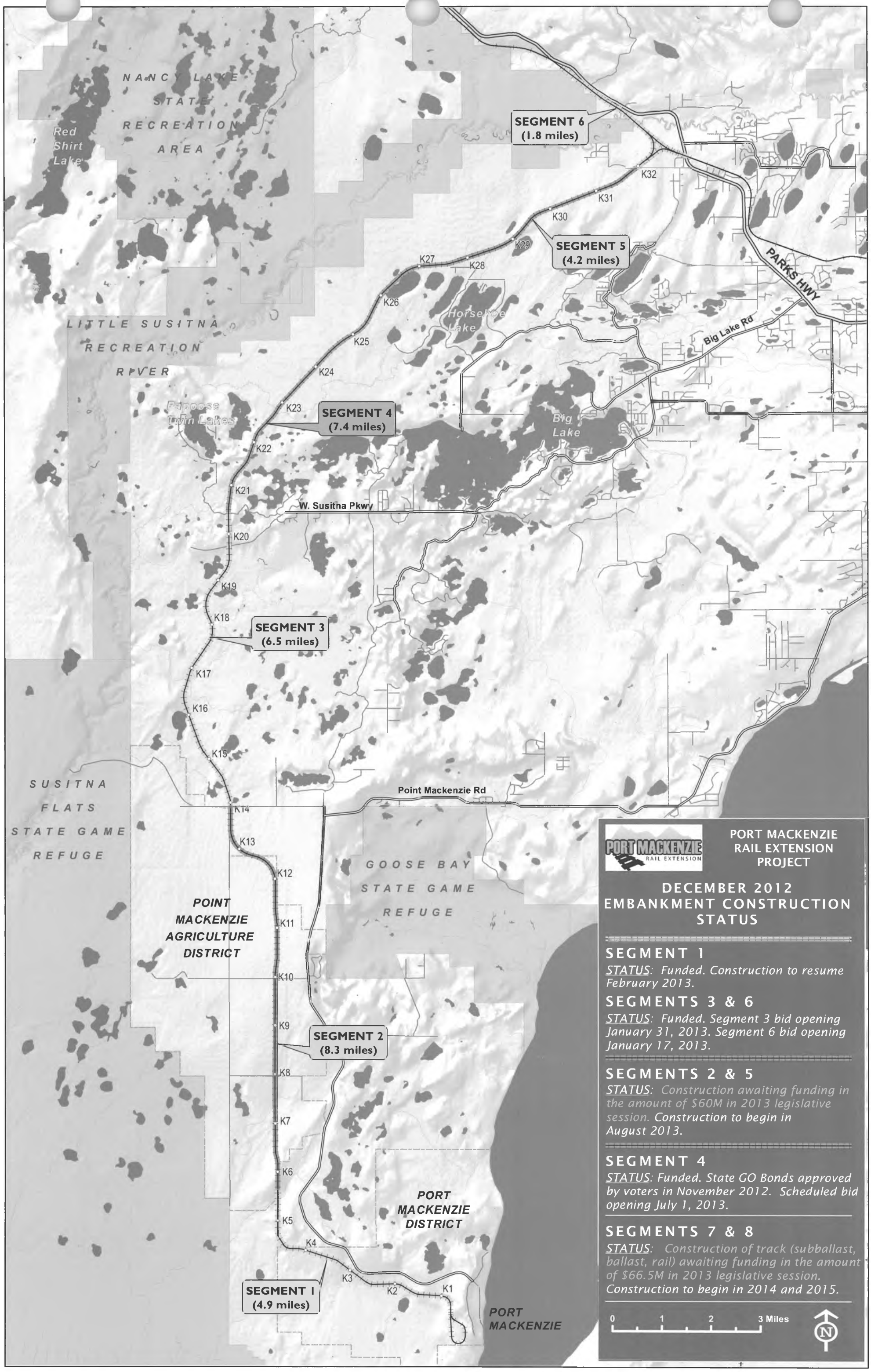
- Jobs are a product of profits
- Investment is a product of good prospects
- North Dakota vs. Alaska – 57% vs. 77%
- Set aside non-renewable revenue to build a renewable future.
- One Stop Permitting

Alaska's

Port MacKenzie

Rail Project

Thank You!



PORT MACKENZIE RAIL EXTENSION PROJECT

DECEMBER 2012 EMBANKMENT CONSTRUCTION STATUS

SEGMENT 1

STATUS: Funded. Construction to resume February 2013.

SEGMENTS 3 & 6

STATUS: Funded. Segment 3 bid opening January 31, 2013. Segment 6 bid opening January 17, 2013.

SEGMENTS 2 & 5

STATUS: Construction awaiting funding in the amount of $60M in 2013 legislative session. Construction to begin in August 2013.

SEGMENT 4

STATUS: Funded. State GO Bonds approved by voters in November 2012. Scheduled bid opening July 1, 2013.

SEGMENTS 7 & 8

STATUS: Construction of track (subballast, ballast, rail) awaiting funding in the amount of $66.5M in 2013 legislative session. Construction to begin in 2014 and 2015.

0 1 2 3 Miles

N

Value Added Food Production Cluster

Stakeholders

- Food Retailers
- Farm Bureau
- AFPC Local Grown Workgroup
- Farm Union
- SOA Department. of Agriculture
- MSB EconDev Strategy 1F Workgroup
- The Farmers
- USDA
- AMBIT
- APGA
- Matsu Borough
- Cities in MSB

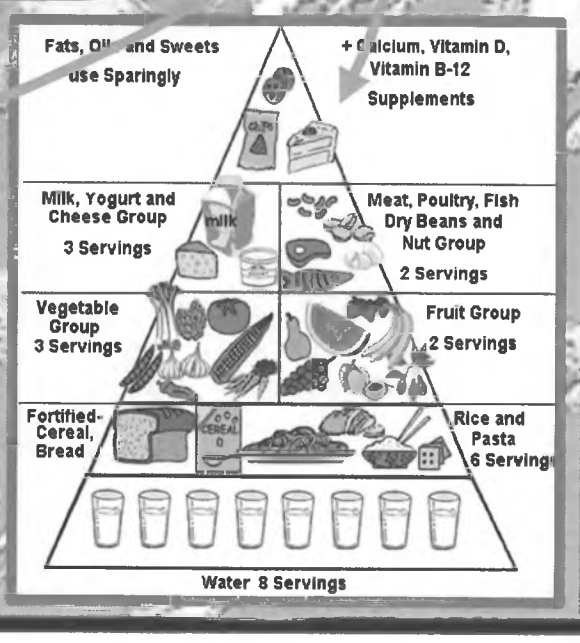
FAIRBANKS
Chena River
Nenana
Wheat
Barley
Canola
Delta Jct.
Animal Feed
Human Food
HEALY RIVER
DENALI PARK
Ag Lime
Denali National Park & Preserve
CANTWELL
Mt. McKinley
Susitna River
GOLD CREEK
Talkeetna River
Talkeetna Mountains
TALKEETNA
Hay
AMF Moose
Vegetables
Berries
Peonies
Cattle
Dairy Cows
Pigs
Chicken/ Turkey
WASILLA
Palmer
Port Mackenzie
Fish Meal
Exports
ANCHORAGE
Cook Inlet
Demand
Ship
Product Lines
Marketplace
SEATTLE RIDGE
PORTAGE
WHITTIER
TUNNEL
43 MILE PEAK
MOOSE PASS
SEWARD

Food Production Collaboration Engine

- Products Available
- Products Wanted
- Warehouse
- Fulfillment & Logistics

Food / Non- Food Products / Byproducts

- Animal Feed
- Cosmetics
- Bottled Water
- Fertilizer
- Nutraceuticals
- Fish Meal
- School Lunch
- Leather
- Charity Food
- Ag Lime
- Meals On Wheels
- Bio-Fuel & Methane



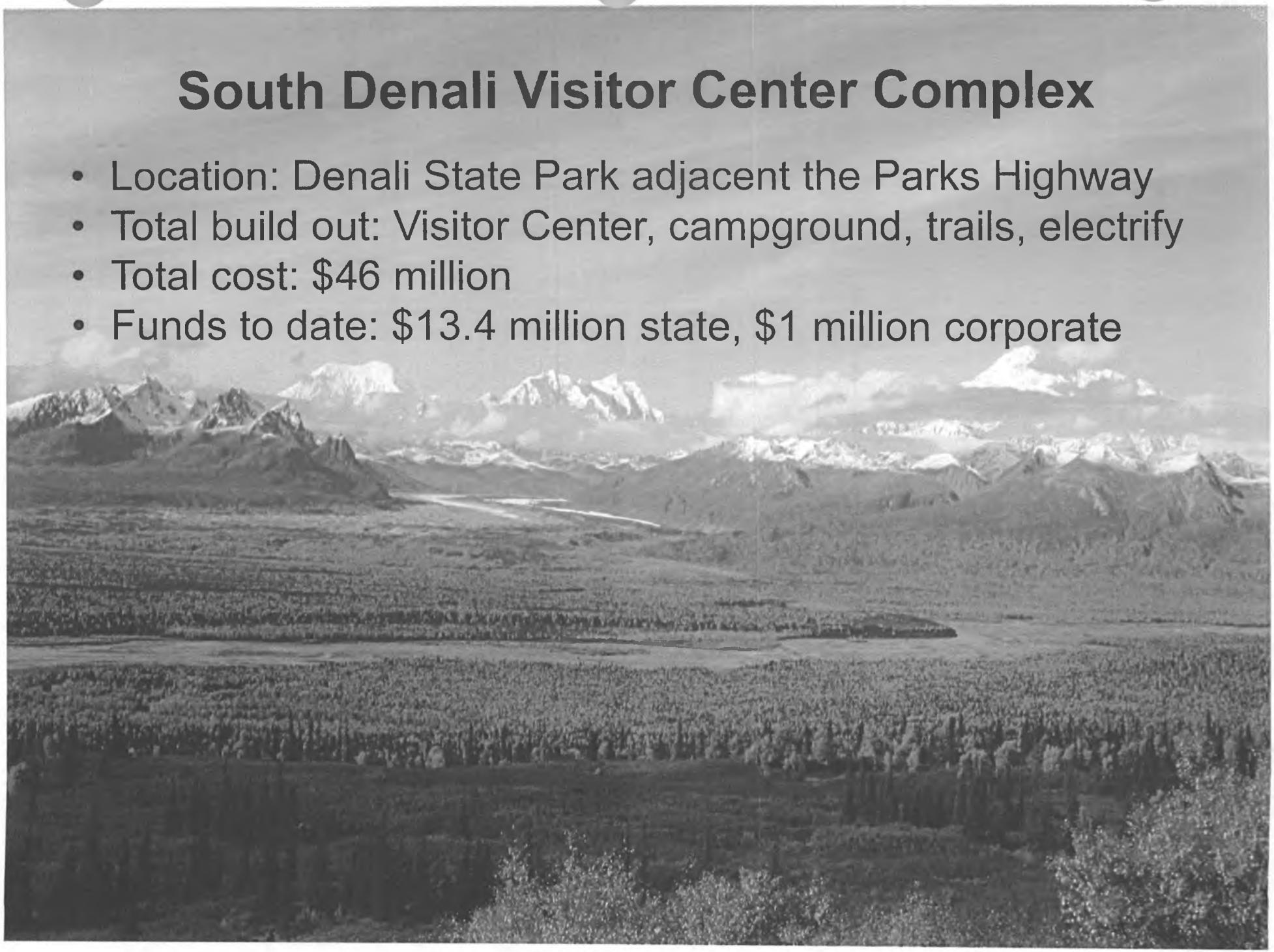
South Denali Visitor Center

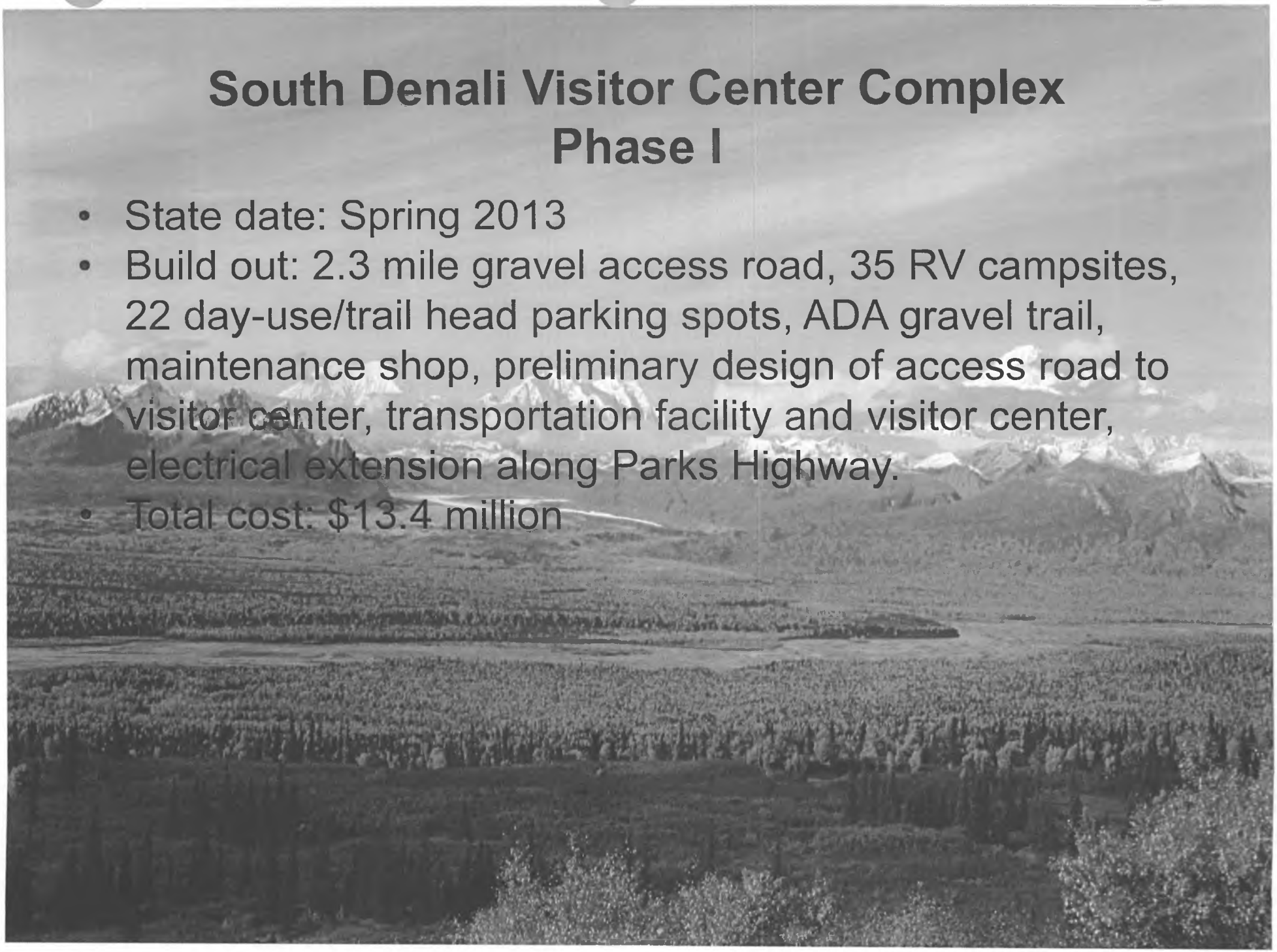
Ben Ellis, Director
Division of Parks and Outdoor Recreation
Department of Natural Resources

House Special Committee on Economic Development, Trade, and Tourism – March 19, 2013

South Denali Visitor Center Complex

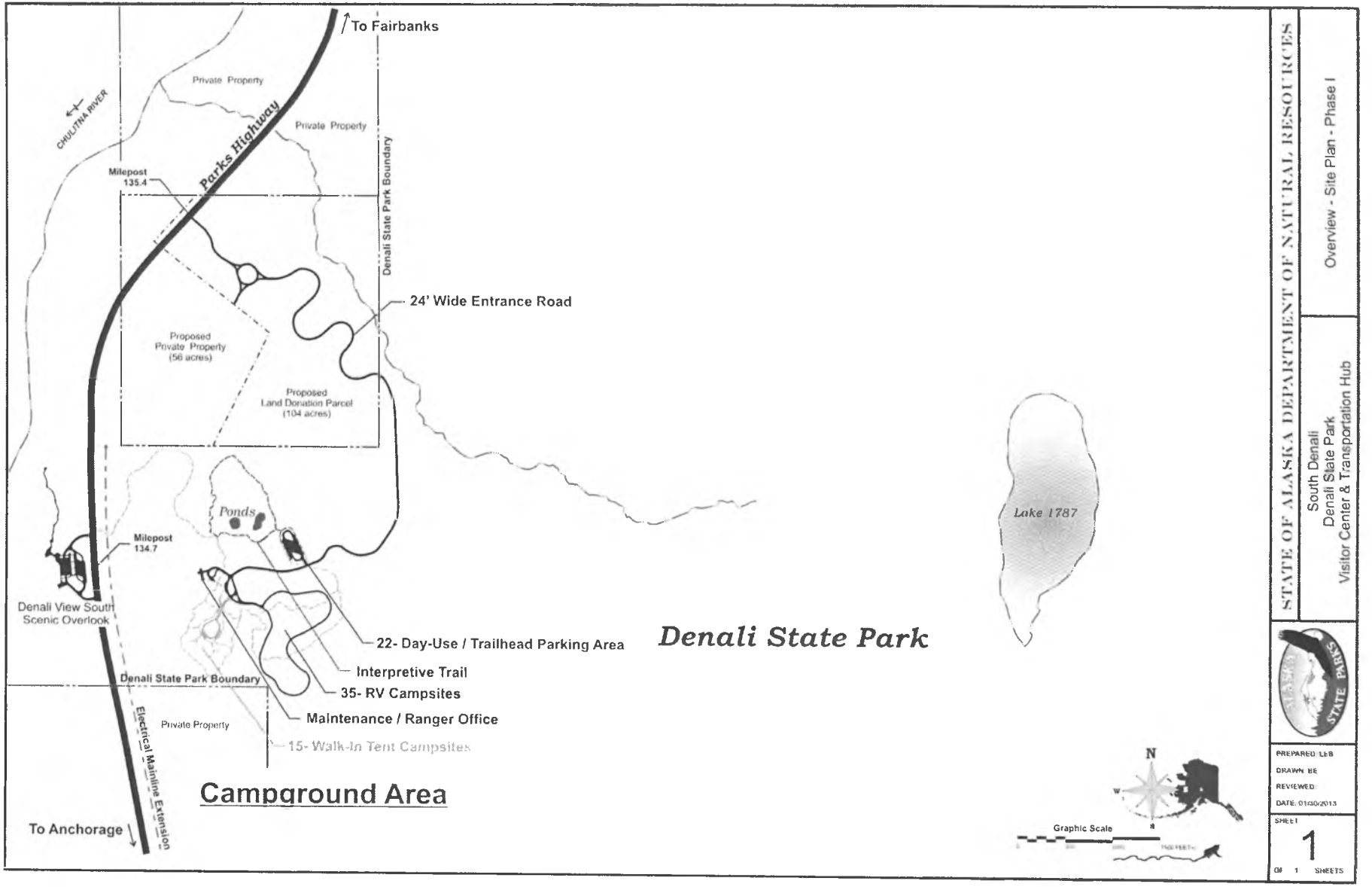
- Location: Denali State Park adjacent the Parks Highway
- Total build out: Visitor Center, campground, trails, electrify
- Total cost: $46 million
- Funds to date: $13.4 million state, $1 million corporate



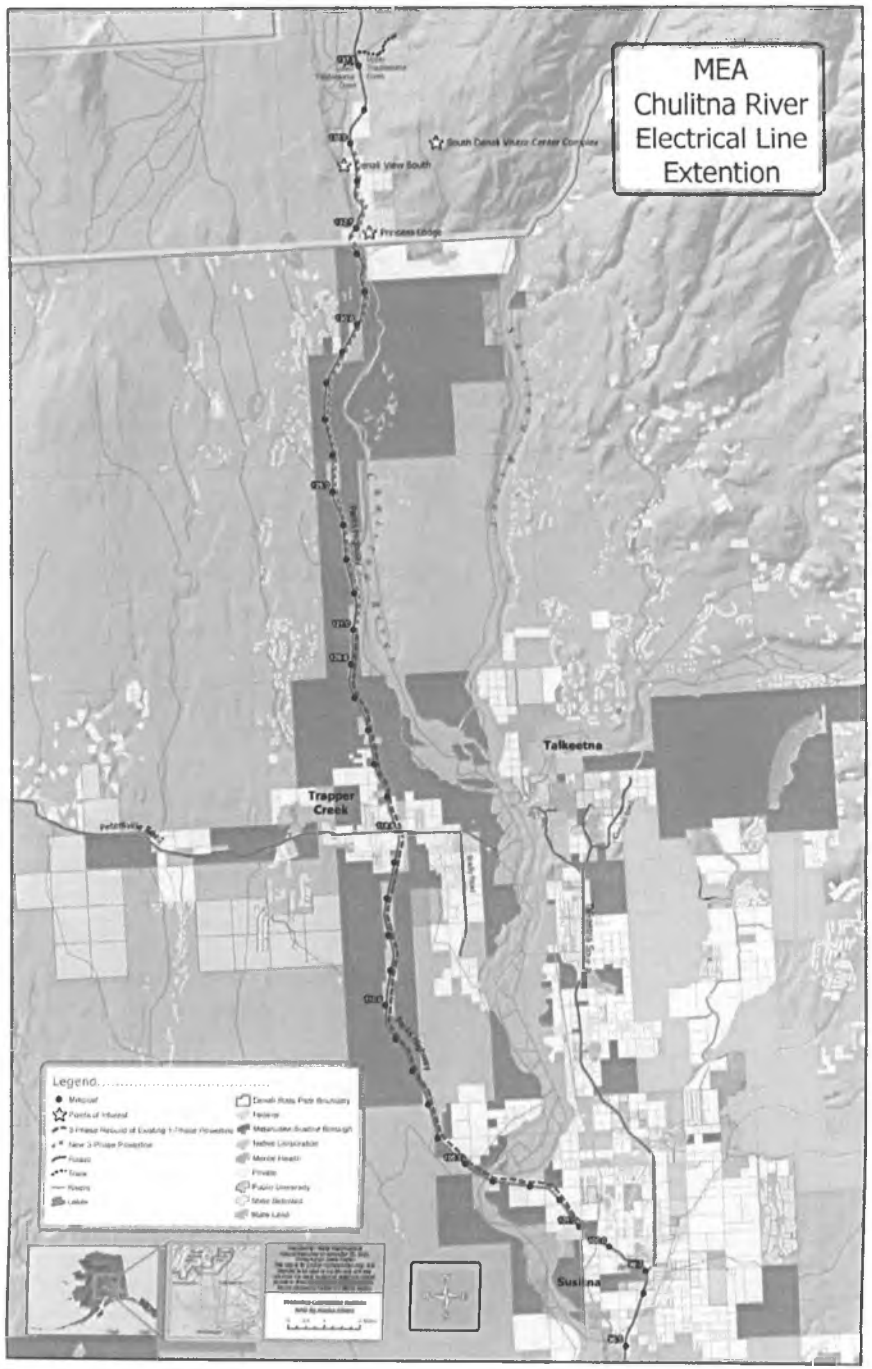


South Denali Visitor Center Complex Phase I

- State date: Spring 2013
- Build out: 2.3 mile gravel access road, 35 RV campsites, 22 day-use/trail head parking spots, ADA gravel trail, maintenance shop, preliminary design of access road to visitor center, transportation facility and visitor center, electrical extension along Parks Highway.
- Total cost: $13.4 million


To Fairbanks
Private Property
CHULITNA RIVER
Parks Highway
Private Property
Milepost 135.4
Denali State Park Boundary
24' Wide Entrance Road
Proposed Private Property (56 acres)
Proposed Land Donation Parcel (104 acres)
Ponds
Milepost 134.7
Denali View South Scenic Overlook
22- Day-Use / Trailhead Parking Area
Interpretive Trail
35- RV Campsites
Maintenance / Ranger Office
15- Walk-In Tent Campsites
Denali State Park Boundary
Private Property
Electrical Mainline Extension
To Anchorage
Campground Area
Denali State Park
Lake 1787
N
Graphic Scale
STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES
Overview - Site Plan - Phase I
South Denali
Denali State Park
Visitor Center & Transportation Hub
PREPARED: LEB
DRAWN: BE
REVIEWED:
DATE: 01/30/2013
SHEET
1
OF 1 SHEETS

Phase One

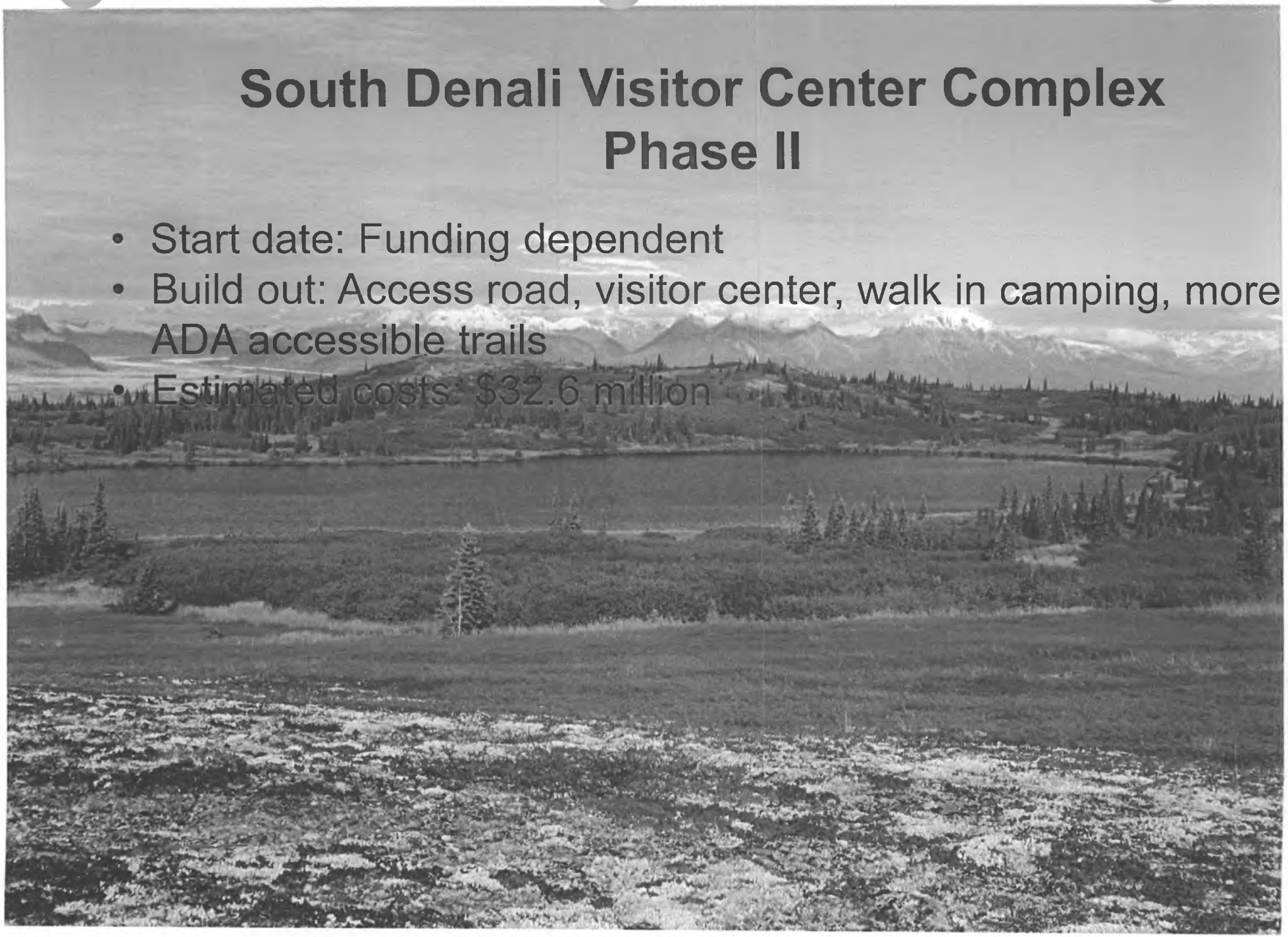


Benefits of Electrical Upgrade

- Upgrade from Single Phase to Three Phase power lines
- Provides community of Trapper Creek with Three Phase Power
- Extension of power from MP 121 to MP 135
- Energizes Parks Highway corridor

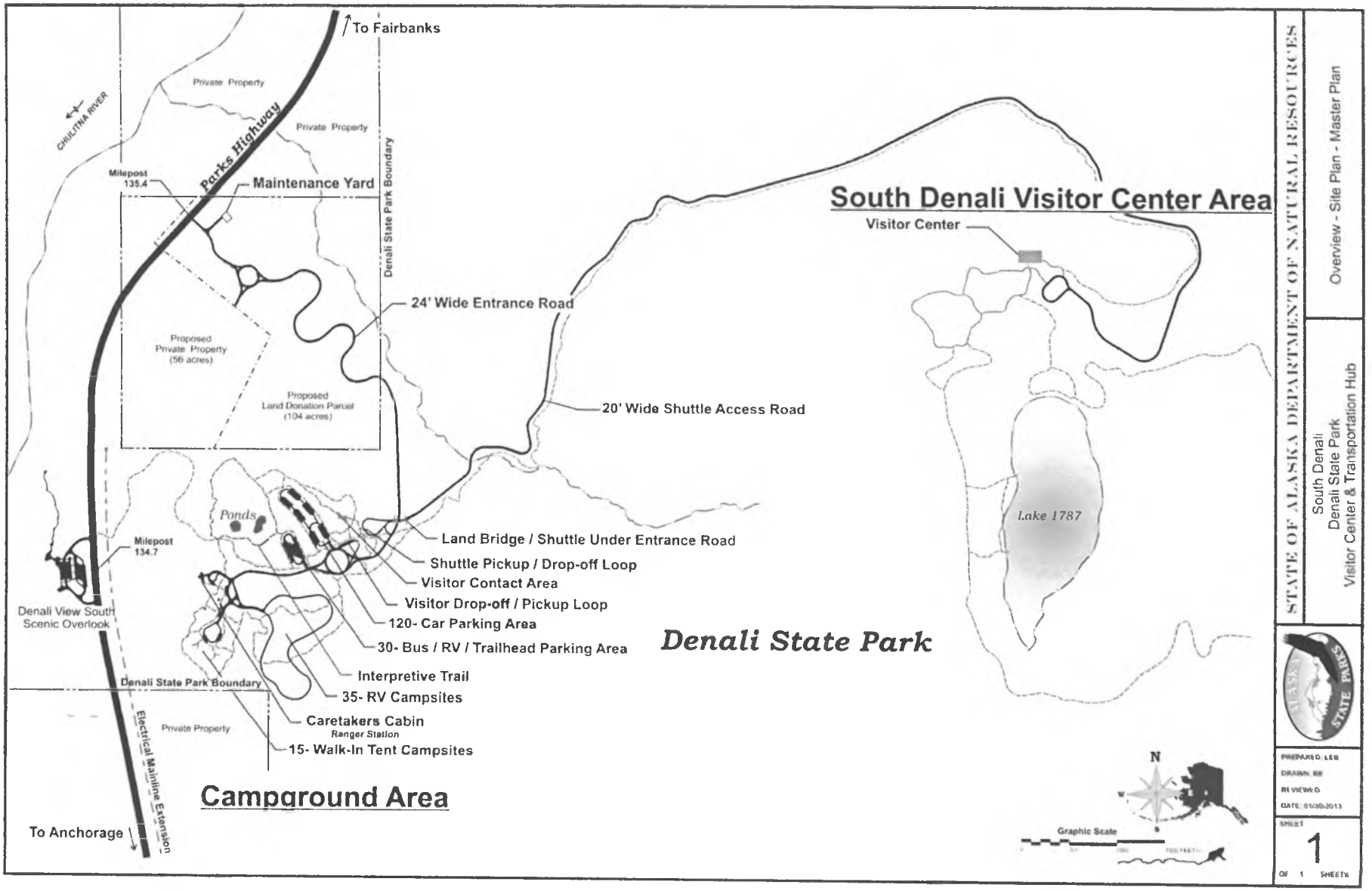
Payoff

- More tourism relate business opportunities



South Denali Visitor Center Complex Phase II

- Start date: Funding dependent
- Build out: Access road, visitor center, walk in camping, more ADA accessible trails
- Estimated costs: $32.6 million



Phase Two – Master Plan

Positive Economic Impacts

- Additional resident and non-resident visitor expenditures
- Tourism expenditures $17.8 million to $44.8 million per year
- Job creation – construction activities (116-213) and visitor services (221-549)
- Development of adjacent private lands supporting tourism growth

South Denali Economic Assessment, Institute of Social and Economic Research, University of Alaska January 2008


Thank you!
ben.ellis@alaska.gov

Economic Impacts of the South Denali Implementation Plan

prepared for:

National Park Service
and
Planning and Land Use Department,
Matanuska-Susitna Borough

prepared by:

Steve Colt
Nick Szymoniak
Institute of Social and Economic Research
University of Alaska Anchorage

in collaboration with:

Ginny Fay
EcoSystems
1101 Potlatch Circle
Anchorage AK

contact:
steve.colt@uaa.alaska.edu
907-786-1753

Final Report

February 2008

Abstract

This study estimates the economic effects of carrying out the South Denali Implementation Plan. The plan provides for construction of new visitor facilities in the South Denali Region. ISER economists used the IMPLAN input-output modeling system to project the jobs, income, and sales due to 1) initial construction activity; 2) ongoing operation and maintenance expenses; and 3) additional visitation and visitor spending attributable to the new facilities. The model results include the effects at the Mat-Su Borough and statewide Alaska levels. Local area impacts are also estimated.

Suggested Citation:
Colt, Steve, Fay, Ginny, Szymoniak, Nick. 2008. *Economic Impact of the South Denali Implementation Plan.* Prepared for the National Park Service, Denali National Park and Preserve and the Matanuska-Susitna Borough Planning and Land Use Department. Anchorage: University of Alaska Anchorage Institute of Social and Economic Research.

Acknowledgments

We thank:

Charlie Ball, John Shively and other cruise line executives, for information about future industry plans.

Dick Cattanach, Associated General Contractors of Alaska, for construction spending information.

Peter Fix, associate professor of economics at University of Alaska Fairbanks, for early results from the Alaska Resident Statistics Program.

Caryl McConkie, State of Alaska Office of Tourism Development, for Alaska Visitor Statistics Program data.

Dan Oberlatz, Alaska Alpine Adventures and Alaska Wilderness Recreation and Tourism Association, for input on visitor center impacts on small Alaska-based companies and potential use of the proposed facilities.

Brandon Walker, Bond Stephens & Johnson, for construction cost information.

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Executive Summary

The South Denali Implementation Plan (the Plan) calls for additional visitor facilities including buildings, parking areas, campgrounds and trails. The economic effects of implementing the plan include additional jobs, income, and sales resulting from five types of spending:

- spending by government for construction of public facilities;
- spending by private businesses for the construction of new travel related facilities;
- spending by government for facility operations and maintenance;
- spending by nonresident visitors to Alaska; and
- spending by Alaska residents.

The purpose of this study is to estimate these effects separately for the Matanuska-Susitna Borough economy and for the Alaska economy. The analysis considers a baseline or "current status" scenario with no new facilities and compares that baseline to two alternatives: a **high scenario** and a **medium scenario**.[1] The IMPLAN input-output economic model is used to translate direct spending into jobs and income and to calculate economic multiplier effects.

High scenario

The high scenario is based on full implementation of the Plan. Key assumptions include:

- The South Denali Visitor Center at Curry Ridge plus additional trails, campgrounds, and enhancements to the Petersville Road are built at a total cost of $46.0 million.
- Private sector investors spend $15 million on 75 new hotel rooms and an additional $15 million on other tourism facilities such as gas stations and restaurants
- The visitor center is staffed with a $551,000 annual payroll.
- Nonresident Visitors to Alaska spend an additional $30.9 million
- Alaska residents spend an additional $12.7 million in the Mat-Su Borough

The resulting economic impacts to the Mat-Su Borough under this scenario can be summarized as follows:

Jobs. Full implementation of the Plan, which includes the Curry Ridge Visitor Center as well as Parks Highway and Petersville Road enhancements, results in a net increase in the Matanuska-Susitna Borough of 403 construction jobs each year for three years and 669 annual on-going jobs from new non-resident and resident visitor spending and visitor center staffing and maintenance.

Income. These jobs translate into $21.3 million in construction sector annual income for three years plus $19.0 million annual on-going personal income.

Construction spending from full implementation of the plan equals $76 million -- $46 million in public spending plus $30 million of additional private sector investment. The private sector construction expenditures are expected to occur in a new development node in the vicinity of the new visitor center.

[1] See the Project Plan section on page 8 for more details on facilities.

New business development is likely to occur in the road corridor from the north boundary of Denali State Park south to Trapper Creek, the Y and Talkeetna. New visitation will require approximately 235 new overnight rooms, four or more restaurants, a general retail outlet and gas station. New car rental business activity would most likely be located in Anchorage.

Tourism growth. Full implementation of the plan is expected to result in 20% of current tourism visitors spending an additional day in the vicinity of the visitor center and a 20% increase in the number of cruise land tour visitors spending three days and two nights in the area.

Medium Scenario

The medium scenario is based on partial implementation of the Plan. Key assumptions include:

- The South Denali Visitor Center at Curry Ridge is built at a cost of $28.1 million.
- The visitor center is staffed with a $551,000 annual payroll.
- Nonresident Visitors to Alaska spend an additional $11.7 million
- Alaska residents spend an additional $880,500 in the Mat-Su Borough

The resulting economic impacts to the Mat-Su Borough under this scenario can be summarized as follows:

Jobs. Partial implementation of the Plan, which includes only the South Denali Visitor Center, results in a net increase in the Matanuska-Susitna Borough of 119 construction jobs each year for three years and 184 annual on-going jobs from new non-resident and resident visitor spending and visitor center staffing and maintenance.

Income. These jobs translate into $6.4 million in construction sector annual income for three years and $5.8 million annual on-going personal income related to increased visitation.

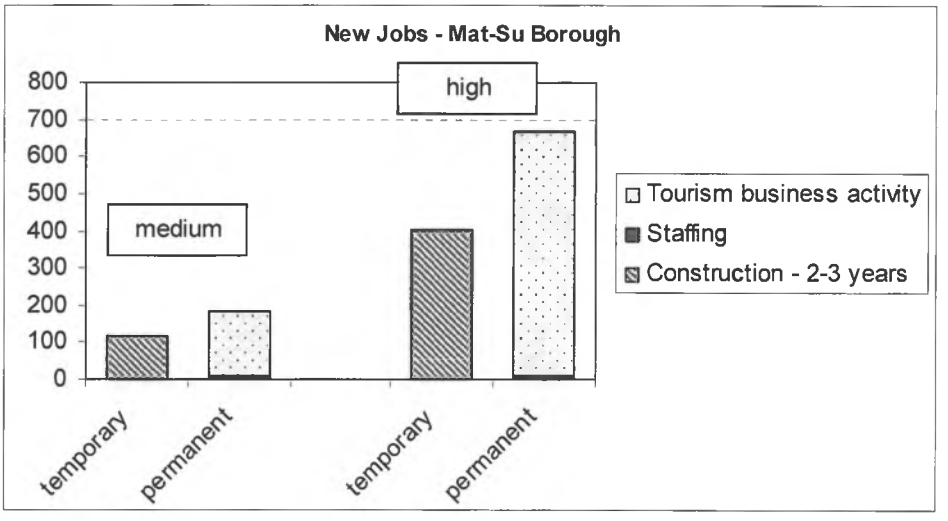
Construction spending under this scenario is $28.1 million in public funds.

New business development is likely to occur in the road corridor from the north boundary of Denali State Park south to Trapper Creek, the Y and Talkeetna but is likely to be more limited than under full implementation of the plan.

Tourism growth. Under this scenario the partial implementation of the Plan results in 20% of current tourism visitors spending an additional half-day in the vicinity of the visitor center and also a 10% increase in the number of cruise land tour visitors spending three days and two nights in the area.

Summary of jobs, income, and expenditures in the Mat-Su Borough

	Scenario	
	Medium	High
Employment (avg annual jobs)		
Construction (2-3 years)	**119**	**403**
Ongoing Activity, total	**184**	**669**
Visitor center staffing	9	9
Nonresident Visitor spending	159	478
Alaska resident traveler spending	16	182
Income ($ million per yr)		
Construction (2-3 years)	**6.4**	**21.3**
Ongoing Activity, total	**5.8**	**19.0**
Visitor center staffing	0.7	0.7
Nonresident Visitor spending	4.7	14.2
Alaska resident traveler spending	0.4	4.1
Expenditures / Output ($ million per yr)		
Construction (2-3 years)	**13.2**	**43.0**
Ongoing Activity, total	**14.0**	**47.9**
Visitor center staffing	1.3	1.3
Nonresident Visitor spending	11.5	34.8
Alaska resident traveler spending	1.2	11.8



Local Area Business Development

The local area for this analysis is defined as the highway corridor from the northern border of Denali State Park to Trapper Creek and the "Y" community, and including Talkeetna. Under the high scenario, the input-output model projects that additional visitor activity and spending will be sufficient to support the following new business development within the local area:

- $15 million spent on 75 new hotel rooms close to the visitor center to accommodate additional cruise-tour traffic.
- $15 million additional spent in the local area, at one or more small development nodes, on 40-60 additional hotel rooms (in addition to the 75 above); approximately 4 eating establishments, and approximately one gasoline station.

Under the medium scenario, spending increases are lower and we project that additional demand can be met by the expansion of activity at existing business establishments.

Estimated local area economic impacts are shown in the following table. These include between 95 and 322 short-run jobs driven by construction and between 94 and 337 ongoing jobs driven by tourism.

Summary of jobs, income, and new business development in the local development area

	Total Mat-Su impact		% of total in	Local area impact	
	Medium	High	local area	**Medium**	**High**
Employment (avg annual jobs)					
from Construction (2-3 years)				**95**	**322**
Visitor Facilities in the Plan	119	193	80%	95	154
Hotel rooms & other business construction	0	210	80%	0	168
from Ongoing Visitor Spending				**94**	**337**
Visitor center staffing	9	9	80%	7	7
Nonresident Visitor spending	159	478	50%	79	239
Alaska resident traveler spending	16	182	50%	8	91
Income ($ million per yr)					
from Construction (2-3 years)	6.4	21.3	**25%**	**1.6**	**5.3**
from Ongoing Activity				**1.4**	**4.7**
Visitor center staffing	0.7	0.7	25%	0.2	0.2
Nonresident Visitor spending	4.7	14.2	25%	1.2	3.5
Alaska resident traveler spending	0.4	4.1	25%	0.1	1.0

New business development (# built)	Local area impact	
(impacts of this new development are included above)	**Medium**	**High**
New hotel rooms	(existing	**115-135**
New restaurants	business	**4**
New gas station mini-marts	expands)	**1**

*Local Area is defined as highway corridor from the northern border of Denali State Park to Trapper Creek and the Y and including Talkeetna
Source: Mat-Su Borough total impacts from ISER IMPLAN model runs based on scenarios described in text. Allocations of impacts to local area are authors' assumptions.

Introduction

Visitation in the South Denali region continues to increase, requiring additional resident and non-resident visitor opportunities and new methods of management to protect natural and cultural resources and quality of life values in local communities. To address these needs, the State of Alaska, Matanuska-Susitna Borough (Mat-Su), and National Park Service developed the South Denali Implementation Plan to consider alternatives for the area. The Plan calls for additional visitor facilities including a new visitor center, parking areas, campgrounds and trails (see Map 1 at the end of this report).[2] The proposed facilities are at approximately mile 134 of the Parks Highway between Anchorage and Denali National Park. A new visitor complex would be constructed on approximately 4.1 acres at the highway site in Denali State Park. The total building requirement would be approximately 16,000 square feet. A facility this size could accommodate up to 300-400 people at a time. This analysis estimates the economic impacts of full and partial implementation of the South Denali Plan.

Economic Impact Analysis

The economic effects of implementing the plan include additional jobs, income, and sales resulting from five types of spending:

- spending by government for construction of public facilities;
- spending by private businesses for the construction of new travel related facilities;
- spending by government for facility operations and maintenance;
- spending by nonresident visitors to Alaska; and
- spending by Alaska residents.

The purpose of this study is to estimate these effects separately for the Matanuska-Susitna Borough economy and for the State of Alaska economy. We also estimate potential additional development in a local impact area or development node, which we define as the highway corridor from the northern border of Denali State Park to Trapper Creek and the "Y" and including Talkeetna.

An economic impact analysis traces the flows of spending associated with activity in a region to identify changes in sales, income, and jobs due to that economic activity. For this study the principal activities are construction, travel, and tourism. Economic impact assessments focus on actual flows of money into a region as contrasted with economic valuation or benefit-cost studies that generally measure willingness to pay and consumer surplus. Economic impact analysis measures benefits to the region, not the benefits to the visitors themselves.[3]

As a result, health, quality of life, enjoyment and other user benefits are not included in this analysis, which traces flows and impacts of spending in the economy. These user benefits, while not directly measured in this analysis, are clearly important, especially for local residents who will use the facilities. Because we are not attempting to quantify these benefits here, one might consider the numbers we do present as a conservative estimate of the overall social benefits of the project.

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[2] www.southdenaliplanning.com

[3] Stynes, Daniel J., 2005.*Economic Significance of Recreational Uses of National Parks and other Public Lands*, National Park Service, Social Science Research Review, Volume 5, Number 1, Winter 2005.

An input-output model is a representation of the flows of economic activity within a region. The model captures what each business or sector must purchase from every other sector in order to produce a dollar's worth of goods or services. Using an input-output model, in this case IMPLAN, flows of economic activity associated with a change in spending may be traced through the economy. By tracing these linkages between sectors, input-output models can estimate secondary effects of visitor spending, often captured in the form of multipliers.

Secondary effects of visitor spending are of two types: indirect and induced. Indirect effects are the changes in sales, income or jobs in sectors within the region that supply goods and services to the recreation/tourism sectors. The increased sales in linen supply businesses resulting from more lodging overnight stays is an indirect effect of visitor spending. Induced effects are the increased sales within the region from household spending of the income earned in the tourism and supporting sectors. Motel or park employees spend the income they earn from visitors on housing, utilities, and groceries. These represent induced effects of the visitor spending.

Multipliers capture the size of the secondary effects, usually expressed as a ratio of total effects to direct effects. Total effects are direct effects plus the secondary (indirect plus induced) effects. A sales multiplier of 2.0, for example, means that for every dollar received directly from a visitor, another dollar in sales is created within the region through indirect or induced effects.

The Project Plan

The South Denali Project Record of Decision and Environmental Impact Statement calls for the construction of *Alternative C: Parks Highway* of the South Denali Implementation Plan. We developed scenarios that describe changes in visitor patterns and spending and construction as a result of the new South Denali facilities.

The current status scenario assumes that no visitor center or South Denali related facilities are constructed. This scenario serves as a benchmark against which impacts can be measured.

Under the medium scenario, the South Denali Visitor Center at Curry Ridge is constructed at a cost of $28.1 million. No additional components of the Plan are implemented as part of this scenario.

The high scenario is based on full implementation of the plan at a total construction cost of $46.1 million. It includes the South Denali Visitor Center plus construction of the following additional facilities:

- Improve parking area/wayside at MP 121.5 and create new parking area at milepost 122 Parks Highway,
- Parking area near Rabideux Creek (west side of Parks Highway),
- Informational kiosk near Parks Highway/Petersville Road intersection,
- Non-motorized boat access near Troublesome Creek,
- Campground near Petersville Road near the Forks,
- Bike path along Petersville Road from milepost zero to seven,
- Turnouts at MP 12.8 and MP 16.3 of Petersville Road, and

- Redesign of Kroto Creek parking lot.

An overview map and map of full implementation of this alternative are shown in Maps 1 and 2 (following the text). Construction costs and annual staff employment and wage estimates are from the Final South Denali Implementation Plan and Environmental Impact Statement[4] and updated construction cost estimates of the total costs of full implementation of the plan are from the National Park Service.

Baseline Situation

The scenarios are built from baseline data about current travel and expenditure patterns. To develop this baseline, we used the following principal primary data sources:

- Summer 2006 Alaska Visitor Statistics Program (AVSP) Exit Intercept data file
- Discussions with cruise tourism industry participants and experts [5]
- Alaska Resident Statistics Program preliminary cross-tabulations
- ISER 1993 Angler Expenditure Survey

For the purpose of this study, we have defined the **local area** to be the highway corridor from the northern border of Denali State Park to Trapper Creek and the Y and including Talkeetna. Visitor facilities in this area include about 900 existing hotel rooms: 460 rooms at Mount McKinley Princess Wilderness Lodge, 212 rooms at the Talkeetna Alaska Lodge, and about 238 rooms in other smaller establishments. These represent almost 60% of the approximately 1,600 rooms in the Borough, of which 1,200 are open year-round.[6] Based on reported Mat-Su bed tax (5%) collections, these hotel rooms generated $12 million in revenues in 2007. By comparison, Anchorage hotel rooms generated approximately $147 million in revenues, based on their reported $11.8 million in bed tax (8%) collections.[7]

Non-Resident Visitors

There were about 1.6 million nonresident Visitors to Alaska during summer 2006. According to the AVSP data, approximately 28 percent of these nonresident Visitors (hereafter: "Visitors," with a capital "V") included an overnight stay at Denali National Park and Preserve as part of their Alaska experience. Another 5 percent were day visitors to Denali (Table 1). Expenditures by these Visitors to Denali NP and where they occur are shown in Table 2. We also obtained data on cross-Gulf of Alaska cruise passenger volumes directly from cruise companies. These data produce a slightly higher total number of estimated Denali overnight visitors (512,543). We used this higher number as the basis for building the scenarios described below.

It is important to remember that AVSP expenditures are reported by survey respondents as dollars per party per region visited. (Only a subsample of the full survey sample provides

[4] National Park Service, Denali National Park and Preserve, Denali National Park and Preserve Final South Denali Implementation Plan and Environmental Impact Statement, April 2006.
[5] Interview notes are available upon request.
[6] These room counts are based on data tabulated by the Mat-Su Convention and Visitors' Bureau for the "McKinley Country" region, which is slightly larger than the local area defined here.
[7] Alaska Taxable, 2007. http://www.commerce.state.ak.us/dca/osa/assessor.cfm

expenditure data.) Expenditures expressed as $ per person per day are derived from overall totals. For this study we rely heavily on two of these numbers: First, the average spending while in Alaska of Visitors who spent at least one night visiting Denali NPP was $132 per person per day. Second, the average spending while in Alaska of Visitors who visited Denali NPP but did not spend a night there was $90 per person per day.

We used the expenditure data specific to particular regions to adjust the spending *patterns* in developing our scenarios. For example, AVSP data shows that people who visited Talkeetna spent a significant portion of their money on tours. This relatively heavy spending fraction is reflected in how the $90/person/day figure for day visitors is allocated across industries when it is input to the economic model.

Table 1. Characteristics of Denali National Park and Preserve overnight and day nonresident Visitors, Summer 2006

	Denali National Park	
	Overnight	**Day visitor**
Number of visitors	456,820	81,575
% of total AK visitors	28%	5%
mean # nights @ Denali NP	2.9	
Frequency of nights stayed	**Percent**	
1	10.3	
2	34.5	
3	31.0	
4	10.3	
5	3.4	
6	10.3	
Exit mode	**Percent**	
Domestic air	49.7	56.5
International air	18.8	17.4
Ferry	5.4	6.5
Cruise ship*	13.2	3.3
Highway	12.9	16.3
Male	53.1	60.9
Female	46.9	39.1
Retired?		
Yes	50.9	46.7
No	47.6	52.2
Children living in household		
Yes	18.7	18.5
No	79.9	80.4
Average age (years)	56	55
Average party size	2.4	2.2
Average length stay- days	13.5	12.7

Source: Alaska Department of Commerce, Community and Economic Development, Alaska Visitor Statistics Program V, data file, 2007.
*As these are cross Gulf cruises, they fly one way and cruise the other. The actual percentage of overnight visitors on land tours that are cruise passengers is 26.4%.

Table 2. Expenditures by Denali National Park and Preserve overnight and day Visitors, Summer 2006

Persons who visit Denali National Park		
In-State Expenditures	**Overnight**	**Day visitor**
Total Alaska per party	$4,279	$2,512
Total Alaska per person	$1,783	$1,142
Total Alaska per person per day	$132	$90
Total Alaska per party per day	$317	$198
Expenditures per party by location		
Denali-Healy-Cantwell average		
Lodging	$180	$0
Tours	$156	$61
Gifts/Souvenirs/Clothing	$62	$14
Food-beverages	$84	$14
Rental cars-fuel-transp.	$28	$6
other	$60	$0
Total	$569	$96
Portion total Alaska trip expenditures	13%	4%
Denali per party per day exp.	$196	$96
Half day increase	$98	$48
Talkeetna average		
Lodging	$93	$158
Tours	$147	$75
Gifts/Souvenirs/Clothing	$36	$30
Food-beverages	$60	$77
Rental cars-fuel-transp.	$13	$125
other	$0	$12
Total	$349	$476
Portion total Alaska trip expenditures	8%	19%
Palmer-Wasilla average		
Lodging	$60	$55
Tours	$14	$6
Gifts/Souvenirs/Clothing	$17	$31
Food-beverages	$54	$62
Rental cars-fuel-transp.	$71	$60
other		$0
Total	$216	$213
Portion total Alaska trip expenditures	5%	8%
Anchorage		
Lodging	$267	$265
Tours	$52	$74
Gifts/Souvenirs/Clothing	$118	$101
Food-beverages	$140	$168
Rental cars-fuel-transp.	$396	$376
other	$91	$157
Total	$1,063	$1,141
Portion total Alaska trip expenditures	25%	45%

Source: Alaska Department of Commerce, Community and Economic Development, Alaska Visitor Statistics Program V, data file, 2007.
Notes: These are per party expenditures for surveyed non-resident Visitors who visited Denali NP during summer 2006.

Figure 1. Alaska in-state expenditures by Denali National Park and Preserve Visitors, Summer 2006

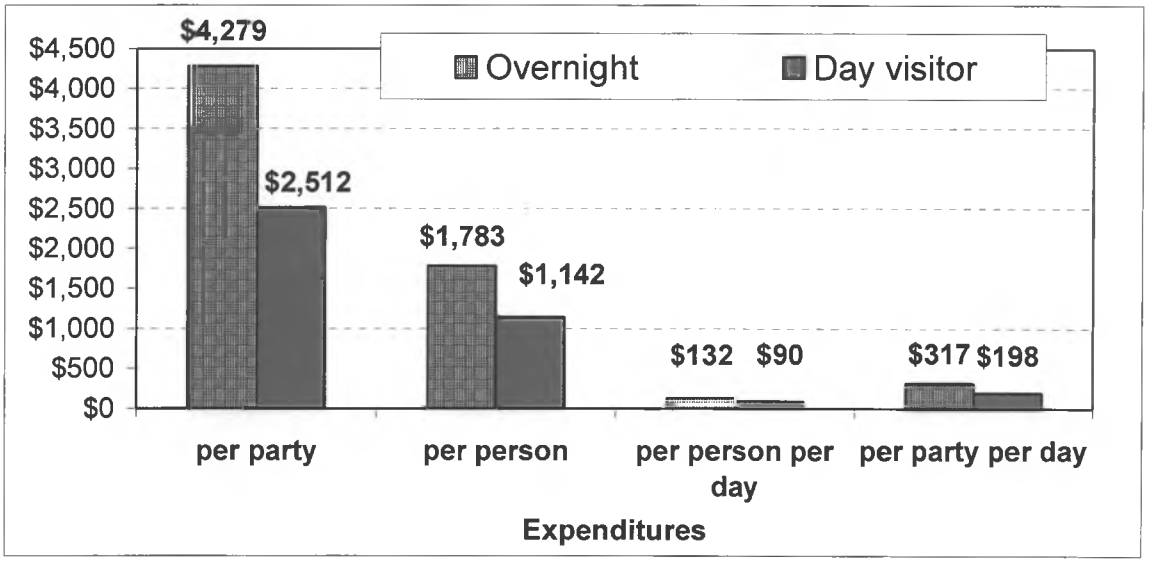
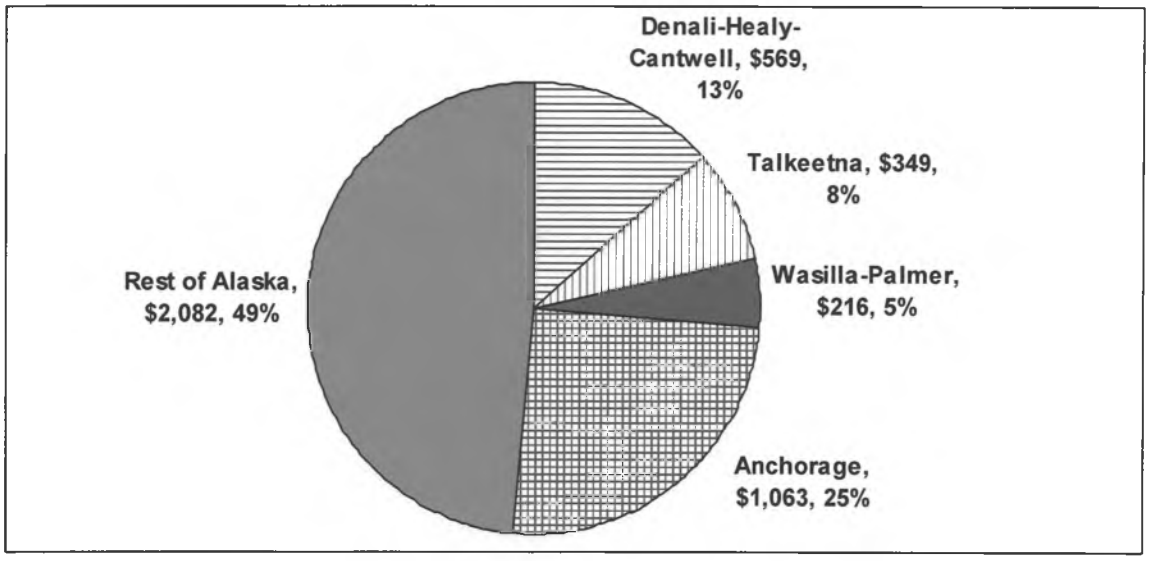


Figure 2. Distribution of Alaska in-state per-party expenditures by Denali National Park and Preserve Visitors, Summer 2006



Alaska Resident Travel

The Alaska Resident Statistics Program collected data on **trips** by Alaska residents and on activity patterns while traveling. The ARSP is a new program and the full raw dataset was not available for use in this study. Instead, we obtained data on total trips to the Mat-Su Borough made by people living outside the borough. We also obtained data on what activities were pursued during these trips.

Table 3. Numbers of Alaska residents visiting Mat-Su Borough from Southcentral and Interior regions, number of visits, and frequency of activities while visiting

Population base (18+)	333,066	
Total people making visits		159,848
Total visits (lower bound estimate)		736,222
Total visits (best estimate)		1,021,852

Activity frequency:	lower bound estimate	best estimate
visit developed campgrounds	99,790	138,330
visit developed trail systems	196,827	270,466
hike	190,633	262,895
camp	148,653	208,527
wildlife viewing	180,310	249,819
fishing (freshwater)	131,448	181,687
boating (nonmotorized)	48,863	66,068
ski and snowshoe	62,627	86,026
snowmachine	109,336	126,796

Note: The columns "lower bound estimate" and "best estimate" reflect the range of values obtained from the same raw data but using two different methods for tabulating the raw data.

Source: Alaska Resident Statistics Program, preliminary results. People living inside the Mat-Su Borough are excluded from these counts.

As Table 3 shows, about half of the people living in Anchorage, the Kenai, or the Interior (Fairbanks + environs) regions make at least one visit to the Mat-Su Borough each year. Hiking, wildlife viewing, fishing, and snowmachining are the most popular activities. When reviewing these data it is important to note that there is no information about the length of each "visit." We made assumptions about visit length and about expenditures per visit. These are described below under the appropriate scenario.

One way of thinking about the data on current visitation is that there are about one half million nonresident Visitors who currently go to Denali as a destination, and there are about one million Alaska resident trips to the Mat-Su Borough as a destination. This, very roughly, is the baseline visitation level on which we based our scenarios. It should also be noted that these baseline numbers have been growing at about 2-5% per year[8] and are likely to continue growing into the future as part of the baseline situation. Our medium and high scenarios consider additional activity beyond this underlying growth.

Scenarios of Future Activity

We developed high, medium and current status scenarios for input into the economic impact models. The potential economic outcomes stemming from proposed new visitor centers are uncertain and could be affected by a number of circumstances. These include exchange rates, global political unrest, and most importantly peoples' preferences for different types of experiences. As a result, these scenarios represent a range of potential economic impacts. The

[8] There is no resident travel data on which to base a trend. Nonresident Visitor travel has grown at various annual rates generally between 1% and 8% during the past decade.

actual outcome is likely to be a mixture of these attributes falling somewhere along the spectrum bracketed by the medium and high scenarios.

High and medium scenarios represent:

- Projected shifts in the numbers of non-resident Visitors;
- Incremental changes in these Visitors' expenditures;
- National Park Service visitor center staffing;
- Public construction of the new visitor facilities in the Plan, as well as private construction spending for additional accommodations and other businesses to support increased visitation.
- Shifts in Alaska resident travel and spending from other Alaska regions and to Mat-Su

Current Status Scenario

Construction. Under this scenario, **no new facilities** are constructed.

Visitor Center Staffing. Under this scenario, there are **no changes** in the number of NPS employees.

Nonresident Visitors. This scenario assumes there are **no changes** in the number of visitors, their length of stay, or their expenditures in Alaska. Total visitor expenditures and underlying expenditure growth trends would remain the same as they currently are.

Alaska resident travel. This scenario assumes **no change** in net visitation patterns to the Mat-Su Borough by residents of other regions. Underlying growth commensurate with population growth will continue.

Medium Scenario

Construction. The South Denali Visitor Center at Curry Ridge is built at a cost of $28.1 million. The construction costs are divided one third each among construction wages/labor, materials, and project management. The labor and project management dollars would be paid to Alaskans while the materials portion would largely be spent on materials produced out of state. Even if materials are purchased from an Alaska firm, that firm purchases them from out of state and most of the dollars leave Alaska. For modeling purposes, it is assumed 70% of the total construction expenditure stays in Alaska and 30% is spent out of state. There are sufficient and adequately skilled construction companies based in the Mat-Su or with laborers living in the Mat-Su to assume that all construction wages paid would go to Mat-Su residents. For the project management third, 75% is paid to Mat-Su companies and 25% to Anchorage companies.

Visitor Center Staffing. Under this medium scenario, it is also assumed that the NPS receives a budget increase to fund additional NPS employees in the new visitor center ($551,000). As a result, employment and wages for new visitor center staff is a net increase in wages paid to employees residing in the Mat-Su Borough. There is no loss of NPS wages to the Denali Borough.

Non-resident Visitors. The medium scenario assumes that 1) the current number of Visitors increase their length of stay and expenditures in Alaska and 2) there are also changes in the number of Visitors as a result of the additional facilities and activities offered at the new visitor center. Based on discussions with tour operators, cruise line, and backcountry visitor representatives, we assume that the increases in visitation are proportional across market sectors (cruise, domestic air, highway/ferry).

According to AVSP V summer visitor intercept data, approximately 28% of Alaska Visitors currently overnight at Denali NP area, spending 2.9 days. Another 5% do day visits. **In this medium scenario, we assume that 10% of these Denali Visitors spend an additional half day in the Denali area (mostly on the South side) and their expenditures therefore increase by half of their average per person per day: a $66 increase for overnight Visitors and a $45 increase for day Visitors.** These assumptions result in a total of $3.4 million in increased expenditures by overnight Visitors and a $366,700 increase in expenditures by day Visitors. This increased spending is allocated 75% to the Mat-Su Borough and 25% to the Interior region north of the borough.

In addition to the extra time spent by current visitors, we assume that there is an increase in the number of people on cross Gulf of Alaska cruises who take land tours. Approximately 350,000 visitors took cruises that crossed the Gulf in 2007. Of these, approximately 175,000 to 200,000 took Denali NPP land tours. According to cruise company representatives, the new opportunities and tours that would be developed to take advantage of the visitor center would increase the portion of cross Gulf cruise passengers taking land tours. We assume each passenger spends two nights and three days on these tours, based on interviews with industry representatives. **Under the medium scenario, we assume that the Denali land tour subsector of the cross-gulf cruise market grows by 10 percent, or 20,000 additional tours of 3 days + 2 nights each.** This results in a $7.9 million increase in visitor spending from cruise land tours. This spending is allocated 80% to the Mat-Su Borough and 20% to Anchorage.

The grand total net increase in Visitor expenditures under the medium scenario is $11.7 million (extended stay plus new cruise tours).

Alaska resident travel. In this medium scenario we assume that the baseline number of visits for hiking, camping, wildlife viewing, and snowmachining is about 630,000. Each visit is assumed to generate one person-day of activity. In this scenario we assume that this number **increases by 5%** as a result of South Denali facilities and that each additional person-day generates an additional $28 of spending within the Mat-Su Borough. This figure is based on the ISER 1993 Angler expenditure survey data adjusted for inflation. The total increase in direct spending within the Mat-Su Borough is $880,500. This increase represents a shift in spending by Alaskans within Alaska and is not included when measuring statewide impacts.

High Scenario

Construction. The South Denali Visitor Center at Curry Ridge plus other Parks Highway and Petersville Road enhancements are built for a total cost of $46.1 million. The allocation of this spending is the same as in the medium scenario: 70% of the total construction expenditure stays

in Alaska and 30% is spent out of state. All direct construction wages would go to Mat-Su residents. For the project management third, 75% is paid to Mat-Su companies and 25% to Anchorage companies.

It is also assumed that 75 additional hotel rooms are constructed to handle the increased cruise-tour visitor nights. At $200,000 per hotel room, this adds $15 million to construction expenditures. These are similarly proportioned to the visitor center construction pattern of one third each to labor/wages, material and construction management.

Finally, in this scenario $15 million is also assumed to be spent in the local area, at one or more small development nodes, on 40-60 additional hotel rooms (in addition to the 75 above); approximately 4 eating establishments, and approximately one gasoline station.

Visitor Center Staffing. Under this scenario, it is also assumed that the NPS receives a budget increase to fund additional NPS employees in the new visitor center ($551,000). As a result, employment and wages for new visitor center staff is a net increase in wages paid to employees residing in the Mat-Su Borough. There is no loss of NPS wages to the Denali Borough.

Non-resident Visitors. The high scenario includes the same types of impacts as the medium scenario. However, in this high scenario, we assume that **20% of all current Denali visitors spend an additional full day in the Denali area and their expenditures increase by the average per person per day expenditure: A $132 increase for overnight visitors and a $90 increase for day visitors.** These assumptions result in a total of $15.0 million in increased Visitor expenditures. This increase is allocated 100% to the Mat-Su Borough.

As in the medium scenario, we assume that there is an increase in the number of people on cross Gulf of Alaska cruises who take land tours. In 2007 approximately 350,000 people did the Gulf crossing and approximately 175,000 to 200,000 took Denali NP land tours. Based on information from cruise line officials, we assume that in the high scenario **there will be a 20% increase in these tours** because of the new opportunities and new tours developed to take advantage of the visitor center. We assume each tour customer spends two nights and three days. This results in a $15.9 million increase in visitor spending from cruise land tours. This spending is allocated 80% to the Mat-Su Borough and 20% to Anchorage.

The grand total net increase in Visitor expenditures under the high scenario is $30.9 million (extended stay plus new cruise tours).

Alaska resident travel. In the high scenario we assume that the baseline number of visits for hiking, camping, wildlife viewing, and snowmachining is 848,000. Each visit is assumed to generate 1.5 person-days of activity. In this scenario we assume that this number **increases by 10% as a result of South Denali facilities and that each additional person-day generates an additional $100 of spending** within the Mat-Su Borough. This $100 figure is based on the AVSP spending patterns used above ($132 / person / day) with adjustments to reduce the amounts spent on commercial tours and gifts and to increase the amount spent on motor fuel. The result of these assumptions is a projected $12.7 million increase in direct spending within

the Mat-Su Borough. This increase represents a shift in spending within Alaska and is not included when measuring statewide impacts.

Tables 4 and 5 provide a summary of these scenario assumptions. Table 4 highlights the major assumptions in each scenario. Table 5 shows the assumed increases in non-resident Visitor spending in more detail.

Table 4. South Denali economic impact scenarios

	Current	Medium	High
New facilities	None	Curry Ridge Visitor Center	Curry Ridge Visitor Center plus Parks Highway and Petersville Road enhancements
Construction spending	$0.0	$28.1 million	$46.0 million
One-third each labor, management and materials; labor to Mat-Su residents; 90% materials out of state			
project management 75% Mat-Su and 25% Anchorage			
New hotel room construction	None	None	$30 million for new accommodations & other businesses; spending distributed similar to visitor center construction
Visitor center staffing	No new $$	$551,000; net increase in NPS wages paid to staff residing in Mat-Su Borough	$551,000; net increase in NPS wages paid to staff residing in Mat-Su Borough
Nonresident Visitors	No change	Net increase: 10% all visitors 1/2 day longer; 10% increase 3-day, 2-night land tours	Net increase: 20% all visitors 1 day longer; 20% increase in 3-day, 2-night land tours
Alaska resident direct spending in MatSu	No change	$880,500 additional	$12.7 million additional
Distribution of direct increase in visitor spending:			
Extended length of stay	No net increase in visitor spending	25% Denali, 75% Mat-Su	100% Mat-Su
New land tours	No change	20% Anchorage, 80% Mat-Su	20% Anchorage, 80% Mat-Su

Table 5. Net increase in direct expenditures by nonresident Visitors to Denali National Park and Preserve, medium and high scenarios

	Baseline (2006)		Medium scenario		High scenario	
	Overnight	Day	Overnight	Day	Overnight	Day
Longer visits:						
Baseline Visitors	512,543	81,575	512,543	81,575	512,543	81,575
Additional Visitor-days	0	0	25,627	4,079	102,509	16,315
Additional spending per Visitor-day			$132	$90	$132	$90
Additional Visitor spending			$3,384,554	$366,650	$13,538,217	$1,466,598
Total additional spending from longer visits			**$3,751,204**		**$15,004,815**	
Additional cruise land tour activity:						
Number of additional 3-day, 2-night tours			20,000		40,000	
Additional spending per tour			$396		$396	
Total additional spending from more tours			**$7,924,151**		**$15,848,301**	
****Grand total additional Visitor spending**			**$11,675,354**		**$30,853,116**	
Location of spending:						
Denali Borough			$937,801		$0	
Mat-Su Borough			$9,152,723		$27,683,456	
Anchorage Municipality (20% of tour $)			$1,584,830		$3,169,660	
Total			$11,675,354		$30,853,116	

Source: Alaska Department of Commerce, Community and Economic Development, Alaska Visitor Statistics Program V, data file, 2007; industry interviews; ISER estimates.

Results

Mat-Su Borough and Alaska Impacts

Table 6 (p. 20) summarizes the economic effects of these scenarios for the Mat-Su Borough. Table 7 (p. 21) shows the statewide effects. The following general points should be noted. Construction-related impacts are temporary. However, in the medium and high scenarios more permanent jobs are generated in visitor services than in the construction efforts.

Tables 8 (p. 22) and 9 (p. 23) show summaries of total impacts for the Mat-Su Borough and Alaska, respectively, with a side-by-side comparison of results across scenarios. For example, the employment gain in the Mat-Su Borough due to ongoing nonresident Visitor spending varies from 0 in the base case to 484 jobs in the high scenario.

In some categories impacts to Alaska are greater than impacts to the Mat-Su Borough. The key example of this is nonresident Visitor spending impacts. Some of these impacts occur in Anchorage or other Alaska regions outside the Mat-Su Borough, so total Alaska impacts are greater than Mat-Su impacts.

In other categories Mat-Su Borough impacts are greater. The most important example of these is spending by Alaska residents traveling to the Mat-Su Borough and spending more money there.

This spending is a displacement of purchases by Alaskans that would otherwise be made in other regions of the state and hence does not add to the overall Alaska impact.

Table 6. Summary of direct, indirect and induced impacts of the South Denali Implementation Plan on the Mat-Su Borough ($ million per yr or average annual employment)

		Direct	Indirect	Induced	Total
Current Status Scenario		0.0	0.0	0.0	0.0
Medium Scenario					
Construction					
Parks Hwy Visitor Center	Expenditures	9.4	1.1	2.7	13.2
(per year for 3 years)	Employment	80	11	28	119
	Labor Income	5.1	0.5	0.8	6.4
Visitor Spending*	Expenditures	8.2	1.4	2.0	11.5
(ongoing, nonresidents)	Employment	123	15	21	159
	Labor Income	3.6	0.5	0.6	4.7
Alaska Resident Spending	Expenditures	0.9	0.2	0.2	1.2
(ongoing)	Employment	12	2	2	16
	Labor Income	0.3	0.1	0.0	0.4
Visitor Center Staffing	Expenditures	0.9	0.1	0.3	1.3
(ongoing)	Employment**	23	1	3	27
	Labor Income	0.6	0.0	0.1	0.7
High Scenario					
Construction					
Parks Hwy Visitor Center	Expenditures	15.3	1.6	4.4	21.4
(per year for 3 years)	Employment	130	17	46	193
	Labor Income	8.3	0.7	1.3	10.4
New Hotel Rooms & other	Expenditures	15.0	2.0	4.7	21.7
business construction	Employment	140	22	48	210
(per year for 2 years)	Labor Income	8.7	0.9	1.4	11.0
Visitor Spending*	Expenditures	24.7	4.1	6.0	34.8
(ongoing, nonresidents)	Employment	370	46	62	478
	Labor Income	10.9	1.4	1.8	14.2
Alaska Resident Spending	Expenditures	8.5	1.6	1.7	11.8
(ongoing)	Employment	146	18	18	182
	Labor Income	3.1	0.5	0.5	4.1
Visitor Center Staffing	Expenditures	0.9	0.1	0.3	1.3
(ongoing)	Employment**	23	1	3	27
	Labor Income	0.6	0.0	0.1	0.7

** Direct employment of visitor center staffing is seasonal jobs

Source: ISER IMPLAN model runs based on scenarios described in text.

Table 7. Summary of direct, indirect and induced impacts of the South Denali Implementation Plan on Alaska ($ million or average annual employment)

		Direct	Indirect	Induced	Total
Current Status Scenario		0.0	0.0	0.0	0.0
Medium Scenario					
Construction					
Parks Hwy Visitor Center	Expenditures	9.4	2.3	3.5	15.1
(per year for 3 years)	Employment	69	14	32	114
	Labor Income	4.9	0.7	1.1	6.7
Visitor Spending	Expenditures	10.4	2.6	3.4	16.3
(ongoing, nonresidents)	Employment	149	22	31	202
	Labor Income	4.8	0.8	1.1	6.7
Alaska Resident Spending	Expenditures		No impact because total		
(ongoing)	Employment		spending within Alaska		
	Labor Income		remains constant.		
Visitor Center Staffing	Expenditures	0.9	0.2	0.4	1.4
(ongoing)	Employment**	23	2	3	28
	Labor Income	0.6	0.1	0.1	0.7
High Scenario					
Construction					
Parks Hwy Visitor Center	Expenditures	15.3	3.8	5.7	24.8
(per year for 3 years)	Employment	112	21	51	185
	Labor Income	8.0	1.1	1.8	10.9
New Hotel Rooms & other	Expenditures	15.0	3.0	5.8	23.9
business construction	Employment	118	24	53	195
(per year for 2 years)	Labor Income	8.2	1.2	1.8	11.2
Visitor Spending	Expenditures	27.5	6.8	8.9	43.2
(ongoing, nonresidents)	Employment	394	57	81	532
	Labor Income	12.7	2.2	2.8	17.6
Alaska Resident Spending	Expenditures		No impact because total		
(ongoing)	Employment		spending within Alaska		
	Labor Income		remains constant.		
Visitor Center Staffing	Expenditures	0.9	0.2	0.4	1.4
(ongoing)	Employment**	23	2	3	28
	Labor Income	0.6	0.1	0.1	0.7

** Direct employment of visitor center staffing is seasonal jobs

Source: ISER IMPLAN model runs based on scenarios described in text.

Table 8. Summary of economic impacts of the South Denali Implementation Plan on the Mat-Su Borough ($ million per yr or average annual employment)

	Scenario		
	Current	Medium	High
Employment (avg annual jobs)			
Construction (2-3 years)	**0.0**	**119**	**403**
Ongoing Activity, total	**0.0**	**184**	**669**
Visitor center staffing*	0.0	9	9
Nonresident Visitor spending	0.0	159	478
Alaska resident traveler spending	0.0	16	182
Income ($ million per yr)			
Construction (2-3 years)	**0.0**	**6.4**	**21.3**
Ongoing Activity, total	**0.0**	**5.8**	**19.0**
Visitor center staffing*	0.0	0.7	0.7
Nonresident Visitor spending	0.0	4.7	14.2
Alaska resident traveler spending	0.0	0.4	4.1
Expenditures / Output ($ million per yr)			
Construction (2-3 years)	**0.0**	**13.2**	**43.0**
Ongoing Activity, total	**0.0**	**14.0**	**47.9**
Visitor center staffing*	0.0	1.3	1.3
Nonresident Visitor spending	0.0	11.5	34.8
Alaska resident traveler spending	0.0	1.2	11.8

*Visitor center avg annual employment converted from previous tables assuming positions are 4 mos/yr

Source: ISER IMPLAN model runs based on scenarios described in text.

Table 9. Summary of economic impacts of the South Denali Implementation Plan on Alaska

	Scenario		
	Current	Medium	High
Employment (avg annual jobs)			
Construction (2-3 years)	**0.0**	**114**	**380**
Ongoing Activity, total	**0.0**	**211**	**542**
Visitor center staffing*	0.0	9	9
Nonresident Visitor spending	0.0	202	532
Alaska resident traveler spending	0.0	0	0
Income ($ million per yr)			
Construction (2-3 years)	**0.0**	**6.7**	**22.1**
Ongoing Activity, total	**0.0**	**7.4**	**18.4**
Visitor center staffing*	0.0	0.7	0.7
Nonresident Visitor spending	0.0	6.7	17.6
Alaska resident traveler spending	0.0	0	0
Expenditures / Output ($ million per yr)			
Construction (2-3 years)	**0.0**	**15.1**	**48.7**
Ongoing Activity, total	**0.0**	**17.8**	**44.6**
Visitor center staffing*	0.0	1.4	1.4
Nonresident Visitor spending	0.0	16.3	43.2
Alaska resident traveler spending	0.0	0	0

*Visitor center avg annual employment converted from previous tables assuming positions are 4 mos/yr

Source: ISER IMPLAN model runs based on scenarios described in text.

Potential Business Development in Local Area

The local area for this analysis is defined as the highway corridor from the northern border of Denali State Park to Trapper Creek and the Y and including Talkeetna. As a result of the implementation of the South Denali Plan, the industry sectors that potentially experience the most growth include automobile rental, sightseeing and ground transportation, hotels and accommodations, eating and drinking places, recreation and amusement establishments, general retail outlets and gas stations. With the exception of auto rentals, these are also the businesses that could potentially be developed in the local area.

Table 10 (p. 25) shows the approximate number of additional businesses of "average" size that could potentially be supported by this new spending in the medium and high scenarios. While the Table 10 results are based on total spending within the Borough, it is reasonable to assume that new establishments would be concentrated in the local area at one or more development nodes close to the new facilities.

To estimate additional accommodations demand, we converted spending per establishment into spending per room using the average establishment size of 13 rooms. This yields a demand for 234 additional rooms. The 75 rooms estimated to be added to accommodate new cruise tour visitors would address approximately one-third of these potential additional rooms; the planned 100 campground spaces would also be available to address the need for new overnight accommodations. This leaves a potential opportunity for approximately 40 to 60 additional rooms. Some of this additional demand would probably be served by additional business at existing Bed and Breakfast establishments or the conversion of some properties into B&B establishments. Combining all of this information yields our estimate that between 115 and 135 additional hotel rooms would be built in the high scenario.

In addition to accommodations, food and drinking places would potentially also be needed. Based on a similar analysis of how much revenue is required to support one establishment, we assume four new eating and drinking establishments under the high scenario and one new gas station mini-mart. In total, we have added an additional $15 million of new construction of additional overnight accommodations, restaurants and a gas station for the high scenario. No additional construction is included in the medium scenario as the increased expenditures under that scenario most likely would be captured by existing businesses. As previously noted, the two scenarios bracket a range of plausible outcomes.

Estimated local area economic impacts are shown in the Table 11 (p. 26).We have estimated these impacts as a percentage of the corresponding total Mat-Su Borough economic impacts.[9] We assume that 80% of construction and visitor center staffing jobs and 50% of additional tourism-driven jobs occur in the local area. We assume that 25% of the total income associated with these jobs – including income from multiplier effects -- accrues to local area residents.

[9] The local area economy is too sparse to be treated as a separate region within the input-output model.

Table 10. Direct, indirect and induced output impacts of visitor expenditures and potential additional establishments in the Mat-Su Borough, medium and high scenarios

	Additional Economic Output ($)				Current Mat-Su Total	%	Business Establishments		
Industry	Direct	Indirect	Induced	Total	Output ($)	increase	Current Mat-Su number	Output per establish-ment	Potential additional
High Scenario									
Automotive rental & leasing	312,267	1,519	1,973	315,759	352,000	90%	5	70,400	4
Scenic & sightseeing transportation	7,789,138	188,199	24,291	8,001,628	13,195,000	61%	9	1,466,111	5
Hotels and motels	12,009,794	90,824	101,736	12,202,354	41,608,000	29%	63	660,444	18
Other amusement & recreation	1,402,361	2,743	40,326	1,445,430	6,077,000	24%	32	189,906	8
Food & drinking places	7,772,862	96,594	449,646	8,319,101	68,857,000	12%	122	564,402	15
Travel reservations	0	371,490	20,330	391,820	6,792,000	6%	--	--	--
Miscellaneous store retailers	574,277	7,124	50,726	632,127	13,302,000	5%	32	415,688	2
Gasoline stations	1,158,753	14,902	91,143	1,264,798	31,209,000	4%	23	1,356,913	1
Medium Scenario									
Automotive rental & leasing	99,405	435	539	100,379	352,000	29%	5	70,400	1
Scenic & sightseeing transportation	2,473,560	57,849	6,641	2,538,050	13,195,000	19%	9	1,466,111	2
Other amusement & recreation	754,914	592	11,027	766,533	6,077,000	13%	32	189,906	4
Hotels and motels	2,958,873	22,974	27,823	3,009,670	41,608,000	7%	63	660,444	5
Food & drinking places	1,462,948	23,420	122,957	1,609,325	68,857,000	2%	122	564,402	3
Miscellaneous store retailers	204,030	1,861	13,880	219,771	13,302,000	2%	32	415,688	1
Travel reservations	0	92,845	5,559	98,404	6,792,000	1%			
Gasoline stations	351,428	3,894	24,941	380,263	31,209,000	1%	23	1,356,913	0

Source: Economic impacts and current business activity from ISER IMPLAN projections; # of establishments from Alaska Department of Labor and Work Force Development, 2006 earnings and employment data.

Table 11. Summary of economic impacts of the South Denali Implementation Plan on the local area*

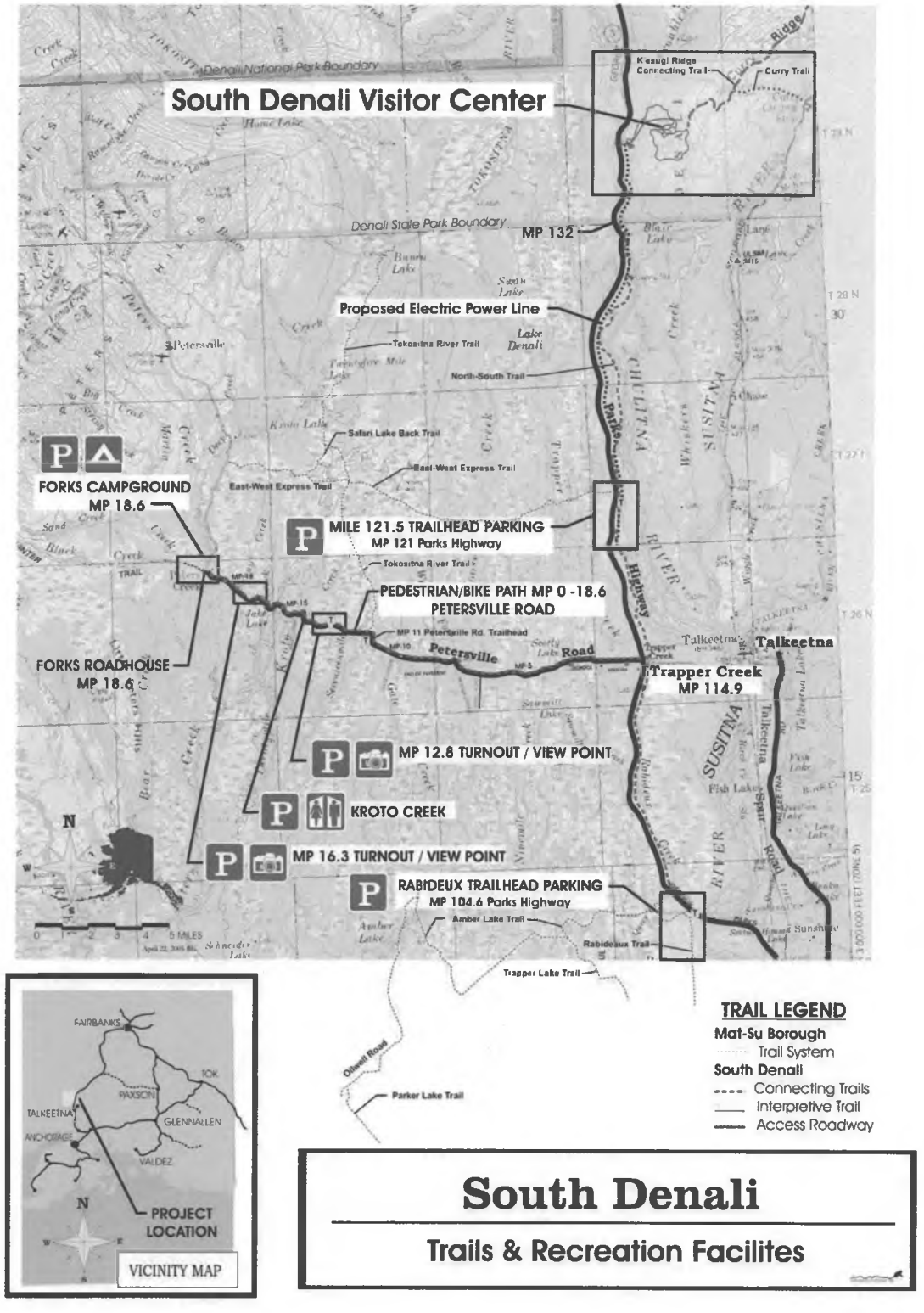
	Total Mat-Su impact		% of total in	Local area impact	
	Medium	High	local area	**Medium**	**High**
Employment (avg annual jobs)					
from Construction (2-3 years)				**95**	**322**
Visitor Facilities in the Plan	119	193	80%	95	154
Hotel rooms & other business construction	0	210	80%	0	168
from Ongoing Visitor Spending				**94**	**337**
Visitor center staffing	9	9	80%	7	7
Nonresident Visitor spending	159	478	50%	79	239
Alaska resident traveler spending	16	182	50%	8	91
Income ($ million per yr)					
from Construction (2-3 years)	6.4	21.3	**25%**	**1.6**	**5.3**
from Ongoing Activity				**1.4**	**4.7**
Visitor center staffing	0.7	0.7	25%	0.2	0.2
Nonresident Visitor spending	4.7	14.2	25%	1.2	3.5
Alaska resident traveler spending	0.4	4.1	25%	0.1	1.0

New business development (# built)	Local area impact	
(impacts of this new development are included above)	**Medium**	**High**
New hotel rooms	(existing	**115-135**
New restaurants	business	**4**
New gas station mini-marts	expands)	**1**

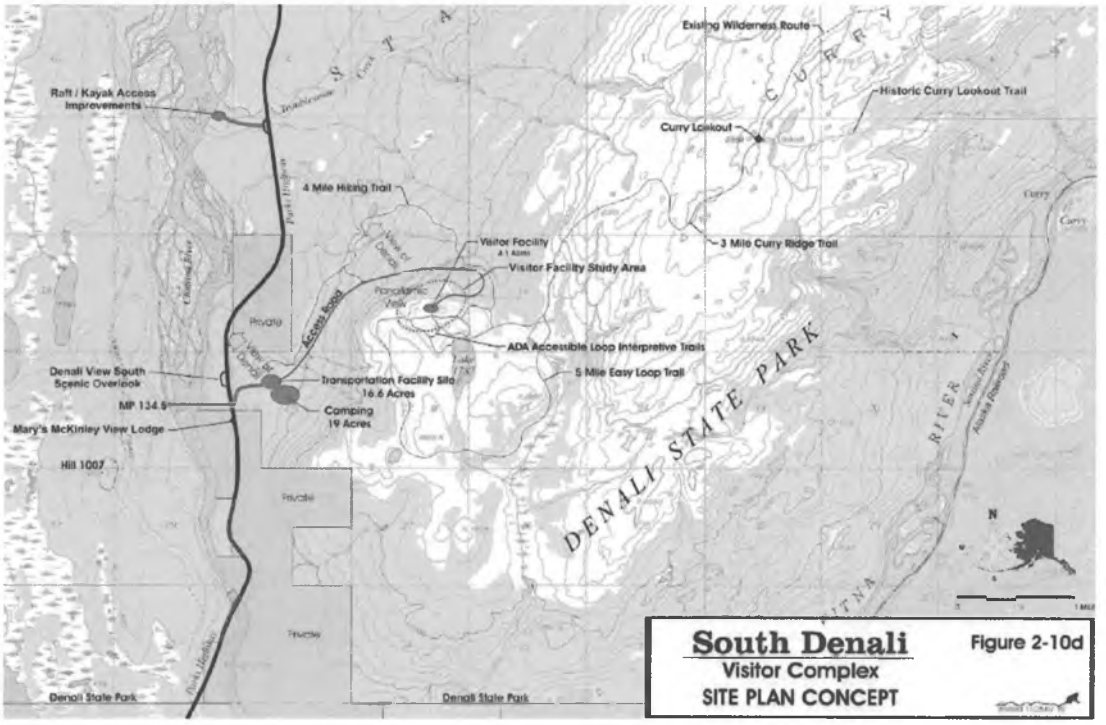
*Local Area is defined as highway corridor from the northern border of Denali State Park to Trapper Creek and the Y and including Talkeetna

Source: Mat-Su Borough total impacts from ISER IMPLAN model runs based on scenarios described in text. Allocations of impacts to local area are authors' assumptions.

Map 1. Curry Ridge Visitor Center with Parks Highway and Petersvile Road enhancements (high scenario)



Map 2. Curry Ridge Visitor Center site plan concept



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South Denali History

The '70s

The '80s

The '90s

EIS Process 2004-2006

Intrepretive Plan Public Meetings (2007)

In general, there has been a shared vision among public land managers in the south Denali region that the south side of Denali should receive greater use and development for visitors. However, the issues related to such development have historically generated extensive public controversy.

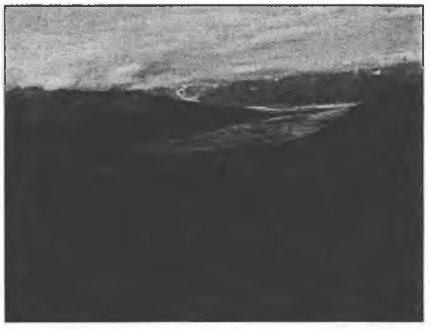
The '60s and '70s

In 1968 the U.S. and Alaska Departments of Commerce proposed a facility at Chulitna Pass. That was followed by a 1969 proposal by the National Park Service and the Alaska Division of Tourism for a facility on South Curry Ridge (NPS 1969). The location at Chulitna, which is only 70 miles from the main entrance of Denali National Park, and lack of existing infrastructure at both sites made these projects unappealing to many people. Neither proposal materialized, though the designation of Denali State Park in 1970 was intended to provide the land base and protections needed for a major public tourism facility (Cresap, McCormick, and Paget; 1968).

In 1974 Alaska State Parks proposed a lodge, visitor center, park headquarters, and a downhill ski area at Byers Lake (Alaska State Parks, 1974 and 1975). This project was actually let out for competitive proposals and a contract was awarded; however, the successful bidder never seriously pursued the project.

The '70s

The concept of locating recreation facilities in the Peters Hills emerged from a study undertaken by the state in 1970 to explore ways to increase the role of tourism in the Alaskan economy. One of the study recommendations was the construction of a hotel in the south Denali area. Bradford Washburn, the director of the Boston Museum of Science and world renown Mount McKinley cartographer and photographer, recommended that visitor facilities be constructed at a site south of the Tokositna River (Environmental Investigation and Site Analysis – Tokositna, Denali State Park, 1980).



In 1972, U.S. Senator Mike Gravel urged the state and the federal government to jointly study the feasibility of locating visitor facilities in the south Denali area. In 1973, the Mount McKinley National Park master plan recommended an expansion of the park boundary to the south and a shift of visitor attention and facilities to the south side. The 1975 Denali State Park master plan recommended the addition of the Tokositna study area to the state park for the development of visitor and recreation facilities. In 1976, the state legislature added to the state park the land that comprises the study area (Environmental Investigation and Site Analysis – Tokositna, Denali State Park,

1980).

Following these two events, State Senator Patrick Rodey and Representative Clark Gruening, with the strong support of Senator Gravel, sponsored the passage of two appropriation bills in the 1978 legislature. One bill appropriated $310,000 to the Alaska Department of Natural Resources to investigate the feasibility of constructing a lodge and visitor center complex at Tokositna, and the second bill appropriated $85,000 to the Alaska Department of Transportation and Public Facilities to study access to the area. These developments led to a memorandum of understanding, signed in October 1978 by the secretary of the U.S. Department of Interior, the governor of Alaska, and the mayor of the Matanuska-Susitna Borough, to jointly plan visitor facilities and programs in Denali State Park (Environmental Investigation and Site Analysis – Tokositna, Denali State Park, 1980).

In May 1979, the state legislature set up the Tokositna Special Committee, with Senator Gravel, State Senator Rodey, and Commissioner of Natural Resources Robert LeResche as members. The purpose of this committee was to provide direction for the Tokositna project. The vision for this project was a major, year-round tourism and recreation destination that included commercial lodging and a variety of other facilities and services; various outdoor recreation activities including alpine skiing; campgrounds; trailheads; an airstrip; and a Teflon dome enclosure to house many of these facilities. Four reports were produced that deal with the feasibility of developing major recreation facilities at Tokositna: 1) Environmental Investigation and Site Analysis; 2) Market Analysis and Economic Study; 3) Downhill/cross-country Ski and Outdoor Recreation Study; and 4) Transportation Study.

The Environmental Investigation and Site Analysis (1980) analyzed key environmental information about the physical aspects of the Tokositna area. The Market Analysis/ Economic Feasibility Study (1979) analyzed the potential in-state and out-of-state visitor use demand. The Skiing Feasibility Analysis (1979) passed a positive judgement on the feasibility of skiing in the south Denali area: "Based upon the scope and quality of terrain the tentatively selected site compares favorably with other successful ski resorts in the U.S., Canada and Europe" (Sno Engineering 1979, p.2). Disadvantages included high development and operating costs, sensitive environmental and wilderness values, conflict with existing mining claims, and unproved technologies with regard to the Teflon dome enclosure.

The '80s

These studies were followed by a series of site proposals. In 1980 the Alaska Division of Parks and the NPS proposed facilities at the Tokositna site. In 1986 the Denali National Park and Preserve General Management Plan proposed cooperative state, federal, and private development of a visitor center/hotel complex on South Curry Ridge (ADNR and NPS 1986). The plan calls for the development of visitor services and access to the South Denali region to take advantage of the area's dramatically sculptured landscapes and mountain-oriented recreational opportunities, and recommends the project be planned and developed cooperatively with the state of Alaska and with involvement from the private sector.

Three years later the 1989 Denali State Park Master Plan proposed a facility for High Lake in the north end of Denali State Park (ADNR 1989; ADNR 1990). The Master Plan recommends facility construction in the South Denali region because, "Tremendous views of the Mt. McKinley massif and the diversity of surrounding areas make the park an appropriate location for a 'South Denali Visitor Complex'. The visitor complex will provide a focal point and staging area for the Denali State Park interpretive program."

The '90s

In 1990 CIRI proposed a facility about a mile south of the Talkeetna townsite. Most proposals were rejected because they weren't accessible by road and railroad. Only two points on the main highway system in the south side area offer both railroad access and a good view of Mount McKinley – High Lake and Talkeetna. High Lake was rejected after considerable public opposition and after it was determined to be only

marginally feasible for hotel development.

In October 1990 the Senate Appropriations Committee directed the National Park Service to address visitor facility development in Talkeetna, Denali State Park, and on the south side of Denali National Park. The 1991 report in response to the directive from the Senate Committee on Appropriations concluded that the CIRI site for a Talkeetna Visitor Center would be suitable and economically feasible (DOI NPS 1991).

In 1993, the National Park Service published a Draft South Slope Denali Development Concept Plan/Environmental Impact Statement that proposed two visitor centers: one in Talkeetna on CIRI-owned land, and one along the Parks Highway. The 1993 draft plan did not resolve the controversial issues, so in 1994 at the request of Secretary of the Interior Bruce Babbitt, a Denali Task Force was established to make recommendations on, among other matters, the cooperative management and recreation development of Denali's south side. The task force submitted its final report to the National Park System Advisory Board in December 1994, and the report's recommendations for the south side were adopted by the advisory board without modification (Denali Task Force 1994).

In 1995 the Alaska Visitors Association (AVA) proposed a tram to Alder Point to access south Denali. The AVA recommended further study of a 2-stage aerial tramway at Alder Point extending from the south end of Denali State Park several miles toward, and into, Denali National Park.

In May 1995, south side planning was reinitiated cooperatively by an intergovernmental planning team. Governor Tony Knowles directed the state to take a lead role in this cooperative effort to increase recreation and tourism opportunities on the south side of Denali. The cooperative planning team was comprised of representatives from the National Park Service, State of Alaska, Denali Borough, Matanuska-Susitna Borough, and two Native regional corporations (Ahtna, Inc., and Cook Inlet Region, Inc.). One component of this cooperative endeavor was the preparation of a 1997 South Side Development Concept Plan/Environmental Impact Statement (DCP/EIS). The purposes of the DCP/EIS were to:

Provide opportunities for high quality, resource-based destination experiences and provide information, orientation, and recreation services and facilities convenient to park visitors.

Develop facilities and access in a location and manner that minimizes impacts on resources, local lifestyles, and communities.

Establish working partnerships for funding and phasing development.

Provide access to and a location for interpretation of the special qualities found in Denali National Park and Preserve and Denali State Park, including access to the spectacular alpine landscape on the south side of the Alaska Range.

Offer a range of experiences and opportunities to meet the diverse needs of the traveling public, including information and orientation to the region, and new or improved recreation facilities.

Ensure that, viewed as a whole, facilities and services benefit all visitors, including Alaska residents, independent travelers, and package tour travelers.

Design and develop facilities and access improvements to support public use and understanding of the south side and its outstanding resources.

Establish a research program and identify management needs to guide facility and road development.

Facilitate orderly economic development in the region consistent with resource

protection.

Minimize and mitigate adverse effects on fish and wildlife resources, habitat, cultural resources, local rural quality of life, and existing public land and resource uses, including subsistence uses.

Establish methods, responsibilities, and necessary steps to control unwanted secondary impacts of tourism and to minimize conflicts between different visitor groups.

In compliance with the National Environmental Policy Act of 1969, as amended, the National Park Service was the lead federal agency responsible for the DCP/EIS; the state and the two boroughs were cooperating agencies. The two Native corporations could not serve as cooperating agencies under the National Environmental Protection Act, but were considered planning partners pursuant to ANCSA (P.L. 92-203, Sec. 2(b) and in accordance with National Park Service policy and the Federal Advisory Committee Act.

The revised draft DCP/EIS was filed with the Environmental Protection Agency (EPA) in March 1996 and the final was filed with the EPA in January 1997. The selected alternative in the final DCP/EIS provides for enhanced access and recreational opportunities throughout the south Denali region for a variety of visitors, including Alaskans, independent travelers, and package tour travelers, while at the same time protecting the important resource and community values in the area, including the rural lifestyle of local residents. The DCP/EIS plans visitor facilities for the Tokositna area at the western edge of Denali State Park near the end of an upgraded and extended Petersville Road; in the central development zone of Denali State Park along the George Parks Highway; at Chelatna Lake; and in the Dunkle Hills. Developments would include a visitor center, parking, up to 50 campsites, a picnic area, hiking trails, information and safety signage, and associated facilities.



The 1997 Record of Decision (ROD) *for the DCP/EIS commits the NPS to take all practicable measures to avoid or minimize adverse environmental effects that could result from implementation of the selected action. These measures include conducting cooperative research on the natural and cultural resources and human uses on the south side; protecting sensitive wildlife habitat and activities; protecting, to the extent practicable, wetlands and vegetation; implementing best management practices to protect water quality and surface water resources; implementing measures to reduce soil loss; implementing measures to reduce the potential for human/wildlife conflicts; protecting archeological and historic resources, as necessary; and incorporating sustainable design principles and aesthetics into facility design and siting. Adverse environmental effects also will be minimized by implementing additional land use controls prior to major development and managing recreational and other activities to protect south side resources.*

At the same time, the Matanuska-Susitna Borough finalized the Petersville Road Corridor Management Plan. One of the objectives of the 1998 Matanuska-Susitna Borough Petersville Road Corridor Management Plan (Maps) is to enhance the visitor experience of Petersville Road in conjunctions with facility development in the South Denali region. Recommendations include interpretive panels, informational kiosks, vegetative buffers, and retention of scenic qualities along the road corridor.

These planning processes relied heavily on public input; however, portions of the 1997 plan remained controversial even after substantial modifications were made to address public concerns. To address implementation of the south side plan, in 1997 the Governor of Alaska chartered the South Denali Citizens Consultation Committee, which included representatives from south side communities and interested user groups.

The 1999 South Denali Citizens Consultation Committee Final Report recommended modifying the development concepts in the South Side Denali Development Concept Plan while remaining consistent with its goals and objectives: to provide resident and visitor facilities throughout the south side of the Alaska Range to meet a wide range of needs and interests of the region's diverse user groups. The committee recommended that a nature center be constructed within the Denali State Park boundary and avoid an extensive upgrade of the Petersville Road through the canyon, thereby minimizing impacts to mining and backcountry uses.

The 2000-2001 Denali National Park Business Plan offers south Denali development as the long-term solution for an alternative tourist destination to Denali National Park and Preserve: "The area offers beautiful views of Mount McKinley and the Alaska Range, glaciers, streams, and much of the impressive array of wildlife for which the Denali Park Road is famous. This alternative visitor destination would be created through partnerships with the state, local communities, and native corporations."

EIS Process 2004-2006

The National Park Service received a fiscal year '04 Congressional appropriation to develop facilities in the South Denali region, and a Notice of Intent to prepare a South Denali Implementation Plan was published in the Federal Register in February 2004. The South Denali Implementation Plan and EIS were developed between 2004 and 2006 with an exhaustive public involvement process that yielded the preferred alternative of Curry Ridge. This excellent resource is constantly utilized as we move forward with implementation.The second record of decision was signed in 2006 click here to view a copy of that document.

Click here for the Scoping Newsletter published in February, 2004.

Interpretive Planning Meetings

The State of Alaska contracted with Schmeekle Reserve Interpreters from the University of Wisconsin at Stevens Point to prepare an interpretive master plan for the South Denali Visitor Complex. In 2007 the Schmeekle Reserve Interpreters held information gathering sessions in Trapper Creek, Wasilla and Anchorage to record responses to the following questions:

- What stories would you share with an out-of-town visitor? (About your community? About Curry Ridge and this region?)

- What effects do you foresee the South Denali facility having on the region, your community, or Curry Ridge? (Potential benefits? Concerns?)

- How can the South Denali facility be developed to benefit Alaska residents? (specific features of the visitor center/specific features of the site?)

- What/who are some resources that we can investigate or interview to learn more about this area?

The following generalized comments from these meetings provide insight into the vision and concerns of local regional citizens:

- Anticipate and mitigate impacts to the alpine flora and wildlife. Conduct biological inventories and monitor wildlife (important area for bears and moose).

- All development should be sensitive to the viewshed and tranquility of the site and minimize environmental impact. Shuttle to the top strongly supported.

- Avoid "glitter gulch" developments along the Parks Highway.

- Minimize recreational impacts on Curry ridge from trampling and motorized vehicles.

- Provide non-motorized shoulder season and winter use of the facilities and site by

locals and schools.

• Interpret local history (town of Curry, railroad, indigenous Athabaskans, mountaineering, aviation, mining, homesteading, Parks Highway).

• Interpret the ecological and geological history and geomorphology.

• The center and trails will be an important recreational resource for Alaska residents and should be designed to meet their needs as well as out-of-state visitors.

Complete responses from these meetings are recorded in Appendix 2 of the South Denali Visitor Complex Interpretive Master Plan.

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Department of Natural Resources
550 W. 7th Ave, Suite 1260, Anchorage, AK 99501-3557
Phone: 907-269-8400 | Fax: 907-269-8901 | TTY: 907-269-8411

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Join Here!

South Denali Planning - Current Status

Design Funds Received: Alaska State Parks received $3,000,000 from State of Alaska general funds for design of the visitor center facilities. Design work will proceed throughout 2011 and into early 2012.

The State received an access road right-of-way donation from United Companies Incorporated whose primary shareholder is the Native owned and operated Sea Lion Corporation. This right-of-way gives the State a better access to the South Denali project with less impacts and gentler grades. It also sets the stage for the acquisition of a large portion of a Denali State Park inholding.

Here is an audio file courtesy of KTNA Talkeetna Community Radio of an interview regarding this land donation by UCI.

The State has adequate funding in place to begin development of Phase I of the South Denali project. This will be design and construction of the access road to the base transportation hub and its associated amenities as detailed in the EIS and Master Interpretive Plan.

Feasibility Report Completed: The State contracted with the University of Alaska's Center for Economic Development to develop a Feasibility Report for the South Denali Visitor Center Complex. This report consists of a Feasibility Study and an Economic Impacts report.

National Scenic Byway Grants Awarded: Alaska State Parks received two National Scenic Byway grants totaling $1,000,080. The $80,000 will be used to develop a Master Interpretive Plan for the George Parks National Scenic Byway. The $1,000,000 is for constructing the visitor contact station portion of the South Denali Visitor Center complex transportation center. This visitor contact station is in close proximity to the Parks Highway.

Contract Awarded for Road Design Studies: In 2009, Dowl HKM was awarded the contract for road alignment, geotechnical, and environmental studies to layout the road, base facilities and visitor center area. DOWL HKM will complete this work within the next two years.

Scenic Corridor Study: This project will provide a scenic analysis of Matanuska-Susitna Borough and additional public land adjacent to the Parks Highway MP 105 - 132, generally from the Susitna River Bridge to the Chulitna Bridge. The Final Scenic Corridor Study and Study Maps & Recommendations explore options for protecting scenic resources into the future, balanced with other development and Community Use Needs The study area was selected because of its proximity to Denali State Park and the future South Denali Visitor Center Complex proximity, and because contiguous public land exists along the roadway—including 9,500 acres of MSB land--that creates an opportunity for a "green ribbon" and protection of extensive scenic resources. A large percentage of these lands already are protected under a 1993 scenic buffer agreement, and lands directly to the north have scenic easements as protected under MSB 17.17 Denali SPUD.

George Parks National Scenic Byway: The George Parks Highway National Scenic Byway begins just south of the South Denali Visitor Center facility and ends in

Fairbanks. The George Parks Highway Corridor Partnership Plan is complete. The National Scenic Byway status was announced in mid-October. Future efforts could be undertaken to achieve All American Road status.

LIDAR & Imagery: Airborne radar was collected and processed to produce 2 foot contours of the study area. Complementary aerial imagery was also collected. Used collectively these provide a powerful planning and design tool for the South Denali facilities.

Electrical Extension Planning: Alaska State Parks is funding a design study by Matanuska Electric Association to develop a plan and cost for extending power to mile 134.6 of the Parks Highway. Having electrical power is a critical element for the success of the proposed development.
Trail Planning: Trail planning is ongoing with coordination between the Master Interpretive Plan developers and Landscape Architects from Alaska State Parks. This will yield the best possible trails with complete attention to user needs and resource sensitivity.

Environmental Analysis: Additional environmental studies will be conducted in the project area. The studies include a historic and archaeological survey and a wetlands delineation.

Access Road Design: Alaska State Parks received State funding dedicated to the design and construction of the access road for the South Denali Visitor Center. Data collection, planning, and preliminary design will proceed.

S.P.U.D: The Denali State Park Special Land Use District, MSB 17.17, is currently being reviewed by a planning team consisting of Borough staff, residents, local businesses, and interested park users. Changes to the regulations are being considered to ensure compatibility with the revised DSP Master Plan, and the recommendations in the South Denali Implementation Plan and EIS. For more information, contact Eileen Probasco, Mat-Su Borough Chief of Planning at (907) 746-7431.

Master Interpretive Plan: Alaska State Parks, with funding from the Matanuska Susitna Borough, contracted with Schmeeckle Reserve Interpreters, a consulting team from the University of Wisconsin-Stevens Point to develop and produce a master interpretive plan for a new visitor center complex to be constructed in Denali State Park. The plan will help guide the development of the facility, site, trail systems, and media associated with the visitor center. This plan was amended to include the base transportation center and is now complete. Please click on the link below to view it.


Final Interpretive Master Plan - August 2009

South Denali Visitor Center Site Location

Refined Visitor Center location near Lake 1787 (Site 2) selected following extensive planning, site surveys and public and agency input, including:

- The Visitor Center area is **geographically separate from the main expanse of Curry Ridge**, thereby reducing the potential visitor impacts on the main ridge. Impacts within the visitor center area can be managed through proper management and design of trails that guide visitors around sensitive areas.

- The concept site proposed in the EIS (Site 1) would require **more extensive vegetation removal** to enhance viewing opportunities.

- The more open mosaic of trees and shrubs at Site 2 improves visibility along trails to **reduce surprise wildlife encounters**, protecting both visitors and local wildlife.

- Site 2 offers a greater **variety of natural features** that through interpretive programming will enhance the visitor's understanding and appreciation for the Denali region, including unique glacial erratics, beaver ponds, rocky knolls, Lake 1787, etc.

- The gentler topography at Site 2 offers **greater accessibility** to visitors of varied physical abilities for activities around the visitor center (nature trails, scenic viewpoints, trails to and around Lake 1787).

This location selection is dependent upon the results of a wetlands delineation, historical and archeological survey, and geotechnical evaluation to ensure that it is suitable for facility development.

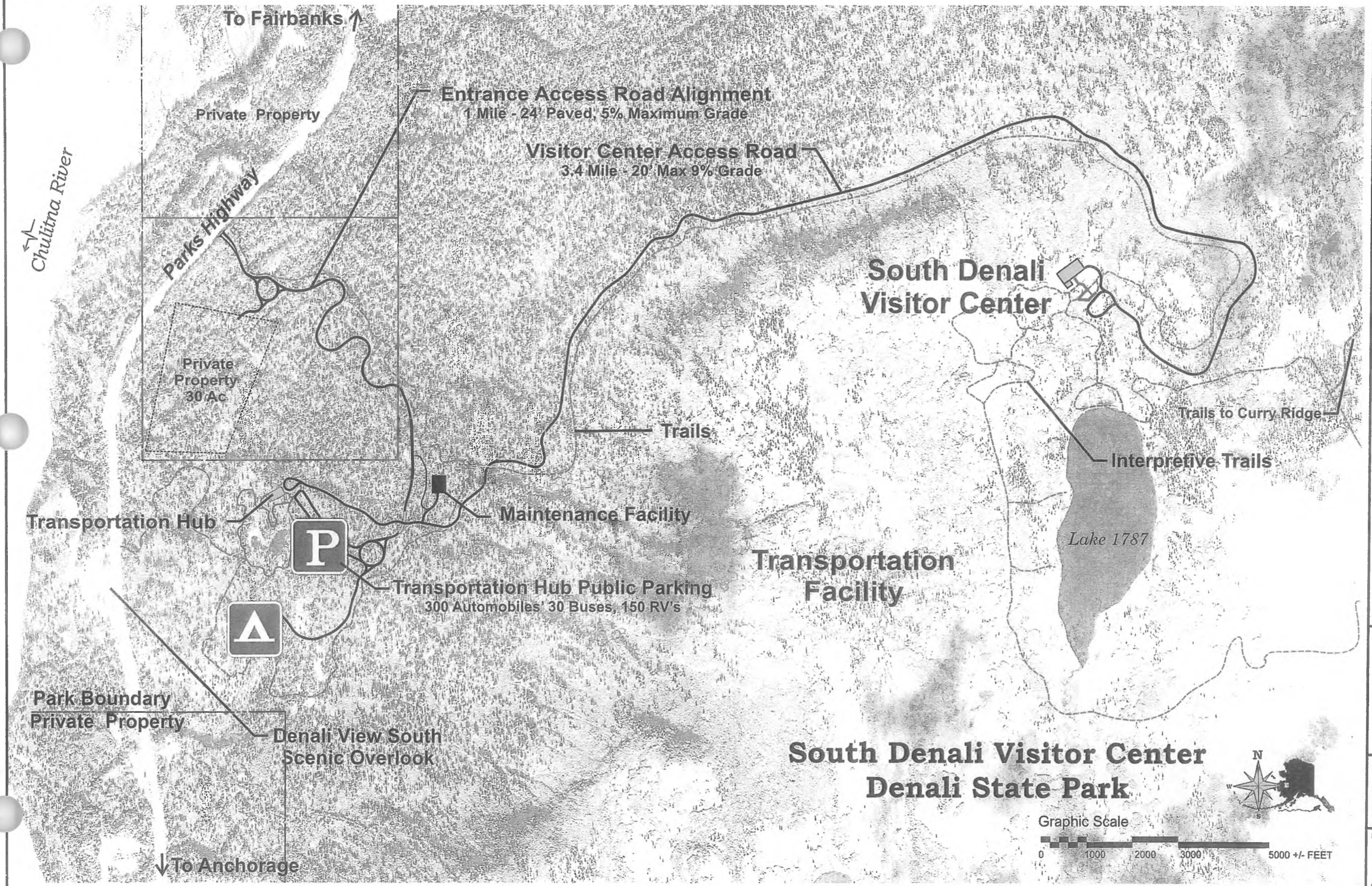
This careful site selection of the South Denali Visitor Center supports agency and project goals and is consistent with the *South Denali Implementation Plan and EIS.*

For a map of the proposed visitor center location, click here.

For more information on the site selection please click here.

Department of Natural Resources
550 W. 7th Ave, Suite 1260, Anchorage, AK 99501-3557
Phone: 907-269-8400 | Fax: 907-269-8901 | TTY: 907-269-8411

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STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES

Project Overview Plan

South Denali Visitor Center
Denali State Park

PREPARED: BE
DRAWN: BE
REVIEWED:
DATE: 09/15/11

SHEET 1 OF 1 SHEETS

Denali State Park







South Denali
Visitor Center Complex

A Visitor Center on the Horizon

The proposed South Denali Visitor Complex will…

Purpose

- Showcase the **natural beauty** of the South Denali Region
- Provide **access** to Denali State Park
- Enhance **outdoor recreation** opportunities
- Educate visitors and residents on the **natural history** and **ecology** of the area
- Highlight **partnerships** that support the mission of the facility
- Inform visitors of **opportunities** along the Scenic Byway



Conceptual Floor Plan










Nestled atop the rolling foothills of Curry Ridge, the proposed South Denali Visitor Center will provide an unparalleled visitor experience that offers dramatic views of Mt. McKinley and the Alaska Range, while highlighting the wilderness values of the South Denali Region.

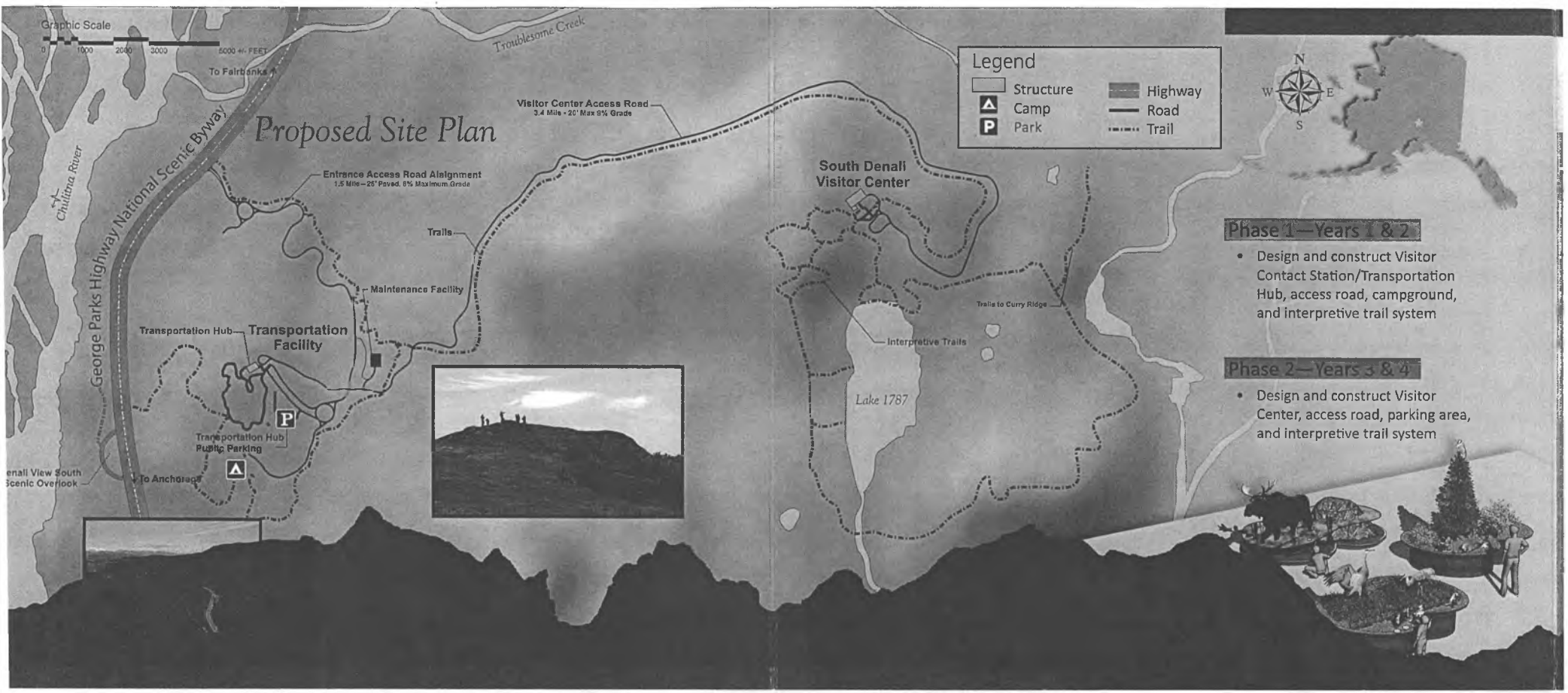
For more information www.southdenali.alaska.gov

Goal

- Provide a quality visitor experience while protecting resource values in the South Denali Region;
- Enhance recreational and access opportunities throughout the South Denali Region for the benefit of a wide variety of visitors including Alaskans, independent travelers, and package tour operators; and
- Develop interpretive components that offer interactive programs, and enhance visitor appreciation of, and connection to the cultural and natural history of the South Denali Region.

Denali State Park

January 2012



Phase 1—Years 1 & 2

- Design and construct Visitor Contact Station/Transportation Hub, access road, campground, and interpretive trail system

Phase 2—Years 3 & 4

- Design and construct Visitor Center, access road, parking area, and interpretive trail system





- Provide a **quality visitor experience** while protecting **resource values** in the South Denali Region;
- Enhance **recreational** and **access opportunities** throughout the South Denali Region for the benefit of a wide variety of visitors including Alaskans, independent travelers, and package tour operators; and
- Develop **interpretive components** that offer **interactive programs**, and enhance visitor appreciation of, and connection to the **cultural and natural history** of the South Denali Region.

Goal

State Park

January 2012





Denali State Park

South Denali
Visitor Center Complex

A Visitor Center on the Horizon

03/21/13 Presentation: Unmanned Aircraft Systems

<TARGET><BILL></BILL><SUBJECT>03-21-13 Presentation Unmanned Aircraft Systems</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
March 21, 2013

1. **Call to Order**

~Gavel~ Welcome to House Economic Development, Trade and Tourism Committee. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aide, Ginger Blaisdell.

2. **Roll Call and Agenda**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)
    - Several members may be coming and going due to other committee meetings underway.

3. **Calendar Review**

- Today we will hear a presentation by Ms. Ro Bailey, Retired Air Force Brigadier General and Deputy Director of the Alaska Center for Unmanned Aircraft Systems Integration – RDT&E.
- Her presentation will provide the preliminary information for the resolution scheduled for hearing on Tuesday, March 26.
- She is joined by an unmanned aircraft named Scout.

4. **EDTT committee Tour of Alaska**
    - June 4-6 (Tuesday through Thursday
        - Tuesday early morning – Anchorage bus to Talkeetna
        - Talkeetna optional river raft, flight seeing, etc.
        - O/N Denali Princess hotel
        - Wednesday morning free
        - Afternoon tour of Usibelli
        - Dinner on Riverboat Discovery
        - O/N Fairbanks Princess or flight to Anchorage

        - Thursday optional tour of Fairbanks or flight to Anchorage
    - How many members, spouses and family, and committee staff?
    - Is this week impossible for most members? Is another Tu-Th week in June better?

Next week we planned on hearing two resolutions on Tuesday and a presentation regarding Arctic Development on Thursday. With the floor sessions scheduled on Tues and Thursday, we may have to adjust the Thursday schedule but we will meet on Tuesday.

Do members have any closing comments?

- Thank you. We are ADJOURNED at 12:___ (time)." ~Gavel~

Unmanned Aircraft System Operations
Industry "Code of Conduct"

The emergence of unmanned aircraft systems (UAS) as a resource for a wide variety of public and private applications quite possibly represents one of the most significant advancements to aviation, the scientific community, and public service since the beginning of flight. Rapid advancements in the technology have presented unique challenges and opportunities to the growing UAS industry and to those who support it. The nature of UAS and the environments which they operate, when not managed properly, can and will create issues that need to be addressed. The future of UAS will be linked to the responsible and safe use of these systems. Our industry has an obligation to conduct our operations in a safe manner that minimizes risk and instills confidence in our systems.

For this reason, the Association for Unmanned Vehicle Systems International (AUVSI), offers this Code of Conduct on behalf of the UAS industry for UAS operation. This code is intended to provide our members, and those who design, test, and operate UAS for public and civil use, a set of guidelines and recommendations for safe, non-intrusive operations. Acceptance and adherence to this code will contribute to safety and professionalism and will accelerate public confidence in these systems.

The code is built on three specific themes: Safety, Professionalism, and Respect. Each theme and its associated recommendations represent a "common sense" approach to UAS operations and address many of the concerns expressed by the public and regulators. This code is meant to provide UAS industry manufacturers and users a convenient checklist for operations and a means to demonstrate their obligation to supporting the growth of our industry in a safe and responsible manner. By adopting this Code, UAS industry manufacturers and users commit to the following:

Safety

- We will not operate UAS in a manner that presents undue risk to persons or property on the surface or in the air.
- We will ensure UAS will be piloted by individuals who are properly trained and competent to operate the vehicle or its systems.
- We will ensure UAS flights will be conducted only after a thorough assessment of risks associated with the activity. This risks assessment will include, but is not limited to:
- Weather conditions relative to the performance capability of the system
- Identification of normally anticipated failure modes (lost link, power plant failures, loss of control, etc) and consequences of the failures
- Crew fitness for flight operations
- Overlying airspace, compliance with aviation regulations as appropriate to the operation, and off-nominal procedures
- Communication, command, control, and payload frequency spectrum requirements
- Reliability, performance, and airworthiness to established standards

Professionalism

- We will comply with all federal, state, and local laws, ordinances, covenants, and restrictions as they relate to UAS operations.
- We will operate our systems as responsible members of the aviation community.
- We will be responsive to the needs of the public.
- We will cooperate fully with federal, state, and local authorities in response to emergency deployments, mishap investigations, and media relations.
- We will establish contingency plans for all anticipated off-nominal events and share them openly with all appropriate authorities.

Respect

- We will respect the rights of other users of the airspace.
- We will respect the privacy of individuals.
- We will respect the concerns of the public as they relate to unmanned aircraft operations.
- We will support improving public awareness and education on the operation of UAS.

As an industry, it is incumbent upon us to hold ourselves and each other to a high professional and ethical standard. As with any revolutionary technology, there will be mishaps and abuses; however, in order to operate safely and gain public acceptance and trust, we should all act in accordance with these guiding themes and do so in an open and transparent manner. We hope the entire UAS industry will join AUVSI in

adopting this industry Code of Conduct.

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INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE

AVIATION COMMITTEE

Recommended Guidelines for the use of Unmanned Aircraft

BACKGROUND:

Rapid advances in technology have led to the development and increased use of unmanned aircraft. That technology is now making its way into the hands of law enforcement officers nationwide.

We also live in a culture that is extremely sensitive to the idea of preventing unnecessary government intrusion into any facet of our lives. Personal rights are cherished and legally protected by the Constitution. Despite their proven effectiveness, concerns about privacy threaten to overshadow the benefits this technology promises to bring to public safety. From enhanced officer safety by exposing unseen dangers, to finding those most vulnerable who may have wandered away from their caregivers, the potential benefits are irrefutable. However, privacy concerns are an issue that must be dealt with effectively if a law enforcement agency expects the public to support the use of UA by their police.

The Aviation Committee has been involved in the development of unmanned aircraft policy and regulations for several years. The Committee recommends the following guidelines for use by any law enforcement agency contemplating the use of unmanned aircraft.

DEFINITIONS:

1. **Model Aircraft** - A remote controlled aircraft used by hobbyists, which is manufactured and operated for the purposes of sport, recreation and/or competition.
2. **Unmanned Aircraft (UA)** – An aircraft that is intended to navigate in the air without an on-board pilot. Also called Remote Piloted Aircraft and "drones."
3. **UA Flight Crewmember** - A pilot, visual observer, payload operator or other person assigned duties for a UA for the purpose of flight.
4. **Unmanned Aircraft Pilot** - A person exercising control over an unmanned aircraft during flight.

COMMUNITY ENGAGEMENT:

1. Law enforcement agencies desiring to use UA should first determine how they will use this technology, including the costs and benefits to be gained.
2. The agency should then engage their community early in the planning process, including their governing body and civil liberties advocates.
3. The agency should assure the community that it values the protections provided citizens by the U.S. Constitution. Further, that the agency will operate the aircraft in full compliance with the mandates of the Constitution, federal, state and local law governing search and seizure.
4. The community should be provided an opportunity to review and comment on agency procedures as they are being drafted. Where appropriate, recommendations should be considered for adoption in the policy.
5. As with the community, the news media should be brought into the process early in its development.

SYSTEM REQUIREMENTS:

1. The UA should have the ability to capture flight time by individual flight and cumulative over a period of time. The ability to reset the flight time counter should be restricted to a supervisor or administrator.
2. The aircraft itself should be painted in a high visibility paint scheme. This will facilitate line of sight control by the aircraft pilot and allow persons on the ground to monitor the location of the aircraft. This recommendation recognizes that in some cases where officer safety is a concern, such as high risk warrant service, high visibility may not be optimal. However, most situations of this type are conducted covertly and at night. Further, given the ability to observe a large area from an aerial vantage point, it may not be necessary to fly the aircraft directly over the target location.
3. Equipping the aircraft with weapons of any type is strongly discouraged. Given the current state of the technology, the ability to effectively deploy weapons from a small UA is doubtful. Further, public acceptance of airborne use of force is likewise doubtful and could result in unnecessary community resistance to the program.
4. The use of model aircraft, modified with cameras, or other sensors, is discouraged due to concerns over reliability and safety.

OPERATIONAL PROCEDURES:

1. UA operations require a Certificate of Authorization (COA) from the Federal Aviation Administration (FAA). A law enforcement agency contemplating the use of UA should contact the FAA early in the planning process to determine the requirements for obtaining a COA.
2. UA will only be operated by personnel, both pilots and crew members, who have been trained and certified in the operation of the system. All agency personnel with UA responsibilities, including command officers, will be provided training in the policies and procedures governing their use.
3. All flights will be approved by a supervisor and must be for a legitimate public safety mission, training, or demonstration purposes.
4. All flights will be documented on a form designed for that purpose and all flight time shall be accounted for on the form. The reason for the flight and name of the supervisor approving will also be documented.
5. An authorized supervisor/administrator will audit flight documentation at regular intervals. The results of the audit will be documented. Any changes to the flight time counter will be documented.
6. Unauthorized use of a UA will result in strict accountability.
7. Except for those instances where officer safety could be jeopardized, the agency should consider using a "Reverse 911" telephone system to alert those living and working in the vicinity of aircraft operations (if such a system is available). If such a system is not available, the use of patrol car public address systems should be considered. This will not only provide a level of safety should the aircraft make an uncontrolled landing, but citizens may also be able to assist with the incident.
8. Where there are specific and articulable grounds to believe that the UA will collect evidence of criminal wrongdoing and if the UA will intrude upon reasonable expectations of privacy, the agency will secure a search warrant prior to conducting the flight.

IMAGE RETENTION:

1. Unless required as evidence of a crime, as part of an on-going investigation, for training, or required by law, images captured by a UA should not be retained by the agency.
2. Unless exempt by law, retained images should be open for public inspection.

UNMANNED AIRCRAFT SYSTEMS FOR ALASKA









Ro Bailey
Deputy Director
Alaska Center for Unmanned Aircraft Systems Integration
(907) 455-2104

Roadmap

- University of Alaska UAS history
  - Vision, mission, why unmanned
- Projects & why they matter to Alaska
  - Economic value
  - Science, engineering, & safety value
- FAA Test Site Proposal
- What about privacy? Law Enforcement?
- House Concurrent Resolution No. 6

UAF's History of Unmanned Aircraft



First UAF Launch

- 2001 - Partnership with New Mexico State University
  - Tasked to develop applications within the Technical Analysis and Applications Center (TAAC)
- 2003/2004 - Funded to work with USAF and USCG
  - Maritime domain awareness
  - Wildfires in the Interior of Alaska
- 2006 - Acquired first ScanEagle with 50% loan from University Foundation
- 2007 to present - Multiple missions for science, emergency response, humanitarian needs, and engineering development
- Today our unmanned aircraft fleet is diverse and growing
  - Existing fixed wing systems
  - Existing rotor systems
  - Developing new systems

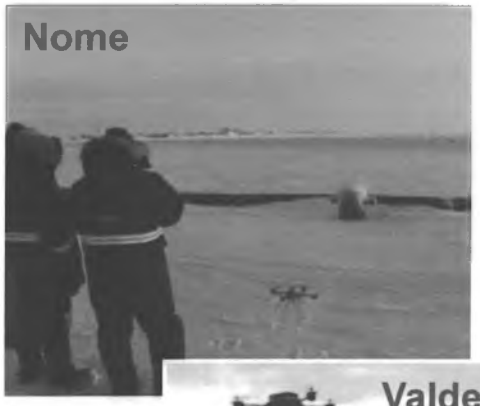


Meeting Alaska's Needs

- Research
  - Science
  - Engineering
- Public Safety / Emergency Response
- Natural Resource Management













Value to Alaska

- UAF alone has brought in over $4.5 M
- Technology
  - Three small company start-ups since 2010
  - Two aerospace companies opened/opening offices in Fairbanks—one is ARTIC, or Atkinson Robotics and Technology Integration Corporation
  - Both Alaskan and Outside companies partnering with UAF to pursue FAA Test Site
- Value to Alaska business
  - Fish & game management & protection
  - Support oil industry, mining, fisheries, others

Economic Impact in Alaska

Before Expected Impact of a Test Range Designation



Northern Embedded Solutions













Alaska-based development partners

Expected Value

- Value to Alaska
  - Better deploy wildfire fighters
  - Support disaster response
  - Assess/protect transportation routes—e.g., monitor slopes
  - Search & rescue in remote areas
  - High resolution mapping
  - Infrastructure monitoring
  - Oil spill response & monitoring
  - Counter unilateral Federal decisions with facts
  - River monitoring during breakup

Why Unmanned?

- Risky work: over remote, extreme terrain or unreachable locations in volatile weather conditions
  - Nov 1999: Helicopter crashed, two Nez Perce biologists conducting surveys seriously injured
  - Polar & distant maritime locations
- Dirty work: observations over chemical spills, volcanoes, wildfire smoke
- Dull: capturing thousands of photos to process into 3D maps is boring, repetitive work
- Other means not possible
  - Monitoring sea ice from under 1000 ft
  - Flying through volcanic ash plumes

What Alaska Offers

- Vast open airspace with little traffic
- Wild, extreme, unpopulated, diverse terrain
- Access to large military ranges with data gathering ability
- History of pioneering aviation technology
- Culture of innovative use of aviation
- Close relationship with regional FAA
- Perhaps most important, willingness to be thoughtful and methodical in potential policy decisions

Vision

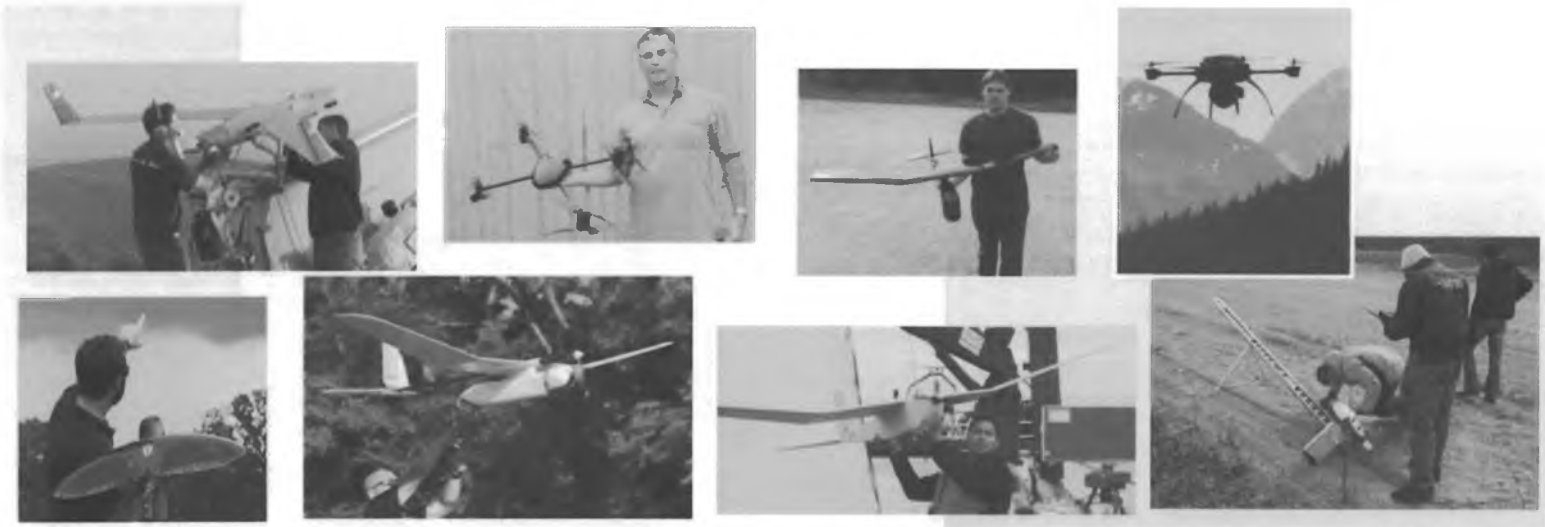
Develop, test, and ultimately exploit emerging unmanned aircraft technology and its uses to create a positive economic and social benefit within the State of Alaska.

When the cost of the hardware is no longer a factor what will people do with the capability?

- **Plan today to prepare for the future**
- **Develop what is needed to support**
- **Participate in policy development for benefit and protection of Alaska & the nation**

Mission Statement

A research center for small, unmanned aircraft systems providing integration of unique payloads and supporting pathfinder missions within government and science communities, with a special emphasis on the Arctic region.

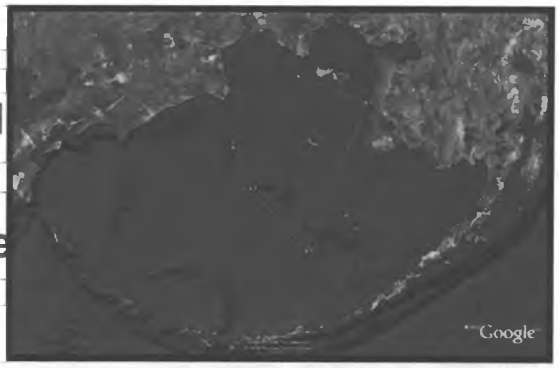


Conducted over 150 mission flight days worldwide in 2012

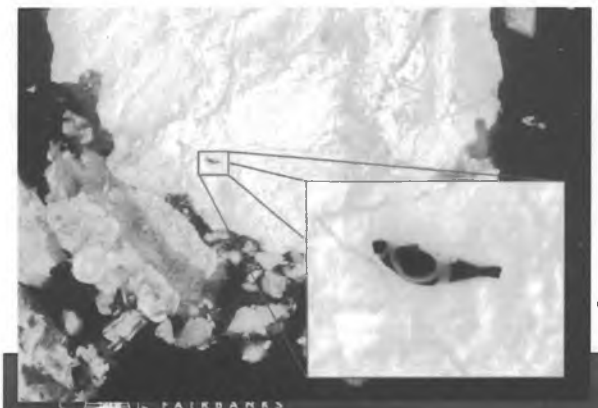
The Evidence:
a sample of projects

Ice Seal Population Study

- Scientific Need
  - Marine Mammal Protection Act mandated
- Relevance
  - Large-scale, systematic ship-based surve
- Outcome
  - Safer (than manned aviation)
  - More effective (they do not startle seals)
    - vs. manned fixed wing or helicopters



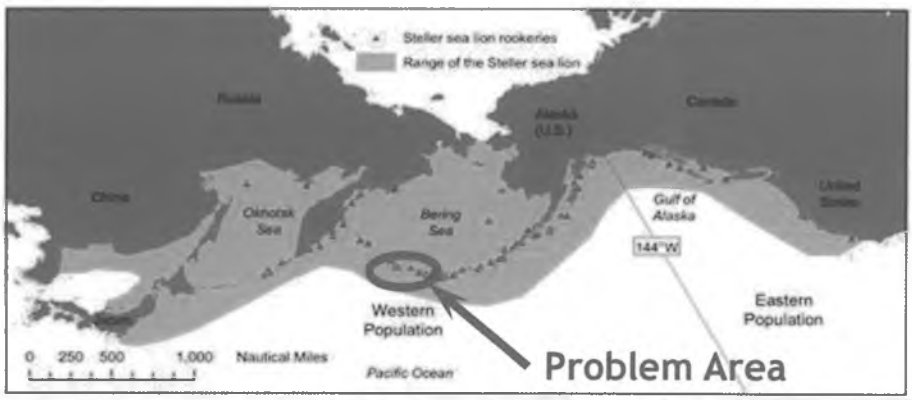




2009 First Deployment
2014 Proposed Expanded Survey
Joint NOAA and US Navy Funded

Augmenting Steller Sea Lion Surveys
Western Aleutians

- **Problem: Biological opinion, based on limited observations, eliminated a commercial fishery**
- **Goal: Demonstrate a method to collect high quality imagery for population surveys in hard to observe areas**
- **Possible Benefit: Improved understanding of animal use of and movement through their habitat**



Steller Sea Lion Habitat Monitoring



Preliminary Findings
- **Migration Patterns**
- **Transient Killer Whales**





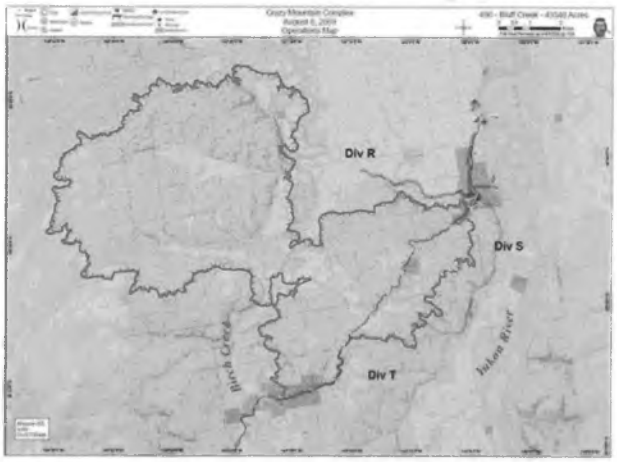




Crazy Mountain Wildfire

Alaska Fire Service Incident Command Team Support

- Tasked by Alaska Fire Service Incident Command Team
- Manned aviation not flown for 5 days due to the smoke and limited visibility
- Satellite imagery (MODUS) incapable of showing critical activity



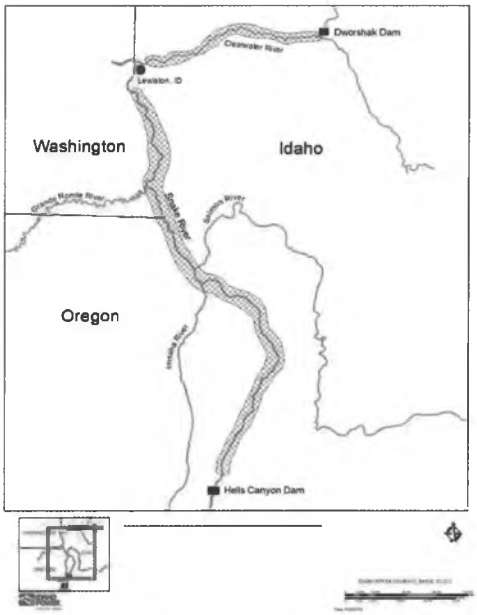




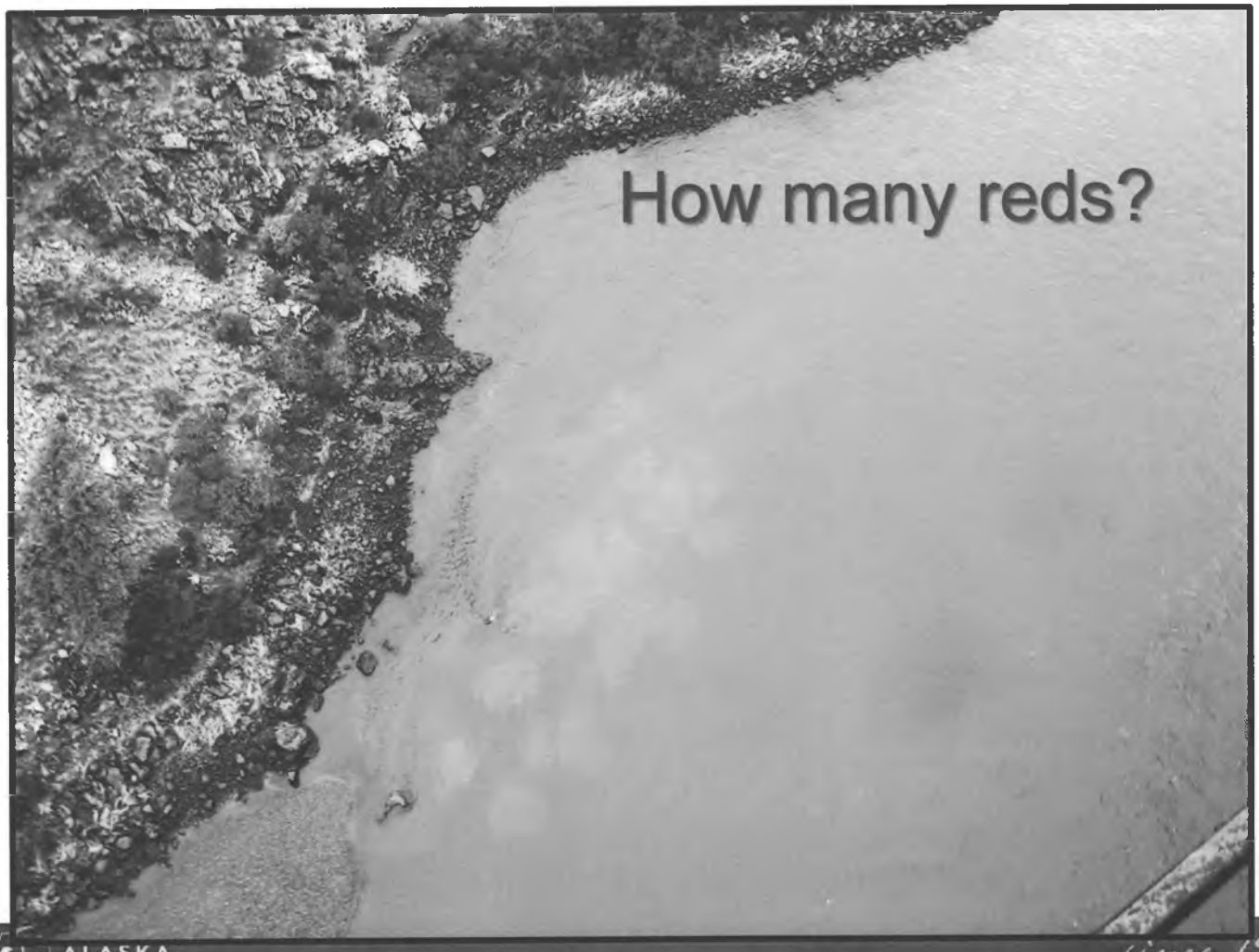


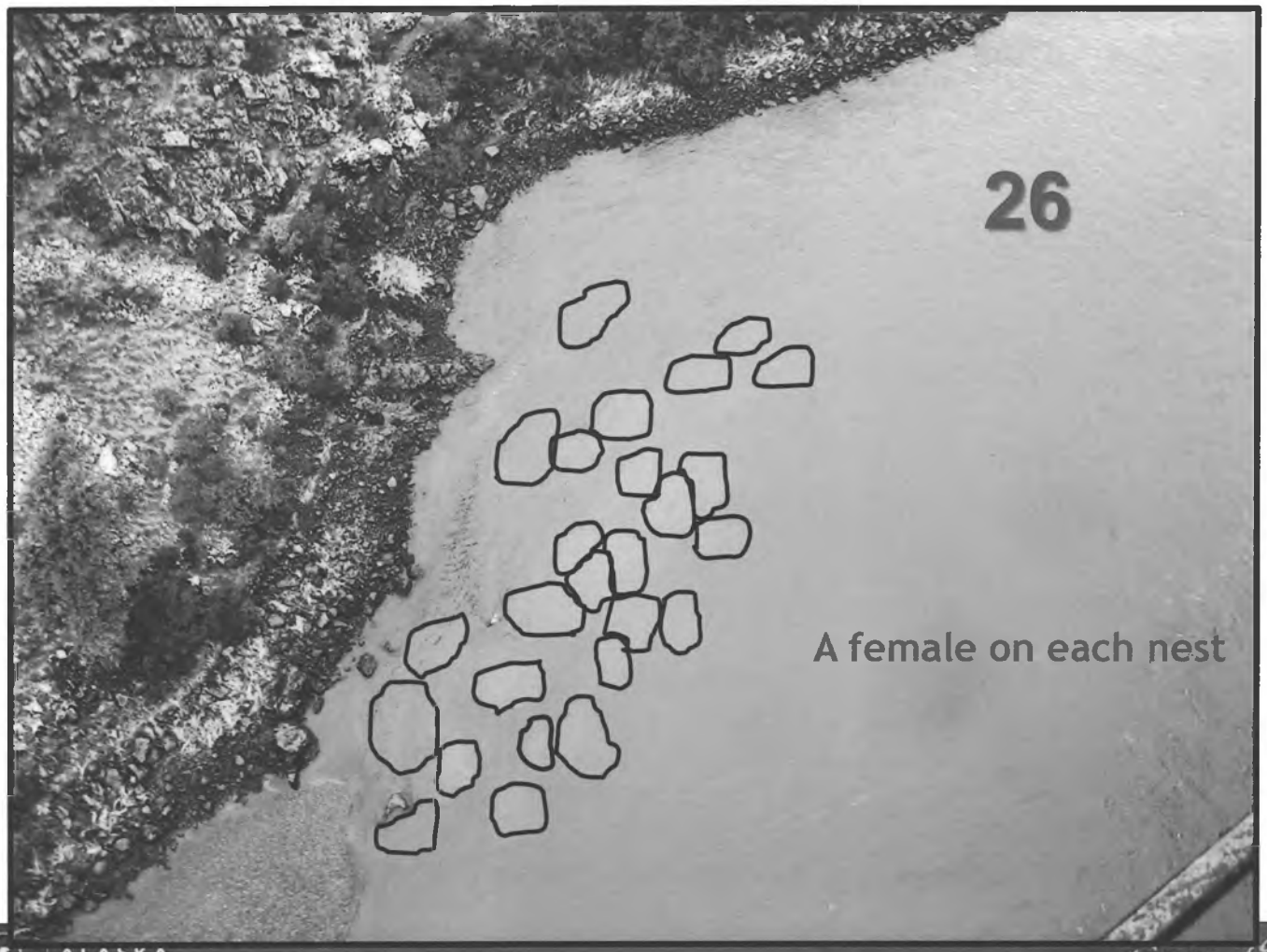
Salmon Spawning Habitat
October - December 2012

- Mapping Fall Salmon Nests along a 162 km of the Snake and Clearwater River in Idaho, Washington, and Oregon
- "THREATENED" under the Endangered Species Act






How many reds?


26
A female on each nest

Fish Habitat Data Products

Weekly Mosaic Images of Select Sites



Rx-CADRE

Prescribed Fire Combustion and Atmospheric Dynamics Research Experiment

- October 29 - November 17 2012
- Eglin AFB Florida



Bear Bite - SAREX

Mass Casualty Exercise 7-10 February 2013

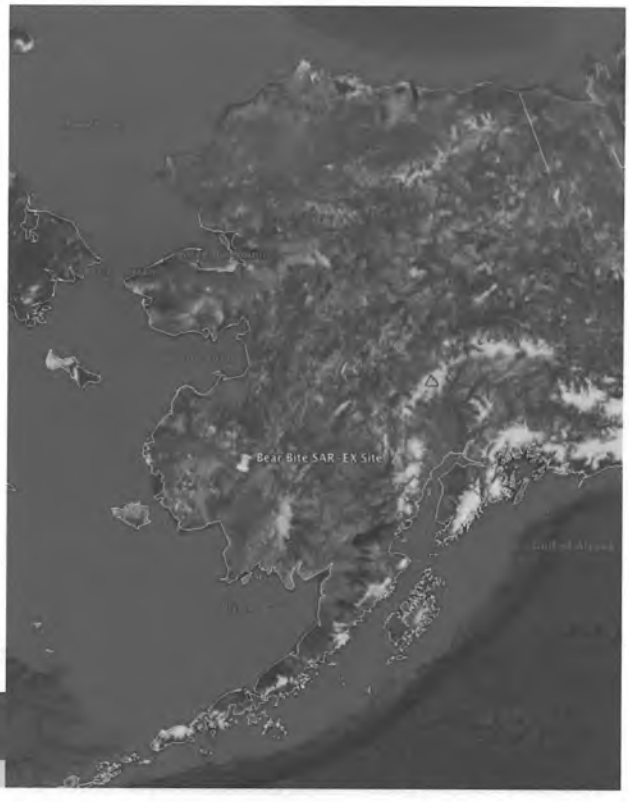
"An aircraft crashed in the tundra roughly 20 miles outside Bethel Alaska many died with some survivors"

Deployed two unmanned aircraft systems with support team

Coordinated with manned aviation on the scene

Mission:

- **Map scene for event documentation**
- **Real-time SAR response**

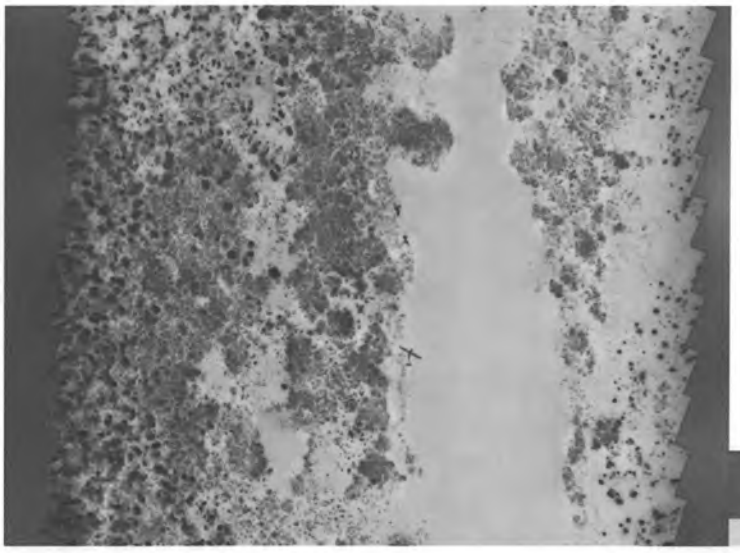


UAF UNIVERSITY OF ALASKA FAIRBANKS

Bear Bite - SAREX

"I've worked with the MQ9 and the MQ1 before and when compared these products were pretty sweet" - SAR Duty Officer statement at after action review 11 Feb 2013. "Within just a couple hours imagery was collected and turned into mosaic products in the field"







Bear Bite - SAREX

cold weather operations – our most challenging yet



Shoreline Clean-up Assessment Technique (SCAT) Evaluation









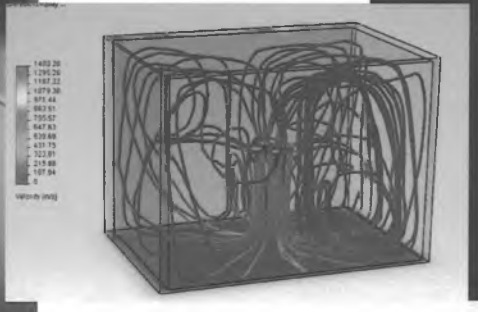
BP Exploration (Alaska) Inc. Partnership

Oil Infrastructure Monitoring Research





- Flare Stacks
- Pipelines
- Processing Facilities
- Access Roads





BP North America Partnership

High Arctic Ship Piloting Experiments

Aboard the Canadian CCGS LOUIS S. ST. LAURENT







Phase I Research conducted by Capt Stephen Wackowski (USAF)

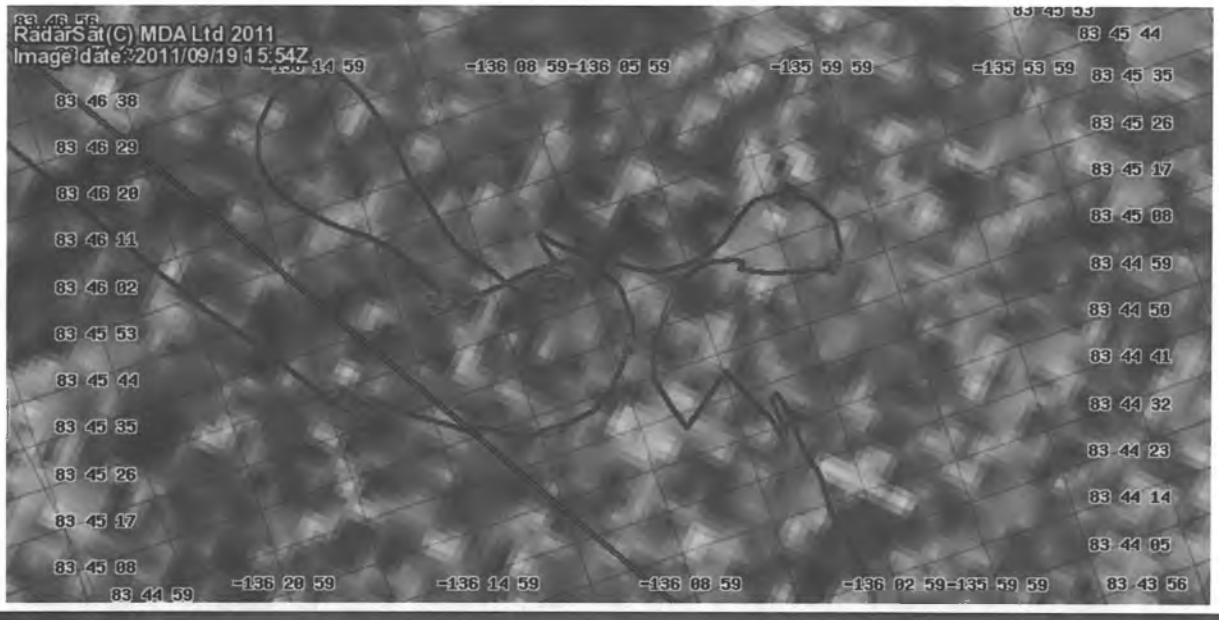
Phase II Ongoing with UAF graduate students with modified Raven systems acquisition

Imagery Used For Ship Piloting in Ice

Ship tracks superimposed (Sept 2011)

Background Image: National Ice Center highest resolution RADARSAT

- **Desired icebreaker track (green)**
- **Actual navigation track (red)**



Small UAS Imagery of Ice Ridges

IR image from RAVEN UAS (Sept 2011)



Navigating Sea Ice during the Nome Fuel Delivery

University Engagement and Decision Support





Mission

1. Identify potential safety concerns for those working on the ice
2. Document the site for mission response activity
3. Collect imagery for the USCG Public Affairs Officer

iPASS

UAF's Portable Airspace Surveillance System

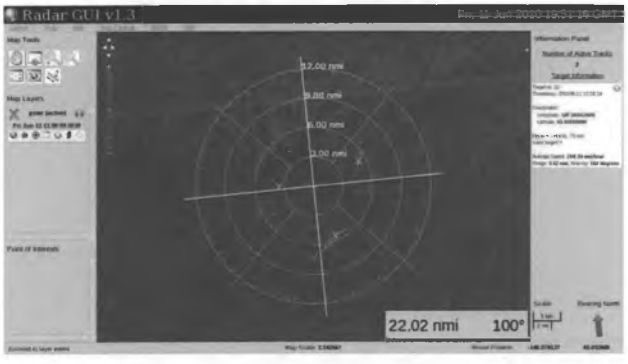
Designed and built by UAF for Alaska's airspace monitoring needs



Status

Operational, used in Canada and NASA Certified





Airspace activity monitoring

Monitors airspace use patterns and validates traffic pattern assumptions

Enhanced situational awareness during aircraft or spacecraft operations

Provides real-time position and track of local airspace activity to assist in traffic avoidance

Ongoing UAS Survey of Marine Debris

Generated by 2011 Japanese Tsunami







NOAA Funded Effort

Partnering with a Wasilla Alaska based UAS Manufacturer Airborne Technologies Inc





Upcoming ACUASI Projects

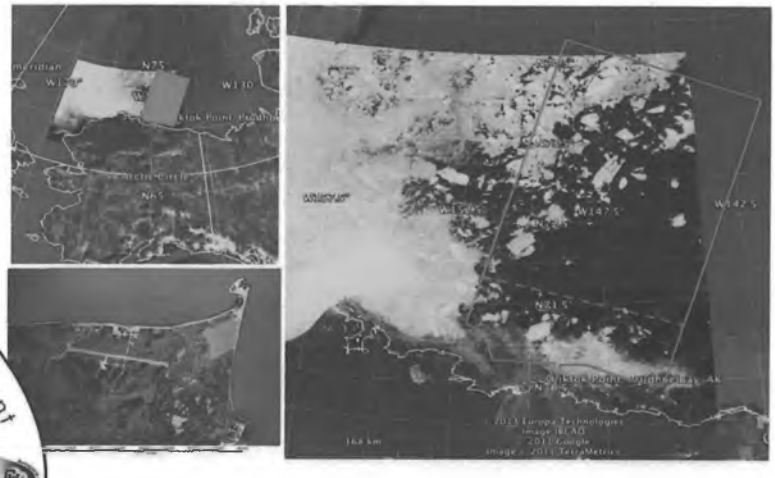
Marginal Ice Zone Ocean and Ice Observations and Processes EXperiment (MIZOPEX)

UAF deployments

NASA Exercise July 2013

Preparation May/June 2013





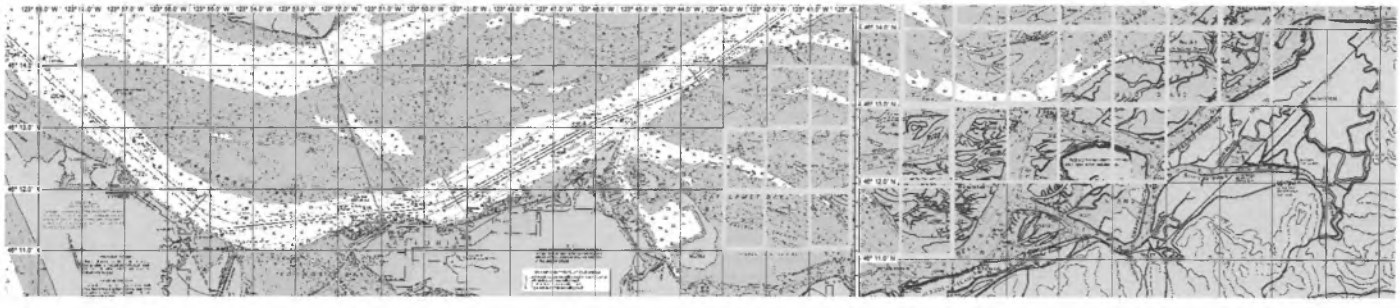
Multiple aircraft simultaneously
Many new scientific payloads

Alaska Department of Public Safety

- Provided demonstration of a vertical takeoff UAS
- Provided concepts in which a UAS could be used including:
  - Forensic evidence at crash or crime scene
  - Search and rescue
  - Wildlife protection
- Provide UAS subject matter expert as AST forms its concept of operations
- Possible development of UAS training package to train State troopers
- Supporting any FAA interaction needs
- Providing connections to legal experts on privacy

Most Recent ACUASI Project

Oil Spill Response Exercise - Columbia River Estuary

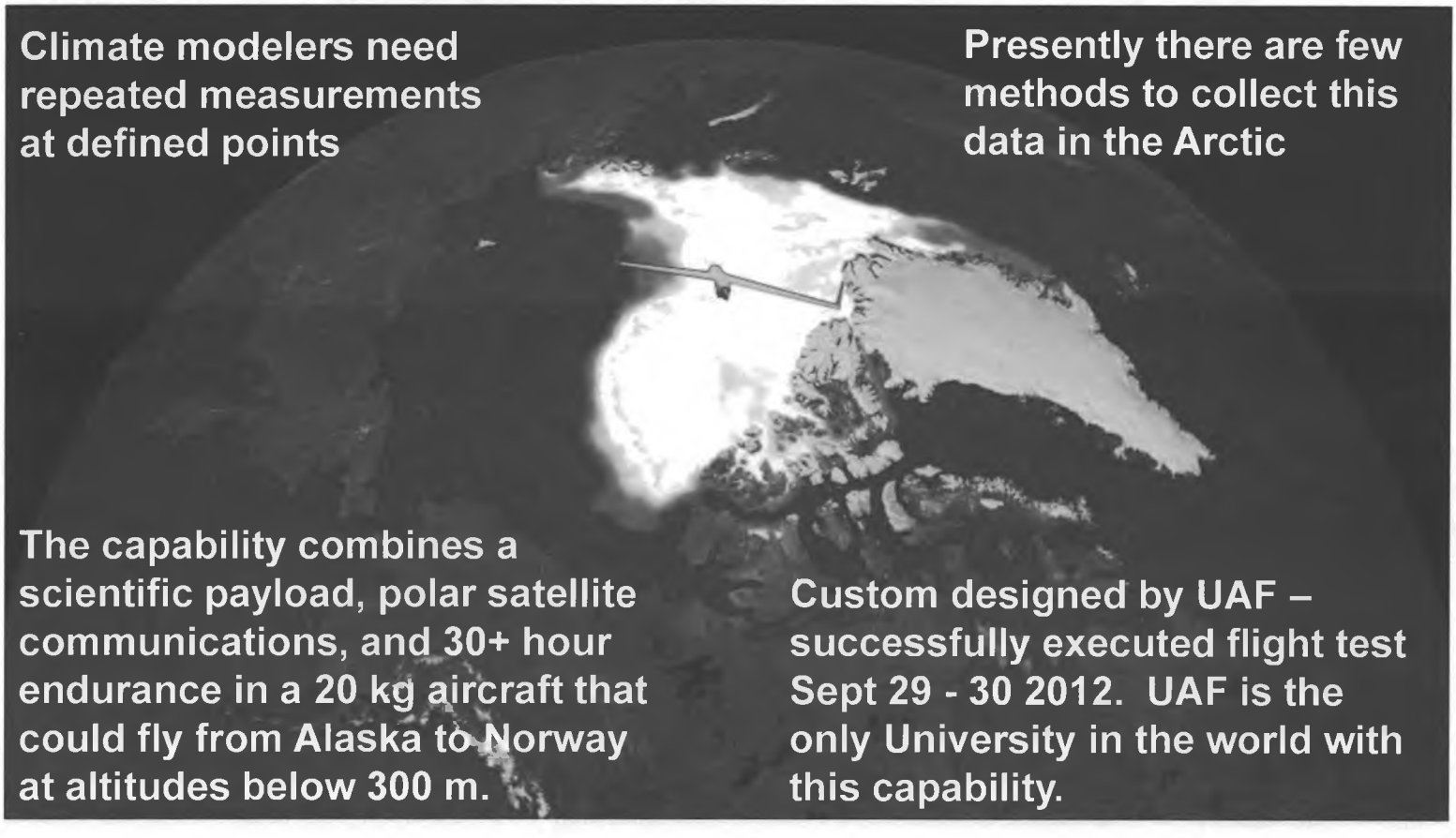


- 11-13 March 2013
- Puma AE Operation



Low-altitude, over-the-pole capability

Fuel-injected, Iridium-communication-enhanced, long-endurance, small unmanned aircraft



Climate modelers need repeated measurements at defined points

Presently there are few methods to collect this data in the Arctic

The capability combines a scientific payload, polar satellite communications, and 30+ hour endurance in a 20 kg aircraft that could fly from Alaska to Norway at altitudes below 300 m.

Custom designed by UAF – successfully executed flight test Sept 29 - 30 2012. UAF is the only University in the world with this capability.

Volcanic Ash Analysis and Detection
USAF Small Business Innovative Research

- Collaboration between UAF researchers and new industry
- Opportunity to launch a business to capitalize on USAF funding with UAF Intellectual Property



FAA Test Site

- Jan 2012: FAA Reauthorization Act directed FAA to select 6 Test Sites to research and test for safe integration of UAS into the national airspace
- Feb 14 2013: Solicitation was released
- UAF leads team for states of Alaska, Oregon, and Hawaii, plus 56 additional team members
  - Includes state agencies (DOT, DPS, Forestry of DNR, DHS&EM, National Guard
  - Universities, EDCs, corporations
- Proposals due multiple dates, last by May 6
- Selection targeted by FAA for Dec 31 2013

Pan Pacific UAS Test Range Complex

- University ACUASI is lead
- Fourteen specific spots around the three states
  - Strong link with military JPARC ranges
  - Forging links with manned aviation safety specialist
- Key questions to answer:
  - Procedures to protect manned aviation
  - Policies to protect privacy
  - Technical testing to assure control, see & avoid, lost link procedures work, etc

How is Privacy Protected?

- We're dedicated to protect privacy so beneficial uses can be obtained
- Current statutory/case law strongly protects privacy while defining legal airborne activities (manned)
  - Unmanned a new technology, but subject to same restrictions
  - DHS & National Institute for Justice have taken on task of defining specific UAS privacy rules
  - FAA committed to incorporating into Test Site and future rules once developed
  - DoD & Guard training on domestic privacy well underway

More on Privacy

- International Chiefs of Police issued guidelines for law enforcement use of UAS
  - Handout with full text available
  - The essence:
    - Follow FAA rules
    - Use strict supervisory accountability
    - Get warrants if any possibility of use for surveillance or investigation
    - Notify locals of intent to fly over them
    - Delete recordings not authorized by warrant, training use, or as required by law
- UAF working with DPS to assist with program, procedures, all to be set up before first flight

What about Weapons on UAS?

- Despite media scares, this won't happen
- The Unmanned Aircraft System community uniformly against any such use
- Small UAS incapable of carrying weapons
  - But even if they could…
- FAA prohibits weapons completely—or any dropping of objects from aircraft
- IACP advises against even considering—sees as unlikely technologically, unacceptable to public, ineffective use of UAS

HR No 6

- Thank you for a thoughtful and balanced view of the potential benefits and risks of UAS
- Recognition of UAF's work to date is gratifying—our goal always has been to benefit Alaska
  - You've seen many benefits already, but potential remains far greater
  - Military users & media treatment have created an impression of danger for domestic use
  - No violations yet; we pledge to work hard both on the task force and in the test site to craft solid, defensible policy for your consideration


UAF
UNIVERSITY OF
ALASKA
FAIRBANKS
Alaska Center for UAS Integration

2012 Alaska Legislature Capital Budget

Research and Development of Unmanned Aerial Systems	5,000,000	5,000,000

16 (HD 1-40)
It is the intent of the Legislature that the University of Alaska collaborate with the Federal Aviation Administration in establishing a research and development program and possible test facility for Unmanned Aerial Systems in Alaska. Unmanned Aerial Systems are already being utilized in Alaska in many ways and as the Arctic race progresses, they will become even more vital as a resource to the State and the Country.

Excerpt From DoD Training Briefing

General Principles

- Do NOT infringe on US Persons' Constitutional rights
- Protect privacy rights of US Persons
- Collect, retain, and disseminate information based on a lawfully assigned mission and function
- Employ the least intrusive lawful techniques
- Comply with all regulatory requirements







03/26/13 HCR 6 and HJR 12

<TARGET><BILL>HCR 6</BILL><SUBJECT>03-26-13 HCR 6 and HJR 12</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
March 26, 2013

- **Call to Order**

~Gavel~ Welcome to House Economic Development, Trade and Tourism Committee. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aide, Ginger Blaisdell.

- **Roll Call and Agenda**

For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)

  - **HCR6 Unmanned Aircraft**
    - **Documents were provided at the March 21 meeting along with a presentation by Ro Bailey, Deputy Director of the Alaska Center for Unmanned Aircraft Systems Integration**

- Before us is House Concurrent Resolution 6 number 28-LS0655 version U Establishing a Legislative Task Force on Unmanned Aircraft.
- We heard the presentation from Ro Bailey last week that supports the statements made in the resolution. Following the presentation, my staff reviewed the resolution and made some adjustments to flow of the document and removed redundancies. A Committee Substitute has been provided in your packets.
- Ask for the CS to be adopted for consideration.
- ___ adopt Committee Substitute for House Concurrent Resolution 6 number 28-LS0655 version U with a zero fiscal note.
- My staff Ginger Blaisdell will discuss the changes made to HCR6
- Are there any questions of the committee?

- We will now open the meeting for public testimony on HCR6 – please keep your remarks to ___ minutes.
    - **Public testimony**
        1. **Steve Colligan**
        2. **Ro Bailey**
- We will now close public testimony.
- Are there any further remarks from the committee?
- What is the will of the committee?
- ___ move Committee Substitute for House Concurrent Resolution 6 number 28-LS0655 version U with a zero fiscal note and individual recommendations.
- **Take a couple of minutes to sign the bill file**

    - **HJR12 Gun Manufacturing**
        - **Documents were delivered to each office yesterday and packets are available for the public**
- Before us is House Joint Resolution 12 number 28-LS0619 version A Encouraging the manufacture of firearms and firearms accessories in the state.
- Representative Chennault and/or Tom Wright will speak to the bill
- Are there any questions of the committee?
- We will now open the meeting for public testimony on HJR12 – please keep your remarks to ___ minutes.
    - **Public testimony**
    -
- We will now close public testimony.
- Are there any further remarks from the committee?
- What is the will of the committee?
- ___ move House Joint Resolution 12 number 28-LS0619 version A with a zero fiscal note and individual recommendations

- **Calendar Review**
    - **Thursday, March 28 presentation on Arctic Economic Development Opportunities**
      We will have a number of short remarks from Rep Herron, Staff from Senator Begich's office, Institute of the North, and the Department of Commerce, Community and Economic Development.

Thursday may be the final meeting of the EDTT committee – no further presentations are scheduled but we will meet if any legislation if referred to committee.

- **EDTT committee Tour of Alaska**
  - June 4-6 (Tuesday through Thursday
    - Tuesday early morning – Anchorage bus to Talkeetna
    - Talkeetna optional river raft, flight seeing, etc.
    - O/N Denali Princess hotel
    - Wednesday morning free
    - Afternoon tour of Usibelli
    - Dinner on Riverboat Discovery
    - O/N Fairbanks Princess or flight to Anchorage
    - Thursday optional tour of Fairbanks or flight to Anchorage
  - How many members, spouses and family, and committee staff?
  - Is this week impossible for most members? Is another Tu-Th week in June better?

- **Adjourn**

ALASKA STATE LEGISLATURE

SESSION ADDRESS:
Alaska State Capitol
Juneau Alaska 99801
Phone: 907-465-3743
Toll-free: 1-800-565-3743
Fax: 907-465-2381
Rep.Shelley.Hughes@akleg.gov

INTERIM ADDRESS:
600 E Railroad Avenue
Wasilla AK 99654
Phone: 907-376-3725
Fax: 907-376-4768

Representative Shelley Hughes
House District 8 - Greater Palmer

House Special Committee Economic Development Trade and Tourism
State Capitol, Room 409
Juneau, AK 99801

HCR6 Unmanned Aircraft Task Force

Sponsor Statement

March 19, 2013

HCR6 recognizes the accomplishments of the University of Alaska Fairbanks, Center for Unmanned Aircraft Systems Integration and the research conducted to advance this technology in a safe manner. The research team at the Center has proven that unmanned aircraft can complete tasks more efficiently than traditional means, provide better information, and reduce life safety risks to animals and humans.

HCR6 also recognizes that with new technology comes the need to revisit certain laws to ensure the safety of our citizens and protect their privacy. This resolution forms a task force made up of legislators, government officials, and industry members. The task force will consider recommendations for privacy, appropriate use, and possible remedies for misuse. A preliminary report to the legislature is due in January 2014 and a final report of recommendations due January 2015.

While national news has sparked debate regarding the privacy concerns and the use of "drones" in U.S. National Airspace, Alaska has responsibly used unmanned aircraft for more than ten years. Some privacy concerns are due to limited understanding of this technology and some concerns are justified. The task force will consider regulation already in place by the Federal Aviation Administration and industry codes of conduct while reviewing Alaska state laws to determine the changes that may be necessary to protect the privacy of all Alaskans.

28-LS0655\N
Gardner
3/23/13

CS FOR HOUSE CONCURRENT RESOLUTION NO. 6(EDT)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-EIGHTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON ECONOMIC DEVELOPMENT, TRADE, AND TOURISM

Offered:
Referred:

Sponsor(s): REPRESENTATIVES HUGHES, Kawasaki, Isaacson, Pruitt

A RESOLUTION

Recognizing the Alaska Center for Unmanned Aircraft Systems Integration at the University of Alaska Fairbanks as a national leader in unmanned aircraft research and development; and relating to a Task Force on Unmanned Aircraft Systems.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the Unmanned Aircraft Systems Program at the University of Alaska Fairbanks has, since 2001, been designing payloads and upgrades for unmanned aircraft systems, testing and evaluating their safety and effectiveness, developing and demonstrating new uses for various potential users, working with the Federal Aviation Administration to make the use of unmanned aircraft systems safe, and developing technology to improve safety and is known across the nation for its leadership in advancing the state of the art and the safe use of unmanned aircraft systems; and

WHEREAS the importance of the program's work to the state was recently recognized by the Board of Regents of the University of Alaska when the regents established the Center for Unmanned Aircraft Systems Integration at the University of Alaska Fairbanks to continue research and development of unmanned aircraft systems for the benefit of the

state; and

WHEREAS the legislature recognizes the Alaska Center for Unmanned Aircraft Systems Integration at University of Alaska Fairbanks as the state's leader in unmanned aircraft systems research, meeting the goals of industry, the Federal Aviation Administration, and government operations; and

WHEREAS the legislature has provided significant financial support to the Alaska Center for Unmanned Aircraft Systems Integration at University of Alaska Fairbanks to further the center's research initiatives, and to increase its capabilities for use as a possible Federal Aviation Administration test site; and

WHEREAS the State of Alaska, the University of Alaska, the Alaska Aerospace Corporation, the Alaska Aviation Safety Project, and other public and private institutions have developed cooperation with the National Aeronautics and Space Administration, the Federal Aviation Administration, the United States Department of Interior, the United States Department of Defense, and others to further advance the research, development, and use of technology to benefit and support Alaskans and Americans with the safe use of unmanned aircraft systems; and

WHEREAS Alaska state government and the state's business and research community continue to work with the Federal Aviation Administration to promote the establishment of safe unmanned aircraft system ranges onshore and offshore Alaska, which will help establish procedures for the safe operation of unmanned aircraft systems in the National Airspace System; and

WHEREAS the Alaska Center for Unmanned Aircraft Systems Integration, by virtue of being located in Alaska, has access to an area of geographic and climatic diversity where the air and surface population density is desirable for conducting research and development of unmanned aircraft systems; and

WHEREAS the state has the highest per capita use of general aviation activity in the nation, and Alaska aviation organizations have helped the Federal Aviation Administration develop the next generation of air traffic control for the nation and the world, while making major gains for the state's aviation safety in the process; and

WHEREAS unmanned aircraft systems may present a risk to privacy, but neither the Federal Aviation Administration nor any other state or federal agency currently has specific

statutory authority to regulate privacy matters relating to unmanned aircraft systems;

BE IT RESOLVED that the Alaska State Legislature recognizes the Alaska Center for Unmanned Aircraft at the University of Alaska Fairbanks as a leader in aviation pioneering and further recognizes the significant benefit to the state and nation the center provides in research and development of unmanned aircraft systems; and be it

FURTHER RESOLVED that the Alaska State Legislature fully supports the efforts of the Alaska Center for Unmanned Aircraft Systems Integration at the University of Alaska Fairbanks to become one of the nation's six test sites for unmanned aircraft systems testing and research; and be it

FURTHER RESOLVED by the Alaska State Legislature that the Task Force on Unmanned Aircraft Systems is created in the legislative branch and shall consist of 15 members, who, except for the member from the senate and the member from the house of representatives, shall be appointed jointly by the president of the senate and the speaker of the house of representatives, as follows:

(1) one senator selected by the president of the senate, who shall serve as co-chair;

(2) one representative selected by the speaker of the house of representatives, who shall serve as co-chair;

(3) the commissioner of transportation and public facilities or the commissioner's designee;

(4) the commissioner of public safety or the commissioner's designee;

(5) the commissioner of natural resources or the commissioner's designee;

(6) one member representing municipal law enforcement;

(7) the attorney general or the attorney general's designee;

(8) the commissioner of fish and game or the commissioner's designee;

(9) the adjutant general of the Department of Military and Veterans' Affairs or the adjunct general's designee;

(10) a member representing the Alaska Center for Unmanned Aircraft Systems Integration at University of Alaska Fairbanks;

(11) a member of the Academy of Model Aeronautics;

(12) a member from the Aviation Advisory Board;

(13) a member from the Medallion Foundation;

(14) one member of the Aerospace States Association;

(15) one member of the Alaska UAS Interest Group; and be it

FURTHER RESOLVED that a vacancy on the task force shall be filled in the manner of the original appointment; and be it

FURTHER RESOLVED that the duties of the task force shall include

(1) reviewing regulations and guidance from the Federal Aviation Administration regarding unmanned aircraft systems;

(2) providing written recommendations, together with suggested legislation, for a comprehensive state policy for unmanned aircraft that protects privacy and allows the use of unmanned aircraft systems for public and private applications; and

(3) submitting, not later than January 15, 2014, an initial report to the legislature and, not later than January 15, 2015, submitting a final report to the legislature; and be it

FURTHER RESOLVED that the task force may meet as frequently as necessary to carry out its responsibilities; and be it

FURTHER RESOLVED that the task force may meet during and between legislative sessions and may request administrative and technical support from the University of Alaska Fairbanks; and be it

FURTHER RESOLVED that the public members of the task force serve without compensation but are entitled to per diem and travel expenses authorized for boards and commissions under AS 39.20.180; and be it

FURTHER RESOLVED that the task force terminates on January 15, 2015.

adopting this industry Code of Conduct.

Supported By:



































INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE

AVIATION COMMITTEE

Recommended Guidelines for the use of Unmanned Aircraft

BACKGROUND:

Rapid advances in technology have led to the development and increased use of unmanned aircraft. That technology is now making its way into the hands of law enforcement officers nationwide.

We also live in a culture that is extremely sensitive to the idea of preventing unnecessary government intrusion into any facet of our lives. Personal rights are cherished and legally protected by the Constitution. Despite their proven effectiveness, concerns about privacy threaten to overshadow the benefits this technology promises to bring to public safety. From enhanced officer safety by exposing unseen dangers, to finding those most vulnerable who may have wandered away from their caregivers, the potential benefits are irrefutable. However, privacy concerns are an issue that must be dealt with effectively if a law enforcement agency expects the public to support the use of UA by their police.

The Aviation Committee has been involved in the development of unmanned aircraft policy and regulations for several years. The Committee recommends the following guidelines for use by any law enforcement agency contemplating the use of unmanned aircraft.

DEFINITIONS:

1. **Model Aircraft** - A remote controlled aircraft used by hobbyists, which is manufactured and operated for the purposes of sport, recreation and/or competition.
2. **Unmanned Aircraft (UA)** – An aircraft that is intended to navigate in the air without an on-board pilot. Also called Remote Piloted Aircraft and "drones."
3. **UA Flight Crewmember** - A pilot, visual observer, payload operator or other person assigned duties for a UA for the purpose of flight.
4. **Unmanned Aircraft Pilot** - A person exercising control over an unmanned aircraft during flight.

COMMUNITY ENGAGEMENT:

1. Law enforcement agencies desiring to use UA should first determine how they will use this technology, including the costs and benefits to be gained.
2. The agency should then engage their community early in the planning process, including their governing body and civil liberties advocates.
3. The agency should assure the community that it values the protections provided citizens by the U.S. Constitution. Further, that the agency will operate the aircraft in full compliance with the mandates of the Constitution, federal, state and local law governing search and seizure.
4. The community should be provided an opportunity to review and comment on agency procedures as they are being drafted. Where appropriate, recommendations should be considered for adoption in the policy.
5. As with the community, the news media should be brought into the process early in its development.

SYSTEM REQUIREMENTS:

1. The UA should have the ability to capture flight time by individual flight and cumulative over a period of time. The ability to reset the flight time counter should be restricted to a supervisor or administrator.
2. The aircraft itself should be painted in a high visibility paint scheme. This will facilitate line of sight control by the aircraft pilot and allow persons on the ground to monitor the location of the aircraft. This recommendation recognizes that in some cases where officer safety is a concern, such as high risk warrant service, high visibility may not be optimal. However, most situations of this type are conducted covertly and at night. Further, given the ability to observe a large area from an aerial vantage point, it may not be necessary to fly the aircraft directly over the target location.
3. Equipping the aircraft with weapons of any type is strongly discouraged. Given the current state of the technology, the ability to effectively deploy weapons from a small UA is doubtful. Further, public acceptance of airborne use of force is likewise doubtful and could result in unnecessary community resistance to the program.
4. The use of model aircraft, modified with cameras, or other sensors, is discouraged due to concerns over reliability and safety.

OPERATIONAL PROCEDURES:

1. UA operations require a Certificate of Authorization (COA) from the Federal Aviation Administration (FAA). A law enforcement agency contemplating the use of UA should contact the FAA early in the planning process to determine the requirements for obtaining a COA.
2. UA will only be operated by personnel, both pilots and crew members, who have been trained and certified in the operation of the system. All agency personnel with UA responsibilities, including command officers, will be provided training in the policies and procedures governing their use.
3. All flights will be approved by a supervisor and must be for a legitimate public safety mission, training, or demonstration purposes.
4. All flights will be documented on a form designed for that purpose and all flight time shall be accounted for on the form. The reason for the flight and name of the supervisor approving will also be documented.
5. An authorized supervisor/administrator will audit flight documentation at regular intervals. The results of the audit will be documented. Any changes to the flight time counter will be documented.
6. Unauthorized use of a UA will result in strict accountability.
7. Except for those instances where officer safety could be jeopardized, the agency should consider using a "Reverse 911" telephone system to alert those living and working in the vicinity of aircraft operations (if such a system is available). If such a system is not available, the use of patrol car public address systems should be considered. This will not only provide a level of safety should the aircraft make an uncontrolled landing, but citizens may also be able to assist with the incident.
8. Where there are specific and articulable grounds to believe that the UA will collect evidence of criminal wrongdoing and if the UA will intrude upon reasonable expectations of privacy, the agency will secure a search warrant prior to conducting the flight.

IMAGE RETENTION:

1. Unless required as evidence of a crime, as part of an on-going investigation, for training, or required by law, images captured by a UA should not be retained by the agency.
2. Unless exempt by law, retained images should be open for public inspection.

Unmanned Aircraft System Operations
Industry "Code of Conduct"

The emergence of unmanned aircraft systems (UAS) as a resource for a wide variety of public and private applications quite possibly represents one of the most significant advancements to aviation, the scientific community, and public service since the beginning of flight. Rapid advancements in the technology have presented unique challenges and opportunities to the growing UAS industry and to those who support it. The nature of UAS and the environments which they operate, when not managed properly, can and will create issues that need to be addressed. The future of UAS will be linked to the responsible and safe use of these systems. Our industry has an obligation to conduct our operations in a safe manner that minimizes risk and instills confidence in our systems.

For this reason, the Association for Unmanned Vehicle Systems International (AUVSI), offers this Code of Conduct on behalf of the UAS industry for UAS operation. This code is intended to provide our members, and those who design, test, and operate UAS for public and civil use, a set of guidelines and recommendations for safe, non-intrusive operations. Acceptance and adherence to this code will contribute to safety and professionalism and will accelerate public confidence in these systems.

The code is built on three specific themes: Safety, Professionalism, and Respect. Each theme and its associated recommendations represent a "common sense" approach to UAS operations and address many of the concerns expressed by the public and regulators. This code is meant to provide UAS industry manufacturers and users a convenient checklist for operations and a means to demonstrate their obligation to supporting the growth of our industry in a safe and responsible manner. By adopting this Code, UAS industry manufacturers and users commit to the following:

Safety

- We will not operate UAS in a manner that presents undue risk to persons or property on the surface or in the air.
- We will ensure UAS will be piloted by individuals who are properly trained and competent to operate the vehicle or its systems.
- We will ensure UAS flights will be conducted only after a thorough assessment of risks associated with the activity. This risks assessment will include, but is not limited to:
- Weather conditions relative to the performance capability of the system
- Identification of normally anticipated failure modes (lost link, power plant failures, loss of control, etc) and consequences of the failures
- Crew fitness for flight operations
- Overlying airspace, compliance with aviation regulations as appropriate to the operation, and off-nominal procedures
- Communication, command, control, and payload frequency spectrum requirements
- Reliability, performance, and airworthiness to established standards

Professionalism

- We will comply with all federal, state, and local laws, ordinances, covenants, and restrictions as they relate to UAS operations.
- We will operate our systems as responsible members of the aviation community.
- We will be responsive to the needs of the public.
- We will cooperate fully with federal, state, and local authorities in response to emergency deployments, mishap investigations, and media relations.
- We will establish contingency plans for all anticipated off-nominal events and share them openly with all appropriate authorities.

Respect

- We will respect the rights of other users of the airspace.
- We will respect the privacy of individuals.
- We will respect the concerns of the public as they relate to unmanned aircraft operations.
- We will support improving public awareness and education on the operation of UAS.

As an industry, it is incumbent upon us to hold ourselves and each other to a high professional and ethical standard. As with any revolutionary technology, there will be mishaps and abuses; however, in order to operate safely and gain public acceptance and trust, we should all act in accordance with these guiding themes and do so in an open and transparent manner. We hope the entire UAS industry will join AUVSI in

UNMANNED AIRCRAFT SYSTEMS FOR ALASKA









Ro Bailey
Deputy Director
Alaska Center for Unmanned Aircraft Systems Integration
(907) 455-2104

Roadmap

- University of Alaska UAS history
  - Vision, mission, why unmanned
- Projects & why they matter to Alaska
  - Economic value
  - Science, engineering, & safety value
- FAA Test Site Proposal
- What about privacy? Law Enforcement?
- House Concurrent Resolution No. 6

UAF's History of Unmanned Aircraft



First UAF Launch

- 2001 - Partnership with New Mexico State University
  - Tasked to develop applications within the Technical Analysis and Applications Center (TAAC)
- 2003/2004 - Funded to work with USAF and USCG
  - Maritime domain awareness
  - Wildfires in the Interior of Alaska
- 2006 - Acquired first ScanEagle with 50% loan from University Foundation
- 2007 to present - Multiple missions for science, emergency response, humanitarian needs, and engineering development
- Today our unmanned aircraft fleet is diverse and growing
  - Existing fixed wing systems
  - Existing rotor systems
  - Developing new systems

Altair "*Mariner*" Alaska July 2004



Meeting Alaska's Needs

- Research
  - Science
  - Engineering
- Public Safety / Emergency Response
- Natural Resource Management













Value to Alaska

- UAF alone has brought in over $4.5 M
- Technology
  - Three small company start-ups since 2010
  - Two aerospace companies opened/opening offices in Fairbanks—one is ARTIC, or Atkinson Robotics and Technology Integration Corporation
  - Both Alaskan and Outside companies partnering with UAF to pursue FAA Test Site
- Value to Alaska business
  - Fish & game management & protection
  - Support oil industry, mining, fisheries, others

Economic Impact in Alaska

Before Expected Impact of a Test Range Designation



Northern Embedded Solutions













Alaska-based development partners

Expected Value

- Value to Alaska
  - Better deploy wildfire fighters
  - Support disaster response
  - Assess/protect transportation routes—e.g., monitor slopes
  - Search & rescue in remote areas
  - High resolution mapping
  - Infrastructure monitoring
  - Oil spill response & monitoring
  - Counter unilateral Federal decisions with facts
  - River monitoring during breakup

What Alaska Offers

- Vast open airspace with little traffic
- Wild, extreme, unpopulated, diverse terrain
- Access to large military ranges with data gathering ability
- History of pioneering aviation technology
- Culture of innovative use of aviation
- Close relationship with regional FAA
- Perhaps most important, willingness to be thoughtful and methodical in potential policy decisions

Vision

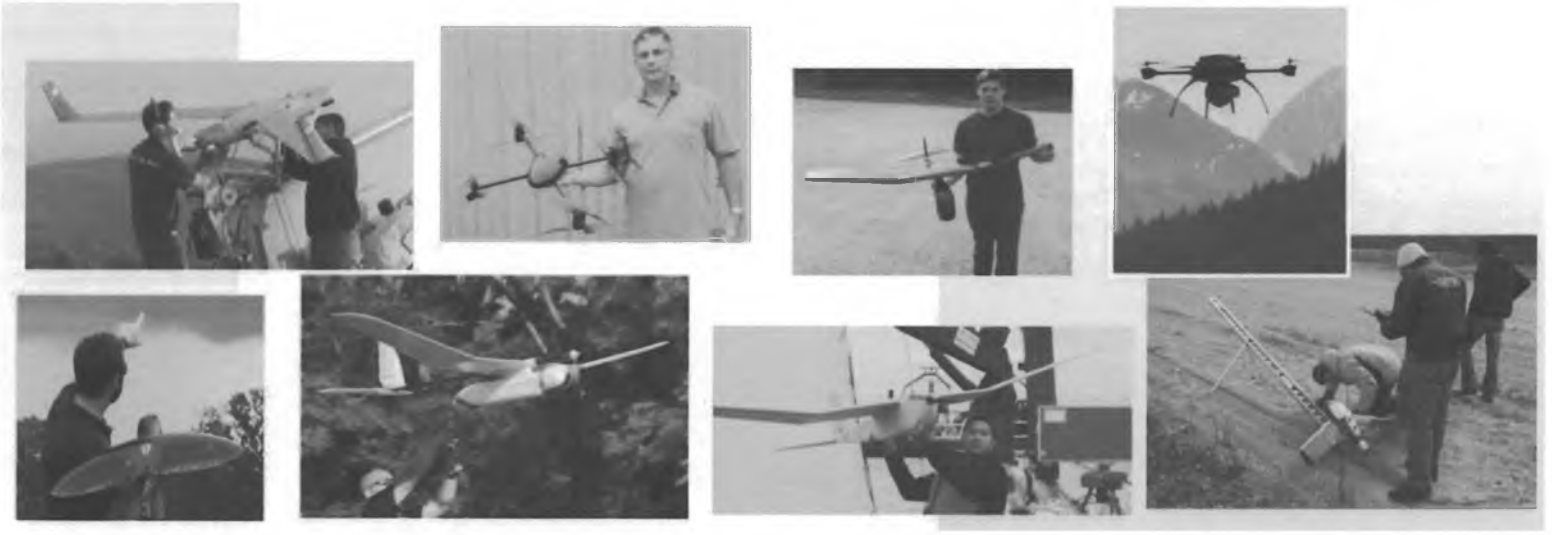
Develop, test, and ultimately exploit emerging unmanned aircraft technology and its uses to create a positive economic and social benefit within the State of Alaska.

When the cost of the hardware is no longer a factor what will people do with the capability?

- **Plan today to prepare for the future**
- **Develop what is needed to support**
- **Participate in policy development for benefit and protection of Alaska & the nation**

Mission Statement

A research center for small, unmanned aircraft systems providing integration of unique payloads and supporting pathfinder missions within government and science communities, with a special emphasis on the Arctic region.



Conducted over 150 mission flight days worldwide in 2012

Why Unmanned?

- Risky work: over remote, extreme terrain or unreachable locations in volatile weather conditions
  - Nov 1999: Helicopter crashed, two Nez Perce biologists conducting surveys seriously injured
  - Polar & distant maritime locations
- Dirty work: observations over chemical spills, volcanoes, wildfire smoke
- Dull: capturing thousands of photos to process into 3D maps is boring, repetitive work
- Other means not possible
  - Monitoring sea ice from under 1000 ft
  - Flying through volcanic ash plumes

The Evidence:
a sample of projects

Steller Sea Lion Habitat Monitoring



Preliminary Findings
- **Migration Patterns**
- **Transient Killer Whales**



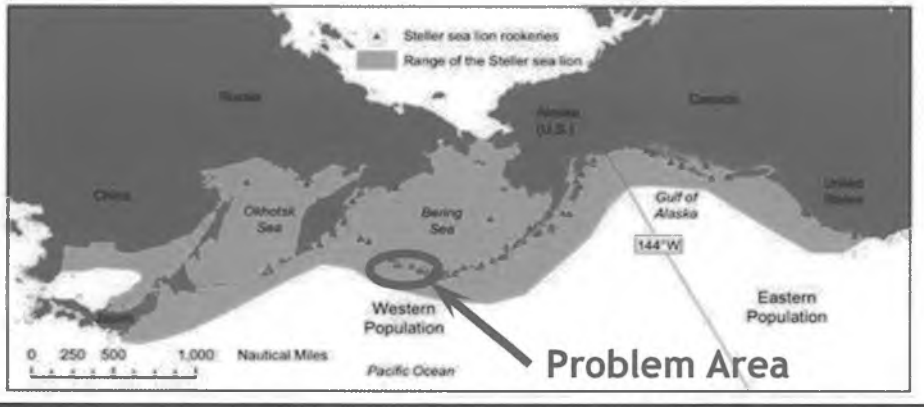






Augmenting Steller Sea Lion Surveys
Western Aleutians

- **Problem: Biological opinion, based on limited observations, eliminated a commercial fishery**
- **Goal: Demonstrate a method to collect high quality imagery for population surveys in hard to observe areas**
- **Possible Benefit: Improved understanding of animal use of and movement through their habitat**

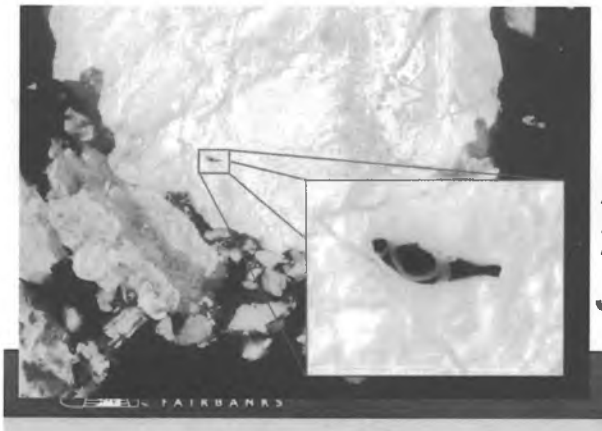


Ice Seal Population Study

- Scientific Need
  - Marine Mammal Protection Act mandated
- Relevance
  - Large-scale, systematic ship-based surve
- Outcome
  - Safer (than manned aviation)
  - More effective (they do not startle seals)
    - vs. manned fixed wing or helicopters







2009 First Deployment
2014 Proposed Expanded Survey
Joint NOAA and US Navy Funded

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2013 LEGISLATIVE SESSION

BILL NO. HCR6

Analysis

This Legislation has zero fiscal impact on the Legislative Affairs Agency.

FISCAL NOTE

STATE OF ALASKA
2013 LEGISLATIVE SESSION

Bill Version: HCR6
Fiscal Note Number:
() Publish Date:

Identifier (file name): HCR6-LEG-SESS-03-25-13
Title: Establishing Legislative Task Force on Unmanned Aircraft.....
Sponsor: Hughes, Kawasaki, Isaacson, Pruitt
Requester: Representative Hughes

Dept. Affected: Alaska Legislature
Appropriation: Legislative Operating Budget
Allocation: Session Expenses
OMB Component Number: 782

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY14 Appropriation Requested	Included in Governor's FY14 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY14**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY13) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY14) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? _____
If yes, by what date are the regulations to be adopted, amended, or repealed? _____ Discuss details in analysis section.

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial Version

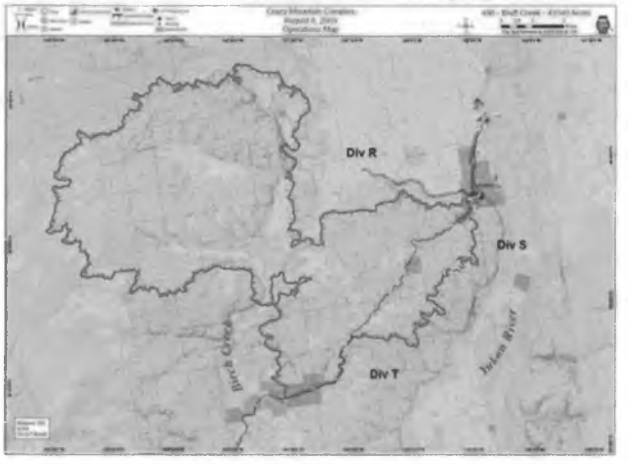
Prepared by: Jessica Geary, Finance Manager — Phone: 465-6626
Division: Legislative Affairs Agency — Date/Time: 3/25/13 11:17am
Approved by: Pamela Varni, Executive Director — Date: 3/25/2013
Legislative Affairs Agency

(Revised 1/15/2013 OMB)

Crazy Mountain Wildfire

Alaska Fire Service Incident Command Team Support

- Tasked by Alaska Fire Service Incident Command Team
- Manned aviation not flown for 5 days due to the smoke and limited visibility
- Satellite imagery (MODUS) incapable of showing critical activity







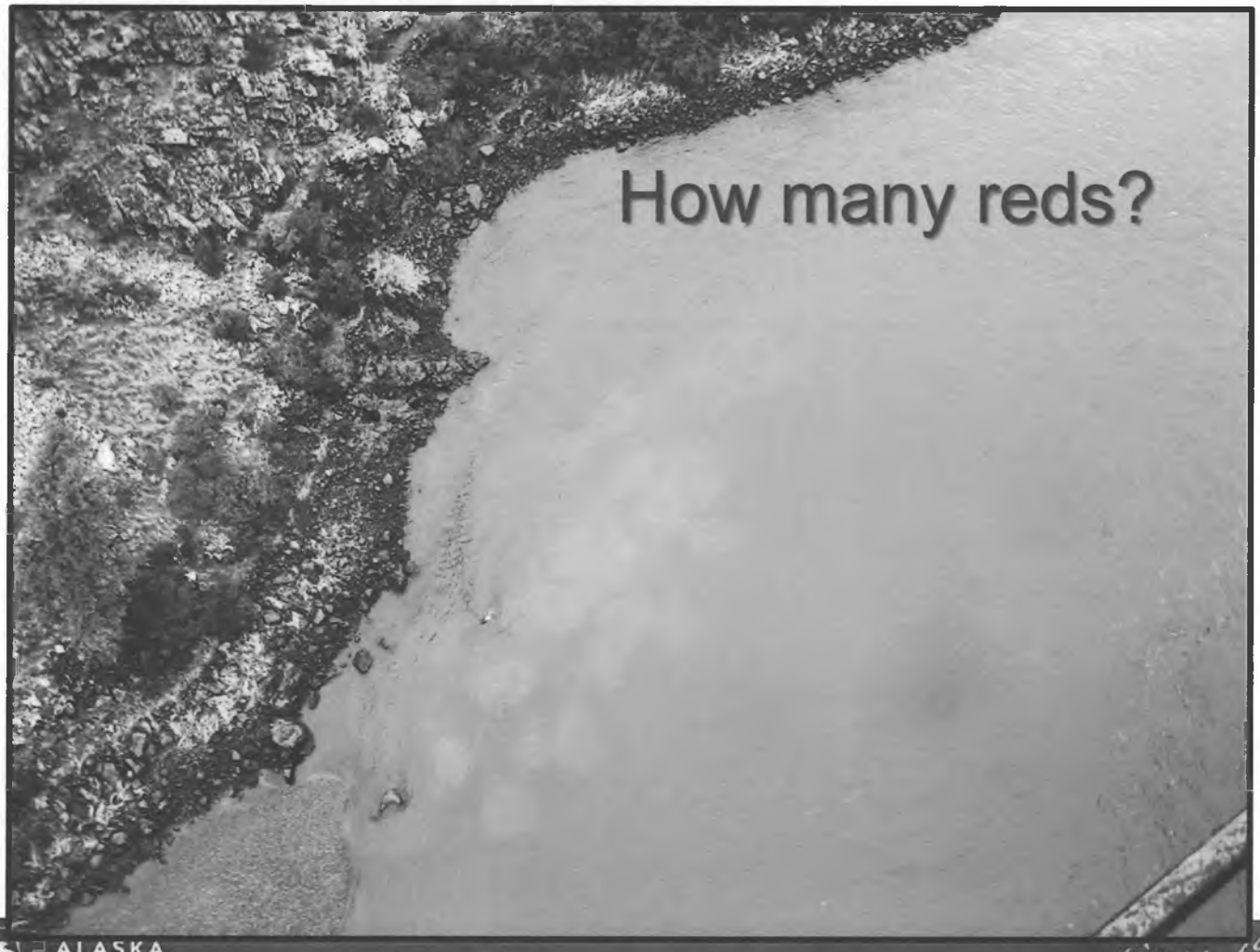


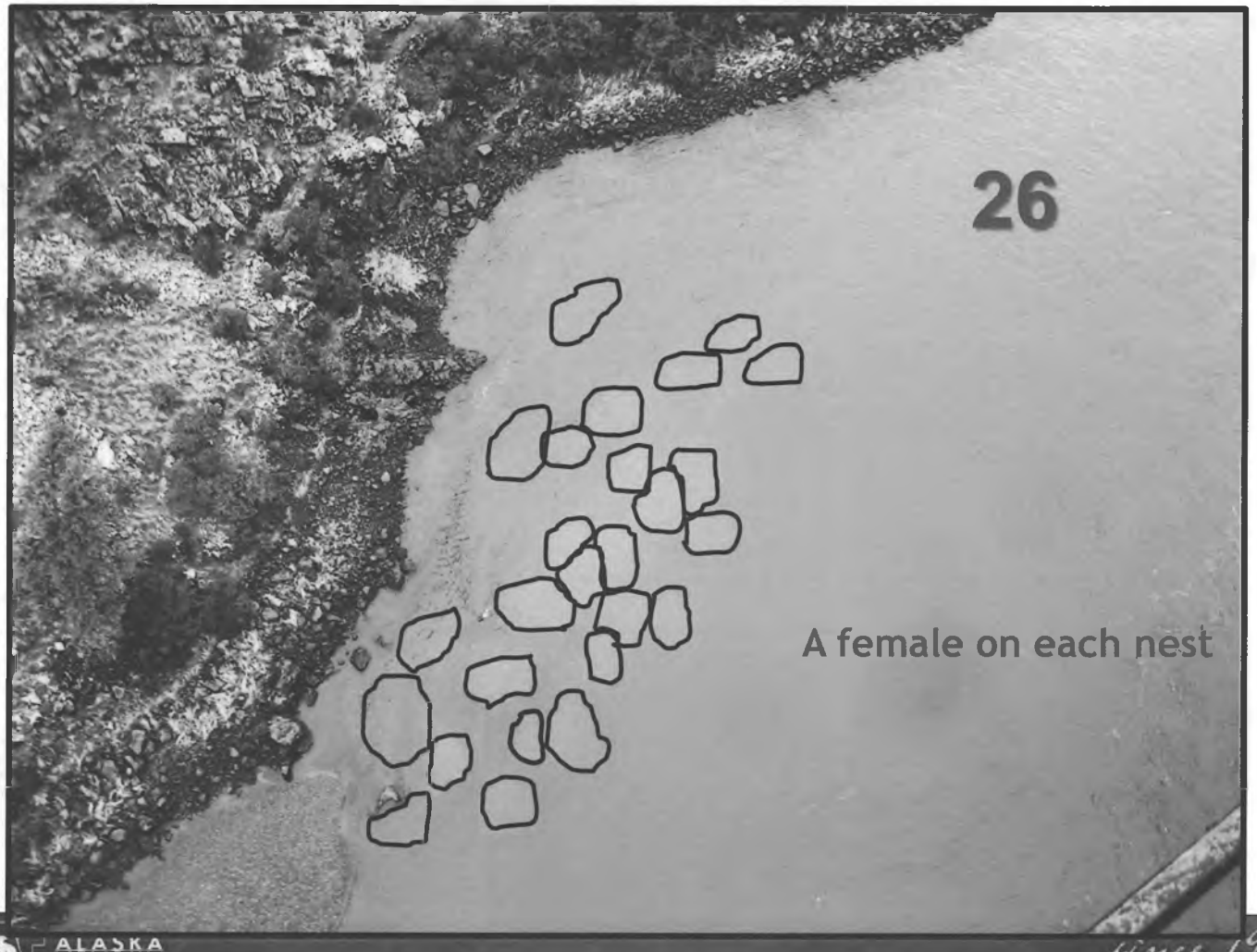
Salmon Spawning Habitat
October - December 2012

- Mapping Fall Salmon Nests along a 162 km of the Snake and Clearwater River in Idaho, Washington, and Oregon
- "THREATENED" under the Endangered Species Act






How many reds?


26
A female on each nest

Fish Habitat Data Products

Weekly Mosaic Images of Select Sites



Rx-CADRE

Prescribed Fire Combustion and Atmospheric Dynamics Research Experiment

- October 29 - November 17 2012
- Eglin AFB Florida



Bear Bite - SAREX

Mass Casualty Exercise 7-10 February 2013

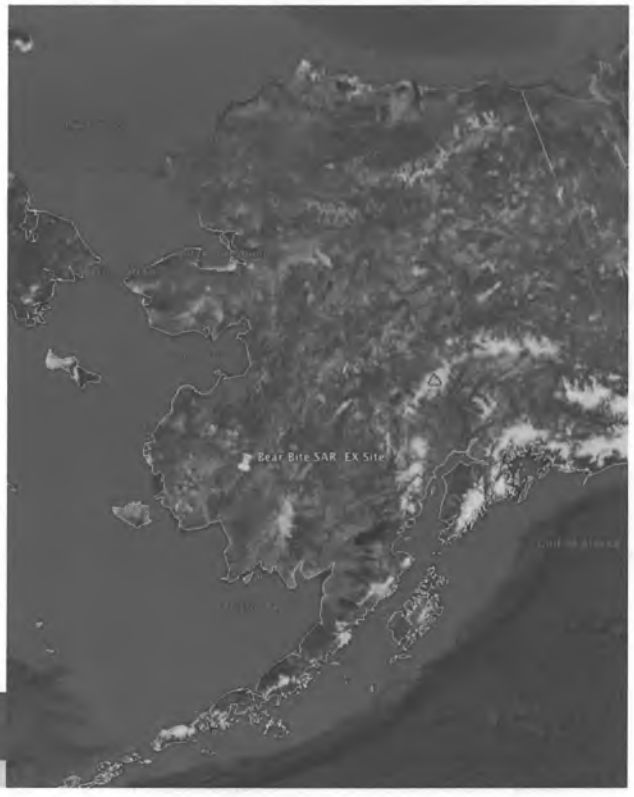
"An aircraft crashed in the tundra roughly 20 miles outside Bethel Alaska many died with some survivors"

Deployed two unmanned aircraft systems with support team

Coordinated with manned aviation on the scene

Mission:

- **Map scene for event documentation**
- **Real-time SAR response**

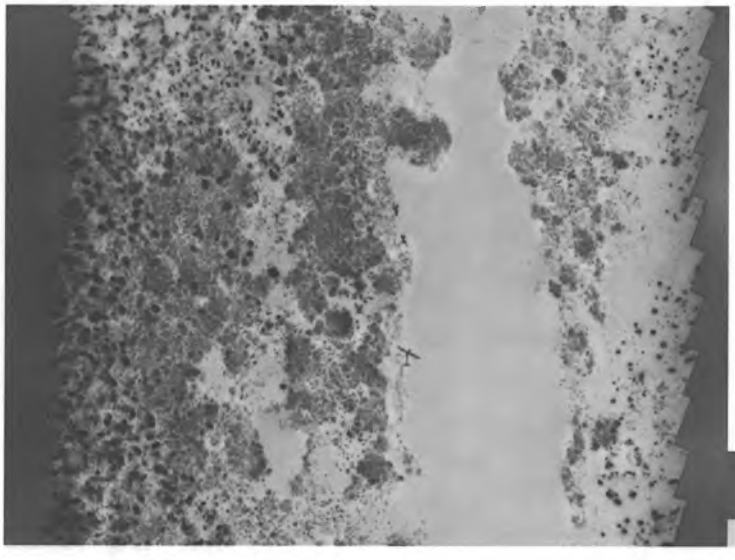


UAF UNIVERSITY OF ALASKA FAIRBANKS

Bear Bite - SAREX

"I've worked with the MQ9 and the MQ1 before and when compared these products were pretty sweet" - SAR Duty Officer statement at after action review 11 Feb 2013. "Within just a couple hours imagery was collected and turned into mosaic products in the field"







Bear Bite - SAREX

cold weather operations – our most challenging yet



Shoreline Clean-up Assessment Technique (SCAT) Evaluation









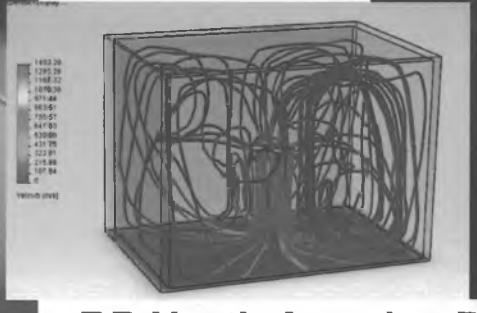
BP Exploration (Alaska) Inc. Partnership

Oil Infrastructure Monitoring Research





- Flare Stacks
- Pipelines
- Processing Facilities
- Access Roads





BP North America Partnership

High Arctic Ship Piloting Experiments

Aboard the Canadian CCGS LOUIS S. ST. LAURENT







Phase I Research conducted by Capt Stephen Wackowski (USAF)

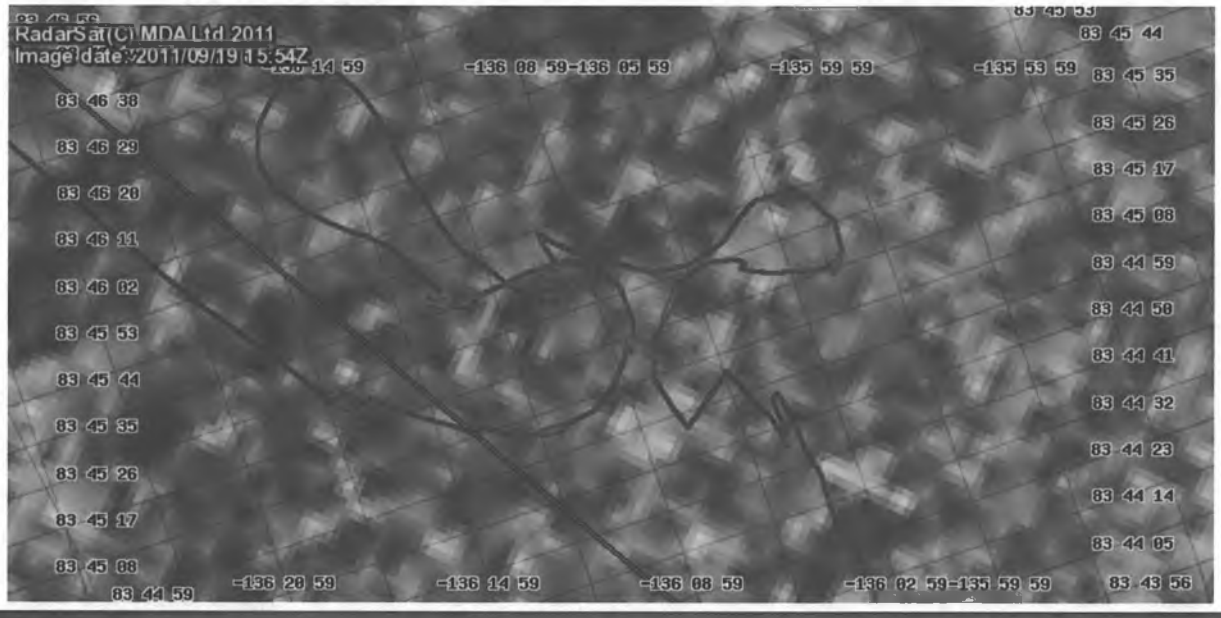
Phase II Ongoing with UAF graduate students with modified Raven systems acquisition

Imagery Used For Ship Piloting in Ice

Ship tracks superimposed (Sept 2011)

Background Image: National Ice Center highest resolution RADARSAT

- **Desired icebreaker track (green)**
- **Actual navigation track (red)**



Small UAS Imagery of Ice Ridges

IR image from RAVEN UAS (Sept 2011)



Navigating Sea Ice during the Nome Fuel Delivery

University Engagement and Decision Support





Mission

1. Identify potential safety concerns for those working on the ice
2. Document the site for mission response activity
3. Collect imagery for the USCG Public Affairs Officer

iPASS

UAF's Portable Airspace Surveillance System

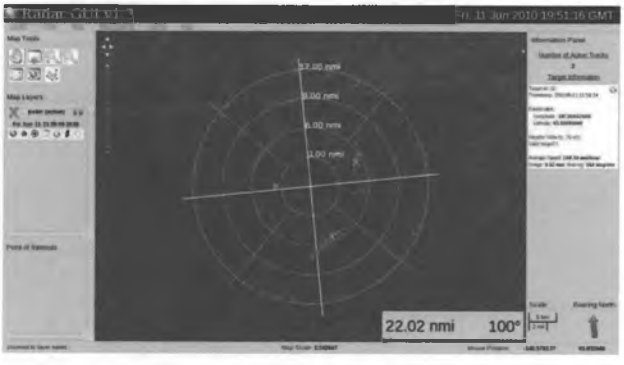
Designed and built by UAF for Alaska's airspace monitoring needs



Status

Operational, used in Canada and NASA Certified





Airspace activity monitoring

Monitors airspace use patterns and validates traffic pattern assumptions

Enhanced situational awareness during aircraft or spacecraft operations

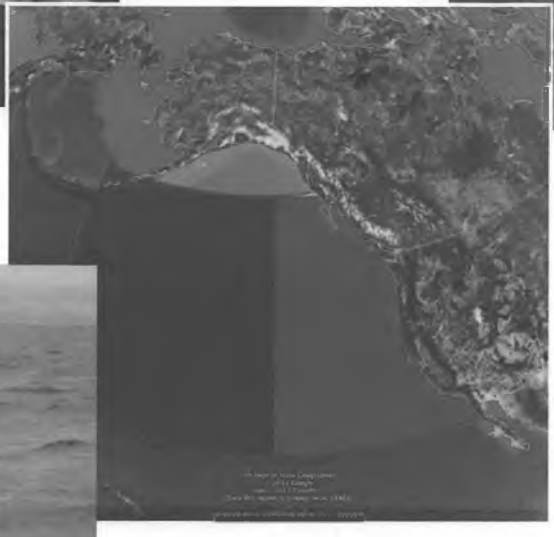
Provides real-time position and track of local airspace activity to assist in traffic avoidance

Ongoing UAS Survey of Marine Debris

Generated by 2011 Japanese Tsunami







NOAA Funded Effort

Partnering with a Wasilla Alaska based UAS Manufacturer Airborne Technologies Inc





Upcoming ACUASI Projects

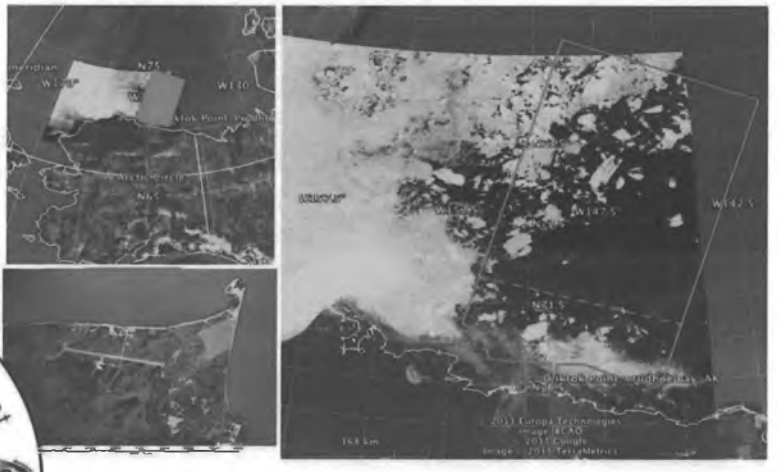
Marginal Ice Zone Ocean and Ice Observations and Processes EXperiment (MIZOPEX)

UAF deployments

NASA Exercise July 2013

Preparation May/June 2013





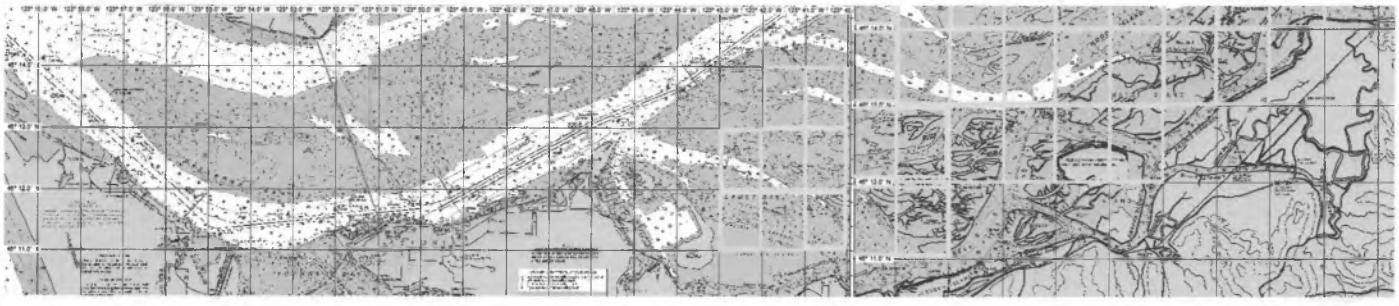
Multiple aircraft simultaneously
Many new scientific payloads

Alaska Department of Public Safety

- Provided demonstration of a vertical takeoff UAS
- Provided concepts in which a UAS could be used including:
  - Forensic evidence at crash or crime scene
  - Search and rescue
  - Wildlife protection
- Provide UAS subject matter expert as AST forms its concept of operations
- Possible development of UAS training package to train State troopers
- Supporting any FAA interaction needs
- Providing connections to legal experts on privacy

Most Recent ACUASI Project

Oil Spill Response Exercise - Columbia River Estuary



- 11-13 March 2013
- Puma AE Operation

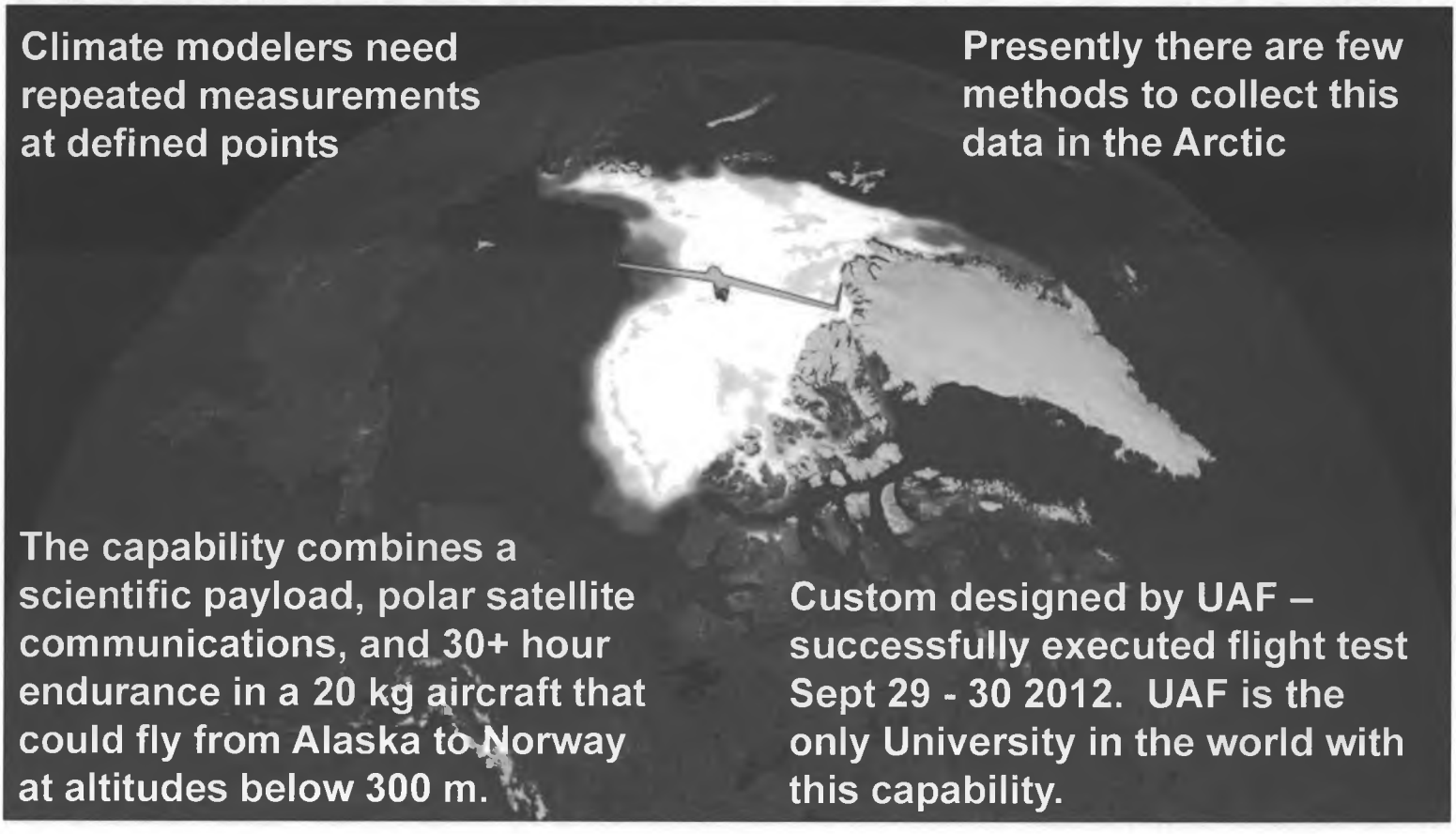


Low-altitude, over-the-pole capability

Fuel-injected, Iridium-communication-enhanced, long-endurance, small unmanned aircraft

Climate modelers need repeated measurements at defined points

Presently there are few methods to collect this data in the Arctic



The capability combines a scientific payload, polar satellite communications, and 30+ hour endurance in a 20 kg aircraft that could fly from Alaska to Norway at altitudes below 300 m.

Custom designed by UAF – successfully executed flight test Sept 29 - 30 2012. UAF is the only University in the world with this capability.

Volcanic Ash Analysis and Detection
USAF Small Business Innovative Research

- Collaboration between UAF researchers and new industry
- Opportunity to launch a business to capitalize on USAF funding with UAF Intellectual Property



FAA Test Site

- Jan 2012: FAA Reauthorization Act directed FAA to select 6 Test Sites to research and test for safe integration of UAS into the national airspace
- Feb 14 2013: Solicitation was released
- UAF leads team for states of Alaska, Oregon, and Hawaii, plus 56 additional team members
  - Includes state agencies (DOT, DPS, Forestry of DNR, DHS&EM, National Guard
  - Universities, EDCs, corporations
- Proposals due multiple dates, last by May 6
- Selection targeted by FAA for Dec 31 2013

Pan Pacific UAS Test Range Complex

- University ACUASI is lead
- Fourteen specific spots around the three states
  - Strong link with military JPARC ranges
  - Forging links with manned aviation safety specialist
- Key questions to answer:
  - Procedures to protect manned aviation
  - Policies to protect privacy
  - Technical testing to assure control, see & avoid, lost link procedures work, etc

How is Privacy Protected?

- We're dedicated to protect privacy so beneficial uses can be obtained
- Current statutory/case law strongly protects privacy while defining legal airborne activities (manned)
  - Unmanned a new technology, but subject to same restrictions
  - DHS & National Institute for Justice have taken on task of defining specific UAS privacy rules
  - FAA committed to incorporating into Test Site and future rules once developed
  - DoD & Guard training on domestic privacy well underway

More on Privacy

- International Chiefs of Police issued guidelines for law enforcement use of UAS
  - Handout with full text available
  - The essence:
    - Follow FAA rules
    - Use strict supervisory accountability
    - Get warrants if any possibility of use for surveillance or investigation
    - Notify locals of intent to fly over them
    - Delete recordings not authorized by warrant, training use, or as required by law
- UAF working with DPS to assist with program, procedures, all to be set up before first flight

What about Weapons on UAS?

- Despite media scares, this won't happen
- The Unmanned Aircraft System community uniformly against any such use
- Small UAS incapable of carrying weapons
  - But even if they could…
- FAA prohibits weapons completely—or any dropping of objects from aircraft
- IACP advises against even considering—sees as unlikely technologically, unacceptable to public, ineffective use of UAS

HR No 6

- Thank you for a thoughtful and balanced view of the potential benefits and risks of UAS
- Recognition of UAF's work to date is gratifying—our goal always has been to benefit Alaska
  - You've seen many benefits already, but potential remains far greater
  - Military users & media treatment have created an impression of danger for domestic use
  - No violations yet; we pledge to work hard both on the task force and in the test site to craft solid, defensible policy for your consideration


UAF
UNIVERSITY OF
ALASKA
FAIRBANKS
Alaska Center for UAS Integration
45

2012 Alaska Legislature Capital Budget

Research and Development of Unmanned Aerial Systems	5,000,000	5,000,000

16 (HD 1-40)
It is the intent of the Legislature that the University of Alaska collaborate with the Federal Aviation Administration in establishing a research and development program and possible test facility for Unmanned Aerial Systems in Alaska. Unmanned Aerial Systems are already being utilized in Alaska in many ways and as the Arctic race progresses, they will become even more vital as a resource to the State and the Country.

Excerpt From DoD Training Briefing

General Principles

- Do NOT infringe on US Persons' Constitutional rights
- Protect privacy rights of US Persons
- Collect, retain, and disseminate information based on a lawfully assigned mission and function
- Employ the least intrusive lawful techniques
- Comply with all regulatory requirements





GREATER FAIRBANKS CHAMBER OF COMMERCE

Interior Alaska – The "Place" To Do Business

100 Cushman St., Suite 102 | Fairbanks, Alaska 99701-4665
ph (907) 452-1105 | fax (907) 456-6968 | www.FairbanksChamber.org

March 26, 2013

Representative Shelley Hughes
State Capitol Building
Room #409
Juneau, AK 99801

Dear Representative Hughes,

The Greater Fairbanks Chamber of Commerce represents over 700 businesses and organizations in the greater Fairbanks area and our mission is to ensure a healthy economic environment. The Chamber supports the Alaska House of Representatives Concurrent Resolution No. 6, recognizing the Alaska Center for Unmanned Aircraft Systems Integration at the University of Alaska Fairbanks as a national leader in unmanned aircraft research and development, and establishing a legislative Task Force on Unmanned Aircraft Systems.

The University of Alaska has led the way for research on unmanned aircraft systems (UAS) and continues this pioneering work in its bid to become one of the nation's six test sites for aircraft systems testing and research. The Resolution recognizes this substantial effort. More significantly, it establishes a legislative Task Force to address potential impacts and opportunities of unmanned aircraft systems for our state.

Alaska's immense land mass and associated airspace presents opportunities no other state can offer for testing and flight training. Vast existing Military Operations Areas and expansive ground maneuver areas can easily support virtually all military applications for current and future UAS technology, and military UAS infrastructure can only complement civilian and commercial applications.

As with any new technology, a myriad of concerns must be addressed before unmanned aircraft become a common fixture in our National airspace. This resolution takes the necessary step to begin addressing those concerns to insure Alaska leads the way for this transformative and dynamic flight environment.

Sincerely,

Lisa Herbert
Executive Director

Terri Froese
Board of Directors, Chair

Tim Jones
Military Affairs Committee, Chair

Anna Atchison
Government Relations Committee, Chair

Cc: Governor Sean Parnell
Alaska State Legislature
Alaska State Chamber of Commerce
Membership of the Greater Fairbanks Chamber of Commerce

INVESTORS

DIAMOND
- BP Exploration
- ConocoPhillips
- ExxonMobil
- Fairbanks Daily News-Miner
- Fairbanks Memorial Hospital & Denali Center
- Flint Hills Resources Alaska
- Mt. McKinley Bank
- Santina's Flowers & Gifts

PLATINUM
- Alyeska Pipeline Service Co
- Doyon, Limited
- Fred Meyer Stores
- Golden Heart Utilities
- Wells Fargo Bank Alaska

GOLD
- Alaska Railroad
- Birchwood Homes
- Carlson Center
- Denali State Bank
- Design Alaska
- Doyon Utilities LLC
- First National Bank Alaska
- Kinross Fort Knox Mine
- Lynden
- MAC Federal Credit Union
- Northrim Bank
- Sumitomo Metal Mining Pogo LLC
- Usibelli Coal Mine

SILVER
- ACS
- Alaska Airlines
- Alaska USA
- Dr. Christopher Henry – Henry Orthodontics
- Everts Air Cargo, Everts Air AK
- Exclusive Paving/Univ. Redi-Mix
- Fairbanks Natural Gas
- Flowline Alaska
- GCI
- General Teamsters Local 959
- GVEA
- Hale & Associates, Inc.
- JL Properties, Inc.
- Key Bank
- Personnel Plus
- Sam's Club
- Shell Exploration & Production Co.
- Spirit of Alaska FCU
- Tanana Valley Clinic
- TDL Staffing
- Totem Ocean Trailer Express, Inc.
- Tower Hill Mines-Livengood Gold Project
- University of Alaska Fairbanks
- Verizon Wireless
- WAL-MART Stores, Inc.
- Yukon Title Company

Alaska State Legislature

State Capitol, Room 208
Juneau, Alaska 99801-1182
Phone: 907-465-3779
Fax: 907-465-2833
Toll Free: 800-469-3779

145 Main St. Loop
Second Floor
Kenai, Alaska 99611
Phone: 907-283-7223
Fax: 907-283-7184

Representative Mike Chenault
Speaker of the Alaska State House

SPONSOR STATEMENT

HOUSE JOINT RESOLUTION 12: SUPPORT IN-STATE FIREARMS MANUFACTURING

House Joint Resolution 12 is based on a resolution recently introduced in the Montana State House. HJR 12 encourages and invites gun and gun accessory manufacturers to bring their business to Alaska. With a number of states considering the enactment of legislation restricting or prohibiting the possession or manufacturing of certain firearms and accessories, it is imperative the Administration and the Legislature make it known that we would welcome them to our state. Our excellent constitutional and statutory protections for firearm use, possession and manufacturing makes Alaska an ideal place for firearm and accessory manufacturers to relocate their business to our state.

The list of the various manufacturers was produced by the National Shooting Sports Association and represents major weapon and accessory manufacturers.

Representative_Mike_Chenault@legis.state.ak.us

FISCAL NOTE

STATE OF ALASKA
2013 LEGISLATIVE SESSION

Bill Version: **HJR12**
Fiscal Note Number:
() Publish Date:

Identifier (file name): HJR12-LEG-SESS-03-25-13
Title: Encouraging the manufacture of firearms and firearms accessories in the state.
Sponsor: Chenault, Hawker, Millett, Johnson, Pruitt, Olson, Thompson
Requester: Representative Hughes

Dept. Affected: Alaska Legislature
Appropriation: Legislative Operating Budget
Allocation: Session Expenses
OMB Component Number: 782

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY14 Appropriation Requested	Included in Governor's FY14 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY14**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE		(Thousands of Dollars)						
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES							

Estimated SUPPLEMENTAL (FY13) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY14) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? _____
If yes, by what date are the regulations to be adopted, amended, or repealed? _____ Discuss details in analysis section.

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial Version

Prepared by: Jessica Geary, Finance Manager — Phone: 465-6626
Division: Legislative Affairs Agency — Date/Time: 3/25/13 11:40am
Approved by: Pamela Varni, Executive Director — Date: 3/25/2013
Legislative Affairs Agency

(Revised 1/15/2013 OMB)

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2013 LEGISLATIVE SESSION

BILL NO. HJR12

Analysis

This Legislation has zero fiscal impact on the Legislative Affairs Agency.

Outdoor Channel Blacklists Colorado Over Gun Control Laws

godfatherpolitics.com

Email
Print

Living in the Southwest for most of my life, I've seen just how many people go to Colorado to hunt, fish, ski, hike, camp and sight see. Combined together, these activities generate millions of dollars for businesses as well as the state government.

Yet, the controlling Democrats are willing to lose a large portion of that revenue and place many businesses in jeopardy, just to push Obama's anti-gun policies. A couple of major businesses are already looking to relocate out of the state because of the recently passed and newly proposed anti-gun laws.

Now, the Outdoor Channel, a very popular cable network for hunters, fishermen and outdoors type people, has notified the Colorado Senate Republican Caucus that they are prepared to pull all of their productions out of the state if the anti-gun laws are passed. Currently, the Outdoor Channel has four cable program series being produced in Colorado, including their most popular program 'Gun Stories.'

Michael Bane, executive producer and host of Outdoor Channel, sent an email to State Sen. Steve King (R-Grand Junction) stating in part:

> "This morning I met with my three Producers, and we made the decision that if these antigun bills become law, we will be moving all of our production OUT of Colorado. We have already cancelled a scheduled filming session for late this month. Obviously, part of this is due to our own commitment to the right to keep and bear arms, but it also reflects 3 lawyers' opinions that these laws are so poorly drafted and so designed to trap otherwise legal citizens into a crime (one of our attorneys referred to them as "flypaper laws") that it is simply too dangerous for us to film here."
>
> "I can give you chapter and verse on the legal implications if you need, but suffice to say that the first legal opinion was so scary we went out and got two others. Al three attorneys agreed."
>
> "We are relatively small potatoes in television, but our relocation of production will cost Colorado a little less than a million dollars in 2013."
>
> "Secondly, we have proudly promoted Colorado in our productions (and have been moving more and more production into the state); now we will do exactly the opposite. What does this mean for Colorado? The community of television producers is a small one. Last week I had lunch with a major network producer who was looking to locate his new reality series in Colorado. That producer is also a shooter, and the new reality series will now be based out of Phoenix. That lunch

cost Colorado over a million in economic impact.

"Thirdly, according to numbers I received from the National Shooting Sports Foundation (for whom I used to work) yesterday, hunting had an almost $800,000,000 impact on Colorado in 2012, driving as many as 8330 jobs. Next month I will be in Texas meeting with most of the top outdoor/hunting producers, and the Number One agenda item will be Colorado. Already, hunting organizations and statewide hunting clubs around the country are pulling out of Colorado, and we expect this trend to accelerate rapidly."

"The message we will take to our viewers and listeners is that these proposed laws are so dangerous to hunters and any other person, be she a fisherman or a skier who brings a handgun into the state for self-defense, that we cannot recommend hunting, fishing or visiting Colorado. We reach millions of people, and, quite frankly, we have a credibility that Colorado government officials can no longer match. Colorado Division of Wildlife is already running ads trying to bring more out-of-state hunters to Colorado...in light of the flood of negative publicity about these proposed laws, I can assure you those ads will fail."

We estimate that as many as one-quarter to one-third of out-of-state hunters will desert Colorado in the next 18-24 months, which will quite frankly be a disaster for the hunting industry in Colorado and have a devastating effect on our western and northern communities (certainly like Grand Junction)."

Sen. King spoke out against the pending anti-gun laws saying:

"These radical bills demonstrate that penalizing law-abiding gun owners harms not only Colorado hunters, but it also damages the economy. If these bills pass, Colorado will become known as an unfriendly state toward sportsmen and will force other producers across the country to consider other states."

Sen. Bill Cadman (R-Colorado Springs), Minority Leader in the state senate also spoke out saying:

"The Democrats are taking their marching orders from extreme liberal New York Mayor Michael Bloomberg and are ignoring the people who voted for them. He has promised to 'pay' for their support of his agenda in the coming elections. He (Bloomberg) has now become the de-facto head of the Democrat party and the de-facto Governor of Colorado. This is a sad day for our state, and could be a very sad day for the Constitution."

First the gun companies threaten to leave, taking hundreds of jobs and a million dollars' worth of revenue and now the Outdoor Channel not only is planning on leaving, but is about to launch a campaign to turn people and millions of dollars away from Colorado. But will it be enough to cause the Democratic leadership to stop their insanity? I suspect not! They are so hell bent on promoting their anti-gun agenda, that they won't care how much money or how many jobs it will cost the people of Colorado.

Just like Obama, it's not what the people want or what's best for the people; it's the personal agenda that takes priority. Once Obama gets some guns banned, he won't stop until they are all banned and once that happens, he will launch his hostile military takeover of the US and free America will disappear forever.

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Will Retirement Accounts be Nationalized by Obama and the Democrats?
An Inconvenient Veteran: Big Government Failing the Troops

- Will Retirement Accounts be Nationalized by Obama and the Democrats?
- New York State Negates Parental Authority In Effort Hide Teen Abortions

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Montana Shooting Sports Association

Missoula, MT –(Ammoland.com)- You may have heard that Remington is thinking of bailing out of its plant in New York *(1,300 employees).*

Beretta is threatening to leave Maryland if the Legislature there bans magazines over 10 rounds *(Beretta just got an Army contract for 100,000 M9 pistols and has 300 employees),* and Magpul is planning to leave Colorado *(because of Colorado's ban on standard-capacity magazines).*

There are others. I've been contacting these companies asking them to come to Montana, but I figure the invitation will carry more punch if it comes from the Legislature, thus the resolutions:

Introduced By **********

A Resolution of the Senate of the State of Montana inviting firearms and firearms accessory manufacturers threatened by hostile laws in other states to move to Montana.

WHEREAS, some states have enacted laws or are considering enacting laws that would prohibit the possession of certain firearms or of certain firearms accessories; and
WHEREAS, these laws may make it impossible for existing manufacturers to remain in or legally do business in those states; and
WHEREAS, many firearms and firearms accessory manufacturers are examining options for relocating their manufacturing to a more firearms friendly location; and
WHEREAS, Montana is a firearm-friendly state with a good legal infrastructure for firearms possession, use, and manufacture; and
WHEREAS, Montana has a well-educated workforce of people with a strong work ethic and with a culture of firearms knowledge and tolerance; and
WHEREAS, Montana offers space, beauty, and a great place to live and work.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE OF THE STATE OF MONTANA: Montana says to threatened firearms and firearms accessories manufacturers: "Come to Montana. We want you here"; and
Be it further resolved that Montana says: "Montana is open for business for manufacturers of firearms and firearm accessories"; and
Be it further resolved that the Secretary of State is encouraged to coordinate with firearm-related groups and businesses existing in Montana to develop contacts with manufacturers of firearms and firearm accessories in other states and deliver this resolution to them; and
Be it further resolved that Governor Steve Bullock is urged to actively seek out any manufacturers of firearms and firearms accessories to encourage them to move to Montana and to aid these manufacturers in relocation in whatever way may be possible.

- END -

Gary Marbut, presidentMontana Shooting Sports Associationwww.mtssa.orgauthor, Gun Laws of Montanawww.mtpublish.com

About Montana Shooting Sports Association:MSSA is the primary political advocate for Montana gun owners. Visit: www.mtssa.org

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Hornady Hornady 338 Lap 285 Gr Bthp Match Ammo
$84.99
Buy Now

Remington Arms Inc. Remington Umc Target Handgun Ammunition
$64.79
Buy Now

HOUSE BILL NO. 468

INTRODUCED BY A. DOANE

A BILL FOR AN ACT ENTITLED: "AN ACT ENSURING THE AVAILABILITY OF MONTANA AMMUNITION; ENCOURAGING THE FORMATION OF BUSINESS IN MONTANA PRIMARILY ENGAGED IN THE MANUFACTURE OF AMMUNITION COMPONENTS; PROVIDING EXEMPTIONS FROM PROPERTY TAXES, INDIVIDUAL INCOME TAXES, CORPORATION LICENSE TAXES, AND OTHER BUSINESS-RELATED TAXES TO A MANUFACTURER OF AMMUNITION COMPONENTS; PROVIDING EXEMPTIONS FROM INDIVIDUAL INCOME TAXES AND CORPORATE LICENSE TAXES TO AN INVESTOR OR LENDER THAT PROVIDES LOANS TO A MANUFACTURER OF AMMUNITION COMPONENTS; CLARIFYING THAT THE FIREARMS LIABILITY LAW APPLIES TO AMMUNITION COMPONENTS MANUFACTURED IN MONTANA; LIMITING FEDERAL REGULATION OF AMMUNITION CHEMICALS; EXPANDING ECONOMIC DEVELOPMENT CRITERIA TO ENCOMPASS THE MANUFACTURE OF AMMUNITION COMPONENTS; AMENDING SECTIONS 15-6-219, 15-30-2110, 15-31-113, 27-1-720, 90-1-118, AND 90-1-202, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE AND APPLICABILITY DATES."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

NEW SECTION. **Section 1. Short title.** [Sections 1 through 8] may be cited as the "Montana Ammunition Availability Act".

NEW SECTION. **Section 2. Legislative findings.** (1) In recognition that the people of Montana have reserved to themselves the individual right to bear arms in Article II, section 12, of the Montana constitution, the legislature finds that both this right and the firearms that the people possess are at serious risk if the people cannot obtain ammunition for firearms. An adequate source of ammunition is an indivisible and essential part of the right to bear arms. The people of Montana are totally dependent upon a very few manufacturers of smokeless propellant, small arms primers, and cartridge cases located in other states for small arms ammunition used in Montana.

(2) The legislature intends to encourage the manufacture of smokeless propellant, small arms primers, and cartridge cases within the borders of Montana to ensure availability of small arms ammunition for the people

of Montana and to fully implement the right to bear arms that the people have reserved to themselves.

NEW SECTION. **Section 3. Definitions.** As used in [sections 1 through 8], the following definitions apply:

(1) "Ammunition components" means propellants, primers, and cartridge cases.

(2) "Black powder" means a propellant made from potassium or sodium nitrate, charcoal, and sulfur or a substitute for black powder made differently that is used for conventional small arms or antique or replica arms.

(3) "Cartridge cases" means the casings that contain and hold together the propellant, primer, and bullet, which may be formed from brass, aluminum, steel, plastic, or some combination of those or other materials.

(4) "Primary business" means a manufacturer in which more than one-half of its product produced is and more than one-half of its gross income comes from sales of ammunition components.

(5) "Propellant" includes smokeless propellant and black powder.

(6) "Small arms" means pistols, revolvers, rifles, shotguns, and other similar devices that are portable by one person, the possession and use of which are protected by Article II, section 12, of the Montana constitution.

(7) "Small arms primers" means the priming component for a round of ammunition intended for use in small arms that is usually made of a cup, an anvil, and a shock-sensitive chemical compound and is designed to ignite the propellant in an ammunition cartridge for conventional small arms.

(8) "Smokeless propellant" means a chemical substance designed to expel a projectile from small arms through burning and expansion at a quick but controlled burning rate.

NEW SECTION. **Section 4. Tax exemptions for manufacturing of ammunition components -- conditions.** (1) A person or entity in this state engaged in the primary business of the manufacture of ammunition components that meets the conditions in subsections (2) and (3) is exempt from:

(a) property taxes levied for state educational purposes under 15-10-108, 20-9-331, 20-9-333, 20-9-360, and 20-25-439;

(b) business equipment tax levied pursuant to 15-6-138;

(c) individual income taxes as provided in Title 15, chapter 30;

(d) corporate license or income tax as provided in Title 15, chapter 31; and

(e) any other tax on business activity levied by the state, except:

(i) the local portion of property tax not exempt under subsection (1)(a); or

(ii) an employer's share of employee payroll taxes that are used to finance state-mandated programs, including unemployment insurance and workers' compensation.

(2) A person or entity in this state engaged in the primary business of the manufacture of ammunition components is exempt from taxation as provided under subsection (1) if the person's or entity's business meets the following conditions:

(a) the products of the business are and remain available to commercial and individual consumers in the state;

(b) the business sells its products to in-state commercial and individual consumers for a price no greater than that for out-of-state purchasers, including any products that leave the state regardless of destination or purchaser; and

(c) the business does not enter into any agreement or contract that could actually or potentially command or commit all of its production to out-of-state consumers or interfere with or prohibit sales and provision of products to in-state consumers.

(3) The exemptions allowed under subsection (1) apply only to the property, income, and business activity attributable to the manufacture of ammunition components.

NEW SECTION. **Section 5. Tax exemptions for providing loans to manufacturer of ammunition components -- conditions.** (1) Subject to subsection (2), a lender or investor that provides loans to a person or entity in this state engaged in the primary business of the manufacture of ammunition components under the provisions of [section 4] is exempt from:

(a) individual income taxes as provided in Title 15, chapter 30; and

(b) corporate license or income tax as provided in Title 15, chapter 31.

(2) The exemption provided for in this section:

(a) does not apply to an employer's share of employee payroll taxes that are used to finance state-mandated programs, including unemployment insurance and workers' compensation; and

(b) may be claimed only for income attributable to providing a bona fide loan in an arm's-length transaction to a manufacturer of ammunition components that satisfies the conditions of [section 4].

NEW SECTION. **Section 6. Tort liability.** The provisions of 27-1-720 apply to ammunition components

manufactured in Montana.

NEW SECTION. **Section 7. Economic development.** The establishment of a primary business is a qualified economic development purpose pursuant to 90-1-116 through 90-1-119 and Title 90, chapter 1, part 2.

NEW SECTION. **Section 8. Regulation of chemicals.** Pursuant to the legislative declarations of authority set forth in 30-20-102, only Montana and the department of environmental quality may regulate the chemicals used to manufacture ammunition components, and any use of those chemicals for those purposes may not be regulated in the state by any agency of the United States.

Section 9. Section 15-6-219, MCA, is amended to read:

"**15-6-219. Personal and other property exemptions.** The following categories of property are exempt from taxation:

(1) harness, saddlery, and other tack equipment;

(2) the first $15,000 or less of market value of tools owned by the taxpayer that are customarily hand-held and that are used to:

(a) construct, repair, and maintain improvements to real property; or

(b) repair and maintain machinery, equipment, appliances, or other personal property;

(3) all household goods and furniture, including but not limited to clocks, musical instruments, sewing machines, and wearing apparel of members of the family, used by the owner for personal and domestic purposes or for furnishing or equipping the family residence;

(4) a bicycle, as defined in 61-8-102, used by the owner for personal transportation purposes;

(5) items of personal property intended for rent or lease in the ordinary course of business if each item of personal property satisfies all of the following:

(a) the acquired cost of the personal property is less than $15,000;

(b) the personal property is owned by a business whose primary business income is from rental or lease of personal property to individuals and no one customer of the business accounts for more than 10% of the total rentals or leases during a calendar year; and

(c) the lease of the personal property is generally on an hourly, daily, weekly, semimonthly, or monthly basis;

(6) space vehicles and all machinery, fixtures, equipment, and tools used in the design, manufacture, launch, repair, and maintenance of space vehicles that are owned by businesses engaged in manufacturing and launching space vehicles in the state or that are owned by a contractor or subcontractor of that business and that are directly used for space vehicle design, manufacture, launch, repair, and maintenance; ~~and~~

(7) a title plant owned by a title insurer or a title insurance producer, as those terms are defined in 33-25-105.; and

(8) property used in the manufacture of ammunition components as provided in [section 4]."

NEW SECTION. **Section 10. Manufacturer of ammunition components -- exemption from statewide property taxes.** As provided in [section 4], property used in the manufacture of ammunition components is exempt from the property taxes levied for state educational purposes under 15-10-108, 20-9-331, 20-9-333, 20-9-360, and 20-25-439. The exemption must be administered and applied for as provided in [sections 1 through 8].

Section 11. Section 15-30-2110, MCA, is amended to read:

"15-30-2110. Adjusted gross income. (1) Subject to subsection (13), adjusted gross income is the taxpayer's federal adjusted gross income as defined in section 62 of the Internal Revenue Code, 26 U.S.C. 62, and in addition includes the following:

(a) (i) interest received on obligations of another state or territory or county, municipality, district, or other political subdivision of another state, except to the extent that the interest is exempt from taxation by Montana under federal law;

(ii) exempt-interest dividends as defined in section 852(b)(5) of the Internal Revenue Code, 26 U.S.C. 852(b)(5), that are attributable to the interest referred to in subsection (1)(a)(i);

(b) refunds received of federal income tax, to the extent that the deduction of the tax resulted in a reduction of Montana income tax liability;

(c) that portion of a shareholder's income under subchapter S. of Chapter 1 of the Internal Revenue Code that has been reduced by any federal taxes paid by the subchapter S. corporation on the income;

(d) depreciation or amortization taken on a title plant as defined in 33-25-105;

(e) the recovery during the tax year of an amount deducted in any prior tax year to the extent that the amount recovered reduced the taxpayer's Montana income tax in the year deducted;

(f) if the state taxable distribution of an estate or trust is greater than the federal taxable distribution of the same estate or trust, the difference between the state taxable distribution and the federal taxable distribution of the same estate or trust for the same tax period; and

(g) except for exempt-interest dividends described in subsection (2)(a)(ii), for tax years commencing after December 31, 2002, the amount of any dividend to the extent that the dividend is not included in federal adjusted gross income.

(2) Notwithstanding the provisions of the Internal Revenue Code, adjusted gross income does not include the following, which are exempt from taxation under this chapter:

(a) (i) all interest income from obligations of the United States government, the state of Montana, or a county, municipality, district, or other political subdivision of the state and any other interest income that is exempt from taxation by Montana under federal law;

(ii) exempt-interest dividends as defined in section 852(b)(5) of the Internal Revenue Code, 26 U.S.C. 852(b)(5), that are attributable to the interest referred to in subsection (2)(a)(i);

(b) interest income earned by a taxpayer who is 65 years of age or older in a tax year up to and including $800 for a taxpayer filing a separate return and $1,600 for each joint return;

(c) (i) except as provided in subsection (2)(c)(ii), the first $3,600 of all pension and annuity income received as defined in 15-30-2101;

(ii) for pension and annuity income described under subsection (2)(c)(i), as follows:

(A) each taxpayer filing singly, head of household, or married filing separately shall reduce the total amount of the exclusion provided in subsection (2)(c)(i) by $2 for every $1 of federal adjusted gross income in excess of $30,000 as shown on the taxpayer's return;

(B) in the case of married taxpayers filing jointly, if both taxpayers are receiving pension or annuity income or if only one taxpayer is receiving pension or annuity income, the exclusion claimed as provided in subsection (2)(c)(i) must be reduced by $2 for every $1 of federal adjusted gross income in excess of $30,000 as shown on their joint return;

(d) all Montana income tax refunds or tax refund credits;

(e) gain required to be recognized by a liquidating corporation under 15-31-113(1)(a)(ii);

(f) all tips or gratuities that are covered by section 3402(k) or service charges that are covered by section 3401 of the Internal Revenue Code of 1954, 26 U.S.C. 3402(k) or 3401, as amended and applicable on January 1, 1983, received by a person for services rendered to patrons of premises licensed to provide food, beverage,

or lodging;

(g) all benefits received under the workers' compensation laws;

(h) all health insurance premiums paid by an employer for an employee if attributed as income to the employee under federal law;

(i) all money received because of a settlement agreement or judgment in a lawsuit brought against a manufacturer or distributor of "agent orange" for damages resulting from exposure to "agent orange";

(j) principal and income in a medical care savings account established in accordance with 15-61-201 or withdrawn from an account for eligible medical expenses, as defined in 15-61-102, of the taxpayer or a dependent of the taxpayer or for the long-term care of the taxpayer or a dependent of the taxpayer;

(k) principal and income in a first-time home buyer savings account established in accordance with 15-63-201 or withdrawn from an account for eligible costs, as provided in 15-63-202(7), for the first-time purchase of a single-family residence;

(l) contributions withdrawn from a family education savings account or earnings withdrawn from a family education savings account for qualified higher education expenses, as defined in 15-62-103, of a designated beneficiary;

(m) the recovery during the tax year of any amount deducted in any prior tax year to the extent that the recovered amount did not reduce the taxpayer's Montana income tax in the year deducted;

(n) if the federal taxable distribution of an estate or trust is greater than the state taxable distribution of the same estate or trust, the difference between the federal taxable distribution and the state taxable distribution of the same estate or trust for the same tax period;

(o) deposits, not exceeding the amount set forth in 15-30-3003, deposited in a Montana farm and ranch risk management account, as provided in 15-30-3001 through 15-30-3005, in any tax year for which a deduction is not provided for federal income tax purposes;

(p) income of a dependent child that is included in the taxpayer's federal adjusted gross income pursuant to the Internal Revenue Code. The child is required to file a Montana personal income tax return if the child and taxpayer meet the filing requirements in 15-30-2602.

(q) principal and income deposited in a health care expense trust account, as defined in 2-18-1303, or withdrawn from the account for payment of qualified health care expenses as defined in 2-18-1303;

(r) that part of the refundable credit provided in 33-22-2006 that reduces Montana tax below zero; ~~and~~

(s) the amount of the gain recognized from the sale or exchange of a mobile home park as provided in

15-31-163;

(t) income received from the manufacture of ammunition components by an entity, owner, or partner engaged in the primary business of the manufacture of ammunition as provided in [section 4]; and

(u) income attributable to providing a bona fide loan in an arm's-length transaction to a manufacturer of ammunition components as provided in [section 5].

(3) A shareholder of a DISC that is exempt from the corporation license tax under 15-31-102(1)(l) shall include in the shareholder's adjusted gross income the earnings and profits of the DISC in the same manner as provided by section 995 of the Internal Revenue Code, 26 U.S.C. 995, for all periods for which the DISC election is effective.

(4) A taxpayer who, in determining federal adjusted gross income, has reduced the taxpayer's business deductions by an amount for wages and salaries for which a federal tax credit was elected under sections 38 and 51(a) of the Internal Revenue Code, 26 U.S.C. 38 and 51(a), is allowed to deduct the amount of the wages and salaries paid regardless of the credit taken. The deduction must be made in the year that the wages and salaries were used to compute the credit. In the case of a partnership or small business corporation, the deduction must be made to determine the amount of income or loss of the partnership or small business corporation.

(5) Married taxpayers filing a joint federal return who are required to include part of their social security benefits or part of their tier 1 railroad retirement benefits in federal adjusted gross income may split the federal base used in calculation of federal taxable social security benefits or federal taxable tier 1 railroad retirement benefits when they file separate Montana income tax returns. The federal base must be split equally on the Montana return.

(6) Married taxpayers filing a joint federal return who are allowed a capital loss deduction under section 1211 of the Internal Revenue Code, 26 U.S.C. 1211, and who file separate Montana income tax returns may claim the same amount of the capital loss deduction that is allowed on the federal return. If the allowable capital loss is clearly attributable to one spouse, the loss must be shown on that spouse's return; otherwise, the loss must be split equally on each return.

(7) In the case of passive and rental income losses, married taxpayers filing a joint federal return and who file separate Montana income tax returns are not required to recompute allowable passive losses according to the federal passive activity rules for married taxpayers filing separately under section 469 of the Internal Revenue Code, 26 U.S.C. 469. If the allowable passive loss is clearly attributable to one spouse, the loss must be shown on that spouse's return; otherwise, the loss must be split equally on each return.

(8) Married taxpayers filing a joint federal return in which one or both of the taxpayers are allowed a deduction for an individual retirement contribution under section 219 of the Internal Revenue Code, 26 U.S.C. 219, and who file separate Montana income tax returns may claim the same amount of the deduction that is allowed on the federal return. The deduction must be attributed to the spouse who made the contribution.

(9) (a) Married taxpayers filing a joint federal return who are allowed a deduction for interest paid for a qualified education loan under section 221 of the Internal Revenue Code, 26 U.S.C. 221, and who file separate Montana income tax returns may claim the same amount of the deduction that is allowed on the federal return. The deduction may be split equally on each return or in proportion to each taxpayer's share of federal adjusted gross income.

(b) Married taxpayers filing a joint federal return who are allowed a deduction for qualified tuition and related expenses under section 222 of the Internal Revenue Code, 26 U.S.C. 222, and who file separate Montana income tax returns may claim the same amount of the deduction that is allowed on the federal return. The deduction may be split equally on each return or in proportion to each taxpayer's share of federal adjusted gross income.

(10) A taxpayer receiving retirement disability benefits who has not attained 65 years of age by the end of the tax year and who has retired as permanently and totally disabled may exclude from adjusted gross income up to $100 a week received as wages or payments in lieu of wages for a period during which the employee is absent from work due to the disability. If the adjusted gross income before this exclusion exceeds $15,000, the excess reduces the exclusion by an equal amount. This limitation affects the amount of exclusion, but not the taxpayer's eligibility for the exclusion. If eligible, married individuals shall apply the exclusion separately, but the limitation for income exceeding $15,000 is determined with respect to the spouses on their combined adjusted gross income. For the purpose of this subsection, "permanently and totally disabled" means unable to engage in any substantial gainful activity by reason of any medically determined physical or mental impairment lasting or expected to last at least 12 months.

(11) An individual who contributes to one or more accounts established under the Montana family education savings program may reduce adjusted gross income by the lesser of $3,000 or the amount of the contribution. In the case of married taxpayers, each spouse is entitled to a reduction, not in excess of $3,000, for the spouses' contributions to the accounts. Spouses may jointly elect to treat half of the total contributions made by the spouses as being made by each spouse. The reduction in adjusted gross income under this subsection applies only with respect to contributions to an account of which the account owner, as defined in 15-62-103, is

the taxpayer, the taxpayer's spouse, or the taxpayer's child or stepchild if the taxpayer's child or stepchild is a Montana resident. The provisions of subsection (1)(e) do not apply with respect to withdrawals of contributions that reduced adjusted gross income.

(12) (a) A taxpayer may exclude the amount of the loan payment received pursuant to subsection (12)(a)(iv), not to exceed $5,000, from the taxpayer's adjusted gross income if the taxpayer:

(i) is a health care professional licensed in Montana as provided in Title 37;

(ii) is serving a significant portion of a designated geographic area, special population, or facility population in a federally designated health professional shortage area, a medically underserved area or population, or a federal nursing shortage county as determined by the secretary of health and human services or by the governor;

(iii) has had a student loan incurred as a result of health-related education; and

(iv) has received a loan payment during the tax year made on the taxpayer's behalf by a loan repayment program described in subsection (12)(b) as an incentive to practice in Montana.

(b) For the purposes of subsection (12)(a), a loan repayment program includes a federal, state, or qualified private program. A qualified private loan repayment program includes a licensed health care facility, as defined in 50-5-101, that makes student loan payments on behalf of the person who is employed by the facility as a licensed health care professional.

(13) Notwithstanding the provisions of subsection (1), adjusted gross income does not include 40% of capital gains on the sale or exchange of capital assets before December 31, 1986, as capital gains are determined under subchapter P. of Chapter 1 of the Internal Revenue Code as it read on December 31, 1986.

(14) By November 1 of each year, the department shall multiply the amount of pension and annuity income contained in subsection (2)(c)(i) and the federal adjusted gross income amounts in subsection (2)(c)(ii) by the inflation factor for that tax year, but using the year 2009 consumer price index, and rounding the results to the nearest $10. The resulting amounts are effective for that tax year and must be used as the basis for the exemption determined under subsection (2)(c). (Subsection (2)(f) terminates on occurrence of contingency--sec. 3, Ch. 634, L. 1983; subsection (2)(o) terminates on occurrence of contingency--sec. 9, Ch. 262, L. 2001.)"

Section 12. Section 15-31-113, MCA, is amended to read:

"15-31-113. Gross income and net income. (1) The term "gross income" means all income recognized in determining the corporation's gross income for federal income tax purposes and:

(a) including:

(i) interest exempt from federal income tax and exempt-interest dividends as defined in section 852(b)(5) of the Internal Revenue Code of 1986, as that section may be amended or renumbered;

(ii) the portion of gain from a liquidation of the reporting corporation not recognized for federal corporate income tax purposes pursuant to sections 331 through 337 of the Internal Revenue Code, as those sections may be amended or renumbered, attributable to stockholders, either individual or corporate, not subject to Montana income or license tax under Title 15, chapter 30 or chapter 31, as appropriate, on the gain passing through to the stockholders pursuant to federal law; and

(b) excluding:

(i) gain recognized for federal tax purposes as a shareholder of a liquidating corporation pursuant to sections 331 through 337 of the Internal Revenue Code, as those sections may be amended or renumbered, when the gain is required to be recognized by the liquidating corporation pursuant to subsection (1)(a)(ii) of this section;

(ii) income received by a corporation from the manufacture of ammunition components if it is engaged in the primary business of the manufacture of ammunition components as provided in [section 4]; and

(iii) income received by a corporation that is attributable to providing bona fide loans in arm's-length transactions to manufacturers of ammunition components as provided in [section 5].

(2) The term "net income" means the gross income of the corporation less the deductions set forth in 15-31-114.

(3) A corporation is not exempt from the corporation license tax unless specifically provided for under 15-31-101(3) or 15-31-102. Any corporation not subject to or liable for federal income tax but not exempt from the corporation license tax under 15-31-101(3) or 15-31-102 shall compute gross income for corporation license tax purposes in the same manner as a corporation that is subject to or liable for federal income tax according to the provisions for determining gross income in the federal Internal Revenue Code in effect for the taxable year."

Section 13. Section 27-1-720, MCA, is amended to read:

"27-1-720. Liability -- defect in design of firearms or ammunition. (1) In a products liability action, no firearm, ammunition component that was manufactured in Montana as provided in [section 4], or ammunition may be considered defective in design on the basis that the benefits of the product do not outweigh the risk of injury posed by its potential to cause serious injury, damage, or death when discharged.

(2) For purposes of this section:

(a) the potential of a firearm or ammunition to cause serious injury, damage, or death when discharged does not make the product defective in design; and

(b) injuries or damages resulting from the discharge of a firearm or ammunition are not proximately caused by its potential to cause serious injury, damage, or death but are proximately caused by the actual discharge of the product.

(3) The provisions of this section do not affect a products liability cause of action based upon the improper selection of design alternatives."

Section 14. Section 90-1-118, MCA, is amended to read:

"**90-1-118. Small business eligibility criteria.** (1) To be eligible for a state matching grant under 90-1-117 through 90-1-119, a business shall provide evidence to the department of commerce that the business meets all of the following criteria:

~~(1)~~(a) the business is a for-profit sole proprietorship, partnership, limited liability company, limited liability partnership, or corporation registered with the secretary of state under Title 35 and has its principal place of business in this state;

~~(2)~~(b) the business has received a phase I award under a small business innovative research grant or small business technology transfer grant from a participating federal agency in response to a specific federal solicitation;

~~(3)~~(c) the business meets all federal eligibility requirements for a small business innovative research grant or a small business technology transfer grant;

~~(4)~~(d) the business is not concurrently receiving funding from other state funding programs that duplicate the purpose stated in 90-1-117;

~~(5)~~(e) the business certifies that at least 51% of the research described in the business's proposal for phase II funding under a small business innovative research grant or small business technology transfer grant is to be conducted in this state and that the business will remain a Montana-based business for the duration of a phase II project under a small business innovative research grant or small business technology transfer grant; and

~~(6)~~(f) the business demonstrates an ability to conduct research for the business's phase II proposal under the small business innovative research grant or small business technology transfer grant.

(2) As provided in [section 7], manufacturing ammunition components is a qualified economic development purpose."

Section 15. Section 90-1-202, MCA, is amended to read:

"**90-1-202. Purpose.** (1) The legislature finds and declares that economic development is a public purpose. The purpose of the big sky economic development program is to assist in economic development for Montana that will:

~~(1)~~(a) create good-paying jobs for Montana residents;

~~(2)~~(b) promote long-term, stable economic growth in Montana;

~~(3)~~(c) encourage local economic development organizations;

~~(4)~~(d) create partnerships between the state, local governments, tribal governments, and local economic development organizations that are interested in pursuing these same economic development goals;

~~(5)~~(e) retain or expand existing businesses;

~~(6)~~(f) provide a better life for future generations through greater economic growth and prosperity in Montana; and

~~(7)~~(g) encourage workforce development, including workforce training and job creation, in high-poverty counties by providing targeted assistance.

(2) As provided in [section 7], manufacturing ammunition components is a qualified economic development purpose."

NEW SECTION. **Section 16. Codification instruction.** (1) [Sections 1 through 8] are intended to be codified as an integral part of Title 30, chapter 20, and the provisions of Title 30, chapter 20, apply to [sections 1 through 8].

(2) [Section 10] is intended to be codified as an integral part of Title 15, chapter 24, and the provisions of Title 15, chapter 24, apply to [section 10].

NEW SECTION. **Section 17. Severability.** If a part of [this act] is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of [this act] is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

NEW SECTION. **Section 18. Effective date.** [This act] is effective on passage and approval.

NEW SECTION. **Section 19. Retroactive applicability -- applicability.** (1) For the purposes of exemption from individual income taxes and corporation taxes pursuant to [sections 4 and 5], [this act] applies retroactively, within the meaning of 1-2-109, to tax years beginning after December 31, 2012.

(2) For the purposes of exemption from all other taxes, [this act] applies to tax years beginning after December 31, 2013.

- END -

HOUSE RESOLUTION NO. 5

INTRODUCED BY K. KERNS

A RESOLUTION OF THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA INVITING FIREARMS MANUFACTURERS AND FIREARMS ACCESSORY MANUFACTURERS THREATENED BY HOSTILE LAWS IN OTHER STATES TO MOVE TO MONTANA.

WHEREAS, some states have enacted laws or are considering enacting laws that would prohibit the possession of certain firearms or of certain firearms accessories; and

WHEREAS, these laws may make it impossible for existing manufacturers to remain in or legally do business in those states; and

WHEREAS, many firearms and firearms accessory manufacturers are examining options for relocating their manufacturing to a more firearms-friendly location; and

WHEREAS, Montana is a firearms-friendly state with a good legal infrastructure for firearms possession, use, and manufacture; and

WHEREAS, Montana has a well-educated workforce of people with a strong work ethic and with a culture of firearms knowledge and tolerance; and

WHEREAS, Montana offers space, beauty, and a great place to live and work.

NOW, THEREFORE, BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

That Montana says to threatened firearms manufacturers and firearms accessory manufacturers: "Come to Montana. We want you here!".

BE IT FURTHER RESOLVED, that Montana says: "Montana is open for business for manufacturers of firearms and firearms accessories".

BE IT FURTHER RESOLVED, that the Secretary of State is encouraged to coordinate with firearms-related groups and businesses existing in Montana to develop contacts with manufacturers of firearms and firearms accessories in other states and deliver this resolution to them.

BE IT FURTHER RESOLVED, that Governor Steve Bullock is urged to actively seek out any manufacturers of firearms and firearms accessories to encourage them to move to Montana and to aid these

manufacturers in relocation in whatever way may be possible.

- END -

Colorado gun magazine manufacturer, Magpul Industries, says it's moving operations

Posted: 03/21/2013
Last Updated: 1 day ago

BOULDER, Colo. - A Colorado company that makes gun magazines says it expects to begin making magazines out of state within 30 days.

Gun accessory manufacturer, Magpul Industries, posted on its Facebook page that it is "actively working" on plans to move now that Colorado Governor John Hickenlooper has signed three gun control bills -- one of which limits magazines to 15 rounds.

"We will start our transition out of the state almost immediately, and we will prioritize moving magazine manufacturing operations first," Magpul posted on its Facebook this week. "We expect the first PMAGs to be made outside CO within 30 days of the signing, with the rest to follow in phases. We will likely become a multi-state operation as a result of this move, and not all locations have been selected."

A search found at least five Facebook groups asking Magpul to move to their states. "Magpul Industries - Texas Wants You" has 2,046 likes. "Bring Magpul Industries to Alabama" has 1,551 likes. The group's page says, "This is a grassroots effort to help bring Magpul Industries to the great State of Alabama!"

Magpul is based in Erie. It has about 200 workers.

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03/28/13 Overview: Arctic Economic Development Opportunities In Alaska

<TARGET><BILL></BILL><SUBJECT>03-28-13 Overview Arctic Economic Development Opportunities In Alaska</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: March 27, 2013

Re: Committee Schedule for the Weeks Beginning March 25, 2013 - REVISED

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, March 26, 2013 11:15am in Room 124

* + HCR6 Recognizing the Alaska Center for Unmanned Aircraft Systems Integration and establishing a task force
  Public testimony
* + HCR12 Support In-State Firearms Manufacturing
  Public testimony

Thursday, March 28, 2013 11:15am in Room 124

+ Arctic Economic Development Opportunities in Alaska
  Representative Bob Herron
  Bill Mowitt, Aide to Senator Begich
  Andy Varner, South West Alaska Municipal Conference
  Nils Andreassen, Institute of the North
  Roberta Graham, Deputy Commissioner DCCED
  Invited testimony only

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
+ Teleconferenced
= Bill was Previously Heard/Scheduled

Representative.Shelley.Hughes@akleg.gov

Alaska State Legislature

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House Special Committee on Economic Development, Trade and Tourism

AGENDA
March 28, 2013

- **Call to Order**

~Gavel~ Welcome to House Economic Development, Trade and Tourism Committee. The meeting is called to order. The time is _____. Welcome, everyone. Thanks to LIO monitor, _____, and our recording secretary, Debbie, and to committee aide, Ginger Blaisdell.

- **Roll Call and Agenda**

For the record, in attendance are: (representative xx, representative xx,… and representative xx – and remember to include self!)

Today's presenters will each give a five minute overview of Arctic Development Activities or Possibilities for Alaska and we will reserve questions for the end of their presentations.

- Representative Bob Herron
- Bill Mowitt, Aide to Senator Begich
- Andy Varner, South West Alaska Municipal Conference
- Nils Andreassen, Institute of the North
- Roberta Graham, Deputy Commissioner DCCED

- **Calendar Review**

  Today may be the final meeting of the EDTT committee – no further presentations are scheduled but we will meet if any legislation if referred to committee.

- **EDTT committee Tour of Alaska**

  The Special Committee on Energy is interested in joining our tour so the 6th will likely include a tour of the Unmanned Aircraft Center and the energy/sustainability related efforts at Chena Hot Springs.

  - June 4-6 (Tuesday through Thursday
    - Tuesday early morning – Anchorage bus to Talkeetna
    - Talkeetna optional river raft, flight seeing, etc.
    - O/N Denali Princess hotel
    - Wednesday morning free
    - Afternoon tour of Usibelli
    - Dinner on Riverboat Discovery
    - O/N Fairbanks Princess or flight to Anchorage
    - Thursday optional tour of Fairbanks or flight to Anchorage
  - How many members, spouses and family, and committee staff?
  - Is this week impossible for most members? Is another Tu-Th week in June better?

- **Adjourn**

ACEP

Alaska Center for Energy and Power

Fostering development of innovative solutions to Alaska's energy challenges.

Research Briefing

Stranded Renewable Energy Resources of Alaska: A Preliminary Overview of Opportunities and Challenges to Development

This report was prepared by the Alaska Center for Energy and Power for the National Renewable Energy Laboratory.

Project Overview

Alaska is home to significant renewable energy resources. Geothermal, wind, tidal, wave, hydro and even solar and biomass resources have the theoretical potential to not only meet the majority of Alaska's in-state energy needs, but also provide tremendous economic and strategic opportunities for the state and the nation. Despite the many opportunities for developing these resources, there are also significant barriers. Foremost among these challenges is the fact that many of Alaska's renewable energy resources are stranded.

Pathways to Development

Typically, the primary barriers to developing stranded resources are technical, logistical and economic, including the cost of fully assessing the resource, developing the resource into usable energy, maintaining and operating a facility or technology in a remote location, and transporting the energy or product to demand centers. In Alaska, these barriers are amplified by the sheer size and diversity of the land, varying climates, extreme weather and distance from global demand centers. Political and social barriers can also play a significant role when considering the development of stranded resources in Alaska. Land use restrictions, regulatory requirements, aesthetic and environmental concerns, and other similar barriers could preclude the development of certain resources or increase the overall cost of project development.

See the full report for information on stranded renewables that are export- or commercial-scale in size. The renewable energy resources considered to be relevant for this report include geothermal, wind, river (hydroelectric) and ocean (tidal and wave). Available at www.uaf.edu/acep/publications.

The challenges and opportunities associated with developing Alaska's stranded renewables are assessed via "pathways to development," that is, those methods or mechanisms that allow for access to and development of stranded energy resources.

Transportation to Market

One pathway to developing a stranded resource is to overcome the resource's isolation by transporting the site-produced energy to market. Practically all methods of transport-

What is a stranded renewable energy resource?

Stranded renewables are those renewable energy resources located in remote, distant or otherwise isolated areas "stranded" from integration into modern energy infrastructure and supply chains to local population and industry centers. Stranded renewables can be divided into two categories: (1) isolated or remote resources that are commercial- or export-scale in size, i.e., those energy resources that provide potential energy and economic value that justify remote development and have large potential markets, and (2) resources "stranded" from utilization not by isolation or remote location, but by issues such as economies of scale or "seasonality," e.g., abundant solar or hydro availability in the summer but not in the winter.



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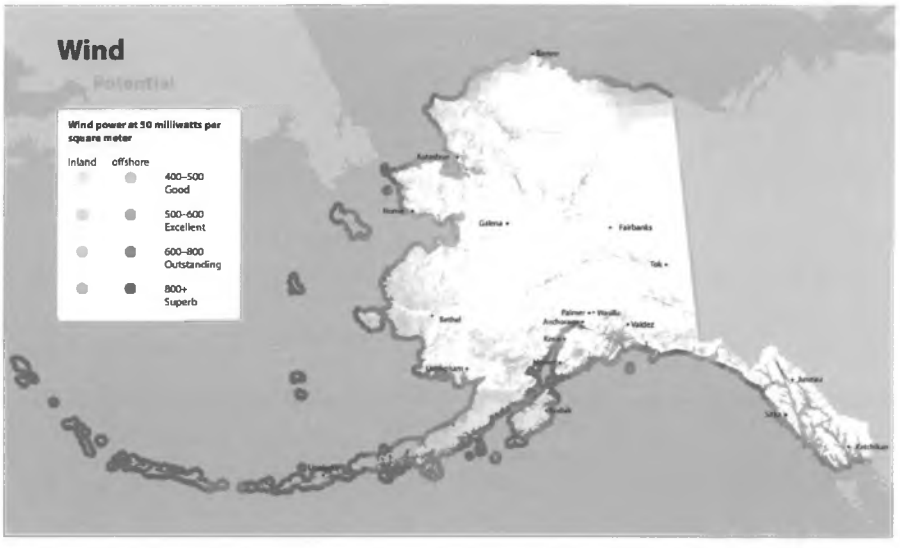
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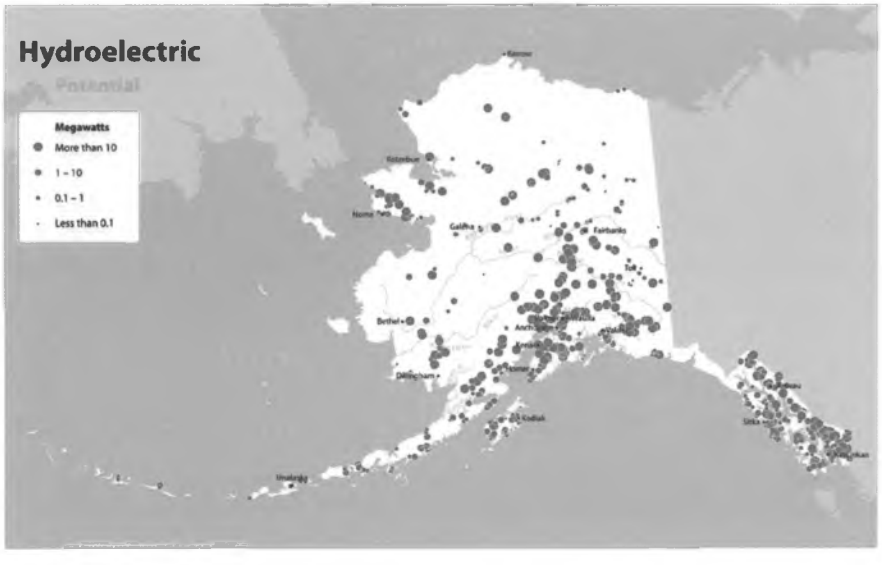
ing energy over significant distances fall into two categories: electrical energy transmission or chemical energy transport. Electrical energy transmission is perhaps the more familiar and common of these two. It consists of converting the renewable energy resource into electrical energy, and transmitting that energy to market via electrical transmission lines. Electricity markets are connected by transmission systems. Accordingly, transmission has historically been at the center of discussion when considering the barriers to and opportunities for developing stranded renewable energy resources. The cost of electrical transmission in Alaska is one of the most significant challenges to developing stranded renewable energy resources. Many factors, such as permafrost and varying soil compositions, mountain ranges, rivers, limited access and extreme seasonal weather conditions, can contribute to difficult engineering and construction challenges and, ultimately, high costs.



Alaska has an abundance of potential wind resources, hosting the largest area of class 7 wind power in the United States.

Chemical energy transport is most familiar in the context of fossil energy, primarily through the use of pipelines and marine tankers. Unlike fossil energy resources, which are harvested as a chemical energy resource, renewable energy must first be converted into a chemical energy form that is suitable for transportation. Only then can it be transported to energy markets via ship, pipeline or other transportation methods. With growing concerns over rising oil prices and increasing greenhouse gases, the production of alternative fuels has gained interest in order to reduce fossil fuel consumption, potentially stabilize energy prices, enhance energy security and offset carbon and other emissions. Some countries, especially in Asia and Europe, have begun to invest in alternative fuels such as hydrogen, ammonia and dimethyl ether (DME) to move toward a sustainable, clean energy economy.

Hydroelectric power is the most abundantly developed renewable resource in the state and provides 24 percent of the electricity consumed in Alaska.

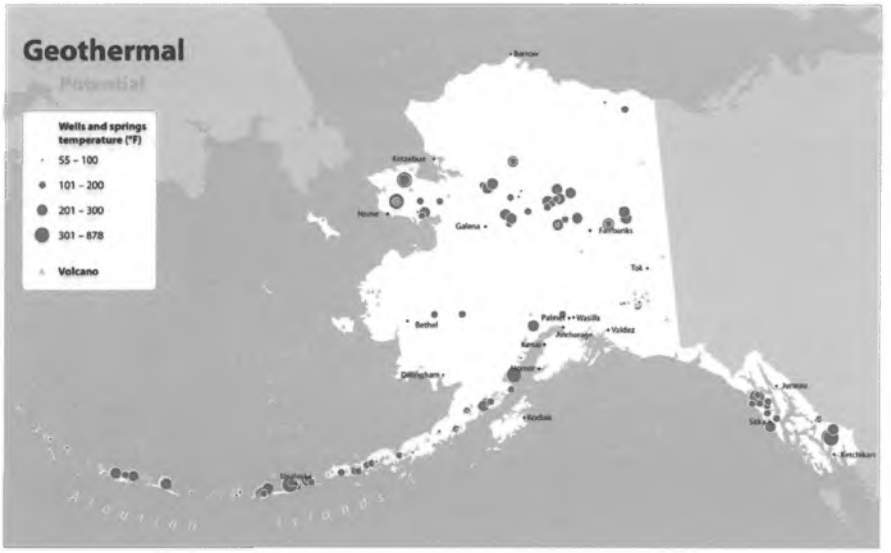


Place-Based Industry

An alternative approach to transporting produced energy to market is place-based industry, i.e., the development of stranded renewable energy resources for local use. A specific form of industry, energy-intensive industry, is a primary candidate for place-based industry. Energy-intensive industry is a general term for those industries that use large amounts of heat and/or other forms of energy to physically or chemically transform materials. These industries include, but are not limited to, aluminum smelting, mining, petroleum refinement, metal casting, the production of chemicals, steel and glass, and forest products.

Technology Development

A final pathway to developing Alaska's stranded renewables is through technol-



In 2008, the United States Geological Survey (USGS) estimated the capacity of all known geothermal resources in Alaska at a mean of 677 MW over the next 30 years, with a low range of 236 MW and a high of 1,359 MW. Unidentified geothermal resources for Alaska are estimated to add an average of 1,788 MW, with a low of 537 MW and a high of 4,256 MW.

Smelting is the process of reducing mineral ores and concentrates to metal. Most methods involve heating the ore and concentrates with carbon to reduce the other ore compounds and, with additional refining, produce metal in a high state of purity ready for sale. Smelting is an extremely energy-intensive process. To produce a ton of aluminum it takes from 14.5 MWh to over 15 MWh. In addition to high-energy demand, smelting operations require a large infrastructure (the plant itself, access roads, and shipping and dock facilities) and an optimized location. Proximity to global shipping routes, distance to raw material, distance to market and ease of access, including the presence of a deep water port, are all critical elements to the overall feasibility of a smelting operation.

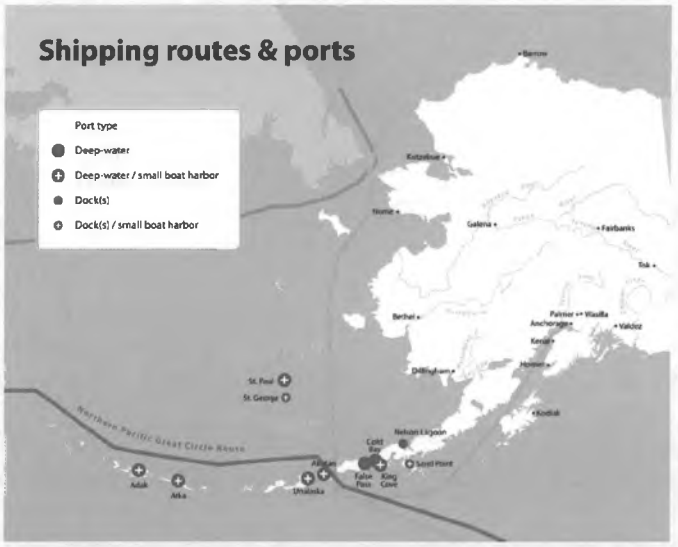


Total wave energy potential in Alaska is estimated to be 1,250 TWh/yr, more than 50 percent of the total potential found in the U.S. In addition to wave energy, Alaska is estimated to possess 90 percent of the tidal power in the U.S., or 109 TWh/yr.

ogy development. Technology designed to harness and utilize renewable energy resources has been used for centuries and is always evolving in response to new technological breakthroughs. Traditional technology for generating and transmitting power from renewable energy is being challenged by the remoteness of Alaska's energy resources. As interest in developing renewable energy in Alaska increases, new technological advances could expand opportunities for the development of stranded renewable resource projects in rural regions of the state.

Findings

One transportation opportunity of particular relevance to Alaska is high voltage, direct current (HVDC) transmission. HVDC transmission has often been discussed as an economical means of transporting produced power to large, distant markets such as British Columbia and the Pacific Northwest. There are substantial hurdles to consider, however, when considering HVDC as a means of transporting large-scale stranded energy sources. While HVDC lines are usually more efficient than comparable AC lines, the power conversion equipment used to convert AC to HVDC and back is generally less efficient and more expensive than AC transformers. This makes AC more cost-effective for short interties, with HVDC more favorable for longer-distance transmission applications. The high cost of an HVDC power converter also forms an economic barrier that keeps energy resources or loads located along an HVDC transmission line from easily accessing the line.



Shipping in the Arctic Ocean is mostly limited to a short summer season, typically between July and September. During the ice-free season the Bering Sea averages around 120 vessels. This number is expected to increase as the extent of sea ice cover decreases.

Preliminary metrics such as access to a large base-load renewable energy source, proximity to global shipping routes, presence of a deep water port and supporting infrastructure requirements indicate that several sites throughout the Aleutian Islands, most notably Unalaska, could theoretically have the capacity to host smelting operations. Other energy-intensive industries such as mining and fish processing have theoretical applicability at various locations around the state, given suitable demand and the availability of a resource. Overall, there are substantial hurdles to consider when discussing developing stranded renewable energy resources through place-based industry. Many of these hurdles deal with the remoteness of these potential sites and typical challenges such as harsh climates. Others, including the high capital cost of such applications and need for competitive business environment, speak more to the ability of developing a business model to move forward with these prospects.

As interest in developing renewable energy in Alaska increases, finding innovative and emerging technology could encourage the advancement of stranded renewable resource projects in rural regions of the state. An example of this is Alaska's Emerging Energy Technology Fund (EETF), implemented by the legislature in 2010, which seeks to "promote the expansion of energy sources available to Alaskans." There is much activity globally in pursuing such relevant technologies such as floating offshore wind turbines, wave energy conversion devices, and tidal hydrokinetic generation technology. In addition, transmission and distribution technologies, control systems, and energy storage devices are all the focus of development, and could be relevant to developing stranded renewables in Alaska.

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For further information on this report, please visit www.uaf.edu/acep or contact:

Jason Meyer, Program Manager, ACEP
907-306-9900
jason.meyer@alaska.edu

Gwen Holdmann, Director, ACEP
907-474-5402
gwen.holdman@alaska.edu

Alaska Center for Power and Energy, University of Alaska Fairbanks, P.O. Box 755910, Fairbanks, Alaska, 99775-5880

A full report, *Stranded Renewable Energy Resources of Alaska: A Preliminary Overview of Opportunities and Challenges to Development*, can be found online at www.uaf.edu/acep/publications.

CASE STUDY: Demand Analysis for Underserved Markets of North Pacific and Arctic
Prepared by Southwest Alaska Municipal Conference (SWAMC)

The Southwest Alaska Municipal Conference (SWAMC) is conducting broadband analysis for Southwest Alaska, and works in coordination with the State and the Broadband Task Force on Internet adoption and access. The lack of high-speed Internet in Southwest Alaska is due to poor economics, not technological difficulties. According to HughesNet and ViaSat, the stand-alone cost of a next-generation satellite is in the range of $250 to $400 million. Bridging the commercial gap will likely require a public investment, though offsetting the total cost will not be necessary, due to growing industrial activity, reliant on modern communication. Much of the industrial activity in the area requires a link from a mobile vessel, such as a plane or boat. Multiple telecommunications providers claim they now offer this technology. In addition to residential needs and industrial demand, an opportunity exists to share costs with large population Asian markets as well.

There is an inherent supply and demand dichotomy between broadband access and adoption. Due to costs associated with building broadband, providers are reticent to deploy infrastructure, which further surpasses demand. Adoption in Alaska's western coastal communities, and especially offshore areas of the North Pacific and Arctic Ocean, represents stranded demand, and does not accurately encompass the potential penetration for high-speed broadband Internet. Meeting demand with terrestrial fiber backbone networks for part of this market will be difficult, if not impossible. Shore-based facilities using legacy satellite systems provide lower data transfer speeds at very high costs, and most ocean-going vessels are not connecting to the Internet. Private companies (in addition to school districts) may pay as much as $10,000 per month for a 1.5 Mbps connection in Southwest Alaska. Next-generation satellites currently provide much faster data transfer speeds at a fraction of the cost.

The technology company ViaSat advertises data rates of 12 Mbps at a monthly cost of $50 (though mostly geared toward the Continental US market); HughesNet advertises a similar plan. ViaSat will launch their newest *Ka Band* satellite in 2015, but Western and Arctic Alaska will not be included in their coverage plans due to a lack of perceived market demand by the private sector. Public investment in next-generation satellite technology may be necessary to provide basic information needs to residents in the area; however, with the industrial capacity growing fast in Western & Arctic Alaska, Public - Private Partnership are likely viable options for sharing costs and increasing service.

Our analysis has identified the following potential customers in Western and Arctic Alaska:

- Communities - Anchor Institutions, Business & Residential
  Appendix A provides an overview of many SWAMC region communities that are in the underserved area. Note that Kodiak City and the Bristol Bay regions are connected to a fiber backbone. The underserved region contains between 15-20 communities, from Kodiak Island to the Alaska Peninsula and Aleutians that have very little chance of being physically connected through a fiber backbone in the intermediate- to medium-term future. Thus, next generation satellite represents their best hope for high-speed broadband. In addition to the residents deserving of cost effective and reliable Internet, anchor institutions such as schools, libraries, governments and health facilities are under a federal mandate to meet a minimum level of service, which is currently neither cost effective nor reliable. Other industries in this region include hunting & fishing lodges that rely on satellite for their business and client needs. Businesses and residents living in these communities require broadband services if they are to remain competitive in the global marketplace, and will be further restricted from services (and entertainment) that migrate to digital mediums.

- Ocean Shipping and Arctic Activity
  Appendixes B & C display information on vessel activity, provided by the Marine Exchange of Alaska, in the Bering Gateway to the Arctic and Unimak Pass in Alaska's Aleutian Peninsula. This ocean highway links America to Asia on the Great Circle Route, where 3,178 Westbound sailings and 1,255 Eastbound sailings through Unimak Pass were recorded in 2011. Each of the past five years has led to more and more Arctic activity and development, which trickles down to the Western and Southwestern regions of Alaska. Icebreakers, tankers, researchers, escort vessels, and more are ramping up activity. The US Coast Guard has documented total Arctic vessel activity increasing over 100% from 123 in 2008 to 247 in 2012, and total Bering Sea activity expanding 123% from 217 in 2008 to 484 in 2012. Most of the ships passing through these regions are large sophisticated vessels that require modern communication, and spend most of their time at sea, much of it in the North Pacific and Arctic. This represents a large and untapped market for real-time data, advanced vessel tracking and modern communication. Russia, China, Japan, Norway, America, and many other nations are all vying for increased access in the region as the Arctic warms up. The Marine Exchange of Alaska is responsible for reporting and tracking vessels operating in Alaskan waters; through their network, vessels upload trip data when they reach port or upload information through VHF radio network to the shore-based satellite uplinks.

- Science and Environmental Research
  Appendixes B & C provide information on science and research vessels in the Bering Gate and Unimak Pass. The region has seen increased research and science activity in recent years due to climate change, fisheries and other information gaps necessary to understand a fragile Arctic environment. NOAA has several offices in the region which constantly monitor and model weather patterns and climate activity. The National Marine Fishery Service does regular survey work of fisheries and marine mammals. Alaska Department of Fish and Game's goal is to move toward real-time data collection and reporting, especially important for managing millions of pounds of harvest data. With the vast data requirements involved in creating a comprehensive understanding of environmental science, there is a great need to enhance existing networks.

- Fishing Industry
  Appendix D identifies fishing vessels by community, as reported by Alaska Department of Fish and Game, Commercial Fisheries Entry Commission, and a more detailed analysis of vessels reporting to the community of Kodiak in 2010, provided by the Port of Kodiak. The North Pacific and Bering Sea, though sparsely populated, have some of the world's most productive commercial fishing grounds, making for year-round activity. This industry consists of many factory trawlers, at-sea processors, large and small boats, service vessels, and more; in total 9,857 vessels participated in Alaska's commercial fishing harvests in 2010. A snapshot from Alaska largest fishing and marine sector community, Kodiak, reported 3,225 vessels calls on her port in 2010. On-shore facilities include many processors, usually at least one in each community, in addition to boat harbors and other marine businesses. Three of the nation's Top 5 seafood ports by volume reside in Dutch Harbor (#1), Akutan (#3), and Kodiak (#5), and the world's largest crab production facility is in St. Paul Island in the Pribilofs. This activity produces lots of jobs and industrial processes that require reliable communications. Even most of the smallest commercial vessels use satellite based phone systems; new technology now available offers similar hardware for Internet capable connections. The importance of reliable and real-time information to the fishing industry will require that all vessels become Internet capable. Early adopters of internet enabled fishing vessels in Italy are maximizing harvest value and opening up new markets by finding buyers from sea, at the moment the fish is landed, so that buyers are waiting for them when fishers return to the docks.

- Oil & Gas Industry

The oil & gas and logistics industry is developing fast as the value of hydrocarbons rises and the Arctic ice recedes. Shell, Statoil, ConocoPhillips and others are now starting their exploration activity in Alaska's Outer Continental Shelf. The staging community for Arctic activity is in the Aleutians, due to the region's ice-free, deep draft ports. Communications, vital to global energy companies, has proven to be expensive, rumored to cost $10,000 per month for a dedicated T-1 (1.5 Mbps) connection. Public officials in Unalaska are considering constructing another hotel to house the expected increased traffic due to energy exploration; each of these companies will have the same, vast communication needs. Due to the data intensive needs of these companies, demand for Internet speed and capacity will increase.

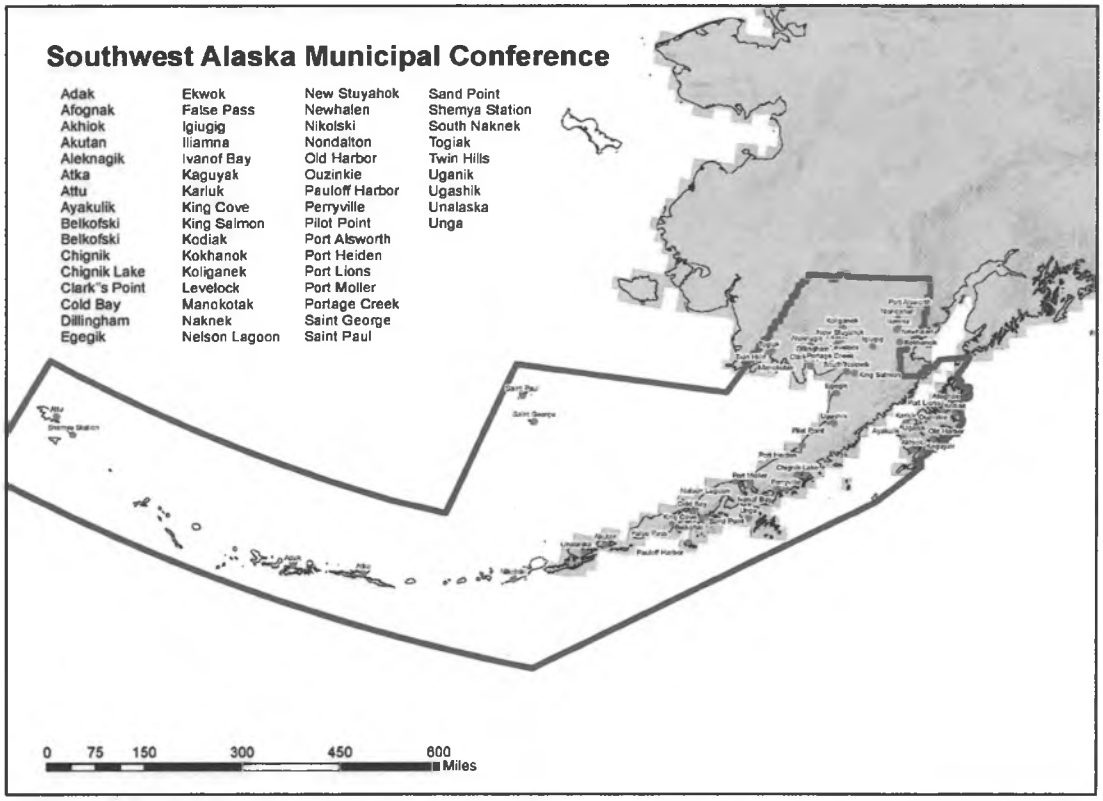
- Military
  The region has a large military presence due to its strategic geographic position, bordering the Arctic, Asia, and the North Pacific. The largest Coast Guard base in the country is on Kodiak Island, tasked with protecting a coverage area that extends to the tip of the Aleutians and up to Barrow on the North Slope, a distance of several thousand miles. There is additional limited presence in many communities in the region, with plans for new large bases to accommodate anticipated Arctic activity. Eareckson Air Force Base on Shemya Island, at the tip of the Aleutian Chain, houses a missile defense system and weather station. The COBRA DANE is an operational, ground based, L-band large phased array radar, which fulfills three concurrent missions: intelligence data collection of strategic missile systems; treaty verification; and early warning to North American Aerospace Defense Command (NORAD). Military contractors Boeing and Raytheon are present on the island. Dedicated T-1 connections likely cost several thousand dollars per month. With the Nation's new geo-political focus on the Asian continent, this will mean maintaining advanced telecommunications networks to meet growing national security needs.

- Airline Industry
  Appendix E (part of correspondence with HughesNet) identifies current airline coverage as they transit the Pacific between Asian and American markets. Technology linking passenger airline traffic to the Internet is now commonplace, although without a reliable link to a satellite, this service will not be purchased. This gap provides a great business opportunity for the thousands of flights linking Asia, America and Europe daily, over the North Pacific and Arctic. In addition to passenger traffic, Anchorage is the nation's second largest airfreight hub.

- Asian Markets
  The largest opportunity to offset costs in the sparsely populated North Pacific and Arctic regions may be the densely populated Asian economies. 1.5 billion people live in this region, which is located not far from Alaska's remote communities. Even if only a small percentage of the Asian population requires satellite service, the absolute customer base is huge.

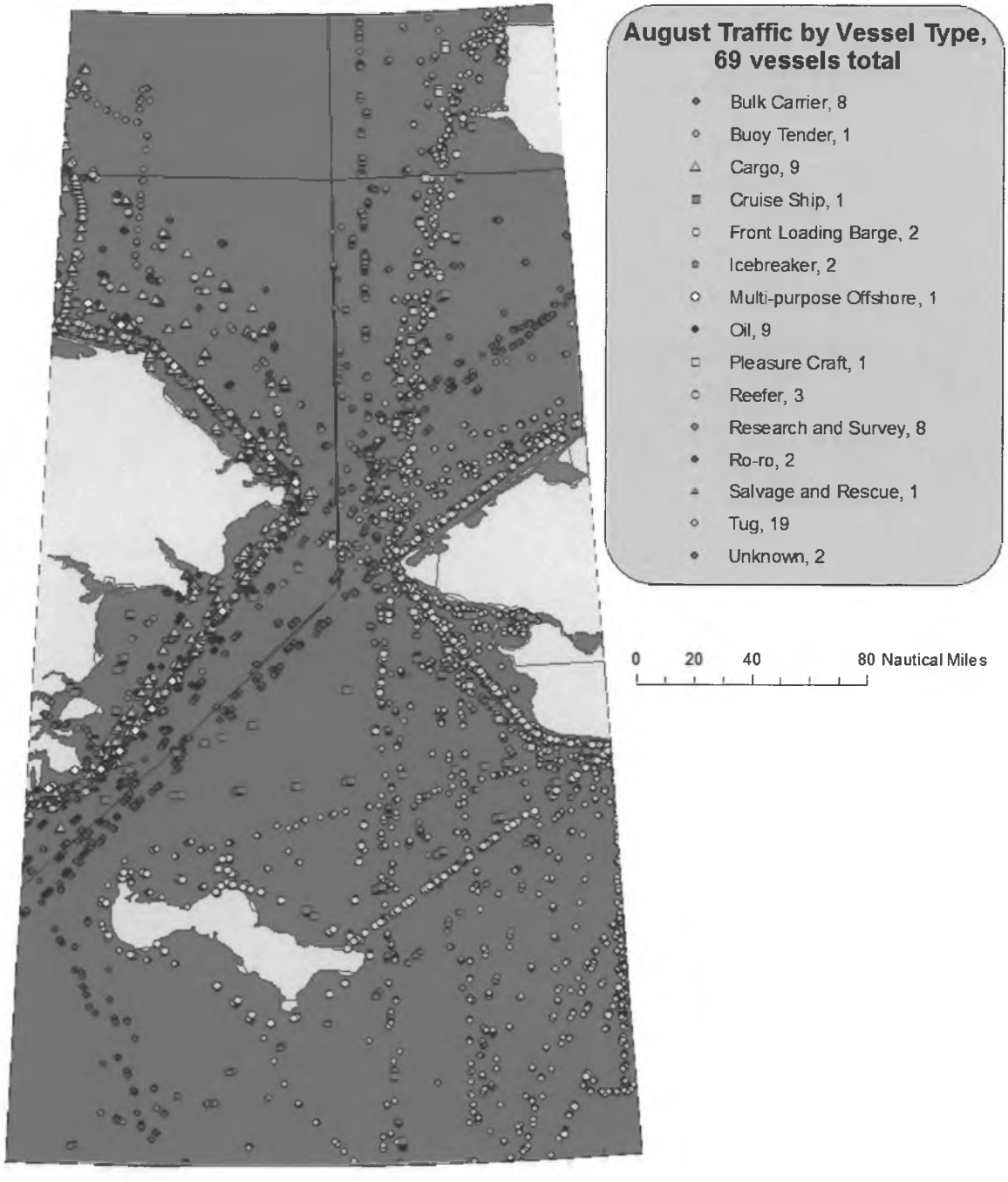
This document and the empirical data in the Appendices outline potential and overlooked demand for high-speed Internet in the North Pacific and Arctic, independent of the basic infrastructure needs in today's modern, interconnected economy. With the predominant geography being ocean and becoming highly industrialized with mobile vessels, terrestrial fiber backbone networks will not be capable of delivering high-speed Internet to those customers. While a fiber backbone is feasible to deliver networks to the communities of the North Pacific and Arctic, high marginal costs may prevent the establishment of needed upgrades for many years. This case study defends a need and demand for modern communication in the aforementioned regions, with the understanding that some public investment may be required. Much of this investment can be shared by leveraging Public-Private Partnerships with the industrial base in the region.

Appendix A


Southwest Alaska Municipal Conference
Adak
Afognak
Akhiok
Akutan
Aleknagik
Atka
Attu
Ayakulik
Belkofski
Belkofski
Chignik
Chignik Lake
Clark"s Point
Cold Bay
Dillingham
Egegik
Ekwok
False Pass
Igiugig
Iliamna
Ivanof Bay
Kaguyak
Karluk
King Cove
King Salmon
Kodiak
Kokhanok
Koliganek
Levelock
Manokotak
Naknek
Nelson Lagoon
New Stuyahok
Newhalen
Nikolski
Nondalton
Old Harbor
Ouzinkie
Pauloff Harbor
Perryville
Pilot Point
Port Alsworth
Port Heiden
Port Lions
Port Moller
Portage Creek
Saint George
Saint Paul
Sand Point
Shemya Station
South Naknek
Togiak
Twin Hills
Uganik
Ugashik
Unalaska
Unga
0 75 150 300 450 600
Miles

Appendix B

August 2011 AIS Vessel Traffic



Source: US Coast Guard- Juneau Station

Appendix C

Summary traffic information from the previous years' data collection efforts and from calendar year 2011 is shown in the table below. Data provided on the following pages is provided by the Marine Exchange of Alaska.

FISCAL YEAR	WESTBOUND	EASTBOUND
2006*	2923	568
2007*	3581	890
2008*	3274	957
2009*	2886	1088
CALENDAR YEAR		
2011**	3178	1355

*Unimak Pass Only ** Unimak Pass + South Line Traffic

Detailed breakdowns of East and West Traffic by ship type are contained in the following pages.

CALENDAR YEAR 2011 WESTBOUND SHIPS

WESTBOUND SHIPS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
BULK CARRIERS	120	93	150	140	177	169	149	110	86	107	56	152	1509
CONTAINER SHIPS	170	72	119	77	139	111	90	92	69	71	45	142	1197
GENERAL CARGO	11	6	13	5	12	12	8	9	4	8	4	10	102
RORO	2	3	1		1	1	3	1	1	4	1	2	20
TANKERS	6	5	9	7	7	9	5	6	8	5	8	4	79
VEHICLE CARRIERS	14	5	13	5	13	15	15	9	6	7	8	11	121
WOOD CHIP CARRIERS	3	2	1	2	2	2	1	3	1	3		3	23
PASSENGER SHIPS								1	1	1			3
LNG TANKERS			1	1	1	1		1	1		1		7
RESEARCH VESSELS													0
REEFER CARGO			1	1	1		2	2	1		1		9
TOTALS	326	186	308	238	353	320	273	234	178	206	124	324	3070

CALENDAR YEAR 2011 EASTBOUND SHIPS

EASTBOUND SHIPS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
BULK CARRIERS	58	40	39	42	78	67	71	75	50	51	32	44	647
CONTAINER SHIPS	68	32	40	30	47	47	47	48	38	42	31	48	518
GENERAL CARGO	5	2	2	3	5	4	2	6	1	2	1	1	34
RORO	1			1	1		3	2		1		1	10
TANKERS	2	1				1	2	2		2	1		11
VEHICLE CARRIERS	7	6	4	4	10	6	6	10	6	8	2	5	74
WOOD CHIP CARRIERS		1	1					1	1				4
PASSENGER SHIPS					2		1						3
LNG TANKERS		1	1				1	1			1		5
RESEARCH VESSELS								1					1
REEFER CARGO	1	1	1	3			4	2	1	1			14
TOTALS	142	84	88	83	143	125	137	148	97	107	68	99	1321

Appendix D

Southwest Community Vessel Count - 2010		
Community	Home Port	Resident Boats
Kodiak	549	349
Sand Point	169	119
King Cove	89	63
Dutch Harbor	37	19
Bristol Bay	612	154
Seattle	639	267
TOTAL Fishing Vessels		**9,857**

Kodiak Harbor Vessel Report 2010: By Type		
Number	**Type**	**Size Range**
411	Auxiliary	8 – 28 Foot
2	Auxiliary	114 – 165 Foot
72	Tug Barge	22 – 344 Foot
118	Charter	80-173 Foot
1610	Commercial Fishing	8 - 377 Foot
31	Landing Craft	21 - 160 Foot
91	Other	10 - 781 Foot
735	Pleasure	5 - 232 Foot
152	Sail / Yacht	14 - 220 Foot
TOTAL Kodiak Vessel Calls		**3,225**

Kodiak Harbor Vessel Report 2010: By Length	
Number	**Length Category**
9	Greater than 300 Foot
22	Between 200 – 300 Foot
254	Between 100 – 200 Foot
476	Between 58 – 100 Foot
710	Between 38 – 57 Foot
1769	Less than 38 Foot
TOTAL Kodiak Vessel Calls	**3,225**

Appendix E

Provided by HughesNet:

Solutions for Meeting Broadband Connectivity Needs of Western / Arctic Alaska

Requirements:

Providing broadband access (inter/intranet) to the community with the following applications:

1. Fixed/stationary sites covering home, offices, airports, and others where the users are in fixed buildings;
2. Marine, whereby the marine vessels get broadband access;
3. Aeronautical, whereby planes flying within coverage zone have access to broadband.

HUGHES Solutions:

HUGHES, as the world leader in Satellite Communication (SatComm), can work with Southwest Alaska Municipal Conference (SWAMC) to develop and deliver the best set of broadband access solutions connecting its constituents and communities to the Internet. HUGHES has a long history of connecting the unconnected in the underserved areas around the world and as such it can meet SWAMC's requirements both in the short term and the long term. The Western/Arctic region of Alaska is an underserved area as terrestrial carriers have traditionally not made any serious investment in infrastructure due to significant inherits cost.

As a result, SatComm offers the best and the most cost-effective alternative. However, while satellite operators have not focused their asset deployments to cover the Western/Arctic region of Alaska, they can, given the creation of a sufficient market worthy of investments. Meanwhile, HUGHES can offer the following three options:

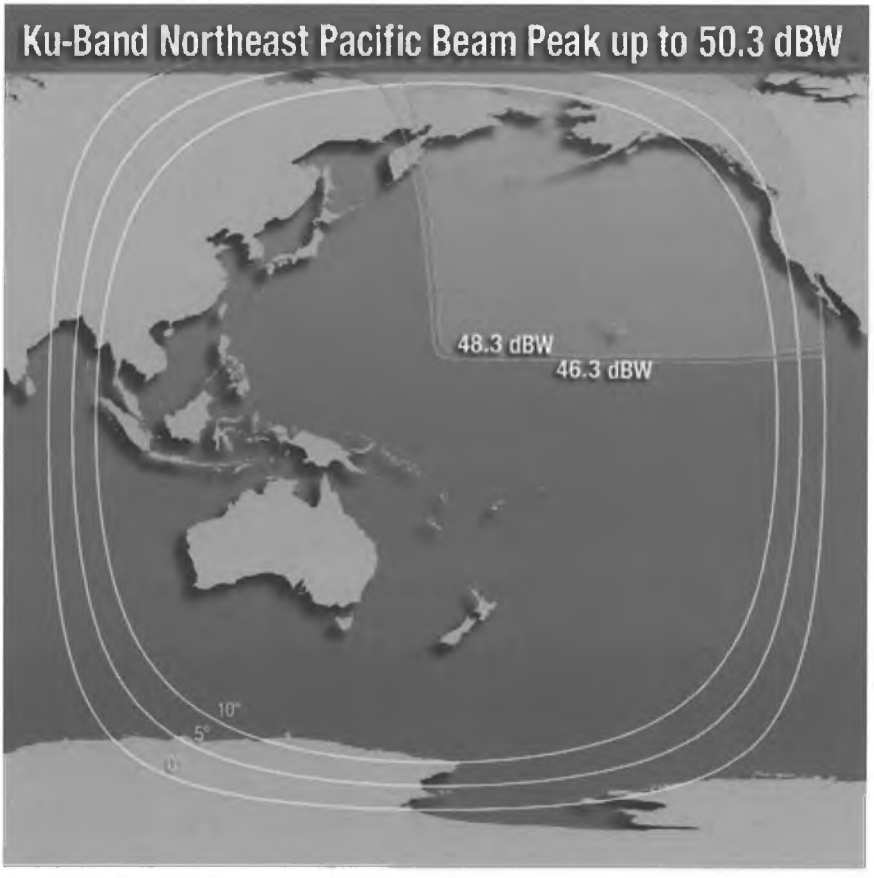
1. **Medium Term**, meaning this solution can be available within the next 12-18 months and requiring some investment by either SWAMC, the State of Alaska, or in-region clients, and
2. **Long Term**, whereby this solution may take a few years to develop and launch and may most certainly require noticeable investment by SWAMC, the State of Alaska, or in-region clients.

Below are highlights of the above options.

1. Medium Term

HUGHES has been a service provider to Row44 since its inception. Row44 provides global broadband Internet access to airlines such as Southwest, Iceland Air, Allegiant Air, Norwegian Airline, and others. HUGHES will be expanding their coverage to include the Pacific Ocean through the use of the IS-19 satellite (166° E), which has perfect coverage covering the Western/Arctic region of Alaska as shown below.

Service on IS-19 will be available in late 2013 and will be supported out of our NOC in Napa Valley, CA. HUGHES can work with SWAMC on developing a unique service offering off of IS-19, though this will require commitment/investment by SWAMC, the State of Alaska, or other clients to acquire dedicated capacity on that satellite to deliver your specific services. IS-19 offers a much better coverage and look angle and therefore it can provide service to fixed, marine, and aeronautical sites.



2. Long Term

This is the scenario where HUGHES can work with SWAMC to develop a satellite payload-specific strategy resulting in SWAMC (or other entities) to have its own payload on an upcoming satellite. The biggest benefit of this approach would be to have the payload/transponder(s) on that satellite to be optimally configured to cover the Western /Arctic region of AK as best as possible and thereby deliver the most optimum coverage. This approach requires long term planning and engagement by the satellite operators, which will require financial commitments by SWAMC, the State of Alaska, and/or private industry. HUGHES has extensive experience in these types of deployments and can help SWAMC with the proper engagement and of course development of the payload, ground equipment (Uplink), and the required satellite terminals to be deployed at the remote fixed, marine, or aeronautical sites.

Senator Mark Begich

Arctic Deep Water Ports Enhancement Act of 2013 Section by Section Summary

Section 1: Title

Section 2: Findings

- Congress finds that with growing development in the Arctic, developing Arctic ports is in the national interest.

Section 3: Definitions

- Defines Arctic Deepwater Ports as ports along the coast from Bethel north, with at least 30 feet of water.
- Defines 'developer' as any private entity, State, municipal, or borough government, Alaska native corp or CDQ group.

Section 4: Arctic Deepwater Port Development Partnerships

- Authorizes the Army Corps to enter into partnerships with port developers to plan, survey, design, construct, maintain or operate Arctic Deepwater Ports, or to provide technical assistance to developers.
- Authorizes the Army Corps to receive federal, non-federal, or private funds for such activities

Section 5: Arctic Port Infrastructure Development Fund

- Creates an Arctic Deepwater Port Infrastructure development fund to do two things:
  1: Receive federal, non-federal, or private funds for Army Corps port development partnerships, and use those funds for such purposes

  2: Creates Federal loan guarantee program, which will:
  - Provide federal guarantee of private debt secured by port developers
  - Limit guarantees to 75% of total capital costs of any single project and to $3 Billion in aggregate for all projects.
  - Authorizes appropriations for loan guarantee

Section 6: Environmental Reviews

- Establishes Army Corps as lead federal agency for EIS process, and directs them to create an EIS with cooperation of all other agencies.
- Requires them to complete EIS within 1.5 years of complete application.

Section 7: Federal Coordinator for Arctic Ports

- Creates a politically appointed Federal Coordinator in the Ass't Sec of the Army for Civil Works office (i.e. where the Army Corps is).
- Authorizes the coordinator to coordinate other agencies activities and advise the Secretary on port partnership agreements and loan guarantees.

- Prohibits other fed agencies from imposing conditions on permits that would hinder port development (unless those conditions specifically required by law).

Section 8: Assistance to Developers of Arctic Ports

- Ensures Arctic Port Developers have access to DOT Transportation Infrastructure Funding source.
- Authorized Coast Guard to enter into long-term leases with Arctic port developers and to convey surplus real estate to developers (i.e. Pt. Clarence LORAN station to BBNC).

Section 9: Deepwater Port Act of 1974 Amendment

- Clarifies that for *offshore* port structures, DOT has authority to license them for uses other than oil and gas (current law is a bit unclear on that).

Section 10: Authorization of Appropriations

- Authorizes $3M to do all of the above (assumedly primarily to run Fed Coordinator office)



Economic Development Trade and Tourism Committee – March 28, 2013

HB 165: Alaska Arctic Port & Development Authority

Alaska State Representative Bob Herron

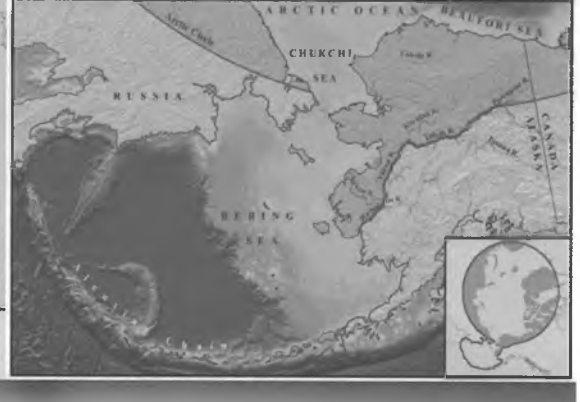
Arctic Boundary
– as Defined by US Congress

Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)

All United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.[1]







Acknowledgement: Funding for this map was provided by the National Science Foundation through the Arctic Research Mapping Application (armap.org) and Contract #0520837 to CH2M HILL for the Interagency Arctic Research Policy Committee (IARPC).

Map author: Allison Gaylord, Nuna Technologies. May 27, 2009.

1. The Aleutian chain boundary is demarcated by the 'Contiguous zone' limit of 24-nautical miles.

Arctic Port & Development Authority

Overarching Goal:

To develop as effectively and efficiently as possible an Alaska Arctic regional system of ports and related facilities (including a deep water port) for the economic betterment of the region, Alaska as a whole, and the United States.





Arctic Port & Development Authority

Port Authority Could Depoliticize Siting of Arctic Port

- An Alaska Arctic Port and Development Authority with a Board responsible for formulating and implementing a comprehensive plan for development and operation of a regional system of ports and related facilities.
- This will provide a comprehensive approach that will maximize the efficiency of the entire port system in Alaska's Arctic and bring projects on line in an effective manner.
- This is consistent both with the recently completed Alaska Deep Draft Arctic Port Systems Study as well as the recently introduced Federal Bill.



Arctic Port & Development Authority

Legislation:



HB 165 would create the **Alaska Arctic Port & Development Authority (AAPDA)** as a public corporation within DCCED but with its own board and separate and independent legal status.

- Alternatively AAPDA could be created as a subsidiary corporation of AIDEA, to which AIDEA can transfer assets and powers.



Arctic Port & Development Authority

Purpose of the Authority:

- In coordination with the Army Corps of Engineers, USDOT and others, **formulating and implementing a plan for a regional system of ports** (including a deep water port) and related facilities along Alaska's Arctic coast



- Acquiring means of financing for ports and related facilities
- Owning and operating ports and related facilities
- The Authority should allocate resources and services throughout the Alaska Arctic coastal region in a coherent and cost-effective manner

Arctic Port & Development Authority

Boundaries:

Arctic Alaska Coast from the Canadian Border to Attu

Inland Areas

- North of the Brooks Range
- West of Barrow



Arctic Port & Development Authority

Powers of the Authority:

- To acquire an interest in a project in the Alaska Arctic coastal region as necessary or appropriate to provide financing for the project
- To acquire, operate and manage projects in Alaska Arctic coastal region
- To straighten, deepen, and improve any watercourse as necessary and proper in the development of a port or its facilities.
- To assist private lenders to make loans to finance costs of projects
- To accept gifts, grants or loans and to enter into contracts with various entities
- To charge and collect fees

Arctic Port & Development Authority

Membership of the Authority:

Authority Board consists of 9 governor-appointed members, 4 of whom must reside in the Alaska Arctic coastal region.







Arctic Port & Development Authority

Types of Possible Projects:

- Docks, Roads, Railroads, Airports, Pipelines
- Facilities for Natural Resource:
  - Processing
  - Refinement
  - Storage
  - Distribution
- Other Facilities for:
  - Vessels
  - Power Generation
  - Seafood Processing
  - Search & Rescue









Thank You!

Representative Bob Herron
Rep.Bob.Herron@legis.state.ak.us
907.465.4942

Representative Bob Herron

Rep.Bob.Herron@akleg.gov

State Capitol • Juneau, Alaska 99801-1182
Phone: (907) 465-4942 • Fax: (907) 465-4589

House District 37
Kuskokwim Bay • Western Bristol Bay • Alaska Peninsula
Aleutian Chain • Bering Sea Islands • Bethel

Adak
Akutan
Atka
Attu Station
Bethel
Chignik
Chignik Lagoon
Chignik Lake
Clark's Point
Cold Bay
Eek
Egegik
False Pass
Goodnews Bay
Ivanof Bay
King Cove
Mekoryuk
Nelson Lagoon
Nikolski
Perryville
Pilot Point
Platinum
Port Heiden
Portage Creek
Quinhagak
Sand Point
St. George
St. Paul
Togiak
Twin Hills
Ugashik
Unalaska

SECTIONAL ANALYSIS

HB 165

ALASKA ARCTIC PORT AND DEVELOPMENT AUTHORITY

Section 24.20.201 and **Section 24.20.206** (pages 1-2) Adds the Alaska Arctic Port and Development Authority (AAPDA) to the list of entities (including AHFC, AIDEA and Alaska Aerospace Corp) that Legislative Budget and Audit Committee can audit annually and must at a minimum annually provide an operational and performance evaluation of.

Section 30.09.010 (page 3) **Creation of Authority.** Creates AAPDA as a public corporation within DCCED but with separate and independent legal status.

Section 30.09.020 (page 4) **Membership of Authority.** AAPDA Board consists of 9 governor-appointed members, 4 of whom reside in Alaska Arctic coastal region.

Section 30.09.030 Chair and vice-chair. Members elect chair and vice-chair

Section 30.09.040 Meetings, compensation, officers, and employees.

Section 30.09.050 (page 5) **Alaska Arctic Port and Development Authority revolving fund.** Creates AAPDA revolving fund consisting of appropriations made to the fund by the legislature and money or other assets transferred to the fund by the Authority. Amounts from the fund may be expended for the purposes of the Authority. The Authority may also invest amounts in the fund pursuant to 37.10.071.

Section 30.09.100 Purpose of the Authority. Purpose is to develop a comprehensive plan for a deepwater port development in the Alaska Arctic coastal region and to construct, develop, and improve deepwater ports and related infrastructure in the Alaska Arctic coast region by

- Developing a plan for a regional system of ports and related facilities
- Providing means of financing of ports and related facilities
- Owning and operating ports and related facilities

Section 30.09.120 (page 6) **Powers of the Authority** include:

- To acquire an interest in a project in the Alaska Arctic coastal region as necessary or appropriate to provide financing for the project
- To purchase or insure loans to finance the costs of construction of ports and related infrastructure in the Alaska Arctic coastal region
- To sell property owned by the Authority

- To accept gifts, grants or loans and to enter into contracts with various entities
- To acquire, operate and manage projects in Alaska Arctic coastal region
- To charge and collect fees
- To make cooperative agreements with DOTPF to acquire, equip, operate maintain, construct or install ports and related facilities
- To straighten, deepen, and improve any watercourse as necessary and proper in the development of a port or its facilities.

Section 30.09.130 (page 8) **Regulations.** Authority shall adopt regulations necessary for financing of projects.

Section 30.09.200 Purchase of project and leases. Allows the Authority flexibility in leasing, including leasing for eventual purchase and engaging two or more lessees in a single project.

Section 30.09.210 (page 9) **Finance Plan.** Details what must be included in a finance plan before the Authority approves a project. Authority must give preference to projects that don't require state financial assistance. Authority submits finance plans to the Governor and legislature before incurring debt for a project.

Section 30.09.220 Annual audit. Authority must have its financial records audited annually.

Section 30.09.230 Compliance with Executive Budget Act; authority finances.

Section 30.09.240 (page 10) **Reports and Publications.**

Section 30.09.250 (page 11) **Fees charged by the Authority; prepayments.**
A commitment fee for a loan by the Authority may not exceed 2% of the principal. The Authority may not charge for prepayment of a loan after five years from inception.

Section 30.09.260 Confidentiality of records and information.

Section 30.09.270 (page 12) **Personal liability.** Authority personnel may not be held liable for actions performed in good faith while on duty.

Section 30.09.500 Definitions. 10 definitions. Alaska Arctic coastal region is defined as area of the state north of 51 degrees North latitude and west of 156 degrees West longitude, and the area of the state east of 156 West Latitude and north of the Brooks Range. This includes Barrow, the west coast of Alaska and the islands off the west coast, and the Aleutians, including most of the southern coast of the Aleutians.

Section 36.90.300 (c)(4) (page 13) Adds AAPDA to the list of agencies defined as a "public agency" in statute.
Section 39.25.110(11) (page 14) Adds officers and employees of AAPDA to the list of employees exempt from the State Personnel Act.

Section 39.50.200(b) For abbreviation purposes, adds AAPDA to the list of agencies that "state commission or board" could refer to in statute.

01/28/14 Presentation: Arctic Policy Trends and New Developments by Institute of the North

<TARGET><BILL></BILL><SUBJECT>01-28-14 Presentation Arctic Policy Trends and New Developments by Institute of the North</SUBJECT><COMM>HEDT28</COMM></TARGET>

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, January 27, 2014 2:08 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: Jan 28, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

none

Other Information:

Presenter: Nils Andreassen, Institute of the North

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: January 22, 2014

Re: Committee Schedule for the Week Beginning January 27, 2014

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, January 28, 2014 11:15am in Room 124

+ Nils Andreassen, Institute of the North
  "Arctic Policy Trends and New Developments"

Thursday, January 30, 2014 11:15am in Room 124

+ Matt Vickers, Generating for Seven Generations, Vancouver BC
  "G7G Railway, Alaska/Canada Rail Link Update"

+ Lorraine Cordova, US Army Corps of Engineers
  "Arctic Ports"

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
+ Teleconferenced
= Bill was Previously Heard/Scheduled

Alaska State Legislature

Representative Shelley Hughes, Chair

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House Special Committee on Economic Development, Trade and Tourism

AGENDA
January 28, 2013

1. **Call to Order**

~Gavel~ The first meeting of the Economic Development, Trade and Tourism Committee of the second session of the 28th Alaska State Legislature is called to order. Welcome, everyone.

2. **Roll Call**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx)
- I would like to introduce Debbie Tillinghast, the committee recording secretary
- Info services person
- Ginger Blaisdell is my staff that will be the committee aide for EDT

3. **Mission of the Committee**

- We understand the importance of economic growth of the various sectors to the overall health and well-being of Alaska, to a prosperous Alaska.
- Hearing from private industry to better understand barriers and opportunities; and hearing from government and other entities on how some of these issues are or aren't being addressed. The goal is to determine if there is an appropriate role for the State of Alaska to play in fostering an improved open-for-business environment in Alaska.
- Our presentations are focused on investigating economic potential and opportunities. I ask that if you are aware of any industries or new products for our committee to explore that you let me know and I'll try to schedule a presentation.

4. **Protocols**
    - **Time**
        - I respect everyone's busy schedules and will begin our committee meetings on time and will work to end them on time.
        - I understand that we have competing schedules and I appreciate that you can spend as much time as possible in EDTT.
    - **Electronics**
        - I would like to allow the use of electronics in the meeting room.
        - Please turn your phones and computers to silent/no vibrate so not to disrupt others.

5. **Standard questions for all testifiers**

- "I would like all presenters and bill testifiers to be prepared to address the following questions:
    - What is the value added component of your program/legislation?
    - Are there regulation or statute changes that are required in order to make better economic improvements/enhancements in Alaska?
    - What will your program do to improve Alaska's economic future?
- Do any committee members have an additional standard question that may be answered by each presenter who comes before the committee?"

6. **Sneak Preview**

- The first few weeks of this session will focus on Arctic Policy and the opportunities Alaska may enjoy with the development of this region of our state.
- I would like to introduce Nils Andreassen, Institute of the North who will begin the session with a presentation "Alaska's Arctic Think-and-do Tank"

Before we adjourn:

- The Thursday meeting may begin slightly delayed due to the floor session. My office will notify you of any changes if we know ahead of time.

Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

Alaska State Legislature

Representative Shelley Hughes, Chair

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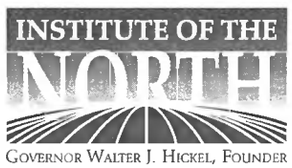
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* First Hearing in First Committee of Referral
+ Teleconferenced
= Bill was Previously Heard/Scheduled



NILS ANDREASSEN
MANAGING DIRECTOR

1675 C STREET, SUITE 106
ANCHORAGE, AK 99501

+1 (907) 786-6324 Office
+1 (907) 351-4982 Cell

nandreassen@institutenorth.org
www.institutenorth.org

Institute of the North

Alaska's Arctic Think-and-do Tank

Presentation by
Nils Andreassen Executive Director

| Responding to |

Fundamental challenges facing Alaska and Alaska's Arctic:

- Infrastructure deficit – response capacity
- Significant change taking place
- State and national environment of fiscal constraint
- Increasing international and national attention; local and regional fear
- Communications

Considerations for EDT:

- Anticipating future states – opportunities and challenges
- State's role in facilitating development

International Activity

- Arctic Council
  - AMSA Status on Implementation
  - Working Group projects
- International Maritime Organization
  - Polar Code due to be released in 2014
  - Will provide guidance for Arctic marine shipping operations
- Law of the Sea claims
- PNWER Arctic Caucus
  - Collaborative effort by Alaska, Yukon and NWT to unify priorities and leverage sub-national voices

Considerations for EDT:

- Maintain awareness of these efforts and how they impact Alaska

International Activity

Arctic Council - AMSA Status on Implementation

- Clear movement to satellite AIS reporting (EMSA - CleanSeaNet)
- Black carbon continues to be challenge
- Association of Arctic Cruise Ship Operators – nothing on this side of the Arctic
- Oil spill response barge based in Tuktoyaktuk
- Cultural and environmentally sensitive protected areas
- BarentsWatch (monitoring and information sharing system) → could be good model for Bering Strait
- Ballast water management and waste management increasingly a concern
- Arctic ERMA – NOAA efforts – possibility for collaboration?
- Hydrographic, Meteorological and Oceanographic Data

Considerations for EDT:

- AIS investment (pro)
- Tourism (con)
- Marine Protected Areas (con)
- Federal efforts (pro)

National Strategy

Advance United States Security Interests

- Evolve Arctic infrastructure and strategic capabilities
- Enhance Arctic domain awareness
- Preserve Arctic region freedom of the seas
- Provide for future U.S. energy security

Pursue Responsible Arctic Region Stewardship

- Protect the Arctic environment and conserve its natural resources
- Balance economic, environmental, & cultural values in management
- Increase understanding of Arctic - scientific research & traditional knowledge
- Chart the Arctic region

Strengthen International Cooperation

- Promote shared prosperity, protect environment, & enhance security
- Work internationally to advance U.S. interests in the Arctic region
- Accede to the United Nations Convention on the Law of the Sea
- Cooperate with other interested parties

Considerations for EDT:

- Develop partnerships that promote economic development

National Activity

- USCG Arctic Strategy
  - Improving Awareness
  - Modernizing Governance
  - Broadening Partnerships

Considerations for EDT:

- Leverage national interest
- Help Coast Guard achieve what it needs

Local Activity

- From competition to collaboration
  - Regional self-awareness of mutual benefit
- North Slope Borough, Northwest Arctic Borough and Bering Straits Energy Planning
  - Test of cooperation and collaboration
  - Needs to result in affordable energy for region
- Leadership Team and Arctic Economic Summit
- Bering Strait Communications Network
  - Newly established forum for engagement and communication
  - Update regional stakeholders and community members about Arctic issues

Considerations for EDT:

- Maintain strong relationship with local/regional efforts
- Anticipate increased locally-driven projects

Alaska Arctic Policy

- Values Community Sustainability and Thriving Cultures
- Balances Resource Development and Environmental Protection
- Ensures National, Community and Individual Security
- Incorporates Transparency and Inclusion into Decision-Making

Considerations for EDT:

- Expand thinking around “economic development” and “opportunity”

Alaska Arctic Policy

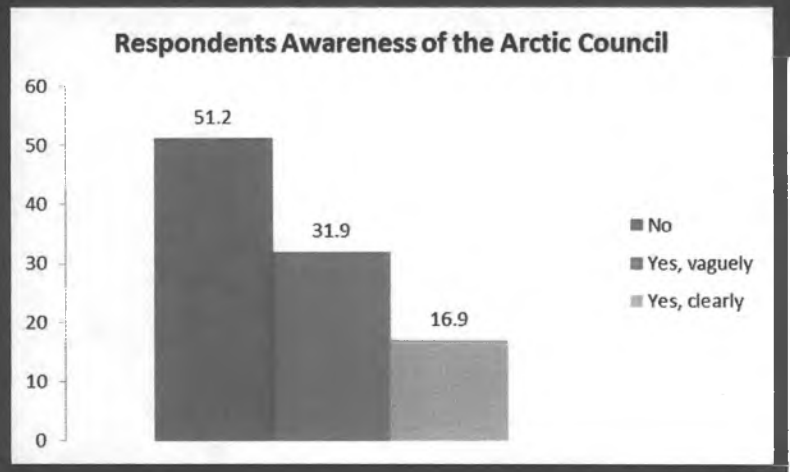
- Support Alaska Arctic Policy Commission
- Prepare Alaska for a leading role in the United States chairmanship of the Arctic Council
- Encourage State of Alaska participation in working groups
- Increase understanding of Arctic Council and PPs
- Active cross-border collaboration
- Community and regional engagement, voice

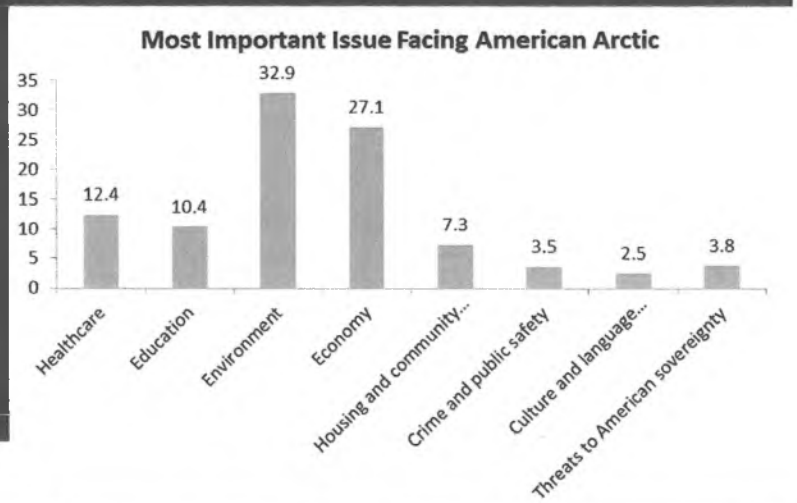


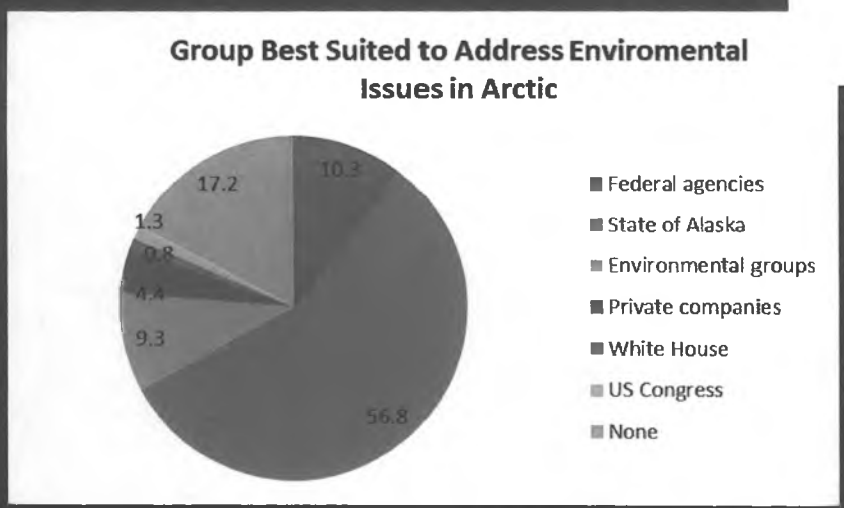
Considerations for EDT:

- Explore cross-border trade relationships

Informed by Public Opinion







Considerations for EDT:

- Develop economic justification

Energy & Transportation Infrastructure

Circumpolar Policy Tours
- Norway and Iceland

Arctic Maritime and Aviation Transportation Infrastructure Initiative
- An Arctic Council SDWG project
- Inventory of ports and airports around the Arctic

Arctic Energy Summit
- Akureyri, Iceland
- Expert presentations
- Best practices
- Latest technology
- Sustainable development



Fundamental Lessons for Alaska, from Iceland and Norway

Iceland - *Sacrifice in the short-term for long-term prosperity*

1. Pick a resource
2. Develop comprehensive plan
3. Own the infrastructure
4. Export value-added product

Norway - *Respond to complexity with sophistication*

1. Export non-renewable resource, develop renewables for domestic use
2. Co-invest in production and infrastructure, sharing risk and reward
3. Build regulatory capacity for effective and efficient development of resources

Arctic Energy Summit

Richness

+

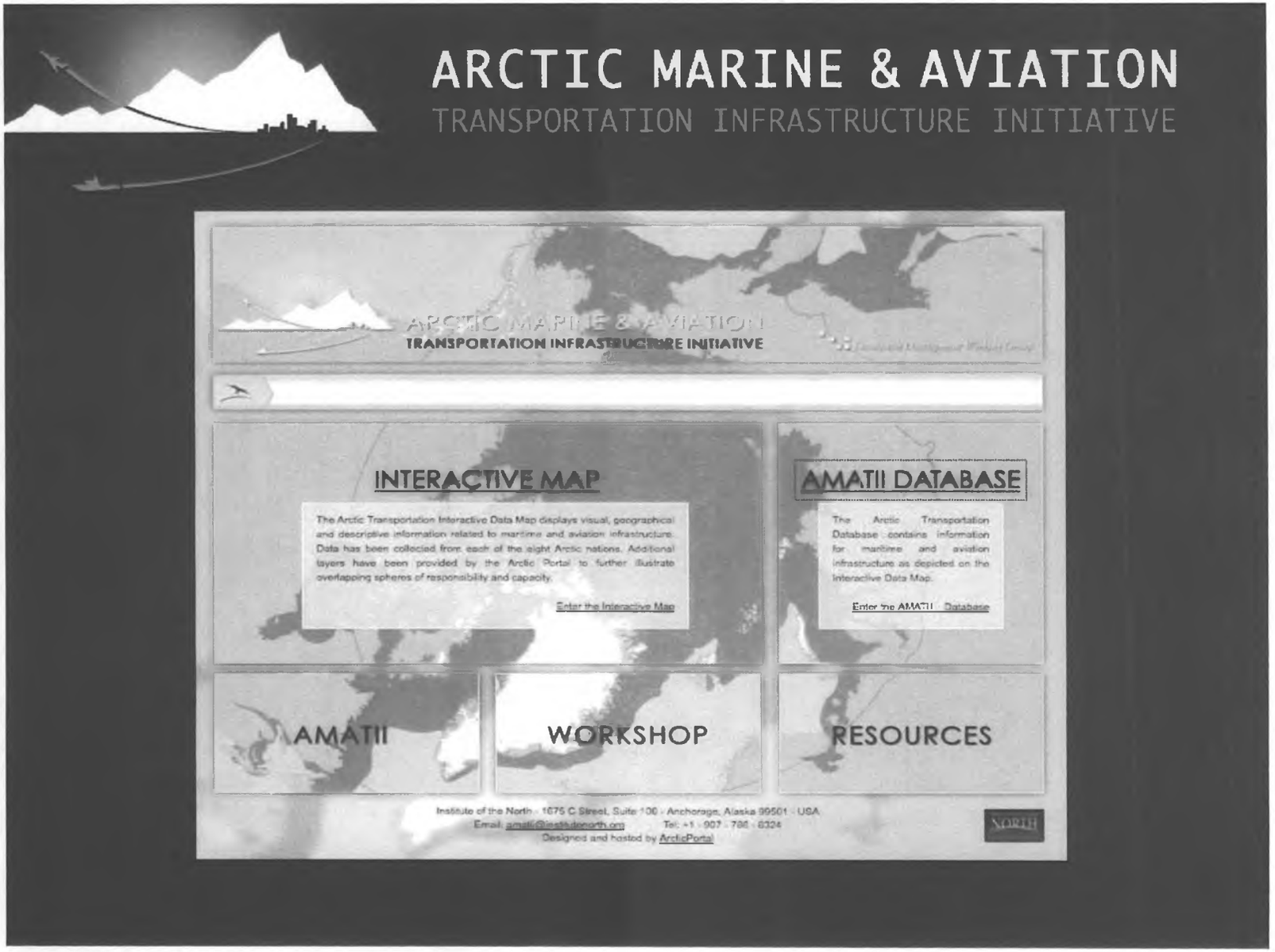
Responsibility

= Resilience

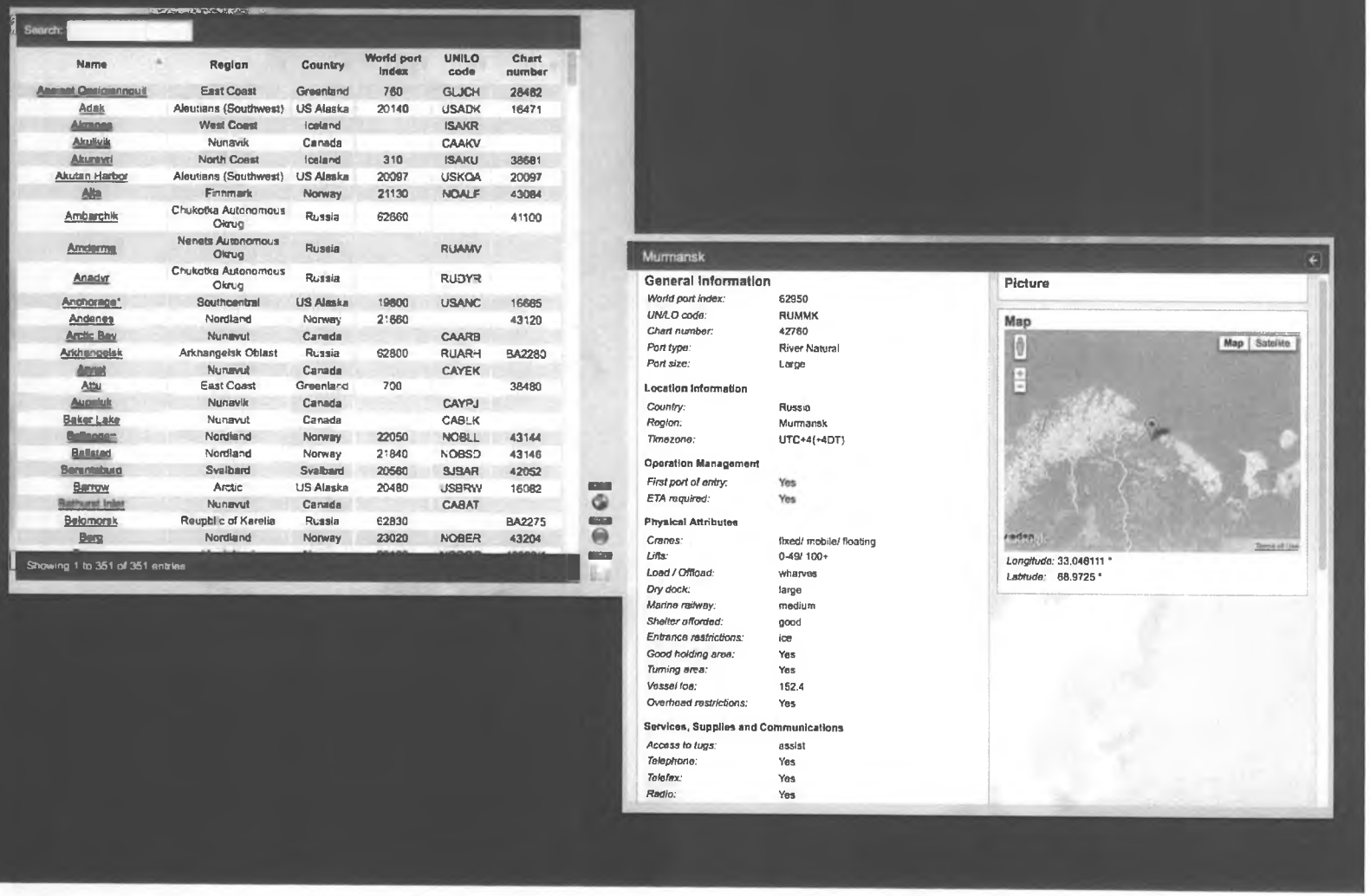


Considerations for EDT:

- Invest in infrastructure and people
- Value-added opportunities


ARCTIC MARINE & AVIATION
TRANSPORTATION INFRASTRUCTURE INITIATIVE
INTERACTIVE MAP
The Arctic Transportation Interactive Data Map displays visual, geographical and descriptive information related to maritime and aviation infrastructure. Data has been collected from each of the eight Arctic nations. Additional layers have been provided by the Arctic Portal to further illustrate overlapping spheres of responsibility and capacity.
Enter the Interactive Map
AMATII DATABASE
The Arctic Transportation Database contains information for maritime and aviation infrastructure as depicted on the Interactive Data Map.
Enter the AMATII Database
AMATII
WORKSHOP
RESOURCES
Institute of the North - 1075 C Street, Suite 100 - Anchorage, Alaska 99501 - USA
Email: amatii@institutenorth.org Tel: +1 - 907 - 786 - 6324
Designed and hosted by ArcticPortal

Opening maritime infrastructure



Search:

Name	Region	Country	World port index	UNILO code	Chart number
Aasiaat Qasigiannguit	East Coast	Greenland	760	GLJCH	28462
Adak	Aleutians (Southwest)	US Alaska	20140	USADK	16471
Akranes	West Coast	Iceland		ISAKR	
Akulivik	Nunavik	Canada		CAAKV	
Akureyri	North Coast	Iceland	310	ISAKU	38681
Akutan Harbor	Aleutians (Southwest)	US Alaska	20097	USKOA	20097
Alta	Finnmark	Norway	21130	NOALF	43084
Ambarchik	Chukotka Autonomous Okrug	Russia	62660		41100
Amderma	Nenets Autonomous Okrug	Russia		RUAMV	
Anadyr	Chukotka Autonomous Okrug	Russia		RUDYR	
Anchorage*	Southcentral	US Alaska	19800	USANC	16665
Andenes	Nordland	Norway	21660		43120
Arctic Bay	Nunavut	Canada		CAARB	
Arkhangelsk	Arkhangelsk Oblast	Russia	62800	RUARH	BA2280
Arviat	Nunavut	Canada		CAYEK	
Attu	East Coast	Greenland	700		38480
Aupaluk	Nunavik	Canada		CAYPJ	
Baker Lake	Nunavut	Canada		CABLK	
Ballangen	Nordland	Norway	22050	NOBLL	43144
Ballstad	Nordland	Norway	21840	NOBSD	43146
Barentsburg	Svalbard	Svalbard	20560	SJBAR	42052
Barrow	Arctic	US Alaska	20480	USBRW	16082
Bathurst Inlet	Nunavut	Canada		CABAT	
Belomorsk	Reupblic of Karelia	Russia	62830		BA2275
Berg	Nordland	Norway	23020	NOBER	43204

Showing 1 to 351 of 351 entries

Murmansk

General Information

World port index:	62950
UN/LO code:	RUMMK
Chart number:	4Z760
Port type:	River Natural
Port size:	Large

Location Information

Country:	Russia
Region:	Murmansk
Timezone:	UTC+4(+4DT)

Operation Management

First port of entry:	Yes
ETA required:	Yes

Physical Attributes

Cranes:	fixed/ mobile/ floating
Lifts:	0-49/ 100+
Load / Offload:	wharves
Dry dock:	large
Marine railway:	medium
Shelter afforded:	good
Entrance restrictions:	ice
Good holding area:	Yes
Turning area:	Yes
Vessel loa:	152.4
Overhead restrictions:	Yes

Services, Supplies and Communications

Access to tugs:	assist
Telephone:	Yes
Telefax:	Yes
Radio:	Yes

Picture

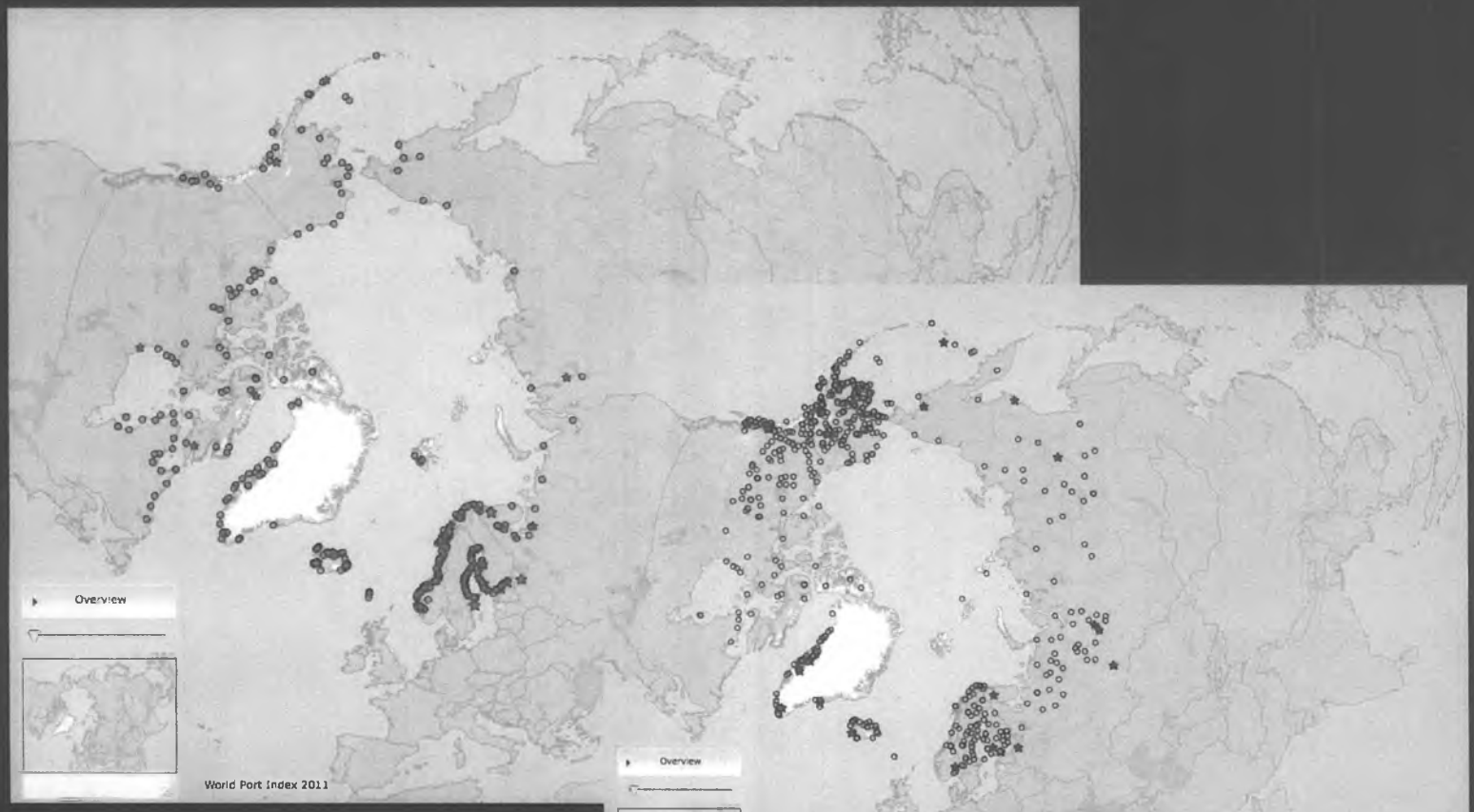
Map

Map Satellite

Longitude: 33.046111 °

Latitude: 68.9725 °

Map of Arctic infrastructure



Considerations for EDT:

- Response capacity

Next steps

Economic Development and Trade Agenda in the Arctic

- Strengthening Response Capacity
- Future Careers - Workforce Development
- Review LOST, Polar Code, and Jones Act
- Drive Regulatory Certainty
- Identify Competitive Advantage

Upcoming Events - 2014

- AAPC outreach and public testimony
- Northern Regions Mining Summit – Vancouver, B.C.
- Promise of the Arctic – Seattle
- Week of the Arctic
- Regional strategic planning within Alaska's Arctic
- Oil Spill Response Communications

Future Workforce

A draft list of potential skills, jobs and training needs exist:

- Ice Navigation Training & Watchkeeping
- Shipboard Engineering/Repair/Maintenance
- Oil spill prevention; Oil Spill Recovery/Response Operations
- Hydrography/Charting
- Ports Engineering/Maintenance
- SAR/Emergency Response
- Monitoring/Surveillance/Data Handling
- Observing Systems; Marine Mammal Observers
- Naval Architecture
- Environmental Management
- Transportation Systems Planning
- Law Enforcement

Thank you!

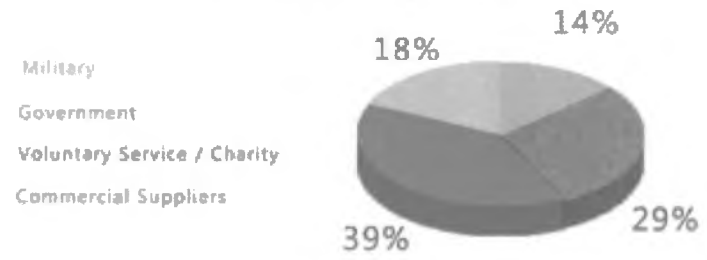
Nils Andreassen
Institute of the North
1675 C Street, Suite 106
Anchorage, AK 99501
Phone: (907) 786-6324 or cell: (907) 351-4982

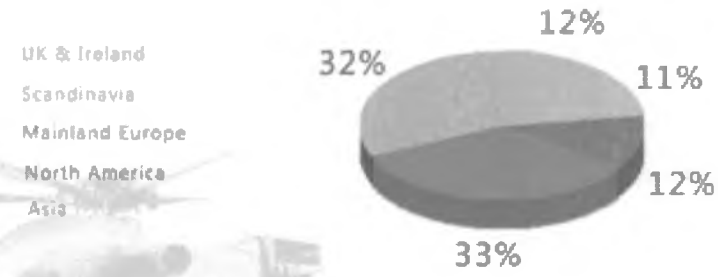
Email: nandreassen@institutenorth.org
Website: www.institutenorth.org
Twitter: @ionorth
Facebook: www.facebook.com/InstituteNorth

SEARCH + RESCUE EUROPE

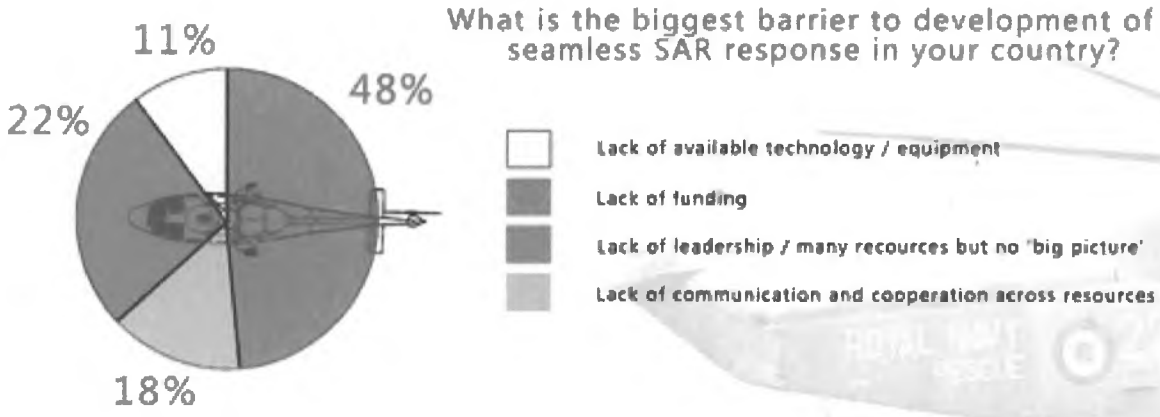
The Search and Rescue world has evolved over the past year. Under deep consideration within Europe and much of the rest of the world are the acquisition of a number of innovative life-saving assets, the standardisation of training and the opportunities to enhance multinational and multi-agency partnerships. Defence IQ surveyed the international SAR community, ahead of the Search and Rescue Europe 2014 conference, to find out what is at the forefront of the minds of operators and solution providers working in this field...

About our respondees

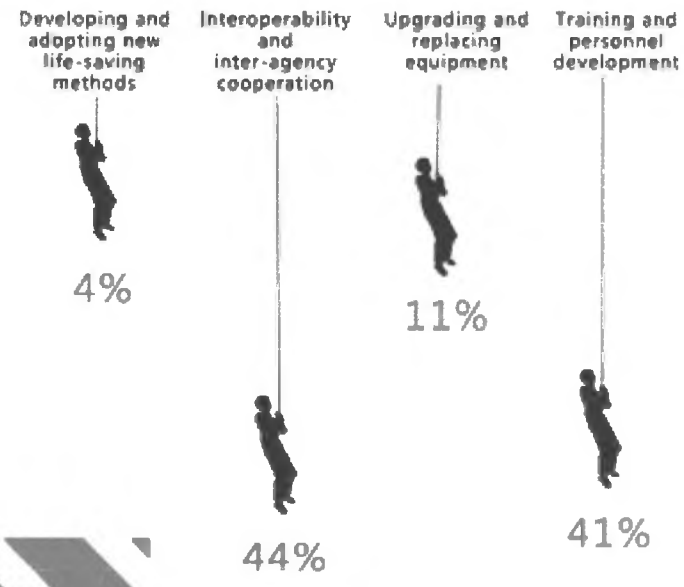




What is the biggest barrier to development of a seamless SAR response in your country?



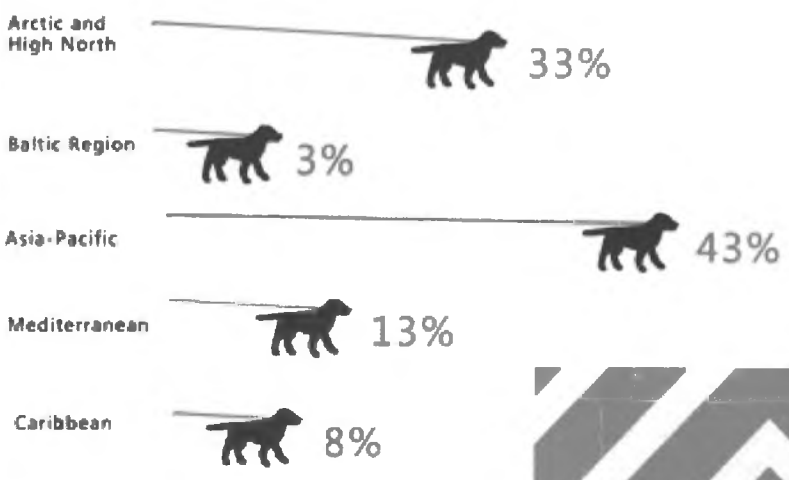
What are your most pressing concerns for 2014?



180

Volunteers on call with the German Maritime SAR Service, alongside 180 full time employees, 20 rescue cruisers and 40 lifeboats operating across 54 stations in the North Sea, Baltic Sea, mainland and surrounding islands.

Of which region of the world would you like to gain a better SAR understanding?



56

The average number of quarterly maritime callouts for UK military Search and Rescue Units over the past five years

98

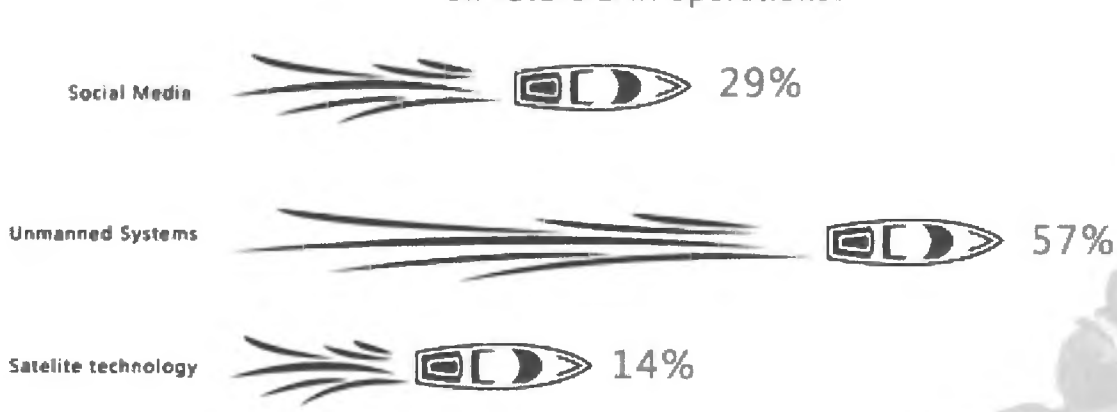
Percentage of Germany's 90,000 firefighters comprised of volunteers. Portugal's percentage is 80.

NOTICE

90

Number of minutes between a callout and and an SRU being at the scene of an incident in 90 per cent of cases, as targeted by the Swedish Maritime Administration

Which of the following is likely to have the biggest impact on future SAR operations?



Want to learn more?

Better integration is the key to more effective SAR operations. In 2014, Search and Rescue Europe brings together leading SAR practitioners to discuss how we can move towards better coordination between different SAR agencies.

Search and Rescue Europe
07-09 April, 2014
Radisson Blu Scandinavia Hotel
Copenhagen, Denmark

www.SEARCHANDRESCUEEUROPE.COM
enquire@defenceiq.com
+44 (0) 20 7368 9737

Defence iQ
a division of IQPC

Sources: Defence Statistics Search And Rescue [dasa.mod.uk]; Luke Gribbon, RUSI [rusi.org] (June 2013); German Maritime SAR Service [seenotretter.de]; Sjofartsverket.se. Data intended for research purposes only and is subject to change. Defence IQ is not responsible for the use of this information.

01/30/14 Update: Alaska State Rail Plan, Haines Railroad Study & 7G7, and Army Corps of Engineers Update on Arctic Ports (heard by HEDT members in HTRA)

<TARGET><BILL></BILL><SUBJECT>01-30-14 Update Alaska State Rail Plan, Haines Railroad Study and 7G7, and Army Corps of Engineers Update on Arctic Ports (heard by HEDT members in HTRA)</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: January 29, 2014

Re: Committee Schedule for the Week Beginning February 3, 2014

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, February 4, 2014 11:15am in Room 124
Joint hearing with Senate Special Committee on World Trade – Senator Gary Stevens, Chair
+ Representative Bob Herron (D-Bethel)
+ Senator Lesil McGuire (R-Anchorage)
"Alaska Arctic Policy Commission"

Thursday, February 6, 2014 11:15am in Room 124
+ Greg Wolf, Executive Director of the World Trade Center Alaska
"Three Rights - Trends Driving Alaska's Export Success"

Please feel free to contact the EDT committee aide, Ginger Blaisdell at 465-5265 with questions.

* First Hearing in First Committee of Referral
+ Teleconferenced
= Bill was Previously Heard/Scheduled

JANUARY 30, 2014 –

EDT Meeting
cancelled

Members attended
(H) Transportation
@ 1:00pm



ALASKA DEEP-DRAFT ARCTIC PORT SYSTEM



Presented to Arctic Speaker Series

15 Jan 2014

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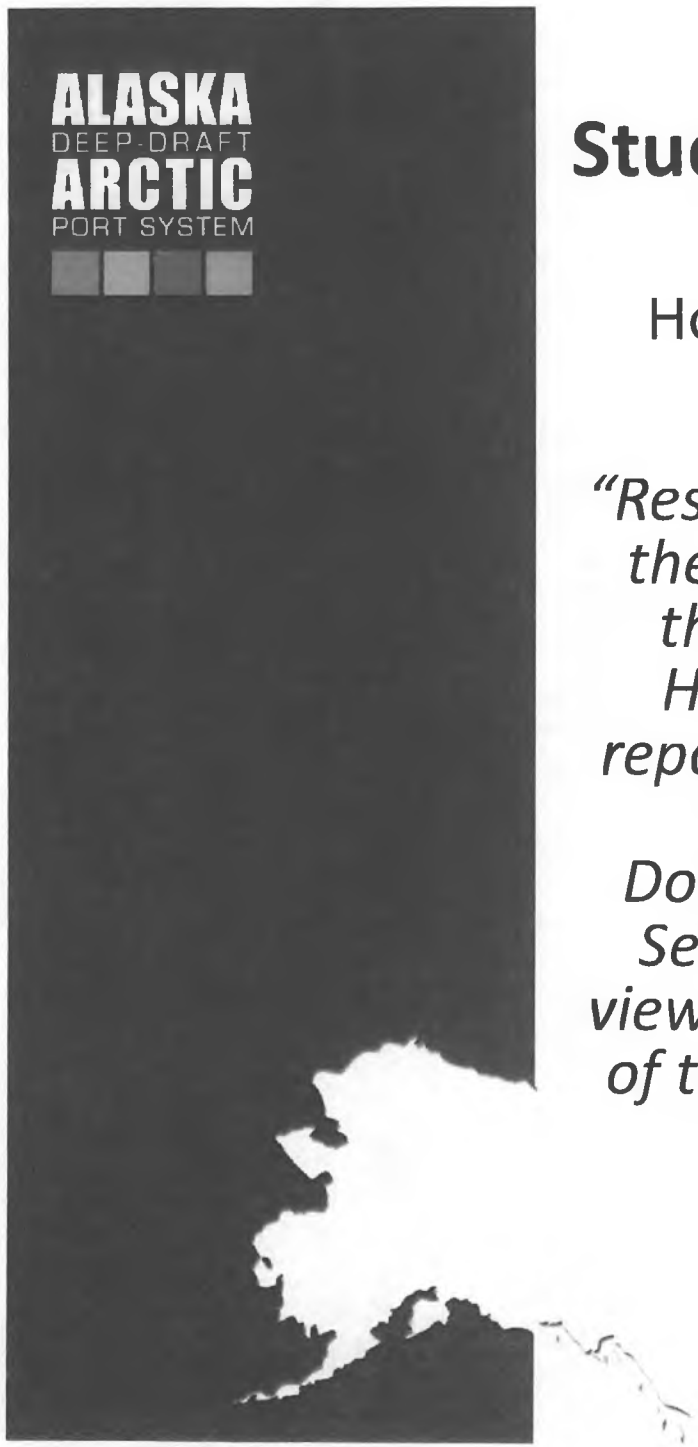


Project Need

- Large vessel traffic is increasing and more than 60% of these vessels are foreign flagged.
- Greater traffic heightens risk of incidents, accidents, and potential threats to subsistence and national sovereignty.
- Emergency response can be many days travel away.
- Community resupply costs are high.
- State policy calls for increased development of mineral, oil and gas resources in the Arctic.
- Increased national concern for energy sufficiency.



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Study Authority

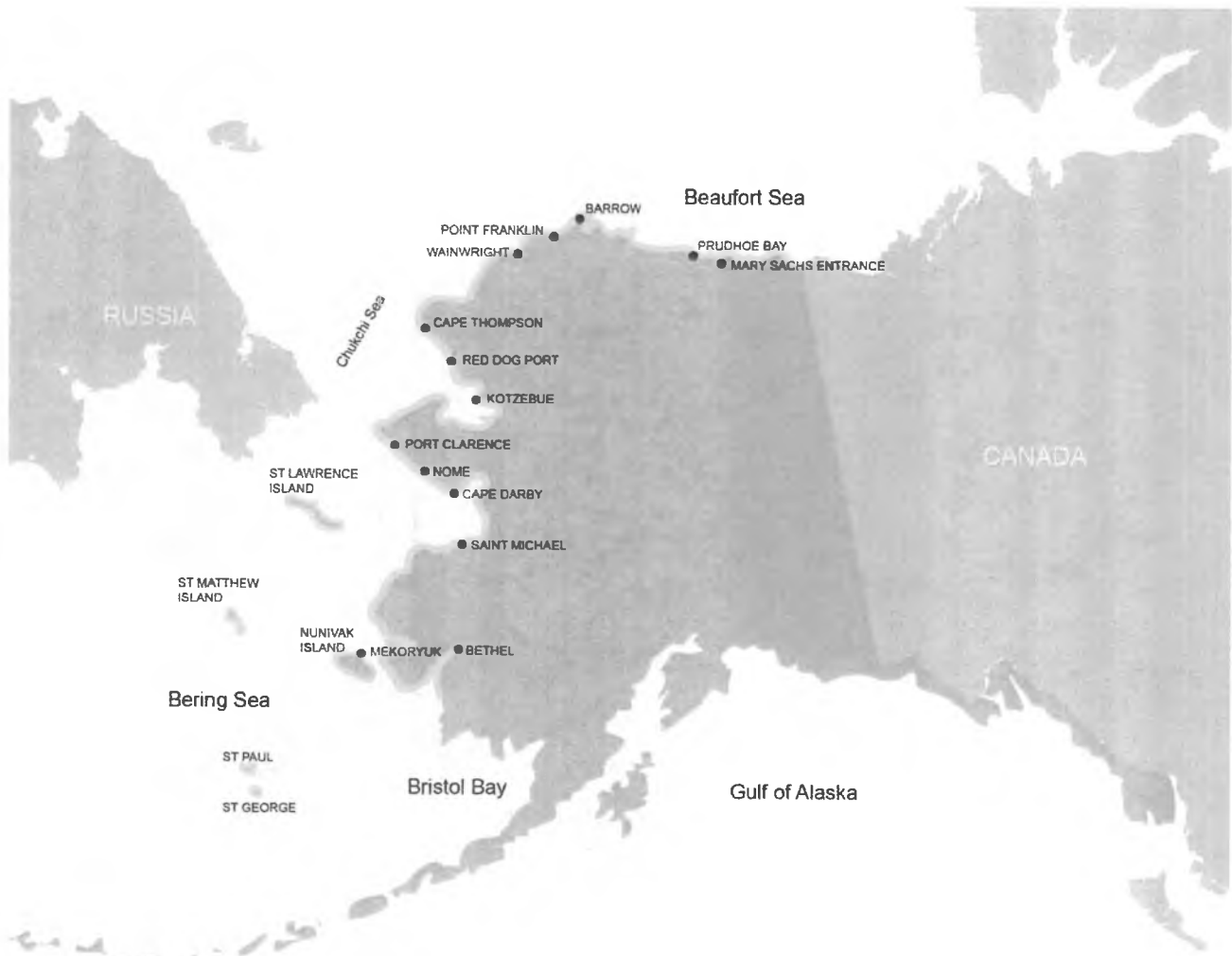
House Public Works Committee Resolution dated 2 December, 1970 states:

"Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Rivers and Harbors in Alaska, published as House Document Numbered 414, 83rd Congress, 2nd Session; and other pertinent reports, with a view to determining whether any modifications of the recommendations contained herein are advisable at the present time."

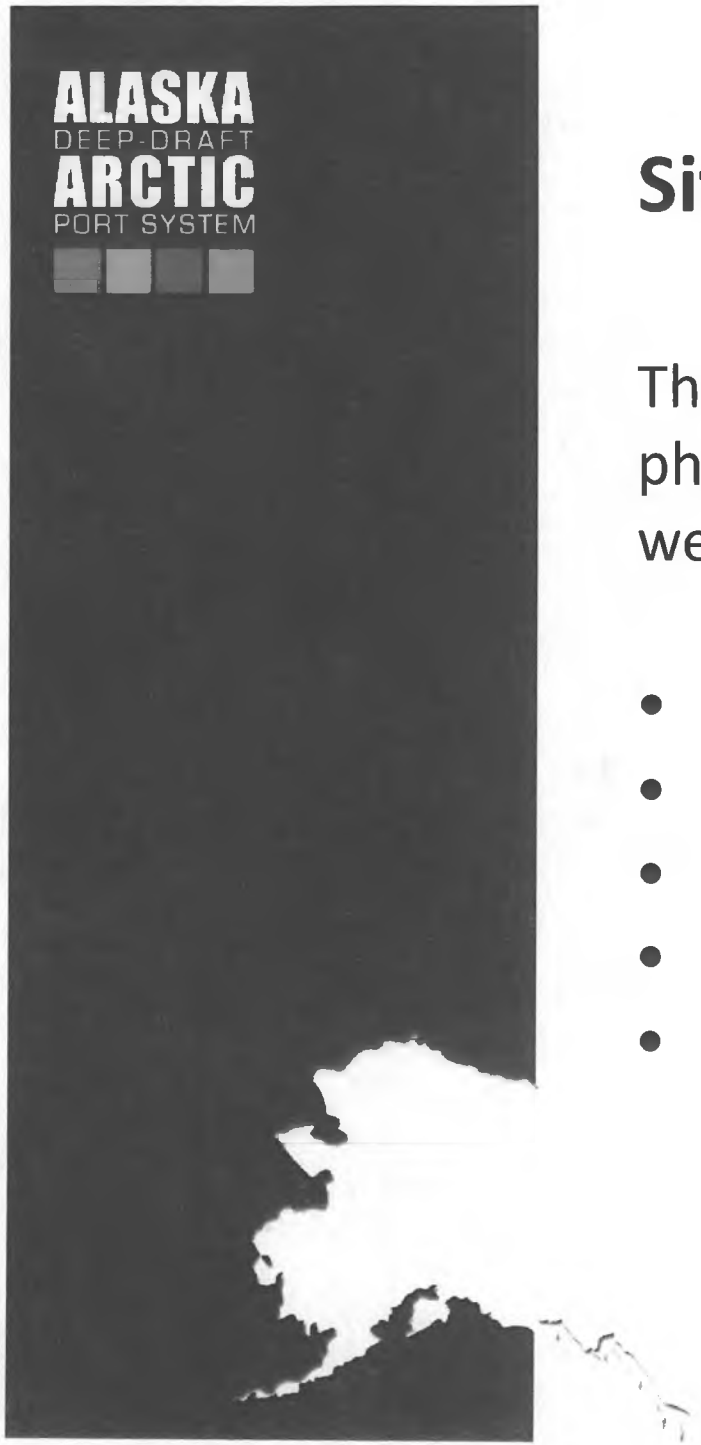
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Study Area

The greatest need for Arctic marine infrastructure is the area from Bethel west and north and then east to the Canadian border.



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Site Selection Criteria

The primary criteria for evaluation of each site's physical suitability as a deep-draft Arctic port were:

- Ports Proximity to Mission(s)
- Intermodal Connections
- Upland Support
- Natural Water Depth
- Navigation Accessibility

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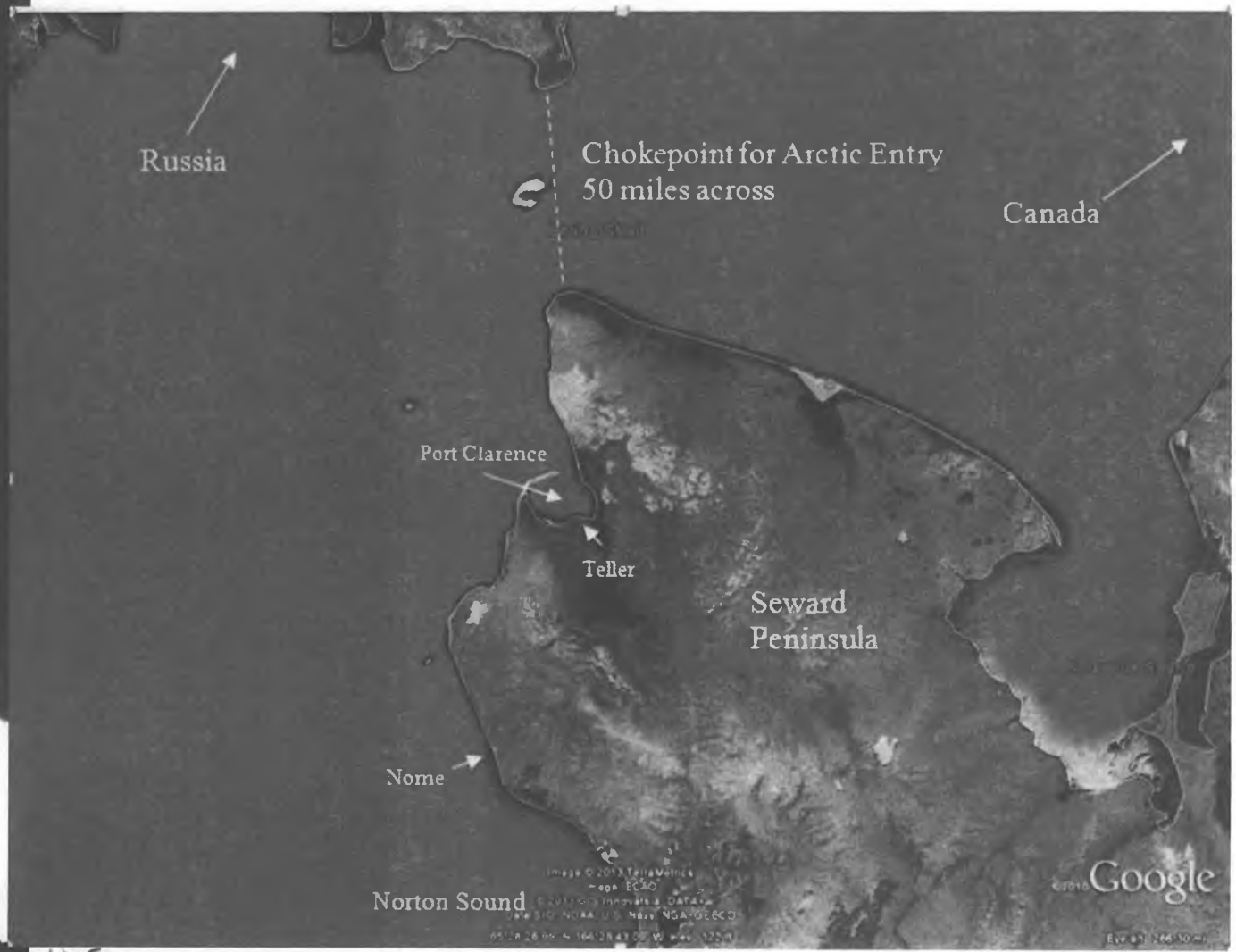


Site Shortlist

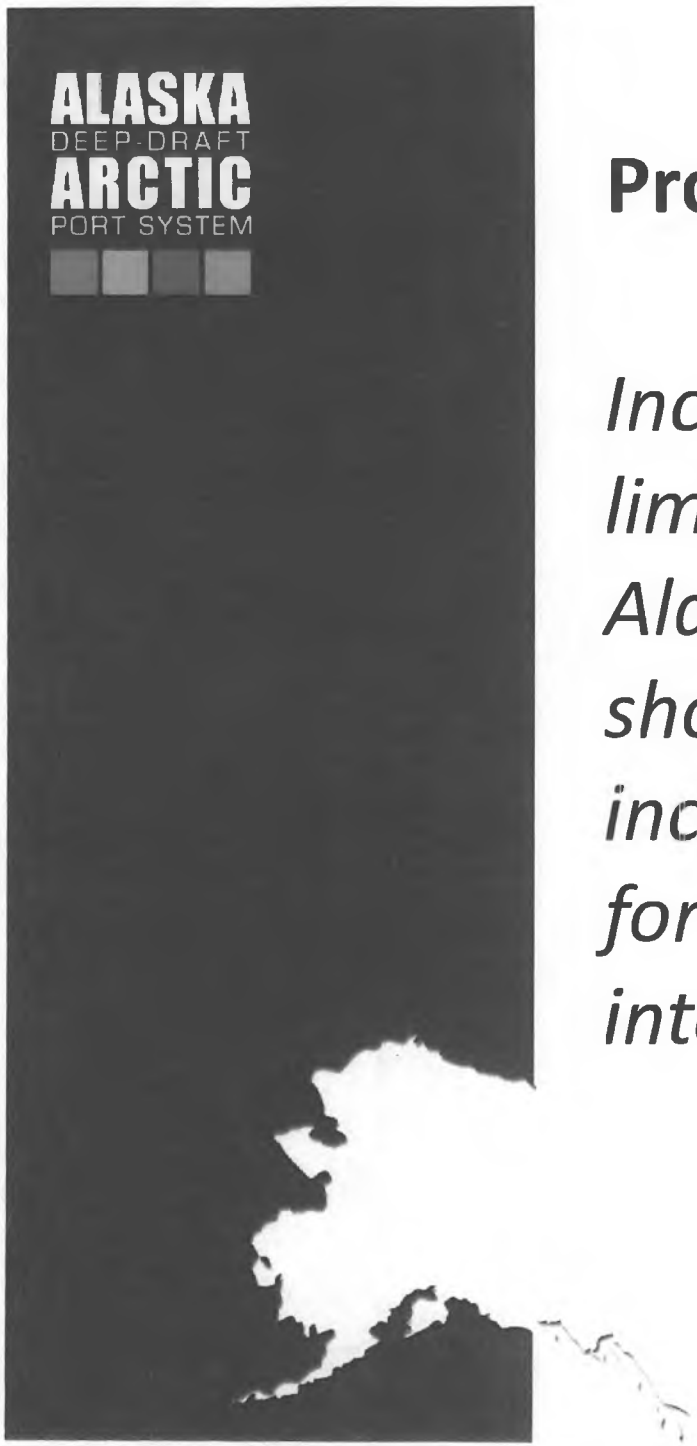
- All sites, all purposes, all criteria, equal weights:
  - Nome, Port Clarence (Teller), Cape Darby
- Oil and Gas sites – water depth limited to minus 35-feet
  - Nome, Port Clarence (Teller), Barrow
- Mining Sites – water depth limited to minus 45-feet
  - Nome, Cape Darby, Port Clarence (Teller)

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Study Area



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Problem Statement

Increased vessel traffic coupled with limited marine infrastructure along Alaska's Western and Northern shores poses risks for accidents and incidents, increases response times for Search and Rescue, and requires international coordination.

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Opportunities

- Develop local and regional economies (i.e. resource extraction, tourism, research)
- Decrease the cost to exist in the Arctic region
- Improve cooperation and sharing between Nome, Port Clarence, and Teller (and possibly Brevig Mission)
- Provide protected moorage to support offshore oil and gas endeavors, fishing fleet, and resource extraction vessels



Opportunities Cont'd

- Provide vessel repair and maintenance support
- Improve international relationships
- Increase U.S. exports
- Optimize economic benefits while preserving natural resources
- Raise awareness of U.S. as an Arctic Nation
- Provide upland support to vessels operating in the region (i.e. fuel, water, electricity, food, medical, storage facilities, laydown/staging area for resource extraction)

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Initial Array of Alternatives

Alternative Number	Alternative Name
1	No Action
2	Cape Riley alone
3	Point Spencer alone
4	Nome alone
5	Point Spencer/Cape Riley
6	Nome/Point Spencer
7	Nome/Point Spencer/Cape Riley
8	Nome/Cape Riley

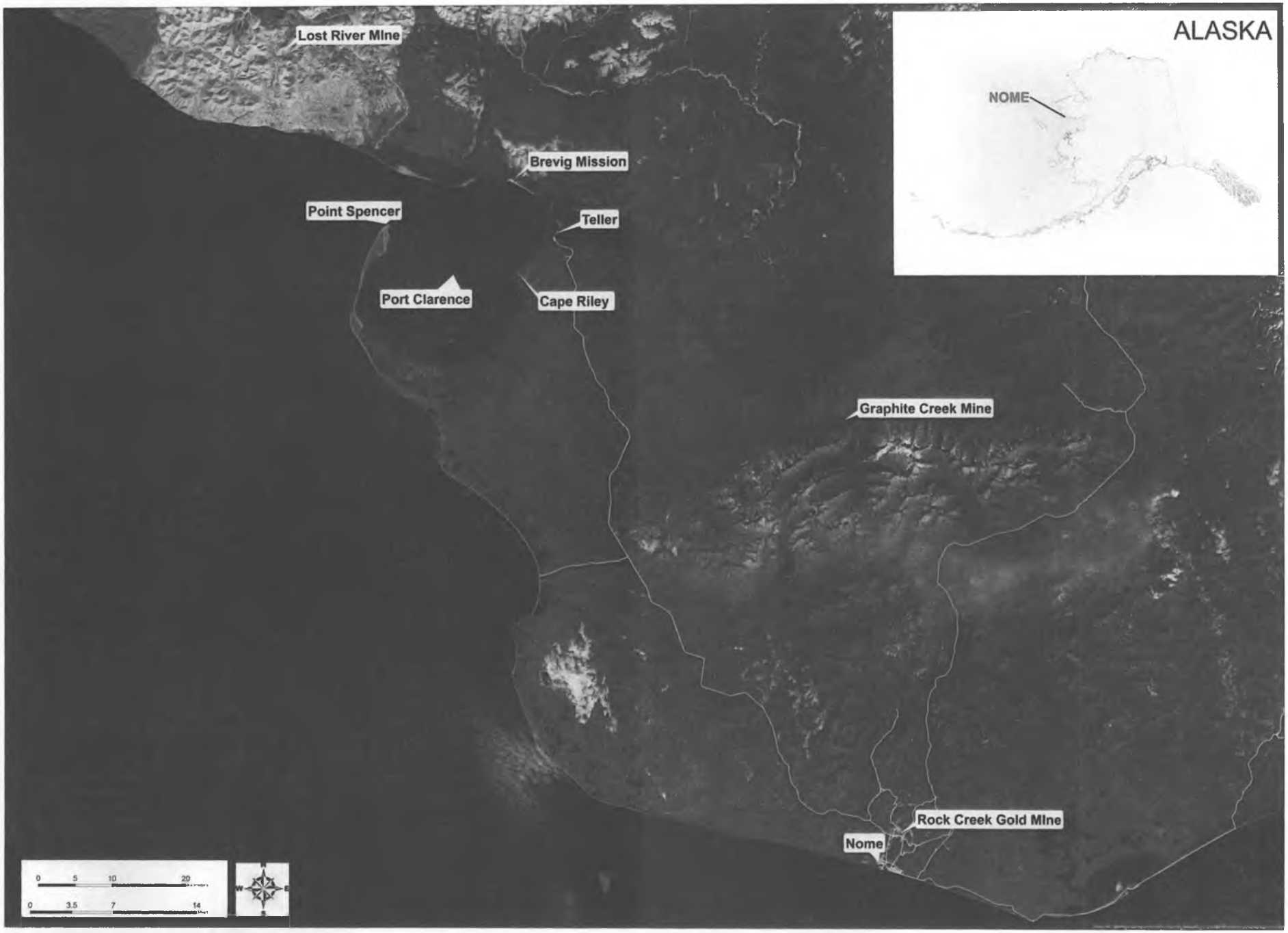


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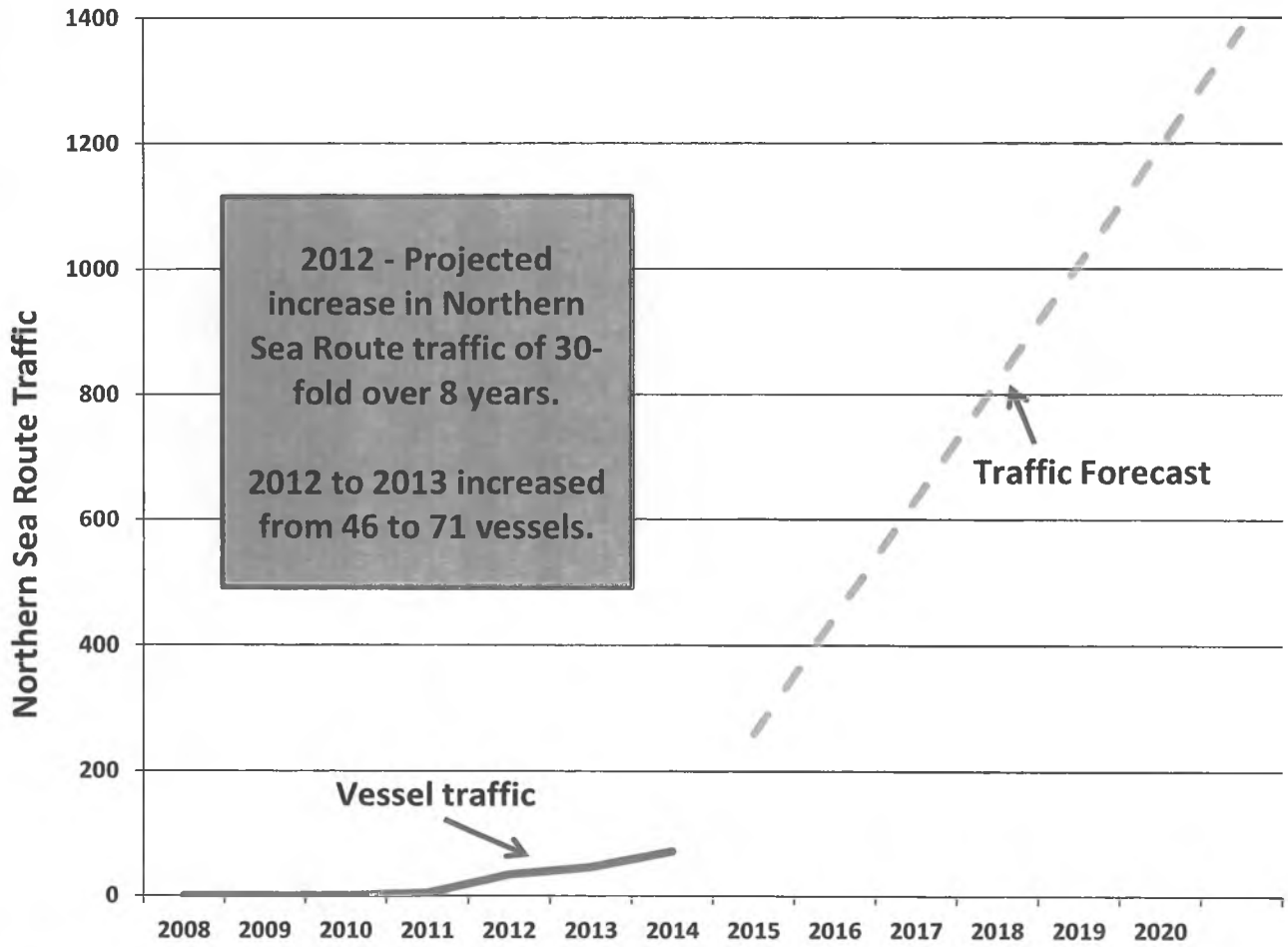
Screening Alternatives

- Three geographic sites:
  - Nome
  - Point Spencer
  - Cape Riley


Lost River Mine
Brevig Mission
Point Spencer
Teller
Port Clarence
Cape Riley
Graphite Creek Mine
Rock Creek Gold Mine
Nome
ALASKA
NOME
0 5 10 20
0 3.5 7 14
N
W
E
S

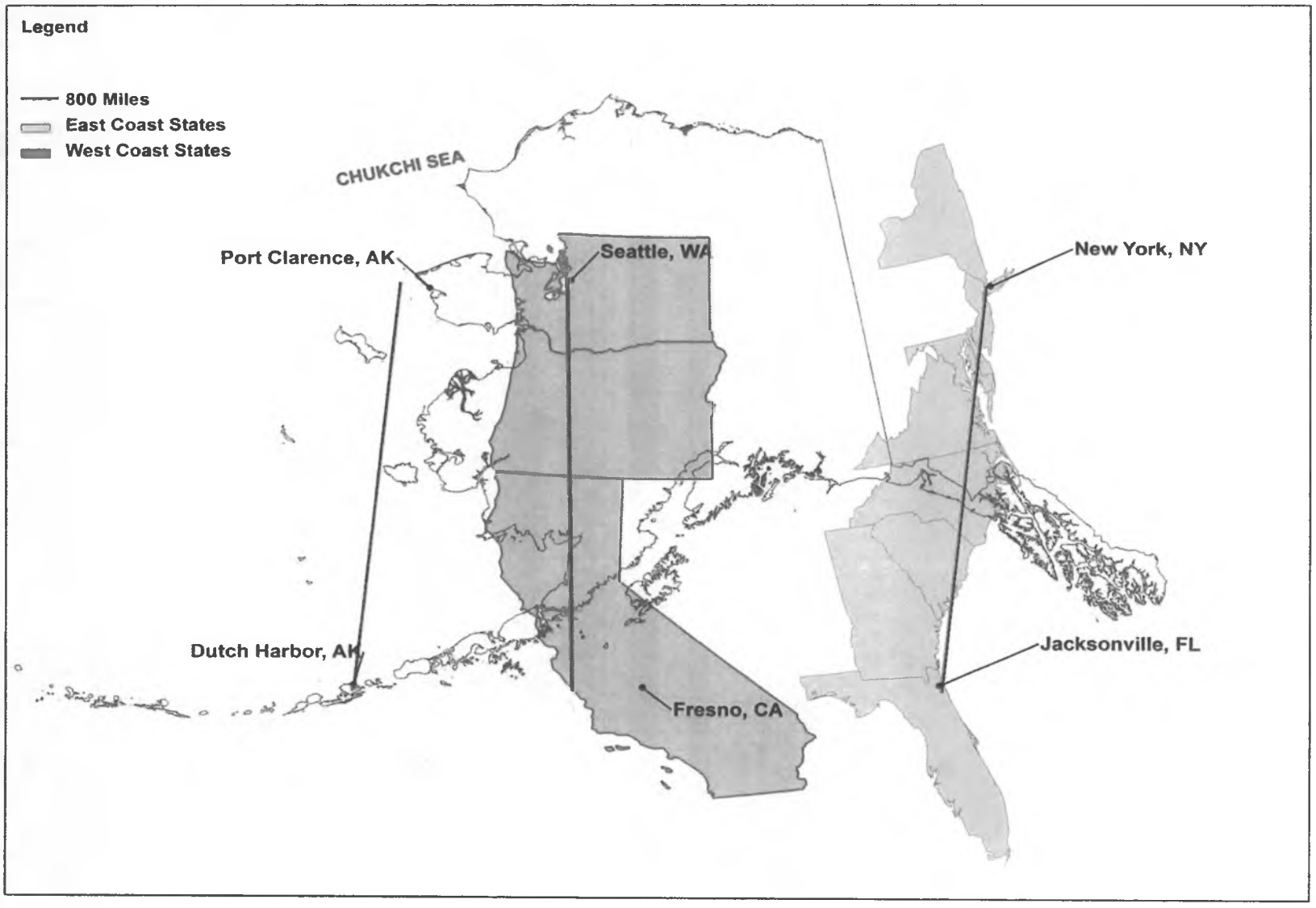
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Arctic Traffic Trends

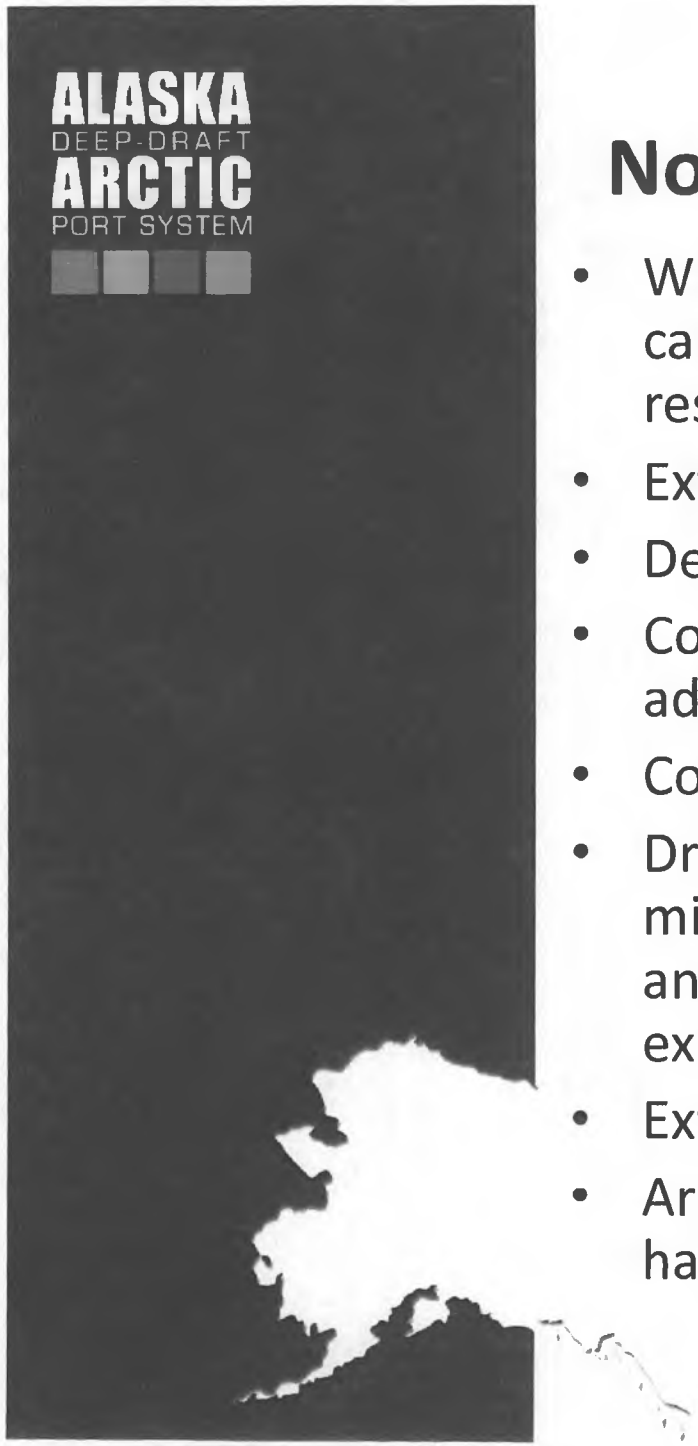


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What does 800 miles look like?

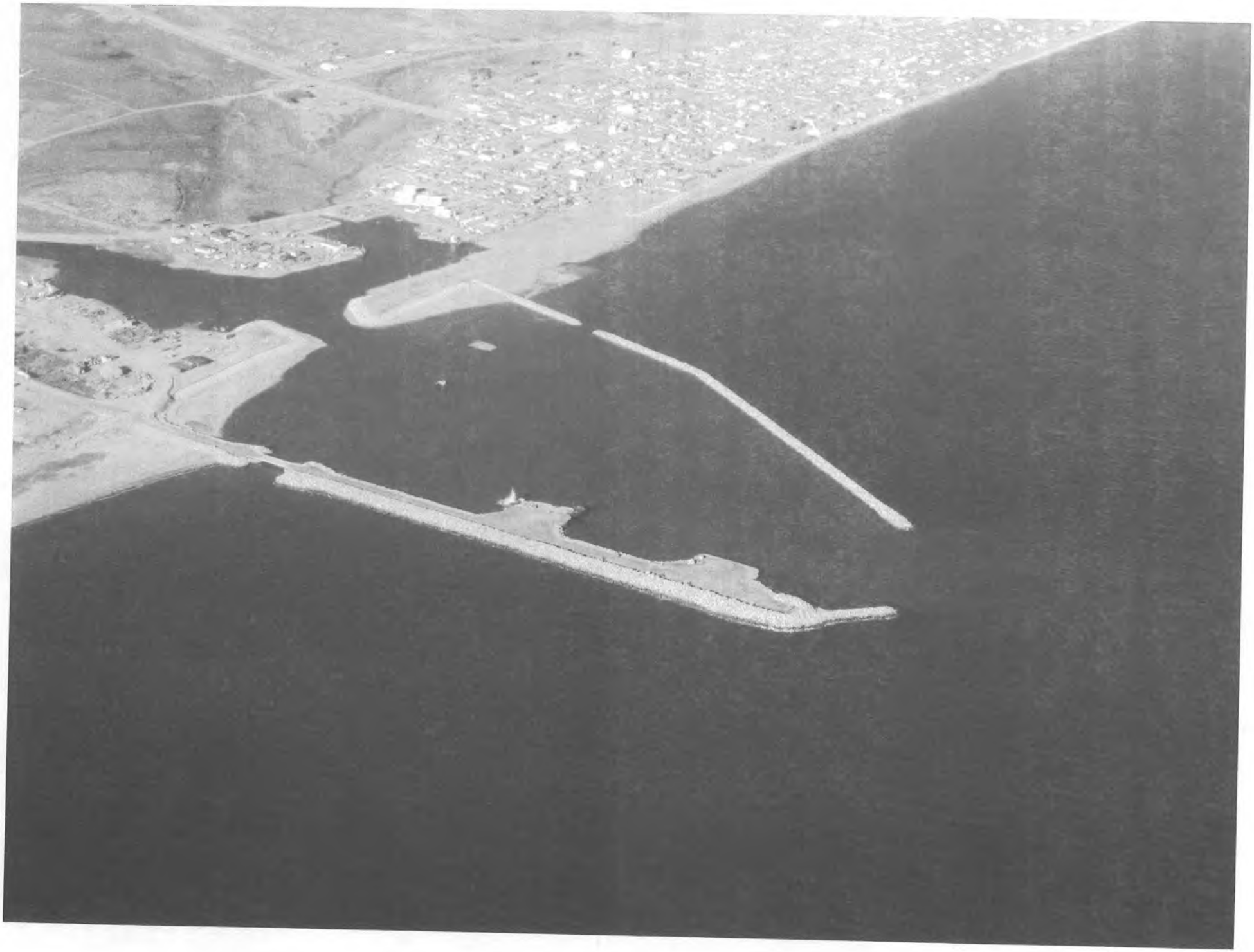


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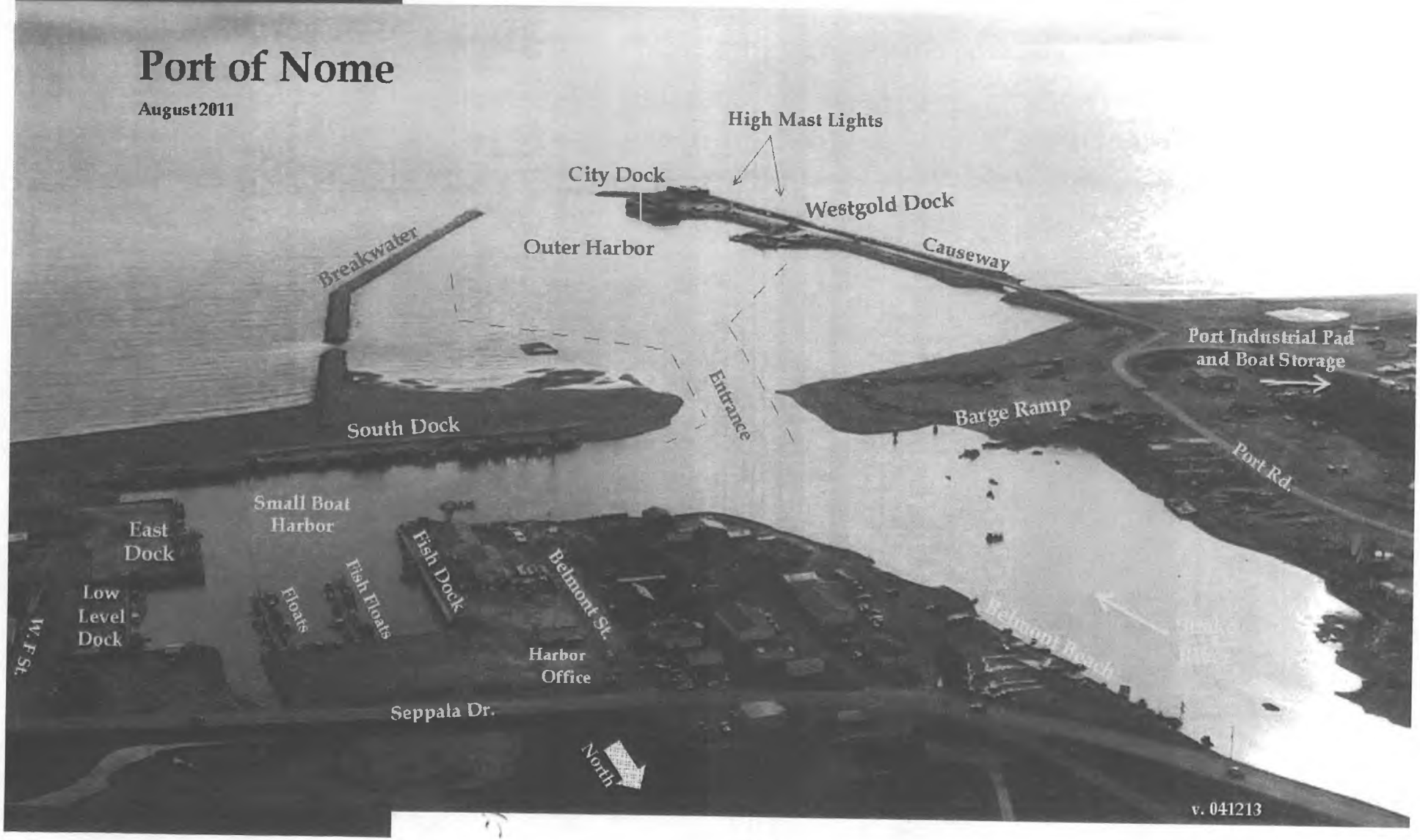
Nome proposal

- Will accommodate line haul fuel barge, ice breakers, cargo barges, tanker, Coast Guard cutters, NOAA, research vessels, landing craft, tugs
- Extend existing causeway 2,150 feet
- Demolish existing spur breakwater
- Construct 600-foot concrete caisson dock, (maybe an additional 400-foot caisson dock)
- Connect City Dock and West Gold Docks
- Dredge outer channel and maneuvering area to minus 35-feet, dredge between existing causeway and main breakwater to minus 22-feet. Disposal in existing offshore disposal area.
- Extend utilities to caisson dock
- Armor stone on seaward face is 22-ton average and harborside face is 8-ton average

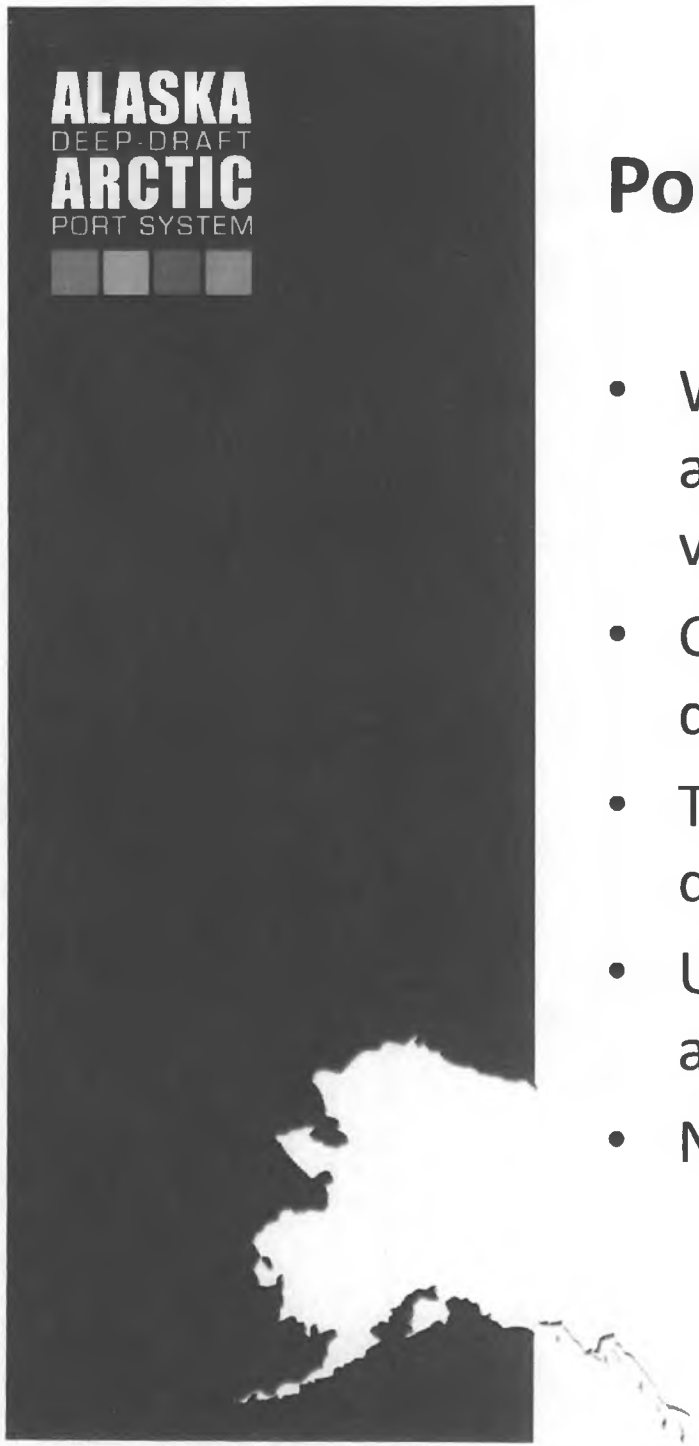


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Port of Nome



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Point Spencer proposal

- Will accommodate line-haul barge, tug assist, ice breakers, oil and gas support vessels, heavy lift barge
- Construct 200, 600, or 1,000-foot caisson dock
- Turning basin and entrance channel dredged to minus 35-feet
- Upland facilities include fuel tanks and 13-acre laydown area
- No connecting road to Nome/Teller Hwy.

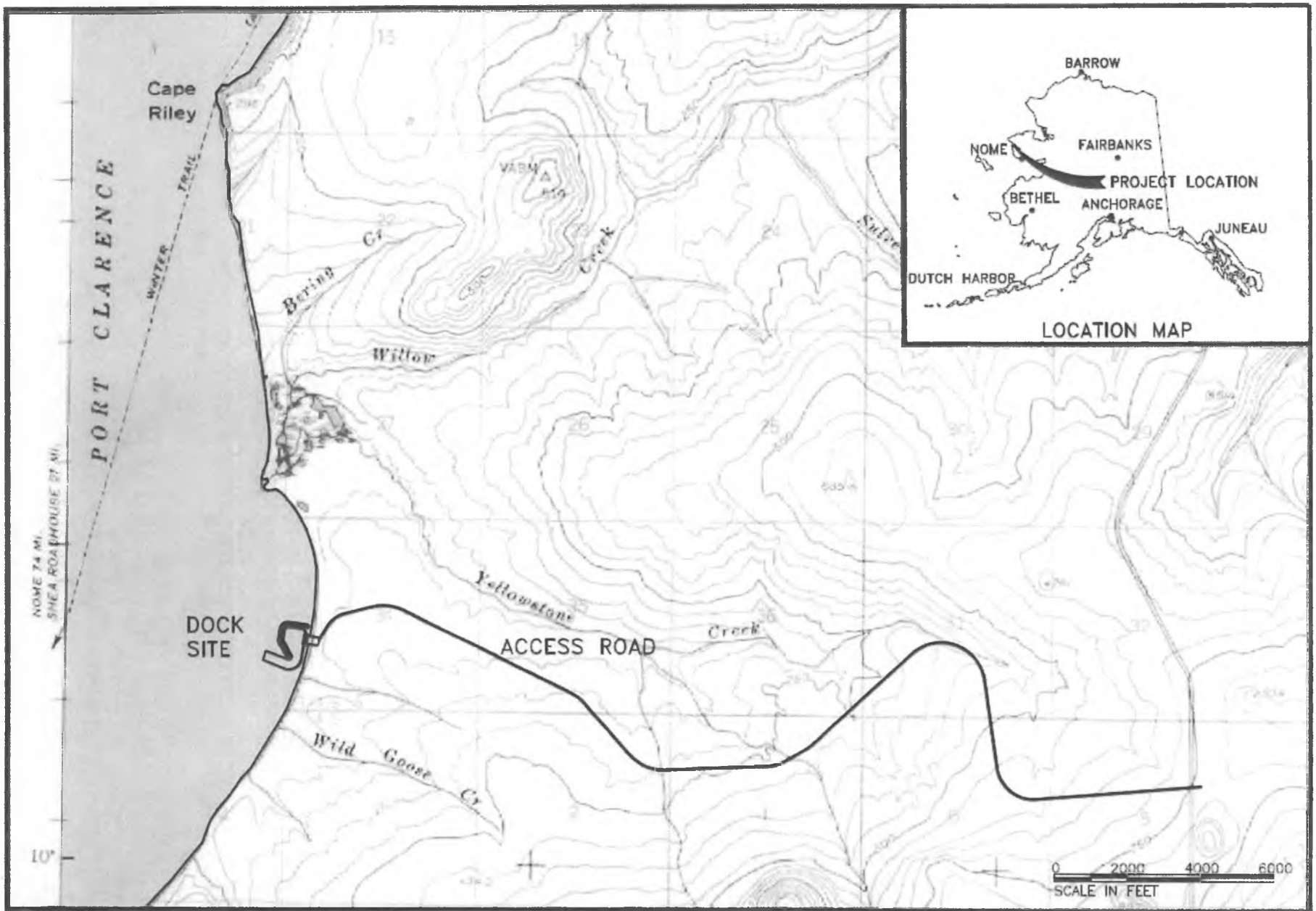


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Cape Riley proposal

- Can accommodate shallow draft mineral extraction vessels, lightering vessels
- 250-foot by 40-foot concrete caisson dock
- 200-foot by 360-foot staging area
- 550-foot turning basin with minus 12.5-foot depth
- 305-foot entrance channel with minus 12.5-foot depth
- Armor stone weighing 3 to 6 tons
- 5.5 mile road connecting to Nome/Teller Hwy.



ALASKA DISTRICT
CORPS OF ENGINEERS
CIVIL WORKS BRANCH

CAPE RILEY SHALLOW-DRAFT MINERAL EXTRACTION DOCK
ARCTIC DEEP DRAFT FEASIBILITY STUDY

#

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Timeline (USACE Process)

- Alternatives Milestone – May 15, 2013 (Actual)
- Tentatively Selected Plan concurrence – November 2013 (not yet)
- Public Review – March 2014
- Agency Decision Milestone – June 2014
- MSC Submittal final report – July 2014
- Civil Works Review Board – August 2014
- Chief's Report – December 2014



What happens then?

Once the Assistant Secretary to the Army for Civil Works, ASA (CW), signs the feasibility study:

- Final feasibility report goes to Congress for action:
  - Authorization to construct (WRDA type action)
  - Appropriations to construct (funding)

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More Information….

State website and email

http://www.dot.alaska.gov/stwddes/desports/arctic.shtml

dot.jhq.arcticportstudy@alaska.gov

Federal website and email

http://www.poa.usace.army.mil/Library/ReportsandStudies/AlaskaRegionalPortsStudy.aspx

Akregports@usace.army.mil

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Thank You

Lorraine Cordova

(907) 753-2672

Lorraine.a.cordova@usace.army.mil

G7G Railway Corporation

All Commodity Rail Transport to and from Northern Pacific Tidewater

presented

January 30, 2014

ALASKA STAKEHOLDERS

Dedicated to Alternative Solutions for the benefit of all

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G7G assumes no responsibility for verification of the information in these materials, and no representation or warranty is made as to the accuracy or completeness of such information.

G7G assumes no obligation to correct or update these materials.

KEMERER, Ward ..... Ward has been in the Renewable Energy business in British Columbia for over twenty five years, being a founding Director of the Independent Power Producers Association of BC. Ward's early stage prospecting work has led directly to over 60 MW of operating small hydro plants and another 80 MW permitted and in pre-construction with BC Hydro PPAs. Ward then began to prospect for Wind Energy potential. Since 2001, Ward has studied and secured some of the best potential sites available in BC and Alberta. Ward is dedicated to Environmental concerns and the introduction of innovative clean Business Practices in the Energy Sector.

VICKERS, Matt (Gunaatsk) ..... Matt specializes in establishing links in cross-cultural business environments. He has a successful track record of matching Aboriginal with non-Aboriginal potential business partners. Matt's in-depth knowledge of the Aboriginal market stems from his First Nation roots (Tsimshian/Heiltsuk & Haida) and his extensive work with Aboriginal communities in areas of organizational reviews; business plan development; feasibility studies; roles and responsibility training for elected leaders and staff; five year funding agreements; policy development; board training, as well as goals and objectives setting sessions.

Matt's dedication to institutions of higher learning includes: a founding board member of the University of Victoria's Administration of Aboriginal Government certificate program; the University of British Columbia's advisory board for their Bachelor of Commerce program and a founding member of the Chinook Program; Simon Fraser University's Presidents Advisory Board and the Banff Centre's Advisory Council as well as Head of Faculty for their Principles and Practice of Good Governance Program since 2000. Matt has been recognized with several awards for his performance in business and for his passionate support of diversity in the workplace.

WILSON, Len ..... Len has spent most of his working life in Management with almost twenty years as General Manager with an Alberta Manufacturing Company that specializes in the innovation, design, production and distribution of Forestry Equipment. After Len successfully sold his personal project to Caterpillar, and looking for a rewarding change, Len began to focus on the needs of Canadian Aboriginals. To this end, Len holds the honour of being the only non-Aboriginal to complete the necessary courses at the Banff Centre to receive his Certificate of Aboriginal Leadership, Governance and Management Excellence. It was during his Banff Centre training that Len decided to focus on what he and Ward have dubbed the Aboriginal Energy Ownership Initiative. This Initiative is designed to introduce Renewable Energy opportunities and training within the Aboriginal Traditional Territories complete with an equity stake for the Community.

JACKSON, Tom ..... Tom was born on the One Arrow Reserve near Batoche, Saskatchewan, to a Cree mother and an English father. Appointed an Officer of the Order of Canada in 2000 for his music and humanitarian work, Tom is well known to Canadians as an accomplished musician and actor dedicated to helping the less fortunate. At the 2007 Junos, the Canadian Academy of Recording Arts and Sciences bestowed Tom with the Humanitarian Award in recognition for his positive contributions to the social landscape of Canada. That same year, the Academy of Canadian Cinema & Television also presented Tom with their prestigious Humanitarian Award at the annual Gemini events. Tom received the Queen's Jubilee medal in 2002 and Centennial Medals from Alberta and Saskatchewan in 2005. Time Magazine named him one of Canada's best activists and honorary Degrees have been conferred upon him from the University of Alberta, Laurentian, Winnipeg, Victoria, Trent, Lakehead, Calgary, Lethbridge and Regina. Tom began a 3 – year appointment as Chancellor of Trent University in September 2009.

Tom's Musical Tours, The Huron Carole, Singing for Supper and Swinging for Supper, have raised millions of dollars for local food banks across Canada.

STRATEGIC PARTNERS



FIRST NATIONS :

G7G is dedicated to "making a difference" for the general population and for Mother Earth. The best way to achieve this is to collaborate with the original stewards of the land since time immemorial .... the **First Nations**. G7G has the traditional and cultural knowledge to adequately consult and inform the First Nations that will be directly affected by the Project. But, unlike standard Industry approach, G7G is also including the First Nations that will be indirectly affected by the Project. In the spirit of true accommodation, the First Nations will hold 50% equity ownership in the Project. To this point G7G has received Letters of Support from the First Nation Leadership for the Project concepts as presented.

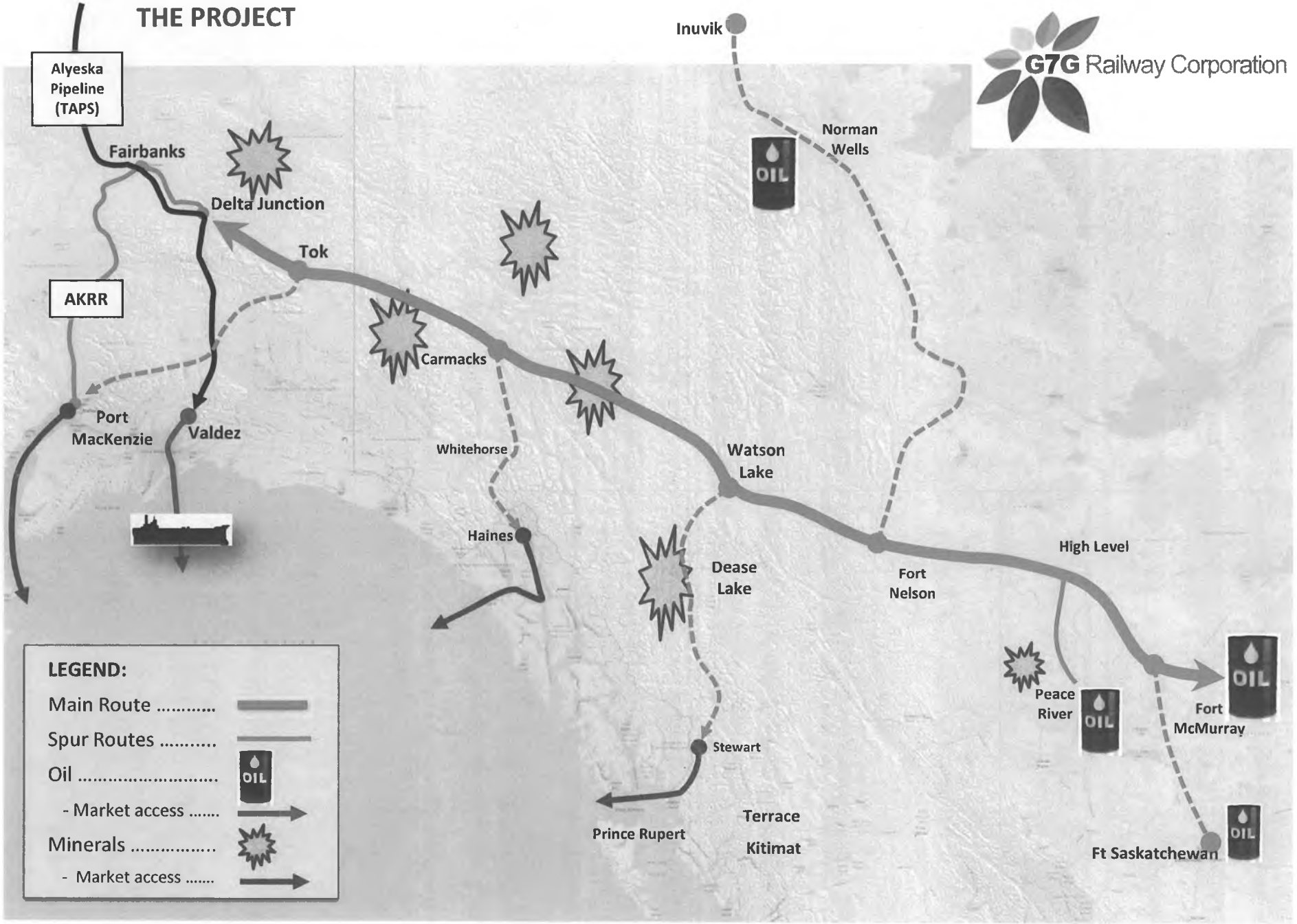
AECOM Canada Ltd :

G7G received a Letter of Intent from AECOM to partner with G7G on project proposals. Specifically to, but not limited to, the rail project. This was followed up with a Memorandum of Agreement. Following is an excerpt from the Letter of Intent:

"AECOM is pleased to provide this letter of intent to work in partnership with G Seven Generations Limited in the development of the Alaska to Fort McMurray Rail Project. We see this project as a major initiative to enhance West Coast access to the abundant resources in Western Canada. In our development of the business case and feasibility studies, we will work in partnership with G7G, the First Nations and other stakeholders to minimize the environmental impact of the project while meeting the needs of the potential users of the development. We will implement "green" technology to create sustainable infrastructure that can be used for generations to come.

AECOM is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government and is ranked as the #1 design firm in the 2011 Engineering News-Record. With approximately 45,000 employees around the world. AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering solutions that create, enhance and sustain the world's built, natural and social environments. A Fortune 500 company, AECOM serves clients in approximately 125 countries and had revenue of $7.7 billion during the 12 months ended June 30, 2011. AECOM is ranked by *Ethisphere* as one of the world's 110 most ethical companies for 2011.

AECOM immediately took on the task of performing a Scoping Document to confirm the viability of the Project.


THE PROJECT
G7G Railway Corporation
Inuvik
Norman Wells
OIL
Alyeska Pipeline (TAPS)
Fairbanks
Delta Junction
Tok
AKRR
Carmacks
Port MacKenzie
Valdez
Whitehorse
Watson Lake
Haines
Dease Lake
Fort Nelson
High Level
Peace River
OIL
Fort McMurray
OIL
Stewart
Terrace
Kitimat
Prince Rupert
Ft Saskatchewan
OIL
LEGEND:
Main Route .....
Spur Routes .....
Oil .....
- Market access .....
Minerals .....
- Market access .....

GOVERNMENT SUPPORT and INTEREST

ALASKA: Sean Parnell, Governor

"Thank you for the opportunity to write in support of the Generating for Seven Generations (G7G) proposed rail project."

"The potential economic benefits of a rail link for both Alaska and Canada have been a vision as far back as the Harriman Expedition in the mid-1800's."

YUKON TERRITORY: Currie Dixon, Minister of Economic Development

"A rail development, such as the project proposed by G7G could significantly decrease transportation costs and improve competitiveness of key industries in Yukon."

ALBERTA: Premier Alison M. Redford, QC

"I appreciate being informed of projects that relate to Alberta's strategic objective to diversify our energy products and market portfolio."

BRITISH COLUMBIA: Premier Christy Clark

"We will, of course, follow your project's progress with interest."

CANADA: Joe Oliver, Minister of Natural Resources

" ... the Government is supportive of any private sector project that would contribute to shipping our growing Canadian crude oil supply to international markets as long as the project meets all the applicable regulatory requirements."

SASKATCHEWAN: Has not been approached to date.

NORTHWEST TERRITORY: Has not been approached to date.

UNITED STATES: Has not been approached to date.

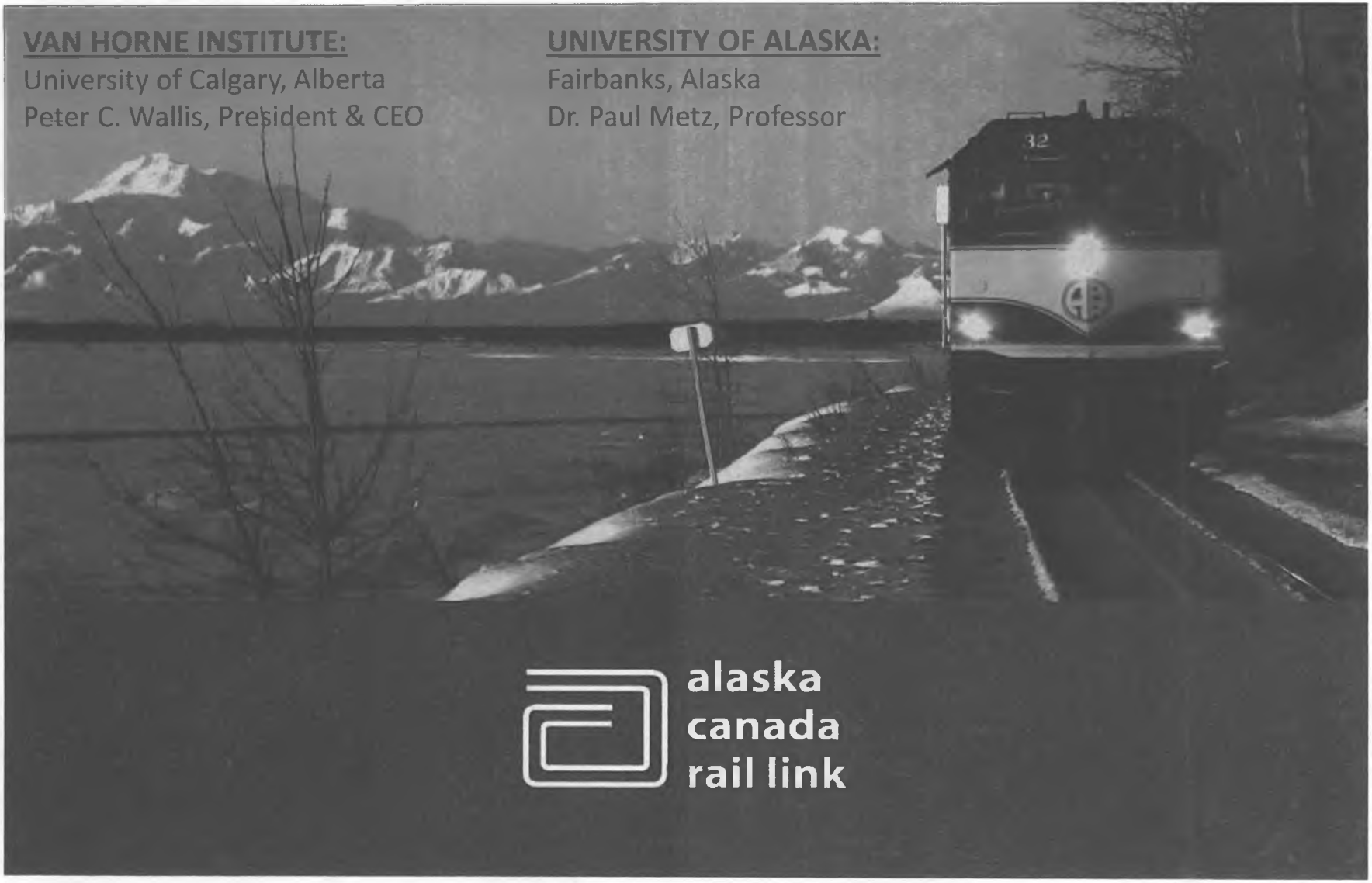
GOVERNMENT SUPPORT and INTEREST

Quote from April 30, 2013 Letter to G Seven Generations Ltd. from the Government of Alberta – Department of Energy with regard to the G7G Railway Project

"The Government of Alberta has provided a grant of $1.8 million to the Van Horne Institute to allow them to work with G7G, the project proponents and with the University of Alaska, Fairbanks, Michigan Tech, and other organizations or companies on the potential routing, cost, and business case for such a railway. The Van Horne Institute will provide the information they obtain to the Government of Alberta and other stakeholders.

This information will include a feasible route description and initial cost of facilities. It will also include an assessment of the potential for oil, mineral, and other products that could be exported and imported via this line."

INSTITUTE INVOLVEMENT



SOCIAL LICENSE NOW A PRE-CONDITION FOR MAJOR INFRASTRUCTURE DEVELOPMENT

- **What is social license?**
  - Early engagement and broad support among First Nations and other affected communities
  - "Duty to Consult and Accommodate" – where a government decision may affect Aboriginal and treaty rights, the Crown is required to consult with potentially affected First Nations, minimize infringement on Aboriginal and treaty rights, and address the potential effects through accommodation, as interpreted by Canadian courts
  - Public support for development , taking into account socio-economic and environmental impacts
- Social license is a necessary condition for securing major infrastructure project approvals across Canada
  - This is also summarized by the World Energy Council's stated goals of "accessibility, availability and acceptability"

A FIRST NATION SUPPORTED PROPOSAL
COMPLETE WITH EQUITY INVOLVEMENT

Community Consultation

- G7G's indigenous initiative lays out a precedent-setting approach to aboriginal consultation and accommodation.

- G7G has met with the leadership of the First Nations villages, communities and tribes along the proposed project route, already receiving letters of support for the concept as proposed.

- Along with the aboriginal communities; all of the other community stakeholders will be consulted as part of this work element.

- G7G expects this critical element to be an approximately one year process per community, performed simultaneously.

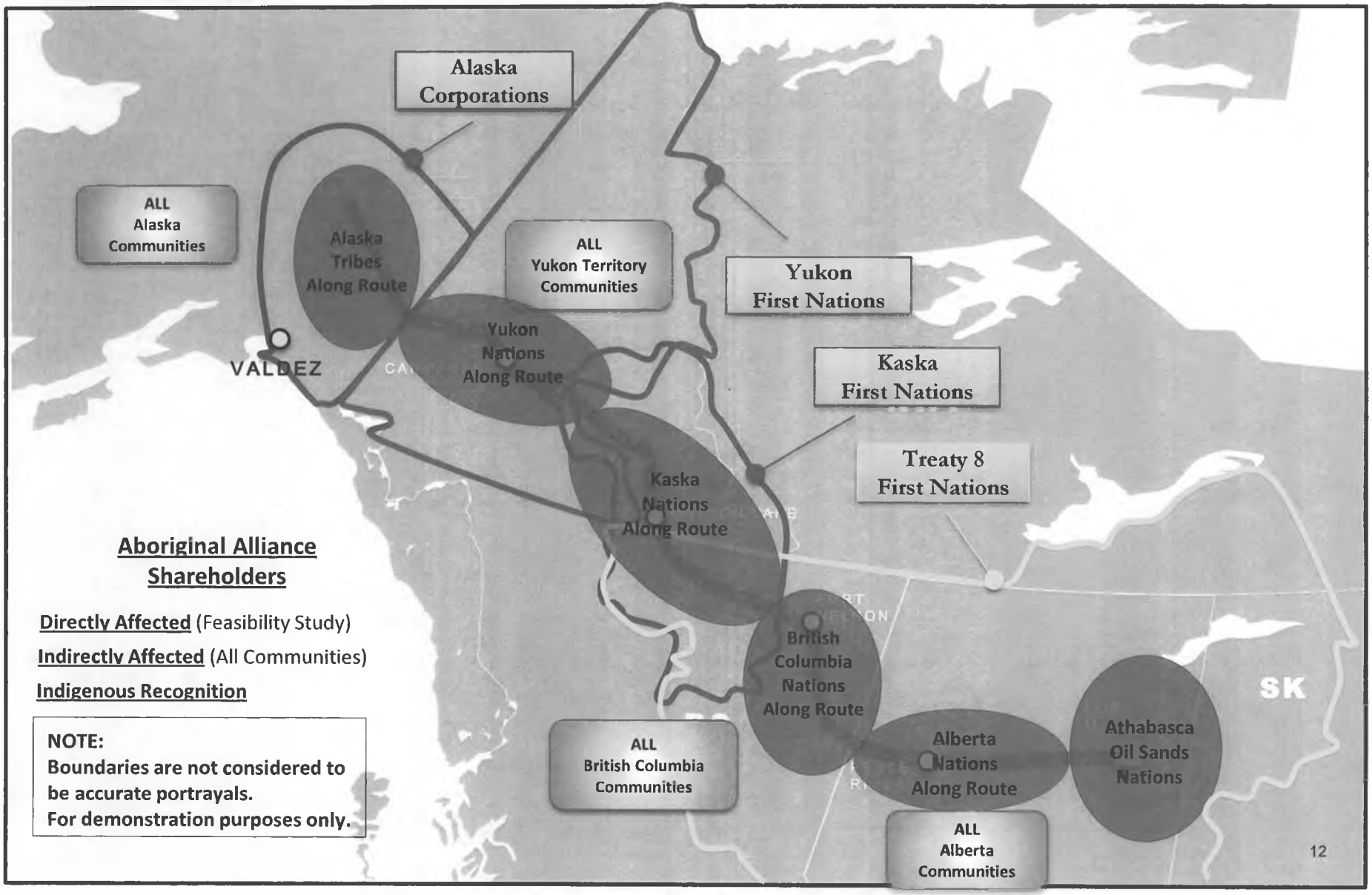
- G7G will use the following criteria as a guideline:

Vickers and Associates
Summary of Best Practices for First Nations
in Consultation and Accommodation

The Benefits of this Project for First Nations:

1. Recognition – Rights and Title
2. Respect – early engagement
3. Relationship – personally informed
4. Partnership – 50% equity/profit sharing
5. Employment Opportunities
   - construction
   - operation
   - maintenance
   - management

ABORIGINAL ALLIANCE STAKEHOLDERS



The Benefits of this Project for Canada :

1. Unlock the bottleneck for transporting Canadian oil, minerals and other commodities to offshore markets
2. Accelerated increase of royalty and tax revenues
3. Economic hauling, export and import of all commodities
4. Increase long term and permanent employment
5. Positive impact on stakeholder relationships

The Benefits of this Project for Alaska :

1. Connection to the rail network of North America, specifically the Lower 48 States.
2. Enhance utilization of infrastructure (TAPS, Ports, etc.)
2. Economic hauling, export and import of all commodities
2. Accelerated increase of royalty and/or tax revenues
2. Increase long term and permanent employment
6. Positive impact on stakeholder relationships

G7G Project Timeline

G7G Railway Corporation

Oct 2011 | **$150K+**

Strategic Plan
- Concept Viability (AECOM)

Fall 2013 | **$2.0M**

Pre - Feasibility Study
- Al-Can Rail Link Study update
- G7G Rail Study (all commodities)
- FN Information Sharing
- Preliminary Business Plan (±25%)

Spring 2014 | **$40M**

Feasibility Study
- Confirm Al-Can Rail Link Study
- Confirm G7G Rail Route
- FN Information Sharing
- Preliminary Business Plan (±10%)

2014-15 | **~$300M**

Project Approval Process
- Environmental assessment
- Community consultation
- etc.

2015-16 | **TBD**

Bankable Business Plan
- Includes detailed Engineering

2016-18 | **TBD**

Project Construction

Pre – Feasibility Study ($2.0 million)

- **Conducted by Van Horne Institute**
- **Government of Alberta ..... $1.8 million Grant**
- **Government of Yukon ..... Observer**

Project Equity Partners

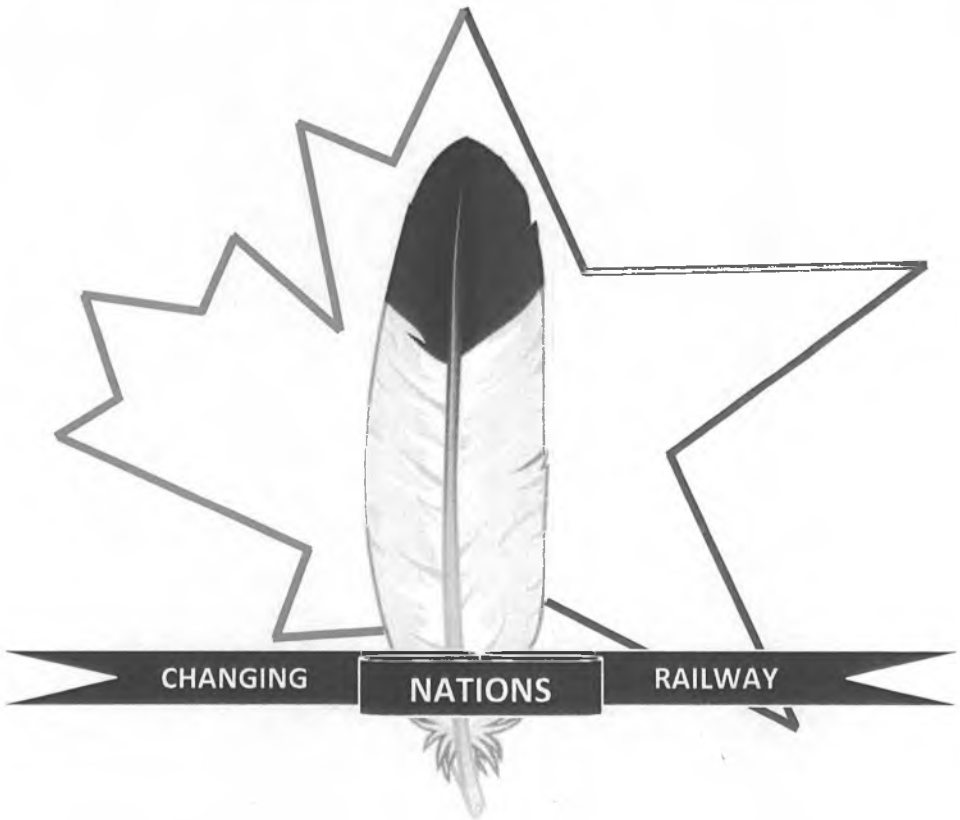
- **Aboriginal Alliance Trust 50%**
- **AECOM Canada Ltd (Letter of Interest) 10%**
- **G7G Finance/Investment Firms or Industry 40%**

Other Opportunities

Project Management	Operation & Maintenance
Shipper Contracts	Commercial Agreements
Rolling Stock	Material Supply

G7G RAILWAY CORPORATION

AECOM



Generating for Seven Generations

Contact: Matt Vickers, CET
matt@mattvickers.com

Len Wilson
len.wilson@askienterprises.com



Alaska Department of Transportation & Public Facilities

Alaska State Rail Plan Update
House Transportation Committee

Murray Walsh, ADOT&PF

January 30, 2014

Purposes of a State Rail Plan

- To set forth **state policy** involving freight and passenger rail transportation, including commuter operations.
- To present **priorities and strategies** to enhance rail service that benefits the public.
- To serve as the **basis for federal and state rail investments** within the state.





Why ADOT&PF?

- Alaska Statutes (AS 44.42) assign DOT&PF the responsibility to plan for all modes of transportation.
- There is more than one railroad in the state; there may be even more in the future.
- Any movement of freight or passengers involves more than just a railroad – what happens when the freight shipment gets to the end of the line; how does it get to its ultimate destination?

Our Focus

A word of caution: the Alaska State Rail Plan (ASRP) focuses on rail, generally. This is not an Alaska Railroad Corporation plan.

- Alaska Railroad Corporation and White Pass & Yukon Route are Alaska's two railroads, and the individual needs of these operators are identified in the plan.

- ASRP looks at the potential for NEW operators and future capacity needs. What infrastructure, plans, or information is needed to promote rail, broadly defined, in the future?

Rail Plan—Not in Isolation

- The State Rail Plan must be coordinated with the State's Long Range Transportation Policy Plan.
- In September 2013, the Federal Railroad Administration released new guidance for preparing state rail plans. Our plan will comply with those guidelines.



Alaska Department of Transportation & Public Facilities
Statewide & Area Transportation Plans

search

DOT&PF > Long Range Planning

SLRTP Home | 2030-Let's Get Moving | Area & Regional | Modal/System | Other Plans | Related Links & Resources | Contacts

Statewide Long Range Transportation Plan
Guiding Transportation Development for Alaska's Future

DOT&PF Strategic Plan - *Office of the Commissioner*
Mission Statement: "*Get Alaska Moving through service and infrastructure.*"

Statewide Long Range Transportation Policy Plan
This plan embodies the long-range vision, policies and objectives that will guide Alaska's transportation development during the upcoming 20-year period. It is required by federal regulation (23CFR450.214) and draws its authority from Alaska Statute 44.42.050. The current Statewide Long-Range Transportation Policy Plan is called *Let's Get Moving 2030*, and was approved February, 2008.

Area/Regional Transportation Plans
These are regional, multi-modal transportation plans developed for specific areas of the state, designed to address movement between communities in the region, and from the region to points beyond. Each of these plans incorporates economic modeling to evaluate potential projects and prioritize them to best meet state and regional goals. Within the Area/Regional Transportation Plans Category, we also have **Metropolitan Transportation Plans**. These are fiscally-constrained plans unique to the state's metropolitan planning areas and required by federal regulation 23CFR450.322. They include both long and short range strategies and actions that lead to an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demands.

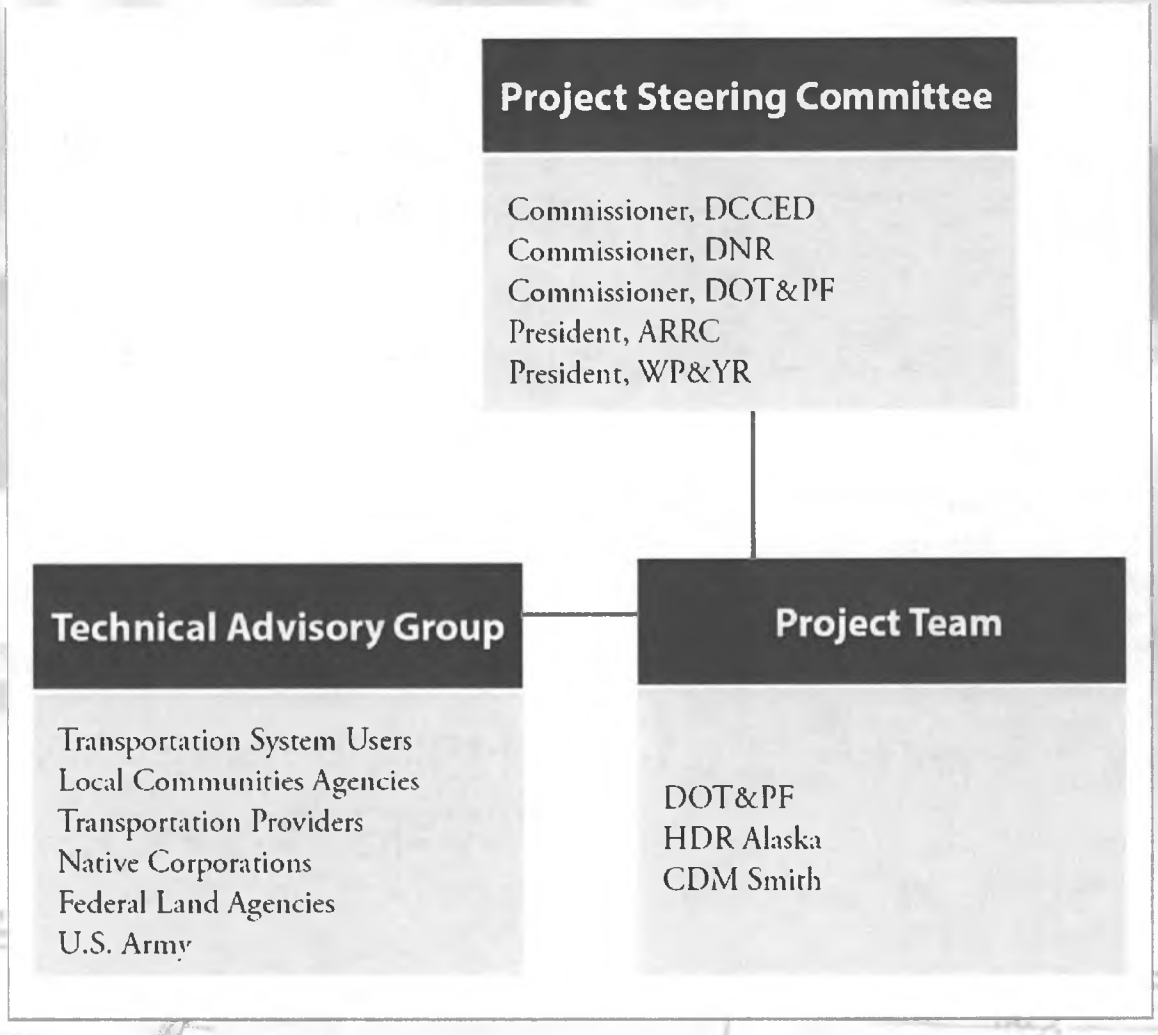
Modal/System Transportation Plans
These are statewide plans that address system needs and structure of a mode or subset of the overall transportation system. System plans help identify system-wide issues, goals, objectives, standards, and processes. Examples include the *Alaska Aviation System Plan*, *Alaska State Rail Plan*, *Alaska Bicycle and Pedestrian Plan*, and the *Alaska Strategic Highway Safety Plan*.

Other Plans related to Transportation
Alaska DOT&PF works with other government agencies and communities to develop and update long range plans. This website will link to other plans that may have an impact on transportation in Alaska.

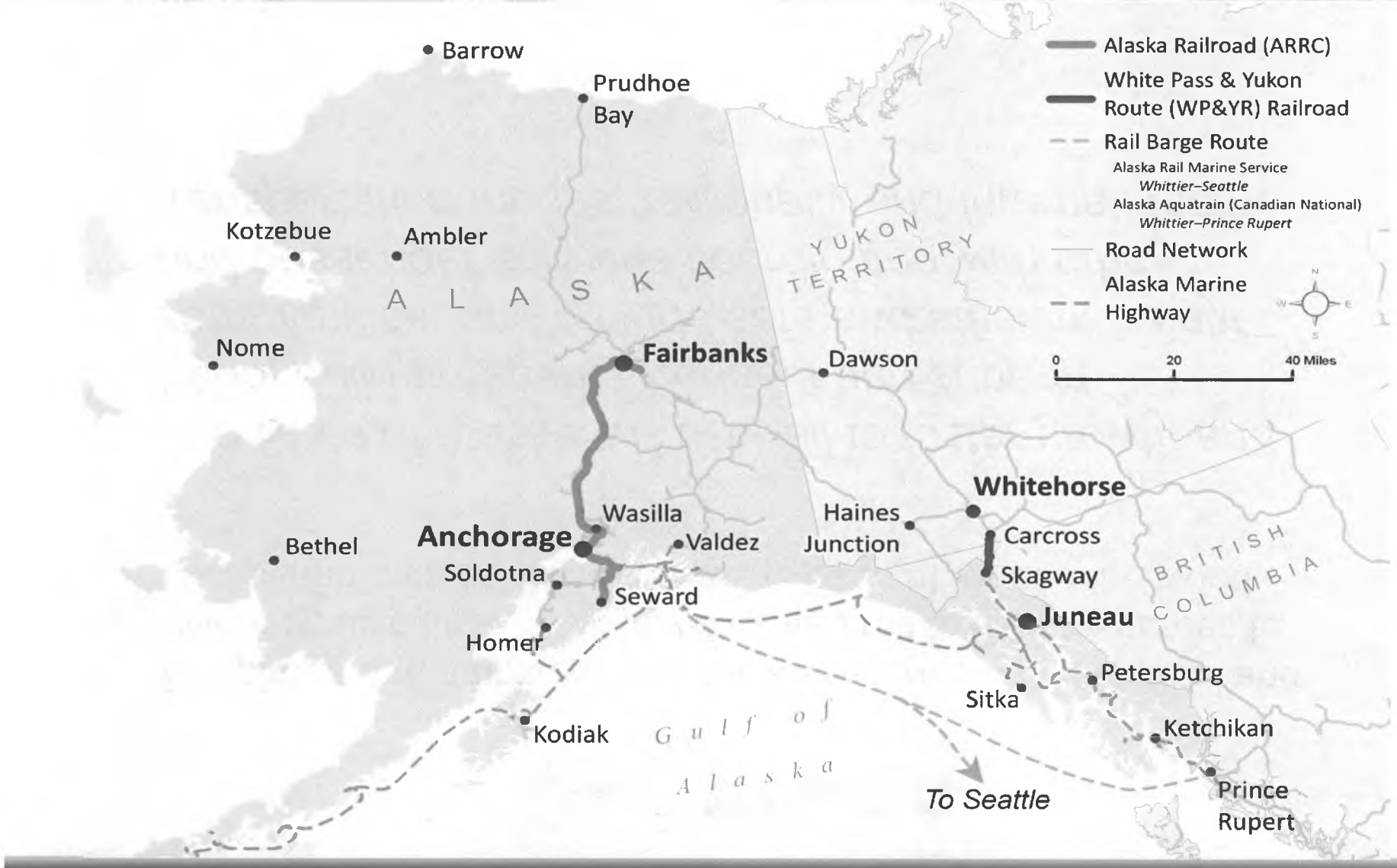
Call us toll-free in the State of Alaska 1-888-PLANDOT
or 907-465-4070 (in Juneau)
TDD: 907-465-3652
or fax us 1-888-PLANFAX

If you have questions regarding the content of this page, please contact Eric Taylor at 907-465-8858 or eric.taylor@alaska.gov

Plan Advisors



Alaska's Current Rail System



Our Vision

The pioneering ambition that built Alaska was both practical and visionary, using roads, waterways, and rail to haul resources to market and connect communities to each other and the world.

The State of Alaska will use rail to foster growth and trade, build prosperity, connect and support communities, and provide safe and efficient freight and passenger services coordinated with other transportation modes, regionally and internationally.

Planning Context

The Past: Rail has played an important role in the development of Alaska's economy and in national defense.

- Military transport
- Construction and resource development (TAPS)
- Passenger service, both resident and visitor
- Transport of hydrocarbon and petroleum products
- Transport of natural resources such as coal and gravel
- Supply of building materials, equipment, and other commodities

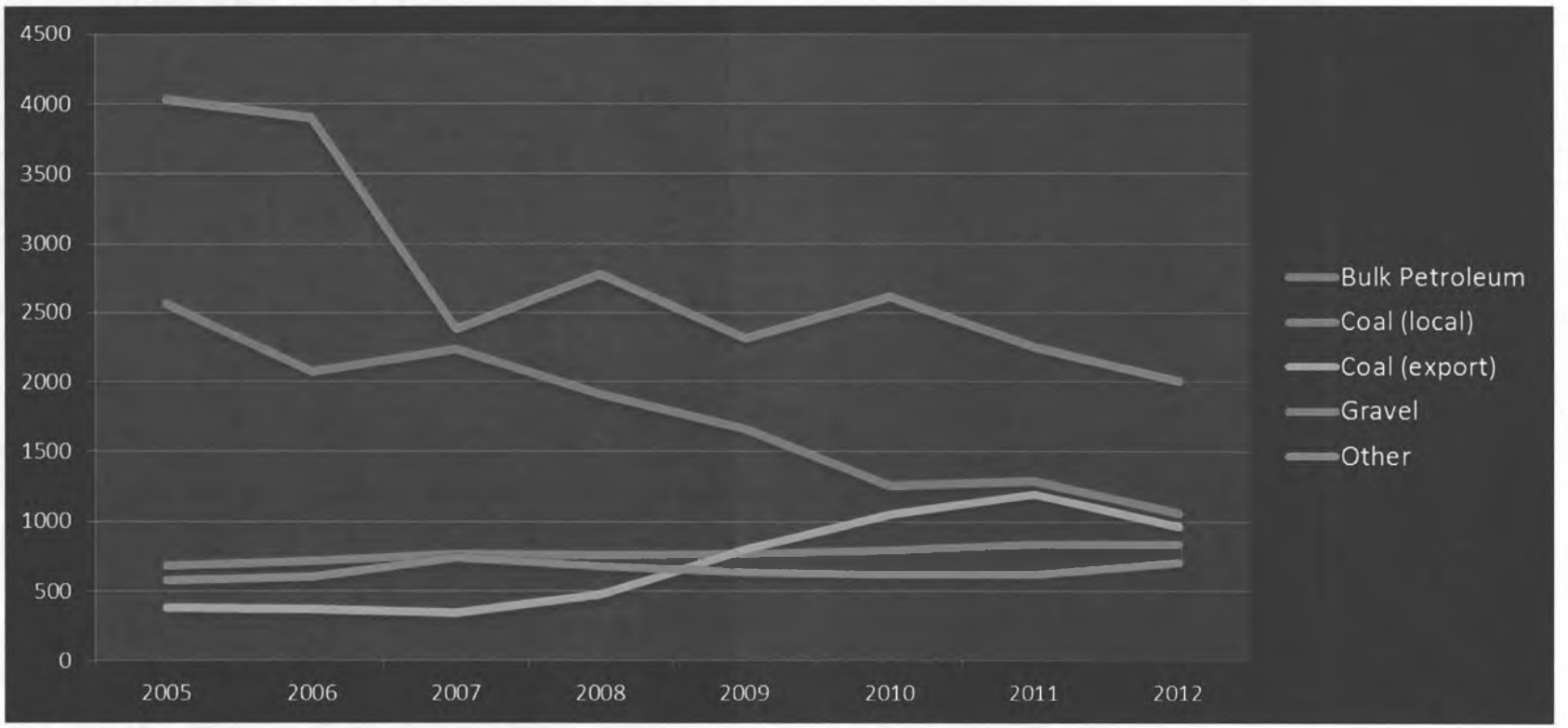
Planning Context

The Present: Rail volumes and revenues, along with industrial activity, have decreased since 2005.

- The Port MacKenzie and Northern Rail extensions are under construction
- External financial support is needed for major safety and efficiency improvements
- The public would like commuter service



Alaska Railroad Freight Operations



Between 2005 and 2012, demand for ARRC freight services declined nearly 32 percent (all commodities, in tons).

Planning Context

The Future:

- The industrial renaissance that Alaska has been preparing for is finally happening — shale, oil, mining, LNG, coal, natural gas...
- The Port MacKenzie and Northern Rail extensions are complete and fully operational.
- Rail commuter service is available, linking Southcentral Alaska and is under consideration elsewhere.

Plan Direction

What do we do now in the present day to:

- *Make sure the railroad is available to support the future context; and*
- *Identify defensible means to evaluate and enable new rail lines?*

Plan Goals

- **Promote economic development** in Alaska; seek rail extensions to new resource and defense opportunities.
- **Maintain systems** in good repair and expand capacity.
- Support rail's role in **international exports**, market development, and trade.
- Emphasize **interconnectivity** with other modes of transport.
- Increase regularly scheduled **passenger rail** service.
- Support **safe and environmentally responsible** rail operations.

Plan Objectives - Passenger



- Develop a Southcentral regional transit organization – Legislation needed
- Include Anchorage International Airport in regular public rail passenger service
- Maintain passenger equipment in continuing state of good repair.
- Complete Wasilla track realignment
- Provide higher speed track for commuter trainsets
- Support connectivity with other transit options

Plan Objectives—Freight

- Establish and re-claim corridors to preserve rail right-of-way for future use
- Lengthen (and strengthen) passing sidings, improve (or remove) tunnels, upgrade bridges
- Increase rail carrying capacity to the emerging US standard of 315,000 lbs. per car
- Include rail in emergency service planning
- Separate the remaining rail-highway at-grade crossings on the National Highway System
- Implement quiet zones to enhance livability
- Improve wildlife crossings and culverts for fish passage

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Capital Improvement Context

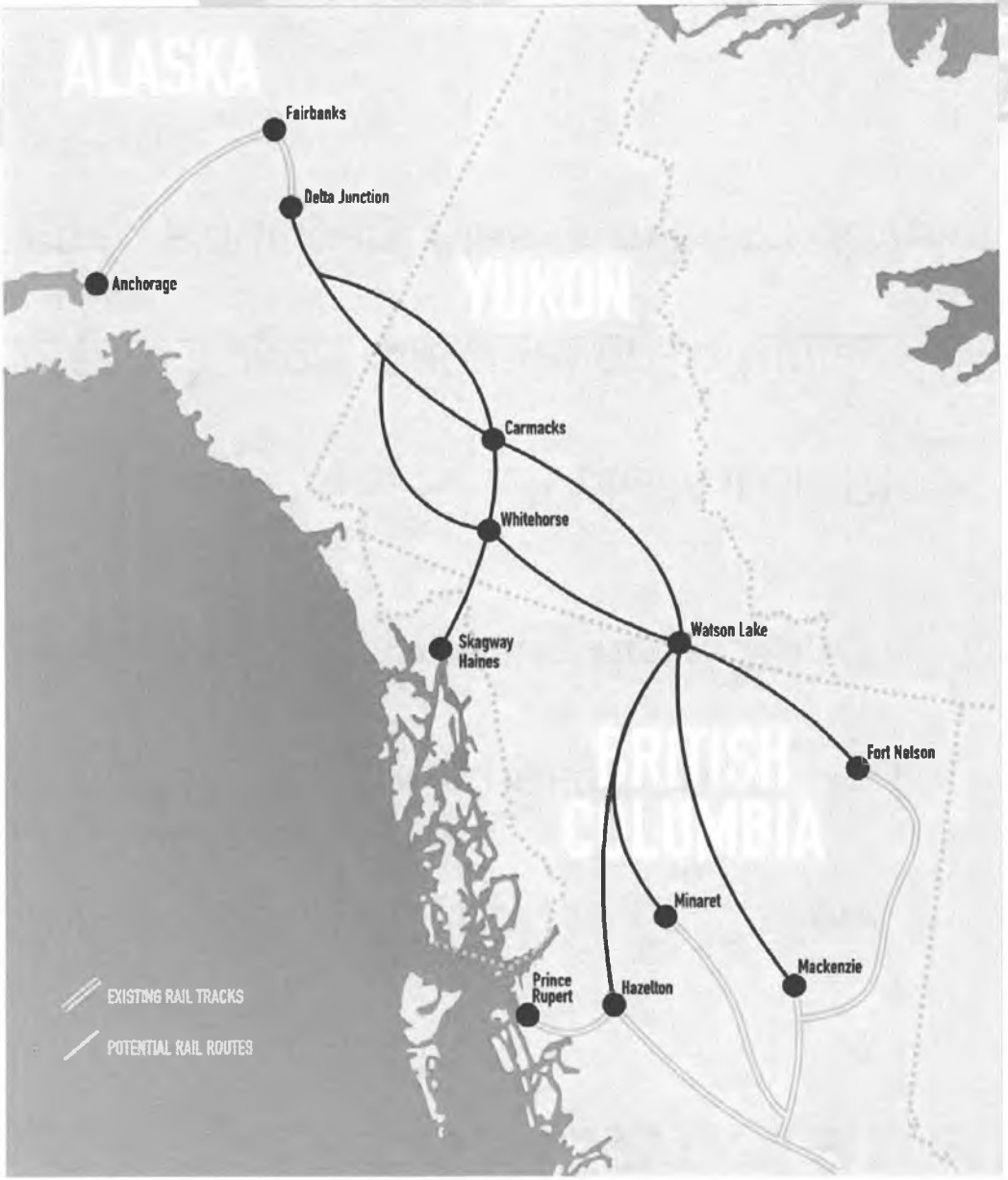
- Alaska's rail accident rate is comparable to other US railroads
- Positive Train Control (PTC) should improve safety, but at a substantial cost
  - ✓ PTC costs exceed the ARRC's ability to fund and requires state support
- Freight operating revenues are lower (ARRC)
- Additional investment in track, depots, and equipment will be needed to operate commuter service

Short/Near-Term Capital Projects

- Remove obstacles to double-stack container train operation – notably the Portage Tunnel
- Grade-separation of mainline/NHS and significant urban at-grade crossings
- Extension from Eielson AFB to Salcha Bridge
- Commuter rail in Southcentral Alaska – Trainsets & Depots
- Wasilla, North Pole and Nenana realignments
- Anchorage to Seward railroad rehabilitation
- Upgrade, rebuild docks in Whittier
- Expand Seward dock facilities
- Girdwood to Portage track upgrades

Mid to Long-term Capital Projects

- Extension from Salcha Bridge to Ft. Greely
- Fairbanks and North Pole realignments
- Extension to Livengood mining district and on to Yukon River
- Passenger service from Salcha to Yukon River
- Rail Service to Yukon resource opportunities
- Extensions to significant Alaska mineral developments


ALASKA
Fairbanks
Delta Junction
Anchorage
YUKON
Carmacks
Whitehorse
Watson Lake
Skagway
Haines
Fort Nelson
BRITISH
COLUMBIA
Minaret
Mackenzie
Prince
Rupert
Hazelton
EXISTING RAIL TRACKS
POTENTIAL RAIL ROUTES

- **Crest Iron Ore Deposit in NE Yukon – one of world's largest (28 million tonnes/yr or 76,000 tonnes per day, seven trains a day!).**

- **The Alaska Canada Rail Link Study determined that investment capital and operating cost would be covered for Crest Iron Ore transport to Haines.**

- **This set the Haines Benchmark which was not met by any other ACRL route.**

The Value Proposition – Haines Rail Access

a) ***Tidewater access*** for mineral feeder service from an Alberta to Alaska railway junction at Carmacks.

b) ***Terminal acreage*** to handle Crest Iron Ore (28 million tonnes/yr).

c) ***Rail alternative to highway*** heavy haul trucking that authorities are reluctant to allow.

d) ***Interim truck to rail transfer hub*** at Carmacks for current and future Yukon mines

e) ***Interim Inside Passage connection*** to CN Rail for the Alaska Railroad (50% shorter than Gulf transit).

Long-term Capital Projects

- Extension to North Slope
- Extension to Canada/railhead in British Columbia
- Extension from Yukon River to Nome







Preliminary (Draft) Policy Recommendations

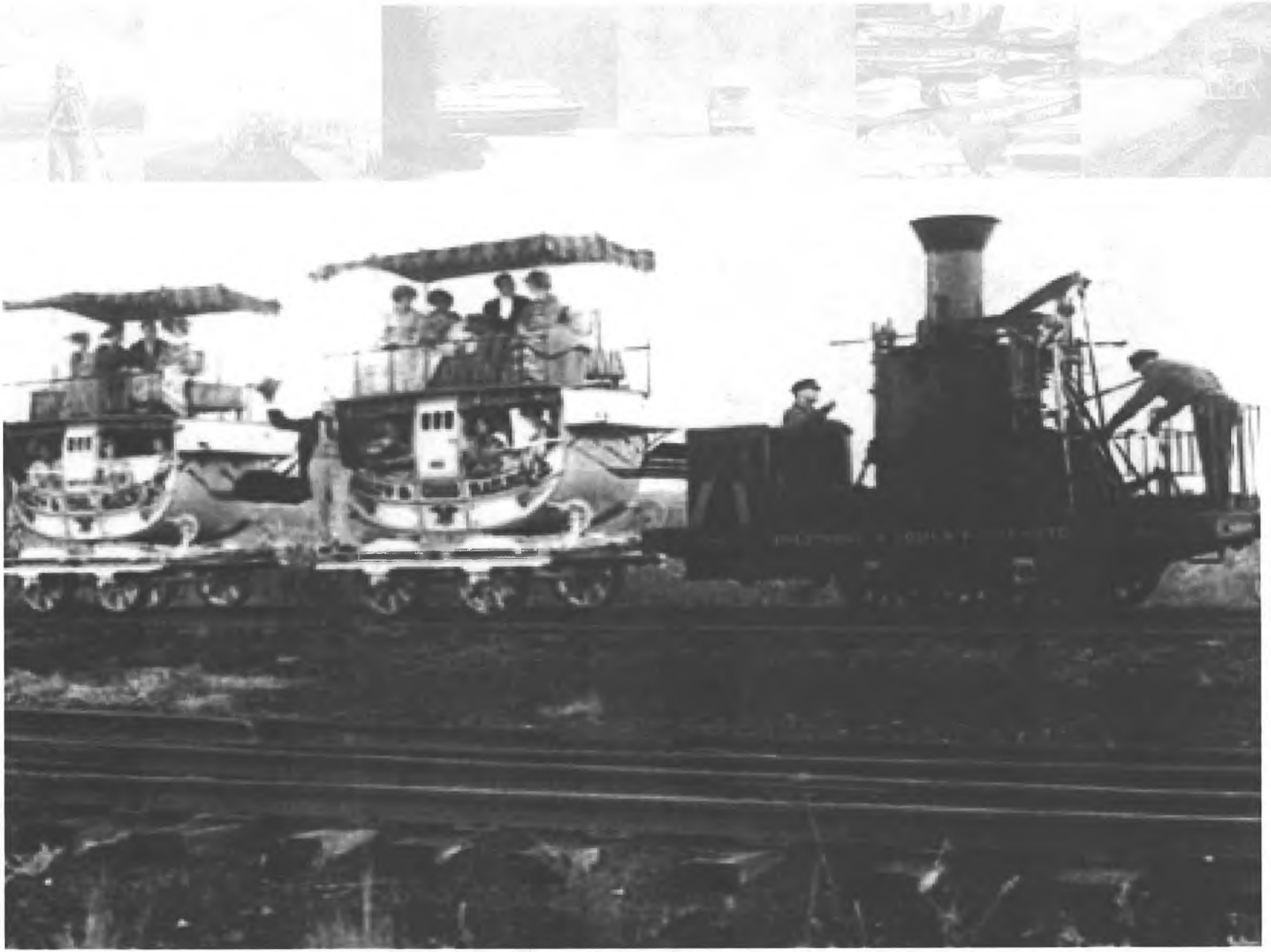
- Plan for and reserve corridors
- Prioritize and commit to capital project assistance
- Authorize Regional Transit Organizations - legislative action required
- Pursue rail service extensions

Next Steps

A draft plan, conforming with federal guidance, will be available in Spring 2014

On-line public open houses featuring preliminary findings and the draft plan





Thank you

Murray Walsh
Special Assistant to the Commissioner
Alaska Department of Transportation & Public Facilities

Phone:
(907) 465-6973

Email:
Murray.Walsh@alaska.gov



02/04/14 Presentation: Alaska Arctic Policy Commission

<TARGET><BILL></BILL><SUBJECT>02-04-14 Presentation Alaska Arctic Policy Commission</SUBJECT><COMM>HEDT28</COMM></TARGET>

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, February 03, 2014 1:48 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 4, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

no offnet callers that I know of

Other Information:

this is a joint meeting with Senate World Affairs committee

C. Nikoosh Carlo, PhD

Executive Director

nikoosh.carlo@gmail.com +1 (571) 766-6784



ALASKA ARCTIC POLICY COMMISSION

Co-Chair: Senator Lesil McGuire, R-Anchorage, 907.465.2995
Co-Chair: Representative Bob Herron, D-Bethel, 907.465.4942

Memorandum

To: Senator Fred Dyson, Chair of the Senate State Affairs Committee
Representative Bob Lynn, Chair of the House State Affairs Committee
Senator Gary Stevens, Chair of the Senate World Trade Committee
Representative Shelley Hughes, Chair of the House Economic Development, Trade, & Tourism Committee

From: AAPC Co-Chairs Senator Lesil McGuire and Representative Bob Herron

Date: February 21, 2014

Re: Answers to Questions from AAPC Presentations on February 4

Thank you for giving us the opportunity to present on the Alaska Arctic Policy Commission Preliminary Report in your respective committees on February 4. We were pleased with how well-received the hearings were and greatly appreciated the opportunity to share some of the Commission's hard work.

Below are follow-up answers to some questions that came up during the hearings. Thank you for sharing this memo with your committee members.

Questions raised during the joint House/Senate State Affairs hearing and the joint Senate World Trade & House EDT hearing:

Describe the role of some salient Arctic groups, in particular the Northern Forum?
Please see the attached diagrams of federal Arctic entities and of Arctic Council groups.

The Northern Forum is a non-profit, international organization composed of sub-national or regional governments originally from eight (now seven) northern countries. Alaska recently stopped contributing funds to the Northern Forum, and the Forum's headquarters moved from Anchorage to Sakha, Russia. The legislature could become a member of the Forum by contributing funding. www.northernforum.org/

Where is the most marine traffic coming from – the northeast or northwest?
The shipping route along Russia's northern coast is called the Northern Sea Route (NSR); the route through the Canadian Arctic archipelago is called the Northwest Passage (NWP). The NSR sees far more traffic than the NWP.

Marine traffic in 2013 through the Bering Strait region totaled more than 400 transits (from Alaska Marine Exchange data). No traffic was observed through Bering Strait from January 1 - May 31, 2013; all of the marine traffic was observed during June 1 - November 30, 2013. Approximately 95 commercial cargo carriers such as tankers, bulk carriers and LNG carriers made transits through the Bering Strait. 71 carriers were reported along the Russian coast in and out of the Northern Sea Route and some 24-26 into Kivilina and the Red Dog Mine complex. Many of the remaining transits are tugs and barges along the northwest coast of Alaska and a handful of Coast Guard cutters, research ships, several small cruise ships, and a single commercial ship.

The M/V NORDIC ORION sailed the Northwest Passage (NWP) in late September 2013 on a route carrying coal from Vancouver to Finland. This is the first such large commercial ship to make use of the NWP on a voyage from the Pacific to the Atlantic. The bulk of traffic through the Bering Strait region remains tug and barge traffic along the northwest Alaska coast. Most maritime experts do not believe the NWP will be a viable, regular trade route in the foreseeable future. Most trans-Arctic voyages will probably be along the Northern Sea Route in a navigation season of some 4-6 months.

It's also worth noting that more marine traffic goes through Unimak Pass in the Aleutians than the rest of the Arctic combined: 5219 vessels in 2013, with a recent annual increase of 8%.

How far ahead is Russia in their northern infrastructure development and other activities in the Arctic?
Any nation's infrastructure corresponds to the level of its economic activity. The Arctic may be the future for Alaska and the United States, but it is the present for Russia. Russia's Arctic is integral to her national economy and GNP. Natural resource development is driving development of the region and there is a corresponding need for marine shipping in summer to carry those resources to global markets. So it can easily be argued that comparing U.S./Canada Arctic development to Russia's is not a fair comparison. Russia has more economic activity in the Arctic than the United States does, and so it's no surprise its infrastructure is more advanced than ours. Russia also has by far the largest city on the Arctic Ocean (Murmansk, population 307,000). Russia has also announced plans for a series of search and rescue stations along the northern sea route, but those remain theoretical.

The website for the Arctic Maritime & Aviation Transportation Infrastructure Initiative has information on existing infrastructure across the Arctic: www.arcticinfrastructure.org

Will the border issue with Canada be addressed in the near future?
The Beaufort Sea border dispute between the United States and Canada involves an 8,276 square mile wedge north of Alaska and Yukon. Canada thinks the maritime boundary should be an extension in the same direction as the land boundary. The U.S. thinks the maritime boundary should extend along a path equidistant from the coasts of the two nations. The border dispute is mentioned in the United States National Strategy for the Arctic Region (NSAR) implementation plan. The co-chairs have no direct knowledge of when the dispute might be resolved.

Does the AAPC have a workplan for 2014? A draft of the 2014 workplan was sent to all Commissioners in January. When finalized, it will be posted to our website: www.akarctic.com. The workplan includes 3 full commission meetings in Kotzebue, Nome and Anchorage. Hearings for public testimony (to include commission updates) will be held in September and October. Public written comments will be received through May 15, 2014. Instructions for submittal are on our website.

What influence has the AAPC had on federal activities?
On June 28 of 2013, the Commission sent the White House and State Department a Letter of Intent, announcing the Commission and its goals (see www.akarctic.com). Soon after, the Co-chairs began

having monthly teleconferences with the National Strategy for the Arctic Region Task Force leads (consisting of State Department and White House officials). The Task Force has proved very receptive of input from the AAPC. For example, the NSAR implementation plan included more direct mention of Arctic residents, and suggested increasing efforts to foster partnerships with Alaska Natives and the state of Alaska.

The Co-chairs think it's important for the AAPC to help shape federal policy and will continue to meet with NSAR team toward that end.

How do we support Alaskans to be involved in the Arctic Council working groups?
SJR 17/HJR 24 encourages the Legislature to support the strategic recommendations of the AAPC preliminary report, including continuing to "pursue, and actively expand, all avenues of participation in the Arctic Council, including involvement in working groups and by building partnerships with permanent participants."

Alaska can participate as part of US delegation in the Arctic Council and can supply technical experts. Alaska could also apply to be an observer, although there are no sub-national jurisdictions that are currently observers.

The Administration or the Legislature providing travel funding for indigenous groups to participate at Arctic Council meetings would also increase Alaskan involvement.

Where can we access other relevant Arctic documents, e.g. Canadian Arctic Policies?
The national strategies of all 8 Arctic nations are on the Commission's website: www.akarctic.com/national-arctic-strategies/.

The website also has a list of United States federal reports on the Arctic region: www.akarctic.com/federal-reports/.

Will the Commission work on Arctic Council themes for the US Chairmanship?
The Commission is not planning further work on Arctic Council themes for the US chairmanship. SJR 17/HJR 24, which incorporates work from the Commission, asks the Legislature to support four chairmanship priorities the Governor proposed to the United States Department of State in a letter of December 2012:

- Creating jobs and economic opportunity for Arctic residents;
- Preventing suicide;
- Developing safe and sustainable sanitation facilities for small, isolated Arctic communities; and
- Securing safe and reliable shipping.

Can a deep draft port be federally funded without the state of Alaska having a Coast Zone Management Program (CZMP)?
A deep water port can still be funded with federal dollars without the state having a Coastal Zone Management Program; however, it makes it much harder for the Alaska Army Corps of Engineers to complete the necessary environmental permitting work. The NEPA coordination in particular is much more difficult without a central contact through the CZMP.

The deep draft port has a broad range of local, regional and tribal support. Without a CZMP, the City of Nome made the effort to reach out to coordinate much of this support.

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The shipping route along Russia's northern coast is called the Northern Sea Route (NSR); the route through the Canadian Arctic archipelago is called the Northwest Passage (NWP). The NSR sees far more traffic than the NWP.

Marine traffic in 2013 through the Bering Strait region totaled more than 400 transits (from Alaska Marine Exchange data). No traffic was observed through Bering Strait from January 1 - May 31, 2013; all of the marine traffic was observed during June 1 - November 30, 2013. Approximately 95 commercial cargo carriers such as tankers, bulk carriers and LNG carriers made transits through the Bering Strait. 71 carriers were reported along the Russian coast in and out of the Northern Sea Route and some 24-26 into Kivilina and the Red Dog Mine complex. Many of the remaining transits are tugs and barges along the northwest coast of Alaska and a handful of Coast Guard cutters, research ships, several small cruise ships, and a single commercial ship.

The M/V NORDIC ORION sailed the Northwest Passage (NWP) in late September 2013 on a route carrying coal from Vancouver to Finland. This is the first such large commercial ship to make use of the NWP on a voyage from the Pacific to the Atlantic. The bulk of traffic through the Bering Strait region remains tug and barge traffic along the northwest Alaska coast. Most maritime experts do not believe the NWP will be a viable, regular trade route in the foreseeable future. Most trans-Arctic voyages will probably be along the Northern Sea Route in a navigation season of some 4-6 months.

It's also worth noting that more marine traffic goes through Unimak Pass in the Aleutians than the rest of the Arctic combined: 5219 vessels in 2013, with a recent annual increase of 8%.

How far ahead is Russia in their northern infrastructure development and other activities in the Arctic?
Any nation's infrastructure corresponds to the level of its economic activity. The Arctic may be the future for Alaska and the United States, but it is the present for Russia. Russia's Arctic is integral to her national economy and GNP. Natural resource development is driving development of the region and there is a corresponding need for marine shipping in summer to carry those resources to global markets. So it can easily be argued that comparing U.S./Canada Arctic development to Russia's is not a fair comparison. Russia has more economic activity in the Arctic than the United States does, and so it's no surprise its infrastructure is more advanced than ours. Russia also has by far the largest city on the Arctic Ocean (Murmansk, population 307,000). Russia has also announced plans for a series of search and rescue stations along the northern sea route, but those remain theoretical.

The website for the Arctic Maritime & Aviation Transportation Infrastructure Initiative has information on existing infrastructure across the Arctic: www.arcticinfrastructure.org

Will the border issue with Canada be addressed in the near future?
The Beaufort Sea border dispute between the United States and Canada involves an 8,276 square mile wedge north of Alaska and Yukon. Canada thinks the maritime boundary should be an extension in the same direction as the land boundary. The U.S. thinks the maritime boundary should extend along a path equidistant from the coasts of the two nations. The border dispute is mentioned in the United States National Strategy for the Arctic Region (NSAR) implementation plan. The co-chairs have no direct knowledge of when the dispute might be resolved.

Does the AAPC have a workplan for 2014? A draft of the 2014 workplan was sent to all Commissioners in January. When finalized, it will be posted to our website: www.akarctic.com. The workplan includes 3 full commission meetings in Kotzebue, Nome and Anchorage. Hearings for public testimony (to include commission updates) will be held in September and October. Public written comments will be received through May 15, 2014. Instructions for submittal are on our website.

What influence has the AAPC had on federal activities?
On June 28 of 2013, the Commission sent the White House and State Department a Letter of Intent, announcing the Commission and its goals (see www.akarctic.com). Soon after, the Co-chairs began having monthly teleconferences with the National Strategy for the Arctic Region Task Force leads (consisting of State Department and White House officials). The Task Force has proved very receptive of input from the AAPC. For example, the NSAR implementation plan included more direct mention of Arctic residents, and suggested increasing efforts to foster partnerships with Alaska Natives and the state of Alaska.

The Co-chairs think it's important for the AAPC to help shape federal policy and will continue to meet with NSAR team toward that end.

How do we support Alaskans to be involved in the Arctic Council working groups?
SJR 17/HJR 24 encourages the Legislature to support the strategic recommendations of the AAPC preliminary report, including continuing to "pursue, and actively expand, all avenues of participation in the Arctic Council, including involvement in working groups and by building partnerships with permanent participants."

Alaska can participate as part of US delegation in the Arctic Council and can supply technical experts. Alaska could also apply to be an observer, although there are no sub-national jurisdictions that are currently observers.

The Administration or the Legislature providing travel funding for indigenous groups to participate at Arctic Council meetings would also increase Alaskan involvement.

Where can we access other relevant Arctic documents, e.g. Canadian Arctic Policies?
The national strategies of all 8 Arctic nations are on the Commission's website: www.akarctic.com/national-arctic-strategies/.

The website also has a list of United States federal reports on the Arctic region: www.akarctic.com/federal-reports/.

Will the Commission work on Arctic Council themes for the US Chairmanship?
The Commission is not planning further work on Arctic Council themes for the US chairmanship. SJR 17/HJR 24, which incorporates work from the Commission, asks the Legislature to support four chairmanship priorities the Governor proposed to the United States Department of State in a letter of December 2012:

- Creating jobs and economic opportunity for Arctic residents;
- Preventing suicide;

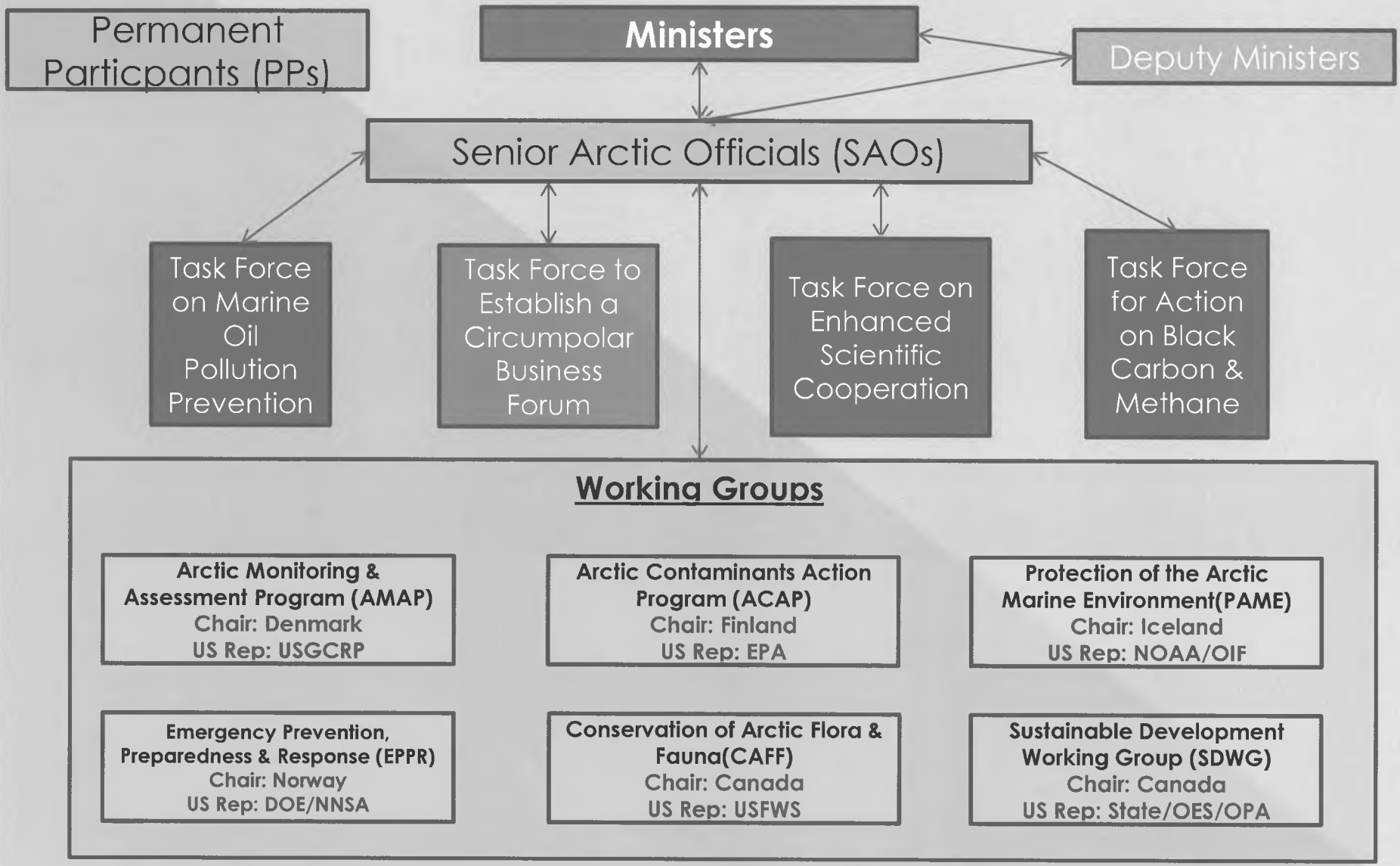
- Developing safe and sustainable sanitation facilities for small, isolated Arctic communities; and
- Securing safe and reliable shipping.

Can a deep draft port be federally funded without the state of Alaska having a Coast Zone Management Program (CZMP)?
A deep water port can still be funded with federal dollars without the state having a Coastal Zone Management Program; however, it makes it much harder for the Alaska Army Corps of Engineers to complete the necessary environmental permitting work. The NEPA coordination in particular is much more difficult without a central contact through the CZMP.

The deep draft port has a broad range of local, regional and tribal support. Without a CZMP, the City of Nome made the effort to reach out to coordinate much of this support.

Arctic Council Structure

2013 to 2015 Chairmanship: Canada



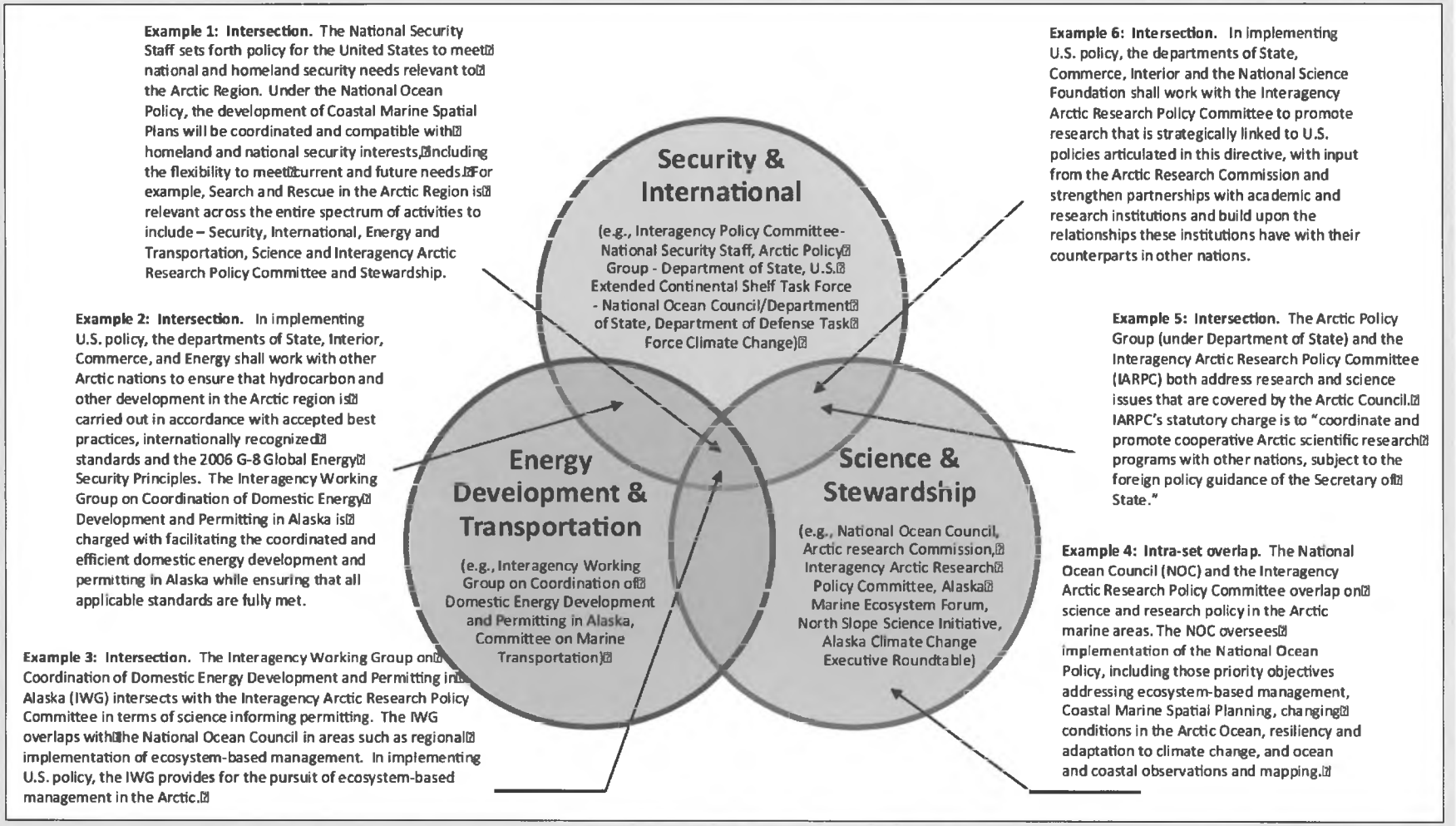
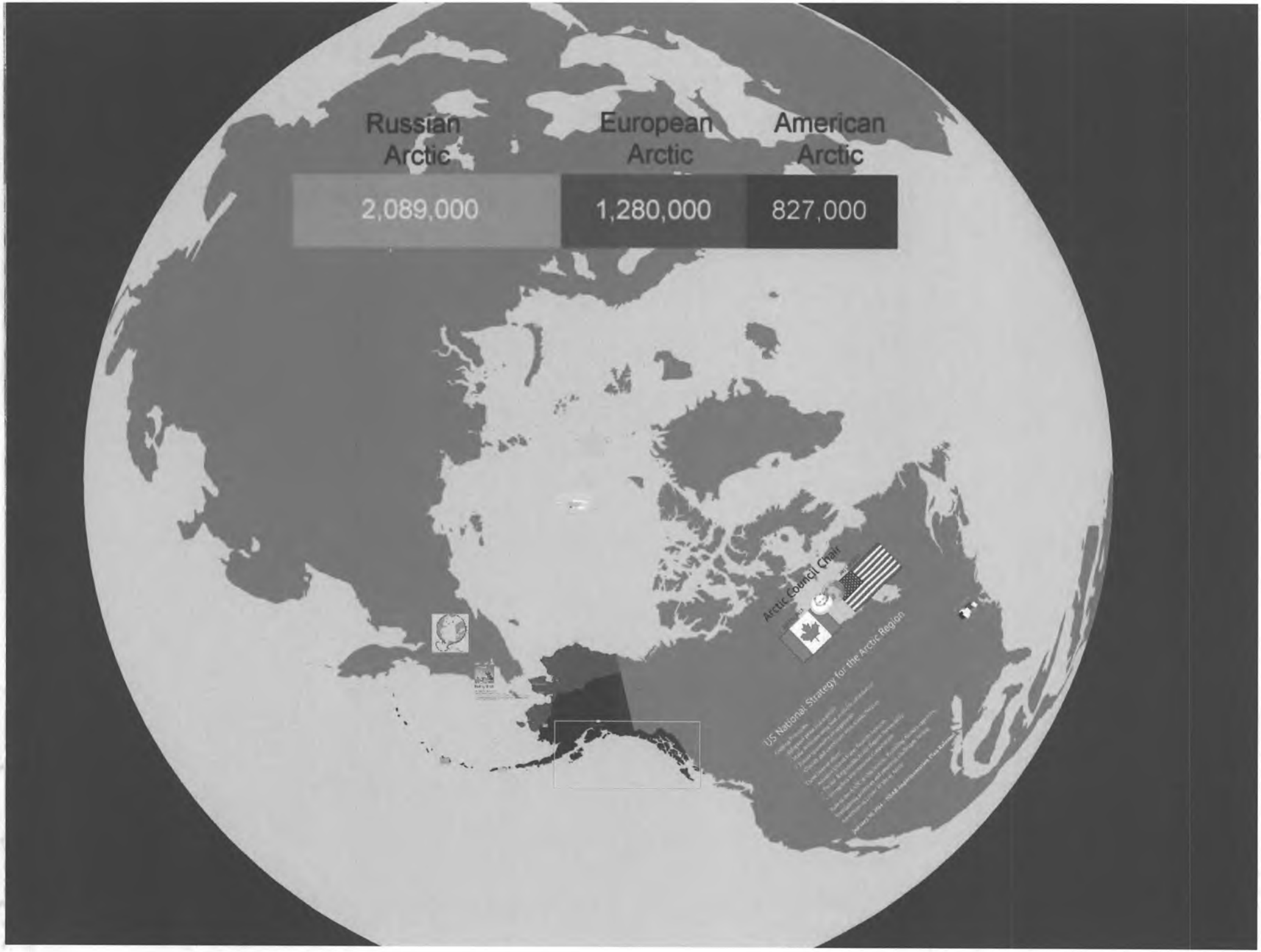


Figure 4.2. *Examples of the interrelationships among U.S. interagency Arctic activities. Areas of intersection or instances of intra-set overlap reflect U.S. policy and associated implementation guidance as articulated consistently across various authorities. The examples below are neither exhaustive nor intended to emphasize a particular policy consideration. They are presented for informational purposes only. Figure courtesy of the Interagency Arctic Research Policy Committee and the National Ocean Council.*



Alaska Arctic Policy Commission
Senate World Trade and House Economic Dev., Trade & Tourism Committees

Juneau, Alaska | February 4, 2014


Russian Arctic
2,089,000
European Arctic
1,280,000
American Arctic
827,000
Arctic Council Chair
US National Strategy for the Arctic Region





Bering Strait

STRATEGIC RECOMMENDATIONS:

Response Operations: Search and Rescue/Oil Pollution

- Encourage and advocate for more adequate funding so that the U.S. Coast Guard can carry out its assigned and emerging duties in the U.S. maritime Arctic; evaluate ongoing requirements to upgrade or construct all resources throughout Alaska

Port Clarence

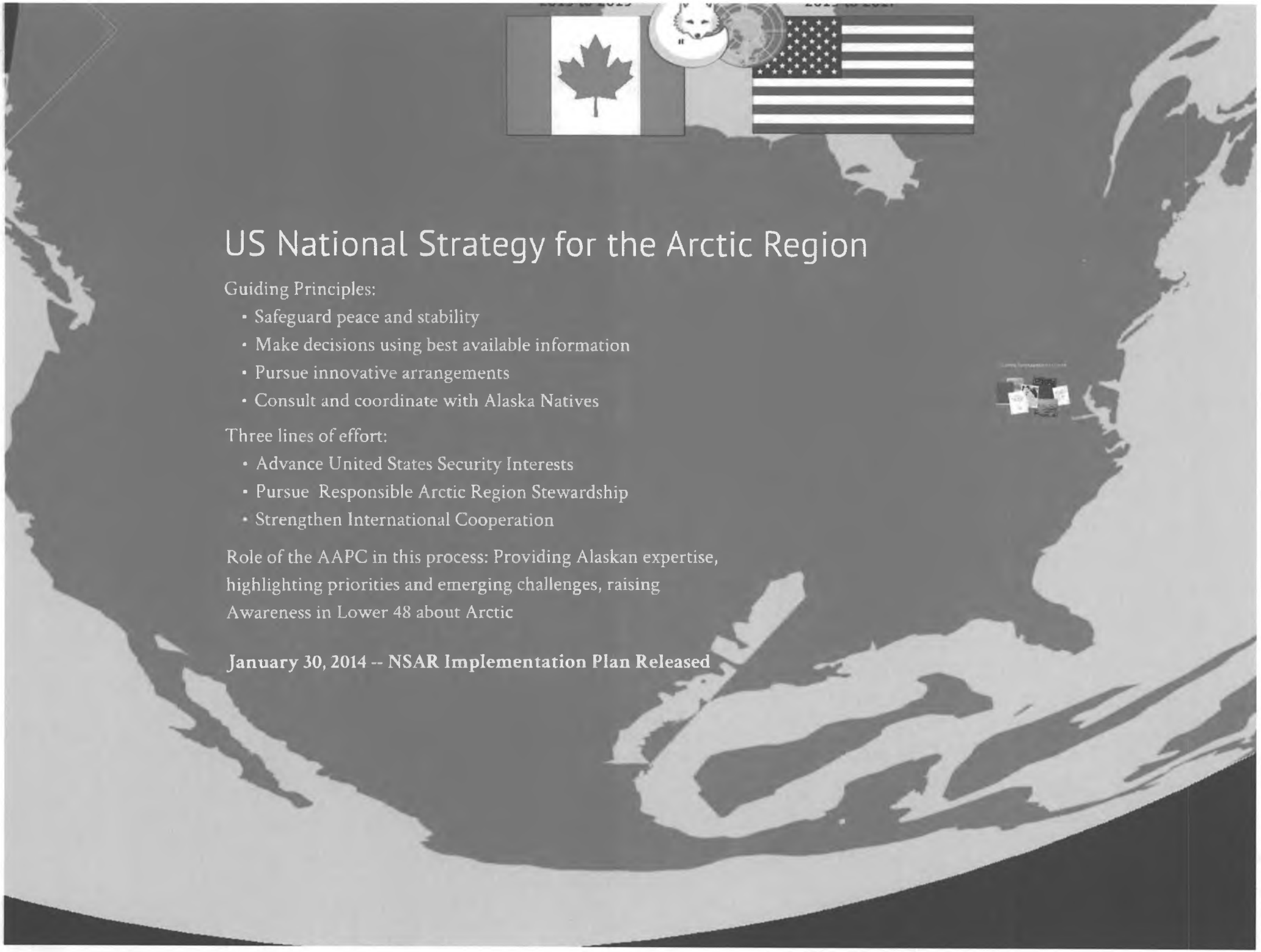
Nome

Anchorage

Juneau

DC Giving More Attention to the Arctic





US National Strategy for the Arctic Region

Guiding Principles:

- Safeguard peace and stability
- Make decisions using best available information
- Pursue innovative arrangements
- Consult and coordinate with Alaska Natives

Three lines of effort:

- Advance United States Security Interests
- Pursue Responsible Arctic Region Stewardship
- Strengthen International Cooperation

Role of the AAPC in this process: Providing Alaskan expertise, highlighting priorities and emerging challenges, raising Awareness in Lower 48 about Arctic

January 30, 2014 -- NSAR Implementation Plan Released

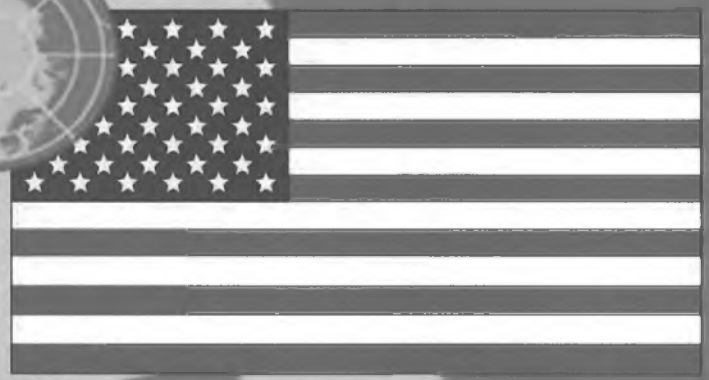
Arctic Council Chair

2013 to 2015

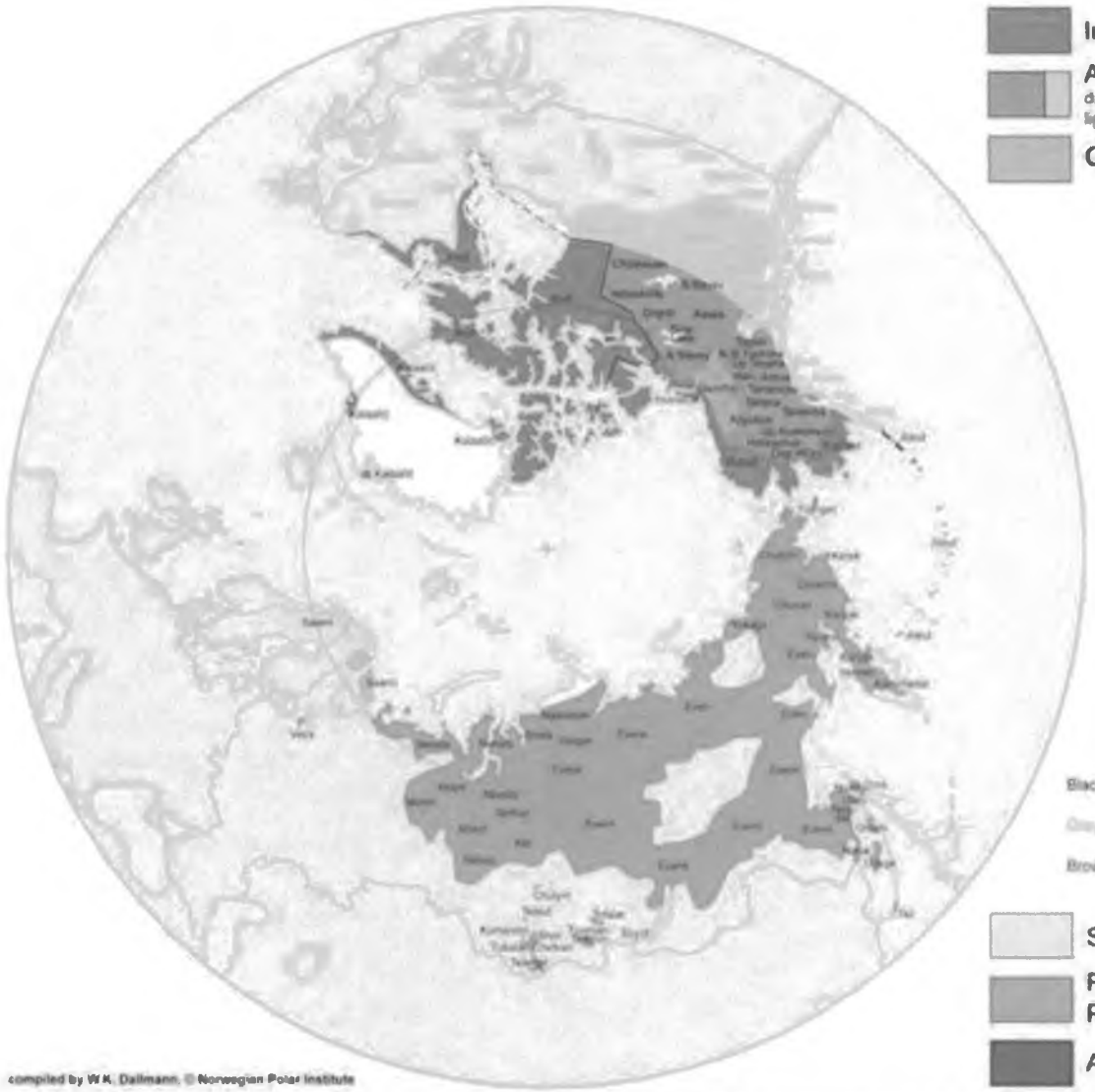




2015 to 2017



Strategy for the Arctic Region



Inuit Circumpolar Conference (ICC)

Arctic Athabaskan Council (AAC)
dark: area of potential member communities (north of 60°)
light and dark: Athabaskan cultural area

Gwich'in Council International (GCI)

Permanent Participants of the Arctic Council

Permanent participation is equally open to other Arctic organizations of indigenous peoples with majority Arctic indigenous constituency, representing:

a. a single indigenous people resident in more than one Arctic State; or
b. more than one Arctic indigenous people resident in a single Arctic State.

Black	Indigenous peoples represented by the Permanent Participants
Grey	Other indigenous peoples living in Arctic Council member countries (for USA: only Alaska)
Brown	Potential member groups of the AAC. The AAC represents selected communities, not peoples.

Saami Council (SC)

Russian Association of Indigenous Peoples of the North (RAIPON)

Aleut International Association (AIA)

compiled by W.K. Dallmann, © Norwegian Polar Institute



Arctic Council Membership

Alaska Arctic Policy Commission

26-member Commission formed within the Alaska Legislature in April 2012:

5 Senators and 5 Representatives

1 Executive branch member appointed by the Governor

15 Members appointed jointly by the President and the Speaker:

- Federal government
- A tribal entity
- Mining industry
- Oil & gas industry
- An Alaskan university or college
- Fisheries
- A local government
- A coastal community
- An int'l Arctic organization
- A conservation group
- Marine transportation industry
- A Native corporation
- Marine pilots



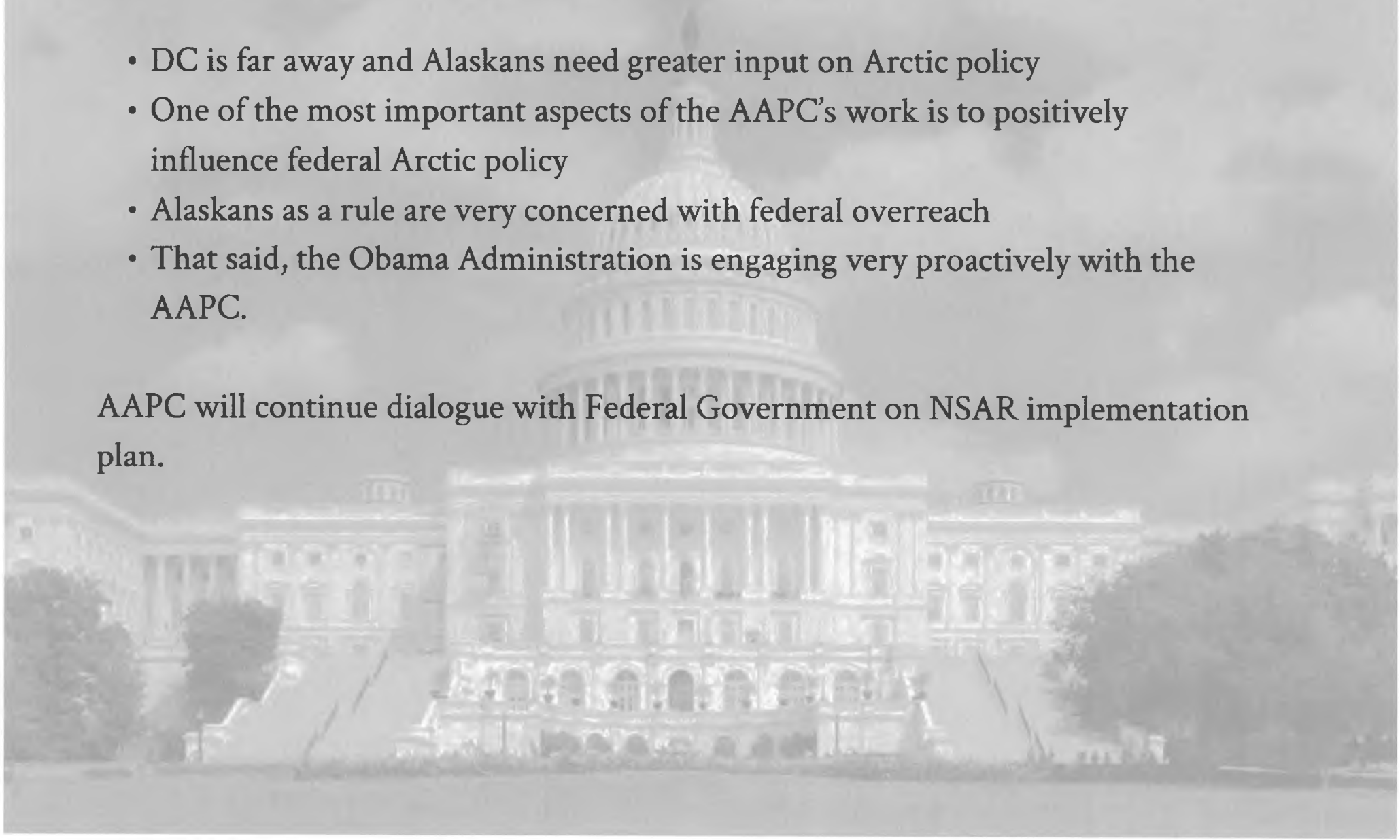
How the Commission can work for Alaskans

- Provide forum for public input on Arctic issues
- Set guiding Arctic policy principles for possible inclusion in state statute
- Create detailed Alaska Arctic policy report to inform the public and future policy-makers (Preliminary released 1.30.2014 and final due 1.30.2015)

How the Commission Can Work with the US Federal Government

- DC is far away and Alaskans need greater input on Arctic policy
- One of the most important aspects of the AAPC's work is to positively influence federal Arctic policy
- Alaskans as a rule are very concerned with federal overreach
- That said, the Obama Administration is engaging very proactively with the AAPC.

AAPC will continue dialogue with Federal Government on NSAR implementation plan.



AAPC Letter of Intent

Sent to State Department and White House on 6.28.13

Early letter from AAPC was necessary due to the recent flood of federal Arctic policies and strategies

KEY ASSUMPTIONS:

- State Leadership and Experience Valuable
- Need for Federal/State/Local collaboration
- Need for International Engagement and Governance

EIGHT AREAS OF CONSIDERATION:

- Indigenous Perspectives and Priorities
- Governance
- Oil, Gas, and Mineral Exploration and Development
- Science and Research
- Energy
- Planning & Infrastructure
- Security & Marine Transportation
- Fisheries

AAPC Vision Statements



Values community sustainability and thriving cultures



Ensures public safety and security

ALASKA ARCTIC POLICY COMMISSION



Advances economic development and a healthy environment



Incorporates transparency and inclusion into decision making

Strategic Recommendations

Chosen based on high-impact and reasonable effort to implement

16 Strategic Recommendations in these areas:

- Governance and Indigenous Perspectives
- Science and Research
- Planning and Infrastructure
- Oil, Gas, and Mineral Resources
- Security and Defense
- Marine Transportation
- Response Operations: Search and Rescue/Oil Pollution
- Energy and Power
- Fisheries and Wildlife

We'll highlight some specific Recommendations later in the presentation

Barrow

AAPC MEETING, JUNE 12 - 13

Arctic residents stressed the importance of:

- Governance begins at the local level
- Economic development should benefit communities nearest the impact, and include community revenue-sharing
- Food security is a priority
- Research should focus on people and their needs
- Onshore (ANWR, etc.) should be drilled before offshore areas

STRATEGIC RECOMMENDATIONS:

Oil, Gas, and Mineral Resources

- Implement regional planning efforts that allow local stakeholders to identify and communicate priorities such as education, infrastructure, and development, to state and federal agencies.
- Develop a mechanism for revenue sharing from resource extraction for impacted communities, developing perpetual trust funds (where lacking) to finance community needs beyond the life of non-renewable resources.

Unalaska

AAPC MEETING AUGUST 28-29

Dutch Harbor:

- Largest port by seafood volume in US
- Alaska's only true Arctic deep-water port
- Issues related to increased port traffic
- Environmental impact
- Infrastructure needs
- Foreign vessels

STRATEGIC RECOMMENDATIONS:

Marine Transportation

- Encourage development of appropriately integrated systems to monitor and communicate Arctic marine information, and continue state and federal support for programs such as the Alaska Marine Exchange.

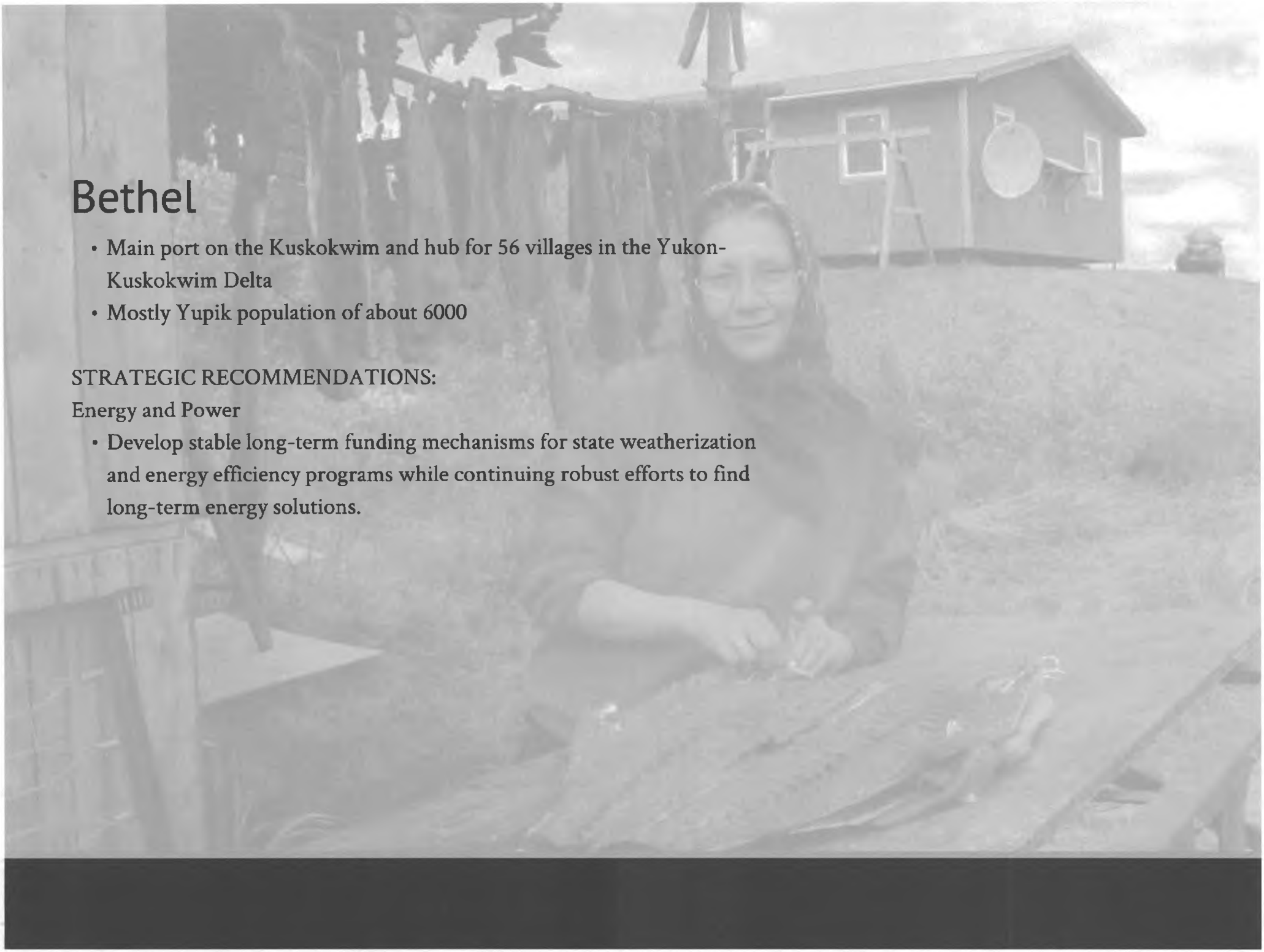
Adak

- Westernmost municipality in the United States
- Former location of the Adak Army Base and Adak Naval Operation Base

STRATEGIC RECOMMENDATIONS:

Planning and Infrastructure

- Conduct a comprehensive Arctic region economic and infrastructure assessment and planning process that integrates local, regional, state and federal planning efforts.



Bethel

- Main port on the Kuskokwim and hub for 56 villages in the Yukon-Kuskokwim Delta
- Mostly Yupik population of about 6000

STRATEGIC RECOMMENDATIONS:

Energy and Power

- Develop stable long-term funding mechanisms for state weatherization and energy efficiency programs while continuing robust efforts to find long-term energy solutions.

Nome

Alaska Dept. of Transportation/US Army Corps of Engineers study is seeking the best location for Alaska Arctic Port. An initial feasibility study is directed at a dual-system for Nome and Port Clarence area.

STRATEGIC RECOMMENDATIONS:

Response Operations: Search and Rescue/Oil Pollution

- Facilitate and secure public and private investment in support of critical aviation and maritime response infrastructure and economic development, to include consideration of direct state funding and/or public-private partnerships that address development of communications, a deep draft port(s), icebreaker(s), logistics hubs, and a WX C-130 size aircraft hangar(s).
- Expand and support the Department of Environmental Conservation's effort to involve communities through Sub-area Planning and provide local training to maintain limited supplies of oil spill response equipment and to ensure timely, effective and safe response and spill containment.



Bering Strait

STRATEGIC RECOMMENDATIONS:

Response Operations: Search and Rescue/Oil Pollution

- Encourage and advocate for more adequate funding so that the U.S. Coast Guard can carry out its assigned and emerging duties in the U.S. maritime Arctic without compromising its capacity to conduct all missions throughout Alaska.

Port Clarence

Nome

Fairbanks

AAPC MEETING OCTOBER 22-23, 2013

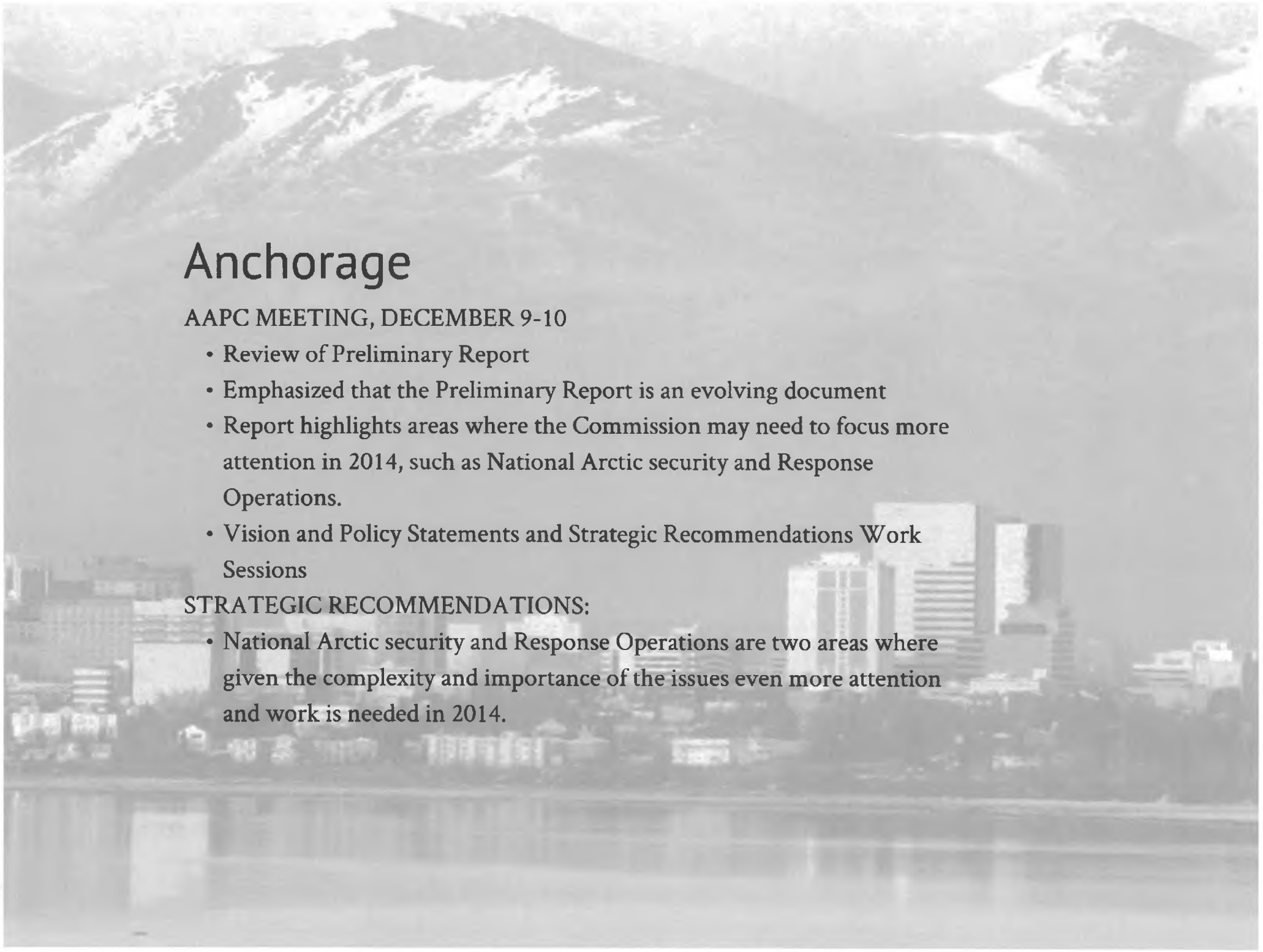
- Hosted by University of Alaska Fairbanks, a center for Arctic research
- Meeting aligning with the Alaska Federation of Natives Annual Convention, October 24-26

STRATEGIC RECOMMENDATIONS:

Science and Research

- Increase state funding to, and partnership with, the University of Alaska for Arctic research that aligns with state priorities and leverages the University's exceptional facilities and academic capacity.
- State agencies should consider adapting successful models – such as the Alaska Department of Environmental Conservation and Yukon-Koyukuk Tribal Communications Protocol – to development agreements with local governments and tribes regarding the use of traditional knowledge and culturally sensitive practices in research and permitting programs.

Photo Credit: Kenneth Tape



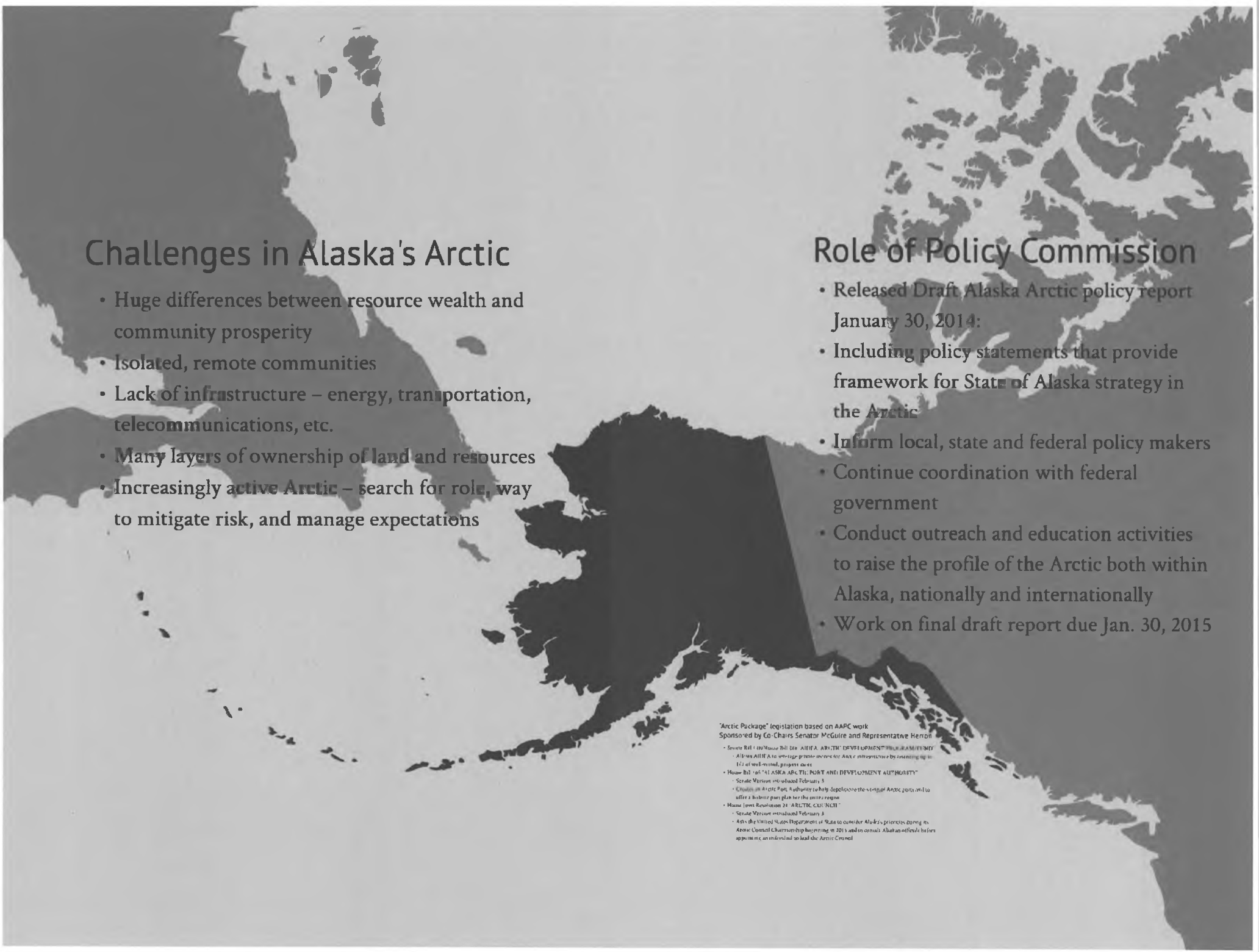
Anchorage

AAPC MEETING, DECEMBER 9-10

- Review of Preliminary Report
- Emphasized that the Preliminary Report is an evolving document
- Report highlights areas where the Commission may need to focus more attention in 2014, such as National Arctic security and Response Operations.
- Vision and Policy Statements and Strategic Recommendations Work Sessions

STRATEGIC RECOMMENDATIONS:

- National Arctic security and Response Operations are two areas where given the complexity and importance of the issues even more attention and work is needed in 2014.



Challenges in Alaska's Arctic

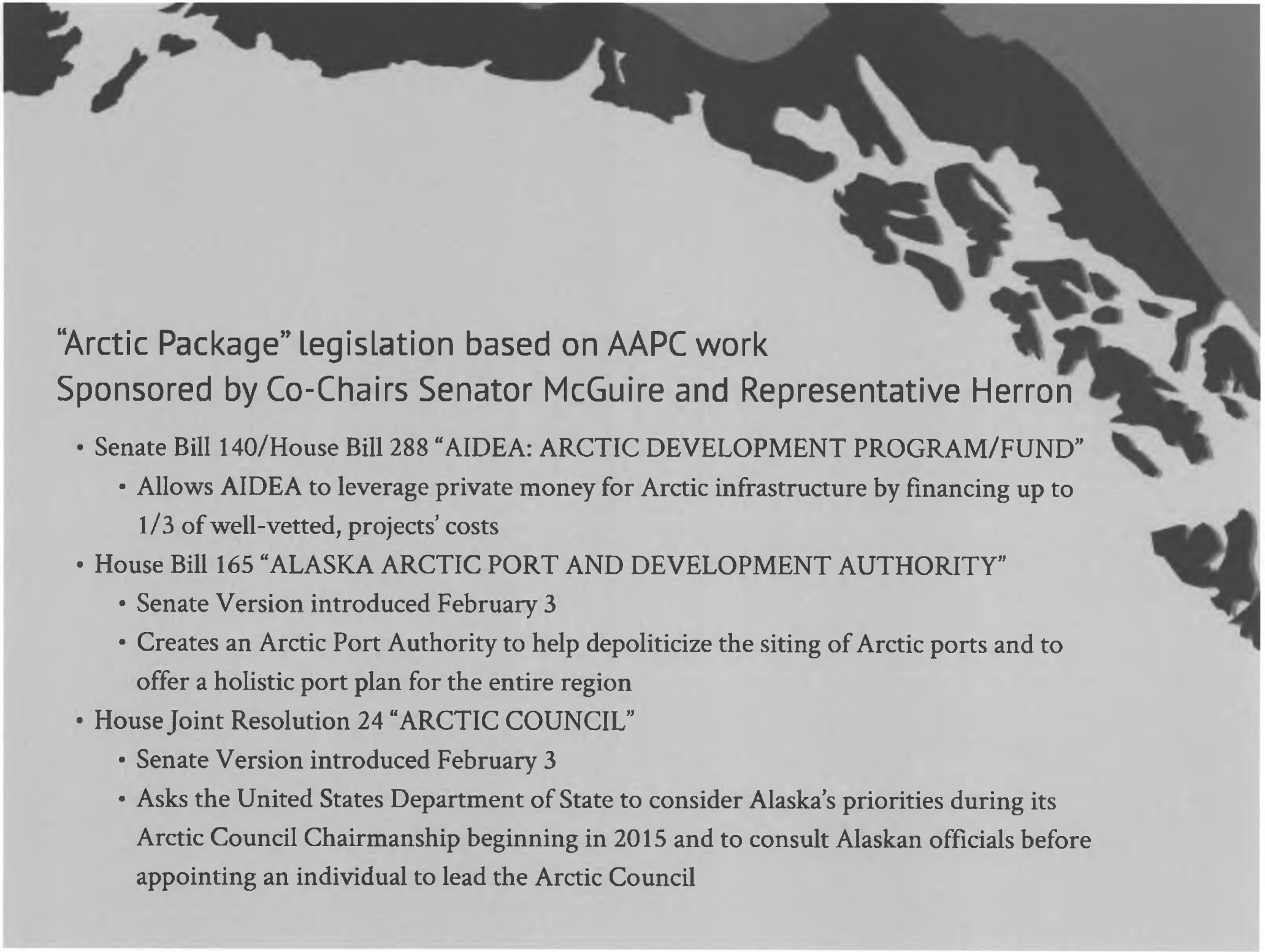
- Huge differences between resource wealth and community prosperity
- Isolated, remote communities
- Lack of infrastructure – energy, transportation, telecommunications, etc.
- Many layers of ownership of land and resources
- Increasingly active Arctic – search for role, way to mitigate risk, and manage expectations

Role of Policy Commission

- Released Draft Alaska Arctic policy report January 30, 2014:
- Including policy statements that provide framework for State of Alaska strategy in the Arctic
- Inform local, state and federal policy makers
- Continue coordination with federal government
- Conduct outreach and education activities to raise the profile of the Arctic both within Alaska, nationally and internationally
- Work on final draft report due Jan. 30, 2015

"Arctic Package" legislation based on AAPC work
Sponsored by Co-Chairs Senator McGuire and Representative Herron

- Senate Bill 138/House Bill 216 "ARCTIC DEVELOPMENT [illegible]"
  - Allows AIDEA to leverage private money for Arctic infrastructure by investing up to [illegible] of well-vetted, projects cases
- House Bill 196 "ALASKA ARCTIC PORT AND DEVELOPMENT AUTHORITY"
  - Senate Version introduced February 3
  - Creates an Arctic Port Authority to help [illegible] of Arctic ports and to offer a holistic port plan for the entire region
- House Joint Resolution 24 "ARCTIC COUNCIL"
  - Senate Version introduced February 3
  - Asks the United States Department of State to consider Alaska's priorities during its Arctic Council Chairmanship beginning in 2015 and to consult Alaskan officials before appointing an individual to lead the Arctic Council



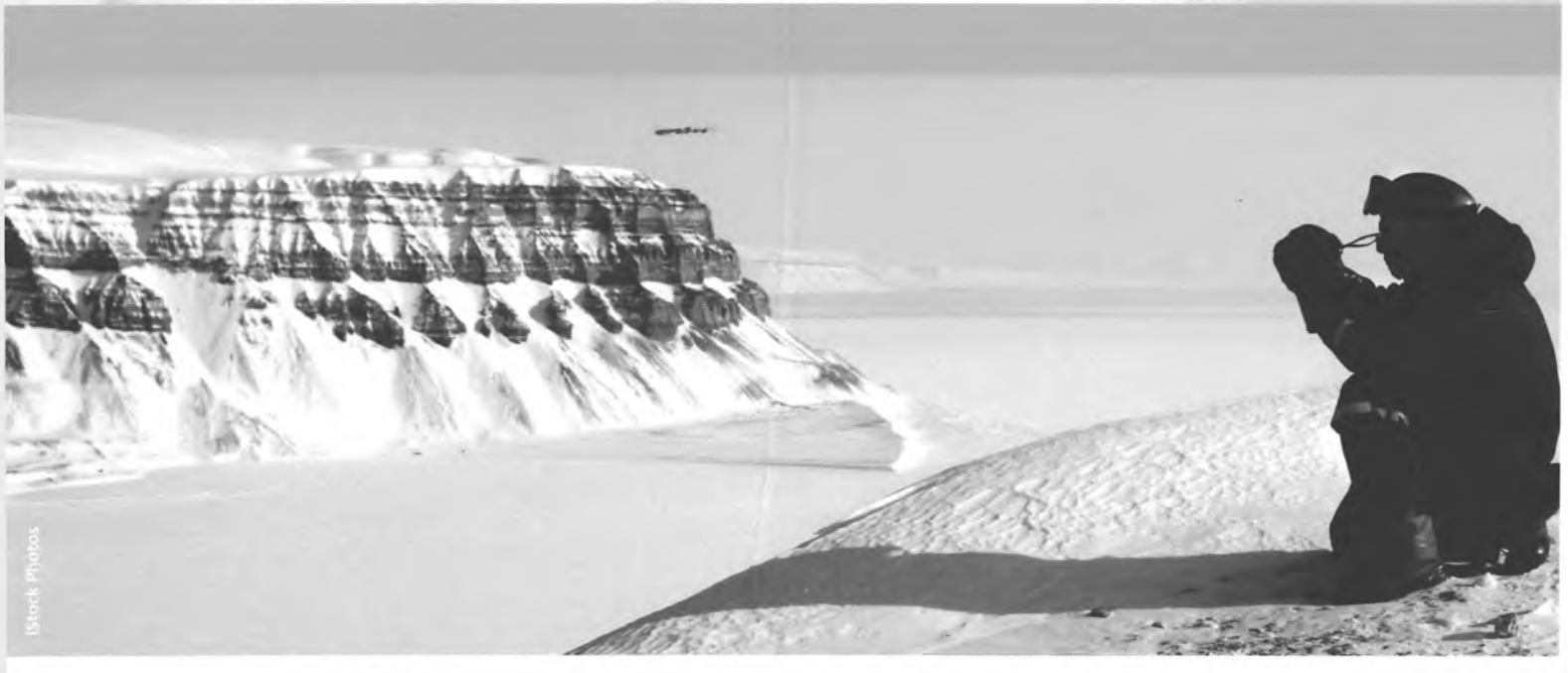
"Arctic Package" legislation based on AAPC work
Sponsored by Co-Chairs Senator McGuire and Representative Herron

- Senate Bill 140/House Bill 288 "AIDEA: ARCTIC DEVELOPMENT PROGRAM/FUND"
  - Allows AIDEA to leverage private money for Arctic infrastructure by financing up to 1/3 of well-vetted, projects' costs
- House Bill 165 "ALASKA ARCTIC PORT AND DEVELOPMENT AUTHORITY"
  - Senate Version introduced February 3
  - Creates an Arctic Port Authority to help depoliticize the siting of Arctic ports and to offer a holistic port plan for the entire region
- House Joint Resolution 24 "ARCTIC COUNCIL"
  - Senate Version introduced February 3
  - Asks the United States Department of State to consider Alaska's priorities during its Arctic Council Chairmanship beginning in 2015 and to consult Alaskan officials before appointing an individual to lead the Arctic Council

ALASKA ARCTIC POLICY COMMISSION

Preliminary Report
to the Alaska State Legislature

Executive Summary



iStock Photos



Alaska Arctic Policy Commission

Co-Chair: Senator Lesil McGuire, Anchorage, 907.465.2995
Co-Chair: Representative Bob Herron, Bethel, 907.465.4942

January 30, 2014

Dear Alaskans,

Alaska is America's Arctic, and the Arctic is changing. All eyes are on this vast, bountiful, and sparsely populated region – this creates new opportunities, and new challenges for Alaska. Across the Arctic and around the world, we have articulated a vision of this region as a vibrant place of activity and possibility. To envision these emerging opportunities is a good start, now we must help bring them to life for the benefit of Alaska and America.

Alaskans must boldly lead the United States in forming a strategy for its Arctic that realizes the state's prominent role in Arctic decision making. Alaskans have a shared responsibility to understand the issues at stake, including the perspectives and priorities of Arctic residents, and to set a clear course for leadership now and into the future.

Planting a flag in the Arctic is like planting a flag on the moon. It is an important symbolic message telling us to push boundaries and move with purpose toward Arctic endeavors. If we can conceive of the Arctic in a new way, a way that mirrors the reality and the way it ought to be—a place of unsurpassed beauty, culture and opportunity—then that is what the Arctic shall be.

Our timely report is consistent with the interest and commitment that our neighbors in the circumpolar north have shown in developing Arctic policies for their homelands. In addition, it coincides with the warranted but past due attention that the United States has given the topic in the last twelve months.

It is our job as Alaskans to seize these new opportunities, while at the same time overcoming new challenges and obstacles. We have trekked far and wide to ensure we received input from Alaskans around our state including Juneau, Barrow, Unalaska, Fairbanks and Anchorage in 2013, with visits to other locations planned in 2014.

2014 is the Year of the Arctic for the Alaska Legislature. There is a need to make sure Alaska is in the captain's seat as arctic decisions are made that will affect all Alaskans today and for hundreds of years to come.

If we act now, we have an opportunity to set the heading. The United States will be Chair of the Arctic Council in two years and it is imperative for Alaskans to develop and pursue our own Arctic vision. We must strive to be the navigator of the Arctic policy vessel.

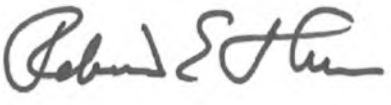
This monumental undertaking of shaping an Arctic policy cannot be understated. It is easy for vision and leadership to be lost in the complexity of the task. However, we are not lost if we know where we have been, where we are, and where we are headed. This Preliminary Report acknowledges the first, provides a brief overview of the second, and begins to lay out clear guidelines and direction for the third.

To the legislators reading this, we ask you to take the time during this busy legislative session to provide critical and constructive feedback. Your input will help ensure that the Commission has the information it needs to draft what will become a determining and significant policy and implementation plan that shapes Alaska's future and benefits Arctic residents, citizens of the United States, and visitors who share its waters and land.

As fellow Alaskans, we know you recognize that with increasing activity in the region comes both risk and opportunity. We cannot let the perceptions of others determine Alaska's future. The Alaska Arctic Policy Commission is proud to provide this Preliminary Report of the findings and recommendations we have reached over this past year. We hope that you will view this Preliminary Report as a guide for maximizing opportunities and overcoming challenges that come with accepting our role as America's Arctic state.

Our fellow Commissioners, and many other Alaskans who have provided input, deserve our gratitude for their hard work and patience as together we have crafted this document. We look forward to 2014 when we will be gathering more public input, finalizing this report, seeking your "Arctic" appreciation, and producing a strategy for the implementation of Alaska's Arctic policy.

Sincerely,



Representative Bob Herron

Sincerely,



Senator Lesil McGuire

Alaska Arctic Policy Commission



Senator Lesil McGuire
Anchorage
Commission Co-Chair



Representative Bob Herron
South Bering Sea
Commission Co-Chair



Senator Lyman Hoffman
Bethel



Senator Gary Stevens
Kodiak



Senator Cathy Giessel
Anchorage



Senator Donny Olson
Golovin



Representative Alan Austerman
Kodiak



Representative Beth Kerttula
Juneau



Representative Mark Neuman
Big Lake



Representative Bryce Edgmon
Dillingham



Nils Andreassen
Institute of the North
Executive Director
International Arctic Organization Representative



Dr. Lawson Brigham
Distinguished Professor
University of Alaska Fairbanks
University Representative



Peter Garay
American Pilots Association Delegate
Marine Pilots Representative



Chris Hladick
Unalaska City Manager
Local Government Representative



Layla Hughes
Conservation Group Representative



Mayor Reggie Joule
The Native Village of Kotzebue
Kotzebue IRA
Tribal Entity Representative



Stephanie Madsen
Executive Director
At-Sea Processors Association
Fisheries Representative



Denise Michels
City of Nome Mayor
Coastal Community Representative



Liz Qaulluq Moore
Senior Director, Community & Government Affairs
NANA Regional Corporation
ANCSA Corporation Representative



Stefanie Moreland
Special Assistant to Governor Sean Parnell
Governor's appointee



Lisa Pekich
Director of Village Outreach
ConocoPhillips Alaska
Oil & Gas Industry Representative



Pat Pourchot
Special Assistant to the Secretary of the Interior
Federal Government Representative



Steve Scalzo
Foss Marine Holdings COO
Marine Transportation & Logistics Representative



Stephen Trimble
President
Trimble Strategies
Mining Industry Representative



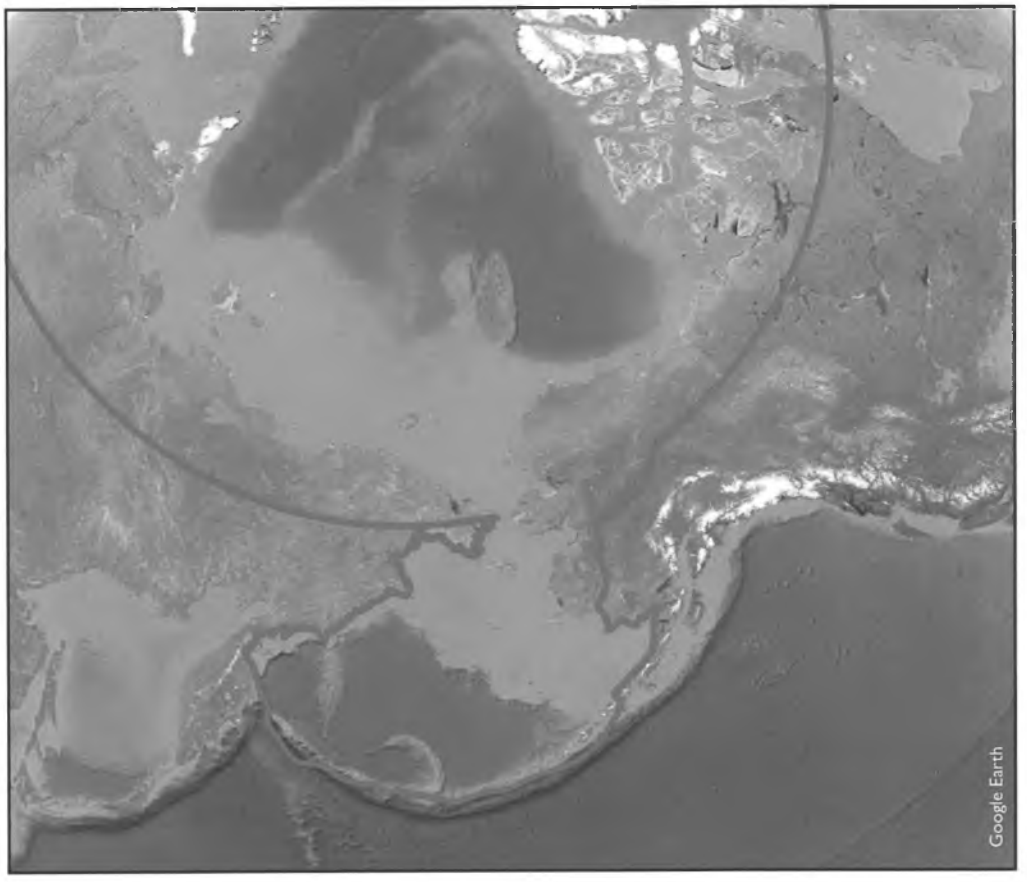
Jake Adams
Board Member
Arctic Slope Regional Corporation



Kris Norosz
Government Affairs Director
Icicle Seafoods, Inc.

We would also like to specifically thank these individuals for their input and guidance: Lt. Governor Mead Treadwell; USARC Chair Fran Ulmer; US Coast Guard District 17 Rear Admiral Thomas P. Ostebo; US Coast Guard Arctic Planning/Coordination James Robinson; Arctic Circle Co-founder Alice Rogoff; former Alaska Senate President Drue Pearce; and former Department of Natural Resources Commissioner Dan Sullivan.

Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)



All United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.

The Aleutian chain boundary is demarcated by the 'Contiguous zone' limit of 24-nautical miles.

Northern Hemisphere by Coven's and Mortier (1741)



This map was originally drawn by Guiluame de L'Isle in 1714 and updated by Coven's and Mortier in 1741. This map shows North America at the height of the Colonial period. Alaska does not appear as it was not explored by the Europeans at the time.

Note: California is drawn connected to the mainland with a dotted line- indicating that the European map publishers were not yet prepared to give up on the idea that California was an island.

As befits De Lilsle's scientific approach to cartography much of the unexplored northwest of America remains blank.

Introduction

In years to come, Alaskans may ask how citizens of the state - and their government - are working to deal with massive changes coming to the Arctic region. This report of the Alaska Arctic Policy Commission shows that Alaska's leaders are working to understand the local, national, and global impact of an actively changing Arctic. Alaskans are on the forefront of new exploration and use of Arctic resources, and of new circumpolar cooperation.

Alaskans continue to dream big about the possibilities that come with an accessible Arctic, building on the vision and hard work of peoples who have lived here for thousands of years and many more who have contributed to exploring and pioneering in the region. The cultural traditions, beliefs, and practices that have sustained us must themselves be sustained. Alaska's leaders are working to make sure that happens.

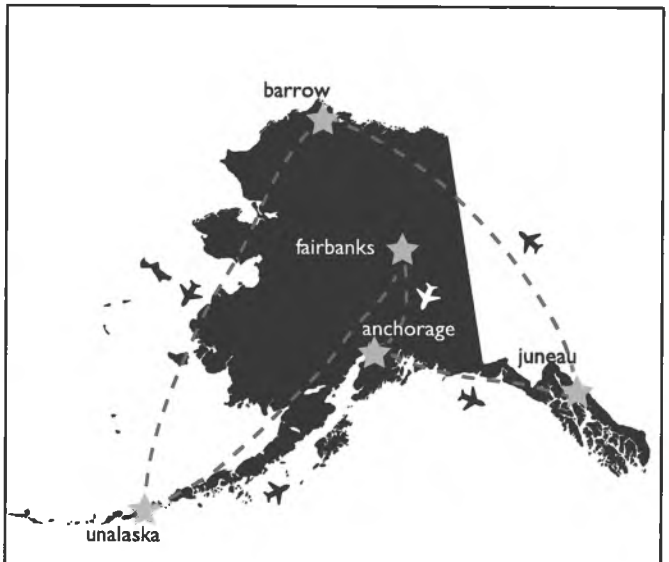
Leaders in Norway, Denmark, Sweden, Finland, Iceland, Russia and Canada - and even non-Arctic nations like Singapore and China - all see the value of the Arctic. Meanwhile, many Americans still do not realize that the United States is an Arctic nation. Providing relevant information about the reality of the emerging Arctic, understanding and communicating the critical issues that affect this frontier, and instilling confidence in the promise of safety and prosperity is essential as Alaska and America move forward to ensure both.

The Alaska Arctic Policy Commission

In April 2012, the Alaska State Legislature established the Alaska Arctic Policy Commission to "develop an Arctic policy for the state and produce a strategy for the implementation of an Arctic policy." To accomplish these objectives the Commission has conducted a baseline review of the Alaskan Arctic by evaluating strengths, gaps and opportunities, and produced this *Preliminary Report* to the Alaska Legislature. The *Preliminary Report* sets forth a proposed Arctic policy and recommendations, from which Alaska's perspectives and priorities can be better understood by the many decision makers playing active roles in a rapidly changing Arctic.

As highlighted in the Commission's Letter of Intent to Secretary Kerry and National Security Advisor Rice (June 28, 2013), the Commission operated under the "conviction that the state is an active and willing leader and partner in Arctic decision making, bringing expertise and resources to the table." Furthermore, the Commission remains "committed to producing a vision for Alaska's Arctic that stands the test of time; delivering policy statements that capture not only the opportunity of the Arctic but also the need to mitigate the challenges; and completing a final product that elevates the priorities and perspectives of Alaskans to a national and international stage."





The Commission met in 5 locations during 2013.



The Commission has considered a broad diversity of perspectives, drawing from a wealth of expertise within Alaska, while considering the national and international context of ongoing Arctic initiatives. The *Preliminary Report* includes a "State of Alaska's Arctic" chapter that summarizes the Commission's findings and which serves as the basis for its recommendations. The *Preliminary Report* should be considered a draft, with public comment and additional work to be completed throughout 2014 and incorporated into the Final Report.

The Alaskan Arctic

Alaska is the sole reason the U.S. is an Arctic nation. Alaska holds 56% of U.S. coastline, and is 1/5 the size of the entire U.S. with 61.8% of its lands under the control of the Federal Government. Approximately 53,000 people out of Alaska's total population of 740,000 live in the Arctic region, which has a diverse and fragile ecosystem with considerable natural resource potential. Indigenous peoples have occupied the Alaskan Arctic for thousands of years and today account for about 70% of the total population in mainland areas bordering the Bering, Chukchi, and Beaufort Seas. Local, state, federal and tribal governments; Alaska Native Corporations; and industry have been active in the region for decades.

Increased Global Attention

The U.S. government and policymakers around the world have recently shown increased interest in the Arctic. A record number of non-Arctic nations were granted observer status at the 2013 Arctic Council Ministerial meeting and many of these nations have developed Arctic Strategies in recent years. This interest is due in large part to significant changes experienced by the region in the last decade, particularly environmental changes such as rapid loss of summer sea ice and melting permafrost. With these developments come a series of new challenges and opportunities with respect to the health, economies, and cultures of Arctic inhabitants; environmental impacts; access to natural resources; commercial shipping and tourism; and security.

Seeking Cohesive Policy in the U.S.

Alaska and U.S. domestic Arctic policy must be coordinated and aligned to achieve key objectives for the benefit of Alaskans and the nation. U.S. international Arctic policy should be a direct extension of sound domestic policy that has meaningful input from, and is endorsed by, Alaskans.

The Alaska Arctic Policy Commission was formed partially in response to efforts by the U.S. government to refine its Arctic policy. It is imperative that U.S. policy for the Arctic reflects the values and interests of Alaskans. The need for Alaska to influence national Arctic policy is about more than informed decision making. A top-down approach to U.S. Arctic policy that fails to build on the substantial knowledge (both traditional and scientific) and expertise of Alaskans would be counterproductive, inefficient, and lack legitimacy in the eyes of Alaskans.

Scope of Issues Addressed by the Commission

For the purposes of its work, the Commission applied the geographic definition of the U.S. Arctic set out in the Arctic Research and Policy Act (ARPA), henceforth called the Alaskan Arctic – from the Aleutians to the Canadian border, west and north of the Porcupine, Yukon and Kuskokwim



rivers. The Commission acknowledges that there are other ways to define the Arctic. For example, some definitions focus on the physical properties of the area, specifically the Arctic cryosphere (i.e., permafrost, sea ice, etc.), and others focus on geopolitical boundaries.

The Commission realizes that many issues facing the ARPA geographic area are similar to, or intertwined with, developments in other regions of Alaska. In fact, much of the dialogue around Arctic issues has relevance to geographic areas of Alaska found outside the "Alaskan Arctic" area as defined by the ARPA.

Although the challenges and opportunities of the Alaskan Arctic region cannot truly be separated from those of the state as a whole, the Commission has focused on those issues specific or unique to the Arctic region. The Commission did not wholly avoid statewide issues, but when those issues were addressed, they were examined based on how they related to the Arctic region in particular. Using the ARPA-delineated Arctic region also ensured that the Commission's work product would be in a form that is helpful to U.S. federal agencies, which draw a distinction between federal policy for the Alaskan Arctic and the rest of Alaska. The Commission recognizes that, especially from a national and international perspective, it is often necessary and beneficial for Alaska as a whole to be included in Arctic discussions.

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The Alaskan Arctic Vision Statement

The Alaska Arctic Policy Commission respectfully submits to the 28th Alaska State Legislature for careful consideration this draft policy statement to establish an Arctic Policy for the state of Alaska.

Alaskans recognize the need for a higher level of attention to and deeper understanding of the "emerging Arctic." Increasing activity, change and opportunity globalization and resource development, a sensitive environment and rich and diverse cultures are now framing the Arctic.

Therefore, the state of Alaska envisions an Arctic that:

- Values Community Sustainability and Thriving Cultures
  Alaska will continue to value and strengthen the sustainability of communities and respect and integrate Arctic peoples' cultures and knowledge.

- Advances Economic Development and a Healthy Environment
  Alaska will continue its commitment to economically vibrant communities sustained by development activities that recognize the need and our responsibility for a healthy environment.

- Ensures Public Safety and Security
  Alaska will provide a safe and secure Arctic for individuals and communities, and coordinate with federal agencies on national defense obligations to enhance Alaska security.

- Incorporates Transparency and Inclusion into Decision Making
  Alaska will collaborate with other levels of government, industry, non-governmental organizations, and tribes to achieve transparent and inclusive Arctic decision making that results in more informed, sustainable and beneficial outcomes.







Therefore, it is the policy of the state of Alaska, as it relates to the Arctic, to:

- Recognize and respect the values and perspectives of the region's indigenous peoples, their cultures, and traditional ways of living.
- Sustain current and develop new approaches for responding to a changing climate that increase community resilience, adaptability and sustainability, as well as promote health and social well-being.
- Manage Arctic fisheries and wildlife for abundance and sustained yield using a science-based, ecosystem approach that integrates local and traditional knowledge.
- Build capacity to conduct science and research and advance innovation and technology, consistent with emerging risk and opportunity in the Arctic, as part of a state-led collaborative effort.
- Ensure that impacted communities receive direct and indirect benefits from economic development activities, including employment and training opportunities that might come with new and different careers.
- Strengthen disaster prevention and emergency response capability by coordinating the necessary levels of public and private investment for infrastructure and equipment.
- Collaborate with industry, local government, and federal agencies, and consult with Arctic residents, to improve the efficiency of permitting and regulatory processes, as well as to foster a positive investment climate.
- Strengthen cross-border relationships with Canada and Russia and support international Arctic cooperation.
- Pursue opportunities to meaningfully participate as a partner in development of federal and international Arctic policies and incorporate state and local government knowledge and expertise.
- Employ integrated, strategic planning and consult with Arctic residents for scientific, local and traditional knowledge to meaningfully enhance Arctic decision making.
- Attract Arctic investment with a competitive business environment supported by strategic investment in Arctic communications, energy, maritime, and aviation infrastructure.
- Establish, support and maintain national, state, community and personal security and safety.

Strategic Recommendations

Commissioners have identified the following "strategic recommendations" as important for priority consideration given their potential scale of impact— responding to significant gaps and/or opportunities—and the degree to which their implementation is complex or difficult.

These have been selected as recommendations that would benefit from the attention of the 28th Alaska State Legislature with the hope that action might come sooner than later. *Note: The recommendations are grouped by section and are in the order that they appear in this report. Strategies for implementation of recommendations will be further developed in 2014, prior to the final report's delivery in 2015.*

Governance and Indigenous Perspectives

- Continue to pursue, and actively expand, all avenues of participation in the Arctic Council, including involvement in Working Groups and by building partnerships with Permanent Participants.

- Develop, where lacking, and build upon existing programs to improve transparency and community/local inclusion in decision making through state coordination of multi-agency permits, state and federal coordination of permits and plans, and meaningful involvement of regional stakeholders in development activities or plans that affect them.

Science and Research

- Increase state funding to, and partnership with, the University of Alaska for Arctic research that aligns with state priorities and leverages the University's exceptional facilities and academic capacity.

- State agencies should consider adapting successful models—such as the Alaska Department of Environmental Conservation and Yukon-Koyukuk Tribal Communications Protocol—to development agreements with local governments and tribes regarding the use of traditional knowledge and culturally sensitive practices in research and permitting programs.







Planning and Infrastructure

- Conduct a comprehensive Arctic region economic and infrastructure assessment and planning process that integrates local, regional, state and federal planning efforts.

- Encourage the development of an inter-agency and inter-governmental working group tasked with working with multiple levels of stakeholders to develop and implement a prioritization, funding and implementation mechanism for constructing and maintaining infrastructure and economic development.

Oil, Gas, and Mineral Resources

- Implement regional planning efforts that allow local stakeholders to identify and communicate priorities such as education, infrastructure, and development, to state and federal agencies.

- Develop a mechanism for revenue sharing from resource extraction for impacted communities, developing perpetual trust funds (where lacking) to finance community needs beyond the life of non-renewable resources.

Security and Defense

Due to the complexity and importance of National Arctic security issues the Commission decided that this area warrants more attention than they were able to give it. National Arctic security issues will be reviewed for the DOD agencies and the Coast Guard during 2014.

Marine Transportation

- Encourage development of appropriately integrated systems to monitor and communicate Arctic marine information, and continue state and federal support for programs such as the Alaska Marine Exchange.

Response Operations:

Search and Rescue/Oil Pollution

- Facilitate and secure public and private investment in support of critical aviation and maritime response infrastructure and economic development, to include consideration of direct state funding and/or public-private partnerships that address development of communications, a deep draft port(s), icebreaker(s), logistics hubs, and a WX C-130 size aircraft hangar(s).

- Encourage and advocate for more adequate funding so that the U.S. Coast Guard can carry out its assigned and emerging duties in the U.S. maritime Arctic without compromising its capacity to conduct all missions throughout Alaska.

- Expand and support the Department of Environmental Conservation's effort to involve communities through Sub-area Planning and provide local training to maintain limited supplies of oil spill response equipment and to ensure timely, effective and safe response and spill containment.

- Support the Department of Environmental Conservation's ongoing communication with the U.S. Coast Guard in reviewing alternative compliance program development and applications.

Energy and Power

- Develop stable long-term funding mechanisms for state weatherization and energy efficiency programs while continuing robust efforts to find long-term energy solutions.

Fisheries and Wildlife

- Develop an assessment and monitoring program in support of strategies for fish and wildlife management that enhances food security for Arctic residents.

- Develop new and improve existing public education and awareness programs that result in a more informed public who understand the multi-faceted programs and policies that regulate the conservation of Arctic biodiversity and sustainable use of biological resources.


REAP


AOGA


USCG

Values community sustainability & thriving cultures



Ensures public safety & security



ALASKA ARCTIC POLICY COMMISSION





Advances economic development & a healthy environment

Incorporates transparency & inclusion into decision making

Co-Chair Senator Lesil McGuire, Anchorage
Co-Chair Representative Bob Herron, South Bering Sea

www.akarctic.com



PRELIMINARY REPORT

TO THE ALASKA STATE LEGISLATURE

SUBMITTED JANUARY 30, 2014

ALASKA ARCTIC POLICY COMMISSION MEMBERS

Senator Lesil McGuire, Co-Chair – Anchorage
Senator Cathy Giessel – Anchorage
Senator Lyman Hoffman – Bethel
Senator Donny Olson – Golovin
Senator Gary Stevens – Kodiak

Representative Bob Herron, Co-Chair – South Bering Sea
Representative Alan Austerman – Kodiak
Representative Beth Kerttula – Juneau
Representative Bryce Edgmon – Dillingham
Representative Mark Neuman – Big Lake

Nils Andreassen – Executive Director, Institute of the North – International Arctic organization representative
Dr. Lawson Brigham– Distinguished Professor, University of Alaska Fairbanks – University representative
Peter Garay – American Pilots Association delegate – Marine pilots representative
Chris Hladick – Unalaska City Manager – Local government representative
Layla Hughes – Conservation group representative
Reggie Joule – Mayor, The Native Village of Kotzebue - Kotzebue IRA – Tribal entity representative
Stephanie Madsen– Executive Director, At-Sea Processors Association – Fisheries representative
Denise Michels – Nome Mayor – Coastal community representative
Liz Qaulluq Moore – Senior Director, Community & Government Affairs, NANA Regional Corporation – ANCSA Corporation representative
Stefanie Moreland – Special Assistant to Governor Sean Parnell – Governor's appointee
Lisa Pekich – Director of Village Outreach, ConocoPhillips Alaska – Oil & gas industry representative
Pat Pourchot – Special Assistant to the Secretary of the Interior – Federal government representative
Steve Scalzo – COO Foss Marine Holdings – Marine transportation & logistics representative
Stephen Trimble – President, Trimble Strategies – Mining industry representative
Jake Adams – Board Member, Arctic Slope Regional Corporation
Kris Norosz – Government Affairs Director, Icicle Seafoods, Inc.

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1 Foreword



Alaska Arctic Policy Commission
Co-Chair: Senator Lesil McGuire, Anchorage, 907.465.2995
Co-Chair: Representative Bob Herron, Bethel, 907.465.4942

January 30, 2014

Dear Alaskans,

Alaska is America's Arctic, and the Arctic is changing. All eyes are on this vast, bountiful, and sparsely populated region – this creates new opportunities, and new challenges for Alaska. Across the Arctic and around the world, we have articulated a vision of this region as a vibrant place of activity and possibility. To envision these emerging opportunities is a good start, now we must help bring them to life for the benefit of Alaska and America.

Alaskans must boldly lead the United States in forming a strategy for its Arctic that realizes the state's prominent role in Arctic decision making. Alaskans have a shared responsibility to understand the issues at stake, including the perspectives and priorities of Arctic residents, and to set a clear course for leadership now and into the future.

Planting a flag in the Arctic is like planting a flag on the moon. It is an important symbolic message telling us to push boundaries and move with purpose toward Arctic endeavors. If we can conceive of the Arctic in a new way, a way that mirrors the reality and the way it ought to be—a place of unsurpassed beauty, culture and opportunity—then that is what the Arctic shall be.

Our timely report is consistent with the interest and commitment that our neighbors in the circumpolar north have shown in developing Arctic policies for their homelands. In addition, it coincides with the warranted but past due attention that the United States has given the topic in the last twelve months.

It is our job as Alaskans to seize these new opportunities, while at the same time overcoming new challenges and obstacles. We have trekked far and wide to ensure we received input from Alaskans around our state including Juneau, Barrow, Unalaska, Fairbanks and Anchorage in 2013, with visits to other locations planned in 2014.

2014 is the Year of the Arctic for the Alaska Legislature. There is a need to make sure Alaska is in the captain's seat as arctic decisions are made that will affect all Alaskans today and for hundreds of years to come.

Alaska Arctic Policy Commission
Co-Chair: Senator Lesil McGuire, Anchorage, 907.465.2995
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If we act now, we have an opportunity to set the heading. The United States will be Chair of the Arctic Council in two years and it is imperative for Alaskans to develop and pursue our own Arctic vision. We must strive to be the navigator of the Arctic policy vessel.

This monumental undertaking of shaping an Arctic policy cannot be understated. It is easy for vision and leadership to be lost in the complexity of the task. However, we are not lost if we know where we have been, where we are, and where we are headed. This Preliminary Report acknowledges the first, provides a brief overview of the second, and begins to lay out clear guidelines and direction for the third.

To the legislators reading this, we ask you to take the time during this busy legislative session to provide critical and constructive feedback. Your input will help ensure that the Commission has the information it needs to draft what will become a determining and significant policy and implementation plan that shapes Alaska's future and benefits Arctic residents, citizens of the United States, and visitors who share its waters and land.

As fellow Alaskans, we know you recognize that with increasing activity in the region comes both risk and opportunity. We cannot let the perceptions of others determine Alaska's future. The Alaska Arctic Policy Commission is proud to provide this Preliminary Report of the findings and recommendations we have reached over this past year. We hope that you will view this Preliminary Report as a guide for maximizing opportunities and overcoming challenges that come with accepting our role as America's Arctic state.

Our fellow Commissioners, and many other Alaskans who have provided input, deserve our gratitude for their hard work and patience as together we have crafted this document. We look forward to 2014 when we will be gathering more public input, finalizing this report, seeking your "Arctic" appreciation, and producing a strategy for the implementation of Alaska's Arctic policy.

Sincerely,

Representative Bob Herron

Sincerely,

Senator Lesil McGuire

3

4

2 Introduction

In years to come, Alaskans may ask how citizens of the state - and their government - are working to deal with massive changes coming to the Arctic region. This report of the Alaska Arctic Policy Commission shows that Alaska's leaders are working to understand the local, national, and global impact of an actively changing Arctic. Alaskans are on the forefront of new exploration and use of Arctic resources, and of new circumpolar cooperation.

Alaskans continue to dream big about the possibilities that come with an accessible Arctic, building on the vision and hard work of peoples who have lived here for thousands of years and many more who have contributed to exploring and pioneering in the region. The cultural traditions, beliefs, and practices that have sustained us must themselves be sustained. Alaska's leaders are working to make sure that happens.

Leaders in Norway, Denmark, Sweden, Finland, Iceland, Russia and Canada - and even non-Arctic nations like Singapore and China - all see the value of the Arctic. Meanwhile, many Americans still do not realize that the United States is an Arctic nation. Providing relevant information about the reality of the emerging Arctic, understanding and communicating the critical issues that affect this frontier, and instilling confidence in the promise of safety and prosperity is essential as Alaska and America move forward to ensure both.

The Alaska Arctic Policy Commission is doing its part to lay out a vision for the Arctic that values sustainable communities and thriving cultures; advances economic development and a healthy environment; and ensures public safety and security. The Commission believes these goals can be achieved in a transparent, inclusive process of collaboration with other levels of government and stakeholders.

The Alaska Arctic Policy Commission

In April 2012, the Alaska State Legislature established the Alaska Arctic Policy Commission to "develop an Arctic policy for the state and produce a strategy for the implementation of an Arctic policy." To accomplish these objectives the Commission has conducted a baseline review of the Alaskan Arctic by evaluating strengths, gaps and opportunities, and produced this *Preliminary Report to the Legislature. The Preliminary Report* sets forth a proposed Arctic policy and recommendations, from which Alaska's perspectives and priorities can be better understood by the many decision makers playing active roles in a rapidly changing Arctic.

As highlighted in the Commission's Letter of Intent to Secretary Kerry and National Security Advisor Rice (June 28, 2013)[1], the Commission operated under the "conviction that the state is

[1] See Introduction Appendix A for a copy of the Letter of Intent

an active and willing leader and partner in Arctic decision making, bringing expertise and resources to the table." Furthermore, the Commission remains "committed to producing a vision for Alaska's Arctic that stands the test of time; delivering policy statements that capture not only the opportunity of the Arctic but also the need to mitigate the challenges; and completing a final product that elevates the priorities and perspectives of Alaskans to a national and international stage."

Alaska's Arctic policy will guide the state's initiatives and inform U.S. domestic and international Arctic policy in order to best serve the interests of Alaskans and the nation. The Commission has considered a broad diversity of perspectives, drawing from a wealth of expertise within Alaska, while considering the national and international context of ongoing Arctic initiatives. This *Preliminary Report* includes a "State of Alaska's Arctic" chapter that summarizes the Commission's findings and which serves as the basis for its recommendations.

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The establishment of the Commission has provided an opportunity for members of the Alaska State Legislature and Alaskan Arctic experts to speak with a united voice about shared values, interests, and priorities for the Arctic region. Commission work products are intended to guide U.S. and Alaska policymakers to achieve effective Arctic policy at all levels of government. The Alaska State Legislature must continue outreach and education on Arctic policy among its members, all Alaskans, and the broader national and international communities.

Scope of Issues Addressed by the Commission

For the purposes of its work, the Commission applied the geographic definition of the U.S. Arctic set out in the Arctic Research and Policy Act (ARPA), henceforth called the Alaskan Arctic – from the Aleutians to the Canadian border, west and north of the Porcupine, Yukon and Kuskokwim rivers[2]. The Commission acknowledges that there are other ways to define the Arctic. For example, some definitions focus on the physical properties of the area, specifically the Arctic cryosphere (i.e., permafrost, sea ice, etc.), and others focus on geopolitical boundaries.

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[2] See ARPA Map in Introduction Appendix B

Policy Teams and Topics

The Commission organized its 26 members into policy teams co-chaired by Legislative members tasked with evaluating the following subjects: Governance and Indigenous Perspectives; Science and Research; Planning and Infrastructure; Oil, Gas, and Mineral Resources; Security and Defense; Marine Transportation; Response Operations; Energy and Power; and Fisheries and Wildlife.

Preliminary Report

The Commission has worked toward two deadlines since its inception: submitting a *Preliminary Report* to the Alaska State Legislature by January 30, 2014; and submitting its *Final Report and Implementation Plan* to the Legislature by January 30, 2015. The *Preliminary Report* includes four components:

1. **Introduction: The Alaska Arctic Policy Commission:** What and who the Commission is and why it was formed.

2. **Alaska's Arctic Policy**: Distilled, values-based Vision Statement and Arctic Policy that form the lens through which the Commission evaluated challenges and opportunities in the Alaskan Arctic.

3. **Strategic Recommendations:** A prioritized list of recommendations – based on the background information and policy statements – that the Commission is presenting to the State Legislature for consideration.

4. **State of Alaska's Arctic:** Includes detailed background, discussion, considerations, and additional draft recommendations.

The first three components of the *Preliminary Report* communicate "Alaska's Arctic Policy" as well as the key recommendations to the Legislature and the broader Arctic community. The "State of Alaska's Arctic" is designed to be a stand-alone document that reviews and evaluates gaps in knowledge, potential opportunities, challenges facing the region, and strategic assets at the community, regional, and state level. The *Preliminary Report* should be considered a draft, with public comment and additional work to be completed throughout 2014 and incorporated into the Final Report.

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- Pursue opportunities to meaningfully participate as a partner in development of federal and international Arctic policies and incorporate state and local government knowledge and expertise.

- Employ integrated, strategic planning and consult with Arctic residents for scientific, local and traditional knowledge to meaningfully enhance Arctic decision making.

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- Establish, support and maintain national, state, community and personal security and safety.

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These have been selected as recommendations that would benefit from the attention of the 28th Alaska State Legislature with the hope that action might come sooner than later. *Note: The recommendations are grouped by section and are in the order that they appear in this report. Strategies for implementation of recommendations will be further developed in 2014, prior to the final report's delivery in 2015.*

Governance and Indigenous Perspectives

- Continue to pursue, and actively expand, all avenues of participation in the Arctic Council, including involvement in Working Groups and by building partnerships with Permanent Participants.

- Develop, where lacking, and build upon existing programs to improve transparency and community/local inclusion in decision making through state coordination of multi-agency permits, state and federal coordination of permits and plans, and meaningful involvement of regional stakeholders in development activities or plans that affect them.

Science and Research

- Increase state funding to, and partnership with, the University of Alaska for Arctic research that aligns with state priorities and leverages the University's exceptional facilities and academic capacity.

- State agencies should consider adapting successful models – such as the Alaska Department of Environmental Conservation and Yukon-Koyukuk Tribal Communications Protocol – to development agreements with local governments and tribes regarding the use of traditional knowledge and culturally sensitive practices in research and permitting programs.

Planning and Infrastructure

- Conduct a comprehensive Arctic region economic and infrastructure assessment and planning process that integrates local, regional, state and federal planning efforts.

- Encourage the development of an inter-agency and inter-governmental working group tasked with working with multiple levels of stakeholders to develop and implement a

prioritization, funding and implementation mechanism for constructing and maintaining infrastructure and economic development.

Oil, Gas, and Mineral Resources

- Implement regional planning efforts that allow local stakeholders to identify and communicate priorities such as education, infrastructure, and development, to state and federal agencies.

- Develop a mechanism for revenue sharing from resource extraction for impacted communities, developing perpetual trust funds (where lacking) to finance community needs beyond the life of non-renewable resources.

Security and Defense

Due to the complexity and importance of National Arctic security issues the Commission decided that this area warrants more attention than they were able to give it. National Arctic security issues will be reviewed for the DOD agencies and the Coast Guard during 2014.

Marine Transportation

- Encourage development of appropriately integrated systems to monitor and communicate Arctic marine information, and continue state and federal support for programs such as the Alaska Marine Exchange.

Response Operations: Search and Rescue/Oil Pollution

- Facilitate and secure public and private investment in support of critical aviation and maritime response infrastructure and economic development, to include consideration of direct state funding and/or public-private partnerships that address development of communications, a deep draft port(s), icebreaker(s), logistics hubs, and a WX C-130 size aircraft hangar(s).

- Encourage and advocate for more adequate funding so that the U.S. Coast Guard can carry out its assigned and emerging duties in the U.S. maritime Arctic without compromising its capacity to conduct all missions throughout Alaska.

- Expand and support the Department of Environmental Conservation's effort to involve communities through Sub-area Planning and provide local training to maintain limited supplies of oil spill response equipment and to ensure timely, effective and safe response and spill containment.

- Support the Department of Environmental Conservation's ongoing communication with the U.S. Coast Guard in reviewing alternative compliance program development and applications.

Energy and Power

- Develop stable long-term funding mechanisms for state weatherization and energy efficiency programs while continuing robust efforts to find long-term energy solutions.

Fisheries and Wildlife

- Develop an assessment and monitoring program in support of strategies for fish and wildlife management that enhances food security for Arctic residents.

- Develop new and improve existing public education and awareness programs that result in a more informed public who understand the multi-faceted programs and policies that regulate the conservation of Arctic biodiversity and sustainable use of biological resources.

5 State of Alaska's Arctic

The "State of Alaska's Arctic" chapter is designed to be a stand-alone document that reviews and evaluates gaps in knowledge, potential opportunities, challenges facing the region, and strategic assets at the community, regional and state level. The Commission's Policy Teams were co-chaired by Legislators, who guided the work of their teams to investigate the topic areas addressed in the remainder of the document. *Note: these areas will be further developed in 2014 with significant additions and revisions based on subject matter expertise, agency input and public comment anticipated and planned for.*

5.1 Governance and Indigenous Perspectives

Introduction

Good governance is the foundation and fundamental goal of an Alaskan Arctic Policy. Well-established principles highlight some of the most important aspects of good governance in the Arctic[3], including a commitment to: economically and environmentally vibrant communities through balanced resource development and respect for the environment in which Alaskans live; sustainable communities that respect Alaskans' cultures, practices and traditional values; and leadership, collaboration, and transparent and inclusive decision making that achieves outcomes that benefit Arctic peoples and all Alaskans.

These principles are reflected in Alaska's Constitution, specifically Section 1.2 that states, "All political power is inherent in the people. All government originates with the people, is founded upon their will only, and is instituted solely for the good of the people as a whole." In addition, Section 8.1 lays out the policy of the state of Alaska to "encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest," and Section 8.2 vests the Legislature with the authority to "provide for the utilization, development, and conservation of all natural resources belonging to the state, including land and waters, for the maximum benefit of its people," subject to the sustained yield requirements of Section 8.4. The Constitution also provides for varying levels of government and jurisdiction, and provides for maximum local self-government in Section 10.1.

Background

Governance in the Arctic spans international, national, state and local levels, but it is important to understand and recognize the degree to which tribal governance and indigenous peoples exert influence on decision making in the Alaskan Arctic. The U.S. is one of many countries with indigenous populations that have inhabited the Arctic for thousands of years and includes the

[3] Arctic Research and Policy Act of 1984, Section 112

traditional cultural boundaries of the Iñupiat, Yupik, Siberian Yupik, Cup'ik, Aleut, Athabascan and Gwich'in peoples. Nearly 53,000 people live in the Alaskan Arctic, with more than 37,000 people (70%) identifying as Alaska Native or 'Alaska Native and another race.'[4] Alaska Native cultures have distinct language, familial, historical, cultural and traditional ties to the lands and resources in the Alaskan Arctic and across international borders.

Alaska Natives are engaged in multiple arenas of governance that touch every aspect of the lives of Arctic peoples, including the Arctic Council, the International Whaling Commission, state and federal co-management of subsistence resources, borough and city governments, and tribal governments.[5]

In addition, the federal government has a unique relationship with Alaska Native tribes. Federal executive departments and agencies are required to engage in meaningful consultation and collaboration with tribal officials in development of federal policies that have tribal implications, and are charged with strengthening the government-to-government relationship between the United States and federally recognized tribes. Alaska Native Corporations[6] are also consulted, in part due to their role in land management, and this provides an avenue for Alaska Natives to be directly involved in responsible development of natural resources and to develop businesses that support these activities, on behalf of their people. This is accomplished in a similar way to other state and federal public outreach during review and adjudications of planning or development processes.

In addition to tribal governance, Alaska has unique local or regional government, all of which have important roles in governance. Unlike most other states that typically have local government structures consisting of many overlapping local government service providers, Alaska's system of local government is simple, efficient and effective. A city government is a municipal corporation and political subdivision of the state of Alaska. It generally encompasses a single community. Presently, there are 145 city governments in Alaska. Like a city, an organized borough in Alaska is a municipal corporation and political subdivision of the state of Alaska. However, organized boroughs are intermediate-sized governments – much larger than cities. Presently, there are 16 organized boroughs in Alaska. All local governments in Alaska – general law cities, home rule cities, general law boroughs, and home rule boroughs – enjoy broad powers. All local governments have certain fundamental duties such as conducting elections and holding regular meetings of the governing bodies. Beyond this, the duties of municipalities in Alaska vary considerably.[7]

The role of local government needs to be included in any discussion of governance because it will be Alaska's communities – particularly coastal communities – that will bear the most risk

[4] 2010 Census
[5] See appendix – Tribal Governance
[6] See appendix – Alaska Native Claims Settlement Act
[7] http://commerce.alaska.gov/dnn/Portals/4/pub/Local_Gov_AK.pdf

and potential opportunity, depending on geography and distance from economic activity. Specifically, local government will be faced with many questions related to increased activity and potential development in the Arctic:

- Does the local government have or want a specific tax code to address the activity such as policies for taxing oil field or mining equipment?
- Is increased activity going to adversely impact current infrastructure or utilities, including docks, electric, water and sewer and solid waste? Who pays for necessary improvements?
- Does the local government have codes to deal with the activity? Are there zoning issues?
- Does the community realize the impacts to social services that might come with increased activity?
- What are the environmental impacts of the activity?
- How will communities balance the positive benefits of economic development?
- How will increased revenues maintain community infrastructure and support schools and other educational resources?

Clearly, local government has a distinct and important role to play in the Arctic because potential and real activity will impact communities in ways that haven't been fully realized.

Governance at the state level is defined by the Alaska Statehood Act of 1958, which granted the state approximately 105 million acres of land intended to help Alaska develop an economic base. Alaska was also granted ownership of state submerged lands beneath navigable waterways and submerged lands up to three miles offshore, and was given the primary authority to manage fish and wildlife on all lands and waters. The state of Alaska is the largest landholder after the federal government and has responsibilities as such.

The state of Alaska has a constitutional duty to responsibly develop and utilize Alaska's abundant natural resources for the benefit of its citizens, and to safeguard world-class fish, wildlife and the natural environment. These mandates are primarily achieved through state agencies entrusted with natural resource management responsibilities. The state of Alaska also has responsibilities to provide for the health, safety and education of its people.

The state of Alaska provides input to federal decision making and activities through state-federal agency coordination efforts, data and information sharing, submission of formal comments, and litigation. The state has a formal role in several coordinating entities active in the Arctic region, including:

- North Pacific Fishery Management Council
- Alaska Ocean Observing System
- North Slope Science Initiative
- Arctic Landscape Conservation Cooperative and Western Alaska Landscape Conservation Cooperative

- Alaska Climate Change Executive Roundtable
- North Pacific Research Board
- Arctic Policy Group

In part to keep interested Alaskans informed about the Arctic Council, the Office of the Governor hosts a bi-monthly Alaska Ad Hoc Arctic Council Working Group meeting and conference call. The call brings a diverse group of Alaskans together with the U.S. Department of State Arctic Affairs Officer, federal agency heads of delegation to Arctic Council working groups, and the Alaska Congressional delegation staff.

In addition to the activities of the executive branch and state agencies, the Alaska State Legislature acts in many ways to support the residents of the Alaskan Arctic region, perhaps most notably through funding infrastructure projects but also through public bodies that focus on the region. The Alaska State Legislature created the Alaska Northern Waters Task Force in 2010 and their final report has been available since January 2012. One of the report's recommendations was the creation of an Alaska Arctic Policy Commission (AAPC), subsequently formed by HCR 23 during the 2012 legislative session. In addition, the Legislature has passed several Arctic-relevant resolutions in recent years, including: HJR 15 "Supporting the Arctic Caucus" and HJR 19 "Urging U.S. Senate to ratify the Law of the Sea Treaty" in 2011; and SJR 17 "Supporting the Arctic Council Task Force" and HJR 34 "Asking Congress to fund icebreakers and a Coast Guard Arctic base" in 2012.

The next level of governance to consider is the role of the national government. U.S. Arctic Policy is codified in NSPD-66, which includes the following goals:

- Meet national security and homeland security needs in the Arctic
- Protect the Arctic environment and its biological resources
- Ensure natural resource management and economic development are environmentally sustainable
- Strengthen institutions for cooperation among the eight Arctic nations
- Engage the Arctic's indigenous communities in decisions that affect them
- Enhance scientific monitoring and research into local, regional and global environmental issues

On May 10, 2013, the White House released the National Strategy for the Arctic Region (NSAR), emphasizing three lines of effort: Advancing U.S. Security Interests, Pursuing Responsible Arctic Region Stewardship, and Strengthening International Cooperation. The NSAR is intended to position the United States to respond effectively to challenges and emerging opportunities arising from significant increases in Arctic activity due to the diminishment of sea ice and the emergence of a new Arctic environment. It defines U.S. national security interests in the Arctic region and identifies prioritized lines of effort, building upon existing initiatives by federal, state, local and tribal authorities, the private sector, and

international partners, and aims to focus efforts where opportunities exist and action is needed. It is designed to meet the reality of a changing Arctic environment, while simultaneously pursuing the global objective of combating the climatic changes that are driving these environmental conditions. The strategy directs the U.S. to consult and coordinate with the state of Alaska and Alaska Natives (recognizing tribal governments' unique legal relationship with the United States).

The NSAR will be implemented by more than 20 federal agencies that have responsibilities including resource management; scientific research; homeland security; emergency preparedness and response; maritime and aeronautical safety; and supporting communities. Many stakeholders in the Alaskan Arctic work closely with these agencies to achieve a wide range of management goals; these partners include state agencies, tribal governments and Alaska Native organizations, municipal governments, industrial and commercial interests, and conservation organizations. It is worth highlighting that the NSAR recognizes the state of Alaska as a key partner in its implementation.

Given the extent of federal agency involvement in the Arctic, coordination occurs through a number of inter-agency working groups – the Arctic Policy Group, National Ocean Council, Interagency Arctic Research Policy Committee, Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska, and the Committee on Marine Transportation – that meet periodically to review, develop and implement U.S. programs and policies in the Arctic.

Coordination between tribal, local/regional, state and national levels of governance is important in the face of increasing international attention paid to the Arctic. A critical starting point from which to consider international governance is the Arctic Council. The Arctic Council is the premier intergovernmental forum for Arctic issues and is made up of eight member nations, six Permanent Participants and observers. The state of Alaska supported the Arctic Council as it formed international agreements for search and rescue and marine oil pollution preparedness and response. The state has urged the U.S. Department of State to look to the Arctic Council to coordinate science and to inform best practices, yet asked that federal agencies look to Alaska when developing new standards and requirements for domestic land and waters.

Alaska is represented by the U.S. Secretary of State, the Senior Arctic Official, and federal Heads of Delegation. Four of the Permanent Participants represent Alaska Natives and send delegations from Alaska to engage in all levels of Arctic Council activities, with non-voting seats at the same table as Arctic nations. Canada assumed the Chairmanship of the Arctic Council in May 2013, and the United States is slated to Chair starting in 2015. The theme of Canada's Chairmanship is "development for the people of the North," with a focus on responsible Arctic resource development, safe Arctic shipping and sustainable circumpolar communities. In 2011, the Arctic Search and Rescue Agreement was negotiated and signed under the auspices of the

Arctic Council and in 2013 the Council negotiated the signing of an Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic.

Secretary Hillary Clinton, U.S. Department of State, and Secretary Ken Salazar, U.S. Department of Interior, attended the Nuuk ministerial meeting in 2011, becoming the first secretarial level officials to attend an Arctic Council (AC) meeting. Secretary John Kerry, U.S. Department of State, attended the 2013 ministerial meeting in Kiruna, Sweden. Increased interest in the AC has been driven both by changes in the region and by the international acceptance of the Council's role as the lead forum for international discussion of Arctic issues. Starting at the Nuuk meeting, by addressing Arctic search and rescue as well as initiating an oil spill response instrument, the ministers made a number of decisions that reflect and advance the growth of the Arctic Council as an institution.

By taking on increasingly important topics and negotiating binding commitments, the Arctic Council is evolving from a forum for discussion and technical assessment into an agenda-setting and policy-shaping organization. However, it should be noted that the majority of Arctic Council work does not result in binding agreements and that the Council is limited in the nature of binding agreements it can produce, as agreements must be approved through the domestic process of each member nation. For example, the U.S. cannot commit to major new requirements without Senate treaty approval (a process it has avoided for Arctic Council agreements). Of concern are any new restrictions imposed on Alaskans through an international body, especially when those restrictions may not have been supported by an open and transparent domestic process involving Alaskan stakeholders and domestic authorities.

In addition to the Arctic Council, the Arctic Parliamentarians of the Arctic Region serve as a forum for international Arctic cooperation. The Arctic Parliamentarians is a body whose delegates are appointed by the national parliaments of the Arctic nations. Every two years the Conference of Parliamentarians is held in an Arctic location. Senator Lisa Murkowski is the U.S. representative to the Standing Committee of Parliamentarians of the Arctic Region, which is responsible for the work between conferences. In addition to supporting the establishment of the Arctic Council and promoting Arctic Council work, the Standing Committee has Arctic Council observer status.

There are many other forums for international engagement in governance, including the International Maritime Organization and the International Whaling Commission. Each deserves Alaska's participation and full attention as the Arctic receives increased levels of attention and activity; especially important for Alaskans to fully understand are the ramifications of ratification of the United Nations Convention on the Law of the Sea (UNCLOS)[8].

[8] The Alaska State Legislature is on record as supporting ratification and the Commission will consider more fully in 2014 the issues surrounding the Law of the Sea Treaty such as paying taxes without representation and potential limitations to scientific research.

164 countries have joined the UNCLOS, an international agreement establishing the rights and responsibilities of nations in their use of the oceans, and defining guidelines for businesses, environmental protection, and the management of natural resources within and beneath the oceans. The United States remains the only large, maritime non-signatory and the only Arctic nation yet to ratify. The U.S. Senate is responsible for approving international treaties and has yet to vote on UNCLOS.

The other four Arctic Ocean coastal nations (Canada, Norway, Russia, and Denmark/Greenland) have signed the treaty and are thereby eligible to submit their extended continental shelf claims to the United Nations. The state of Alaska has a long history of support for ratification, and recently the Alaska Northern Waters Task Force's (ANWTF) priority governance recommendation was that the United States Senate ratify UNCLOS. The ANWTF report included this salient quote from President George W. Bush: "[Ratification] will secure U.S. sovereign rights over extensive marine areas, including the valuable natural resources they contain. Accession will promote U.S. interests in the environmental health of the oceans. And it will give the United States a seat at the table when the rights that are vital to our interests are debated and interpreted."

Discussion and Considerations

As the Arctic Council develops as an institution addressing significant policy concerns, it provides an increasingly useful forum through which the state of Alaska can influence Arctic policy. There are a number of ways to do this. Delegates from the state of Alaska can be invited to participate in U.S. delegations at all levels of meetings, task forces and working groups. For example, the state of Alaska provided a delegate to the U.S. team that negotiated the Oil Pollution Preparedness and Response Agreement. The state does not have the authority to direct PP activity but, some of the State's constituents directly influence Arctic Council policy through the four Permanent Participants representing Alaska Natives. The state of Alaska can also continue to provide expert advice to and review of the range of technical and policy documents created by various Arctic Council working groups.

Participation in the Arctic Council derives benefits to the state. The Arctic Council remains an important forum for exchanging technical information, and the state of Alaska can also benefit from the Arctic Council by continuing to contribute to and learn from this information exchange. For example, the Sustaining Arctic Observing Networks (SAON) is a project that integrates data from each nation into an Arctic-wide network. Alaska can also benefit from practical agreements that will help to protect the people of the state - the Search and Rescue agreement commits nations to minimum levels of response infrastructure to help save lives.

The state clearly benefits from the heightened visibility of the Arctic through the work of the Arctic Council. People across the world have become more aware of issues such as economic challenges, food security, health and social welfare, and infrastructure needs in the region, and

this awareness can help the state of Alaska educate others, including the federal government, about our needs and goals.

Finally, the Arctic Council can serve as a forum for creating new requirements and rules that can help to protect the state. For example, the Arctic Council can suggest rules (or recommend that another institution address them, such as the International Maritime Organization) that address the safety of activities that take place beyond state or federal jurisdiction (e.g., shipping). Because there are a number of ways in which the state of Alaska can benefit from the Arctic Council and pursue its Arctic Policy, the state should continue tracking projects of particular importance to the state and contributing as a member of the U.S. delegations to the Arctic Council via Senior Arctic Officials meetings, Task Forces and working groups. The state and its agencies have been active in the region since statehood, accumulating a wealth of experience and expertise. Every state agency is engaged in work related to the Arctic. Some noteworthy activities with particular relevance to the Arctic region, and which might impact Arctic decision making, include:

- Conducting exercises and maintaining equipment specifically designed for Arctic search and rescue (DMVA)
- Engaging in oil spill prevention, preparedness and response (DEC)
- Monitoring of trans-boundary contaminants (DEC)
- Addressing rural water and sanitation needs (DEC)
- Monitoring, conducting research, and managing fish and wildlife populations across the Arctic region (DF&G)
- Documenting subsistence needs and providing subsistence opportunity (DF&G)
- Working with proposed development projects to mitigate impacts to fish and wildlife resources and their habitats (DF&G)
- Leading efforts to improve statewide digital mapping (DNR)
- Developing expertise in permitting and regulation of resource development activities in Arctic environments (DNR)
- Contributing to deep draft Arctic port and improved airport infrastructure planning throughout the region (DOT&PF)
- Coordinating and conducting project permitting (DOT&PF)
- Building capacity and expertise to conduct comprehensive health impact assessments to inform resource development activities (DHSS)
- Collaborating with the University of Alaska Fairbanks to study shipping and related considerations for commerce and international trade (DCCED)

Consistent with the core state government functions mentioned above, current statewide priorities that are as essential to the future of Alaska's Arctic as to any other region of the state include: resources and energy; education; public safety; transportation and infrastructure; and military support.

Indigenous perspectives are extremely relevant and important to consider when evaluating future decision making. Given tribal governance capacity and sovereignty as well as the economic capability brought to bear by Alaska Native Corporations, it is important to recognize the interest and concerns of Arctic indigenous peoples in Alaska. The cultures of Arctic Alaska Natives are diverse, however there are common interests and concerns about a developing Arctic. The Arctic's Alaska Native communities have been developing solutions to tackle challenges affecting the residents of the Arctic that include lack of infrastructure (e.g., transportation, communications), high energy costs, public safety, high cost of living, and issues affecting social well-being. The following areas[9] express a good representation of priorities for consideration, though are by no means comprehensive or final:

- Food security – access to and utilizations of subsistence resources for customary and traditional use – is paramount to the health and well-being and survival of Alaska Native peoples and cultures
- Meaningful and direct inclusion in decision making
- Responsible development of natural resources and infrastructure that benefit the U.S. as a whole and benefits the peoples of the Arctic
- Use of local and traditional knowledge in research as well as identification of research priorities of Alaska Native communities
- Incorporating traditional knowledge when assembling information upon which to base decision making and to encourage the use of traditional knowledge at all levels of decision making
- Development of a ready workforce to participate in economic activities in the Arctic.
- Increased opportunities to develop local economies
- Ratifying the Law of the Sea Treaty[10]
- Continuation of traditional and cultural practices including subsistence hunting, fishing, gathering and practice of language and culture
- Reducing bureaucratic processes that require engagement at many levels and which can burden stakeholders and communities

In an increasingly busy Arctic, it is critical that Alaska strengthen and improve the structures, processes, and practices that determine how relations among people are regulated, how decisions are made, and the role that citizens have in this process. This includes utilizing transparent public processes that engage stakeholders, lead to informed decision making, and hold decision makers accountable. It must include coordination among jurisdictions, cooperation at all levels of government – including international, national, state, local and tribal – with clearly defined functions and roles, and balancing multiple values to protect, promote, and enhance the well-being of the Alaskan Arctic including the people, flora, fauna, land, water and other resources.

[9] These touch on all facets of Arctic policy and development, as reflected in the Department of Interior report "Managing for the Future in a Rapidly Changing Arctic," the Inuit Circumpolar Council "Inuit Arctic Policy," and other documents prepared by local entities.
[10] Inuit Arctic Policy

Conclusion: Policy Recommendations

Strategic Recommendations

- Continue to pursue, and actively expand, all avenues of participation in the Arctic Council, including involvement in Working Groups and by building partnerships with Permanent Participants.

- Develop, where lacking, and build upon existing programs to improve transparency and community/local inclusion in decision making through state coordination of multi-agency permits, state and federal coordination of permits and plans, and meaningful involvement of regional stakeholders in development activities or plans that affect them.

Other Recommendations

1. The state of Alaska has had limited participation in Arctic Council activities as part of U.S. delegations.

    A. The state of Alaska should continue to pursue, and actively expand, all avenues of participation in the Arctic Council, including involvement in Working Groups and by building partnerships with Permanent Participants.

2. There is a gap in effective communication and formal consultation between Arctic communities and other stakeholders and state and federal agencies.

    A. The state of Alaska should develop a program that achieves transparency and community/local inclusion in decision making through state coordination of multi-agency permits, state and federal coordination of permits and plans, and meaningful involvement of regional stakeholders in development activities or plans that affect them.

3. There is lack of information or centralized access to Arctic-specific information to guide governance decisions at all levels.

    A. The state of Alaska should facilitate the establishment of a clearinghouse of Arctic information that is useful for Alaska residents and communities.

4. Alaska's offshore and maritime interests are hampered by the U.S. inability to ratify the Law of the Sea Treaty.

    A. The state of Alaska urges the United States Senate to ratify the United Nations Convention on the Law of the Sea.

5. Alaska lacks clear and consistent cross-border information sharing and scenarios planning.

A. The state of Alaska should foster and strengthen international partnerships with other Arctic Nations, establishing bilateral partnerships with, in particular, Canada and Russia, to address emerging challenges in the Arctic. For example, forming a Beaufort Regional Business Council to work with Canada and/or a Chukchi Regional Business Council to work with Russia on shipping traffic and other issues.

5.2 *Science and Research*

Introduction

Climate change is causing profound transformations in the Arctic's complex ecosystems at the same time worldwide demand grows for the region's abundant natural resources. With the Arctic warming at twice the global rate, effects such as diminishing sea ice coupled with globalization are opening the way for more human activity in the region. Current or potential increases in shipping, mining, oil and gas development, fisheries and tourism demand that Alaska increase its knowledge of the Arctic's environment to inform the responsible development of these industries and protect human and ecosystem health. Alaska needs a solid research base to understand and mitigate the effects of climate change on residents of the Alaskan Arctic – effects that include coastal erosion, flooding, increasing storm activity and permafrost thawing. Ocean acidification and other changes in the ecosystem affecting flora and fauna may prove detrimental to subsistence users. All these factors are likely to have significant social, cultural, health and economic effects on Alaskan Arctic peoples.

Alaska's future prosperity depends in large part on the scientific, technological, cultural and socio-economic research it promotes in the Arctic in the coming years and its ability to integrate science into decision making. Ongoing and new research in the Arctic must be designed to help monitor, assess and improve the health and well-being of communities and ecosystems; anticipate impacts associated with a changing climate and potential development activities; identify appropriate mitigation measures as well as opportunities; and aid in planning successful adaptation to environmental, societal and economic changes in the region.

Background

There are many institutions, organizations and government agencies presently carrying out research in the Arctic.[11] State agencies regularly conduct research and several recent state-led initiatives have focused on the impacts of the changing climate in the Arctic. These include, for example, the work of the Alaska Climate Change Sub-Cabinet.[12] Local government and regional organizations conducting research in the Arctic include, but are not limited to: the Barrow Arctic Science Consortium, the North Slope Borough, Kawerak, the Aleut International Association, the Aleutian Pribilof Islands Association, and the Northwest Arctic Borough. Federal agencies active in the Alaskan Arctic conduct extensive mission-related research. They enhance their programs through several key inter-agency structures that promote coordinated efforts to address Arctic issues. These include the Interagency Working Group on Coordination of Domestic

[11] See Science and Research Appendix A

[12] The Alaska Climate Change Sub-cabinet issued its final report and recommendations in 2009. Several state departments have followed up on the recommendations, e.g., the ADGF&G Adaptation Advisory Group: see www.adfg.alaska.gov/index.cfm?adfg=ecosystems.climate and www.climatechange.alaska.gov

Energy Development and Permitting in Alaska; the National Ocean Council; and the Interagency Arctic Research Policy Committee. Also of note, and straddling governance levels, are the Alaska Ocean Observing System, the North Pacific Research Board, and the North Pacific Fishery Management Council.

It is worth highlighting the North Slope Science Initiative (NSSI) and the U.S. Arctic Research Commission (USARC) for their roles in setting science and research agendas for the Arctic.[13] The NSSI is among the most effective and inclusive research coordination and prioritization efforts operating in the Alaskan Arctic, as it actively involves regional stakeholders as well as state and federal agencies. While NSSI does not address the entire Alaskan Arctic, its mission closely parallels the priorities of the state in regards to science and research. As stated in the organization's 2009 *Emerging Issues Summaries,* "The vision of the NSSI is to identify those data and information needs management agencies will need in the future to develop management scenarios using the best information and mitigation to conserve the environments of the North Slope."

In addition to coordinating research activities, the NSSI also identifies and prioritizes information needs on an ongoing basis. Its mission states that it "also facilitates information sharing among agencies, non-governmental organizations, industry, academia, international programs and members of the public to increase communication and reduce redundancy among science programs." The wide scope of NSSI research coordination is evident in the diverse membership of its Science Technical Advisory Panel (STAP), which gives guidance to the NSSI on matters of science and research planning, the compatibility of methodologies and data compilation, quality assurance of NSSI-generated science, and many other matters.

One of the responsibilities of the USARC, which was created by the Arctic Research and Policy Act of 1984, is to recommend coordination improvements in federal research programs. Additionally, it is among the Commission's lawful duties to "cooperate with the Governor of the state of Alaska, and with agencies and organizations of that state which the Governor may designate" and to "facilitate cooperation between the Federal Government and state and local governments with respect to Arctic research." The USARC also helps develop national research goals and assists the Interagency Arctic Research Policy Committee in creating an Arctic research plan, including, notably, the *Arctic Research Plan: 2013-2017*, which has been incorporated into the federal government's *Draft Framework for the National Strategy for the Arctic Region Implementation Plan.*

Private sector interests – in particular the oil, gas and mining industries – have been active in Arctic research for decades conducting baseline assessments of environmental conditions, mapping, and identifying social risks and opportunities associated with on-going and potential industrial development in the region. That research informs permitting and license applications

[13] See Science and Research Appendix A for a full description of NSSI and USARC

as well as allows effective engagement by industry in the regulatory process. Engineering firms and the support industry assist in the data collection and analysis of private sector science and research.

Non-governmental organizations have long held interest in the Alaskan Arctic's research programs and many fund research in the region. These include the Pew Charitable Trusts; World Wildlife Fund; Oceana; International Union for Conservation of Nature; Gordon and Betty Moore Foundation; the Aspen Institute, Arctic Commission Roundtable; and the Oak Foundation.

Education and the broad impact of public outreach is conducted at multiple levels, including through the university system and such collaborative efforts as the University of the Arctic, which serves as a virtual institution supporting research and education across the Arctic Nations. In addition, the Arctic Portal, based in Iceland, serves as a data depository and information clearinghouse.

Many of the above entities regularly collaborate with one another and with international partners. The foremost international forum gathering knowledge of the Circumpolar North is the Arctic Council. The council's six Working Groups—comprised of experts from among the member nations and Permanent Participants—compile research and conduct analysis related to Arctic monitoring and assessment, Arctic contaminants, protection of the marine environment, emergency prevention and preparedness, conservation of flora and fauna, and sustainable development. Officials from Alaska state agencies and researchers from the University of Alaska as well as Alaskans who are members of Permanent Participant organizations have regularly taken part in Arctic Council working groups and task forces.

Amidst the multiple layers of research taking place, there are key research areas and methodologies that should be especially emphasized. Identified by authorities worldwide as a high priority, improved regionalized modeling was included in the recommendations of the Alaska Climate Change Sub-Cabinet in 2009 and in the findings of the ANWTF in 2012. Both entities also noted the relationship between improved modeling and effective scenarios planning, and they specifically recommended expanding the Scenarios Network for Alaska and Arctic Planning (SNAP) at the University of Alaska Fairbanks. Additionally, the USARC and the U.S. Interagency Arctic Research Policy Committee emphasize the importance of regional models and scenario planning in the *Arctic Research Plan: 2013—2017*. This is among the most important areas of inquiry for the state because of models' practical use in developing strategies for managing wildlife and for sustainable and adaptable communities, civil infrastructure, and economic development infrastructure.

With the support of the state, the NSSI is embarking on scenario planning in partnership with the University of Alaska Fairbanks. NSSI scenario planning will ensure that agencies have good resource information for their decision making on North Slope activities. Decisions about

research and monitoring programs are most effective when based on plausible future social-ecological system expectations. The NSSI will use scenario planning to systematically assess a range of energy and resource extraction development scenarios for the North Slope and adjacent seas through 2040 in a manner that will contribute to our mutual understanding of the potential future state of the social-ecological systems of the region. The specific objectives are to:

- Identify future development scenarios on Alaska's North Slope and adjacent seas
- Identify information needs for decision making relative to those scenarios and to prior NSSI emerging issue analyses
- Use project results to enable more effective coordination of the identified research and monitoring needs

Simultaneously, as the USARC has advised, policy makers should not unduly focus on distinctions between basic and applied research, especially in light of the complexity of climate change and the need for better understanding whole ecosystems. As the state fosters research that has real-world applications, it should not neglect projects that may take time to yield practical outcomes. To be able to better anticipate and adapt to changes across the Arctic region, Alaska needs to continue to advance basic research.

In summarizing its chief recommendations, the Alaska Climate Change Sub-Cabinet noted: "The success and accuracy of downscaled models is largely dependent upon the quantity and quality of data available." The compiling of comprehensive baseline knowledge of existing environmental conditions is also crucial to measure, in order to subsequently mitigate, the impacts of increased activity in Arctic ecosystems. Focuses should not only include marine and terrestrial physical, chemical, and biological variables but also the cultures, socioeconomics, and health of Arctic populations. Two areas are worth particular emphasis: data sharing and accessibility; and traditional knowledge and culturally-considerate practices.

Data Sharing and Accessibility

In 2012 the ANWTF recommended "improving the exchange of research information and integration of data management…Faster and more extensive integration of data collected by state and federal agencies, academics, and industry would yield enormous benefits for all stakeholders." Better data sharing and accessibility is needed between agencies, academic institutions, industry and other organizations. Benefits include increasing the knowledge available to decision makers in both the public and private sectors; strengthening and refining of findings through data synthesis; reducing duplicative research; and enhancing the effectiveness of interdisciplinary research efforts. The ANWTF noted that organizations already working toward these goals – such as the Alaska Ocean Observing System and the NSSI – should be encouraged and supported.

Traditional Knowledge and Culturally Considerate Research Practices

In 2012 the ANWTF noted that "the local and traditional knowledge gathered by Alaska's indigenous peoples over thousands of years is critically important to a fuller understanding of our northern ecosystems and the multitude of marine and land-based resources within them." The NWTF went on to recommend that "the local and traditional knowledge of the state's indigenous inhabitants be incorporated into all relevant areas of study" in the Arctic.

At the state level, there are few examples of required solicitation and use of local and traditional knowledge specifically related to agency research. Most significant among them is the work carried out by the Division of Subsistence within the Department of Fish and Game. State law requires the division to "compile existing data and conduct studies to gather existing information, including data from subsistence users, on all aspects of the role of subsistence hunting and fishing in the lives of the residents of the state." Direct uses of this information include the division's statutory duty to make recommendations to the Board of Fisheries and the Board of Game regarding regulations affecting subsistence fishing and hunting and to collaborate with other agencies on the formation of statewide and regional management plans. The division is also required to "make information gathered available to the public, appropriate agencies, and other organized bodies."

Discussion and Considerations

Clearly, there is a vast amount of science and research being done in the Alaskan Arctic by a broad spectrum of interests, from the public to the private sector and including non-governmental organizations, the University system and many others. It is critical that Alaska be involved in the various forums that build the information base available to policy-makers. Failure to fully engage will result in the state following the lead of others, which may give rise to policies that do not align with priorities and needs of Alaskans.

Traditional Knowledge

Local and traditional knowledge and subsistence activities inform many of the above entities' research priorities, activities and findings, but there is a need for more effective use of traditional knowledge. Inquiry into how researchers can better integrate local people and traditional knowledge into their projects is receiving increasing attention.

Alaska laws do require public notice and comment periods related to agency decisions on permits, authorizations and area management plans, but many representatives from local governments and Alaska Native organizations have voiced discontent with the lack of specific reference to traditional knowledge and tribal consultation in that body of law.

A primary example of meaningful cooperation between the state and local and Alaska Native entities on this issue lies in a tribal communications protocol produced by the Department of

Environmental Conservation in 2011. The *DEC and Yukon-Koyukuk Tribal Communications Protocol* was negotiated to enhance communications between the department and regional tribes during DEC Alaska Pollutant Discharge Elimination System (APDES) permitting. It is designed to:

- Facilitate early notification of permit applications received
- Facilitate effective coordination between DEC and the Tribes by communicating clear information about APDES permitting
- Provide DEC APDES permit staff with information for effective tribal communication and participation in permitting
- **Facilitate the incorporation of pertinent local and traditional knowledge into permits through early notification and engagement** (Emphasis added)

Although the protocol was negotiated specifically in the context of the APDES program, ADEC Commissioner Larry Hartig has described the document as "a potential model for other Tribes and communities." Likewise, the EPA, which funded development of the protocol, stated in its grant description "the best practices resulting from the project will be applied in other Alaska Department of Environmental Conservation programs and potentially to other state permitting programs."

While the goal of using traditional knowledge in conjunction with conventional research is of considerable importance, there also exists a pressing need for increased investigation into precisely how to effectively and meaningfully do so. In *Traditional Knowledge and the Arctic Environment*, published by the Pew Charitable Trusts U.S. Arctic Program in August 2013, the authors assert that it is time to assess the use of traditional knowledge to date and ask, "What can be done to make better use of what traditional knowledge has to offer while respecting the time, patience, and expertise of its holders?" The Social Science Working Group of the North Pacific Research Board is also concerned about these issues and is currently devoting significant attention to the question of how researchers can best integrate local people and their knowledge into research projects and decision making. The NSSI, too, is actively working on better ways to incorporate traditional knowledge into scientific research.

Additionally, the Division of Subsistence's practices, which adhere to the ethical principles of the social sciences, are useful. These standards include ensuring the anonymity of participants, informed consent, and following up with study communities to inform them of research findings. Similarly, research projects at the University of Alaska Fairbanks are rigorously scrutinized by its Institutional Research Board to ensure community sensitivity, data confidentiality and other ethical considerations.

Another resource is the "Policy Guidelines for Research" adopted by the board of the Alaska Federation of Natives in 1993, which urges the training and hiring of Alaska Natives to assist in

studies and requires that communities be advised of the positive and negative implications and impacts of the research.

State-Federal Collaboration

Of significant concern to Alaska is the extent and quality of Alaskan participation in existing federal decision-making bodies that drive scientific research priorities. As described in current federal law, the NSSI's STAP panel's 15 scientists and technical experts are drawn from "diverse professions and interests including the oil and gas industry, subsistence users, Alaska Native entities, conservation organizations, wildlife management organizations, and academia, as determined by the Secretary [of the Interior]." Since 2005, Alaskans have made up a substantial proportion of the STAP membership. However, beyond the general guidance that the STAP membership should include experts from among Alaska Native entities and subsistence users, there are no specific requirements regarding the appointment of Alaskan residents to the panel.

At the same time, the USARC consists of seven members, appointed by the President, as well as the director of the National Science Foundation, who serves *ex officio*. At present, the USARC includes four commissioners who are longtime Alaska residents. However, similar to the legislation enabling the NSSI, the Arctic Research and Policy Act of 1984 requires that only one appointee be a resident of Alaska.

Currently, nearly 90 percent of the research and development expenditures at the University of Alaska Fairbanks (UAF), which carries out the lion's share of UA research in the Alaskan Arctic, is derived from federal and institutional competitive grants. By contrast, in an average year only about seven percent of UAF's research expenditures budget is derived from state of Alaska funding.

UAF competes very successfully for federal grants, for example winning more than $115 million in research and development funding for the 2012 fiscal year. In almost all cases, federal agencies including the National Science Foundation, the Department of the Interior, NASA, and the Department of Defense proffer grants for projects focused on specific subject matter and in turn the university develops proposals to compete for the funding. Institutional funding, which often includes partnerships with other universities, private industry, and foundations, also normally requires UAF to design research projects according to the grantmakers' goals.

Under this rubric, the vast majority of the research conducted by the university is driven by federal agency and institutional priorities, rather than needs identified by the state. Thus, if Alaska seeks more influence over the direction of UAF's Arctic research, it must provide increased research funding to the university. University officials already meet on a regular basis with state agency personnel to strategically examine Alaska's needs and to determine if UAF research capacity makes it the best institution for a given project. There are also opportunities for state funding to leverage substantial federal matches for research on topics of equally high priority to both Alaska and the U.S. government.

An Alaska Arctic Research Agenda

It is worth considering the development of an Alaskan Arctic research agenda that better articulates the state of Alaska's priorities, which could include:

- Economic and socio-economic factors affecting Arctic communities' sustainability and adaptability
- Human physiological, behavioral, and mental health
- Civil and industrial infrastructure planning
- Ocean acidification and its possible impacts on subsistence and commercial fisheries;
- Tracking of trans-boundary contaminants and persistent pollutants and their cumulative impacts on Arctic inhabitants and ecosystems

As part of this research agenda, the state of Alaska should be able to make clear to federal entities providing financial support for modeling efforts that while due resources should be devoted to development of models designed to aid in the responsible management of wildlife, equal emphasis must be given to creating models useful for managing infrastructure and critical public services. There are also concerns that the limitations of models developed to aid in decision making be clearly identified. Even as baseline data and component parameterizations improve, decision makers must have a clear understanding of uncertainties present in model projections in order to evaluate contingencies and determine proper levels of precaution in management and strategic approaches.

Observational systems are among the most effective means for monitoring and documenting change, improving inputs to models and informing permitting decisions. They are also a valuable way to meaningfully involve Arctic communities in research activities. As Henry P. Huntington and George Noongwook write in their recently published brief *Traditional Knowledge and the Arctic Environment*, "Hunters spend a great deal of time on the land and sea and cover a great deal of territory. Making use of this widespread expertise would provide a broader, more up-to-date and different picture of the environment than is available from many other methods, complementing data from remote sensing and sparse monitoring stations. Incorporating local data would also increase confidence in the results of monitoring, building a better foundation for cooperative action to address impacts and changes that are detected."

As well as increasing the monitoring and documentation of change, there needs to be a greater understanding within the state of the mechanisms that influence ecosystem dynamics. Process studies can add to this knowledge and help to reveal the forces shaping ecosystem structure and function. In addition, the transfer of findings from process studies into models can reduce model uncertainties and improve the accuracy of model projections.

To ensure organized state input to federal, local and institutional decisions on Arctic research and monitoring needs, a process is needed to establish state government priorities guided by state objectives in the region. As the state's engagement with Arctic issues increases, the executive

branch will play an important role in improving coordination of state agencies' roles in matters related to Arctic research.

Coordination and prioritization of research activities must be improved. Federal interagency efforts in this sphere are already substantial and a number of them include state agency participation. The federal government has called for a review of interagency activities in the Arctic in order to identify and address overlapping missions and reduce duplication of effort. Such a review must include considerations of how each interagency group interacts with state policy makers to ensure their work addresses Alaska's needs. The state has an increasingly important role to play in the review and in the crafting of recommendations for how to more wisely use limited capacity to address Arctic science and research requirements. Alaska should pursue strategies to broaden and strengthen the influence of its agencies, its academic experts, and its local governments and associations.

Conclusion: Policy Recommendations

Strategic Recommendations

- Increase state funding to, and partnership with, the University of Alaska for Arctic research that aligns with state priorities and leverages the University's exceptional facilities and academic capacity.

- Consider adapting successful models – such as the Alaska Department of Environmental Conservation and Yukon-Koyukuk Tribal Communications Protocol – to development agreements with local governments and tribes regarding the use of traditional knowledge and culturally sensitive practices in research and permitting programs.

Other Recommendations

1. While there are mechanisms in place to include Alaskans in science and research prioritization and implementation, the extent to which state-federal interagency efforts yield outcomes that align with the state of Alaska's interests varies. The North Slope Science Initiative has been a model for generating borough, Alaska Native Corporation, federal, and state research priorities and strategies that correspond with the state of Alaska's interests.

    A. The state of Alaska should support discussions currently underway to add Northwest Arctic Borough participation with the NSSI, thereby extending the initiative's geographical scope without compromising its mission or effectiveness.
    B. The state of Alaska urges its congressional delegation and the U.S. Congress at large to amend Section 103 of the Arctic Research Policy Act of 1984 (Amended 1990) to provide that a minimum of four of the seven members of the U.S. Arctic Research Commission appointed by the President be Alaska residents.

2. The high proportion of federal funding for Arctic research at the university means that the majority of inquiry conducted there is guided by federal agency priorities. To enhance its influence over the direction of UAF's Arctic research, the state must provide increased research funding to the university.

   A. The state of Alaska should increase state funding to, and partnership with, the University of Alaska for Arctic research that aligns with state priorities and leverages the University's exceptional facilities and academic capacity.

3. Traditional knowledge remains underutilized as a resource in state-agency scientific research and corresponding decision making. Agencies also need to address the conduct of specific research projects to include practices that ensure research in and around rural communities is carried out in a manner considerate of local individuals and their culture.

   A. The state of Alaska should consider adapting successful models – such as the Alaska Department of Environmental Conservation and Yukon-Koyukuk Tribal Communications Protocol – to development agreements with local governments and tribes regarding the use of traditional knowledge and culturally sensitive practices in research and permitting programs.

   B. The state of Alaska should support and encourage the development of methods for more effectively integrating traditional knowledge into conventional research and natural resource management.

   C. In addition, the state of Alaska should participate in Arctic Council efforts to develop recommendations for incorporation of traditional and local knowledge into its work, currently undertaken by the Canadian Chairmanship.

5.3 *Planning and Infrastructure*

Introduction

A full analysis of Planning and Infrastructure requires a collection and review of cross-border, national, state, regional and community economic development plans, transportation plans, and strategic planning documents.[14] The goal should be to identify ways in which multiple levels of planning are integrated and coordinated to support economic and community development, and response operations, in the Alaskan Arctic. Planning and Infrastructure should accommodate:

- Ports, Harbors, Places of Refuge, and Anchorages
- Telecommunications, Aids to Navigation, and Data Acquisition and Sharing
- Emergency Management and Response
- Transportation and Access to Resources
- Energy Extraction, Production and Delivery
- Human Resources, Workforce Development, Research, Education and Training
- Sewer and Water

Critical to our understanding of these areas is the extent to which they are inter-linked as fundamental building blocks of sustainable development in the Alaskan Arctic. The vast majority of work to date in these areas has been intermittent (conducted on a project by project basis), uncoordinated (unresponsive to a direct point of contact or leadership team) and independent (unable to take into account inter-modal and cross-sector assets or processes). In order to ensure future prosperity in the Arctic, Alaska must implement strategic, integrated, and intentional planning that results in safe, secure, affordable, efficient, and reliable activities.

Background[15]

When considering planning and infrastructure in the Alaskan Arctic, it is important to understand the scope of the region, its resources and broader issues of concern. The coastline from Dutch Harbor in the Aleutians to Barrow on the North Slope is the same distance as the coastline from Maine to the southern tip of Florida. Within the Alaskan Arctic, there is a vast array of resources.

2012 saw the lowest level of summer sea ice, covering only 3.4 million square kilometers. Sea ice recovered somewhat in 2013, however the overall trend is decreasing sea ice at an aerial extent of 2.7% per decade and accelerating. Predictions are wide-ranging, but there could be a completely ice-free Arctic ocean (in summer months) as early as the 2030's. As ice melts, shipping though the Arctic will increase. Businesses can reduce shipping costs by as much as 40% using Arctic routes rather than the Suez Canal. While this is still not (and may not ever be) a major shipping route, there is increasing activity – mainly along the Northern Sea Route (along

[14] See PandI Appendix C Reference list
[15] Adapted from the Alaska Northern Waters Task Force final report, which continues to be relevant

Russia's northern coast) and through the Bering Strait. According to the U.S. Committee on the Marine Transportation System, a record 46 vessels transited the Northern Sea Route in 2012 compared to 36 in 2011 and 4 in 2010. According to Russian officials, 71 vessels transited the NSR in 2013.[16] In 2012, 1.2 million tons of cargo, up 50% from 2011, was shipped through the Northern Sea Route. In Alaska, and specifically the Bering Sea, vessel traffic is also increasing. Between 2008 and 2012, vessel transits in the Bering Sea rose from 220 to 480. On top of minimal communication equipment, poor weather forecasts, and poor sea ice predictions, the nearest emergency response facilities are located in Anchorage, Kodiak and Dutch Harbor, which are at least 635 miles away from the maritime Arctic Circle. There is a critical need to improve infrastructure along the coast to support search-and-rescue efforts and oil spill response to keep up with additional marine traffic and other human activity.

Clearly, the Arctic is experiencing profound change as it is confronted with the increasingly evident forces of globalization and climate change, as well as new economic challenges for its communities. But this area is not new to the world. Indigenous peoples have been living in the Arctic for thousands of years. It is home to many Alaska Native cultures that rely on subsistence hunting and fishing. It is also an area of heightened environmental importance. Even in a region that is characterized by harsh climates, extreme weather conditions, and times of constant light followed by constant darkness, there is an abundance of life.

Increasing changes and activity in the Alaskan Arctic are likely to hold enormous implications for both existing and future construction of infrastructure. The ability to better predict and understand the effects of phenomena such as widespread thawing of permafrost will help Alaska prepare for considerable maintenance issues on existing roads, airports, buildings, and pipelines. Just as importantly, it will aid engineers when it comes to properly siting, designing, and constructing new infrastructure capable of withstanding future changes in their specific environments. The Alaska Department of Transportation and Public Facilities (ADOTPF) have also examined these important concerns in their report on the "Impact of Climate Change on Alaska's Transportation Infrastructure."[17]

These changes pose significant challenges to some communities in Arctic coastal and riverine areas, most notably those located along the Bering and Chukchi Seas. A number of communities are threatened with increased rates of coastal erosion and flooding as a result of storm activity and battered shorelines once protected by shore-fast ice. These problems could become chronic as the climate warms, seasonal sea ice retreats, and destructive coastal storms become more frequent. These important concerns have been recognized in reports issued by the state of Alaska's Climate Change Subcabinet Immediate Action and Adaptation work groups.

[16] See reference, http://news.nationalgeographic.com/news/energy/2013/11/131129-arctic-shipping-soars-led-by-russia/
[17] See reference, http://climate.dot.gov/documents/workshop1002/smith.pdf

Immediate investment in Arctic infrastructure is a priority for Alaska and is relevant to the interests of the entire United States. Alaska will need to explore ways to attract substantial sources of capital investment in addition to state and federal funding. Action is needed to enable the responsible development of resources; facilitate, secure, and benefit from new global transportation routes; and safeguard Arctic residents and ecosystems. This investment will improve the safety, security, and reliability of transportation in the region—a goal established by the U.S. Arctic Policy signed by President Bush in 2009 and included in the 2013 U.S. National Strategy for the Arctic Region.

Over the last 50 years, the state (through the Village Safe Water program within the Alaska Department of Environmental Conservation) and its federal funding partners (EPA, USDA Rural Development and Indian Health Service) have supported community sanitation systems in rural Alaska. However, DEC reports that the cost of addressing rural sanitation needs has increased substantially in recent years while annual funding has decreased substantially. If this long-term trend continues, many rural Alaska homes will never receive adequate water and sewer service, and many others will lose service as resources will be insufficient to replace all aging infrastructure.

With transformation in the Arctic calling for a broad spectrum of new facilities on such a large scale, the state of Alaska must take an active role in regional planning efforts with communities and their stakeholders, while also keeping in mind the maintenance and upkeep of existing infrastructure. This will help communities develop local strategies and ensure that the state is getting the most return on investment for local projects. Some communities may not have the resources to adequately prepare for the future, and the state should take this opportunity to help increase local capacity for the benefit of all Alaskans.

Discussion and Considerations

Alaska is on a cusp; declining oil production and the reliance on that revenue stream have minimized the development of other resources and the infrastructure necessary for that development. Regardless of whether the development is of oil, gas, methane gas hydrates, minerals, geothermal, other renewable resources or the development of transportation capabilities, a new focus on the development of a statewide *infrastructure system* is necessary and timely. Regionalizing such a system – and beginning with emerging challenges and future scenarios in the Arctic – allows planning to take place that recognizes local and community concerns, prioritizes local resources differently, and provides the greatest leverage to address localized challenges and the greatest amount of opportunity. Infrastructure contributes to *economic growth* (acting through both supply and demand) as well as a peoples' quality of life.

The state of Alaska, then, should consider as a fundamental aspect of its Arctic policy the active development of Arctic infrastructure.[18] Indeed, a robust Arctic infrastructure system is the best answer to economic development planning. This will require the state to make public infrastructure investment decisions based on three components: good economic practices ensuring financial stability; minimizing the impact on the land ensuring environmental sustainability; and assuring the impact on the peoples of Alaska is always positive.

The primary concern should be the meaningful evaluation of – and investment in – response capacity. Alaska must take a leadership role in its emergency management systems in order to reduce uncertainty. A tiered approach whereby Alaska is able to identify primary, secondary and tertiary response assets is warranted. Included in the mix should be consideration of private and/or industry-owned assets, which may be closer to an impacted area than public resources.

Increasing attention should be paid to communications and navigational aids, as well as mapping, hydrography, and bathymetry. The state of Alaska can facilitate this to a large extent, working with federal partners and industry. The same is true for data sharing, increased research collaboration, and private-public partnerships in acquisition and value-added products.

It is worth recognizing that differences in proximity, risk, geography, and scale of challenge make evaluation of response capacity and the need for infrastructure difficult—there is not a one-size-fits-all approach to infrastructure development.

Infrastructure development must be responsive to social, environmental and cultural impacts as a core element of sustainable development. This is important not only for transportation infrastructure, but for energy development and transmission. Furthermore, accessibility of high speed internet in rural communities is still a major obstacle for participation in decision making and is needed to foster more innovation for sustainable businesses in rural villages, and to inspire the state's young people to return after college.

Creative funding strategies (i.e., public-private partnerships) for infrastructure cannot be ignored. Much of the critical infrastructure throughout the North is under the same influences of time, climate change and dwindling resources – planning should occur accordingly. At the same time, investments in infrastructure should be leveraged—an intermodal approach and layering of resources has a multiplier effect on infrastructure development and a direct impact on economic and community development. In addition, planning and infrastructure development needs to account for global supply chains and staging infrastructure outside Alaska.

Lack of adequate water and sewer service is posing a serious health risk in a number of communities in rural Alaska including in the Arctic. Residents without running water and flush toilets have a significantly higher incidence of serious infection than persons with sanitation

[18] See Appendix A "Alaska Northern Waters Task Force" - Findings and Recommendations Pg. 18

service. Approximately 4,500 households in rural Alaska lack running water and flush toilets and many of the 30,000 homes currently connected to systems are in jeopardy of losing service due to system age, deterioration, and harsh weather conditions.

Finally, Alaska's greatest resource is its people, who should be prepared to compete beyond the state for opportunities around the world. Only in this way can Alaska ensure its competitiveness. Adequate funding for education from pre-kindergarten through college will be necessary, as well as investment in technical trainings.

Conclusion: Policy Recommendations

Strategic Recommendations

- Conduct a comprehensive Arctic region economic and infrastructure assessment and planning process that integrates local, regional, state and federal planning efforts.
- Encourage the development of an inter-agency and inter-governmental working group tasked with working with multiple levels of stakeholders to develop and implement a prioritization, funding and implementation mechanism for constructing and maintaining infrastructure and economic development.

Other Recommendations

1. Sub-area plans have identified response sites but there is not enough funding to place container vans for all sites. Additionally, current planning does not identify public and private or industry-owned assets. Local communities are not up to date with National Incident Management System/Incident Command System (NIMS/ICS) nor are first responders trained in HAZWOPER, etc.

    A. The state of Alaska should work with industry to identify and develop primary, secondary and tertiary response infrastructure (and corresponding equipment) and train and sustain first responders.

    B. The state of Alaska should recognize that local contingency plans listing assets must be included in the Sub-area plans.

2. In federal waters the U.S. Coast Guard is in charge of navigational aids; NOAA and the U.S. Army Corps of Engineers are charged with mapping and bathymetry; and the Alaska Department of Natural Resources (DNR) is responsible for this in state lands. The private sector is also collecting data on leased areas.

    A. The state of Alaska should support, invest in and complete increased communications and navigational infrastructure, mapping, hydrographic and bathymetry with data shared using collaborative research and private-public partnerships.

B. The state of Alaska should coordinate with internal and external agencies and gather private sector data for completion of mapping, hydrographic and bathymetry data sharing.

3. Each region or community has their own separate plans for infrastructure development, but these plans are not incorporated into a holistic Alaska Arctic plan. Infrastructure development should be responsive to social, environmental and cultural impacts and that intermodal infrastructure should benefit economic and community development.

   A. The state of Alaska should initiate a comprehensive Arctic region economic and infrastructure assessment and plan.

   B. The state of Alaska should include in such a plan criteria (that identifies proximity, risk, geography and scale of challenge to include intermodal infrastructure) from which projects could be prioritized.

4. The state is operating under a banner of fiscal constraint – state, federal and local budgets are dwindling – while the vast majority of (and increasing) infrastructure projects are in the millions of dollars.

   A. The state of Alaska should establish infrastructure funding mechanisms for multiple infrastructure projects and should include incentives for cross-project planning and for public-private partnerships.

5. The Alaskan Arctic's hub communities have regional training facilities. Some programs are for high school students only or for adults only.

   A. The state of Alaska should create additional programs for adults and students in vocational training.

   B. The state of Alaska should develop Arctic workforce development and education opportunities for Alaska's workforce, to include ice navigation, marine mammal observation, spill response, SAR, pilotage, and engineering.

6. The state and federal governments should continue to work together to assure reliable delivery of adequate water and sewer service in all Alaska Arctic communities.

   A. Alaska should work with interested parties within the United States and other Arctic nations to investigate alternative approaches that are less costly to build, operate and maintain in small Arctic communities.

   B. Alaska should continue to encourage the U.S. Department of State to include fostering new technological approaches for in-home water and sewer infrastructure as part of the agenda for the U.S. chairmanship of the Arctic Council in 2015-17.

5.4 Oil, Gas, and Mineral Resources

Introduction

The state of Alaska has been a sovereign and active Arctic entity engaged in Arctic development and protection since statehood. Even before then, Alaska's citizens and communities pioneered Arctic resource development and sustainable living. With statehood came the promise that Alaska's significant land and resource base would build its economy and support its citizenry. In fact, the discovery of oil and gas on the Kenai Peninsula provided the economic justification for statehood. Today, oil and gas development provides roughly 90% of Alaska's state revenue, with minerals, timber, seafood, and tourism significantly contributing to the balance. Alaska has over 45 years of oil and gas development experience in the Arctic and over 100 years of mining experience. [19]

Background

The Arctic will inevitably see expanding development. The Alaskan Arctic is increasingly the focus of new commercial opportunities for resource development. Arctic sea ice is melting and newly opened shipping lanes promise better access to our shores and more efficient and expeditious delivery of extracted resources to markets across the globe. Mean estimates for undiscovered, technically recoverable resources in the Alaskan Arctic Petroleum Province include 30 billion barrels of oil and 181 trillion cubic feet of non-associated natural gas.[20] For example, North Slope basins hold as much undeveloped coal as the rest of the United States combined. [21] Red Dog Mine produces zinc, lead and silver ore from one of the largest base metal deposits in the world. High gold prices have brought increased exploration activity to the region and production has reached unprecedented levels. In 2012, Alaska's gold production reached 870,000 ounces, a volume not seen since the legendary Alaska Gold Rush days of the late 19th and early 20th century.[22] [23]

Although the vast mineral and hydrocarbon reserves make the Alaskan Arctic attractive for investment, development is challenged by distance to markets, limited infrastructure, costs and risks attendant to its remoteness, challenging weather and environmental conditions, and a

[19] Banet, Jr., Arthur C., *Oil and Gas Development on Alaska's North Slope: Past results and future prospect,* USDOI – BLM – Alaska, Open File Report 34, March 1991; See Table 1, www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/ofr.Par.49987.File.dat/OFR_34.pdf (Accessed May 2013).

[20] The Arctic Petroleum Province encompasses all lands and adjacent continental shelf areas north of the Brooks Range-Herald arch tectonic belts and south of the northern (outboard) margin of the Alaska rift shoulder. USGS – *Assessment of Undiscovered Petroleum Resources of the Arctic Alaska Petroleum Province*, by David W. Houseknecht, Kenneth J. Bird, and Christopher P. Garrity (Scientific Investigations Report 2012-5147); http://pubs.usgs.gov/sir/2012/5147 (Accessed May 2013).

[21] Flores, R.M., G.D. Stricker, and S.A. Kinney. 2003. *Alaska coal resources and coalbed methane potential.* U.S. Geological Survey Bulletin 2198, 4 p., hhtp://pubs.usgs.gov/bul/b2198 (Accessed May 2013); Flores, R.M., G.D. Stricker, and S.A. Kinney. 2004. *Alaska coal geology, resources, and coalbed methane potential.* U.S. Geological Survey Digital Data Series DDS-77, 127 p. http://pubs.usgs.gov/dds/dds-077/ (Accessed May 2013); U.S. Energy Information Administration. 2012. *What is the role of coal in the United States?* U.S. Department of Energy website. Updated July 18, 2012, www.eia.gov/energy_in_brief/article/role_coal_us.cfm (Accessed May 2013).

[22] Lasley, Shane, *Mining News: 2013: A golden year for Alaska miners,* Petroleum News, Vol. 18, No.4, Jan. 27,2013; www.petroleumnews.com/pntruncate/636968834.shtml (Accessed May 2013).

[23] In addition, the Donlin Gold Project proposes to add another 1.5 million ounces of gold to the statewide production by the end of the decade.

dwindling subfreezing season necessary for maintaining ice roads and conditions suitable for safe travel and operation within the Arctic.[24] Despite this challenging environment and extraordinary costs, exploration and development investment in the Arctic has steadily increased and will continue to increase, if commodity prices remain high and if Alaska remains competitive for investment dollars.[25] Alaska should not ignore that it is in a global race to attract investment that will open new opportunities in the Arctic. To encourage new capital investment, and secure the benefits of new resource development upon which state and local communities depend, Alaska and our federal counterparts must continue to spearhead new strategies to keep Alaska competitive with other Arctic nations.

For over 50 years state agencies, including the Department of Environmental Conservation, the Department of Natural Resources, the Department of Fish and Game and the Department of Transportation and Public Facilities have provided thorough environmental oversight for exploration and development activities in the Arctic. Alaska has some of the most sophisticated interagency coordination and permitting processes in the country, with the expertise, experience and commitment to safely develop the Alaskan Arctic's vast resources.[26] With this history and experience, Alaska is well positioned to respond to increased resource development activity in the Arctic.

Protecting the environment is a key concern facing the Arctic; so too is ensuring a sound economy for its residents. Some Alaskan Arctic communities are currently supporting new resource extraction projects, recognizing that oil, gas and mining industries offer meaningful employment, stable cash economies and reliable municipal revenues that support clean water, sanitation, health clinics, airports and other infrastructure necessary for strong, safe and healthy communities. While circumstances differ between local governments, often resource development projects have meant an influx of new revenue sources. This new revenue has, in some cases, meant that local governments have the resources needed to expand emergency response and search and rescue capabilities, take an active role in oil spill preparedness, and implement meaningful measures to protect regional ecosystems and local food sources that are critical to a subsistence culture. While the U.S. Coast Guard, U.S. Environmental Protection Agency, the state of Alaska, and industries play a key role in oil spill planning, prevention and response, local governments also must be equipped to maintain and expand both critical infrastructure and train response personnel to meet the challenges of new on- and offshore

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[24] *USGCRP. 2009. Regional climate impacts: Alaska.* in *T.R. Karl, J.M. Melillo, and T.C. Peterson (Editors), Global climate change impacts in the United States: A state of knowledge report from the U.S. Global Change Research Program. Cambridge University Press, New York, N.Y., p. 139-144, http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-reports.pdf* (Accessed May 2013).

[25] Haley, S., M. Klick, N. Szymoniak, and A. Crow. 2011. Observing trends and assessing data for Arctic mining. Polar Geography 34:1-2, 37-61.

[26] For example, Alaska's spill response planning system partners state agencies with industry. Under this structure the state is obligated for spill response planning and oversight and the responsible party is obligated to provide trained personnel and equipment for the response effort and clean-up. Each year, industry and pertinent state agencies conduct several spill response drills. No other state in the U.S. has a comparable program.

resource development.[27] Local resource development also holds the potential of increasing access to affordable energy in remote communities suffering from staggering energy costs.

Federal revenue sharing generated from oil, gas and mineral development is central to supporting these local economies. For example, revenue sharing from the National Petroleum Reserve-Alaska (NPR-A), in the form of Impact Grants, helps local governments build community infrastructure and fund programs such as teen centers and cultural education. However, although federal revenue sharing is in place for oil and gas leasing activities within the NPR-A, for leasing activities within the federal OCS it is not. Current federal law mandates revenue sharing from OCS development in the Gulf of Mexico, however.

New resource development opportunities both on- and offshore must be balanced against the potential impacts by incorporating appropriate mitigation and safeguards. Although the debate about potential risks to the environment and subsistence resources is often heated and emotional, it is critical for the state of Alaska to ensure a balance is met (see inset box for example), and that debates remain constructive and oriented towards finding workable solutions. Local governments that have active resource development within their boundaries acknowledge that in order to support and sustain the communities in their region, they must work collaboratively with the state and industry. This includes ensuring that rural development includes protections for subsistence resources, cultural identity and lands, while providing needed infrastructure, services, and employment training opportunities.

Local government, state, and industry collaboration occurs with frequency and success in Alaska. Arctic communities affected by new development have rightly demanded to be heard during all phases of a project's development. The manner and scope of this community engagement continues to evolve as the state, communities and industry work to meet new concerns and demands. For example, in 2010 the state formally implemented a Health Impact Assessment (HIA) program within the Department of Health and Social Services and is working with federal agencies to develop HIAs as part of the process for large-scale projects.[28] These HIAs evaluate the potential health effects of a project on a population and the distribution of those effects, so that communities and other stakeholders can preemptively develop strategies to minimize adverse impacts and maximize health benefits to a population near a proposed project. But these kinds of initiatives are not new. Twenty-three years ago the state was awarded the National Planning Award for its exemplary outreach to rural communities.[29] Communities and

[27] See, Charlotte Brower, Mayor North Slope Borough, Congressional Testimony before the Committee on Senate Energy and Natural Resources in support of S. 1273, the "Fixing America's Inequities with Revenues Act of 2013."

[28] Health Impact Assessment work first began in Alaska in 2004 when the North Slope Borough conducted two HIAs for resource development projects. HIAs are used elsewhere in the country, although the state of Alaska views its HIA program as a key component of its "best practices" approach to large project permitting. The state formalized the program in the Department of Health and Social Services in 2010. State of Alaska Epidemiology Bulletin No. 19, July 25, 2011.

[29] The National Planning Award's Paul Davidoff Award for Community Outreach was presented to the State Department of Natural Resources in 1990 and is on display in the Department's office.

regional organizations also take the lead in creating forms of community engagement that will produce meaningful and lasting agreement about resource development decisions.

Discussion and Considerations

To take advantage of the expanding activity and global interest in the Alaskan Arctic, and to craft the course and pace of development in the state and in the region, Alaska must invite better communication and partnership with federal entities.[30] Additionally, Alaska must take a more assertive and proactive role on the national and international stage where Arctic resource development policy is debated.

Alaska is well-suited to contribute to the national and international dialogue on resource development in the Arctic. The state of Alaska, its legislature, relevant agencies, and the Governor – representing all of Alaska's residents – intends to lend a strong voice of experience and leadership to resource management and development opportunities as they emerge in the Arctic. Alaska should continue to build a common outlook for the Arctic by building on existing and potential partnerships with national, international, commercial, academic and non-government entities.

In addition to focused participation in national and international forums, Alaskans must work diligently at home to speak with a unified voice as Alaska moves forward to advocate its sovereign rights as an Arctic state within these arenas. Pro- and anti-development organizations from inside and outside the state, which often present views that are not in keeping with the perspectives of most Alaskans, lobby the Federal Government, influence resident stakeholders, and ultimately impact federal actions. This further highlights the need for Alaskan stakeholders to collaborate and identify priorities for sustainable resource development that include environmental safeguards, and approach federal decisions makers with a unified voice on all development issues.

A more unified voice is crucial to promoting meaningful negotiations with federal agencies and Congress as the state advocates for additional development opportunities onshore and offshore in the Alaskan Arctic and seeks more advanced capabilities for emergency preparedness and response. With declining North Slope oil production, industry access to federal land and Outer Continental Shelf (OCS) waters is critical to future exploration and development success, and ultimately to Alaska's economic stability. Recent federal actions such as the National Petroleum Reserve – Alaska (NPR-A) Integrated Activity Plan, the National Ocean Policy, and the Arctic National Wildlife Reserve (ANWR) Comprehensive Conservation Plan threaten to restrict

[30] Improving the state's relationship with its federal counterparts is prudent, particularly in light of the fact that the Federal Government has primary jurisdiction over nearly three quarters of the U.S. Arctic's land mass. Alaska can help, through example and guidance, as federal agencies work to coordinate and reduce duplication of over 20 federal agencies involved in the U.S. Arctic.
See 04/04/2013 press release, www.doi.gov/news/pressreleases/interagency-working-group-calls-for-integrated-management-and-planning-for-a-rapidly-changing-Arctic.cfm# (Accessed August 2013). The Parnell Administration and Alaska Congressional Delegation have been vocal advocates on various federal energy issues (e.g., ANWR development, OCS, NPR-A, OCS revenue sharing, etc.).

opportunities that are critical to the future of Alaska's economy. At least one major oil company complained in 2013 that regulatory uncertainty in the OCS effectively stalled exploration activities, even after its leases were awarded.[31] [32] Forging stronger alliances within the state, between local governments, communities, Alaska Native entities and other resident stakeholders, will be key in addressing these issues on the federal level.[33]

Resource development is critical to ensuring healthy local economies. Alaska and the Alaskan Arctic is a key component to independent U.S. energy security. To meet national, state and local goals for energy production, and to meet the challenges of adapting to rapidly changing Arctic conditions, the state of Alaska must work with industry, federal agencies, and local/regional communities to encourage the development of new technologies, invest in needed infrastructure, and resolve burdensome legal and regulatory impediments. To that end, considerations should include to:[34]

- Promote better local, state and federal agency collaboration and coordination to facilitate permitting of resource extraction projects
- During all large-project development, ensure that the permitting process includes sufficient time, to allow for meaningful community participation, input and reflection
- Strategically build connectivity between communities, development projects and markets including access to roads, ports, facilities, power generation and transmission, and communication
- Implement localized resource revenue sharing to support infrastructure development by Arctic communities
- Support adequate funding for state-directed baseline data collection and develop reasonable and predictable standards for determining when sufficient data is collected to commence development projects and for ensuring data storage for future access and use
- Solve regulatory uncertainty – especially as it relates to OCS development, remote incinerator rules and future air quality regulations, effluent limits, and Endangered Species Act listings

[31] Press Release, ConocoPhillips Alaska, April 10, 2013, Regulatory Uncertainty Leads ConocoPhillips to Put 2014 Chukchi Sea Exploration Drilling Plans on Hold.

[32] However, it is important to note that the U.S. Bureau of Ocean Energy Management and the U.S. Bureau of Safety and Environmental Enforcement are working with company input to develop Alaska Arctic standards that are based on current OCS development permit conditions. According to the Department of Interior, these standards will be out before the year-end and should have no effect on existing permit conditions and therefore no effect on whether or not an oil company with current leases and permits decides to drill in 2014.

[33] Indeed, on May 20, 2013, Governor Parnell's administration, joining forces with the Arctic Slope Regional Corporation and the North Slope Borough, proposed to help finance exploration in the ANWR 1002 Area. Although the Federal Government has been reluctant to open ANWR to exploration, presenting a united front and offering $50 million in state dollars may help overcome this past resistance. Not all Alaskan's agree with this effort however, with opposition presented by Gwich'in tribal governments who fear the area is critical to the Porcupine caribou herd and others who support permanent protection for the coastal plain, which is an integral part of the protected wildlife refuge.

[34] In 2013, the Oil, Gas and Mining – Resource Development team members interviewed AOGA, RDC, AMA, NANA, Donlin Gold and Calista. Policy Team minutes: 05/03/13 and 05/10/13.

To seize the emerging opportunities in the Arctic, and advance energy independence for Alaska, its rural communities and the U.S., the state of Alaska and pertinent federal agencies must address these issues and lead the way for Arctic resource development strategy and coordination.

Conclusion: Policy Recommendations

Strategic Recommendations

- Implement regional planning efforts that allow local stakeholders to identify and communicate to state and federal agencies priorities for education, infrastructure, and development.
- Develop a mechanism for revenue sharing from resource extraction for impacted communities, developing perpetual trust funds (where lacking) to finance community needs beyond the life of non-renewable resources.

Other Recommendations

1. Alaska must continue to actively promote oil, gas, and mineral exploration and development investment opportunities onshore, offshore and within the extended continental shelf in a manner that is safe, respects people and the environment, and that maintains a level of production that meets the economic needs of the state, local communities, and industry.

    A. The state of Alaska should continually advance new technology to improve safety and mitigate impacts to the environment.
    B. The state of Alaska should establish revenue sharing from resource extraction for Alaska's impacted communities in areas where such are lacking and advocate for federal revenue sharing from opportunities on the Arctic outer continental shelf.
    C. The state of Alaska should encourage use of those funds to develop perpetual trusts, such as the Alaska Permanent Fund, that will help fund community needs into the future beyond the finite life of non-renewable resources.
    D. The state of Alaska should continue to prepare the local workforce to participate in all aspects and all phases of resource development including research, monitoring, regulatory oversight, project development, construction, operation, remediation, and reclamation.

2. To ensure a healthy, secure, and safe Arctic region, Alaska must partner with federal agencies to advance shared goals, like research collaboration and strategic planning.

    A. The state of Alaska should assess and support new infrastructure that may advance resource development opportunities.

B. The state of Alaska should coordinate with industry, universities, other research organizations and countries to enhance sharing and accessibility of scientific data to better inform state and federal permitting and protect the environment.
C. The state of Alaska should collaborate with industry and federal agencies to continue to update hydrocarbon and mineral resource mapping and estimates in the Alaskan Arctic.
D. The state of Alaska should work with the federal government to develop a coordinated permitting system for Arctic assets, to include OCS revenue sharing.
E. The state of Alaska should promote science-influenced decision making that incorporates local and traditional knowledge of Alaskans and encourages adaptive approaches guided by ongoing research and monitoring.

3. Greater interest by industries in Alaskan Arctic opportunities will increase the number of requested resource extraction permits, necessitating more efficient permitting and coordination by local, state and federal entities.

A. The state of Alaska should work with federal agency land managers to achieve greater access, as well as clear and predictable regulatory standards, that together help to attract new industry investment in the Alaskan Arctic.
B. The state of Alaska should lead joint federal and state working groups to improve coordination and communication during permitting of resource development projects.
C. The state of Alaska should develop region-wide planning that allows local stakeholders to identify regional priorities for development and improve understanding and consideration of the cumulative impacts of human activities in the region.
D. The state of Alaska should coordinate with industry, local communities, regions and, when appropriate, neighboring Arctic nations, to identify future needed baseline data collection, research and monitoring that would augment and enhance state and federal permit processing.

4. Alaska has extensive experience and knowledge about Arctic resource development that should inform Arctic policy formation in federal and international arenas.

A. The state of Alaska should continue fostering strong partnerships between state and local resource industry groups, such as the Alaska Miners Association, Resource Development Council and Alaska Oil and Gas Association, in recognition of the contribution these local industry groups will make as Alaska establishes itself as a leader in Arctic policy and expertise.

[Call-out Box]

Leadership by Local Communities: NANA Regional Corporation and Red Dog Mine

Local communities and regional organizations have made community engagement a priority and one aim is to produce meaningful and lasting agreement about resource development decisions. We look to the Red Dog Mine, located 90 miles north of Kotzebue, for a good example. Owned by NANA Regional Corporation, an Alaska Native Corporation created by the Alaska Native Claims Settlement Act of 1971, Red Dog Mine is operated by Teck, Alaska, formerly Cominco. Before the initial development began, NANA directly engaged in a decades-long dialogue with their Inupiat shareholders to determine if resource development was right for their region. As a result of this extensive dialogue, in 1982 NANA and Cominco signed an innovative operating agreement that protects the subsistence resources of the Inupiat of Northwest Alaska and contributes to the regional economy with the production of valuable zinc and lead concentrate at the Red Dog Mine. The 1982 agreement also created a management and oversight committee consisting of members of NANA and Cominco (now Teck Alaska, LLC) and a Subsistence Committee consisting of Elders from neighboring communities who regularly work with mine officials to address local concerns regarding subsistence impacts.

The mine has proven to be an economic catalyst in the region while protecting the Inupiat way-of-life. For example, to date NANA has received $894 million in net proceeds from the mine, of which more than $515 million has been shared with other regions as part of the 7(i) sharing provisions of ANCSA. The Northwest Arctic Borough, the region's home rule borough, has received $118 million in payments-in-lieu-of-taxes; and, on average, approximately 57% of the mine's employees are NANA shareholders. The Red Dog Mine is a success story and one in which rural communities are leading the decision making process for resource development in collaboration with state agencies, Native corporations, and industry leaders. Rural communities are balancing difficult decisions and in this case were able to establish a flexible system that allowed for resource development while protecting customary and traditional ways of life.

Rural communities will need to continue leading decision making and collaborative partnerships as new resource development opportunities are balanced against potential negative impacts. Although the debate about potential risks to the environment and subsistence resources is often heated, it is critical for the state of Alaska to ensure a balance is met and appropriate mitigation strategies and other safeguards are in place. The development of resource access roads is one area where this debate can be found.

NANA Regional Corporation is exploring economic development opportunities for its shareholders that have the potential to increase job opportunities, reduce energy costs and increase access to other resources. One project being pursued by NANA in partnership with NovaCopper is aimed at developing two large copper deposits in the Ambler Mining District located east of Kotzebue in the Upper Kobuk area. To make this project viable for the

development phase of the mine, it is necessary to reduce the cost of transporting mineral ore out of the district. NovaCopper and the state of Alaska are working with communities in the Upper Kobuk area to weigh both the benefits and the risks of developing the new road. Some communities are supportive because of potential benefits, including access to services and supplies that can address the staggeringly high cost of living. Other communities worry that a public-use road will bring with it more non-resident hunters and increased pressure on the caribou herd upon which they rely as a subsistence and cultural resource. In fact, locals report that last year a large number of hunters were dropped into the Ambler/Kobuk area for caribou hunting which forced the caribou herd to turn to the northeast resulting in local resident hunters having to travel further at greater cost to hunt.

Resident hunters worry that building a new road would aggravate further the growing pressure on the caribou herd. NANA, the state, local communities and regional and local Native entities are collaborating to ensure the best option for access to resources. One option being considered is to construct an industrial-use only road with limited access. It should be noted that the state has a history of managing caribou sustainably in the midst of resource and road development. This dialogue about the risks and benefits of new access is ongoing, with more discussion planned as the project is still in the exploration phase and an environmental impact study on the road has not yet commenced.

5.5 Security and Defense

In 2014, the Commission will comment on the recently release DOD Arctic Strategy, provide additional information about Alaska's Division of Military and Veteran's Affairs (DMVA) and the National Guard. At the same time, the Commission will expand on the different types of security, including energy, food, environmental, and economic. Recommendations for this subject matter area will also be drafted in 2014.

Introduction

Though Alaska is not part of the lower 48, it is part of the homeland that the Department of Defense (DOD) defends. Alaska is a critical part of National defense because Alaskans are American citizens, Alaska's natural resources fuel the U.S. and Alaska's strategic location protects everyone in North America. This should warrant more defense personnel, defense hardware and defense technologies. Recognizing the challenges that federal agencies' budgets, including DOD's, face and will face into the future, Alaska must consistently make the case that the state is worth DOD investment. A secure Alaska is the Gateway to a safe North America – it is not enough to guard the gates at Hawai'i and Guam.

An emerging Arctic, with more activity due to diminishing sea ice, is a key aspect of the need for continued and long-term investment. The state needs a visible presence in the Arctic. Anyone sailing on (or under) or flying through America's sovereign space in its northernmost region must know that we will meet and defeat any threat to our homeland.

As part of this new and expanded mission, the state deserves: a strengthened and active Coast Guard; response ability along Alaska's western coast, including a deep draft port; greater ability to detect submarines in the Bering, Chukchi and Beaufort seas; better domain awareness and tracking of maritime activity; and improved communications, navigation and weather infrastructure.

Alaska has been and will continue to be a strong partner alongside America's military forces. For example, the state provided $80M in funding for the Tanana bridge extension, thereby facilitating the military's access to premier training grounds. Currently, the state is supporting renovations to Joint Base Elmendorf-Richardson's (JBER) National Guard Armory and the Alaska Industrial Development and Export Authority (AIDEA) is financing the transition of Sector Anchorage, saving the Coast Guard as much as $1.5M/year. The state of Alaska is willing to be a financial partner in projects that are in the state's interest. The state's security and defense are of paramount importance.

Background

The U.S. Department of Defense Arctic Strategy, released November 22, 2013 at the Halifax International Security Forum, identifies that a desired end-state for the Arctic is: 'a secure and

stable region where U.S. national interests are safeguarded, the U.S. homeland is protected, and nations work cooperatively to address challenges.' Two main supporting objectives are: (1) Ensure security, support safety, and promote defense cooperation; and (2) Prepare to respond to a wide range of challenges and contingencies.

The DOD Arctic Strategy states that the Department will accomplish these objectives in the following ways:

- Exercise sovereignty and protect the homeland
- Engage public and private sector partners to improve domain awareness in the Arctic
- Preserve the freedom of the seas in the Arctic
- Evolve Arctic infrastructure and capabilities consistent with changing conditions
- Support existing arrangements with allies and partners while pursuing new ones to build confidence with key regional partners
- Provide support to civil authorities, as directed
- Partner with other departments and agencies and nations to support human and environmental safety
- Support the development of the Arctic Council and other international institutions that promote regional cooperation and the rule of law

The strategy notes the uncertainty of future projections about the Arctic Ocean and climate change. It also states that 'fiscal constraints may delay or deny needed investment in Arctic capabilities, and may curtail Arctic training and operations.' DOD will also attempt to mitigate a public narrative that speaks to rivalry and conflict in the Arctic. DOD will also be careful to not be too aggressive in taking steps to anticipate future Arctic security risks so that mistrust & miscommunication will not materialize.

U.S. Northern Command (USNORTHCOM) has the primary responsibilities for addressing Arctic defense and homeland security. It provides Strategic-Level Command through the Commander of U.S. Northern Command (CDRUSNORTHCOM). CDRUSNORTHCOM is the geographic combatant commander responsible to the Secretary of Defense and the President for a range of missions within his assigned area of responsibility (AOR), which includes North America and the Arctic to the North Pole. Principle missions include homeland defense, defense support of civil authorities, and security cooperation activities (interactions with foreign defense establishments). CDRUSNORTHCOM is responsible for the planning and conduct of these missions throughout this area of responsibility, which includes the Arctic. CDRUSNORTHCOM is also responsible for the advocacy for DOD Arctic capabilities.

At the operational level, the Commander of Joint Task Force Alaska (CJTF-AK) has responsibilities. JTF-AK is a subordinate organization to USNORTHCOM. CJTF-AK also serves as Commander, Alaskan Command (ALCOM), a sub-unified command to Commander, U.S. Pacific Command (USPACOM), another geographic combatant commander. ALCOM and

JTF-AK are serviced by one combined staff; responsibilities are so intertwined that their most recent campaign planning action resulted in a combined mission statement: Alaskan Command and Joint Task Force Alaska, along with trusted partners, conduct homeland defense, civil support, and mission assurance in Alaska to defend and secure the United States and its interests.

JTF-AK has been tasked with operationalizing the USNORTHCOM missions in the Arctic. DOD is lead for the homeland defense mission. Most other missions (i.e., defense support of civil authorities) would be conducted in support of a state-led agency or other lead agencies. JTF-AK planning is accomplished by developing Arctic concepts of operations (CONOPS). These CONOPS are basically plans for how key USNORTHCOM missions would be executed in the Arctic. CONOPS also facilitate identification of required capabilities. Potential CONOPS to be developed include: Arctic Search and Rescue, Arctic Domain Awareness, and Arctic Communication.

In order to better educate DOD of the uniqueness of both Alaska and the Arctic operational environment, ALCOM/JTF-AK created a monthly Arctic Speaker Series. The Arctic speaker series educates the staff and other Arctic stakeholders on various parts of Alaska and the Arctic. The range of speakers is very diverse in order to provide a broad knowledge base for the staff.

ALCOM/JTF-AK has also partnered with the University of Alaska, with a memorandum of understanding on Arctic information sharing, promoting shared DOD-Academia understanding of emerging Arctic requirements, capabilities and situational awareness. The collaboration is a productive group of organizational representatives who share knowledge of the Arctic and work together to prepare for future challenges as the Arctic becomes more accessible and vulnerable to natural and man-made disasters. JTF-AK has an action plan with University of Alaska Fairbanks (UAF), which provides specific goals for interaction between the two organizations.

Furthermore, the Alaska Arctic Working Group (AAWG) is an enduring organization made up of ALCOM/JTF-AK staff and external armed forces stakeholder representatives responsible for centralized planning and execution of day-to-day activities in support of the JTF-AK Arctic mission. The AAWG identifies existing operational Arctic capabilities and shortfalls; establishes and maintains enduring partnerships with key Arctic stakeholders; synchronizes Arctic exercises; and develops, maintains, and shares Arctic knowledge and situational understanding in support of USNORTHCOM and USPACOM Arctic objectives.

Currently, the DOD's Arctic Operational Focus is on Search and Rescue (SAR) and Homeland Defense. Search and Rescue operations occur through the 11th Rescue Coordination Center (RCC), which is responsible for coordination of aeronautical search and rescue within the state of Alaska. The RCC also assists the U.S. Coast Guard and the Alaska State Troopers for other search and rescue cases. Additionally, the Alaska Air National Guard provides a 24/7 search and rescue alert. Homeland Defense occurs through the Alaskan NORAD Region (ANR), which

conducts aerospace control within its area of operations and contributes to NORAD's aerospace warning mission. This mission is conducted on a 24/7 basis.

The focus areas of NORAD's mission are 1) air sovereignty: responding to a threat from outside the border; 2) asymmetric threat: responding to a threat from within the North American border; 3) strategic threat: carrying out a contingency plan; and 4) consequence management: responding to the outcomes of controls.

Demand for NORAD is projected to increase with heightened regional activity including commercial traffic and tourism. New features might include: underwater/shore-based sensors; unmanned aerial systems; national reconnaissance satellites; more patrol aircraft; and surface/subsurface vessels.

Potential future DOD Arctic operational focus areas include Search and Rescue exercises with other Arctic nations (exercising the Arctic Search and Rescue Agreement); science and technology solutions for Arctic domain awareness; and exercise logistics support to U.S. Coast Guard in the event of an oil spill.

ALCOM/JTF-AK is aware of the challenges in the Arctic and the increasing maritime traffic due to the melting ice. Search and Rescue (SAR) is a major concern. A single cruise ship accident off of the North Slope could easily overwhelm current SAR capabilities. DOD is planning and advocating for better practices and more capabilities to counter future Arctic issues like these.

Conclusion: Policy Recommendations

National Arctic security issues will be reviewed for the DOD agencies and the Coast Guard by the Commission during 2014.

5.6 Marine Transportation

Introduction

The extent of summer sea ice reached a historic low in September 2012, opening more Arctic waters to summer marine transportation. The U.S. Coast Guard (Coast Guard) reported that from 2008 to 2012, total annual vessel traffic in the Arctic region grew from 120 to 250, an increase of more than 100%. The growth rate was particularly high for tank vessels, followed by tugs and other cargo vessels. Similarly, Bering Strait transits have increased by 100% between 2008 and 2012, from 220 to 480. There have been ongoing efforts to study these increases and to address their implications. As the maritime environment of the Arctic becomes more accessible, those most familiar with the Arctic – such as the indigenous peoples who live there, the oil and fishing industries, and the state-licensed marine pilots – have a lot to contribute to policy development affecting the region.

The Bering Strait is a traffic funnel for two major maritime transportation routes: the Northern Sea Route and the Northwest Passage. Arctic marine traffic is primarily driven by globalization of the region, the ability to move cargo faster, and the linkage of Arctic natural resources to global markets. Sea ice retreat provides for potentially greater marine access, shorter routes, and longer seasons of navigation. As the ice retreats, advanced ice-capable and icebreaking ships from both government and industry will allow Arctic marine operations in many new and uncharted areas.

Background

A number of efforts over recent years have worked to address marine transportation issues. In 2009, the Arctic Council approved the Arctic Marine Shipping Assessment (AMSA) Report, which made a number of recommendations to enhance Arctic marine transportation safety, protect Arctic people and the environment, and build Arctic marine infrastructure.[35] The Arctic Council Protection of the Arctic Marine Environment Working Group (PAME) continues to follow up on recommendations found in this groundbreaking document.

The International Maritime Organization (IMO) is the United Nations agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. The IMO, since 2010, has been developing a draft international code of safety for ships operating in polar waters – the Polar Code.[36]

The Alaska Northern Waters Task Force (ANWTF) issued a report in 2012 with recommendations that drew on input and testimony from universities, U.S. military, non-

[35] www.pame.is/amsa-2009-report
[36] www.imo.org

governmental organizations and dozens of state and federal agencies as well as from local communities and residents from around the state of Alaska.

Complementing other federal efforts, the U.S. Committee on the Marine Transportation System (CMTS) issued a report in 2013, titled U.S. Arctic Maritime Transportation System: Overview and Priorities for Action 2013. This collaborative committee is comprised of the federal agencies with interests, responsibility and authority in matters pertaining to the Arctic. It follows AMSA recommendations and was directed via the Coast Guard Authorization Act of 2010.[37]

The U.S. Coast Guard vision for operating in the Arctic Region is to: 'ensure safe, secure and environmentally responsible activity in the Arctic.' The new USCG Arctic strategy released May 21, 2013 focuses on three strategic objectives: improving awareness; modernizing governance; and broadening partnerships (domestic and international).

The strategy also recognizes other factors that will be key, including: building national awareness of the Arctic and its opportunities; strengthening maritime regimes; improving public-private relationships; and identifying future requirements and resources. The Coast Guard notes that the Arctic is not a new venture for the Service. It has a long history in Alaska since it was purchased from Russia in 1867 and a long history of operating the nation's polar ships. These experiences provide many historic lessons.

For long-term success the strategy notes as important the following approaches: enhancing public-private partnerships to implement best practices and respond to challenges; increased federal interagency cooperation; increased international cooperation at the Arctic Council and other organizations; use of advanced science and technology applied to the Arctic; and use of risk-based management to protect the Arctic environment.

The document establishes the Coast Guard's strategy for operations in the Arctic given the realities of today's geo-strategic context. Future development of the Coast Guard's enhanced capability in the Arctic will evolve around the three objectives noted above and engagement with a host of partners and stakeholders. The Coast Guard is the primary federal maritime agency in the region responsible for multiple missions including marine safety, environmental protection, maritime security and law enforcement in the United States Arctic Ocean. In the state, the Alaska State Licensed Marine Pilots are charged under Alaska law to protect life, property, and the marine environment. They have an important role to play in homeland security issues and in helping the state and industry to establish best practices for safe development of the Arctic.

[37] www.cmts.gov

Discussion and Considerations

Vessel traffic through the Bering Strait is increasing with Arctic resource development and exploration (oil and gas); tankers (along Russia's Northern Sea Route); offshore support vessels; bulk carriers (hard minerals); and passenger vessels (cruise ships). At the same time, Unimak Pass is a major constriction point, on the Great Circle Route, in the Eastern Aleutian Islands. Currently 4,600 vessels transit the route annually and this number is expected to increase regardless of Arctic development. The remoteness of the Bering Strait and Unimak Pass complicate any incident – whether vessel grounding, collision or hazardous spill – with extremely challenging logistics.

Alaska Department of Commerce, Community, and Economic Development (DCCED) is working with the University of Alaska Fairbanks on an Arctic shipping study to assess trends in global commerce and trade expected to affect use of Arctic shipping routes. The study will also identify needed infrastructure to address safety of navigation and to position Alaska to take advantage of affordable energy and global promotion of trade and economic development associated with new Arctic maritime transportation.

The Coast Guard does not have a permanent operational base north of the Aleutian Islands and is operating solely in a seasonal surge capacity reflective of increased human activity in the Arctic. The current federal fiscal situation calls for prudent planning in an atmosphere of uncertainty and lean budgets for the foreseeable future. U.S. federal agencies involved in Arctic operations lack appropriate Arctic capable ships, small boats, aircraft and marine port infrastructure in the region. The Coast Guard's need for more ice-capable assets is well-documented. The state of Alaska has supported the planning and funding of ice breakers and ice-capable vessels in the U.S. government's inventory of multi-agency fleet assets.

It is important to plan now in anticipation of the growth in vessel traffic and its impact on the environment and on the people who live there. As traffic increases, standards and regulations to govern vessels in Arctic waters will need to be strengthened. Since many authorities govern the waters, these agreements will fall under state, national and international jurisdictions. Alaskans should be informed about and involved in the process of developing policies on these issues. Special attention should be paid to the Bering Strait, the "gateway" to the Arctic Ocean, which is also proximate to local residents hunting, fishing, and subsistence needs.

The Coast Guard, state of Alaska and counterparts in Russia must work together to develop shipping lanes and operating protocols for vessels transiting the Bering Strait; and the Coast Guard and the state of Alaska must do the same with regards to Unimak Pass. The United States and Russia must cooperate to develop a voluntary, seasonal (summer and open water) marine traffic routing scheme for the Bering Strait Region, which could then be submitted to the IMO for approval. The United States should also work with Canada to resolve their long-standing boundary dispute in the Arctic.

There are currently no Arctic-specific regulations in place for marine safety and environmental protection in the U.S. Arctic. However, there are proposals for the IMO mandatory Polar Code (international), and non-tank vessel rules (domestic U.S. regulations) are newly implemented. As the IMO moves toward finalizing the Polar Code, the Coast Guard and other federal agencies should take a very active role in promulgation of regulations to mitigate risks associated with increased vessel traffic in the Arctic region.

There will also be future Arctic regulations relating to emissions, discharges (effluent, garbage, etc.) and other issues (such as routing measures) as the traffic in the area continues to build. The state of Alaska supports the development of the Polar Code and domestic U.S. regulations that do not curb economic activity but inform business planning for commercial activities in Arctic waters while preserving subsistence and supporting environmental sustainability. Any regulations being considered should be reviewed by the state of Alaska, and state agency experts on the IMO US delegation. Where applicable the state of Alaska should take advantage of participation in IMO meetings.

Especially important to residents in the Alaskan Arctic is the threat that increased commercial activity creates and the unintended consequences for subsistence users and food security. These include changes in migration patterns, risks to subsistence hunters/fishers and decreases in stocks, as well as risks of hazardous spills occurring.

Maritime operations off the Alaskan Arctic coast depend on the ability to communicate with modern technology to address the needs of every possible activity in the Arctic. Data and voice communications are critical to any public or private agency achieving success – the state of Alaska may have a role in investing in this infrastructure as a partner with industry. For instance, the Alaska Aerospace Corporation, a state of Alaska entity, has a launch complex on Kodiak Island that could put polar-orbit satellites into space to meet communication needs in the Alaska Arctic. Additionally, the Statewide Broadband Task Force released a report in 2013, *A Blueprint for Alaska's Broadband Future,* exploring the current state of Alaska's broadband infrastructure and outlining recommendations including satellite launches as well as polar fiber deployment.

The AMSA and the National Strategy for the Arctic Region (NSAR) note the critical importance of adequate hydrographic readings and charting for the U.S. maritime Arctic and the entire Arctic Ocean. The National Oceanic and Atmospheric Administration (NOAA) has the primary responsibility for charting the waters around Alaska and adequate funding must be provided to begin a process of charting critical Arctic areas where increased marine use is occurring, or potential sites for increased Arctic maritime infrastructure. At the same time, year-round ice forecasting will allow ice-capable ships to find the safest route through the seas during the summer months, and ice-breaking ships will know the path of least resistance to follow in the winter.

As part of an integrated approach to the Alaskan Arctic, an enhanced planning process between state and federal agencies should be encouraged. The state of Alaska, industry and Alaska Natives must be an integral part of the planning process. As part of this process, there needs to be regulatory certainty in support of state and local economic activity. This is to encourage a transparent and delineated regulatory process from initial resource identification to economically viable end usage.

Conclusion: Policy Recommendations

Strategic Recommendations

- Encourage development of appropriately integrated systems to monitor and communicate Arctic marine information, and continue state and federal support for programs such as the Alaska Marine Exchange.

Other Recommendations

1. Alaska's maritime environment, whether through Unimak Pass or the Bering Strait, faces increased vessel traffic.

   A. The state of Alaska should support development of a Polar Code that meets the state's interests and recognizes its priorities, while developing practical and voluntary measures that encourage best practices.

   B. The state of Alaska should continue to support further development of the AIS system established by the Alaska Marine Exchange.

   C. The state of Alaska should work to establish IMO- and Russian-endorsed shipping routes.

   D. The state of Alaska should demand that the United States ratify the Law of the Sea Treaty and submit an extended Continental Shelf claim to ensure resources are appropriately retained for both Alaska and the United States.

2. The Alaskan Arctic is sensitive to offshore resource exploration and production.

   A. The state of Alaska should demand federal regulatory certainty and clarity in regards to resource exploration.

   B. The state of Alaska should endorse existing and encourage examination of future Arctic operating practices.

   C. The state of Alaska should establish regulatory standards for production of offshore resources and their transportation to market.

D. The state of Alaska should work with the U.S. Coast Guard to update the Coast Pilot - a reliable and efficient source of information for mariners that gathers all pertinent and relevant information in one accessible and searchable location, ideally covering navigation of the Bering Sea[38] and Arctic waters.

E. The state of Alaska should continue to support the Alaska Maritime Training Center (Alaska's Institute of Technology) at Seward in its efforts to develop a world-class facility for training in Arctic operations and ice navigation.

3. Decreasing ice increases the size of the Federal Government's area of responsibility, which results in challenging resource prioritization and directly impacts the state of Alaska's security, environment and economy.

A. The state of Alaska should continue its strong support for replacement of the Coast Guard's Polar class icebreakers and other ice-capable cutters for conducting Arctic operations in coastal Alaska.

B. The state of Alaska should build on current efforts to identify a deep draft port[39] and identify additional critical aviation and maritime logistics; including a suitable location to build a C-130-size aircraft hangar (which could be collocated with a deep draft port).

C. The state of Alaska should encourage the development of a deep draft port or ports, which could include negotiating public and private long-term investments. An Alaska Arctic Port Authority, or similar body, could facilitate public-private partnerships for investment, and development of the management strategies for future port operations.

4. More effective coordination on the federal level, in consultation with representatives of the state of Alaska, should be established in order to develop priorities and identify needs associated with developments in the Arctic, including transportation.

A. The state of Alaska suggests that the Coast Guard lead coordination amongst the Committee for the Marine Transportation System (CMTS) agencies for activities in the Arctic and should be adequately funded to carry out its duties.

B. The state of Alaska should continue to support a single system to monitor vessel traffic in the Arctic. The Coast Guard and state of Alaska should support and facilitate such a comprehensive system. A system could also transmit information on ice and weather, ship's speed, and closed or sensitive areas for navigation.

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[38] For example; the Canadian 'Arctic Voyage Planning Guide' includes nautical charts, tide and current tables, radio aids, lights, buoys, regulations, IMO guidelines and more - http://geoportal.gc.ca/eng/Gallery/MapProfile/5#wb-tphp Another example is the Coast Guard's Coast Pilot, which has detailed information for other coastal areas of the U.S., but not yet for Arctic waters.

[39] Alaska Arctic Deepwater Ports Study (USACOE AK DOT leads)

5. The Governor and his staff work as a team to leverage state agency information and local input in developing and communicating the state's position to federal entities, including the Coast Guard. While the state has frequent communication with Coast Guard District 17 and Headquarters leadership, it is increasingly difficult to navigate the complex and multi-faceted traffic rules and patterns, navigation aids, OCS activities, fish and wildlife resources, risk assessment, response, community needs and other issues as they pertain to maritime transportation, transportation infrastructure, and planning.

   A. The state of Alaska should have an Arctic specialist who acts as the liaison between industry, the public and private sectors, and indigenous groups; tasked with advocating the state's position to the Coast Guard in Arctic-related maritime and intermodal transportation policy matters. Such a position should utilize valuable local knowledge and input in developing policy and have a budget sufficient to support its efforts.

5.7 Response Operations: Search and Rescue/Oil Pollution

In 2014, this subject matter area will add Search and Rescue information and recommendations, and address additions to the Oil Pollution Prevention and Response section, including emphasizing shipping concerns, as well as national and international efforts to address this issue. This section will also consider local/regional government assets, community response and planning processes.

Introduction

Retreating Arctic sea ice is opening up a once inaccessible region to marine transportation, with corresponding concerns raised about the integrity of safety and security in the Alaskan Arctic. With increased onshore and offshore resource development and shipping in the Arctic, the state, local communities and federal agencies must be equipped to meet new challenges, ensuring that risks are carefully evaluated and addressed.

Background

Currently, the U.S. Coast Guard (Coast Guard) is engaged in cooperative agreements with Canada on search and rescue, marine environmental protection, and icebreaking, which could all be strengthened.

As part of this effort, it is worth noting that the Coast Guard and the Alaska Air and Army National Guard respond to most Arctic, and rural, requests for assistance. The proposed development of offshore natural resources has highlighted the need for increased response and recovery capability in the Arctic. Alaska must have the capability to house a C-130-size plane overnight in sub-zero weather. This hangar can also provide a staging area to coordinate the evacuation of survivors of a small cruise ship, if one were to abandon ship in the Arctic. Nothing of this sort exists north of Fairbanks, Alaska.

Improved search and rescue and oil spill response capability and infrastructure will provide a launching point for defense support to civilian authorities (DSCA) in the Arctic region during Stafford Act disaster events. The state of Alaska values a close relationship with the Department of Defense (DOD) and understands the need to use all local resources to respond to disaster events across the state. This could include DOD assets under the control of an Alaska National Guard dual-status commander, who is reporting to the Governor through the State Emergency Operations Center.

Improving domain awareness is another critical component of successful Arctic operations. The state of Alaska, the federal Department of Homeland Security, and the Department of Defense, must know who is in the water, and where each vessel is located, to provide maximum safety and to shorten life-saving response time. The Alaska Marine Exchange (AME) needs expanded support. It is worth considering increasing Automatic Identification System (AIS) usage on

vessels traveling in U.S. waters off Alaska's coast – this may need bilateral cooperation to achieve. Information updates in the Arctic must be a state and national priority. These updates must include: new bathymetric charts, real-time weather observations, increased development and use of the AIS, as well as improvements to the Alaska Marine Exchange.

Clearly, both assets and capabilities in the Alaskan Arctic must be enhanced. There is an immediate need to replace the nation's Polar class icebreakers that are operated by the Coast Guard. These major icebreakers are required for a minimal U.S. maritime Arctic presence, and for research and incident response. Commercial icebreakers will also have important roles in supporting offshore drilling and ice escort. In fact, the development of shipyards and deep draft ports in the U.S. and Alaska that can build the private sector assets needed to operate in the harsh Arctic environment should be considered. In the event of a large Arctic oil spill, the Coast Guard lacks a source for Arctic capable assets and cold weather proven equipment and supplies.

Search and Rescue

Background

The need for expanded sea and air search and rescue response capacity corresponds to several factors, including: increased resource extraction to support economic and community development; increased shipping traffic through the Northern Sea Route; increased activity in the Canadian Arctic, including the Northwest Passage, to support marine operations like community resupply; and increased cruise ship traffic.

Note: Discussion, conclusions, and policy recommendations will be developed in 2014.

Oil Pollution Prevention and Response

Introduction

A significant risk of Arctic resource development continues to be hazards associated with crude oil releases. Fortunately, the state of Alaska and many oil and gas companies have operated in the Alaskan Arctic for several decades, with experience in planning, prevention and response. Industry has extracted over 16 billion barrels of crude oil from the North Slope region and built considerable infrastructure since the 1960s including wells, storage tanks, offices and residential facilities that are connected by miles of pipelines, power lines and roads. Although the safety and environmental record associated with exploration and development work has largely been good, the state of Alaska continues to diligently evaluate new models for response planning and organization, technologies, and methods for addressing risks in the Arctic.

Background

The Alaska Department of Environmental Conservation (DEC) is the state's lead agency responsible for monitoring and enforcing state requirements relating to protection of the

environment. This includes marine waters within three nautical miles of Alaska's coast. DEC's Division of Spill Prevention and Response (SPAR) is specifically charged with preventing releases of oil and hazardous substances into the environment; assuring that resource extraction industries have contingency plans, response equipment and trained personnel who can immediately respond when a release occurs; and, overseeing that the cleanup and remediation of contamination meets state standards.

The state shares a number of these duties with the U.S. Coast Guard and the Environmental Protection Agency. The state also works closely with other federal agencies, state agencies, and local governments including the U.S. Department of the Interior – Bureau of Ocean Energy Management (BOEM), Bureau of Safety and Environmental Enforcement (BSEE), Fish and Wildlife Service (FWS) and Office of Environmental Policy and Compliance (OEPC) – U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (ADNR), the North Slope and Northwest Arctic Boroughs and tribes. Through this interagency coordination, and collaboration with regulated industry groups, such as companies that produce, store or transport petroleum products, the Alaska DEC ensures the efficacy of oil spill prevention and response plan requirements.

This state and federal partnership in spill response planning has yielded positive results and should be supported as part of the state and nation's Arctic policy. For example, under federal law, a National Oil and Hazardous Substances Pollution Contingency Plan (NCP) determines how the nation will prepare and respond to spills based on regional plans. Each region of the country is also required to have a regional contingency plan - Alaska is its own region. State law also requires a state contingency plan. Like the NCP, the State Master Plan defines the governing process for state oil spill response. To coordinate the two plans, federal agencies in Alaska and DEC (through The Alaska Regional Response Team) promulgated in 1994, a joint Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases (known as the Unified Plan) that addresses how the agencies will coordinate in responding to a spill. The planning extends to 200 miles offshore and includes geographic response strategies for the Bering Strait area and mapping of "priority protection areas" to assist in preventing an oil spill from impacting sensitive environmental or cultural areas. The Unified Plan divides the state into ten subareas, each with a detailed plan that includes response strategies to address specifics about the area. The Subarea Plans identify the location of spawning streams, how and where booms will be deployed, places of refuge for ships in distress, and other geographical considerations. The plans are updated on a regular basis responding to changes in industrial activities, advances in science and technology, and changes in applicable laws.[40]

[40] Work to identify additional culturally or environmentally sensitive areas continues. The state, working with local borough, city, and village leaders, has spearheaded an effort to develop geographic response strategies (GRS) for the shorelines of the Western Alaska and the Northwest Arctic Subareas. GRS identify environmental and cultural areas vulnerable to oil spills and offer spill response strategies that might best protect

One of SPAR's major tools for reducing the risk of hazardous releases is its Industry Preparedness Program (IPP). Unlike spill response plans that address geographic areas, this program applies to specific facilities that store, handle or transport crude oil or non-crude oil, and requires that they have Oil Discharge Prevention and Contingency Plans. These plans are reviewed and approved by DEC. The Contingency Plans are designed to minimize the risk of spills and verify that the plan holder is prepared to respond to a spill in a timely and effective manner. The Contingency Plan holder must provide proof of financial responsibility and affirm that they have the actual capacity to respond to an event either with their own equipment and personnel, through participation in an industry spill co-op, or under contract with a certified spill response contractor. Most operators on the North Slope meet these response requirements through participation in the oil spill response co-op, Alaska Clean Seas.[41]

While DEC's role is to plan for and prevent hazardous releases, under state and federal law the spiller has primary duty to respond in the event of a spill. DEC and its federal counterparts provide response oversight, but if a spiller fails to respond as required the government can supplement the spiller's actions or take the lead in the response, relying on contractors and local governments to assist. The state (the Governor and DEC Commissioner) can access funds from Alaska's Oil and Hazardous Substance Release Prevention and Response Fund, which is maintained for emergencies. All state costs for overseeing the spiller's response and for any supplemental spill response activities are, by law, required to be recovered from the spiller.

In addition to extensive oil spill response planning and preparation, Alaska has also committed significant financial and workforce resources to conducting regular drills to practice executing these contingency plans. Practice drills are organized using the Incident Command System, which provides a structure to organize federal, state and local government, industry and responders (including spill response contractors). A federal on-scene coordinator, a state on-scene coordinator from DEC and a designee from industry manage this response team, which can include as many as 200 people. The response team is divided into groups with expertise in planning, logistics, communications, and wildlife, social, and cultural impacts. The structure is highly organized and functions with clear roles and divisions of responsibility. Conducting these periodic practice drills with agencies, local responders, regulated industry and spill contractors

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these sensitive areas. Each GRS provides the site-specific spill response plans to protect the priority area by presenting unified (the public, responders, and agencies) priorities and strategies for implementation. Over 140 GRS have been developed along the Western Alaska coast beginning at Cape Peirce on the north side of Bristol Bay, running north to Point Hope and including the islands of St. Matthew, Nunivak, and St. Lawrence. Currently, 40 more GRS are under development for the Northwest Arctic Subarea. In addition, approximately 200 locations along the coastline of the North Slope Borough have been mapped as "priority protection areas" designated for immediate attention in the event of a spill. Interested federal agencies have participated with Alaska's state agencies in the development of the GRS mapping and strategies through this robust domestic process.

[41] Besides cleaning up spilled hydrocarbons, Alaska Clean Seas collaborates with the Alaska SeaLife Center, in Seward. The Alaska SeaLife Center is a research facility and public aquarium whose mission promotes understanding and stewardship of Alaska's marine ecosystems including marine wildlife response and rehabilitation. A major part of the facility is devoted to a robust wildlife response program, which includes flexible animal care infrastructure that can be tailored to a variety of species enabling care for sick and injured marine animals. The Center has remote wildlife response capability including animal care professionals and field response equipment, and is the only permanent rehabilitation facility for marine animals in Alaska. This organization has also developed a three day instructional program devoted to oiled wildlife care which is presented annually to North Slope spill responders. The Alaska SeaLife Center is uniquely positioned to respond in collaboration with Alaska Clean Seas to ensure rescue response considerations for marine wildlife.

verifies their readiness for a real event and clarifies the plans are sufficient and can be practically executed.

The prospect of increased future Arctic development both onshore and offshore brings a more urgent need for local communities to have the skills and resources to become the immediate and sometimes first responders. Having a quick and effective initial response to a spill can greatly reduce its impact and the cost of cleanup. Recognizing the importance of local response, SPAR, through its Prevention and Emergency Response Program (PERP), is securing formal agreements with communities that provide a structure for training a response workforce. These agreements also identify the optimal location for response equipment and materials, and determine the scope of assistance that the community will provide in the event of a spill. DEC's community agreements and Subarea Plans affirm the importance of local knowledge and help guarantee effective ongoing communication between residents and regulatory agencies.[42]

Discussion and Considerations

Oil spill prevention and response planning necessarily includes consideration of the nexus between open water spills and the Alaska coast. Shell, ConocoPhillips and Statoil each hold federal outer continental shelf (OCS) leases that are located more than three nautical miles offshore and thus outside state waters. Oil spill prevention, preparedness and response requirements on the OCS arise under federal law, primarily under the Outer Continental Shelf Lands Act, the Clean Water Act, the Oil Pollution Act of 1990, and the regulations of USCG, BOEM and BSEE. After the Deep Water Horizon catastrophe in the Gulf of Mexico in 2010, these federal agencies are paying considerable attention to avoiding catastrophic loss of well-head control, and providing on-hand containment, collection and storage capabilities to minimize the spread of spilled crude oil. In 2011 as part of approval of Shell's Chukchi Exploration Plan, BOEM limited drilling into zones capable of flowing hydrocarbons after September 24th to allow time to respond to a potential spill prior to ice encroachment. It is expected that similar restrictions would be applied to other Arctic exploration plans. Eventually, if year-round oil production commences, effectiveness of oil spill containment and recovery in broken-ice conditions must be improved and new techniques developed. Companies will build permanent infrastructure, which potentially includes subsea and buried pipelines to transport crude oil to processing, storage or other points. Detecting corrosion, leaks and devising solutions such as

[42] When the Exxon Valdez ran aground March 24, 1989, the State, the U.S. Coast Guard and ExxonMobil struggled to organize an immediate response to the worst oil spill in the history of the nation. Controversies about the use of dispersants, mechanical methods of cleanup and hot-water treatment confounded the cleanup (http://library.thinkquest.org/10867/cleanup/methods/dispersants.shtml) as did untrained and unprepared responders and workers, lack of information about fauna and other natural resources, complex response logistics, lack of boom and other response materials – many of which had to be shipped to Alaska from points around the world – and the overwhelming distances that the oil traveled. The Exxon Valdez Oil Spill provided Alaska, the Nation and the world a tragic lesson that led to the State and ADEC making aggressive changes including: new laws requiring oil handlers to develop detailed oil discharge prevention and contingency plans and to have equipment in Alaska to respond to certain size spills based on the volume of oil handled, increased State staffing for comprehensive State oversight of marine terminal and tanker operations, annual major spill drills with frequent smaller drills, development of Unified Command / Incident Command Structure, implementation of the Ship Escort / Response Vessel System, positioning of vast reserves of response equipment in key locations, and advanced training for response crews, marine pilots, and tanker and tug officers. See, http://dec.alaska.gov/spar/evos/thennow.htm (cited websites accessed October 2013).

secondary containment will be critical considerations. DEC and other state agencies remain vigilant and involved as federal agencies work to address these considerations and develop appropriate regulations to minimize these risks.[43]

Oil spill and other hazardous releases can come from OCS development, but also from tankers transporting crude or vessels transporting other hazardous materials through Arctic waters - a potentially greater concern as sea ice melts and Arctic shipping lanes remain open longer. Improved spill prevention, preparedness, and response capacity is needed to minimize risks associated with vessels in innocent passage outside the jurisdiction of state and federal regulations. For example, Western Alaska is vulnerable because foreign flagged vessels transiting through this area that are not coming from or going to a U.S. port are not subject to Oil Pollution Act of 1990 (OPA90) regulations and local infrastructure is not sufficient to conduct a response effort. The state frequently responds to vessels losing power and sometimes grounding on Alaska's shores.[44] A case can be made to nations sending vessels through the Aleutians and the Bering Strait that, in the absence of a global mandate from IMO, they should require oil spill prevention and contingency plans to be made in consultation with Alaska's federal and state agencies and coastal communities, and that they should join and support oil spill response organizations (OSROs) operating in these regions.

Small shore-based spills can also occur from daily activities in the Arctic such as transferring and storing fuel or small boat mishaps. Each event requires a different response, but DEC has designed programs so that shore-based assets are in place and personnel are trained to effectively respond in the event of a spill, be it a significant marine spill or minor spill. However, challenges of distance, training, availability of personnel and materials are still an impediment to total readiness in key areas of the Arctic. In addition, new OCS development will require greater coordination and cooperation among state and federal agencies and industry on issues of permitting, spill response planning, infrastructure needs and other responsibilities. Likewise, coordinating spill response planning and achieving agreement between state, federal and international entities will be critical on topics such as use of dispersants, in situ burning, new technologies of on-ice oil recovery and the like. These challenges also highlight the state's broader interest in the international communities' negotiations concerning the safety of Arctic marine transportation.[45]

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[43] DEC and other state agencies evaluate and respond as appropriate to federal regulations for offshore development. They also evaluate federal directives for improvements in oil spill preparedness, planning and prevention and participate in memorandums of understanding with federal agencies that delineate the state's role in the review of spill prevention and response provisions in federal OCS contingency plans.

[44] Regarding the Outer Continental Shelf (OCS) and federal jurisdiction, the Department of Interior's (DOI) Bureau of Safety and Environmental Enforcement (BSEE) is currently developing and clarifying "Alaska Standards" which involves a review of existing Oil Spill Response Plan regulations, a determination of their adequacy for U.S. offshore Arctic environments and a plan to recommend appropriate changes to ensure that adequate trained personnel and equipment is in place to respond to a worst-case discharge. During the summer of 2013, BSEE is concluding outreach meetings and working on drafting proposed regulations and a preamble for the formal rule making. They intend to have the proposed rule out for public comment by the end of 2013.

[45] This concern and the need for the USCG to have increased capacity to operate in ice infested waters; to participate in Arctic ocean spill response drills; and more consistent presence in Arctic waters, is dealt with in the Marine Transportation chapter, as is the need for ports and other facilities that can be employed in the event of a marine spill.

On land, the challenges ahead are also numerous: The infrastructure on the North Slope is aging, including the Trans Alaska Pipeline System (TAPS) and other pipelines. Leaks from these lines and other facility failures from corrosion are a concern. In response to a significant crude oil leak in 2006 caused by corrosion in Greater Prudhoe Bay infield pipelines, DEC initiated an assessment of risks associated with aging infrastructure. This resulted in enactment of new regulations, and preventative maintenance and corrosion monitoring and control programs.

Under these programs, DEC has conducted compliance reviews of 69% of the North Slope flow lines and has sponsored technology conferences with leading experts from industry and government to discuss leak detection and remediation.[46] Results of the conferences are published for future use and reference by companies working to address aging infrastructure and striving to identify the leading indicators of potential spills so they can become more effective in preventing them. These conferences and other efforts to collaborate will improve the collection of data and development of tools to analyze and determine the root causes of spills with the goal of reducing incidents. Experience gained from the North Slope as the state and industry meets the challenges of addressing corrosion and aging infrastructure must be made available to the next generation working in the Arctic.

An additional challenge is DEC's lack of presence in Arctic communities and how to allocate and stage spill response workers, equipment and facilities. Although larger companies have extensive accommodations and office space for their work force, state agencies are relegated to renting small, substandard space in Deadhorse or Barrow. Vehicles available for staff are limited on the North Slope and transportation by air, land and water is expensive. This makes the DEC duties of inspection, oversight and monitoring expensive and complex. With the potential for new activity on Point Thomson, NPR-A and offshore, the state must grapple with where and how agency staff will be accommodated for space, telecommunication and transportation, not only to ensure a continuous presence, but to accommodate the expected significant influx of additional personnel in the event of a large spill in the Arctic.

The state's efforts to plan for and prevent oil spills in Alaska are largely paid for by the Oil and Hazardous Substance Release Prevention and Response Fund. This fund was formed in 1986 by the Alaska State Legislature using a five-cent surcharge on each barrel of crude oil produced. The fund was subsequently broken into two accounts: Response and Prevention. Four-cents of the surcharge feed the Prevention account and one-cent feeds the Response account. When the balance of the Response account is greater than $50 million the state suspends collection of the one-cent surcharge on crude. By law, the Response account must be maintained at $50 million and occasionally the one-cent surcharge is reactivated. The Response account can be accessed by the Governor or DEC Commissioner with notice given to the legislature and used to assist the

[46] DEC sponsored a technology conference in September 2011, which culminated in a report, *Pipeline Leak Detection Technology 2011 Conference Report* (March 2012). A similar conference was held in 2013 to provide an opportunity for companies new to operating in Alaska to learn side-by-side with experienced companies about the laws, Arctic pipeline engineering and best practices.

state when it responds to the exigencies of a spill. To replenish this account, the state seeks recovery of its expenditures from the responsible party and deposits the funds back into the account. If this cost recovery is not sufficient, and to ensure the account stays at $50 million, the state can reinstate the one-cent surcharge.

The Prevention account is also an important resource for the state and is used to fund the operating expenses of DEC's SPAR Division, including the Industry Preparedness Program and other prevention activities. The four-cent surcharge on crude oil production that generates the funds appropriated by the legislature into the Prevention account has been adequate to fund the SPAR operating budget in the past (approximately $15 million/year). Now however, as oil production in the state declines, the amount collected via the surcharge is no longer adequate. In fact, using a best-case scenario, DEC predicts that in FY15 there will be less than $150,000 in the Prevention account. The state of Alaska must decide, and soon, whether or not as a public policy the state needs to find another mechanism that will guarantee the sustainability of the state's prevention, preparedness, and response work.

Conclusion: Policy Recommendations

Strategic Recommendations

- Facilitate and secure public and private investment in support of critical aviation and maritime response infrastructure and economic development, to include consideration of direct state funding and/or public-private partnerships that address development of communications, a deep draft port(s), icebreaker(s), logistics hubs, and a WX C-130 size aircraft hangar(s).
- Encourage and advocate for more adequate funding so that the U.S. Coast Guard can carry out its assigned and emerging duties in the U.S. maritime Arctic without compromising its capacity to conduct all missions throughout Alaska.
- Expand and support the Department of Environmental Conservation's effort to involve communities through Subarea Planning and provide local training to maintain limited supplies of oil spill response equipment and to ensure timely, effective and safe response and spill containment.
- Support the Department of Environmental Conservation's ongoing communication with the U.S. Coast Guard in reviewing alternative compliance program development and applications.

Other Recommendations

1. As oil and gas development increases on the federally controlled OCS and in international waters, and as tanker traffic rises, Alaska must continue working to prepare for a coordinated response to spills that reach its shores and impact its communities. This

necessarily involves working closely with Alaska's federal partners and with its neighboring Arctic countries.

A. The state of Alaska should strive to inform all federal policies concerning oil spill prevention, preparedness and response measures.

B. The state of Alaska should continue to participate and enhance engagement at the regional and international level to help reduce the risk of spills, including participation with the following: the Pacific States / BC Oil Spill Task Force; Pacific Northwest Economic Region; Energy Council; Bilateral negotiations with Russia and Canada; Arctic Council work groups and projects; International Maritime Organization; and Industry and trade group conferences and discussions.

2. While the Alaska Department of Environmental Conservation has spent decades working to improve the state's readiness for oil spills of all sizes and types, more needs to be done.

A. The state of Alaska should continue working with its federal partners on its subarea planning efforts under the Unified Plan, with enhanced input from local people.

B. The state of Alaska should continue to explore and advance new technologies and best practices to reduce the risk of hazardous releases in the Arctic that include local knowledge and sharing of information between these entities about their respective efforts to reduce the probability and severity of oil spills.

C. The state of Alaska should support the University of Alaska, enabling it to become the center of excellence for research, technology and practical methodologies for reducing the probability and severity of hazardous releases in Arctic waters.

3. A quick and effective initial response to a spill can greatly reduce its impact and the cost of cleanup. The State Division of Spill Prevention and Response is diligently working, through its Prevention and Emergency Response Program, to secure formal agreements with communities that provide a structure for training a response workforce, but additional work is needed to enhance first responder capabilities in Arctic communities.

A. The state of Alaska should continue to partner with Oil Spill Response Organizations (OSROs) to develop and maintain an on-call work force for large spills.

B. The state of Alaska should monitor OSROs to ensure readiness and encourage new companies to join OSROs. OSROs should have expertise in open water, broken ice, near shore and sensitive area protection and be able to meet contingency plan requirements and operate effectively in the unique and demanding conditions of the Arctic environment.

4. The funding mechanism for the Prevention account of the Oil and Hazardous Substance Release Prevention and Response Fund may not be sustainable to support the necessary work of DEC's SPAR Division, including the Industry Preparedness Program and other prevention, preparedness and response programs in Alaska.

    A. The state of Alaska should devise means to ensure the Oil and Hazardous Substance Release Prevention and Response account is sustainable and available to the state, and through the state, to communities as they plan for increased risk of hazardous releases in the Arctic. It will be important, both for efficiency, and coordination that contingency planning follow the existing structures described in this section, i.e. Subarea planning, industry c-planning and the Incident Command System.

5.8 Energy and Power

Introduction

Energy issues in the Alaskan Arctic are nearly identical to those confronting rural regions throughout the state. The lack of affordable energy threatens the sustainability of many remote communities. In villages where residents must spend more than half of their annual income on fuel and electricity, even modest economic activity, such as maintaining a local consumer economy, is severely limited. These same costs compromise the effectiveness of local governments, schools, and utilities, many of which continually struggle for solvency. This comes at a time when the Arctic is facing expanded opportunity.

Background

The majority of Arctic communities depend on expensive diesel fuel for electricity generation and home heating. In recent years the price for diesel in many rural areas has averaged between $6 and $10 per gallon. Gasoline is similarly priced. It should be noted that communities in the North Slope Borough—which derives considerable income from Prudhoe Bay oil and gas development—enjoy substantial borough subsidies for electricity, heating fuel, and gasoline costs. A 2012 study by Commonwealth North, "Energy for a Sustainable Alaska: The Rural Conundrum," [47] points out that the cost of shipping is a chief factor behind such high prices. "The further the community is from a hub the greater the cost," the report states. "Distance also increases costs by the number of times fuel is handled en route and potential transport or handling difficulties, especially if barged on a shallow river or flown into communities."

There are many additional expenses resulting from remoteness. The Commonwealth North study states, "Community isolation has led to each community having unique and independent power systems, bulk fuel systems, airports, and rural health clinics. Each community's infrastructure has unique capital, operations, and maintenance requirements." This approach to satisfying community infrastructure needs is extremely costly. In the Lower 48 a population the size of Alaska's typically requires one or two power plants to supply its energy needs for both electricity and space heat. In Alaska, there are more than 200 power plants.

Alaska has been battling rural energy costs for decades. The Power Cost Equalization (PCE) program, for example, which subsidizes electricity prices in communities across rural Alaska, was established in 1984. The federal Low Income Home Energy Assistance Program (LIHEAP) was created in 1980, and has been augmented since 2008 by state funding through the Alaska Heating Assistance Program (AKHAP). But PCE covers only a small fraction of rural residential electricity consumption and heating assistance grants can likewise be described as survival-level at best. Neither program covers commercial enterprises.

[47] See reference, www.commonwealthnorth.org/index.cfm?section=About&page=What's-New&viewpost=2&ContentId=807

The PCE program has yielded a wealth of data on utility fuel consumption and associated costs in Arctic communities. However, there remains a shortage of comparable information on energy consumption for space heating. For effective planning of both public and private sector energy development, there is not enough collection of clear and comprehensive community consumption and power-supply data.

Few communities in the Arctic have been able to find long-term remedies for crushing energy prices, but the state continues to search for solutions. In the recent past, the legislature and the executive branch have created and funded many substantial programs and tools focused on these issues. Most of the programs in the following list, which is only a sampling, were established or dramatically expanded within the past decade:

- Renewable Energy Grant Fund
- Emerging Energy Technology Fund
- Sustainable Energy Transmission and Supply Development Fund
- Alternative Energy Conservation Loan Program
- Commercial Building Energy Audit Program
- Power Project Fund Loan Program
- Alaska Housing Finance Corporation (AHFC) Weatherization and Home Energy Rebate Programs
- AHFC Alaska [Public Building] Energy Efficiency Revolving Loan Fund Program
- Community Revenue Sharing

The Alaska Energy Authority (AEA) has been the lead agency for a number of these efforts. For example, in administering the Renewable Energy Grant Fund—established by the Legislature in 2008 to reduce dependence on diesel fuel across the state—AEA has approved more than $202 million in grants for 228 renewable energy projects in Alaska through 2012. While the majority of these projects are still under construction, it is nevertheless estimated that the program has displaced more than 10 million gallons in diesel fuel as of this writing. AEA calculates that the first 62 funded projects to reach operation will provide more than half a billion dollars in net benefits over their lifetimes. However, experts caution that reducing the amount of diesel fuel consumed does not always lead to lower costs for consumers. In some cases, the integration of alternative/renewable energy sources does little more than stabilize high prices. In others, it can actually increase rates. It is important that AEA continue to be rigorous in its cost-benefit analysis of projects competing for investment.

In addition to spearheading many programs for energy innovation and efficiency, AEA also publishes a variety of studies and reports as tools for developing local and regional energy strategies. These include:

- "Alaska Energy - A First Step toward Energy Independence: A Guide for Alaska Communities to Utilize Local Energy Sources"

- The periodically updated "Renewable Energy Atlas of Alaska," which evaluates and compiles renewable energy resources statewide
- "Alaska Energy Pathway," which, by offering processes for assessing the economics of developing local alternative energy sources, including financing strategies, seeks to enable and encourage localities and regions to participate in devising strategies suited to their individual needs

These reports and other resources, including direct guidance from AEA, are being used by local governments and organizations in the Arctic who are forming energy plans for the North Slope, Northwest Arctic, and Bering Straits regions. Presently, local energy plans are in varying stages of development.

Nearly all of the programs and studies named above are guided by the tenets of a state energy policy that was developed during months of hearings and stakeholder meetings in 2009 and adopted unanimously by the Legislature in 2010. Its directives include achieving a 15 percent increase in energy efficiency on a per capita basis between 2010 and 2020 and increasing to 50 percent by 2025 the state's electric generation from renewable and alternative energy sources.

Alaska Housing Finance Corporation's (AHFC) weatherization and home energy rebate programs are clearly focused on the state policy's efficiency goal. Since 2008 the Legislature has appropriated more than $400 million to these programs, which bring immediate results. So far, more than 28,000 homes across the state have been weatherized, creating on average a 30 percent annual savings on residential energy costs. Yet that is only 11 percent of Alaska's 275,000 households, and the rebate program in particular has been criticized for the slower pace at which rural households have been retrofitted. There is also worry over the stability and sustainability of funding for these proven programs, which have so far depended on annual legislative appropriations.

AHFC estimates that the state pays $642 million each year to heat and power public buildings. A realistic reduction of 20 percent of those costs through energy efficiency retrofits would amount to annual savings of $128 million. The Renewable Energy Alaska Project (REAP) has suggested that those savings could be designated to provide a stable funding source for AHFC's residential weatherization programs, so that these programs would not have to depend on annual legislative appropriations.

A significant amount of development of energy-related technologies and strategies in Alaska also occurs outside of state and local government. Just a few examples include:

- REAP with more than 80 organizational and individual members across the state, has since 2004 played a prominent role in promoting the increase in renewable energy use and energy efficiency and conservation in Alaska.

- The Alaska Center for Energy and Power (ACEP) at the University of Alaska conducts applied energy research designed to lower energy costs and strengthen Alaska communities and industries.
- The Cold Climate Housing Research Center (CCHRC) is a nonprofit corporation that develops, tests, and employs energy-efficient and cost-effective building technologies for cold climates.
- The Alaska Native Tribal Health Consortium's (ANTHC) Alaska Rural Utilities Collaborative conducts energy audits of village water plants—often the single largest user of fuel in a community—and assists in energy-saving infrastructure retrofits and operational improvements.
- The Rural Community Action Program's Energy Wise program educates rural Alaskans on energy conservation measures in the home.

Discussion and Considerations

While efforts to further energy efficiency in households make headway, there is concern that programs to encourage retrofitting of public and commercial buildings are underutilized. Only a handful of eligible public buildings have been weatherized using AHFC's Energy Efficiency Revolving Loan Fund, with many others bypassing this financing method by seeking capital project grants or direct appropriations from the Legislature. In light of falling state revenues, it is important that energy efficiency improvements that will generate a return on investment be financed through loans rather than through state grants that would be better used for essential projects that do not generate cash flow. Similarly, while AIDEA has financing available for commercial building energy efficiency retrofits, there appears to be too little outreach to owners of commercial enterprises to persuade them of the substantial financial advantages of making these improvements.

Regional electrical grids have been offered as a way to bring down costs through more desirable economies of scale. However, because the volume of power shared even among multiple communities would likely remain relatively small, questions persist regarding the cost-effectiveness of this strategy in all but the most closely-situated clusters of populations.

Similar factors impede the development of natural resources in the Arctic. Meera Kohler, president of the Alaska Village Electric Cooperative (AVEC), has written that "the cost of energy is what currently renders Alaska non-competitive in the areas of resource extraction and refining and in processing products such as fish." Other authorities agree that such costs have long inhibited the creation of value-added processing and manufacturing industries in the Alaskan Arctic and beyond. Presently, the extraction and export of raw resources appear to be the most viable foundation for economic opportunity in the Arctic.

In the view of some policy analysts, further industrial, security, and civil development in the far North may offer the economies of scale to allow for cost-effective deployment of regional long-

term energy solutions. However, past development models – such as that of the Red Dog Mine in the Northwest Arctic Borough – have segregated industrial operations from local communities, failing to yield lower energy costs for Arctic residents despite their proximity.

While the PCE program requires data reporting on fuel use related to electricity generation, data on community consumption of fuels – including diesel, gasoline, and biomass – for heating and transportation go largely unreported. According to ACEP, "A comprehensive data collection and reporting system could enable businesses or private-public partnerships to develop more effective business plans for investing in systems with greater efficiency, provide better financial predications to inform decisions, and provide access to the local expertise needed to operate and troubleshoot their systems after deployment."

Clearly, there have been wide-ranging and long-term efforts to confront energy issues in rural Alaska, yet costs remain at crisis levels in most Arctic communities. Despite the existence of dozens of studies, plans, and task force reports, Alaskans have not identified and united behind a comprehensive vision that would ultimately meet the energy needs of the state's peoples, whether in rural or Railbelt communities. Community sustainability and opportunities for economic diversification depend on lowering energy costs in the Arctic and across rural Alaska.

Conclusion: Policy Recommendations

Strategic Recommendation

- Develop stable long-term funding mechanisms for state weatherization and energy efficiency programs while continuing robust efforts to find long-term energy solutions.

Other Recommendations

1. The Alaskan Arctic's communities continue to face daunting energy challenges.

    A. While continuing robust efforts to develop long-term energy solutions, the state, local governments, and the federal government should maintain support for energy programs to sustain bush communities in the near term.

2. Energy efficiency and conservation programs have been successful in bringing substantial immediate savings to consumers and improving sustainability in Arctic communities.

    A. The state of Alaska should continue strong support for programs that promote energy efficiency and weatherization in homes, public and commercial buildings, schools, and utilities.

B. The state of Alaska should implement measures to increase use of these programs. In particular it should better communicate the benefits of energy efficiency loan programs to owners of commercial and public buildings.

C. The state of Alaska should develop a stable, long-term funding mechanism for its residential weatherization and energy efficiency programs, which currently depend on annual appropriations from the legislature.

3. Interest in exploiting natural resources in the Arctic is increasing at the same time state, local, and federal governments consider expanding infrastructure to enhance Arctic security, search and rescue, and oil spill response capabilities.

A. The state of Alaska should advance integrated planning and forward thinking to identify opportunities that exploit future industrial and civil infrastructure development projects to serve regional energy needs. Early planning processes and new development models should seek to share power production and infrastructure to bring down costs.

4. The development of financeable regional implementation plans—whether by potential private-sector investors or public entities—has been hampered by the dearth of comprehensive data on community fuel consumption.

A. The state of Alaska should increase collection and dissemination of comprehensive community consumption and power supply data.

5. Innovations that create affordable, reliable, long-term energy solutions for Arctic communities are likely to also serve the needs of remote populations in many regions of the developing world. Stimulating Alaskan academic and private enterprise has the potential to solve problems at home while also creating global opportunities for Alaskan businesses.

A. Support partnerships with the university and the private sector for research and development of new energy technologies to bring down power and heating costs in rural Alaskan communities. This could take a form similar to Governor Parnell's R&D tax credit legislation introduced in 2012 but not passed by the legislature. However, any such legislation should limit tax credits to R&D specifically focused on rural energy and power solutions.

B. Support programs such as the Emerging Energy Technology Fund, which provides grants for technology that is within 5 years of commercialization.

5.9 *Fisheries and Wildlife*

Introduction

Alaska is world-renowned for its diverse and abundant wildlife, ranging from some of the largest free-ranging caribou herds in the world to a wide variety of marine mammals including several iconic to the Arctic such as the bowhead whale and walrus. The region also supports important nesting habitat for a wide range of waterfowl species. These resources form the foundation of a subsistence-based culture and as such are important from a food security perspective. They also provide important hunting and wildlife viewing opportunities. At the same time, Alaskans depend on sustainable fisheries for their sustenance, livelihood, and recreation. Fishing has been a major source of food for Alaskans and a provider of employment and economic benefits to those engaged in this activity and their communities. For indigenous peoples living along the coast and river systems, fish and fishing has been fundamental to their way of life.

The Alaska seafood industry accounts for over half of all U.S. fisheries production and is a key economic driver in the state. It is the largest private sector employer in the state. An estimated one-in-eight workers in Alaska earn at least part of their income directly from the seafood industry.

A changing climate presents an emerging challenge to management of Alaska's fish and wildlife and their habitats. Potential ecosystem impacts include changes in water, snow, ice and permafrost conditions. These changes potentially have a cascading effect on biodiversity, ecosystems and human living conditions within the Alaskan Arctic. Arctic climate change is a global concern and should be monitored to assess major and irreversible impacts on biodiversity, ecosystems, and the well-being of indigenous peoples and Arctic communities.

Fisheries

Background

Governance of fisheries in the Alaska region is complex[48], but has supported some of the most progressive fisheries management and research programs in the world. Current governance structures have established protocols for the management of fisheries in the future. Jurisdictions of fisheries in Alaska and off Alaska's coasts are generally based on geographic area and species.

International or bilateral agreements among countries oversee some species and areas.[49] Domestically, the North Pacific Fishery Management Council (NPFMC) and National Marine Fisheries Service (NMFS) manage marine fisheries occurring between 3 and 200 nautical miles from shore – the Exclusive Economic Zone (EEZ) – under authority of the Magnuson-Stevens

[48] See Fisheries and Wildlife Appendix A for detailed Fisheries Governance Chart
[49] See Fisheries and Wildlife Appendix A

Fisheries Management and Conservation Act[50]. The NPFMC and NMFS have some authority for halibut, consistent with the North Pacific Halibut Act administered through the International Pacific Halibut Commission. Inside three miles, it is the Board of Fisheries in the Alaska Department of Fish and Game (ADF&G) that has jurisdiction[51], with the exception of halibut. Since fish straddle and migrate across boundaries, coordination among the governing bodies is essential. Coordination occurs now and will be critical as the Arctic develops.

The Alaskan Arctic's marine environment includes two distinct geographic areas: BSAI – Bering Strait and the Aleutian Island chain waters south of the Bering Strait, which include the Bering Sea, Norton Sound, Bristol Bay, and the waters around St. Lawrence, St. Matthew, Nunivak and the Pribilof Islands; and AO – Arctic Ocean waters north of the Bering Strait including the Chukchi and Beaufort Seas and Kotzebue Sound.

The waters in the BSAI area support some of the world's most productive and valuable commercial fisheries. Species of crab, pollock, cod, sablefish, turbot, rockfish, and scallop are caught by vessels using a variety of gear. The catch is processed either 'at sea' or delivered to shore based processors. This lucrative industry occurs mostly in the offshore waters in the EEZ. Historically, fishery resources in these waters have been sustainably managed.

Western Alaska, Interior, and North Slope river systems and lakes in the Arctic support important fresh water subsistence, recreational, personal use and commercial fisheries. Communities across the region depend on vitally important subsistence salmon harvests as a primary food source and commercial fishing income to support mixed cash-subsistence economies.

In the AO area, ice conditions have made the waters relatively inaccessible. It is one of the least known marine areas on earth. In 2009, the Arctic Fisheries Management Plan (FMP), approved by the NPFMC and implemented by the NMFS, took the proactive and precautionary step of establishing a moratorium on commercial fishing in federal waters until sufficient data has been accumulated to allow for the responsible management and exploitation of fish stocks. This means not only maintaining healthy stocks, but also protecting the ecosystem and environment. Harvest in state waters in the AO region has been very low and primarily for subsistence use.

State and federal fisheries management programs for existing fisheries in the Alaska region are science-based, requiring support of strong assessment and research programs. Catches are limited to biologically sustainable levels determined from the best available information. Necessary investments in annual or in-season assessments, catch accounting, monitoring, and enforcement ensure management plans are implemented as intended. State and federal law require fisheries be managed sustainably and both management systems incorporate ecosystem

[50] See Fisheries and Wildlife Appendix B
[51] See Fisheries and Wildlife Appendix C

considerations to promote sustainability. Seasonal and gear-specific closures, or in hot spots and fixed areas are all employed to protect habitat, reduce bycatch (i.e., prohibited species catch, including salmon, crab, and halibut in non-target fisheries) and other incidental catch. These restrictions also minimize interactions with protected marine resources. Fishery scientists incorporate environmental information into their annual stock assessments (e.g., the use of research to document the relationship between ocean temperature and the productivity of certain species).

An interagency sponsored study that will provide the first comprehensive survey data conducted using methods comparable to fisheries surveys in the Bering Sea, is the Arctic Ecosystem Integrated Survey[52]. The study, when completed, will provide an unprecedented baseline for understanding Arctic marine and coastal communities and for assessing the potential effects of future changes in the region on fisheries resources and the marine environment.

Discussion and Considerations

As the ice melts the environment will continue to change, possibly altering migration patterns as well as the range and distribution of marine resources. In some cases, it could lead to extended productive areas and new species. In others, it could negatively alter the habitat for established species that are relied upon by local communities and the seafood industry. With the warming trend, there might be a freshwater component with an increased influence. The risk of introducing invasive species and pollution also rises with the growth of vessel traffic through the Bering Strait and along the Northern Sea Route and the Northwest Passage.

There is growing interest and attention in the Arctic, which has led to a number of organizations and institutions devoting time and energy to the north. Alaska is ideally positioned to be a base for science and research in the Arctic and the University of Alaska is able to coordinate international and interdisciplinary research programs. UAF's new research vessel, the *R/V Sikuliaq* offers new opportunities to explore oceanographic and fisheries research, coastal marine studies, pollution studies, and marine mammal and bird research. The *R/V Sikuliaq* has ice-breaking capabilities that will allow seasonal access to the Arctic Ocean and year-round access to waters south of St. Matthew Island.

In light of the rapid changes that the Alaskan Arctic is seeing, short-term scientific studies can only give us a snapshot in time. For instance, a North Pacific Fishery Management Council analysis, at the time they adopted their Arctic Fishery Management Plan[53], included biomass estimates for key species such as Arctic and saffron cod and snow crab in the Chukchi and Beaufort regions. In the Chukchi region, survey data from 1990 and 1991 indicate nearly 95 percent of the estimated biomass of key species in the region was made up of invertebrates,

[52] See https://web.sfos.uaf.edu/wordpress/arcticeis/

[53] See the federal analysis supporting the North Pacific Fisheries Management Council's action to adopt the Arctic Fisheries Management Plan. The full analysis is posted at http://alaskafisheries.noaa.gov/analyses/arctic/earirfrfa0809final.pdf

mainly non-commercial species. In the Beaufort region biomass estimates from 2008 survey data show brittle stars alone making up nearly half the total estimated weight. Comparisons between two years of Chukchi region survey data show tremendous variation. While commercial species occur in both regions, they do not occur at densities to support an economically viable fishing opportunity. Long-term monitoring is needed to understand how the habitat is changing (e.g., water salinity, temperature, and acidity), the rate of change, and how fish stocks and critical ecosystem components will respond.

Partners in the U.S. Arctic want a framework for more inclusive, efficient, and transparent engagement that does not add unnecessary layers of bureaucracy to the process. Although there is a lot of work being done, it is scattered and not readily available. The U.S. Arctic Research Commission (USARC) developed an online science portal that provides information to a broad cross-section of users. The Alaska Ocean Observing System (AOOS) is also expanding its data repository for broad use, with much focus on the AO area. The North Pacific Research Board is also turning more attention and resources to Northern Bering Sea and AO research.

In both the BSAI and AO, there are waters outside the national EEZ zones of adjoining countries, commonly referred to as the Donut Hole. For the Bering Sea, an international agreement – the Central Bering Sea Pollock Agreement – was signed, but only after a period of unregulated fishing significantly reduced the fish stock. The Arctic Fisheries Management Plan (FMP) established a moratorium on commercial fishing in federal waters until sufficient data has been accumulated to allow for responsible management of fish stocks. Intended benefits of this precautionary approach could be eroded by unregulated fishing in international Arctic waters or by fishing in adjacent EEZs.

Other consideration for efficient and safe harvest of marine resources include sub-standard internet connectivity, the lack of ports of refuge and a permanent Coast Guard presence, limited emergency response capability, inadequate charting, and challenging environment.

Fishing has the potential to provide a stable economy, income, jobs and infrastructure to Arctic Alaska, but it is essential to support the science necessary for responsible management and exploitation of fish stocks. This should happen before the moratorium in the AO area is lifted to support adaptive fisheries management programs capable of responding to environmental changes in the BSAI and Western Alaska as well.

Future development must not diminish the food security of the people and communities that depend on the harvest of fish, game, or marine mammals. Commercialization of Arctic resources should benefit the residents of the Arctic; for instance, it could form the basis of an economy, providing the needed infrastructure for vessels and processors. An example is the Community Development Quota (CDQ) program, which has been successful in promoting economic development, fisheries infrastructure and investments, and workforce development in remote western Alaska communities. Such a program serves as one example of progressive ways of

offsetting development impacts on local resident, other similarly innovative ideas merit consideration as fisheries become commercially viable.

Conclusion: Policy Recommendations

Northern Area (AO)

1. Changes in ice conditions have made the waters of the Arctic Ocean increasingly accessible, but there is very little infrastructure in place to support safe operations.

    A. The state of Alaska should work with the Coast Guard and other federal agencies to improve and increase search and rescue response capability, communications, update bathymetric charts, and assess the need for additional navigation aids. Local and traditional knowledge should help inform this work.

2. As a result of the opening of Arctic waters- one of the least-known marine areas on earth - baseline information will be needed to inform decision making about the management of marine resources and to track changes. Continued assessments will be needed in anticipation of changes in temperature, salinity, acidity and other effects of climate change.

    A. The state of Alaska should support comprehensive scientific research and data including local knowledge to establish reference points and metrics that could be used to develop management plans that support sustainable fisheries in the region.

    B. The state of Alaska should pursue additional investment in the Arctic to estimate the biomass and conditions that contribute to the health of marine resources, but funding must not be "in lieu of" funding needs in the Bering Sea/Aleutian Islands.

    C. The state of Alaska should formalize the process to be used when considering the opening or extension of the fishery of a species for sustained yield in state waters, to include the evaluation of the potential effects of changes on harvest of other species of fish and the marine ecosystem.

    D. The state of Alaska should establish a program to monitor and continue assessing the health of the ecosystem for responsive management that implements a precautionary approach.

3. There is no commercial fishery in the Arctic Ocean, but there are successful existing structures for management in the Bering Sea/Aleutian Island waters that can provide a model for emerging fisheries in the Arctic.

    A. The state of Alaska should seek ways to participate in current international organizations discussing fisheries (e.g., International Pacific Halibut Commission, North Pacific Fisheries Commission, U.S.-Russia Intergovernmental Consultative

Committee, and Convention on the Conversation and Management of the Pollock Resources in the Central Bering Sea) as well as contribute to any new organization regarding the development of marine resources in the Arctic. Current domestic and international fisheries management structures should be adapted to the needs of the Arctic region.

B. The state of Alaska should continue to support the U.S. Department of State efforts to be proactive in establishing an international agreement that ensures sustainable fisheries management plans for waters outside national EEZs are implemented across all jurisdictions in the Arctic. Precautionary management should be extended to the Arctic donut hole and other Arctic nations' EEZs.

4. Alaskans depend on sustainable fisheries for their sustenance, traditional ways of life and also livelihood.

A. The state of Alaska must support maintenance of existing reliance of local residents on food from the ocean and inland waters and not allow the food security of the people and communities to be diminished.

B. The state of Alaska should develop policies to maximize the value and use of marine resources to the benefit of residents of the Arctic, possibly modeled after successful programs like the CDQ program or other innovative ideas.

C. The state of Alaska should encourage the development of infrastructure necessary to support emerging fisheries such as processing facilities, needed utilities, access for local fleets, and transportation to markets.

<u>Bering Sea/Aleutian Islands (BSAI)</u>

1. With changes in temperature, salinity and acidity, there are potential changes in the waters of the BSAI.

A. The state of Alaska should continue funding stock assessments, research, monitoring and enforcement to support the intent of current fisheries regulations.

2. There is existing oversight of the incidental harvest of non-target fish.

A. The state of Alaska should support technology and policies that continue to minimize bycatch in all fisheries.

3. Because fish straddle and migrate across boundaries, coordination among governing bodies is critical.

A. The state of Alaska should continue to participate in current international organizations discussing fisheries.

4. With the opening of Arctic waters, there are risks of pollution, invasive species, and other hazards.

    A. The state of Alaska should work to mitigate risks from increased marine transportation through the Bering Straits with specific attention to BSAI fisheries and fish habitat.

    B. Several mitigation strategies are being considered by the Aleutian Islands Risk Assessment Project Team for application to the Great Circle Route, and the state of Alaska should support these strategies.

Wildlife

Background

Numerous bodies of scientific evidence suggest a warming in the Arctic region. Those assessments indicate that higher surface temperatures are driving changes such as loss of summer sea ice cover, melting of ice sheets, and thawing permafrost increasing methane emissions.[54] The effects of climate change in the Arctic region will have significant local, regional and global implications.

Other potential impacts from these changes have been identified in the ADF&G's Climate Change Strategy[55] and include potential alterations to habitats that support wildlife and their uses. The state is constitutionally required to manage its wildlife for sustained yield, while responsibly developing resources such as oil and gas and associated infrastructure.

Discussion and Considerations

The goal of the Alaskan Arctic wildlife management is to ensure Alaska's wildlife heritage and manage for abundance in the face of a changing climate. A changing climate will present management challenges commensurate with the rate and extent of the change. With this in mind, Alaska should not overlook the potential impact of climate-related changes. Changes to ecosystems will likely affect permafrost, supplies of water, marine and terrestrial biodiversity, and traditional/local foods. Diminishing sea ice may impact local fauna, including marine mammals and will alter opportunities for subsistence hunting by indigenous peoples.

The state is constitutionally required to manage its wildlife for sustained yield and has an excellent history of actively managing its wildlife under this principle using an adaptive ecosystem management approach for the benefit of its citizens. In so doing the state is providing for food security and diversity of use. This is being successfully done while responsibly

[54] See Arctic Council's Snow, Water, Ice and Permafrost Assessment (SWIPA) of 2011
[55] www.adfg.alaska.gov/static/lands/ecosystems/pdfs/climatechangestrategy.pdf

developing resources such as oil and gas and associated infrastructure employing a robust and adaptive environmental review and permitting structure.

The University of Alaska, federal agencies and the Arctic Council have all called for and worked to establish ecosystem-based management of Arctic resources. In light of the lack of understanding of what ecosystem-based management entails, the ADF&G continues to employ an adaptive management system (based on sustained yield and harvest opportunities important to local communities). Increasingly, national refuge and park lands within Alaska are being managed using a passive management approach. Under this approach, "natural diversity" is paramount and wildlife numbers are allowed to fluctuate widely. It will be critical that federal agencies respect and collaborate with state wildlife management aimed at ensuring food security and the food security it provides.

Consideration should be given to include:

- Understand and cross integrating the plethora of local, state, national, and cross-border assessments of climate change on marine and terrestrial biodiversity that potentially impact traditions and local foods
- Promote the participation of local and indigenous peoples in the development and implementation of monitoring and assessment protocols
- Coordinate assessment and monitoring at the local, state, national levels
- Develop and improve public education and awareness programs that promote the conservation of Arctic biological diversity and the sustainable use of biological resources

To provide Alaska's policy makers and other stakeholders with a deeper understanding of the regional and global effects of any Arctic climate change, it is necessary to continue the work of observing, projecting impacts, and implementing sound policies that preserve our wildlife heritage and their uses, including food security, for future generations.

Conclusion: Policy Recommendations

1. A robust Arctic Wildlife Policy is fundamental to preserving Alaska's heritage and ensuring management of the state's wildlife for abundance today and for future generations of Alaskans.[56]

    A. The state of Alaska, with the participation of local and indigenous peoples, should continue on its trajectory to develop a cohesive and comprehensive Arctic wildlife policy. The establishment of such a policy will have to include the identification and assessment of climate-related impacts and threats; monitoring of the Alaskan Arctic biological diversity; scenarios planning and impact assessment;

[56] See Preamble to Alaska's Constitution

collaborative research and assessment; and consideration of species and habitat conservation and restoration.

2. There are a large number of federal laws and regulations about wildlife that are already enacted, though many have broad nationwide jurisdiction.

    A. The state of Alaska should work to better understand the infrastructure of administrating these laws, regulation and the various groups involved and take a leadership role in the coordination of policies at the local, state, and national levels.

3. Changes in the environment have a cascading effect on biodiversity, ecosystems and human living conditions within the Alaskan Arctic.

    A. The state of Alaska should develop a robust and adaptive monitoring program to assess major impacts on biodiversity, ecosystems, and the well-being of indigenous peoples and Arctic communities and an adaption strategy to address identified impacts.

4. Alaska is world-renowned for its diverse and abundant wildlife.

    A. The state of Alaska should develop new and improve existing public education and awareness programs that promote the conservation of Arctic biological diversity and the sustainable use of biological resources.

Strategic Recommendations: Fisheries and Wildlife

- Develop an assessment and monitoring program in support of strategies for fish and wildlife management that enhances food security for Arctic residents.
- Develop new and improve existing public education and awareness programs that result in a more informed public who understand the multi-faceted programs and policies that regulate the conservation of Arctic biodiversity and sustainable use of biological resources.

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Alaska Arctic Policy Commission



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Anchorage
Commission Co-Chair



Representative Bob Herron
South Bering Sea
Commission Co-Chair



Senator Lyman Hoffman
Bethel



Senator Gary Stevens
Kodiak



Senator Cathy Giessel
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Senator Donny Olson
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Representative Alan Austerman
Kodiak



Representative Beth Kerttula
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Big Lake



Representative Bryce Edgmon
Dillingham



Nils Andreassen
Institute of the North
Executive Director
International Arctic Organization Representative



Dr. Lawson Brigham
Distinguished Professor
University of Alaska Fairbanks
University Representative



Peter Garay
American Pilots Association Delegate
Marine Pilots Representative



Chris Hladick
Unalaska City Manager
Local Government Representative

2593
2594



Layla Hughes
Conservation Group Representative



Mayor Reggie Joule
The Native Village of Kotzebue
Kotzebue IRA
Tribal Entity Representative



Stephanie Madsen
Executive Director
At-Sea Processors Association
Fisheries Representative



Denise Michels
City of Nome Mayor
Coastal Community Representative



Liz Qaulluq Moore
Senior Director, Community & Government Affairs
NANA Regional Corporation
ANCSA Corporation Representative



Stefanie Moreland
Special Assistant to Governor Sean Parnell
Governor's appointee



Lisa Pekich
Director of Village Outreach
ConocoPhillips Alaska
Oil & Gas Industry Representative



Pat Pourchot
Special Assistant to the Secretary of the Interior
Federal Government Representative



Steve Scalzo
Foss Marine Holdings COO
Marine Transportation & Logistics Representative



Stephen Trimble
President
Trimble Strategies
Mining Industry Representative



Jake Adams
Board Member
Arctic Slope Regional Corporation



Kris Norosz
Government Affairs Director
Icicle Seafoods, Inc.

We would also like to specifically thank these individuals for their input and guidance: Lt. Governor Mead Treadwell; USARC Chair Fran Ulmer; US Coast Guard District 17 Rear Admiral Thomas P. Ostebo; US Coast Guard Arctic Planning/Coordination James Robinson; Arctic Circle Co-founder Alice Rogoff; former Alaska Senate President Drue Pearce; and former Department of Natural Resources Commissioner Dan Sullivan.

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6.2 Acronyms Appendix A

AAPC	Alaska Arctic Policy Commission
AAWG	Alaska Arctic Working Group
AC	Arctic Council
ACEP	Alaska Center for Energy and Power
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ADOTPF	Alaska Department of Transportation and Public Facilities
AEA	Alaska Energy Authority
AHFC	Alaska Housing Finance Corporation
AIDEA	Alaska Industrial Development and Export Authority
AIS	Automatic Identification System
AKHAP	Alaska Heating Assistance Program
ALCOM	Alaska Command
AME	Alaska Marine Exchange
AMSA	Arctic Marine Shipping Assessment
ANCSA	Alaska Native Claims Settlement Act
ANR	Alaskan NORAD Region
ANTHC	Alaska Native Tribal Health Consortium
ANWR	Arctic National Wildlife Reserve
ANWTF	Alaska Northern Waters Task Force
AO	Arctic Ocean
AOOS	Alaska Ocean Observing System
AOR	Area of Responsibility
APDES	Alaska Pollutant Discharge Elimination System

2621	**ARPA**	Arctic Research and Policy Act
2622	**ASRC**	Arctic Slope Regional Corporation
2623	**AVEC**	Alaska Village Electric Cooperative
2624	**BOEM**	Bureau of Ocean Energy Management
2625	**BRPC**	Brooks Range Petroleum Company
2626	**BSAI**	Bering Strait and Aleutian Islands
2627	**BSEE**	Bureau of Safety and Environmental Enforcement
2628	**CCHRC**	Cold Climate Housing Research Center
2629	**CDRUSNORTHCOM**	Commander of U.S. Northern Command
2630	**CDQ**	Community Development Quota
2631	**CJTF-AK**	Commander of Joint Task Force Alaska
2632	**CMTS**	U.S. Committee on the Marine Transportation System
2633	**CONOPS**	Concepts of Operation
2634	**CSIS**	Center for Strategic and International Studies
2635	**CZM**	Coastal Zone Management
2636	**DCCED**	Department of Commerce, Community and Economic Development
2637	**DEC**	Department of Environmental Conservation
2638	**DF&G**	Department of Fish and Game
2639	**DHFF**	Department of Health and Social Services
2640	**DMTS**	DeLong Mountain Transportation System
2641	**DMVA**	Department of Military and Veterans Affairs
2642	**DNR**	Department of Natural Resources
2643	**DOD**	Department of Defense
2644	**DOT&PF**	Department of Transportations and Public Facilities
2645	**DSCA**	Defense Support to Civilian Authorities
2646	**EEZ**	Exclusive Economic Zone
2647	**EPA**	Environmental Protection Agency

ERMA	Environmental Response Management Application
ESA	Endangered Species Act
FMP	Fisheries Management Plan
FWS	Fish and Wildlife Service
HAZWOPER	Hazardous Waste Operations and Emergency Response
HIA	Health Impact Assessment
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICS	Incident Command System
IEP	Interior Energy Project
IMO	International Maritime Organization
IOCM	Integrated Ocean and Coastal Mapping
IPHC	International Pacific Halibut Commission
IPO	Indigenous Peoples Organizations
IPP	Industry Preparedness Program
IWC	International Whaling Commission
JBER	Joint Base Elmendorf-Richardson
JTF-AK	Joint Task Force Alaska
LIHEAP	Low Income Home Energy Assistance Program
LNG	Liquid Natural Gas
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NIMS	National Incident Management System
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NORAD	North American Aerospace Defense Command
NPR-A	Nation Petroleum Reserve-Alaska
NPAFC	North Pacific Anadromous Fish Commission

2675	**NPFMC**	North Pacific Fishery Management Council
2676	**NSAR**	National Strategy for the Arctic Region
2677	**NSB**	North Slope Borough
2678	**NSSI**	North Slope Science Initiative
2679	**NWLON**	National Water Level Observation Network
2680	**NWS**	National Weather Service
2681	**NWTF**	Alaska Northern Waters Task Force
2682	**OCS**	Outer Continental Shelf
2683	**OEPC**	Office of Environmental Policy and Compliance
2684	**OPA90**	Oil Pollution Act of 1990
2685	**OR&R**	Office of Response and Restoration
2686	**OSRO**	Oil Spill Response Organization
2687	**PAME**	Protection of the Arctic Marine Environment
2688	**PCE**	Power Cost Equalization
2689	**PERP**	Prevention and Emergency Response Program
2690	**RCC**	Rescue Coordination Center
2691	**REAP**	Renewable Energy Alaska Project
2692	**RFA**	Recreational Fishing Alliance
2693	**RFMO**	Regional Fishery Management Organizations
2694	**SAON**	Sustaining Arctic Observing Networks
2695	**SAR**	Search and Rescue
2696	**SNAP**	Scenarios Network for Alaska and Arctic Planning
2697	**SPAR**	Spill Prevention and Response
2698	**STAP**	Science Technical Advisory Panel
2699	**TAPS**	Trans Alaska Pipeline System
2700	**UA**	University of Alaska
2701	**UAA**	University of Alaska Anchorage

UAF	University of Alaska Fairbanks
UNCLOS	United Nations Convention on the Law of the Sea
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
USARC	United States Arctic Research Commission
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USPACOM	U.S. Pacific Command
USF&WS	U.S. Fish and Wildlife Service
USNORTHCOM	U.S. Northern Command
VMS	Vessel Monitoring System

6.3 AAPC Letter of Intent - Introduction Appendix A

The Commission sent a Letter of Intent to Secretary Kerry and National Security Advisor Rice June 28, 2013 outlining their intent, assumptions, and scope of work.

Alaska Arctic Policy Commission

Co-Chair: Senator Lesil McGuire, R-Anchorage, 907.465.2995
Co-Chair: Representative Bob Herron, D-Bethel, 907.465.4942

June 28, 2013

Secretary of State John Kerry
U.S. Department of State
2201 C Street NW
Washington, DC 20520

National Security Advisor Susan Rice
National Security Council
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear Secretary Kerry and National Security Advisor Rice,

With this letter we introduce the Alaska Arctic Policy Commission (AAPC) and the Commission's intent, assumptions, and scope of work. We look forward to working with the implementation team for the National Strategy for the Arctic Region and other federal partners in the months ahead.

It is Alaska, of course, that makes the United States an Arctic nation. The people closest to the challenges and opportunities in the Arctic have a critical role in mitigating the impacts and maximizing the benefits from the increasing activity in this region. It is incredibly important to understand the priorities and perspectives of the peoples who live in and depend on the health of the resources in what is, to them, simply home. Arctic policy is important to all Alaskans. The immediate stakeholders are those who actually live and do business in Alaska and Alaska's Arctic, a place where costs are high and living conditions are, without question, challenging.

Alaskans are quick to recognize both the opportunity and risk inherent to increased activity in the Arctic. At stake are responsible exploration and development of resources; safeguarding traditional ways of life; protecting the unique environment; and ensuring jobs and a livelihood for those who live there. The Alaska Arctic Policy Commission convened under these fundamental responsibilities, committed to the need for balanced and informed decision making, as well as the importance of local voices contributing to, and working in partnership with, relevant policy-makers concerning those decisions.

One of the most important aspects of the AAPC's work is to positively influence federal Arctic policy, strategy and implementation. This Letter of Intent serves to articulate the Commission's scope of work, which includes its assumptions, interests and considerations, as well as offering some initial guidance to our federal partners. It conveys our conviction that the state is an active and willing leader and partner in Arctic decision making, bringing expertise and resources to the table.

The compelling reason for this Letter of Intent, well in advance of our January 2014 preliminary report, is the recent flood of federal Arctic policies and strategies that directly impacts Alaska now and in the future. During the National Strategy for the Arctic Region listening session held on June 14, 2013 in Anchorage, it was clear that the State of Alaska and the AAPC have a leading role to play in the development of the Implementation Plan for the Arctic Region. We appreciate and accept this offer of cooperation from our federal partners. The AAPC intends to meaningfully contribute to federal efforts as a full partner in the development and implementation of Arctic policy and strategy.

The Alaska Northern Waters Task Force recommended the creation of an Alaska Arctic policy commission in its January 2012 final report (www.anwtf.com), and the AAPC was subsequently legislatively created in April 2012. This year, the AAPC met in Juneau on March 23 and in Barrow June 12-13. Video of these

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meetings are available – along with the schedule for the AAPC – at www.akarctic.com. The Commission will next meet in Unalaska on August 28 and 29.

The AAPC has formed subject matter committees, focused on themes identified in the Alaska Northern Waters Task Force, that were tasked with compiling a summary of issues, stakeholders, questions, challenges and priority areas for future consideration. By conducting interviews with stakeholders and experts, and providing relevant research and findings, the Commission will inform local, state and national decision-making in the year to come. This letter outlines three key assumptions and eight important considerations that frame the Commission's future process. Active and early engagement with communities, state and federal agencies, Alaska Natives, academia and other stakeholders is fundamental to our success. Communication and collaboration have been central tenets of all work to date and are highlighted in each of the areas of consideration in the attached.

The AAPC has work to do and questions to answer as it progresses toward a preliminary report to the Alaska Legislature due January 30, 2014 and a final report due January 30, 2015. These detailed documents will inform the public and policy-makers regarding the principles with which Alaskans approach the promise of the Arctic, and make "North to the Future" a lasting commitment to all Americans. The Commission is committed to producing a vision for Alaska's Arctic that stands the test of time; delivering policy statements that capture not only the opportunity of the Arctic but also the need to mitigate the challenges; and completing a final product that elevates the priorities and perspectives of Alaskans to a national and international stage.

This Letter of Intent and its attachments emphasize an Alaskan approach and commitment to Arctic policy. We look forward to working with you in full partnership while contributing Alaskan leadership, expertise and knowledge toward a promising Arctic future.

With this Letter of Intent, the 26 Commissioners of the AAPC respectfully submit their observations, suggestions, concerns and determination, on behalf of all Alaska's sovereign citizens, to be involved in our collective Arctic future and Arctic policy.

Sincerely,

Senator Lesil McGuire, Co-Chair

Sincerely,

Representative Bob Herron, Co-Chair

cc:

- Ambassador David Balton (Deputy Assistant Secretary, Oceans and Fisheries, Department of State)
- Tommy P. Beaudreau (Director, Bureau of Ocean Energy Management)
- Eric Cooper (Director, Maritime Security & Director, Arctic Region Policy, National Security Staff)
- Julia Gourley (Senior Arctic Official, Department of State)
- David Hayes (Deputy Secretary, Department of the Interior)
- Brendan P. Kelly (Assist. Director, Polar Science, Office of Science & Technology Policy, EOP)
- Rear Admiral Thomas Ostebo (17th Coast Guard District Commander, U.S. Coast Guard)
- Kathy Sullivan (Acting Administrator, National Oceanic and Atmospheric Administration)
- Nancy Sutley (Chair, White House Council on Environmental Quality)

Enclosures: AAPC Assumptions & Considerations; Alaska Arctic Policy Commission Membership

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Alaska Arctic Policy Commission

Co-Chair: Senator Lesil McGuire, R-Anchorage, 907.465.2995
Co-Chair: Representative Bob Herron, D-Bethel, 907.465.4942

Alaska Arctic Policy Commission Assumptions and Considerations

Key Assumptions

1. **State Leadership and Experience**

The State of Alaska has more than a half century of commitment to supporting Alaska's Arctic communities through responsible resource and infrastructure development, with proven experience to help manage the Arctic's future. State of Alaska policy is to promote healthy, sustainable communities - guided by its people and informed by science, public process, and indigenous knowledge and experience. The State of Alaska actively engages residents of the Arctic region in developing policies and strategies.

- State agencies have decades of subject matter expertise and are intimately involved in and knowledgeable about Alaska's Arctic. The AAPC recognizes these as assets that can be leveraged effectively and quickly in response to increasing activity in the Arctic.
- State of Alaska programs provide or support core services in the Arctic region, such as education, public safety, search and rescue and emergency response, oil spill preparedness and response, water and sanitation infrastructure, fish and wildlife management, road and airport infrastructure, energy infrastructure, environmental monitoring, permitting, and mapping.

2. **Federal Oversight, Role and Expectations**

Recently-released U.S. Arctic policies and strategies are revealing in that:

- Consistent among them is the need for collaboration with the State of Alaska, indigenous peoples and local communities. However, it is unclear to the AAPC the extent to which this was practiced in the development of these documents. The Commission believes that early participation by the state and local peoples is fundamental for policy formation and successful implementation. Going forward, Alaska is a ready and willing partner in the development of strategies that address the well-being of its people and management of its resources.
- The calls coming from Alaska for an Arctic Ambassador clearly indicate that a stronger U.S. voice is needed not only for the international community but for Americans who still don't know what it means to be an Arctic nation.

3. **International Engagement and Governance**

The AAPC recognizes the key functions that international governance plays in the Arctic.

- While the AAPC understands that the Arctic Council is not a governing body, Alaskans do have a keen interest in further developing the State of Alaska's role. The AAPC is interested in pursuing all options for Alaskan participation as part of the U.S. Arctic Council delegation,

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including residents serving as subject matter experts in Task Forces and Working Groups, and being involved in State Department representation of the U.S. in this body.

- The AAPC recognizes the role of the International Maritime Organization (IMO) in the development of a Polar Code and looks forward to leveraging the State of Alaska's strong partnership with the Coast Guard to enhance Arctic marine safety and environmental protection issues at the IMO.
- Efforts should be made to constructively address concerns about the U.N. Convention on the Law of the Sea.

Considerations

A Scope of Work for Developing Alaska's Arctic Policy

1. Indigenous Perspectives and Priorities

It is important to engage residents of the Arctic region, particularly Alaska Native and rural residents, in developing Arctic policies and strategies. From scientists to Native elders, Alaskans understand the nuances of a change in the Arctic and the opportunities and challenges a changing Arctic presents better than anyone. Alaskans that live in the Arctic are continuously adapting to a changing environment and have valuable experience to inform future management needs and considerations.

The AAPC recognizes the importance of coordination and consultation with Alaska's Arctic indigenous peoples and to fully involve them at the earliest stages of developing an Arctic Policy in order to integrate and promote their interests. To that end, the Commission will consider the interests of Alaska's Arctic indigenous peoples when evaluating resource development, economic and workforce development, expansion of infrastructure, and mitigation of climate impacts. Such activities will be considered in light of its impacts on human health, language and culture, subsistence resources, and food security.

The AAPC will consider ways to:

- Focus increased attention and priorities to U.S. Arctic communities, particularly regarding human health, food security, culture and language preservation, and climate change issues such as coastal erosion, sea ice retreat, and reduction of permafrost.
- Ensure the needs and concerns of Alaska's Arctic indigenous peoples are incorporated into Alaska's Arctic policy, U.S. Arctic strategy and U.S. participation in international arenas.
- Encourage the use and incorporation of traditional knowledge, along with science-based findings, when assembling information upon which to base decision making at all levels.
- Work closely with Alaska's Arctic indigenous peoples to improve consultation and engagement with Arctic communities while facilitating communication between federal, state, and local governments regarding Arctic decision-making and development activities.

2. Governance

A large body of international, federal and state laws, regulations and standards are applicable to activities in Alaska's Arctic. While stronger governance ensures more certainty on behalf of all

stakeholders, the current system is fragmented, spanning local and national jurisdictions and involving a number of species, ecosystems, peoples, and industrial activities.

At the heart of current conversations are how these components are coordinated, where leadership resides, and to what extent local and state input is solicited and integrated. The AAPC understands that local communities are concerned about risk associated with increased traffic through the Bering Strait, for example, without a clear sense of how Alaska's Arctic residents benefit. It is important to the Commission that the State of Alaska be involved in, represent and have an impact on all levels of Arctic governance.

The AAPC will consider ways to:

- Support for current and increased participation in the Arctic Council, as part of the U.S. delegation, within Working Groups, building relationships with Permanent Participants and Observers, and working with the State Department to highlight Alaskan priorities.
- Respect for, implementation of and enhancing the many existing relationships, while considering the potential for new and future opportunities.
- Strengthen collaborative efforts with the federal government as it negotiates international and trans-boundary agreements, as well as implements the U.S. Arctic Policy and corresponding Strategy.
- Increased bilateral engagement with northern nations and regional governments, especially with the Russian Federation, on issues related to the Bering Strait region.
- Established and potential planning efforts that account for change, human activity, environmental impacts, potential conflicts, stakeholder engagement, economic development and the regulatory environment.
- Safe, secure and reliable offshore operations, to include fisheries, oil, gas and mineral development, itinerant vessels, Bering Strait traffic, response capacity, and infrastructure development.

3. Oil, Gas, and Mineral Exploration and Development

Alaska's promise at Statehood was that its significant land and resource base would build its economy and support its citizenry. Today, oil and gas development provides roughly 90% of Alaska's state revenue. Alaska's Arctic Petroleum Province is estimated to hold nearly 30 billion barrels of oil and 221 trillion cubic feet of non-associated gas, and significant undiscovered mineral resources. Alaskans pioneered Arctic resource development and sustainable living. The State has over 45 years of oil and gas development experience in the Arctic and over 100 years of mining experience. Applying this history and experience, the AAPC will formulate actionable recommendations regarding oil, gas and mineral development for integration into Alaska's Arctic Policy.

At a June 2013 public meeting in Barrow, local leaders and residents urged petroleum development of the Arctic National Wildlife Refuge 1002 Area as a preferred option to keep the Trans-Alaska Pipeline System operating until offshore drilling is safer and can better guarantee protection of the Arctic Ocean – their traditional food source. This exemplifies the priority Arctic residents place on responsible new resource development, well-paying local jobs for residents and sustainable economies for their communities, while protecting the environment, their food security and cultural practices.

The AAPC intends to:

- Promote responsible exploration and development of Alaska's Arctic oil, gas and mineral resources to directly benefit the people of the Arctic, and to support improved energy independence for the United States.
- Identify partnership opportunities with federal agencies to advance shared goals and outcomes for a healthy, secure and safe Arctic region.
- Facilitate greater use of both local, traditional knowledge-based and science-based decision making for oil, gas, and mineral development in the Arctic.
- Build partnerships with national, international, commercial, academic and Alaska Native entities to strengthen Alaska's leadership and voice in Arctic resource management and development decisions.

4. **Science and Research**

If economic activities such as oil and gas exploration, mining, fisheries, shipping, and tourism are to develop responsibly in the Arctic, our knowledge of the far North's marine and terrestrial environments must advance at a corresponding rate. The same warming trends that are expected to create economic opportunities will have a variety of substantial impacts on Arctic communities. Alaska's future prosperity and the well-being of Alaskans living in the Arctic depend in large part on the scientific, technological, cultural, health, and socioeconomic research the state promotes in the coming years.

A strong Arctic research program designed to inform responsible resource development, identify and conserve key ecological functions and subsistence resources, help adaption to a changing climate, and facilitate investment towards healthy Arctic communities rich in tradition and culture must be well coordinated and built on collaborative partnerships. Alaskans hold substantial data, technical expertise, local and traditional knowledge, and other assets of value to collaborative efforts advancing science and research in the region. Dozens of organizations are involved in establishing research priorities and conducting research in the Arctic. Guided by its policy objectives, the state should explore ways to improve, better exploit, and more effectively partner with science and research efforts that serve Alaskans' interests.

The AAPC intends to consider:

- Protocols for respectfully conducting research in and around rural communities and for incorporating local and traditional knowledge into research and decision-making.
- Processes to establish Alaska's research priorities in order to strengthen the state's influence on federal interagency research agendas.
- Applied research, including on oil spills in ice, to inform development decisions, advance technology, and enhance environmental stewardship.
- Basic research and monitoring of environmental conditions to measure impacts of climate change and increased human activity.
- Regional climate modeling in conjunction with scenario planning for sustainable and adaptable communities, civil infrastructure, and economic development infrastructure.
- Ways in which Arctic communities can directly benefit from increased research activities in the region.

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5. **Energy**

Affordable energy is a critical need in Alaska's Arctic. In communities where residents must spend more than half of their annual income on fuel and electricity, even modest economic activity, such as maintaining a local consumer economy, is severely limited. These same costs compromise the effectiveness of local governments, schools, and utilities, which continually struggle for solvency. The high cost of energy also impedes development of natural resources in remote Arctic locations.

The State of Alaska has focused considerable assets on these issues for many years. It has made progress in achieving energy efficiencies through the Alaska Housing Finance Corporation's weatherization and home energy rebate programs, and the Alaska Energy Authority's Renewable Energy Fund is reducing dependence on diesel fuel. More needs to be done to address the threat of high energy costs to the sustainability of many remote communities. Confronting Arctic energy issues requires focused leadership to unite Alaskans behind a comprehensive statewide strategy that will serve Arctic and non-Arctic communities alike. In this, Alaska and the U.S. must acknowledge the linkages between rural and urban Alaska and apply equal resolve and comparable resources to solutions that meet the needs of all.

The AAPC intends to consider:

- Measures at the local, state, and federal level that help sustain communities in the short and medium term as efforts to develop long-term solutions progress.
- Bringing savings to and prolonging sustainability for Alaska's communities through increased research and funding for energy efficiency in homes, public and commercial buildings, schools, and utilities.
- Ways that Arctic communities can benefit from the infrastructure and economies of scale that may come with resource development projects.

6. **Planning & Infrastructure**

It is important to identify ways in which multiple levels of planning are integrated and coordinated to benefit all Alaskans. Therefore, planning and infrastructure development in the Arctic must account for ports, harbors, places of refuge, and anchorages; telecommunications, aids to navigation, and data acquisition and sharing; emergency management and response; transportation and access to resources; energy extraction, production and delivery; human resources, workforce development, research, education and training; schools, medical facilities, civil Infrastructure (water, sewer, solid waste facilities) and housing.

Critical to Alaska's understanding of these areas is the extent to which they are inter-linked and represent fundamental building blocks of sustainable development in Alaska's Arctic. In order to ensure future prosperity in the Arctic, Alaska must encourage strategic, integrated and intentional planning that results in effective implementation and safe, secure, affordable, efficient and reliable infrastructure. That long-term vision has to be reconciled with a near-term need to develop the infrastructure (port and harbors) required to allow assets to be placed to respond to emergencies, search and rescue capabilities, to exercise sovereignty and national security.

The AAPC intends to consider:

- Meaningful evaluation of – and investment in – spill prevention and response capacity, while recognizing differences in proximity, risk, geography and scale of challenge. The AAPC also recognizes the role of local community planning, training and response.

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- The need for communications, navigational aids, and a full analysis on the viability of an Arctic deep draft port, as well as hydrography and marine charting for the region.
- New and creative approaches to sustainable development, needed to fund both planning and infrastructure development, leverage private sector investment, develop resources, and inter-modal approaches.
- Alaska's market competitiveness and preparing the state for global investment opportunities.

7. Security and Marine Transportation

Alaska needs to be proactive in anticipation of the growth in vessel traffic in the Arctic and its impact on the environment and on the people who live there. As traffic increases, it will be important to establish standards and regulations to govern vessels in arctic waters. Since shipping is a global enterprise, key elements of governance will be international regulations; others will be U.S. domestic and local rules. Alaska's policy makers and key stakeholders must be knowledgeable about and involved in the process of developing policies at all levels of governance. Special attention should be paid to the choke point and international strait in the Bering Strait region, the gateway to the Arctic Ocean. The U.S. maritime Arctic, including the Bering Strait region, is also a marine highway for local residents, who traverse it for hunting, fishing, and subsistence.

Decreasing sea ice challenges resource prioritization and directly impacts the State of Alaska's security, environment and economy. The Coast Guard should have full and adequate resources to meet expanding needs, including icebreaking assets in Alaska. Alaska can assist in the identification of air and marine port logistics, including the future development of deep draft port(s) that will need public and private sector investment facilitated.

The AAPC intends to consider:

- Updating the U.S. Coast Pilot produced by NOAA to include Arctic information of relevance to mariners operating through the Bering Strait region and within the U.S. maritime Arctic.
- A coordinated approach to vessel traffic monitoring and assessment throughout the U.S. maritime Arctic, and internationally throughout the Arctic Ocean.
- The State of Alaska's participation in and contributions toward international efforts to establish standards for Arctic vessels at the International Maritime Organization.
- Continued emphasis on the Arctic at the executive level and within state agencies on Arctic marine safety and marine environmental protection.
- Vocational training and education opportunities for young Alaskans and community residents to take advantage of the marine industry by becoming licensed engineers, mates, captains, and pilots.
- Work with federal agencies on coordination of responsibilities in Alaska's maritime Arctic, encouraging all agencies and departments to keep communication open and flowing.
- Search and rescue capacity and environmental protection, to include risk mitigation for subsistence users (i.e.; food security) and the capability to respond to oil spills in the Arctic marine environment.

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8. **Fisheries**

Alaskans depend on sustainable fisheries for their livelihood, recreation, and sustenance. Some of the world's most productive and valuable commercial fisheries occur in the Bering Sea and Aleutian Islands. Indigenous peoples have fished from and lived along western and Arctic Alaska riverine systems for millennia. The high Arctic supports some subsistence fishing, but federal waters of the Chukchi and Beaufort Seas are currently closed to commercial fishing. Fisheries in Alaska's internal and coastal waters are sustainably managed under state and federal management programs grounded in science.

The AAPC intends to consider:

- Change occurring in the Arctic that makes Arctic waters more accessible and the need for monitoring and fishery assessment information that will guide responsive management measures in the Alaskan Arctic.
- The benefit of fisheries' surveys, which in Arctic waters will be critical to informing management of any future, emerging, fishing opportunities in the Arctic.
- The U.S. adoption of a precautionary fisheries management approach for Arctic waters north of the Bering Strait and its benefits, which could be diminished by increased fishing opportunity in adjacent waters, outside U.S. jurisdiction, particularly on migrating and trans-boundary stocks.
- Changes in migration patterns and the range and distribution of marine and freshwater fisheries resources that are anticipated. In some cases, these may affect the possibility of commercial harvest opportunities; in others, it could more broadly alter the habitat for established species relied upon by local communities and the ecology of the area.

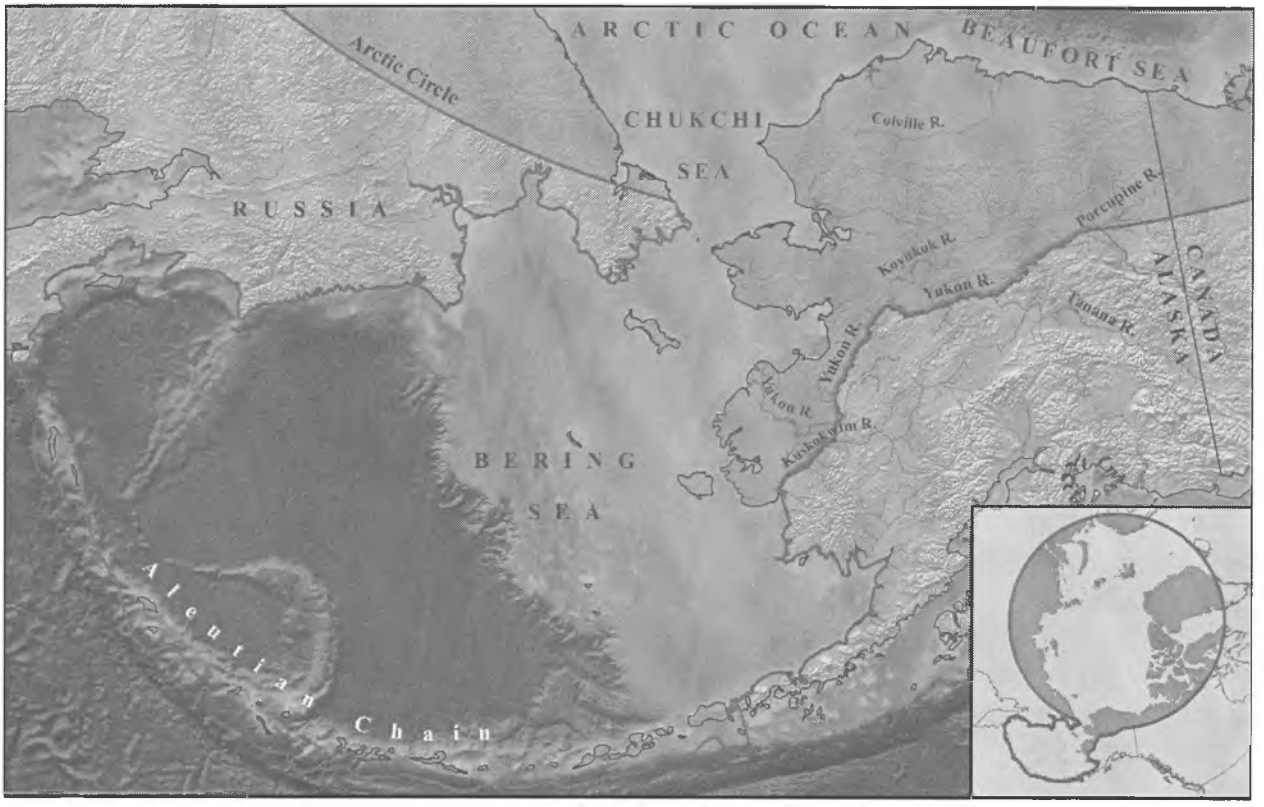
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6.4 ARPA Map - Introduction Appendix B

Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)

All United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.[1]



Acknowledgement: Funding for this map was provided by the National Science Foundation through the Arctic Research Mapping Application (armap.org) and Contract #0520837 to CH2M HILL for the Interagency Arctic Research Policy Committee (IARPC).
Map author: Allison Gaylord, Nuna Technologies. May 27, 2009.
1. The Aleutian chain boundary is demarcated by the 'Contiguous zone' limit of 24-nautical miles.

6.5 Governance Appendix A

The United States Federal government has recently released four Arctic policy documents.

1. Managing for the Future in a Rapidly Changing Arctic (Report to the President March 2013)
2. National Ocean Policy and Implementation Plan (July 2010 and April 2013)
3. NOAA's Arctic Vision and Strategy (February 2011)
4. NSS - National Strategy for the Arctic Region (May 2013)
5. U.S. Coast Guard Arctic Strategy (May 2013)
6. Department of Defense Arctic Strategy (November 2013)

1. Managing for the Future in a Rapidly Changing Arctic (Report to the President March 2013)[57]

Summary: In consultation with the National Ocean Council, the National Security Staff, and the Arctic Research Commission, the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska (Alaska Interagency Working Group) initiated this report to describe the challenges related to the management of natural resources in the U.S. Arctic.

The report recommends ways to advance a common management approach, working off the many efforts currently underway to improve coordination among the region's stakeholders. The report recommends employing an Integrated Arctic Management approach when making stewardship and development decisions affecting the U.S. Arctic.

Stakeholders strongly urged these emphases: whole-of-government coordination to improve efficiency and operational certainty; direct and meaningful partnership with stakeholders; science-based decision-making focused on ensuring sustainable ecosystems; adaptive approaches guided by ongoing research and monitoring; a region-wide planning approach that looks across jurisdictional boundaries; and improved understanding and consideration of the cumulative impacts of human activities in the region.

Other recommendations include:

- Ongoing high-level White House leadership on Arctic issues.
- The Federal government should promptly initiate a high-level dialogue with representatives of the State of Alaska, including Alaska Native leaders.
- By the end of 2013, the Federal government should conduct a review of the

[57] Managing for the Future in a Rapidly Changing Arctic: www.afsc.noaa.gov/Publications/misc_pdf/IAMreport.pdf

numerous interagency efforts related to the U.S. Arctic, with an eye toward identifying and addressing overlapping missions and reducing duplication of effort.

- The federal Arctic leadership team should facilitate international coordination by ensuring that the U.S. Senior Arctic Official is fully briefed on domestic efforts in the Arctic so that the Department of State can coordinate these efforts with those of the United States' bordering international partners and other Arctic nations through the Arctic Council.

2. National Ocean Policy (Executive Order 13547 - Stewardship of the Ocean, Coasts, and the Great Lakes)[58]

Summary: The July 19, 2010 Executive Order 13547 established a national policy to ensure the protection, maintenance, and restoration of the health of ocean, coastal, and Great Lakes ecosystems and resources, enhanced the sustainability of ocean and coastal economies, preserved maritime heritage, supported sustainable uses and access, provided for adaptive management to enhance the understanding of and capacity to respond to climate change and ocean acidification and to coordinate with national security and foreign policy interests. The EO established the National Ocean Council to implement the Final Recommendations of the Interagency Ocean Policy Task Force.

On April 16, 2013, the National Ocean Council released the Implementation Plan, which describes the actions the Federal Government will take to improve the health of the ocean, coasts, and Great Lakes. The Plan focuses on improving coordination to speed Federal permitting decisions; better manage the ocean, coastal, and Great Lakes resources that drive so much of our economy; develop and disseminate sound scientific information that local communities, industries, and decision-makers can use; and collaborate more effectively with State, Tribal, and local partners, marine industries, and other stakeholders. Without creating any new regulations or authorities, the Plan will ensure the many Federal agencies involved in ocean management work together to reduce duplication and red tape and use taxpayer dollars more efficiently.

Specific to the Arctic, The Plan calls for:

- Providing maritime safety and security in a changing Arctic by enhancing communication systems in the Arctic
- Improving Arctic environmental incident prevention and response
- Improving Arctic sea ice forecasting
- Improve Arctic mapping and charting

[58] Executive Order 13547 --Stewardship of the Ocean, Our Coasts, and the Great Lakes: www.whitehouse.gov/the-press-office/executive-order-stewardship-ocean-our-coasts-and-great-lakes

- Implementing a distributed biological observatory in the Arctic to monitor changes and improve our understanding of their socioeconomic and ecosystem impacts

3. NOAA's Arctic Vision and Strategy[59]

Summary: NOAA's Arctic Vision and Strategy provides a high-level framework and six strategic goals (forecast sea ice, strengthen foundational science to understand and detect Arctic climate and ecosystem changes, improve weather and water forecasts and warnings, enhance international and national partnerships, improve stewardship and management of ocean and coastal resources in the Arctic and advance resilient and healthy Arctic communities and economies) to address NOAA's highest priorities in the region.

4. NSS - National Strategy for the Arctic Region[60]

Summary: On May 10, 2013, the White House released the National Strategy for the Arctic Region, emphasizing these three topics: advancing U.S. security, pursuing responsible Arctic environmental stewardship, and strengthening cooperation with international partners.

This National Strategy is intended to position the United States to respond effectively to challenges and emerging opportunities arising from significant increases in Arctic activity due to the diminishment of sea ice and the emergence of a new Arctic environment. It defines U.S. national security interests in the Arctic region and identifies prioritized lines of effort, building upon existing initiatives by federal, state, local, and tribal authorities, the private sector, and international partners, and aims to focus efforts where opportunities exist and action is needed. It is designed to meet the reality of a changing Arctic environment, while simultaneously pursuing global objective of combating the climatic changes that are driving these environmental conditions. The strategy directs the U.S. to consult and coordinate with Alaska Natives, recognizing tribal governments' unique legal relationship with the United States.

Other National Strategy Directives:

- Evolve Arctic infrastructure and strategic capabilities by working with the State of Alaska, local, and tribal authorities, as well as public and private sector partners
- Enhance Arctic domain awareness to enhance sea, air, and space capability
- Provide for future U.S. energy security by factoring the Arctic region's potential energy resources
- Protect the Arctic environment and conserve Arctic natural resources services.
- Use Integrated Arctic Management
- Increase understanding of the Arctic through scientific research and traditional

[59] NOAA's Arctic Vision and Strategy: www.arctic.noaa.gov/docs/NOAAArctic_V_S_2011.pdf
[60] National Strategy for the Arctic Region: www.whitehouse.gov/sites/default/files/docs/nat_arctic_strategy.pdf

knowledge
- Chart the Arctic region's oceans and waterways and map its coastal and interior lands
- Work through the Arctic Council to advance U.S. interests in the Arctic region.
- Accede to the Law of the Sea Convention
- Cooperate with other interested Arctic, non-Arctic states and other entities to advance common objectives in the Arctic

5. U.S. Coast Guard Arctic Strategy (May 2013)[61]

Summary: The U.S. Coast Guard vision for operating in the Arctic Region is to: 'ensure safe, secure and environmentally responsible activity in the Arctic.' The new USCG Arctic strategy released May 21, 2013 focuses on three strategic objectives:

- Improving awareness
- Modernizing governance
- Broadening partnerships (domestic and international)

The strategy also recognizes other factors that will be key including: building national awareness of the Arctic and its opportunities; strengthening maritime regimes; improving public-private relationships; and, identifying future requirements and resources. The Coast Guard notes that the Arctic is not a new venture for the Service. It has a long history in Alaska since it was purchased from Russia in 1867 and a long history of operating the Nation's polar ships. These experiences provide many historic lessons.

For long-term success the strategy notes as important the following approaches: enhancing public-private partnerships to implement best practices and respond to challenges; increased Federal interagency cooperation; increased international cooperation at the Arctic Council and other organizations; use of advanced science and technology applied to the Arctic; and, use of risk-based management to protect the Arctic environment.

The document establishes the Coast Guard's strategy for operations in the Arctic given the realities of today's geo-strategic context. Future development of the Coast Guard's enhanced capability in the Arctic will evolve around the three objectives noted above and engagement with a host of partners and stakeholders.

6. Department of Defense Arctic Strategy (November 2013)[62]

Summary: The U.S. Department of Defense Arctic Strategy, released November 22 2013 at the Halifax International Security Forum, identifies that a desired end-state for the Arctic is: 'a secure and stable region where U.S. national interests are safeguarded, the U.S. homeland is

[61] U.S. Coast Guard Arctic Strategy: www.uscg.mil/seniorleadership/DOCS/CG_Arctic_Strategy.pdf
[62] Department of Defense Arctic Strategy: www.defense.gov/pubs/2013_Arctic_Strategy.pdf

protected, and nations work cooperatively to address challenges.' Two main supporting objectives are: (1) Ensure security, support safety, and promote defense cooperation; and (2) Prepare to respond to a wide range of challenges and contingencies.

The DOD Arctic Strategy states that the Department will accomplish these objectives in the following ways:

- Exercise sovereignty and protect the homeland
- Engage public and private sector partners to improve domain awareness in the Arctic
- Preserve the freedom of the seas in the Arctic
- Evolve Arctic infrastructure and capabilities consistent with changing conditions
- Support existing arrangements with allies and partners while pursuing new ones to build confidence with key regional partners
- Provide support to civil authorities, as directed
- Partner with other departments and agencies and nations to support human and environmental safety
- Support the development of the Arctic Council and other international institutions that promote regional cooperation and the rule of law

The strategy notes the uncertainty of future projections about the Arctic Ocean and climate change. It also states that 'fiscal constraints may delay or deny needed investment in Arctic capabilities, and may curtail Arctic training and operations.' DOD will also attempt to mitigate a public narrative that speaks to rivalry and conflict in the Arctic. DOD will also be careful to not be too aggressive in taking steps to anticipate future Arctic security risks so that mistrust & miscommunication will not materialize.

Arctic Council

Intergovernmental forum whose membership includes the eight Arctic nations—the United States, Canada, Denmark (representing Greenland and the Faroe Islands), Iceland, Norway, Sweden, Finland, and the Russian Federation—and the council's Permanent Participant (PP) organizations. These include the Inuit Circumpolar Council, Aleut International Association, Arctic Athabascan Council, Gwich'in Council International, Russian Association of Indigenous Peoples of the North, and the Saami Council. The first four of the Permanent Participants listed above have members living in Alaska and like all PPs they hold special seats at the Arctic Council table (distinct from their Arctic Nations) and engage across all the Arctic Council working groups, expert groups, and task forces.

At the Nuuk Ministerial, the Arctic States also identified a number of other issues to work on, and decided to address these issues through wide-ranging processes, such as task forces and the establishment of expert groups. One task force was created to address internal, institutional issues, and the Ministers also decided to establish a permanent secretariat for the Arctic Council. These decisions also reflect the development of the Council as an institution.

AC Working groups, expert groups, and task forces: Permanent working groups conduct research, synthesis and analysis related to Arctic monitoring and assessment, Arctic contaminants, protection of the marine environment, emergency prevention and preparedness, conservation of flora and fauna, and sustainable development. The Arctic Council Expert Groups have very focused work scopes, such as the current Ecosystem-based Management Experts Group and in the past an Arctic Health Experts Group. There are also Task Forces that operate within the framework of the Arctic Council for a limited amount of time. Current 2013 Task Forces include: Task Force on Arctic Marine Oil Pollution Prevention, Task Force on Black Carbon and Methane, Scientific Cooperation Task Force, Task Force to Facilitate the Circumpolar Business Forum.

State Agencies

State agencies are engaged in a series of activities with particular relevance to the Arctic region of Alaska. Some of these activities are listed below:

- Department of Military and Veterans Affairs conducts exercises and maintains equipment specifically designed for Arctic search and rescue
- Department of Environmental Conservation engages in oil spill prevention, preparedness, and response; monitoring of trans-boundary contaminants; and addressing rural water and sanitation needs
- Department of Fish and Game monitors, conducts research, and manages fish and wildlife populations across the Arctic region, documents subsistence needs, provides subsistence opportunity, and works with proposed development projects to mitigate impacts to fish and wildlife resources and their habitats
- Department of Natural Resources coordinates and conducts project permitting; is leading efforts to improve statewide digital mapping; and has developed expertise in permitting and regulation of resource development activities in Arctic environments
- Department of Transportation and Public Facilities is contributing to deepwater Arctic port and improved airport infrastructure planning throughout the region
- Department of Health and Social Services has built up capacity and expertise to conduct comprehensive health impact assessments to inform resource development activities
- Department of Commerce, Community & Economic Development is working in collaboration with the University of Alaska Fairbanks to study shipping and related considerations for commerce and international trade

Tribal Governance

Alaska Natives have a unique government-to-government relationship with the United States. [63] Current federal policy acknowledges that the self-determination and the self-governance of Alaska Native and American Indian people are critical to the survival of these cultures and peoples. Self-determination policies, such as the Indian Reorganization Act of 1934, were a result of recognizing the failure of assimilation and termination policies the United States used against Alaska Native and American Indian people.

Alaska Natives governed themselves for thousands of years before the United States purchased Alaska from Russia. Today, approximately 229 of the over 500 federally recognized Tribes in the United States are located within the State of Alaska. Alaska Native Tribal governments are important Alaska Native communities and Alaska Native people. Approximately 20% of the citizens of the State of Alaska identify as Alaska Native. Many Alaska Natives are registered members of their respective Tribal governments Alaska Native Tribes have the ability to execute federal responsibilities to Alaska Native people using federal resources.[64] The framework of Alaska Native Tribal governance is complicated, but important in the context of Arctic policy. In addition to federal recognition, the rights of Tribes to self-govern and be self-determined are recognized in international law.[65]

Alaska Native Land Claims

Though the United States purchased Alaska from Russia in 1967 and Alaska became a state in 1959, Alaska Native claims to traditional lands was not settled until 1971 through the Alaska Native Claims Settlement Act (ANCSA). ANCSA established 13 Alaska Native Regional and about 200 Village corporations that hold title to lands retained by Alaska Natives. The 13th Regional Corporation ceased operations in 2009 and about 80% of the Village Corporations are currently active. From these Corporations a framework for economic development was created. Today 7 of the top 10 companies in Alaska are Alaska Native Corporations.

Alaska Native Claims Settlement Act of 1971: In return for relinquishing claims to nearly all of Alaska's 375 million acres, Alaska Native people received title to 44 million acres, plus $962.5 million in cash that used as seed capital for the 13 Native Corporations. (Citation: Alaska Native Corporations Economic Data Report 2010)

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[63] November 5, 2009 Presidential Memorandum, President Obama, in recognition of that special relationship and pursuant to Executive Order 13175 of November 6, 2000. "History has shown that failure to include the voices of tribal officials in formulating policy affecting their communities has all too often led to undesirable and, at times, devastating and tragic results. By contrast, meaningful dialogue between Federal officials and tribal officials has greatly improved Federal policy toward Indian tribes. Consultation is a critical ingredient of a sound and productive Federal-tribal relationship."

[64] PL 93-638 Indian Self-Determination and Education Assistance Act of 1975

[65] 61/295 United Nations Declaration on the Rights of Indigenous Peoples

Alaska National Interest Lands Conservation Act 1980: Through this legislation statutory preference gives qualified subsistence users priority over other users, when resources are scarce, in the taking of Alaska's fish and wildlife resources.

The United Nations recognizes Indigenous Peoples Organizations (IPOs) and currently the United States is a signatory on the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). UNDRIP acknowledges that indigenous populations have a right to exercise their rights based on their indigenous identity and have a right not to be subjected to forced assimilation or destruction of their culture. UNDRIP includes the protection of language and culture and access to subsistence resources, in addition to other rights.[66]

Alaska Natives are active in the Arctic Council by their leadership and membership in this international forum as Permanent Participants. In Alaska the most engaged are the Aleut International Association and the Inuit Circumpolar Council with the Canadian members of the Arctic Athabaskan Council and Gwich'in Council International leading their participation.

The International Whaling Commission (IWC) is another international body with Alaska Native leadership. IWS is comprised of the countries that signed on to the International Convention for the Regulation of Whaling in 1946. IWC regulates the indigenous take of whales by setting quotas in addition to its other activities on whaling. The United States provides information to the IWC on the continuation of subsistence whaling activities. Information on whaling is provided to the federal government by local whaling commissions in accordance with Section 119 of the Marine Mammal Protection Act. This includes at least 3 whaling commissions.

National: The U.S. has a unique legal and political relationship with Indian tribal governments, established through and confirmed by the Constitution of the United States, treaties, statutes, executive orders, and judicial decisions. Through his November 5, 2009 Presidential Memorandum, President Obama, in recognition of that special relationship and pursuant to Executive Order 13175 of November 6, 2000, stated that all executive departments and agencies will engage in regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes. In Alaska, the Federal government interacts with Alaska Natives and [state agencies?] through the CDQ Program and Regional Subsistence Committees.

Established in 1992, the Western Alaska Community Development Quota (CDQ) Program allocates a percentage of all Bering Sea and Aleutian Islands quotas for groundfish, prohibited species, halibut, and crab to eligible communities. There are sixty-five eligible villages that have organized into six CDQ entities or village coalitions. Each CDQ entity is federally-recognized as an independent nonprofit organization with a separate board of directors and internal governance

[66] 61/295 United Nations Declaration on the Rights of Indigenous Peoples

process. The purpose of the CDQ Program is to (i) to provide eligible western Alaska villages with the opportunity to participate and invest in fisheries in the Bering Sea and Aleutian Islands Management Area; (ii) to support economic development in western Alaska; (iii) to alleviate poverty and provide economic and social benefits for residents of western Alaska; and (iv) to achieve sustainable and diversified local economies in western Alaska.

Regional Subsistence Committees: The Marine Mammal Protection Act gives the National Marine Fisheries Service and the US Fish and Wildlife Service the ability to enter into cooperative agreements with Alaska Native organizations to co-manage marine mammals. Cooperative agreements include the Alaska Native organizations that are comprised of local Alaska Native leaders and utilize traditional knowledge and science to co-manage marine mammals. Alaska Native organizations include, but are not limited to the Alaska Eskimo Whaling Commission; the Alaska Beluga Whale Committee; Ice Seal Committee, etc.[67]

[67] Marine Mammal Protection Act Amendments of 1994, Section 119

6.6 Science and Research Appendix A

To give some idea of the profusion of institutions, organizations, and governmental agencies presently carrying out research in the Arctic, the following is a partial inventory.

State agencies whose work regularly involves research and operations in the Arctic include:

- Department of Fish & Game
- Department of Environmental Conservation
- Department of Natural Resources
- Department of Commerce, Community, & Economic Development
- Department of Transportation and Public Facilities
- Department of Health and Social Services
- Division of Homeland Security and Emergency Management

Recent state-led initiatives researching and addressing Arctic issues include:

- Alaska Climate Change Sub-Cabinet (2007 to Present)
- Alaska Northern Waters Task Force (2012)
- Alaska Climate Impact Assessment Commission (2008)

Local government and in-region organizations conducting research in the Arctic include:

- Barrow Arctic Science Consortium
- North Slope Science Initiative (including local, state, and federal affiliates)
- North Slope Borough
- Northwest Arctic Borough

The University of Alaska is among the world's leading institutions for the study of the Arctic. Here are just some of the university's institutes and programs that focus on the region:

- International Arctic Research Center at the University of Alaska Fairbanks (UAF)
- Alaska Center for Climate Assessment & Policy (UAF)
- Scenarios Network for Alaska & Arctic Planning (UAF)
- Alaska Climate Research Center (UAF)
- Geophysical Institute Permafrost Laboratory (UAF)
- Institute for Circumpolar Health Studies (UAA)
- Institute of Northern Engineering (UAF)
- Environment and Natural Resources Institute (UAA)
- School of Fisheries and Ocean Sciences (UAF)
- Institute of Social and Economic Research (UAA)
- Alaska Center for Energy and Power (UAF)
- Northern Studies Program (UAF)

- Center for Cross-Cultural and Indigenous Studies (UAF)
- Institute of Arctic Biology (UAF)
- School of Natural Resources & Agricultural Sciences (UAF)

On the federal level, agencies regularly active in Alaska's Far North include:

- U.S. Department of the Interior
  - U.S. Fish & Wildlife Service
  - U.S. Geological Survey
  - Bureau of Indian Affairs
  - Bureau of Land Management
  - Bureau of Ocean Energy Management
- National Oceanic and Atmospheric Administration
  - National Marine Fisheries Service
  - Office of Oceanic and Atmospheric Research
- Environmental Protection Agency
- U.S. Coast Guard
- U.S. Army Corps of Engineers
  - Cold Regions Research and Engineering Laboratory
- U.S. Department of Defense
- National Science Foundation
- Department of Energy
- Marine Mammal Commission

Federal inter-agency structures that address Arctic issues include:

- Interagency Arctic Research Policy Committee
- Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska
- National Ocean Council
- U.S. Arctic Research Commission
- Alaska Ocean Observing System
- North Pacific Research Board
- North Pacific Fishery Management Council and Scientific and Statistical Committee

Non-governmental organizations with Arctic research programs include:

- Pew Charitable Trusts U.S. Arctic Program
- World Wildlife Fund U.S. Arctic Field Program
- Arctic Portal (data and information clearing house)
- Oceana
- International Union for Conservation of Nature
- University of the Arctic

- Gordon and Betty Moore Foundation
- Prince Albert of Monaco Foundation
- The Aspen Institute, Arctic Commission Roundtable
- Oak Foundation – Marine Conservation, Arctic Programme
- Center for Strategic & International Studies (CSIS) – Think Tank

NSSI

Partners in the NSSI include the Alaska Departments of Fish & Game and Natural Resources as well as the North Slope Borough and the Arctic Slope Regional Corporation. Participating federal agencies include the Bureau of Land Management; the U.S. Fish and Wildlife, National Marine Fisheries, and National Parks Services; and the Bureau of Ocean Energy Management, Regulation, and Enforcement. Advisory entities include the U.S. Arctic Research Commission, the U.S. Department of Energy, the National Weather Service, and the U.S. Geological Survey.

The U.S. Arctic Research Commission (USARC)

The commission consists of seven members, appointed by the President, as well as the director of the National Science Foundation, who serves *ex officio*. Currently, the USARC includes four commissioners who are longtime Alaska residents: Chair Fran Ulmer; David Benton; Edward Saggan Itta; and Mary C. Pete. However, similar to the legislation enabling the North Slope Science Initiative, the Arctic Research and Policy Act of 1984 requires that only one appointee be an Alaska resident.

6.7 Planning and Infrastructure Appendix A

The Northern Waters Task Force – Summary Planning and Infrastructure Background

Changes in temperature and precipitation are likely to hold enormous implications for both existing and future construction of infrastructure. The ability to better predict and understand the effects of phenomena such as widespread thawing of permafrost will help Alaska prepare for considerable maintenance issues on existing roads, airports, buildings, and pipelines. Just as importantly, it will aid engineers when it comes to properly siting, designing, and constructing new infrastructure capable of withstanding future changes in their specific environments. These important concerns have also been examined in ADOTPF's "Impact of Climate Change on Alaska's Transportation Infrastructure."

These changes pose significant challenges to some communities in Arctic coastal and riverine areas, most notably those located along the Bering and Chukchi Seas. A number of communities are threatened with increased rates of coastal erosion and flooding as a result of storm activity and battered shorelines once protected by shore-fast ice. These problems could become chronic as the climate warms, seasonal sea ice retreats, and destructive coastal storms become more frequent. These important concerns have been recognized in reports issued by the state of Alaska's Climate Change Subcabinet Immediate Action and Adaptation work groups.

Immediate investment in Arctic infrastructure is a foremost priority for Alaska and the entire United States. Alaska will need to explore ways to attract substantial sources of capital investment in addition to state and federal funding. Action is needed to enable the responsible development of resources; facilitate, secure, and benefit from new global transportation routes; and safeguard Arctic residents and ecosystems. This investment will improve the safety, security, and reliability of transportation in the region—a goal established by the U.S. Arctic Policy signed by President Bush in 2009.

As interest and activity in the Arctic continues to rise, America's preparedness in the region becomes ever more important to national security. Increased human activity related to shipping, oil and gas development, commercial fishing, and tourism will require, at a minimum, new ports and safe harbors, equipment and facilities for oil spill response, additional Polar Class icebreakers for the U.S. fleet, and improved charting and mapping.

The U. S. Coast Guard's needs in these areas well illustrate the magnitude of infrastructure investment necessary in negotiated by the eight Arctic Nations through the Arctic Council commits the United States to search and rescue response in regions of the Arctic. Domestically, the National Contingency Plan requires the U.S. Coast Guard to oversee oil spill planning and preparedness in coastal waters and to supervise any oil spill response. Additionally, the U.S. Coast Guard's mission is to protect the public, the environment, and U.S. economic interests in

the nation's ports and waterways, along the coast, on international waters, or in any maritime region as required for national security.

At present, the Coast Guard has very limited Arctic emergency response capabilities and no permanent bases on Alaska's North Slope to support its operations. Basic needs there include communications, housing, and support facilities. It is especially notable that the Coast Guard has only one operational Polar Class icebreaker, the USCG Cutter Healy. Clearly, the Coast Guard does not have the assets required to carry out its expanding mission in the Arctic.

As human activity increases in Alaska's northernmost waters, the need to establish a Coast Guard base in the Arctic grows. The most northern Coast Guard base in the United States is in Kodiak, Alaska, more than 1,000 miles from possible Chukchi Sea drilling sites and nearly as far from existing Arctic shipping lanes in the Bering Strait. This distance causes untenable logistical problems that negatively impact response times and capabilities. The Coast Guard must have a greater overall presence in the Arctic, with the ability to stage assets closer to future shipping, oil and gas drilling, and commercial fishing activities.

With transformation in the Arctic calling for a broad spectrum of new facilities on such a large scale, the state of Alaska must take an active role in regional planning efforts with communities and their stakeholders. This will help communities develop local strategies and ensure that the state is getting the most return on investment for local projects. Some communities may not have the resources to adequately prepare for the future, and the state should take this opportunity to help increase local capacity for the benefit of all Alaskans.

6.8 Planning and Infrastructure Appendix B

Stakeholders Report

Sub-Theme: Ports, Harbors, Places of Refuge, and Anchorages

AIDEA has an ownership positions in three ports of which only one is an Arctic region facility - DeLong Mountain Transportation System (DMTS).

1. AIDEA owns the port facilities at the DMTS which provides critical infrastructure for the Red Dog mine in the Northwest Arctic Borough. Although this port does not offer a place of refuge or anchorage, due to its shallow depth and exposure, it is critical for the development of mineral resources in the Arctic.

    i. Current state of this project is that it is fully operational.

    ii. This infrastructure is critical to accessing stranded mineral resources and creating long-term economic opportunities in the region.

2. AIDEA is partnering with the Arctic Slope Regional Corporation (ASRC) in the development of an Arctic port facility. ASRC and AIDEA are conducting various feasibility studies, planning efforts and pre-development analyses to assess project's feasibility and economic viability.

    i. Current state is in pre-development analysis.

    ii. No assets are in place at this point.

    iii. The pre-development analysis is attempting to fill in the information gaps.

    iv. This port is important because it has the potential to be a place of refuge, usable by the USCG and other such agencies, and provide access to market for the region's extensive mineral resources.

ASRC From west to east along the Arctic Slope coastline there are naturally formed embayments, shelters and anchorages that have served shipping vessels for more than 150 years: Cape Thompson, Point Hope, Cape Lisburne, Icy Cape, Wainwright Inlet, Point Franklin, Point Barrow, Cape Halkett, Oliktok Point, Prudhoe Bay, Mary Sachs Entrance and Barter Island. All of these locales offer shelter and anchorage of some kind. Some, like Cape Thompson, hold the potential even to host a deepwater port with modifications. Wainwright Inlet, Point Barrow, Oliktok, Prudhoe Bay, and perhaps Barter Island offer the best mix of shallow-draft access, shelter and access to infrastructure like landing strips, supplies, communications and people. The remainder offer excellent refuge and anchorage access for shallow- and mid-range draft vessels. For the village-based locales, witness the annual barge shipment of fuel goods and dry materials

that occurs at each village and in the oil patch for testaments to the usefulness of the locations for shipping.

Each individual facet of change that comes to the Arctic will require its own marine access. For the oil and gas exploration in the Alaska OCS it may be one thing. For the US Coast Guard it may be something else, and so on. For that reason the future will probably bring us *"Arctic ports"* (plural, and with a lower case "p") rather than an *"Arctic Port"*. Alaska's Arctic policy should maintain that logistics, bathymetry and individual projects will determine the location of these access points and they should not be determined by some pre-ordained method unrelated to actual needs.

Sub-Theme: Transportation and Energy Production (Access to Resources)

ASRC it has occurred in the rest of Alaska, it is the resource development projects themselves that will create transportation and energy production solutions. There can be no "roads to resources" for example until there is a real resource development-justified need for the road. TAPS and the Dalton Highway would not have been built without the discovery of the Prudhoe Bay field at the other end of the line. The same is true in the marine environment.

AIDEA currently has two active assets in Alaska's Arctic, The DeLong Mountain Transportation System (DMTS) and the Mustang Road and Production Pad.

1. The DMTS consists of a 52 mile road and port facilities that allow ore concentrates from the Red Dog Mine to be transported, stored and shipped to facilities for further processing. This infrastructure has been in place since the 1980s and will continue to operate for many years to come. AIDEA is currently reviewing proposals for additional users of the road from the nearby Lik Deposit. The Red Dog mine provides over 500 permanent jobs in the region and provides tax revenues to the Northwest Arctic Borough and the State.

    i. Current state of this project is that it is fully operational.

    ii. This infrastructure is critical to accessing stranded mineral resources and creating long-term economic opportunities in the region.

2. The Mustang Road project was completed this year and consists of a 4.5 mile access road and production pad for Brooks Range Petroleum Company (BRPC) drill site and production facility. This project will allow for the development of the planned BRPC $180mm oil production facility which is expected to put up to 15,000 bpd of oil into TAPS. Other companies in the area have expressed an interest in using the road and pad for their own development and eventual use of the projected production facility. Current state is in pre-development analysis.

    i. The road and production pad are currently in place.

ii. The drill site and production facility will be constructed when the financing package for the project has been completed.

iii. This project is important because it will allow for the development of stranded oil reserves that will not only add oil to TAPS but create well-paying jobs.

3. Roads to Resources: AIDEA is currently pursuing Roads to Resources projects in the Arctic which include the Ambler Mining District Access and the Foothills West Access projects.

4. The Ambler Mining District Access project will provide a 200+ mile, all-season industrial road to access state lands, and facilitate the exploration and development of mineral resources within this area. Work with baseline studies continues in preparation for the filing of the permit application and subsequent EIS.

i. Current state it's in pre-permitting baseline data gathering and analysis.

ii. No assets are in place at this point.

iii. This project is important because it will allow for the development of remote mineral reserves that will create many well-paying jobs in the region.

5. The Foothills West Access project is proposing to construct a road that will provide all season access to optimize and expand oil and gas exploration and development within the Foothills area, and provide all-season access to the NPR-A in this region. Since 2009, DOT&PF has performed and contracted for engineering and environmental studies of potential road corridors and now AIDEA will continue the work in partnership with Linc Energy to complete the permitting process.

i. Current state it is in pre-permitting phase awaiting EIS.

ii. No assets are in place at this point.

iii. This project is important because it will allow for the development of stranded oil reserves that will not only add oil to TAPS but create well-paying jobs.

Sub-Theme: Energy Extraction, Production and Delivery

The Interior Energy Project (IEP) authorizes AIDEA to provide a defined financing package to partner with the private sector to build a liquefied natural gas (LNG) plant on the North Slope and a natural gas heating distribution system in Fairbanks and North Pole. IEP is anticipated to reduce monthly heating costs by 40 to 50 percent, resulting in potential annual savings to residential ratepayers of up to $3,000. Natural gas should substantially improve Interior air quality by providing a substitute to wood- and oil-burning heating systems. It is expected this will help the region meet federal Environmental Protection Agency (EPA) standards.

i. Current state it is in pre-development feasibility analysis and private partner negotiations.

ii. Information gaps exist, this pre-development analysis will provide need information.

iii. No assets are in place at this point.

iv. Project will not only reduce energy costs and air pollution but will create an environment that is conducive to economic development and long-term sustainability for the interior (Fairbanks) and northern regions.

Sub-Theme: Emergency Management and Response

ASRC The North Slope Borough Search and Rescue Department hosts some of the most Arctic-ready assets for search and rescue functions on the North Slope. With its inventory of fixed wing and helicopter aircraft, the NSB SAR has been of life-saving benefit to icebreakers, oil and gas explorers, world travelers and to North Slope residents. So big is their influence that the US Coast Guard, when they arrived in Barrow to test their own search and rescue assets, said that they (USCG) were taking a second-string role in search and rescue, to learn from the more Arctic-skilled personnel and better-suited aircraft of the NSB SAR. As good as it is, the SAR is only part of the Emergency Response effort. In the event of a collision, spill, or other accident they would be crucial, but just a part of what the NSB has assembled in an Incident Command. This has been tested in our region, with exploration well blowouts, plane crashes, fuel spills and other incidents. The NSB has used its access to traditional knowledge, physical infrastructure, heavy equipment and manpower, and its IC system to integrate its efforts with the oil and gas industry as well as state and federal agencies. The NSB system should be fully researched by the Commission to determine how it would need to be replicated or enhanced in a developing Arctic.

Still needed are staging areas for response equipment in areas of active exploration. There may be a lot of assets in the Prudhoe Bay area, and other equipment may travel on vessels that transit to or explore in the Arctic waters, but the Commission should question the adequacy of what exists now. Once areas of offshore oil and gas development are known, for example, there should be thought given to pre-staging emergency response assets. Bottom line: stage the right things at the right place.

NOAA's National Weather Service (NWS) provides weather and water forecast services to protect life and property, and to enhance the economy and fulfill obligations under international treaties for the safety and security of marine transportation, energy exploration, and tourism activities. NOAA provides forecasts, warnings, and information for surface, marine, and aviation weather interests, with emphasis on high-impact events. It's the agencies responsibility to advise the Federal On-Scene Coordinator on oil cleanup measures in the coastal and marine environment. In addition to scientific support, NOAA provides spill response training support,

preparation for natural resource damage assessment, marine debris removal, research and education.

i. Current state is NOAA faces challenges in meeting its obligations

a. NOAA is working with other agencies, states, tribal and local governments, along with other partners to best meet needs for emergency management and response.

b. Certain science and data gaps exist in the Arctic; NOAA lacks the infrastructure and technical capability to meet all its obligations to provide weather warnings and forecasts that protect life, property, and communities. These gaps impact marine transportation, aviation, oil spill response, and storm surge warnings. Lack of forecasting negatively impacts northern and western Alaskan coastal communities from severe flooding and forecasting for NCP during oil spill response.

c. Major challenges also include limited observations and lack of appropriate operational storm surge model for the region.

ii. NOAA has a number of assets in place to support Emergency Response for oil spills.

a. Office of Response and Restoration (OR&R) has one Science Support Coordinator for Alaska (and will be adding a second in August 2013), OR&R has also developed an Environmental Response Management Application (ERMA) for the Arctic with Stand-alone capacity and will be conducting a field test on board the USCG Cutter HEALY in September 2013.

b. NOAA's NWS has dozens of meteorologists and technicians with knowledge and experience in weather, water, and sea ice prediction and emergency response procedures specific to the challenging Arctic environment.

iii. What gaps do you feel need to be addressed?

a. Improved NOAA models to predict oil movement and weathering in ice-infested waters, assess vulnerable natural habitats, build Arctic oil spill response capacity for NOAA staff, and fund external research to fill science gaps need to be addressed. Furthermore, mitigation strategies for limited communications and response infrastructure are needed.

b. Accelerate the development and implementation for operational storm surge model for north and western Alaska coasts; improve use of remote sensing data to advance the prediction of weather, ocean, and sea ice conditions; improved observation and information infrastructure for data collection and forecasting.

iv. Why is this important to Alaska's Arctic?

a. The capacity for emergency response, particularly concerning oil and chemical spills, is fast becoming an urgent requirement with increasing use of the Arctic Marine Transportation System and expected exploration and development of oil and gas.

b. Severe weather forecasts are critical for Arctic communities to prepare for and respond appropriately to weather and water-related routine and extreme events. They also support safe maritime transportation through accurate and timely marine forecasts and warnings.

Sub-Theme: Aids to Navigation, and Data Acquisition and Sharing

ASRC The Alaskan Arctic suffers from a painful lack of access to the world's communication network. Microwave towers or fiber optic links are the only answer. Resource developers, Arctic researchers, government agencies, and our own people are hobbled by a lack of efficient communication infrastructure. Its placement in the Alaskan Arctic will be a life-changing event for the residents and a crucial key to success for any developing industry.

NOAA's National Ocean Service is lead agency for nautical charts and shoreline mapping supporting safe navigation and efficient maritime commerce. In addition to sea ice and weather forecasts, NOAA's nautical charts, Coast Pilot, and other aids to navigation are important parts of the maritime information infrastructure, and are supported by the underlying geodetic, oceanographic, and hydrographic data that must be collected to build nautical charts. NOAA recently updated its Arctic Nautical Charting Plan. NOAA is working to acquire gravity data, tides and currents data, hydrographic data and shoreline mapping data in the U.S. Arctic. This data is used for navigation products and widely available for other users via NOAA data centers and Digital Coast. NOAA support the Integrated Ocean and Coastal Mapping (IOCM) of the Arctic data acquisition.

i. Currently the U.S. Arctic is severely deficient in its nautical charts and shoreline maps.

a. Arctic waters that are charted were surveyed with obsolete technology, and some surveys date back to the 1800s. Most of Alaska's northern and western coasts has not been mapped to National Shoreline standards since 1960 or earlier.

b. There is a gap of 18 National Water Level Observation Network (NWLON) stations in the Arctic for accurate water levels.

ii. Current NOAA assets are the 500 sq. nautical miles of Alaskan waters surveyed every summer and 190 sq. nautical miles of coastline using LiDAR, presently funded.

a. NOAA has nine NWLON stations to monitor real-time water levels in the Alaskan Arctic. Gravity data acquisition for accurate heights/positioning is underway in Alaska and will be mostly completed by 2017, with the Aleutians to follow.

b. NOAA uses availability data and maintains a number of agreements to support the sharing of environmental data without restriction. In 2011, NOAA signed an agreement with Shell, Conoco Phillips, and Statoil to share Arctic datasets. Meteorological and oceanographic data were the first to be shared by the industry partners. This data was incorporated into NOAA assessments and forecasts during Shell summer 2012 operations and subsequent emergency incident(s). These additional observations continue to help NOAA improve forecast accuracy in the Arctic region.

iii. What gaps do you feel need to be addressed?

a. The Arctic region has virtually no geospatial infrastructure for accurate positioning and elevations, sparse tide, current, and water-level prediction coverage, along with obsolete shoreline and hydrographic data. Funding needs to be increased and partnerships could speed up the process. Navigation offices in NOAA are working on further developing partnerships under NOAA's Arctic Nautical Charting Plan and the National Strategy for the Arctic Region implementation plan.

b. Although NOAA is transparent with its data and is engaged in partnerships to share data, there is plenty of room to increase the number of collaborators.

iv. Why is this important to Alaska's Arctic?

a. Safe and efficient navigation is important for Alaska's economy, Arctic coastal communities, and environmental protection. NOAA's nautical charts and shoreline maps support safe navigation and knowledge of Arctic waters, habitat assessments and inundation models. Any changes in the Arctic can alter indigenous ways of life. When ice barriers that protect Arctic coastal communities diminish, the state of Alaska and its people must make critical decisions based on threats from stronger storms, increasing erosion, thawing permafrost, changing animal migration patterns, and sea level changes. The potential economic impacts of these changes can be significant as well as a danger to local communities.

b. Data-sharing increases the efficiency of delivering services in the Arctic - can speed up requirements like data collection for navigation services, data for sea ice forecasts, etc.

Sub-Theme: Human Resources, Workforce Development, Research, Education and Training and Housing, Sewer and Water

ASRC The answer to these two combined sub-themes will be learned as we go forward. It is said that offshore oil drilling, for example, will require thousands of individuals. Some will travel north with their vessels, and others will be employed from around the country, including Alaska. Yet there is still some risk as to the timing and location of energy exploration. Our local communities need to have gainful employment from the increase in commerce and exploration. When energy development does come to the OCS, we need to improve upon the Prudhoe Bay experience and put more of our own local people to work. Thankfully, we are better poised than in the early days of Prudhoe Bay; we have Native-owned enterprises that stand ready to assist energy developers in their efforts and we can target our own residents for employment opportunities. The size and nature of any new development project, energy or otherwise, will determine what and where housing, water/sewer, and other infrastructure should be placed. Pre-staging anything like that ahead of time is a gamble that may result in the wrong facilities in the wrong place.

6.9 Planning and Infrastructure Appendix C

Reference Material:

Northern Waters Taskforce Report - Findings & Recommendations
http://housemajority.org/coms/anw/pdfs/27/NWTF_Full_Report_Color.pdf

ADOT&PF Statewide Long-Range Transportation Policy Plan – Lets Get Moving 2030
www.dot.alaska.gov/stwdplng/areaplans/2030/assets/SWLRTPPfinal022908.pdf

ADOT&PF Statewide Long-Range Transportation Policy Plan - Data Refresh
www.dot.alaska.gov/stwdplng/areaplans/2030/assets/LGM2030datarefreshfinal12-10.pdf

USACE Alaska Regional Ports 905(b) Reconnaissance Study, May 2008
www.poa.usace.army.mil/Portals/34/docs/AKports/AK%20Regional%20Ports%20905b%20FINAL_May2008.pdf

USACE/DOT&PF Alaska Deep-Draft Arctic Ports Planning Charrette May 16-17, 2011
www.poa.usace.army.mil/Portals/34/docs/AKports/Charrette%20Summary%207-13-11web.pdf

2013 Alaska Broadband Task Force Report-A Blueprint for Alaska's Broadband Future
www.alaska.edu/files/oit/bbtaskforce/2013-08-AK-Broadband-Task-Force-Report%7CA-Blueprint-for-Alaska%27s-Broadband-Future.pdf

Paula Lowther, Arctic Deep Water Port, Alaska Business Monthly, Jan 2012
www.akbizmag.com/Alaska-Business-Monthly/January-2012/Arctic-Deep-Water-Port/

US Arctic Research Commission - Goals and Objectives for Research 2011-2012
www.arctic.gov/publications/2011-12_usarc_goals.pdf

National Science and Technology Council (NSTC) Arctic Research Plan FY 2013–2017
www.whitehouse.gov/sites/default/files/microsites/ostp/2013_arctic_research_plan.pdf

US Arctic Research Commission - Arctic Marine Transport Workshop Sept 2004
www.arctic.gov/publications/arctic_marine_transport.pdf

US Coast Guard-High Latitude Region Mission Analysis Capstone Summary
http://assets.fiercemarkets.com/public/sites/govit/hlssummarycapstone.pdf

Representative Bob Herron - Empowering Alaska as America's Arctic
www.institutenorth.org/assets/images/uploads/articles/Empowering_Alaska_as_America%E2%80%99s_Arctic_By_Representative_Bob_Herron.pdf

Northwest Artic Borough-Comp Economic Development Strategy of March 2012
http://commerce.alaska.gov/dnn/Portals/6/pub/NWABEDC_CEDS.pdf

Fairbanks North Star Borough-Comp Economic Development Strategy 2011

http://commerce.alaska.gov/dnn/Portals/6/pub/FNSB_CEDS.pdf

Bering Strait Comp Economic Development Strategy 2009

http://commerce.alaska.gov/dnn/Portals/6/pub/BSDC_CEDS.pdf

6.10 Fisheries Appendix A – Governance of Arctic Fisheries

International agreements oversee several species:

- North Pacific Anadromous Fish Commission, NPAFC www.npafc.org/new/index.html
  - NPAFC doesn't actually govern fisheries in US EEZ, but NPFMC (NOAA) is bound by law to observe its conventions, which are primarily responsible for prohibiting harvesting salmon on the high seas and for enforcing that prohibition outside the EEZs of US, Canada, Russia, Japan and Korea. NPAFC Science Plan 2011-2015 can be found at www.npafc.org/new/publications/Documents/PDF%202010/1255(2011-2015%20Science%20Plan).pdf
- International Pacific Halibut Commission IPHC http://www.iphc.int/
  - IPHC sets the quotas which are implemented by IPHC regulations in US waters. In the ARPA Arctic area http://alaskafisheries.noaa.gov/maps/iphc/areas.htm in addition to the regulations of IPHC, halibut is managed by the North Pacific Fishery Management Council as a prohibited species. A prohibited species is one that a fishery targeting other species, i.e. pollock, can only catch so much of before they have stop fishing altogether.
- Conservation and Management of Pollock Resources in the Central Bering Sea 1994 – the donut hole www.afsc.noaa.gov/refm/cbs/convention_description.htm
  - These are waters that are beyond 200 nautical miles

Russians and Norwegians have an international agreement on fishery management in the Barents Sea www.fao.org/docrep/006/y4652e/y4652e0e.htm

- The Barents region has its own "donut hole" called the "Loophole" and other disputed jurisdiction areas outside the EEZ's of Russia and Norway.

Regional Fishery Management Organizations
http://ec.europa.eu/fisheries/cfp/international/rfmo/index_en.htm

- Various RFMOs apply to the Arctic on above the Atlantic; ICCAT for example, extends into the Arctic Ocean on the Atlantic side of the continent.
- The RFMOs on the Atlantic side are coordinated by the International Council for the Exploration of the Sea ICES an international fishery management body for Europe and the North Atlantic. www.ices.dk/Pages/default.aspx

United States - www.nwr.noaa.gov/whatwedo/msa/magnuson_stevens_act.html

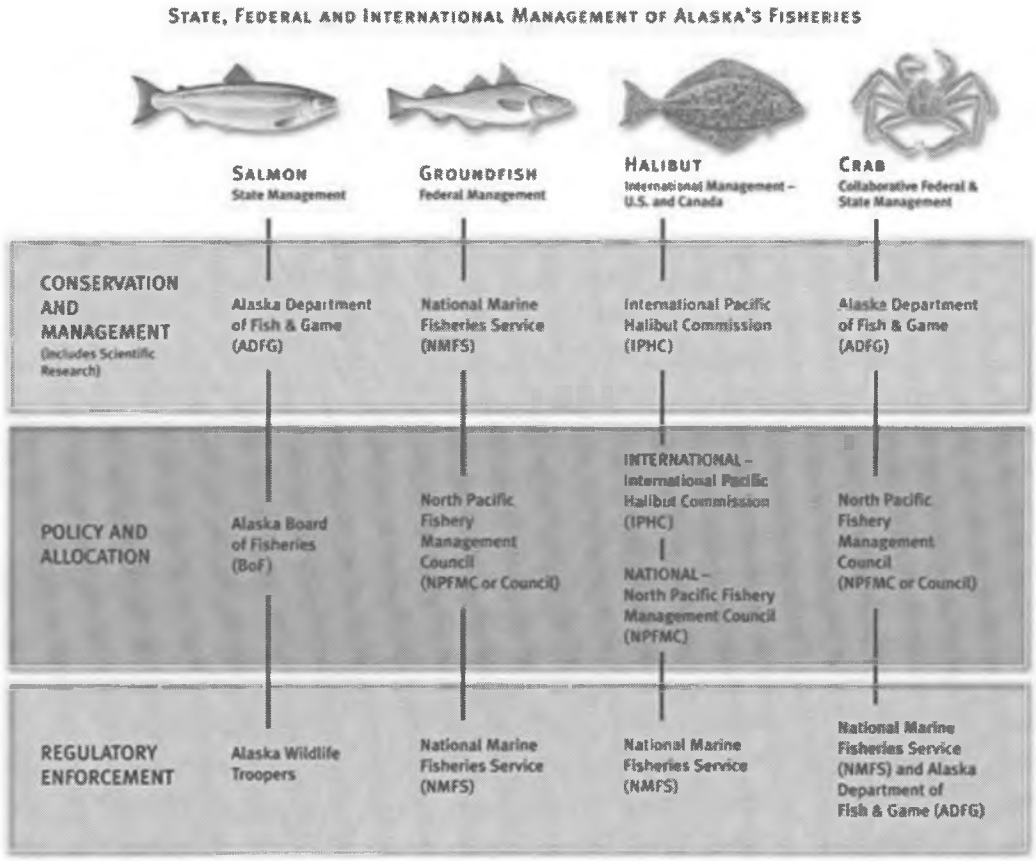
The Magnuson-Stevens Act is the guiding law for marine fisheries occurring between 3 - 200 nautical miles from shore - called the Exclusive Economic Zone (EEZ). It is governed under the National Ocean and Atmospheric Administration (NOAA). The North Pacific Fishery Management Council (NPFMC) makes recommendations to the National Marine Fisheries

Service (NMFS) which develops a Fishery Management Plan (FMP) for a specific area. In addition to the Magnuson-Stevens Act, they must follow other applicable laws (ESA, NEPA, RFA) in the Fishery Management Plan. (see Appendix C for a detailed list)

Alaska - www.adfg.alaska.gov/index.cfm?adfg=fishing.main

The Board of Fisheries in the Alaska Department of Fish and Game (ADF&G) that has jurisdiction of the waters up to 3 miles from shore. They regulate commercial, sport, personal use and subsistence fishing. This involves research, planning, management, protection, enhancement, restoration of the ecosystem. (see Appendix B for a detailed list)

State, Federal and International Management of Alaska's Fisheries:



6.11 Fisheries Appendix B – State of Alaska Arctic Management

The Board of Fisheries' main role is to conserve and develop the fishery resources of the state. It sets policy and direction for management of subsistence, commercial, sport, and personal use fisheries. The board is charged with making allocative decisions, including establishing open and closed seasons, areas for taking fish; setting quotas, bag limits, harvest levels and limitations for taking fish, and establishing the methods and means for the taking of fish. The department is responsible for management based on those decisions.

Commercial Fisheries

- Norton Sound, Port Clarence, and Arctic-Kotzebue Area
  - Commercial Fisheries Management Report
    - www.adfg.alaska.gov/FedAidpdfs/FMR13-28.pdf
  - Commercial Fisheries Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=commercialbyareanortonsound.main
- Northern Area
  - Commercial Fisheries Management Report
    - www.adfg.alaska.gov/FedAidpdfs/FMR12-23.pdf
  - Commercial Fisheries Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=commercialbyareanorthern.main
- Bering Sea & Aleutian Islands Area
  - Commercial Fisheries Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaaleutianislands.main
  - Commercial Fisheries Management Report for Herring
    - www.adfg.alaska.gov/FedAidPDFs/FMR12-38.pdf
  - Commercial Fisheries Management Report for Groundfish
    - www.adfg.alaska.gov/FedAidPDFs/FMR12-38.pdf
  - Commercial Fisheries Management Report for Shellfish
    - www.adfg.alaska.gov/FedAidPDFs/FMR12-22.pdf

Sport Fisheries

- Northwest Drainages Management Area
  - Sport Fish Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=ByAreaInteriornorthwest.main
- North Slope Management Area
  - Sport Fish Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=ByAreaInteriorNorthSlope.main
- Fishery Management Report for Sport Fisheries in the Northwest / North Slope Management Area
  - Management report

- www.adfg.alaska.gov/FedAidPDFs/FMR12-45.pdf
- Kodiak Management Area (includes the Alaska Peninsula and Aleutian Islands)
  - Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=ByAreaSouthcentralKodiak.main

Subsistence Fisheries

- Bering Sea / Aleutian Islands Area
  - Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=ByAreaSubsistenceBeringAleutians.main
- Norton Sound – Port Clarence Management Area
  - Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=ByAreaSubsistenceNortonSound.main
- Kotzebue Sound Management Area
  - Overview Webpage
    - www.adfg.alaska.gov/index.cfm?adfg=ByAreaSubsistenceNortonSound.main

6.12 Fisheries Appendix C – Federal Arctic Management

Arctic Management Area - Fishery Management Plan

- 2009 Fishery Management Plan
  - http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/fmp/Arctic/ArcticFMP.pdf
- 2013 amendments to the 2009 Plan
  - www.pcouncil.org/groundfish/fishery-management-plan/

Bering Sea Aleutian Islands (BSAI) Management Area

- 2012 Groundfish of the BSAI Fishery Management Plan
  - http://alaskafisheries.noaa.gov/npfmc/pdfdocuments/fmp/bsai/bsai.pdf
- Crab Fisheries
  - http://alaskafisheries.noaa.gov/sustainablefisheries/crab/default.htm
    - Rationalization - http://alaskafisheries.noaa.gov/sustainablefisheries/crab/crfaq.htm
    - Buy back - www.nmfs.noaa.gov/mb/financial_services/buyback.htm
- Rockfish Program
  - http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/
- Halibut Catch Sharing Program
  - http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/Area4CSP605.pdf
- Exempted Fisheries
  - http://alaskafisheries.noaa.gov/ram/efp.htm
- 2007 amended Magnuson Stevens Act
  - www.nmfs.noaa.gov/sfa/magact/MSA_Amended_2007%20.pdf
- 2006 Amendment 80 – to facilitate formation of harvesting cooperatives
  - https://alaskafisheries.noaa.gov/sustainablefisheries/amds/80/
- 2004 revision
  - http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/meetings/Management_FMP.pdf
- History of Magnuson Stevens Act
  - www.oceanconservancy.org/our-work/fisheries/msa-the-law-thats-saving.pdf

NPFMC Salmon - EEZ - http://alaskafisheries.noaa.gov/npfmc/fishery-management-plans/salmon.html

Background informational sites:

NOAA – North Pacific Fisheries Management Board - alaskafisheries.noaa.gov/npfmc
NOAA – Community Development Quota Program - alaskafisheries.noaa.gov/cdq/

02/06/14 Presentation: World Trade Center Alaska

<TARGET><BILL></BILL><SUBJECT>02-06-14 Presentation World Trade Center Alaska</SUBJECT><COMM>HEDT28</COMM></TARGET>

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Wednesday, February 05, 2014 4:14 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 6, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

Greg Wolf, Executive Director
World Trade Center Alaska

Other Information:

no other callers anticipated

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 6, 2014

1. **Call to Order**

~Gavel~ Welcome members of the Economic Development, Trade and Tourism Committee.

2. **Roll Call**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx)
- I would like to introduce Debbie Tillinghast, the committee recording secretary
- Info services person Shane
- Ginger Blaisdell, my staff will operate the slides for our speaker today

3. **Presentation**

- Introduce today's speaker: Greg Wolf, Executive Director of World Trade Center Alaska
    - "All The Right Stuff"
    - Four ways Alaska is primed for export success

4. **Adjourn**

- Next week's schedule will include an update from the DCCED Division of Economic Development on Tuesday and an update from Alaska Seafood Marketing Institute on Thursday. Watch the Friday paper "tomorrow" for special flyers from the American Heart Association regarding eating fish a minimum of twice a week for heart health.

We are ADJOURNED." ~gavel~

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: February 6, 2014

Re: Committee Schedule for the Week Beginning February 10, 2014

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Tuesday, February 11, 2014 11:15am in Room 124

+ Department of Commerce Community and Economic Development
  Division of Economic Development Overview and New Programs

Thursday, February 13, 2014 11:15am in Room 124

+ Alaska Seafood Marketing Institute
  Mike Cerne, Executive Director
  Alexa Tonkovich, International Program Director
  Jack Schultheis, Kwik' Pak Fisheries, ASMI Board of Directors

May change

* First Hearing in First Committee of Referral
\+ Teleconferenced
= Bill was Previously Heard/Scheduled



BY GREG WOLF
Executive Director, World Trade Center Alaska
Presented to the House Special Committee on Economic Dev., Trade & Tourism
Representative Shelley Hughes, Chair
February 6, 2014

International Trade is Big Business for Alaska

- Overseas Exports estimated $4.5 - $4.6 billion in 2013
- This represents nearly 10% of the Alaska's Gross State Product (GSP)
- New Money into Economy
- Thousands of Direct and Indirect Jobs
- Results in stronger, more diversified economy

Why Trade Matters?

- Substantial component of Alaska's economy. Exports typically account for approximately 10% of the GSP. Export total does not include the export of services from Alaska — such as construction, engineering and oil & gas services.
- Exports now bring between $4 and $5 billion of new money into our economy. New money, not recycled money. Also, exports account for nearly $2 billion in induced and indirect economic benefits, according to a study by Northern Economics.
- Exports allow companies to become larger through expanded markets and customer base.
- For some Alaska companies, their best bet for growth is overseas markets.

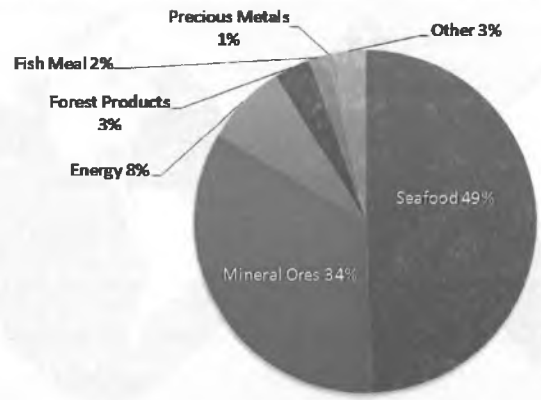
Exports = Jobs

- Exports support nearly 15,000 direct and 10,000 indirect and induced jobs in Alaska
- Export jobs are high paying jobs. Export-related jobs typically pay 13-16% more than jobs tied solely to domestic economy

How Do We Rank?

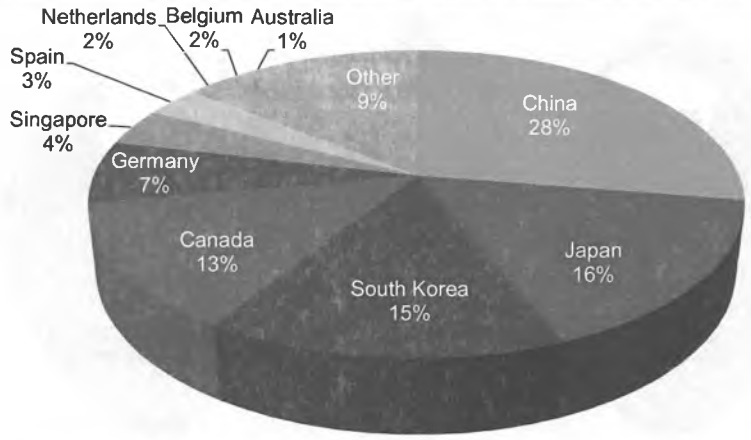
- Alaska ranks 40th among all states by the value of exports
- As a percent of GSP, Alaska ranks 14th
- On a per capita basis, Alaska ranks 4th
- According to the U.S. Department of Commerce, there are approximately 300 companies that export from locations in Alaska. 75% are considered SMEs

Alaska's Top Export Commodities (Jan. – Nov. 2013)



Source: U.S. Census Bureau

Alaska's Total Overseas Exports Jan. – Nov. 2013 ($4.4 Billion)



Source: U.S. Census Bureau

Alaska's Total Overseas Exports Jan. – Nov. 2013 ($4.4 Billion)

Ranking	Country	Amount (USD Millions)
1.	China	$1,208
2.	Japan	$719
3.	South Korea	$661
4.	Canada	$583
5.	Germany	$286
6.	Singapore	$173
7.	Spain	$140
8.	Netherlands	$108
9.	Belgium	$65
10.	Australia	$62
11.	Others	$390
	Total:	$4,395

Source: U.S. Census Bureau

Alaska's China Era Continues
(2000 – 2013 Comparison, USD Million)



Source: U.S. Census Bureau

Where We've Been (in USD Billion)



Source: U.S. Census Bureau

Current Trends: The Three "Rights"

- Right Place
  - Alaska's geographic location on the Pacific Rim. Fast growing economies and populations
- Right Time
  - Economic liberalization and modernization. Migration to the cities and growth of the middle class
- Right Commodities
  - Alaska has world-class reserves of natural resources. The building blocks of economic development. What people need versus what they want.

The Fourth "Right"

- Right Direction:
  - Alaska and the world are heading North

    Access to natural resources

    Transportation infrastructure

    Maritime shipping opportunities

  Flowing from commercial development of the Arctic

Why am I optimistic?

- We have what the world needs
- We have fast-growing economies and populations in our backyard
- Commercial development of the Arctic presents significant opportunities for Alaska

Why am I optimistic? (cont.)

- Many resources remain untapped – for example, minerals & metals:

  - Coal – 17% of the world's coal; 2nd most in the world
  - Copper – 6% of the world's copper; 3rd most in the world
  - Lead – 2% of the world's lead; 6th most in the world
  - Gold – 3% of the world's gold; 7th most in the world
  - Zinc – 3% of the world's zinc; 8th most in the world
  - Silver – 2% of the world's silver; 8th most in the world

(Source: Commonwealth North – Assets Review)

- North Slope natural gas; Rare Earth Elements; Service Sector Exports

Towards a New Business Model

- Increasing number of Alaskan companies adopting new business model for growth & success
- Traditional model: 700,000 potential customers
- New model: 3 billion potential customers
- This new mindset creates greater feasibility for Alaskan companies & projects

Members Spotlight

ADS-B Technologies

Dowland-Bach

db

www.dowlandbach.com

UCM

USIBELLI COAL MINE, INC.

Members Spotlight (cont.)

alaska BRANDS GROUP

NANA DEVELOPMENT CORPORATION

RIM ARCHITECTS

WTCAK Trade Development Programs



Thank You!

WORLD TRADE CENTER
ALASKA

Phone: (907) 27-TRADE
web: www.wtcak.org

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UNIVERSITY *of* ALASKA
ANCHORAGE

U.S. COMMERCIAL SERVICE

02/11/14 Overview: Division of Economic Development, Department of Commerce, Community and Economic Development

<TARGET><BILL></BILL><SUBJECT>02-11-14 Overview Division of Economic Development, Department of Commerce, Community and Economic Development</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 11, 2014

1. **Call to Order**

~Gavel~ Welcome members of the Economic Development, Trade and Tourism Committee.

2. **Roll Call**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx)
- I would like to introduce Crys Jones (Debbie had a schedule conflict), the committee recording secretary
- Info services person
- Ginger Blaisdell is my staff that will be the committee aide for EDT

3. **Mission of the Committee**

   - Today's speaker is Robbie Graham, Assistant Commissioner of the Department of Commerce Community and Economic Development. Robbie oversees the operations of the Division of Economic Development and will provide us with remarks on the division's program updates and future plans as well as Alaska's general economic health statewide ~ challenges and new opportunities
   - Our format is different today. I've invited staff to offer questions to our speaker by passing questions to Ginger and she will forward them to me. I recognize that the members of this committee have conflicting schedules and staffs are often the eyes and ears to the legislators who would otherwise be here. I feel it's important that the

conversation on Alaska economic development be engaging to all of the members of this committee.

Before we adjourn:

- The Thursday meeting of the EDTT will hear from the Alaska Seafood Marketing Institute.
- Do we want this style of question forum at the next meeting?

Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

Topics for Robbie Graham:

Governor's (DCCED) Economic Development Board - EDB

Membership page attached

What is the mission of the EDB?

After Gasline – with or without a gasline, what are the goals for DCCED and Alaska's economic health?

How is the department planning for either scenario?

What other industries is the department focusing on to diversify Alaska's economy?

Long Term Vision/Plan and Priorities

US Department of State – Pathways to Prosperity

- Empowering Small Business by providing access to financial and technical support mechanisms for micro, small, and medium-sized enterprises
- Facilitating Trade by improving regulations and the infrastructure that small businesses need to trade more competitively across borders
- Building Modern Workforce by collaboration with other departments and developing a culture of entrepreneurship
- Promoting sustainable business practices

Collaboration with other agencies

New Industries:

Arctic

Unmanned Aircraft

DCCED theme: "North to Opportunity"

Ginger Blaisdell

From: Crystal Koeneman
Sent: Tuesday, February 11, 2014 9:33 AM
To: Ginger Blaisdell
Subject: Question for EDT&T

Ginger,

Thank you and your boss for allowing the opportunity for others to ask questions of the Assistant Commissioner of Commerce during your hearing today. We would like to offer the question below for consideration:

Since FY 11 the Department has received $16 million plus a year in tourism marketing funds directly instead contracting with a qualified trade association. What has the department done with $64 million given during this time? And what does the department plan to do with an addition $16 million proposed in the Governor budget this year.

Crystal Koeneman
Legislative Aide
Representative Reinbold
Administrative Regulatory Review Committee
(907) 465-3822

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, February 10, 2014 1:53 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 11, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

no one expected to be calling in

Other Information:

DCCED Economic Development Advisory Council

Last Name	First Name	Title	Organization	Address	City	ST	Zip Code	Phone	Email	Notes
Beedle	Joe	President	Northrim Bank	PO Box 241489	Anchorage	AK	99524	261-3525	beedle.joe@nrim.com	calkins.
Binkley	John	President	Alaska Cruise Association	360 K Street Suite 300	Anchorage	AK	99501	322-2390	john@akcruise.org	
Cook	Jeff	Regional Director, External Affairs	Flint Hills		Fairbanks	AK			jeff.cook@fhr.com	
Crockett	Deantha	Executive Director	Alaska Miners Association	3305 Arctic Blvd Suite 105	Anchorage	AK	99503	563-9229	deantha@alaskaminers.org	
Dick	Russell	President, CEO	Haa Aani, LLC	1 Sealaska Plaza Ste 400	Juneau	AK	99801	586-1612	russell.dick@sealaska.com	
Gore	Carol	President & CEO	Cook Inlet Housing Authority	3510 Spenard Rd. #100	Anchorage	AK	99503	276-8822	cgore@cookinlethousing.org	tmeyer
Hajdukovich	Bob	CEO	Era Alaska	4700 Old Intl Airport Rd	Anchorage	AK	99502	248-4422	bhajdukovich@flyera.com	
Leary	Linda	Carlile Transportation Systems	President	1800 E 1st Avenue	Anchorage	AK	99501	276-7797	lleary@carlile.biz	
MacKinnon	John	Executive Director	AGC - Alaska	8005 Schoon St	Anchorage	AK	99518	561-5354	john@agcak.org	
Miller	Lance	VP - Natural Resources	NANA Regional Corporation	PO Box 49	Kotzebue	AK	99752	265-4360	lance.miller@nana.com	
Moriarty	Kara	Director	Alaska Oil and Gas Association	121 W. Fireweed Lane, Suite 207	Anchorage	AK	99503		moriarty@aoga.org	
Petro	Rachel	Executive Director	Alaska State Chamber of Commerce	630 E. 5th Avenue	Anchorage	AK	99501	278.2722	rpetro@alaskachamber.com	
Pruhs	Dana	President	Pruhs Corporation	2193 Viking Dr	Anchorage	AK	99501	279-1020	danapruhs@pruhscorp.com	
Reitmeier	Kim	Executive Director	ANSCA Regional Associations	PO Box 240766	Anchorage	AK	99524	339-6052	kim@ancsaceos.org	
Rogers	Rick	Executive Director	Resource Development Council	121 W. Fireweed Lane	Anchorage	AK	99503	276-0700	rrogers@akrdc.org	
Sweeney	Tara	Senior VP, External Affairs	ASRC	3900 C St, Suite 801	Anchorage	AK	99503	339-6000	tsweeney@asrc.com	

THE STATE
of ALASKA
GOVERNOR SEAN PARNELL

Department of Commerce, Community, and Economic Development

OFFICE OF THE COMMISSIONER

P.O. Box 110800
Juneau, Alaska 99811-0800
Main: 907.465.2500
Programs fax: 907.465.5442

February 26, 2014

The Honorable Shelley Hughes
Alaska State House of Representatives
State Capitol, Room 409
Juneau, AK 99801

Dear Representative Hughes,

During the Economic Development, Trade & Tourism hearing on Tuesday, February 11, several questions were asked that required follow up response. Please find that information below:

1. **How many businesses were assisted by the Division of Economic Development in FY 2013?**
   The Division of Economic Development (DED) provides assistance to a number of businesses and individuals in myriad industries and business sectors. In FY 2013, DED provided:
   a. New loans to 283 businesses worth $28.4 million. In helping these business owners, DED was able to create or save scores of jobs. The division also extended or refinanced nearly 200 loans allowing businesses to enjoy a greater cash flow or return on investment.
   b. Assisted 525 requests for one-on-one business assistance and provided small business technical assistance to approximately 480 businesses.
   c. Approximately 550 tourism businesses and communities advertised in the Vacation Planner, which brings business information to 650,000 potential visitors and 1.3 million interested visitors through www.travelalaska.com. Hundreds more participated in opportunities to engage with potential visitors through other tourism marketing efforts including trade shows and business exchanges.
   d. Training to 450 AlaskaHost participants.
   e. Created the "Opportunity Alaska" room at the Prospectors and Developers Association of Canada (PDAC), which included a dozen Alaska mining companies and Native corporations.
   f. Represented dozens of Alaska products and businesses to Walmart buyers at the Walmart Manufacturing Summit.

2. **How does the tourism industry leverage state tourism programs to raise its match?**
   Of the overall $18.7 tourism marketing budget, the tourism industry contributes $2.7 million to the marketing efforts of the state, and raises those funds through the following activities:
   a. Advertising sales from the State Vacation Planner
   b. Fees collected from the purchase of labels by tourism businesses

c. Fees collected from Yukon, British Columbia and Alberta to fund the North to Alaska campaign targeting highway travelers
d. Advertising sales from TravelAlaska.com
e. Fees collected from Yukon to help fund the Alaska/Yukon campaign
f. Fees collected from participation in international shows and training sessions
g. Fees collected from participation in Alaska Media Road Show and NY media event
h. Fees collected from business participation in travel trade shows and training sessions
i. Advertising sales from Coop National Magazine Campaign
j. Revenue collected from businesses participating in consumer shows

3. **What is the per-unit cost to produce and mail the State Vacation Planner?**
The state vacation planner production cost is $1.14 per book, or $1.86 when all handling, data collection, and mailing fees are included. Approximately 650,000 planners were printed in FY 2013 and an equal number will be printed in FY 2014.

4. **What is the Division of Economic Development doing to address the challenges facing the timber industry and to market Alaskan timber?**
The Division of Economic Development collaborated with ADFG and DNR to produce the Alaska Timber Jobs Task Force report and implement the 34 recommendations in the final report. The division also launched the Made in Alaska Home project, featuring Alaska-made building products at home shows across Alaska. The division is working to research potential markets for second growth timber products.

If you have further questions, please do not hesitate to contact me.

Best regards,

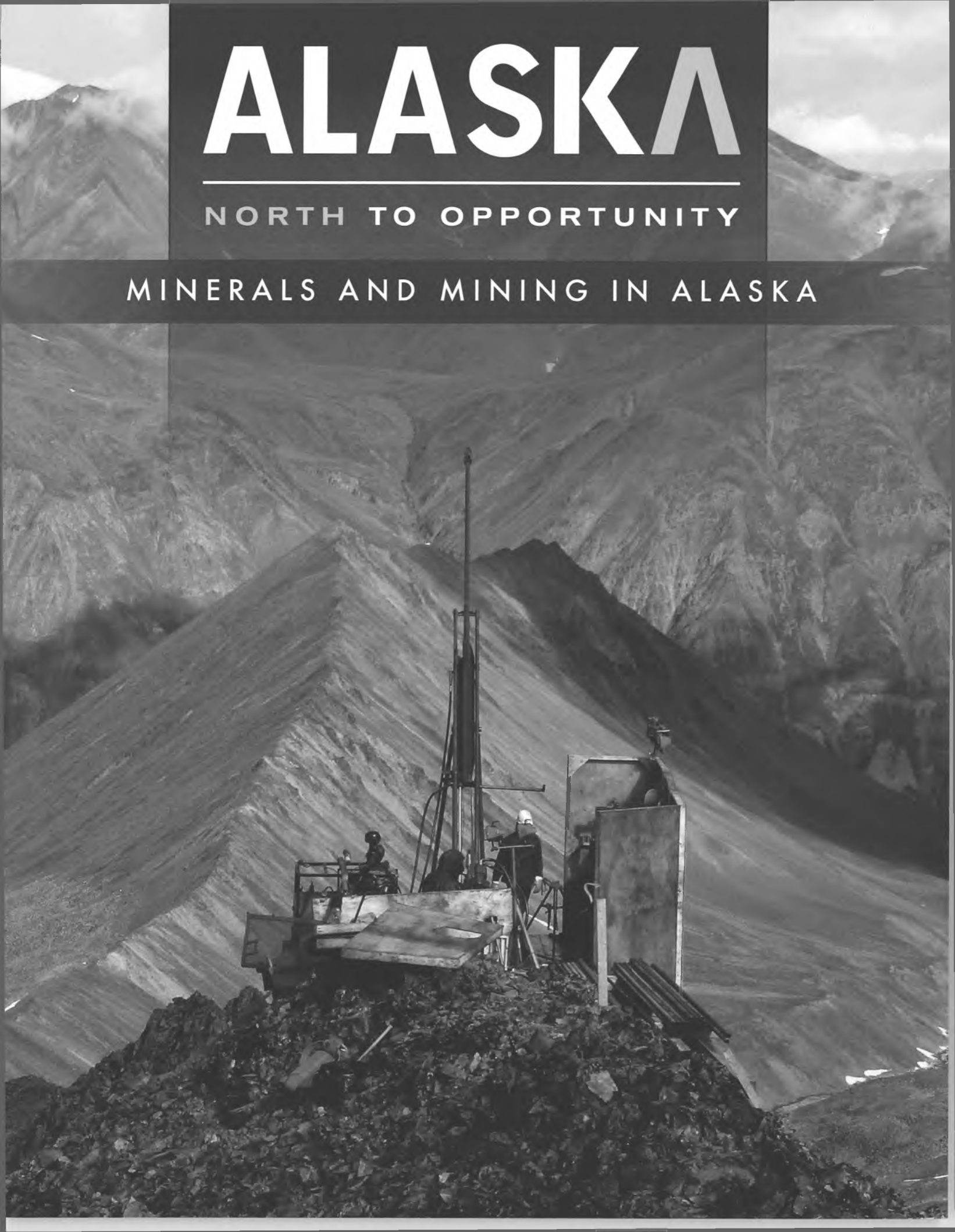


Roberta Graham
Assistant Commissioner

ALASKA

NORTH TO OPPORTUNITY

MINERALS AND MINING IN ALASKA



WHY INVEST IN ALASKA?

- Extraordinary geological potential
- Low degree of prior exploration
- Geopolitically stable
- State constitution and government that emphasize resource development
- Clear land ownership
- Competitive tax incentives and low taxation
- State-sponsored infrastructure development and permitting coordination
- Growing geological database
- Strategic global position in close proximity to international minerals markets

STRATEGIC & CRITICAL MINERALS

Alaska is considered highly prospective in regard to strategic and critical minerals for domestic uses. Alaska's diverse geology hosts a wide range of minerals deposit types, including more than 70 occurrences of rare earth elements and millions of acres of selected or conveyed land with significant minerals potential. The State is undertaking a statewide assessment of Alaska's strategic minerals potential and will provide infrastructure partnerships and incentives for the development of known or highly prospective strategic minerals occurrences throughout Alaska.

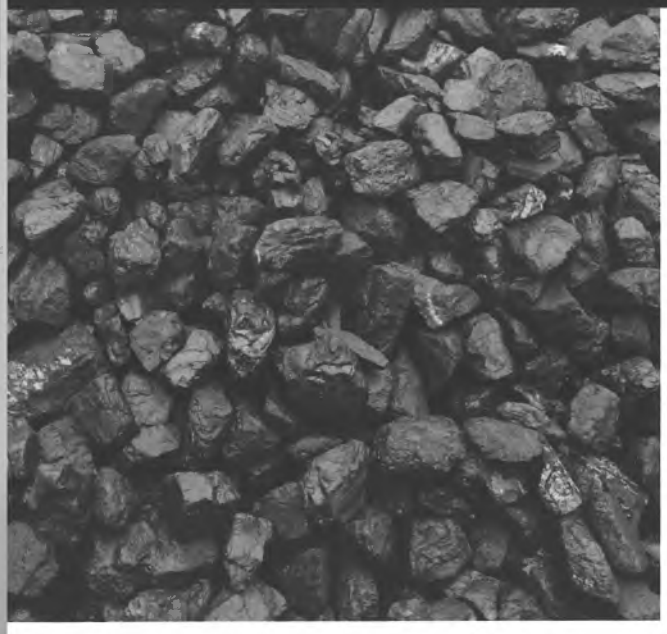
Alaska is #1 in the United States and #6 in the world for current minerals potential.

Fraser Institute, Survey of Mining Companies 2012/2013



WORLD-CLASS DEPOSITS AWAITING DISCOVERY

Alaska's undeveloped world-class minerals deposits represent extraordinary potential for future discoveries.



Top ten globally for known reserves of important minerals:



Percent of world's estimated 2012 production volume

USGS estimates and data



The United States is consistently ranked as one of the best countries in the world for mining investment.

Behre Dolbear



INCENTIVE TO EXPLORE

The Alaska Exploration Incentive Credit Program allows the deduction of up to $20 million of qualified costs from taxes and royalties over a 15-year period for new mines. Exploration credits are site-specific and continue to be earned up to receipt of the final operating permit.

INFRASTRUCTURE PARTNERSHIPS

The State of Alaska provides financing of minerals development and associated infrastructure through the Alaska Industrial Development and Export Authority (AIDEA). AIDEA has a 29-year history of supporting Alaska's mining industry, beginning with the development of the DeLong Mountain Transportation System, which includes a 52-mile road and port facility that serves the Red Dog Mine in Northwest Alaska. AIDEA also financed the development of the Seward Coal Loading Facility and continues to own and operate the Skagway Ore Terminal that serves base metal mines in the Yukon via the port of Skagway.

ROADS TO RESOURCES

New roads to resources are being developed and will provide reliable access to known or highly prospective, significant minerals occurrences. AIDEA is currently leading the State of Alaska's efforts to provide surface access to the Ambler Mining District with a 200-mile, industrial, all-season access road. Additional upgrade and construction projects implemented by the Alaska Department of Transportation and Public Facilities will unlock promising minerals opportunities: www.dot.state.ak.us/roadstoresources.

CONSISTENT AND EFFECTIVE PERMITTING

Alaska supports a rigorous but fair permitting process coordinated through the Alaska Department of Natural Resources (DNR) Office of Project Management and Permitting (OPMP). OPMP facilitates the inter-agency Large Mine Permitting Team, which works cooperatively with large-mine applicants and operators, federal resource agencies and the public. The coordinated process minimizes duplication and is often tailored to fit specific project needs. Five of Alaska's six producing mines coordinated permitting work utilizing the Large Mine Permitting Team.

AN EDUCATED WORKFORCE

Alaska has a variety of educational programs as well as education and training tax credits available to support the minerals industry workforce and ensure that Alaskans entering the workforce are career-ready. Providing education and training opportunities to build in-state workforce expertise is vital to the industry and a priority for Alaska's educational institutions.

- The **University of Alaska** offers undergraduate, graduate and doctoral programs with emphases in earth science, geology, engineering, minerals and mining, operations, permitting, exploration and development.
- The **Center for Mine Training** provides world-class workforce training in occupational fields, with a special emphasis on growing the Alaska workforce for underground hard-rock mining.
- **University of Alaska Corporate Programs** include the Mine and Petroleum Training Service (MAPTS), Underground Mine Classroom, MSHA Certifications and Mine Simulator.
- **University of Alaska Fairbanks (UAF) Community and Technical College** is one of only a few programs in the nation to offer a working wellhead in a classroom environment.
- **The State of Alaska** operates 22 job centers across the state to connect employers to job seekers and also partners with employers, educational institutions and training providers to invest in Alaska workers.

The 2012 gross minerals production value from Alaska totaled $3.4 billion, yet this just scratched the surface of what's possible. Based on estimates, Alaska's reserves offer tremendous opportunity for growth in future production and career-making finds for exploration companies, juniors and global mining leaders.

ALASKA'S MINING INDUSTRY

Alaska's minerals remain largely undeveloped. There are only six producing mines in Alaska, with more than 190 million acres of land open to exploration and investment.

Producing Mines and 2012 Mineral Production

- Red Dog Mine: one of the world's largest zinc mines, produced over 583,000 tons of zinc and 105,000 tons of lead
- Greens Creek Mine: among the world's top 10 silver mines, produced over 6.4 million ounces of silver, 55,000 ounces of gold, 64,000 tons of zinc and 21,000 tons of lead
- Pogo Mine: produced 315,900 ounces of gold
- Fort Knox Mine: produced 359,900 ounces of gold
- Usibelli Mine: produced over 2 million tons of low-sulfur coal, exporting half of its production
- Kensington Mine: produced 82,100 ounces of gold

Minerals Exploration

Thirty-one projects spent $1 million or more in 2012; $2.4 billion has been spent on minerals exploration in Alaska since 1981. Advanced exploration projects include:

- Pebble: ~ 80.6 billion pounds of copper, 107.3 million ounces of gold and 5.6 billion pounds of molybdenum
- Bokan Mountain: enriched in yttrium, dysprosium and critical, heavy rare earth elements
- Donlin Gold: ~ 42.3 million ounces of gold
- Livengood Gold Project: ~10.1 million ounces of gold
- Niblack: ~9.0 million tons polymetallic (copper, gold, silver and zinc)

KEY CONTACTS

ALASKA DEPARTMENT OF NATURAL RESOURCES

Division of Mining, Land and Water
550 W. 7th Ave., Suite 1070
Anchorage, AK 99501
907-269-8600
dnr.alaska.gov/mlw

Office of Project Management and Permitting
550 W. 7th Ave., Suite 1260
Anchorage, AK 99501
907-269-8400
dnr.alaska.gov/commis/opmp

ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT

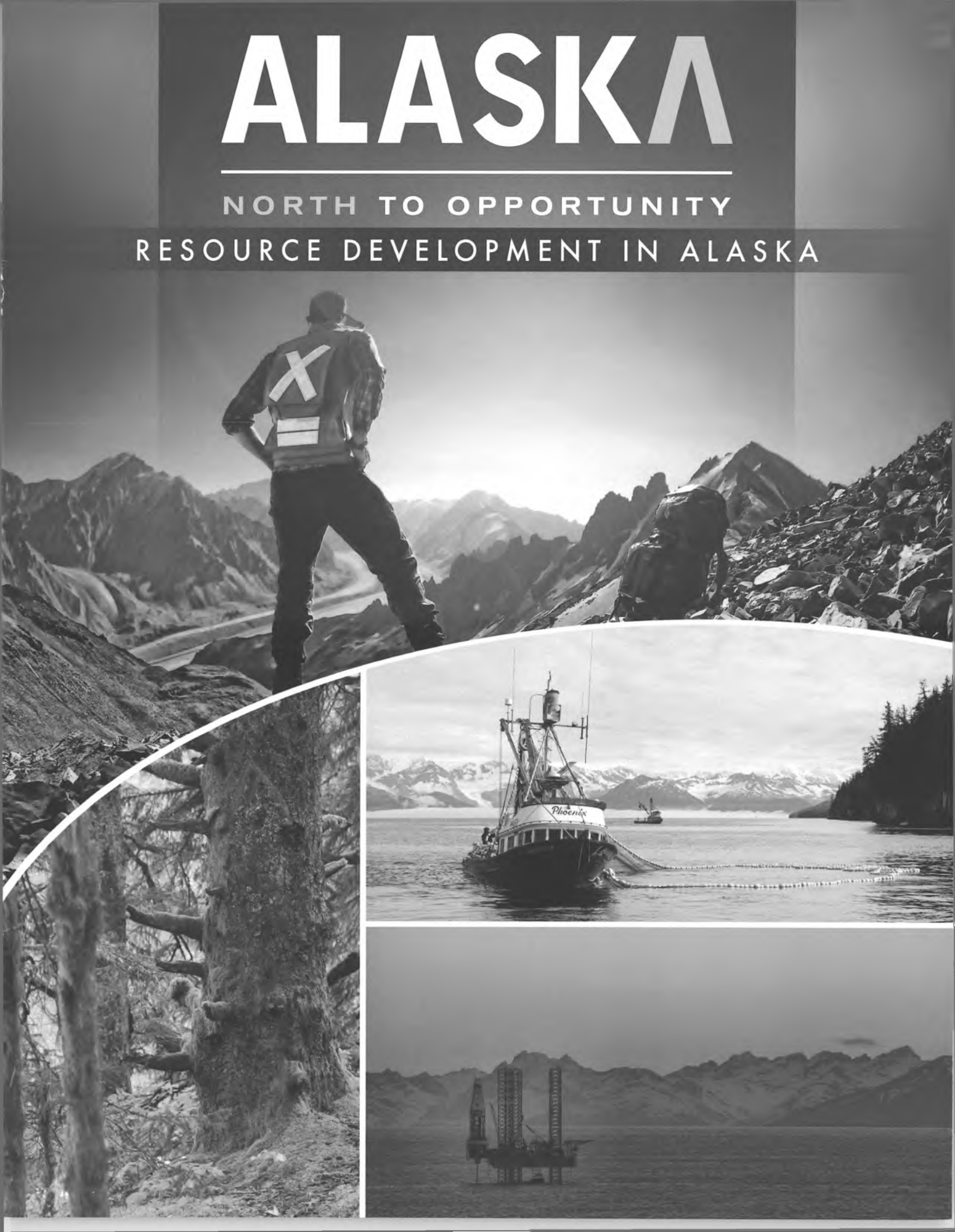
Division of Economic Development
3032 Vintage Park Blvd, Suite 100
Juneau, AK 99801
907-465-2510
commerce.alaska.gov/dnn/ded

Alaska Industrial Development and Export Authority
813 W. Northern Lights Blvd.
Anchorage, AK 99503
907-771-3000
www.aidea.org

ALASKA

NORTH TO OPPORTUNITY

RESOURCE DEVELOPMENT IN ALASKA





RESOURCE

North to Opportunity

With a nearly inexhaustible supply of natural gas, 40 billion barrels of conventional oil, abundant reserves of coal, copper, gold, lead, silver and zinc, vast forests and North America's most prolific wild fisheries, Alaska's natural resources are world-class. Despite this potential, large portions of Alaska remain underexplored and economic opportunity abounds.

Pro-Resource Development

Since statehood, Alaska has been committed to responsibly developing its resources as a key driver of the state's economic development. In contrast to many jurisdictions of comparable potential, Alaska offers political stability, secure land tenure, low tax rates, a skilled workforce, attractive tax incentives, a strategic Pacific Rim location and a state government that emphasizes resource development. Today, Alaska remains committed to natural-resource development and continues to focus on being a competitive and attractive jurisdiction in which to invest. Efforts include exploration incentives and tax abatement, improving permitting processes to enhance efficiency and consistency, and supporting promising projects through infrastructure partnerships and incentives.

"It is the policy of the state to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest."

- Article 8, Section 1 of the Alaska Constitution

Oil and Gas

While more than 16.3 billion barrels of oil and natural gas liquids have been transported through the trans-Alaska pipeline since 1977, an estimated 40 billion barrels of conventional oil and more than 200 trillion cubic feet of conventional natural gas remain untapped on Alaska's North Slope and Outer Continental Shelf. Alaska's world-class unconventional resources include tens of billions of barrels of heavy oil, shale oil and viscous oil, and hundreds of trillions of cubic feet of shale gas, tight gas and gas hydrates. Despite USGS estimates that Alaska's North Slope has more oil than any Arctic nation, the basin is relatively underexplored, with just 500 exploration wells. Other regions, like Cook Inlet, also possess significant undiscovered volumes of hydrocarbons.



Minerals

During 2012, Alaska's six large lode mines, placer mines, and rock, sand and gravel operations produced an estimated $3.44 billion in gross value.* However, Alaska's exploration potential dwarfs its current production value thanks to its geologic potential, which ranks in the top 10 globally for known reserves of coal, copper, lead, gold, zinc and silver, along with more than 70 occurrences of rare earth elements. In 2012, there were 64** active exploration projects in pursuit of these resources and, in the case of gold alone, more than five million ounces were added to the statewide inventory through new discoveries and advancements.

Timber

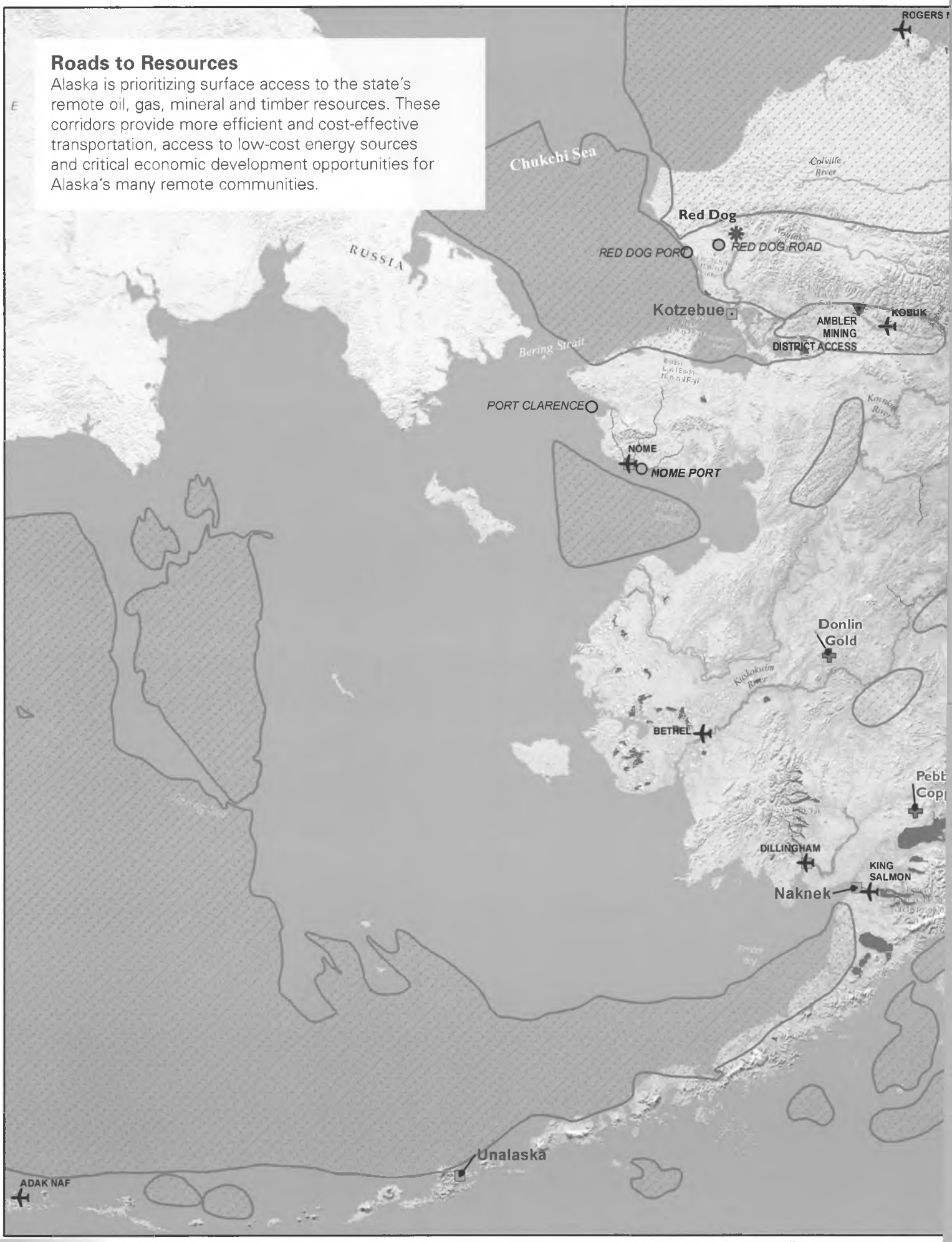
Alaska has two distinct forest types: coastal rainforest, stretching from southern Southeast Alaska through Prince William Sound and the Kenai Peninsula to Kodiak Island; and boreal forest, covering much of Interior and Southcentral Alaska. Commercial species include Sitka spruce, hemlock, cedar, white spruce, quaking aspen and paper birch. Annually, an average of more than 200 million board feet (MBF) are offered for sale in Alaska (49.5 MBF from state land; 56.13 MBF from federal land; and approximately 110 MBF from private land).

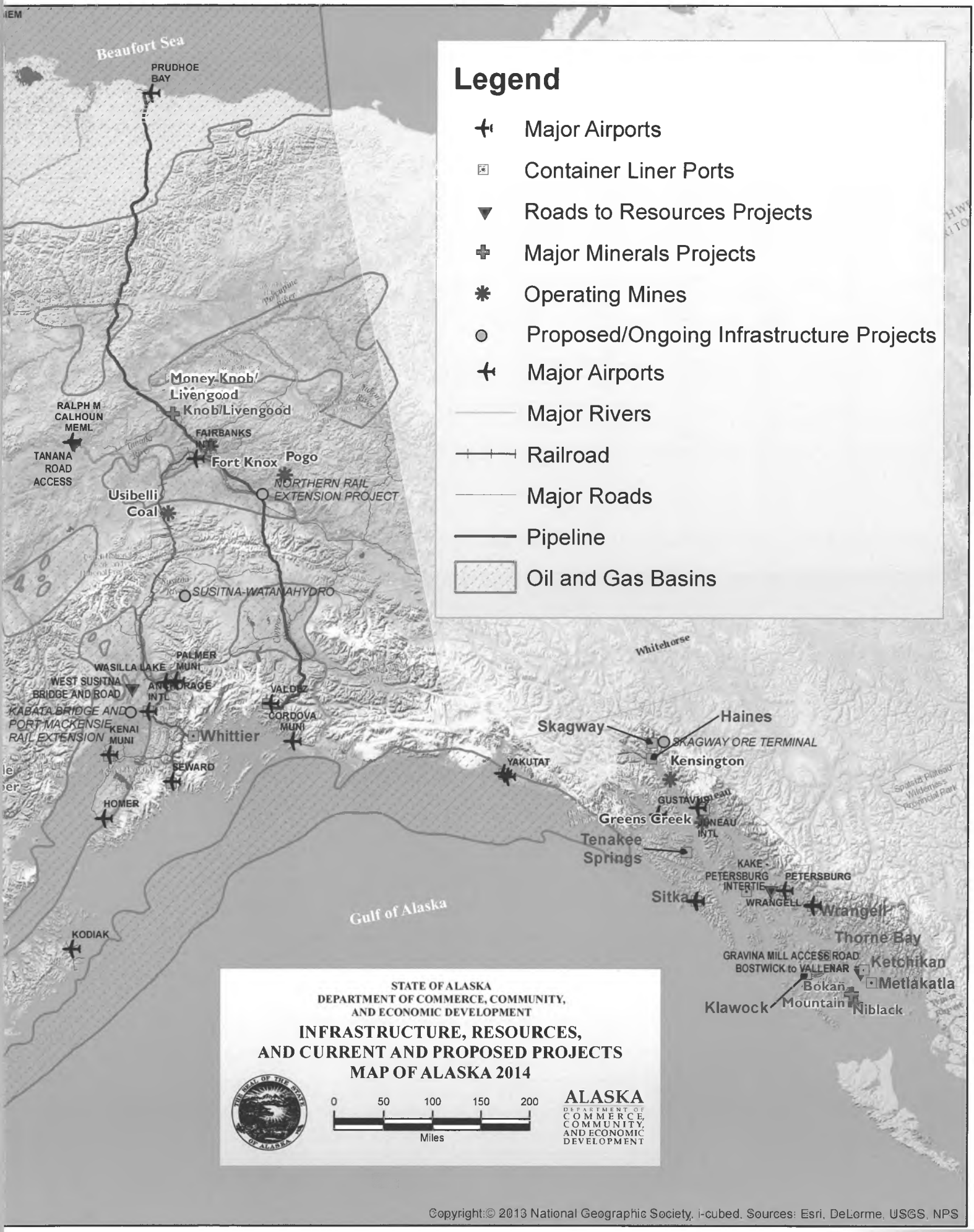
Seafood

Alaska's seafood industry accounts for more than half of all domestic seafood production and is a key economic driver, directly employing over 63,100 workers in Alaska and another 34,000 in Washington. The combined value of Alaska seafood exports and the retail value of seafood sold in the United States totaled $6.4 billion, with direct and secondary economic impact in the U.S. estimated at $15.7 billion. Alaska's diverse and valuable seafood portfolio includes: five species of wild Pacific salmon; shellfish, including shrimp, king crab, Dungeness crab, snow crab, scallops and geoducks; Pacific halibut and black cod (sablefish); Alaska pollock and Pacific cod; and other whitefish varieties managed as "groundfish" (rockfish, sole, flounder, etc.).

* Category includes zinc ores and concentrates, lead ores and concentrates, copper ores and concentrates, precious metal ores and concentrates, precious stones, and coal.
**Alaska Minerals Industry Report
http://137.229.113.30/webpubs/dggs/sr/text/sr068.pdf

TO OPPORTUNITY


Roads to Resources
Alaska is prioritizing surface access to the state's remote oil, gas, mineral and timber resources. These corridors provide more efficient and cost-effective transportation, access to low-cost energy sources and critical economic development opportunities for Alaska's many remote communities.
ROGERS
Chukchi Sea
Colville River
Red Dog
RED DOG PORT
RED DOG ROAD
RUSSIA
Kotzebue
KOBUK
AMBLER MINING DISTRICT ACCESS
Bering Strait
PORT CLARENCE
Kobuk River
NOME
NOME PORT
Donlin Gold
Kuskokwim River
BETHEL
Pebble Copper
DILLINGHAM
KING SALMON
Naknek
Unalaska
ADAK NAF



Copyright:© 2013 National Geographic Society, i-cubed, Sources: Esri, DeLorme, USGS, NPS

ALASKA'S ADVANTAGES



Established Land Ownership

Alaska is 586,412 square miles in size – more than twice the size of Texas and larger than all but 18 sovereign nations – with more coastline than all other U.S. states combined.

- Federal land: more than 200 million acres
- State land: ~100 million acres of uplands; 60 million acres of tidelands, shore lands and submerged lands; 40,000 miles of coastline
- Native corporation land: 44 million acres

(Alaska Department of Natural Resources, Jan. 2013)

Alaska Native Claims Settlement Act

The Alaska Native Claims Settlement Act (ANCSA) of 1971 granted 40 million acres of land to 12 regional Native corporations and 220 village corporations. Regional corporations own the surface and subsurface - or mineral estate to their lands, as well as the subsurface estate - of the lands conveyed to the village and urban corporations within their region; village corporations own the surface land around their villages. These lands are held in fee simple and can be sold, mortgaged, or developed similar to private land.

Alaska Native corporations (ANCs) are structured as modern corporations and are unique business institutions that present an array of opportunities for domestic and international partnerships. Increasingly, ANCs partner with private companies in resource-development projects on their lands. American Business Law applies to projects developed with Alaska Native corporations.

State Support

- Comprehensive permitting reform to create timely and efficient permitting process; ongoing reform has already yielded measurable results, achieving a 53.5 percent reduction in the backlog for permits and authorizations for land and water use (1,421 authorizations) since July, 2011
- Tax credits to support exploration, development and vocational education
- Competitive corporate taxes and no individual state income or sales tax; ranked fourth best in the U.S. by the Tax Foundation in the annual "2014 State Business Tax Climate Index"
- Acquiring and publishing new high-resolution geological and geophysical data to assess areas of potential infrastructure development
- Statewide goal of 50 percent renewable power (or electrical energy) by 2025, with more than $227 million dedicated to 251 renewable-energy projects across Alaska through the Renewable Energy Fund
- An engaged, coordinated and robust statewide university system with an emphasis on engineering, environmental science and technical training



Large Project Permitting Coordination

The Office of Project Management and Permitting (OPMP) facilitates a consistent and efficient permitting process for large-scale projects subject to overlapping jurisdictional authorities in Alaska. With a coordinated team approach to the technical review and environmental permitting, OPMP assists project proponents in navigating the State's permitting processes:

- OPMP coordination is voluntary, at the applicant's expense
- An experienced project coordinator serves as the State's primary point of contact for the project
- Permitting coordination and assistance occurs throughout the project lifecycle
- Clear expectations and open lines of communications are established
- Unnecessary permit contradictions and duplications are avoided
- The OPMP coordinator works to integrate the state and federal permitting processes and to maintain cooperative relationships with the federal agencies

Infrastructure Investment and Lending Programs

The Alaska Industrial Development and Export Authority (AIDEA) is the State of Alaska's finance authority for development projects. Working in partnership with the private sector, AIDEA provides long-term financing for economic-development projects. This business model allows Alaska to be a competitive financing partner and retain Alaska investment, which is recovered through modest rate of return and negotiated user fees. AIDEA has $1.3 billion in assets under management with a Standard and Poor's credit rating of AA+.

- Long-term commercial and project financing
- Ownership in all or part of a project or infrastructure development
- Co-investment through a corporation or LLC in a project or infrastructure development





KEY CONTACTS

Alaska Department of Commerce, Community, and Economic Development

Division of Economic Development
3032 Vintage Park Blvd, Suite 100
Juneau, AK 99801
907-465-2510
commerce.alaska.gov/dnn/ded

Alaska Industrial Development and Export Authority
813 W. Northern Lights Blvd.
Anchorage, AK 99503
907-771-3000
www.aidea.org

Alaska Department of Natural Resources

Division of Mining, Land and Water
550 W. 7th Ave., Suite 1070
Anchorage, AK 99501
907-269-8600
dnr.alaska.gov/mlw

Office of Project Management and Permitting
550 W. 7th Ave., Suite 1260
Anchorage, AK 99501
907-269-8400
dnr.alaska.gov/commis/opmp



02/13/14 Presentation: Alaska Seafood Marketing Institute

<TARGET><BILL></BILL><SUBJECT>02-13-14 Presentation Alaska Seafood Marketing Institute</SUBJECT><COMM>HEDT28</COMM></TARGET>

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, February 10, 2014 1:59 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 13, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

no one is expected to call in

Other Information:

Wild, Natural & Sustainable®

February 26, 2014

The Honorable Shelly Hughes
Chairwoman
House Economic Development Trade and Tourism
State Capitol, Room 409
Juneau, AK 99811

Dear Representative Hughes;

Thank you for giving the Alaska Seafood Marketing Institute (ASMI) the opportunity to present at House Economic Development Trade and Tourism on February 13, 2014. Below are the responses to some questions that came up during our presentation.

Q1 "Regarding the out of state workers, how many are non US residents?"

There is no exact data collected on how many Alaska processing workers are not U.S. citizens. Up until last year, processing companies were able to hire foreign students under the J-1 Visa program. Alaska typically gets about 4,000 J-1 workers per year, and while many work in processing plants, they are also employed in other seasonal industries (such as hotels/ lodges). However, the J-1 program was altered in 2012 and processors were not allowed to hire J-1's in 2013. Senators Begich and Murkowski recognize the need for seasonal workers in the processing industry and have introduced language into an immigration bill (S. 722) that would allow the seafood industry to recruit and hire seasonal workers from foreign countries. Alaska's processors employ roughly 25,000 processing workers per year. The State of Alaska, through the University of Alaska, the Department of Labor and Workforce Development, and the Marine Advisory Program, offer several programs that place and train Alaskans in seafood processing jobs. The seafood industry requires a large number of line workers to process fish for a few months during the busy summer months. In less populated areas, it can be difficult or even impossible to find enough local residents to fill those seasonal positions.

Q2 Where are the majority of seasonal workers located at? How long are they in the state?

See attachment 1

Q3 "Can I get a one page highlight of the McDowell Group report?"

See attachment 2

Alaska Seafood Marketing Institute ▲ 311 North Franklin Street, Suite 200 ▲ Juneau, AK 99801-1147
Phone 907/465-5560 800/478-2903 ▲ Fax 907/465-5572 ▲ www.AlaskaSeafood.org ▲ info@AlaskaSeafood.org

Economic Value of the Alaska Seafood Industry

A brief summary of the McDowell Group report *The Economic Value of the Alaska Seafood Industry* is presented below. The full report can be found online at: http://pressroom.alaskaseafood.org/wp-content/uploads/2013/08/AK-Seafood-Impact-Report.pdf.

Impact on Alaska's Economy

- The commercial seafood industry employed an estimated 77,400 workers who earned $2.17 billion in 2011. It is the state's largest private sector employer (in terms of direct employment).

- Alaska produces over five billion pounds of seafood each year and over 90 percent of it comes from regions containing less than 10 percent of Alaska's population. As a result, the industry relies heavily on nonresident or transient labor in some areas. However, it is estimated the industry creates jobs for 41,500 Alaska residents - who make up over half of the workforce - and earn 59 percent of the labor income. Commercial fishing accounts for two-thirds of Alaska resident employment created by the industry.

- In western Alaska, the seafood industry directly employs more than 40 percent of working age residents (ages 20-69) at some point during the year. Despite the obvious impact in western Alaska, the state's Southcentral region (including Anchorage and Mat-Su) actually contained more residents working directly in the industry (7,500 workers) than any other region in 2011.

- It is estimated the Alaska seafood industry employs 8 percent of all working age Alaska residents (through direct and secondary impacts), and accounts for 7 percent of all Alaska resident earnings from private sector industries. Including nonresidents and adjusting worker totals to monthly averages, it is estimated the seafood industry creates 9 percent of all jobs in Alaska.

- Alaska's seafood industry also benefits Alaskans in many other ways. Seafood backhaul lowers northbound shipping rates, which lowers the cost of living in coastal Alaska communities. A major Alaska shipper estimates northbound rates would be 10 percent higher in Alaska if not for seafood. The industry funds six CDQ groups who created over 2,400 jobs for western Alaska residents and funded 1,600 scholarship/training opportunities in 2011. In addition, the industry paid out over $135 million in taxes, fees, and self-assessments in FY2012; with $54 million going to local governments as unencumbered revenue.

- The Alaska seafood industry creates more labor income and employs more workers in Alaska than the visitor industry and mining industry combined. The commercial seafood industry is the state's most valuable renewable (natural) resource.

Impact on U.S. Economy

- Alaska produced 56 of the total U.S. commercial fishery harvest volume in 2011, but since most seafood consumed by Americans is imported Alaska only accounted for 10 percent of the U.S. seafood supply. Roughly two-thirds of Alaska seafood is exported, but it is still the largest source of domestically caught seafood for American consumers.
- Alaska seafood created 165,800 U.S. jobs and $15.7 billion in economic output in 2011.

Q4 "Do we know where the volume is caught for sockeye and pink?"

Commercial Salmon Harvest by Region and Species, 2012						
in Thousands of Fish	Chinook	Sockeye	Coho	Pink	Chum	**Total**
Southeast Alaska	278	945	2,084	21,302	12,375	**36,983**
Prince William Sound	12	3,690	209	27,232	3,818	**34,961**
Cook Inlet	3	3,328	107	726	326	**4,490**
Kodiak	15	2,235	209	16,873	866	**20,198**
AK Pen & Chignik	13	4,565	157	789	1,067	**6,590**
Bristol Bay	19	20,915	116	906	679	**22,636**
Arctic, Yukon & Kuskokwim	8	93	255	205	1,054	**1,615**
Total	**347**	**35,769**	**3,137**	**68,035**	**20,185**	**127,473**
Source: Alaska Department of Fish and Game, compiled by McDowell Group.						

Q5 "What is the share of Alaska seafood on the world market, and is there room for growth in volume?"

There are few fisheries in Alaska that are not fully utilized. Some species such as flatfish and herring have some unexploited biomass that could be harvested if markets were developed. On any given year, Alaska represents between 1 and 2 percent of global supply and the North Pacific Fisheries Management Council has a 2 Million Metric Ton limit to the amount of fish harvested from Alaska's federal fisheries. The combined factors which limit volume show how marketing is vital to capture the maximum economic benefit from Alaska's fisheries.

Please don't hesitate to let me know should you have any further questions about the ASMI.

Sincerely,

Tyson Fick
Communications Director

Enclosures

cc Mike Cerne, Director ASMI

ASMI Legislative Response Worksheet - Feb2014

Avg. Monthly Employment in Seafood Processing - 2012

Month	Workers	
Jan	7,506	10198
Feb	9,589	10198
Mar	10,004	10198
Apr	8,882	10198
May	8,187	10198
Jun	13,589	10198
Jul	19,472	10198
Aug	16,779	10198
Sep	11,397	10198
Oct	7,653	10198
Nov	5,671	10198
Dec	3,648	10198
Month Avg.	10,198	

Source: DOLWD.

Avg. Monthly Empl

Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month Avg.

Source: DOLWD.

Residency in Alaska's Seafood Processing Industry - 2012

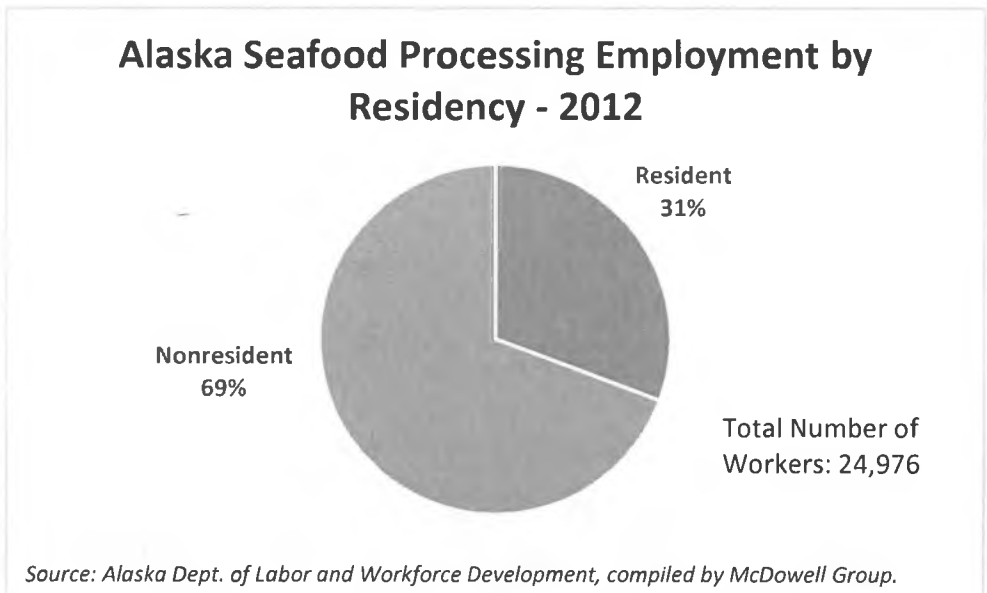
	Workers	Wages/Salaries ($Millions)
Resident	7,668	137.6
Nonresident	17,308	227.4
Total	24,976	365.0

Source: DOLWD.

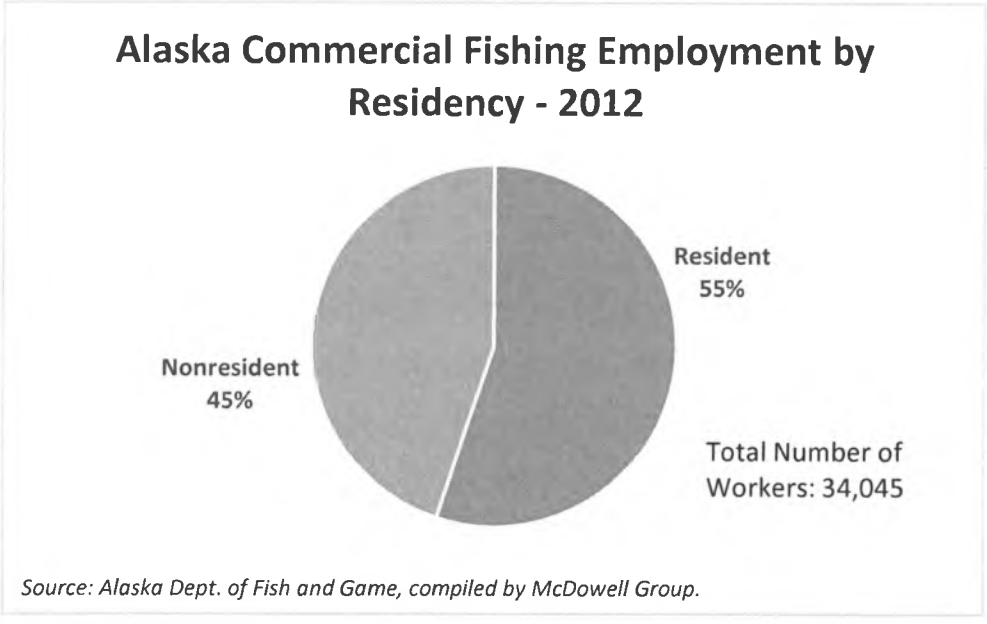
Residency in Alaska

Resident
Nonresident
Total

Note: Gross earning
gross earnings for 2
Source: ADFG and C



Source: Alaska Dept. of Labor and Workforce Development, compiled by McDowell Group.

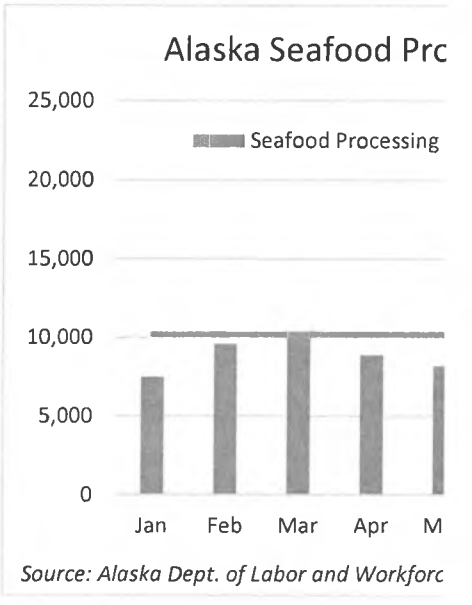


Source: Alaska Dept. of Fish and Game, compiled by McDowell Group.

Notes about Seafood Processing Data: residency is based on PFD applications for the 2012 and information can be found at http://labor.alaska.gov/research/seafood/seafood.htm
Notes about Commercial Fishing Data: Monthly average worker counts have been estimated b only count fishermen in months when they made a landing, as a result pre/post/offseason wor tends to understate commercial fishing employment (in terms of monthly average employment comparison to other industries because many fishermen only fish for a few months during the fishing employment estimates compiled by McDowell Group in their "Economic Value of the Al monthly employment was calculated by dividing estimated profit by the average earnings for a employment of 16,500 in 2011. This figure is more comparable to industries where workers ten more difficult to compile and has not been calculated for other years (besides 2011).

oyment in Commercial Fishing - 2012

Workers	
2,923	8,189
3,409	8,189
4,609	8,189
5,402	8,189
6,163	8,189
19,237	8,189
24,761	8,189
16,191	8,189
6,988	8,189
5,453	8,189
2,274	8,189
853	8,189
8,189	



Source: Alaska Dept. of Labor and Workforc

's Commercial Fishing Industry - 2012

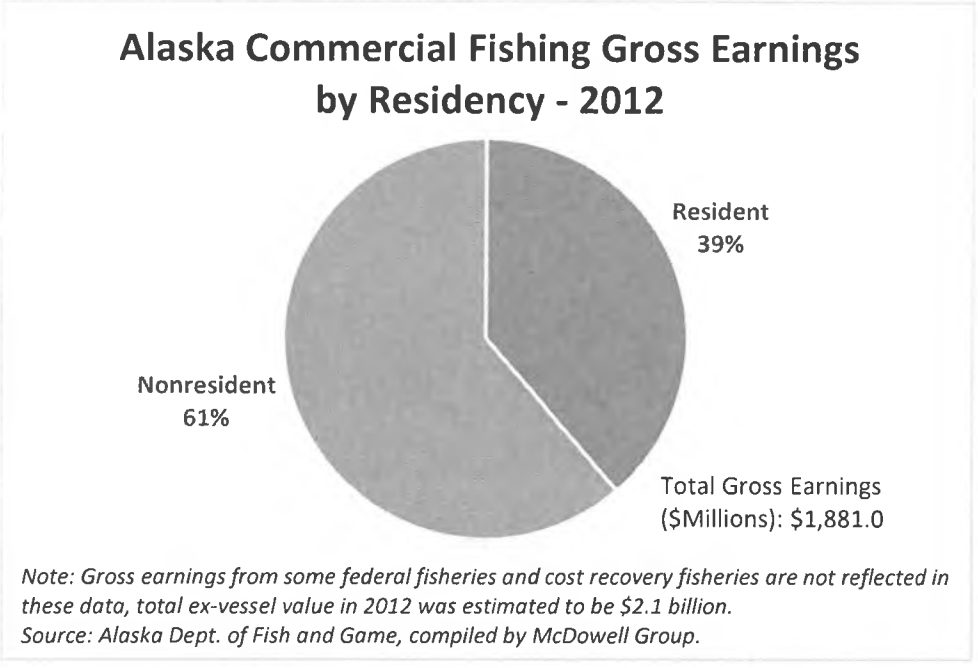
Active Permit Holders	Crew	Total	Gross Earnings ($Millions)
7,162	11,598	18,760	728.0
2,793	12,492	15,285	1,152.9
9,955	24,090	34,045	1,881.0

ıs may not include some harvest caught in federal fisheries or cost recovery harvests, total '012 were $2.1 billion.

:FEC.



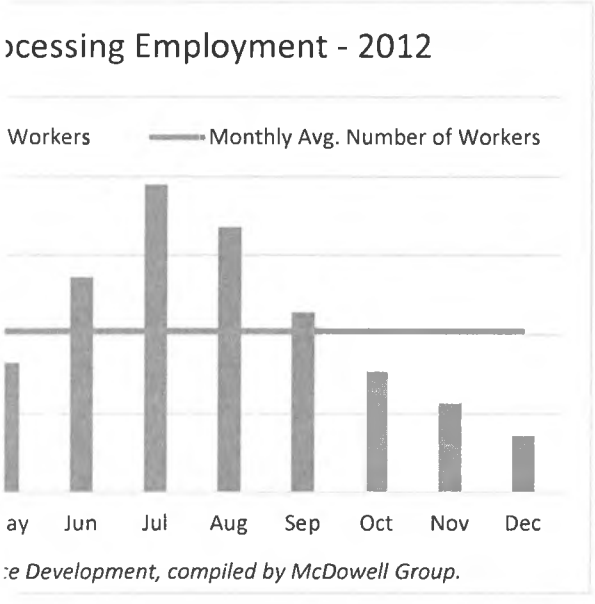
Source: Alaska Dept. of Labor and Workforce Development, compiled by McDowell Group.

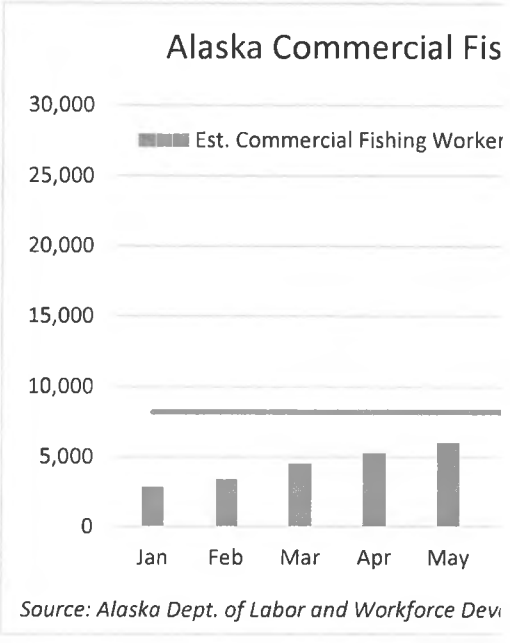


Note: Gross earnings from some federal fisheries and cost recovery fisheries are not reflected in these data, total ex-vessel value in 2012 was estimated to be $2.1 billion.
Source: Alaska Dept. of Fish and Game, compiled by McDowell Group.

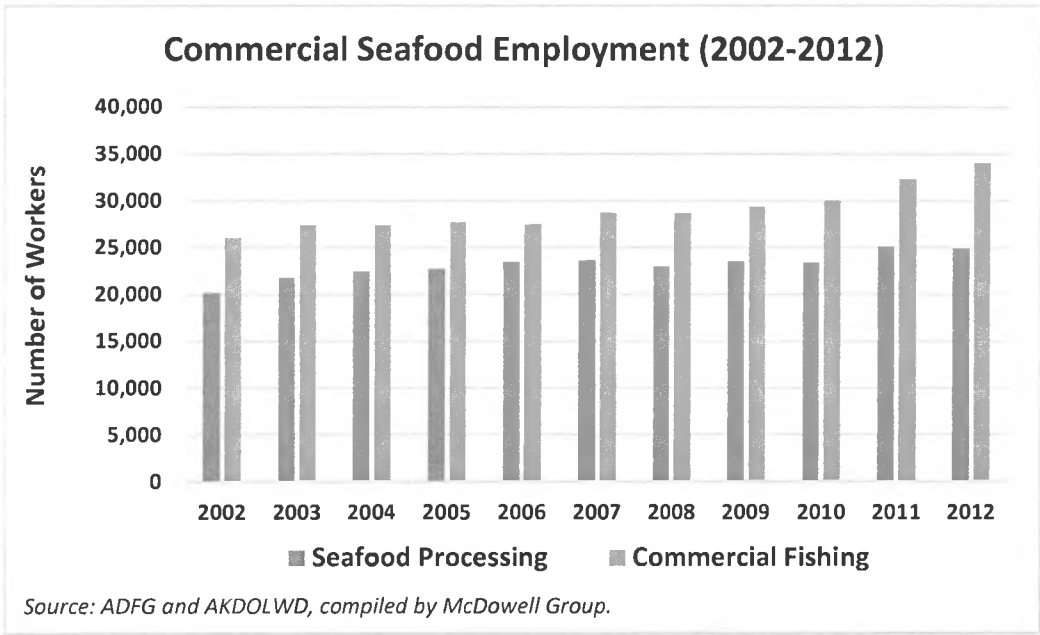
2013 calender years. Earnings do not include profits made from the sale of product. More

y DOLWD based on fish tickets and other landing records. These employment estimates
k is not reflected in these data. Using this approach for commercial fishing employment
:). However, counting the total number of workers may be somewhat misleading in
ıear, using the industry as a way to supplement income from other jobs. Commercial
ıska Seafood Industry" report took a different approach. In the MG report, the equivalent
ll Alaska industries based on BEA/IMPLAN data. This approach yielded an equivalent
ıd to work full-time for an entire calendar year. However, the MG approach is considerably

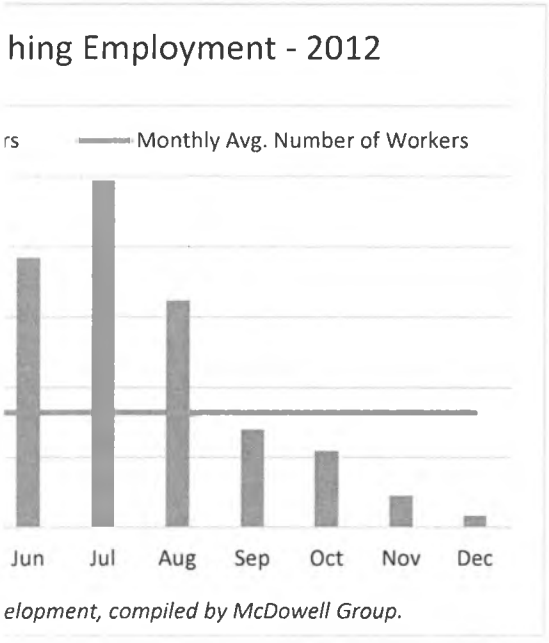




Historical Commercial Seafood Employment				
SP	2001	2002	2003	2004
Resident	7,764	6,815	7,576	7,560
Nonresident	14,807	13,347	14,257	14,939
Total	22,571	20,162	21,833	22,499
Wages/Salaries ($M)	226.0995	214.2799	247.9381	256.3787
Pct. NR	0.656	0.662	0.653	0.664
Pct. NR$	0.568	0.587	0.614	0.623
CF	2001	2002	2003	2004
Resident	17,632	16,188	17,048	16,655
Nonresident	N/A	9,871	10,395	10,782
Total	N/A	26,059	27,443	27,437
Commercial Seafood Total Workers		46,221	49,276	49,936



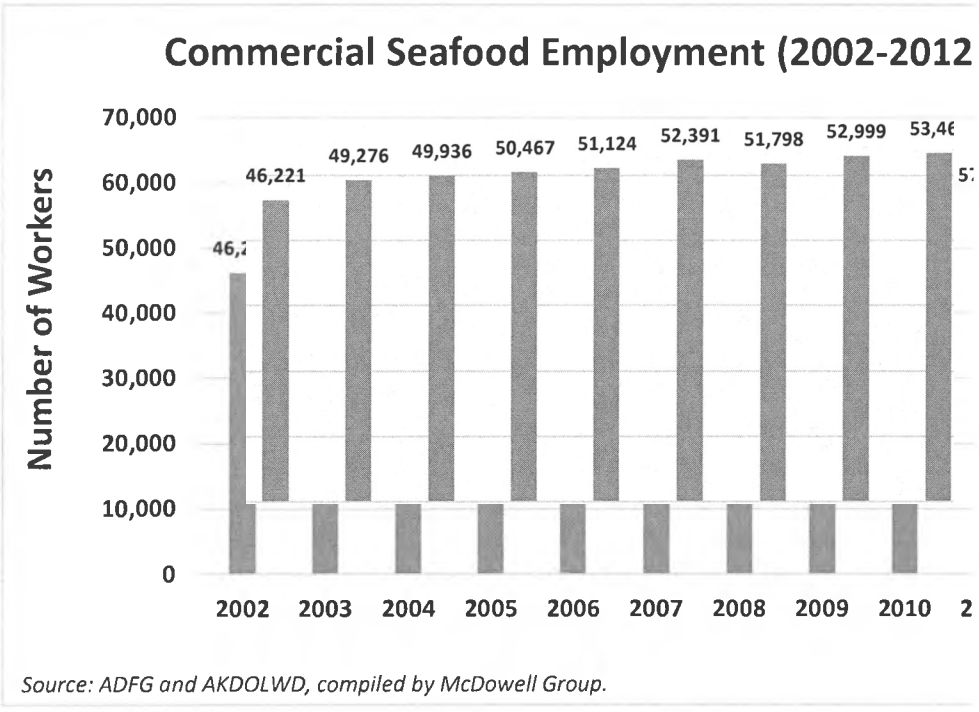
Source: ADFG and AKDOLWD, compiled by McDowell Group.



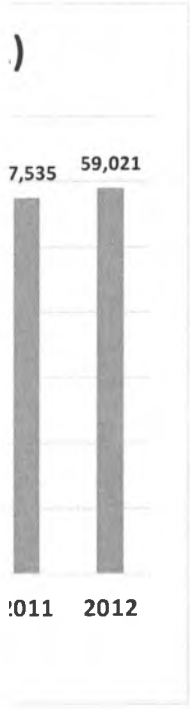
elopment, compiled by McDowell Group.

2005	2006	2007	2008	2009	2010	2011	2012	2013
7,477	6,762	7,074	7,055	6,880	6,912	6,830	7,668	
15,248	16,800	16,586	16,002	16,683	16,520	18,282	17,308	
22,725	23,562	23,660	23,057	23,563	23,432	25,112	24,976	
279.2332	292.344	306.7756	295.4883	288.4665	313.5537	349.5679	365.0211	
0.671	0.713	0.701	0.694	0.708	0.705	0.728	0.693	
0.635	0.658	0.642	0.614	0.601	0.628	0.634	0.623	

2005	2006	2007	2008	2009	2010	2011	2012	2013
17,047	16,866	17,199	17,102	16,798	17,371	18,287	18,760	
10,695	10,696	11,532	11,639	12,638	12,666	14,136	15,285	
27,742	27,562	28,731	28,741	29,436	30,037	32,423	34,045	
50,467	51,124	52,391	51,798	52,999	53,469	57,535	59,021	



Source: ADFG and AKDOLWD, compiled by McDowell Group.


)
7,535
59,021
:011
2012

02/18/14 Presentation: University of Alaska

<TARGET><BILL></BILL><SUBJECT>02-18-14 Presentation University of Alaska</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 18, 2014

1. **Call to Order**

~Gavel~ Welcome members of the Economic Development, Trade and Tourism Committee.

2. **Roll Call**

- For the record, in attendance are: (representative xx, representative xx,… and representative xx)
- I would like to introduce Debbie Tillinghast, the committee recording secretary
- Info services person
- Ginger Blaisdell, committee aide for EDT

3. **AGENDA**

Dr. Helena Wisniewski, UAA Vice Provost for Research and Graduate Studies
"Innovation Clusters and Economic Growth"

Dr. Dan White, UAF Associate Vice Chancellor for Research
"Commercializing UAF Innovation, a Win-Win for Alaska"

Before we adjourn:

- Thursday, we'll wrap up our Arctic conversations by hearing from John Higginbotham from Ottowa CA and from the Marine Exchange of Alaska; both focusing on the new northern routes and the Arctic.

Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, February 17, 2014 2:59 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 18, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

I do not anticipate any offnet callers

Other Information:



Technology Transfer Is Part of UAF's Educational Mission

Knowledge

- Publish data and research
- Educate students and the public

Technology

- Transfer of intellectual property to developers is technology commercialization

Transforming Research into Technology



- Innovate
- Protect IP
- License IP
- Build startups

UAF Structure for Commercializing Technology



Researchers innovate

OIPC protects IP

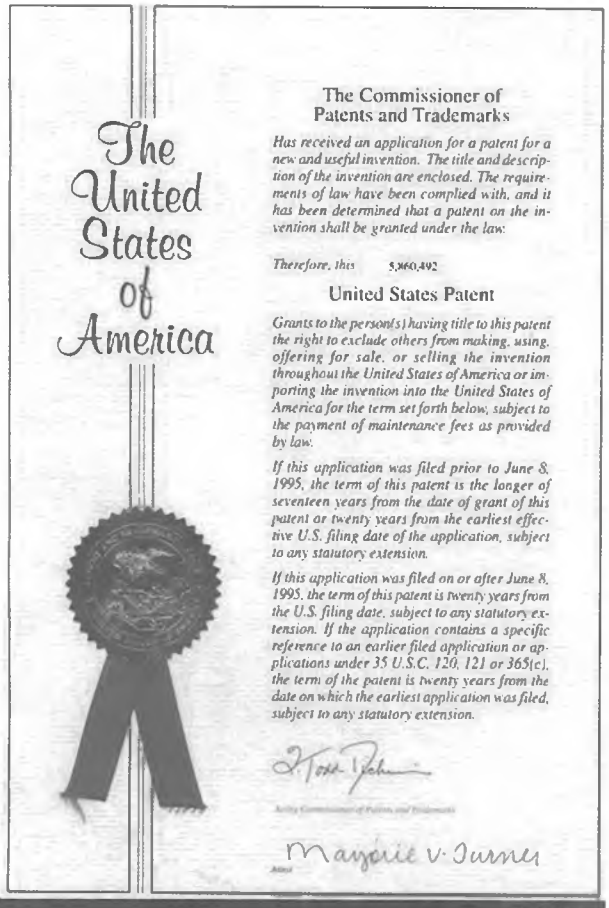
NIC licenses IP
(Separate 501c3)

NTV builds startups
(Separate C-Corp)

OIPC

The role of the Office of Intellectual Property and Commercialization (OIPC) is to:

- engage inventors,
- perform initial due diligence, and
- protect intellectual property


The United States of America

The Commissioner of Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this 5,960,492

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

UAF UNIVERSITY OF ALASKA FAIRBANKS

since 1917

OIPC Engagement at UAF



OIPC Engagement at UAF







UNIVERSITY OF ALASKA FAIRBANKS

OIPC Community Engagement

The Fairbanks Regional Economic Partnership gathers legislators, UAF inventors, and UAF staff to discuss how the University can engage on economic issues.

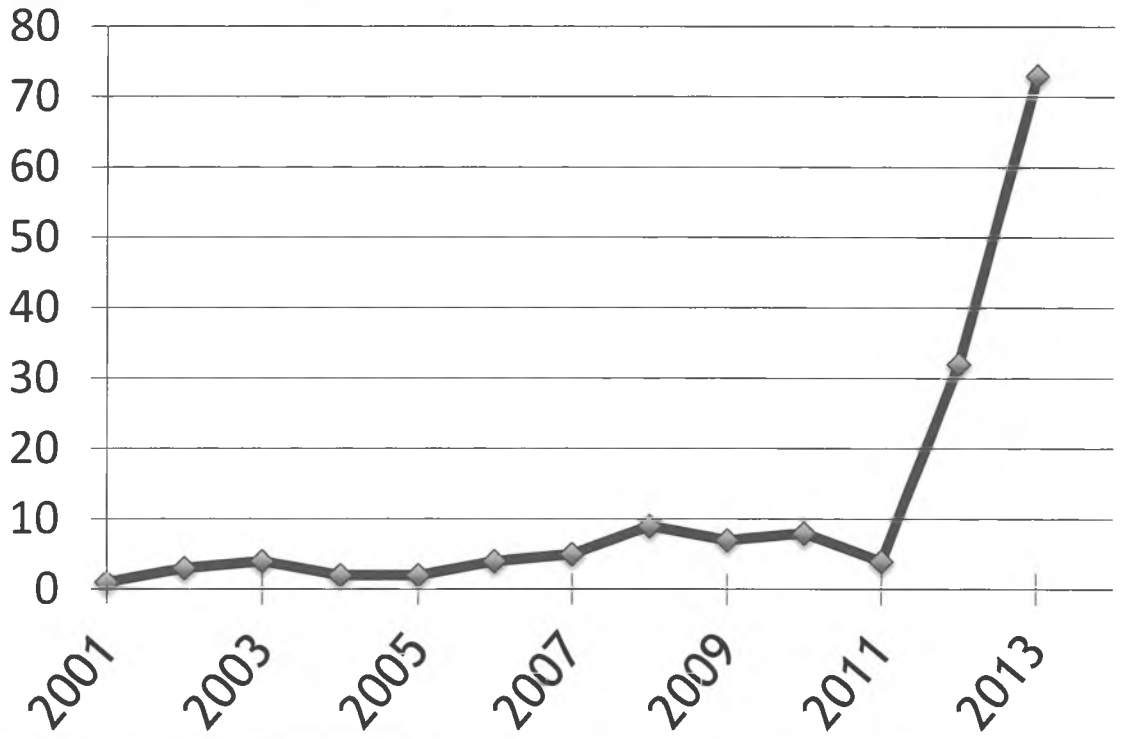


UNIVERSITY OF ALASKA FAIRBANKS

since 1917

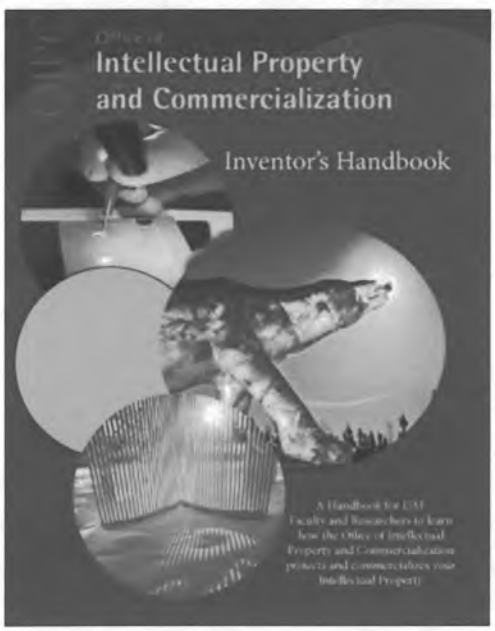
OIPC

Disclosures by Fiscal Year



OIPC

Inventor Support



- Review grant contracts and MTAs for IP
  - 69 in 2013
- Execute non-disclosure agreements
  - > 55 in 2013
- File patents
  - 7 last calendar year
- Assign non-commercialized inventions back to inventors
  - 25 last year
- Develop conflict of interest plans for inventors creating startups

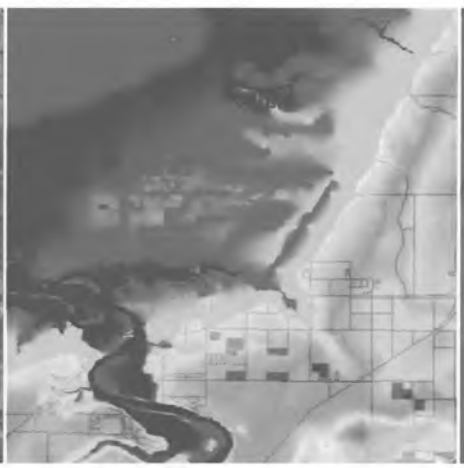
OIPC Upcoming Technologies

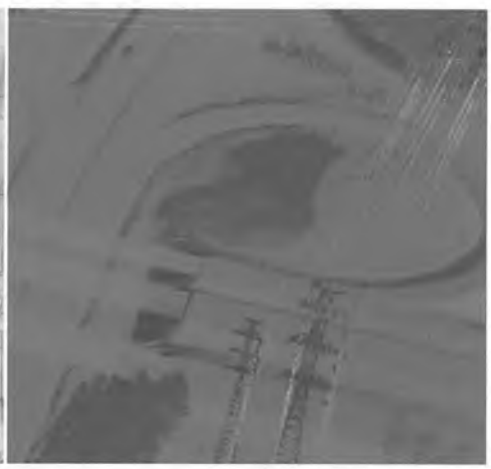
- Pharmaceutical formulation for therapeutic hypothermia
  - prevent ischemic brain injury
- DNA Sampling Method for Pathogen Diagnostics
  - Use one test instead of dozens
- The patented state filter
  - cleans digital signals and resolves the cocktail party effect



Decision support tools for private sector and government use

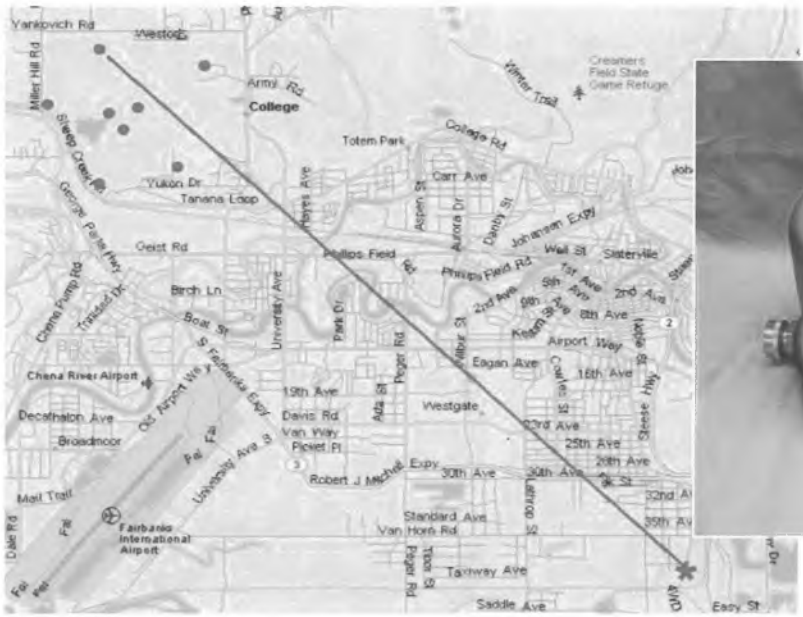






OIPC

Sensors & Software



UAF Structure for Commercializing Technology

UNIVERSITY OF ALASKA FAIRBANKS

OIPC

Researchers innovate

OIPC protects IP

NIC

NIC licenses IP
(Separate 501c3)

NTV

NTV builds startups
(Separate C-Corp)

NIC

Nanook Innovation Corporation Board Members



Dan White
President
Associate Vice Chancellor for Research, OIPC Director, and INE Director



Lorna Shaw
Vice-President
External Affairs Manager for Sumitomo Metal Mining Pogo, LLC



John Zarling
Treasurer
UAF Engineering Faculty, Retired



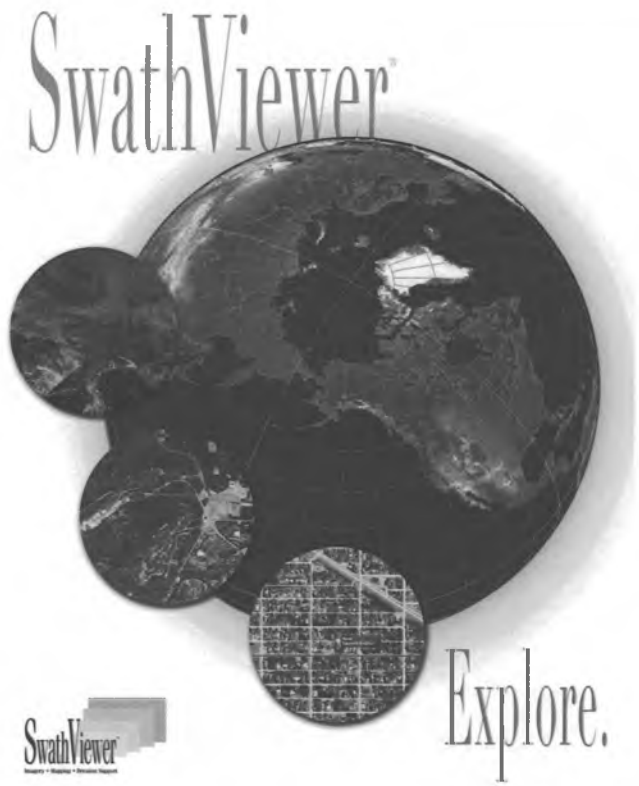
Mike Powers
Secretary
UA Board of Regents Secretary, CEO, Fairbanks Memorial Hospital and Denali Center



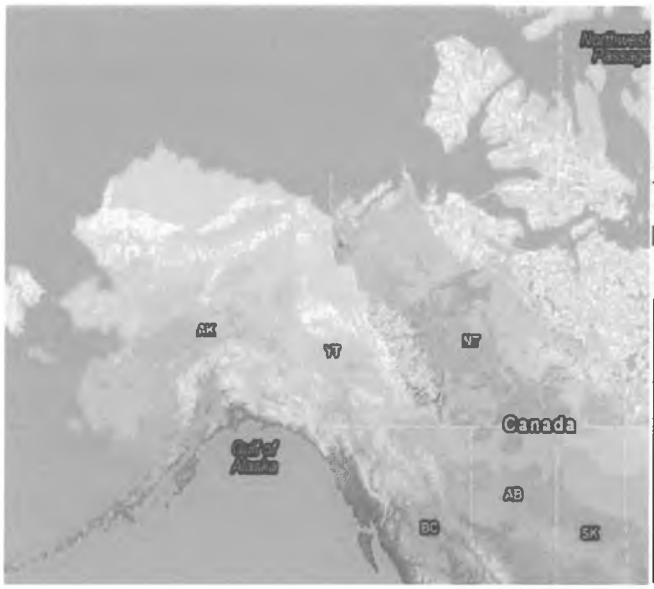
John Burns
Board Member
Former Alaska Attorney General, Owner, Burns & Associates, PC

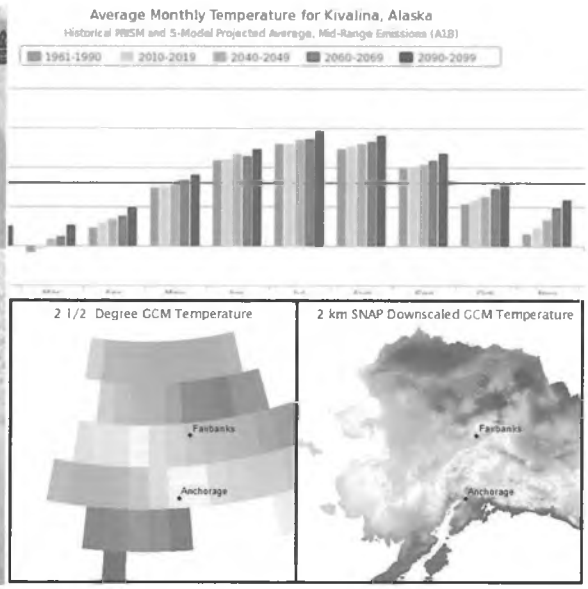
NIC

- Patents and software licensed
- Licensing can expand existing businesses



UAF UNIVERSITY OF ALASKA FAIRBANKS since 1917





NIC licenses proprietary data

First license was to

URS for monthly precipitation and temperature data

NIC

Economic Development for Fish Processing

After years of development and no private sector licensee, the pinbone removal technology has been licensed to Freeman Bell Machine Shop in Juneau and several prototypes have been transferred to end users.





- Promoting opportunities to reduce cost at the university via "intra-preneurship"



- Licensing this technology

NIC

Transferring Technology

Recent Assignments into NIC

- Timesheet tracking software
- Signal Processing Software
- Change Detection and Appraisal Software
- Aerosol dispersion tool
- State Filter, Tracker, Localization
- Volcanic ash tracking patent

UAF Structure for Commercializing Technology

UNIVERSITY OF ALASKA FAIRBANKS

OIPC

Researchers innovate

OIPC protects IP

NIC

NIC licenses IP
(Separate 501c3)

NTV

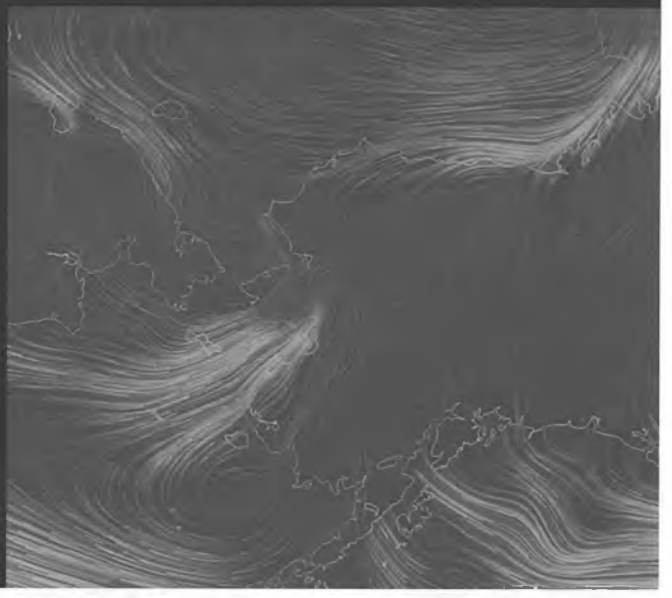
NTV builds startups
(Separate C-Corp)

UNIVERSITY OF ALASKA FAIRBANKS since 1917

NTV

Accelerating Startups in the Far North

Nanook Tech Ventures (NTV) is the nation's northernmost startup accelerator program.



www.nanooktechventures.com

UNIVERSITY OF ALASKA FAIRBANKS since 1917

Nanook Tech Ventures Board Members



Scott Bell
President
UAF Director of Facilities Services



Adam Krynicki
Vice-President
OIPC Business Development Director



Randy Weaver
Secretary
CFO Denali State Bank



Michelle Rizk
Treasurer
UA Associate VP of Budget



Doug Johnson
Board Member
Executive VP of Professional Growth Systems



Bill S. Pierre
Board Member
Private Investor



Gloria O'Neill
Board Member
UA Board of Regents Member, President & CEO of Cook Inlet Tribal Council

UNIVERSITY OF ALASKA FAIRBANKS *since 1917*





First startup for NTV
www.vadapt.net

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NTV takes inventors from a research concept...

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Fairbanks
HACKATHON





...to a prototype...

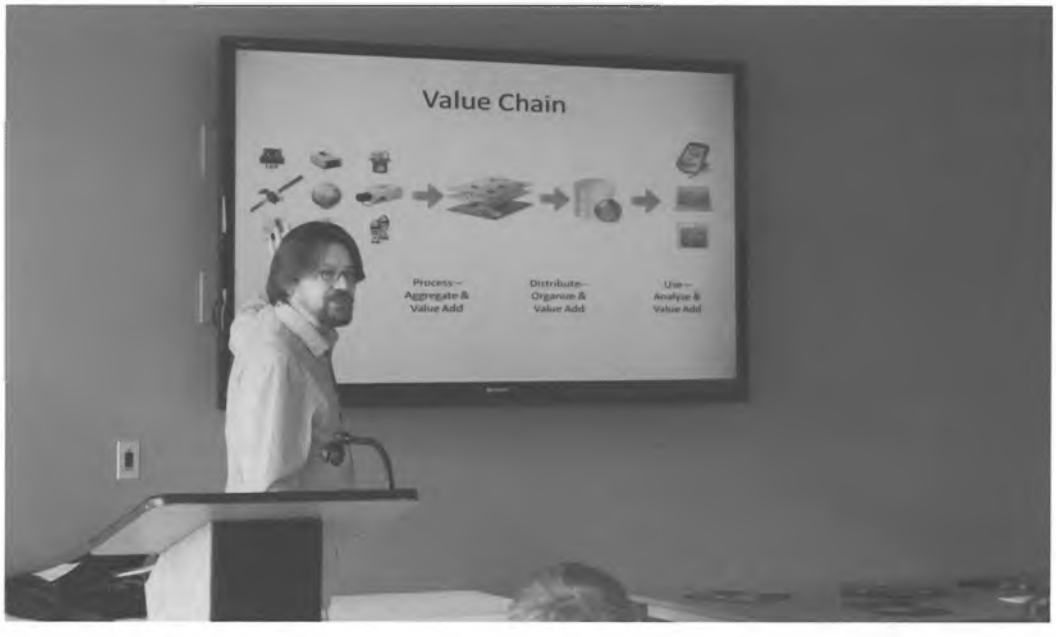
UAF UNIVERSITY OF ALASKA FAIRBANKS



...to starting an Alaskan business based on their research and inventions.

ARTIC

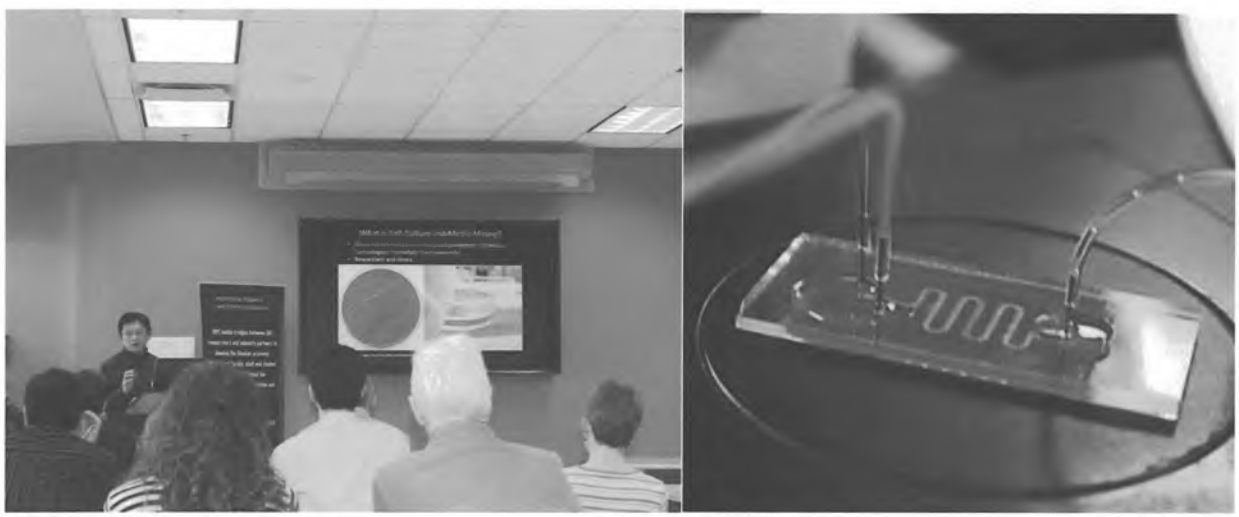
MOBILE MAPPING



There are several companies in the innovation pipeline. Several are launching startups to build new technology under SBIR and STTR grants right here in Alaska.



Faculty have moved to Fairbanks due to the unique start up opportunities provided by OIPC/NIC/NTV.



One inventor and faculty member is partnering with ArcticBio, an Alaskan startup, to build and test a new cell sampling method.

Investment and Fund Management

wbtangels

UAF UNIVERSITY OF ALASKA FAIRBANKS since 1917

Summary of Success

- UAF OIPC
  - over 130 invention disclosures in the past 2.5 years
- NIC
  - Licensed more than 37 pieces of technology
  - 36 of which are to companies doing business in Alaska
- NTV
  - Created two startups that are licensing technology
  - Four upcoming startups working on technology under SBIR or STTR grants

UAF UNIVERSITY OF ALASKA FAIRBANKS since 1917

Transforming Culture

OIPC/NIC/NTV provides new opportunities for:

- **Inventors** to commercialize their technology
- **Existing companies** to license and sell new technology
- **Inventors**, students, alumni, or other business people build small businesses
- **Investors** to fund startups here in Alaska
- **Inventors** to utilize new monetary sources to develop even more inventions in Alaska
  - SBIRS, STTRS, GOALI, I-CORPS, Seed money

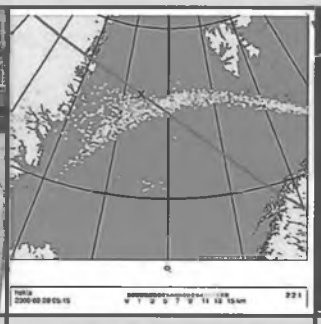
Economic Impact

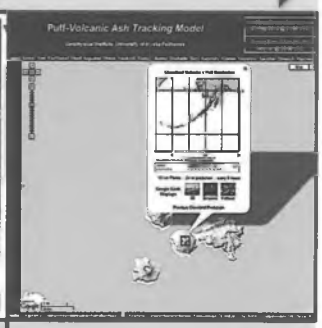
- Companies get access to better technology
  - Their businesses become more efficient
- Consumers get better, low cost products
- The best talent moves to/stays in Alaska
- Keep money in our state
  - Alaskan investors can invest in Alaskan businesses
- Create high-tech, competitive jobs in Alaska
  - Eight have stepped into private business with conflict plans

We are Alaska's Innovation Pipeline









Solve real problems	Protect intellectual property	License technology	Create startups

UAF UNIVERSITY OF ALASKA FAIRBANKS

OIPC NIC NTV

UAF UNIVERSITY OF ALASKA FAIRBANKS *since 1917*

UAF UNIVERSITY OF ALASKA FAIRBANKS

THANK YOU

Office of Intellectual Property and Commercialization
P.O. Box 757265
Fairbanks, AK 99775-7265
907-474-2605

www.uaf.edu/oipc



UAA Research and the Graduate School
UNIVERSITY of ALASKA ANCHORAGE

Dr. Helena S. Wisniewski
Vice Provost for Research and Graduate Studies
Professor, College of Business and Public Policy
President of Seawolf Holdings, L.L.C.
T 907.786.4833 • F 907.786.1791
hswisniewski@uaa.alaska.edu
www.uaa.alaska.edu/research

Physical Address
Diplomacy Building, Suite 101P
4500 Diplomacy Dr

Mailing Address
3211 Providence Drive
Anchorage, AK 99508-4614

CFT SOLUTIONS

Product Description

CFT Solutions provides an innovative and cost-effective approach to revolutionizing snow removal and deicing using carbon fiber tapes. Efficient heating by the carbon fiber tapes embedded under pavement keeps the surface free of snow and ice.

Advantages of CFT

- **Easy installation at lower costs** than other systems. Complete installation costs $12 per square foot (40% the cost of a hydronic system).
- **Significantly less expensive** (50% less) to operate than other systems (only $0.02/ft2/day during the heaviest snow fall winter in Anchorage based an area of 800 ft2).
- **Self-monitoring, and remotely managed** - sensors below the pavement control the on/off power supply circuit of the CFT heating panels based on the surface temperature or ice detection.
- **Environmental friendly** – can be powered by renewable energy sources.
- **Durable** – carbon fiber tapes have high strength and long-term stability.
- **Versatile** – easily customized.
- **Safe** – Operates with only 24V AC.
- **Alaska tested** – successfully tested in Anchorage during the winter of 2011-12, which had a record snowfall for the area.



Picture shows CFT keeping a walkway free of snow and ice.



Pictures show easy installation of the technology.

CFT Technology

(Patent Pending: Patent Filing #14/024,152)

CFT's patent-pending innovation embeds carbon fiber tapes under asphalt or concrete pavement to heat the surface. Carbon fiber materials including regular carbon fiber and carbon nanofibers exhibit excellent strength and electrical properties, offering great potential for deicing applications. Taking advantage of the strength and low electrical resistivity, a plain, woven 3"-wide carbon fiber tape is assembled into panels for anti-icing and preventing snow accumulation. Panel sizes usually range from 6'x4' to 10'x10'. An electrode is connected to the carbon fiber tape with electrically conductive epoxy. To increase the system safety, the heating panels are coated with a thin layer of thermally conductive, electrically isolative epoxy to insulate it from the concrete or asphalt surface. Transformers connected to the electrodes charge the heating panels with a low 24V AC for heat generation. The temperature of the heating panel does not exceed 30oC, and the surface temperature does not exceed 10oC. To provide for self-monitoring, sensors record the inside and surface temperature variations of the pavement.

Markets and Applications

CFT satisfies the need for environmentally friendly, durable, cost-effective, easy-to-install and maintain deicing technology for municipalities, departments of transportation, construction companies, private homes and corporations.

Applications include:

- High pedestrian traffic areas.
- High usage road intersections.
- Bridges.
- Driveways and walkways.
- Roofs.

About CFT Solutions

CFT Solutions, LLC is a Seawolf Holdings Company and was legally formed as an Alaskan company. CFT Solutions was created in May 2013 by UAA Vice Provost for Research and Graduate Studies Dr. Helena S. Wisniewski and inventor Zhaohui "Joey" Yang, a UAA civil engineering professor.

The idea for CFT Solutions began when Dr. Yang met Professor Gangbing Song from University of Houston. Dr. Song was experimenting with commercially available flexible carbon fiber to heat surfaces in his lab. Dr. Yang, knowing how dangerous a slick sidewalk was in winter, decided to test the material on walkways in the challenging Alaskan winter. With a grant from Alaska University Transportation Center, the idea that led to CFT Solutions was born.

- ***Business model:*** assemble customized systems for a particular use and sell directly to customers and through distributors. Provide panel sizes of 6'x4' to 10'x10'; sizes can be customized to meet customer needs.

The business infrastructure for the commercialization of faculty and student research resides in the Office of Research and Graduate Studies under the oversight of the Vice Provost. This infrastructure includes Seawolf Holdings and Seawolf Venture Fund, which provides seed money for start-ups and has a world class Board of Directors consisting of CEOs, venture firm partners and entrepreneurs. Seawolf Venture Fund provides early stage investment in start-ups and is managed by a seasoned team of investment professionals.

Management Team

To achieve its mission, CFT Solutions is assembling a team of experienced senior executives, leaders in technology industries, and entrepreneurs.

Dr. Joey Yang is the co-founder of CFT Solutions, LLC, and the technology inventor. Dr. Yang joined UAA as an Assistant Professor in May 2003. He is currently Professor of Civil Engineering, Associate Director of Alaska University Transportation Center, and Director for Geotechnical and Frozen Ground Engineering Research Laboratory. Dr. Yang's expertise is in geotechnical and earthquake engineering, and he has maintained an active research program with particular interests in cold regions-related issues since he joined UAA in 2003. He has published more than 50 peer-reviewed papers, including 20 journal articles. Dr. Yang has received research funding in geotechnical/earthquake engineering and cold regions-related research from NSF EPSCoR, U.S. Geological Survey, U.S. Dept. of Interior, U.S. Dept of Transportation via Alaska University Transportation Center, U.S. Dept. of Energy through Alaska Energy Authority, and State of Alaska Department of Transportation. He received his Ph.D. in Civil and Environmental Engineering from the University of California, Davis and his B.S. in Hydraulic Engineering from Chengdu University of Science and Technology.

Dr. Helena S. Wisniewski is the Vice Provost for University Research and Graduate Studies at the University of Alaska Anchorage. She is also President of Seawolf Holdings, LLC a wholly owned subsidiary of UAA that is part of the commercialization infrastructure she created, which includes Seawolf Venture Fund. She is an accomplished senior executive with a breadth of experience in public and private companies, academia, and the federal government, and a technological entrepreneur who has successfully launched ten start-up companies, raised investment, and sold three. She served as Vice President for University Research at Stevens Institute of Technology prior to UAA. Prior to Stevens, she was CEO/ Chairman of Aurora Biometrics, a company that she founded, built the business, and sold. She served as Vice President of the Titan Corporation; a senior executive at the Lockheed Corporation; founded the first mathematics program at Defense Advanced Research Projects Agency (DARPA), and previously served at the CIA. She served on public and private boards of directors, including Greatbatch Inc., (GB:NYSE) and its Audit and Technology Committees, and in 2007, the Secretary of the Navy appointed her to the Naval Research Advisory Committee. Dr. Wisniewski currently serves on the Life Sciences Advisory Board of Landmark Ventures. She earned a PhD in mathematics from the Graduate Center of CUNY and has received awards for outstanding leadership, entrepreneurship, and significant scientific contributions including the 2002 Women in Technology Leadership Award.

Investment Strategy: Initial investment Seawolf Venture Fund; seeking additional $500K.
For additional information contact: Dr. Wisniewski – hswisniewski@uaa.alaska.edu or Dr. Yang - zyang2@uaa.alaska.edu.

ZENSOR™

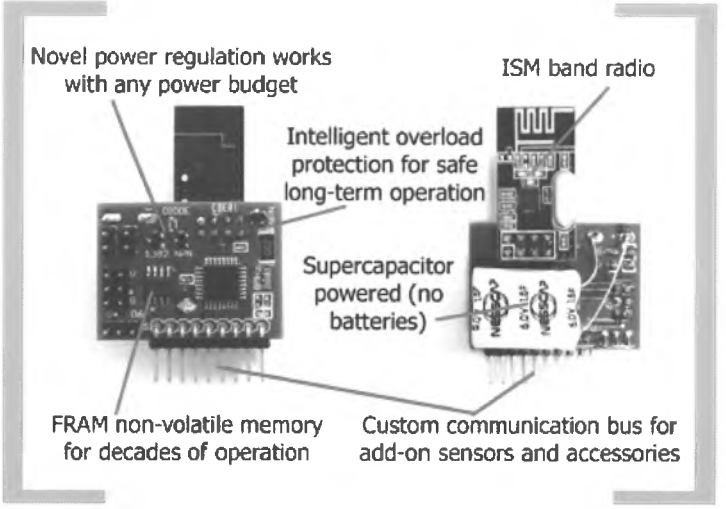
Product Description

Zensor™, LLC created a new generation of wireless sensors yielding an order of magnitude improvement for use in remote monitoring, asset management, surveillance and security. The Zensor™ ultra long lifespan wireless sensor and its distributed network require no external source of power with performance options that are nearly unlimited.

Advantages of the Zensor™ sensor over other sensors presently on the market include: no batteries, in contrast to short life batteries of other sensors; collection of wide ranging data on a distributed network at a very low cost - as much as one-thirtieth the price of other sensors; and multiple capabilities, in contrast to limited capabilities of others sensors.

Capabilities

- **No batteries** required—solar energy coupled with a new ultra-capacitor.
- Effective with a **small power source.**
- **Long lasting:** 50+year lifespan.
- **Distributed Wireless Networked** system for data receipt, transmission and storage.
- **Requires just one sensor to interrogate** information about every device in the network. Each sensor collects data from all other sensors.
- **Maintenance free.**
- **Low Cost**—Less than $40 per sensor – sold in kits of 25 for under $1,000.
- **Current sensors collect and transmit data on:** humidity, light intensity, temperature, color, sound, thermal images, vibrations, and the tilt of a stationary object. Additional capabilities can be added, including GPS and gas sensing (CO_2, CO, O_2, CH_4, C_3H_8).
- Currently **testing in arctic** to ensure reliability even under extreme environmental conditions.



Technology

(Patent Pending #61/645,356)

The sensors have a 50- to 100-meter range and collect 200,000 data packets a day. The invention consists of a sensor network node which incorporates non-volatile memory (FRAM) capable of a large number of rewrites and long data retention times, a wireless transceiver, a solar panel, a capacitive energy harvesting circuit, a controller, and an analog to digital converter.

About Zensor™

Zensor™, LLC , a Seawolf Holdings company, was formed in February 2013 by the Vice Provost for Research and Graduate Studies at UAA, Dr. Helena Wisniewski, with the faculty inventor, Dr. John Lund, Professor of Engineering. The Zensor™ *mission* is to provide long-lasting, low cost, maintenance-free sensors in a wireless distributed network with multiple performance options for remote monitoring, asset management, security and surveillance. *The idea came from* Dr. Lund's observation of remote monitoring needs for the maintenance and management of assets in the harsh arctic environment. The *business model* is to manufacture the sensors and sell them direct to customers and through distributors. Services will also be provided for customized applications.

UAA's Office of Research and Graduate Studies has an agile business infrastructure for commercialization of faculty and student research. This infrastructure includes Seawolf Holdings and Seawolf Venture Fund, which provides seed money for startups.

Markets and Applications

The global wireless sensor devices market is expected to increase at a 43.1% annual growth rate (CAGR) to reach an estimated $4.7 billion by 2016, according to market research firms such as BCC Research. The markets include: industrial installations, residential automation and energy management, ecology and agriculture, defense and surveillance. For example, usage in industrial control systems such as supervisory control and data acquisition (SCADA) shows these devices can effectively meet the needs of industrial applications – the largest growing market.

Zensor™ meets market needs.

- ***Industrial installations:*** early warnings and preventive data collection for roadway infrastructures and culverts (flooding, changes in surface levels); SCADA for pipelines, pumps transformers, remote monitoring of bridges, oil rigs and other structures; temperature monitoring in shipping and storage containers.
- ***Surveillance and security:*** border activity sensors placed along the border detect vibrations that indicate movement of persons, or digging of tunnels, or on the water, early warning of submarine and surface vessels.
- ***Climate Change and Ecology:*** ideal for remote sites over large expanses of difficult-to-reach geographic areas. For example, the sensors can be dropped from UAVs to cover the landscape and provide reports on environmental changes such as ice flow or melt, and climate monitoring, or used creatively to provide data collection from animal herds.

Management Team

To achieve its mission, Zensor™ is assembling a team of experienced senior executives, leaders in technology industries and entrepreneurs.

Dr. John Lund is the founder of Zensor™, LLC, and the technology inventor. He is a professor of Electrical Engineering at the University of Alaska Anchorage and received his PhD in Electrical Engineering from the University of Washington. Dr. Lund's research and development experience includes the development of a microfluidic malaria detection tool, a fully automated molecular traversal and analysis instrument for characterizing DNA molecules, and a method for measuring metallized molecules. Professor Lund specializes in nanoscale fabrication and characterization, including the development of nanoscale biosensors and break junctions. His current research efforts focus on developing novel sensors and sensor platforms to allow measurement and data collection where such systems were previously inaccessible. Professor Lund recently developed a patent pending instrumented mouthguard for high-speed data collection to characterize head impact events. He is also actively researching low-power sensor designs to provide additional utility for a long lifespan battery-free wireless sensor platform he developed.

Dr. Helena S. Wisniewski is Vice Provost for Research and Graduate Studies and Dean of the Graduate School at the University of Alaska Anchorage and President of Seawolf Holdings, LLC, a wholly owned subsidiary of UAA that is part of the commercialization infrastructure she created and includes Seawolf Venture Fund. Dr. Wisniewski is an accomplished senior executive with a breadth of experience in public and private companies, academia, and the federal government and a technological entrepreneur who has successfully launched ten startup companies, raised investments, and sold three. Prior to UAA, she served as Vice President for University Research at Stevens Institute of Technology. She served as CEO/ Chairman of Aurora Biometrics, a company that she founded, built the business, and sold. She held the positions of Vice President of the Titan Corporation; a senior executive at the Lockheed Corporation; founded the first mathematics program at Defense Advanced Research Projects Agency (DARPA); and served at the CIA. Dr. Wisniewski has served on public and private boards of companies, including Director of Greatbatch Inc., (NYSE:GB) and on its Audit and Technology Committees and the Life Sciences Advisory Board of Landmark Ventures. In 2007, the Secretary of the Navy appointed her to the Naval Research Advisory Committee. She received a PhD in mathematics from the Graduate Center of CUNY and is the recipient of awards for outstanding leadership, entrepreneurship, and significant scientific contributions including the 2002 Women in Technology Leadership Award.

Investment Strategy: Initial investment Seawolf Venture Fund; seeking additional $1M.
For additional information contact: Dr. Wisniewski – hswisniewski@uaa.alaska.edu or Dr. Lund – jalund@uaa.alaska.edu.

UAA's Smart Instrumented Mouthguard (SIM)

Patent Pending 61/747,411.

Product Summary

Traumatic Head Injuries are a foremost concern in athletes and the military. Research suggests that even blows that are not severe enough to cause unconsciousness can be harmful when their effects are cumulatively considered.

In response to these concerns, UAA engineers have created an innovative smart instrumented mouth-guard (SIM) with custom wireless capabilities to measure precisely and in real-time the motion of the skull from head impact in sports or accidents, and the effects of such impacts. This new generation of mouth-guard yields a significant improvement in accuracy for use in diagnosing and treating head injury.

The SIM Advantage

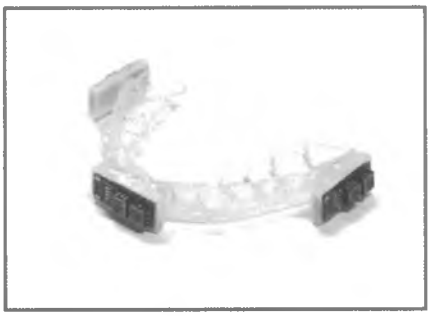
Real-time medical monitoring of sports players is now possible from the sideline, thus preventing re-injury from the failure to remove injured players from the field. SIM sensors fully identify the movement of the skull by collecting data in six dimensions, necessary to accurately measure linear and angular acceleration. Angular accelerations (changes in rotational velocity of the head) can have an enormous impact on the nature of brain injury, and are often the most significant component of impacts resulting in substantial trauma and/or loss of consciousness.

Its rugged construction also makes the smart mouthguard suitable for the military. Soldiers injured on the battlefield, by roadside bombs, or in other explosions will have the exact conditions of their head trauma available for medics and doctors in field hospitals.

SIMCapabilities

- Accurate measurement of skull motion resulting from an impact to determine brain injury.
- The SIM logs acceleration data and provides a detailed record before, during, and after the impact event.
- Impact events from the SIM are transmitted wirelessly in real time to a central server.
- Provides immediate determination of the severity of the impact.
- Additional logging and post-processing of data can be performed.
- Batteries, controller and wireless transmission electronics can be mounted on the mouthguard or be located on a helmet or other nearby fixture.
- Sensor responses capture sudden and jarring skull movements with appropriate detail for analysis.

Picture 1 that follows is of a pre-molded development prototype to illustrate the orthogonal pairs of high-speed accelerometers that capture spatially-separated linear accelerations which can be used to determine both the linear and angular movments of the head. Picture 2 was taken during lab testing at UAA using a soccer ball.



Picture 1



Picture 2

SIM Technology

In contrast to other products presently on the market, SIM provides:

- Accurate measurements due to a rigid attachment to the upper jaw, which is the ideal non-invasive mechanical connection to the skull. This is in contrast to earpieces and attachments to the lower jaw that are limited in ability to identify skull acceleration. In addition, sensors affixed to helmets provide almost no ability to indicate the motion of the skull/brain as the purpose of a helmet is to isolate the brain from the impact event.
- Six high-speed high-g accelerometers that capture linear and angular motion in all six axes. This allows the SIM to accurately measure all six orientations of linear and angular acceleration, which is necessary to fully identify the movement of the skull. Linear and angular accelerations sensors that are well below historical thresholds (75g) are still serious health concerns.
- A frequency response and measurement speed sufficient to capture all reasonable impact events. SIM angular accelerations provide sufficient detail in time which can be difficult to achieve with other existing micro-electromechanical devices. It should be noted that sensor responses and sampling less than 2 kHz are insufficient to capture sudden and jarring skull movements with appropriate detail for analysis.
- The ability to be incorporated into existing mouthguards for an additional cost of less than $500.00, or an entire mouthguard can be provided.

For additional information contact:
Dr. Helena S. Wisniewski
Vice Provost for Research
University of Alaska Anchorage
3211 Providence Dr, DPL 101P
Anchorage, AK 99508
E-mail: hswisniewski@uaa.alaska.edu. Office Phone: 907.786.4833

02/20/14 Presentations: Center of International Governance Innovation and Marine Exchange of Alaska

<TARGET><BILL></BILL><SUBJECT>02-20-14 Presentations Center of International Governance Innovation and Marine Exchange of Alaska</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 20 , 2014

1. **Call to Order**

~Gavel~ Welcome members of the Economic Development, Trade and Tourism Committee.

2. **Roll Call**

- For the record, in attendance are: (representative xx, … and representative xx)
- I would like to introduce Debbie Tillinghast, the committee recording secretary
- Info services person
- Ginger Blaisdell, committee aide for EDT

3. **AGENDA**

John Higginbotham, Head of Arctic Program at the Center of International Governance Innovation, Carleton University, Ottawa CA
"North America and the New Arctic"

Paul Fuhs and Ed Page, Marine Exchange of Alaska
"Alaska and the Future of the Northern Sea Route"

4. **Before we ADJOURN:**

- Tuesday, we'll hear a presentation from Director of Economic Development, Don Dyer and Mat-Su Borough Mayor Larry DeVilbiss ~ Statewide Link to Economic Certainty; The Point MacKenzie Enterprise Zone.
- (nothing scheduled for Thursday – no meeting/couple of absences)

Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, February 17, 2014 3:00 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 20, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

I do not anticipate any offnet callers

Other Information:

NORTH AMERICA AND THE NEW ARCTIC

By John Higginbotham

For the **Economic Development, Trade and Tourism Committee, Alaska State House of Representatives**

Ottawa-Juneau, February 20, 2014

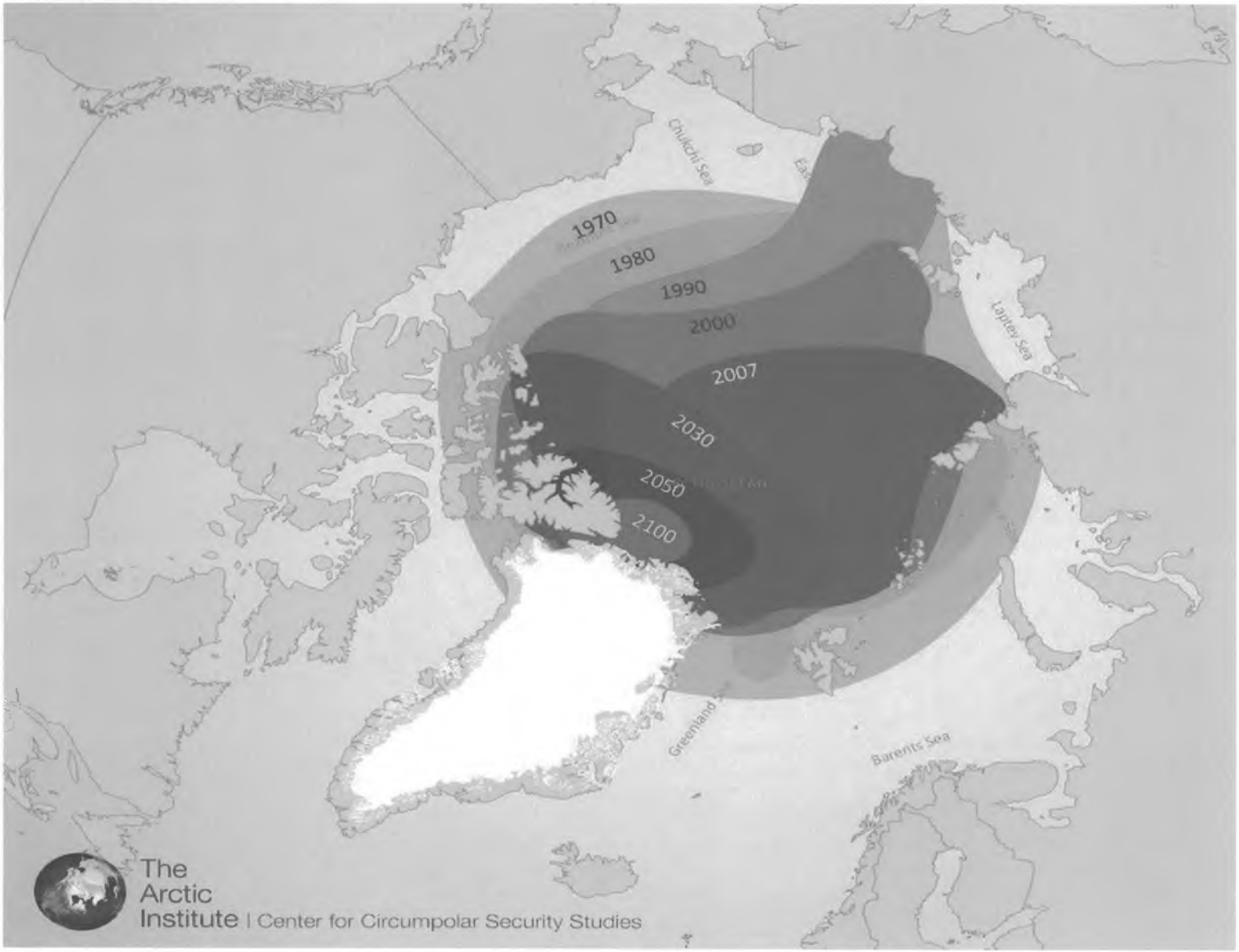


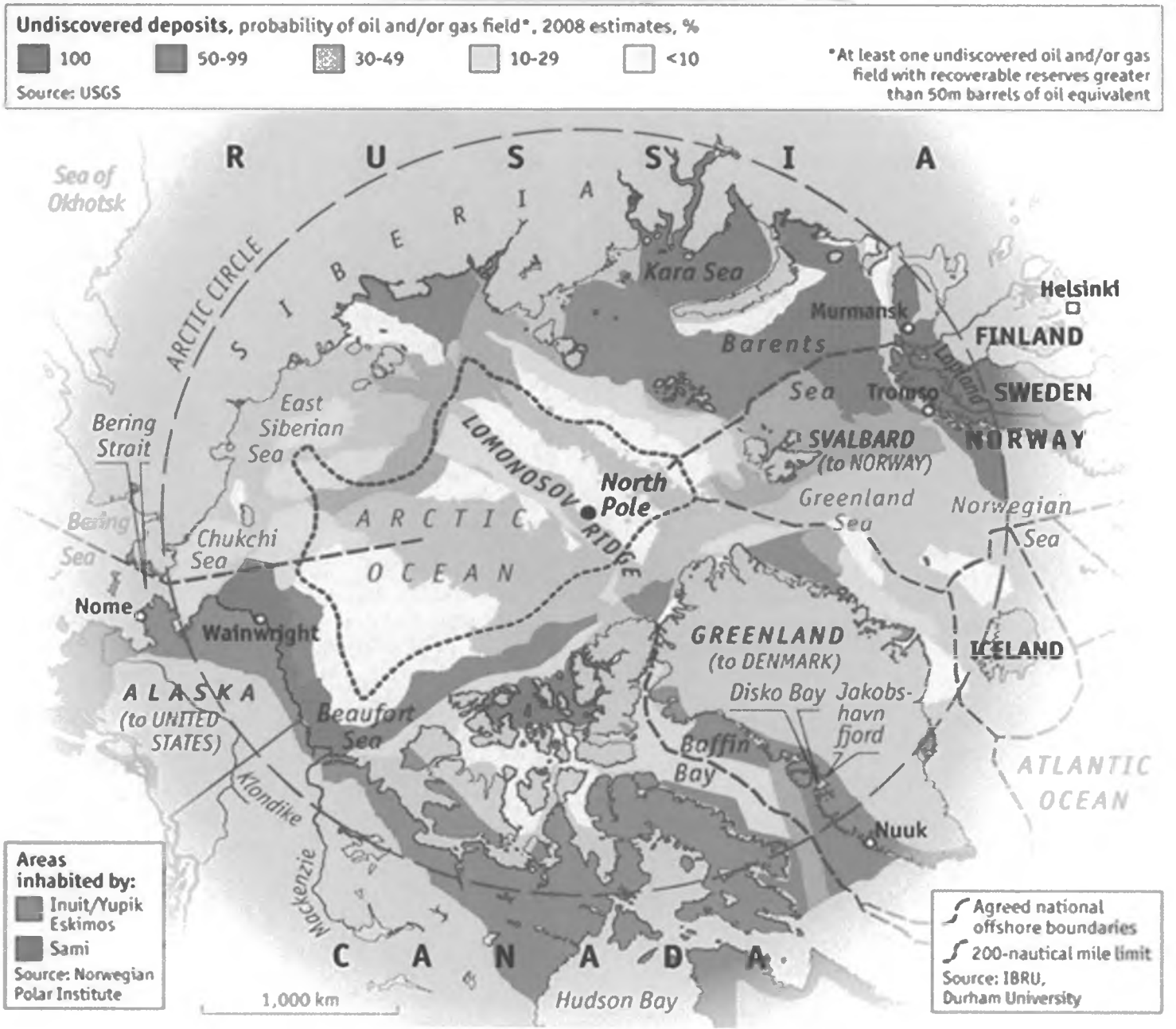
Carleton UNIVERSITY

Canada's Capital University

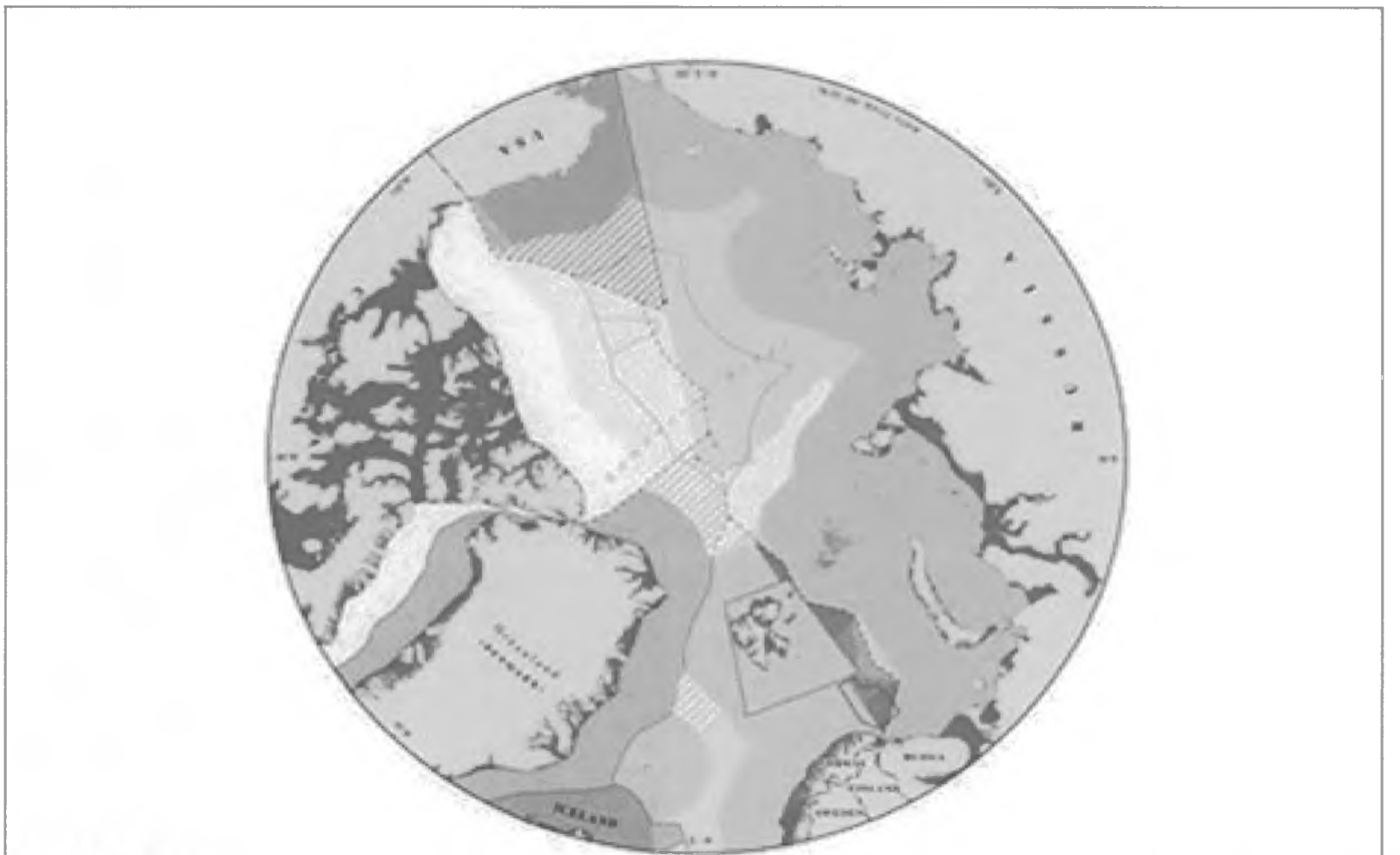


The Big Melt


Chukchi Sea
1970
1980
1990
2000
2007
2030
2050
2100
Laptev Sea
Greenland
Barents Sea
The Arctic Institute | Center for Circumpolar Security Studies


Undiscovered deposits, probability of oil and/or gas field*, 2008 estimates, %
100
50-99
30-49
10-29
<10
Source: USGS
*At least one undiscovered oil and/or gas field with recoverable reserves greater than 50m barrels of oil equivalent
RUSSIA
SIBERIA
Sea of Okhotsk
ARCTIC CIRCLE
Kara Sea
Barents Sea
Murmansk
Helsinki
FINLAND
SWEDEN
NORWAY
Lapland
Tromso
SVALBARD (to NORWAY)
Bering Strait
East Siberian Sea
LOMONOSOV RIDGE
North Pole
ARCTIC OCEAN
Greenland Sea
Norwegian Sea
Bering Sea
Chukchi Sea
Nome
Wainwright
GREENLAND (to DENMARK)
ICELAND
ALASKA (to UNITED STATES)
Beaufort Sea
Disko Bay
Jakobs-havn fjord
Baffin Bay
ATLANTIC OCEAN
Klondike
Mackenzie
Nuuk
CANADA
Hudson Bay
1,000 km
Areas inhabited by:
Inuit/Yupik Eskimos
Sami
Source: Norwegian Polar Institute
Agreed national offshore boundaries
200-nautical mile limit
Source: IBRU, Durham University

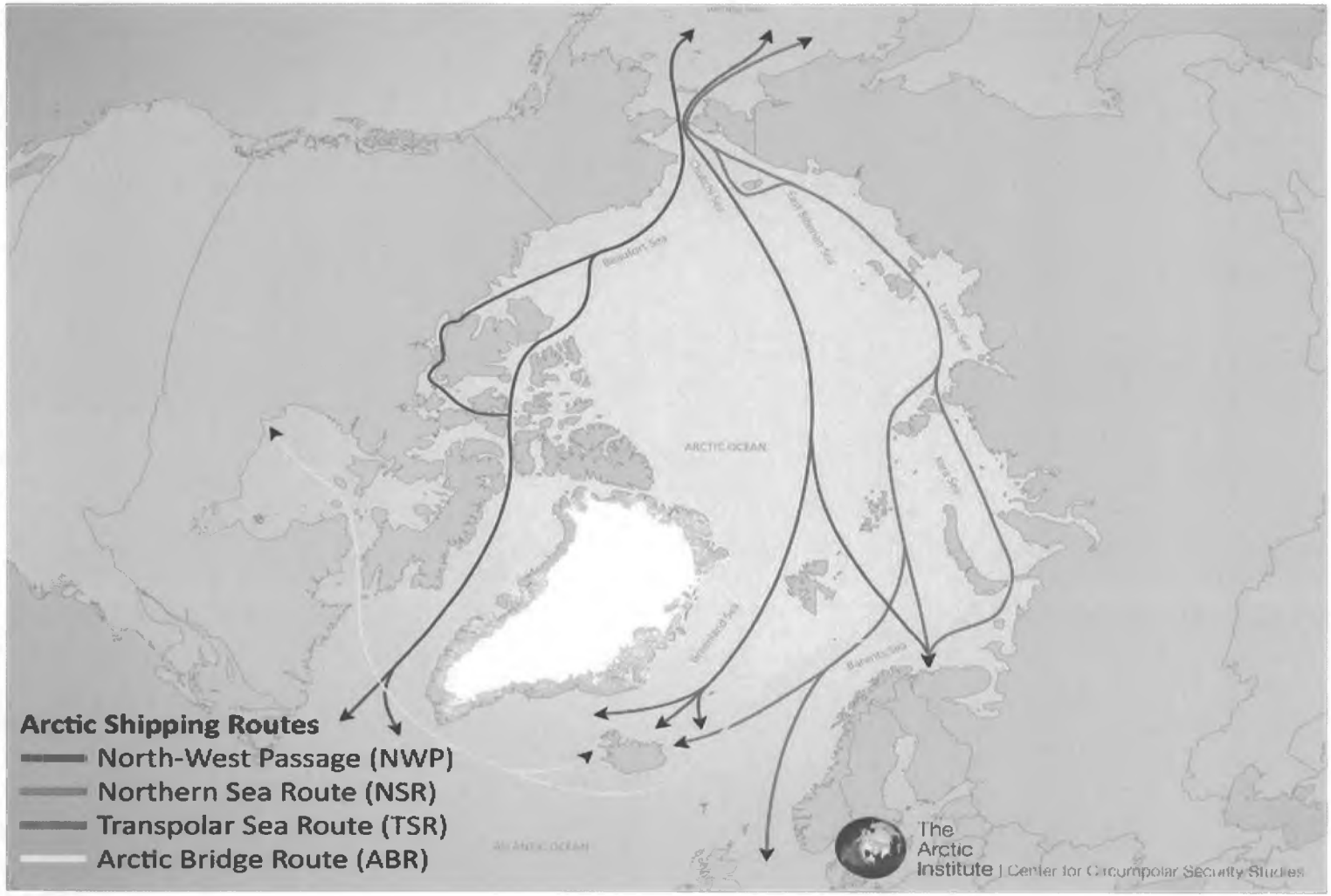
Arctic Boundaries Claims



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Canada's Capital University

CIGI

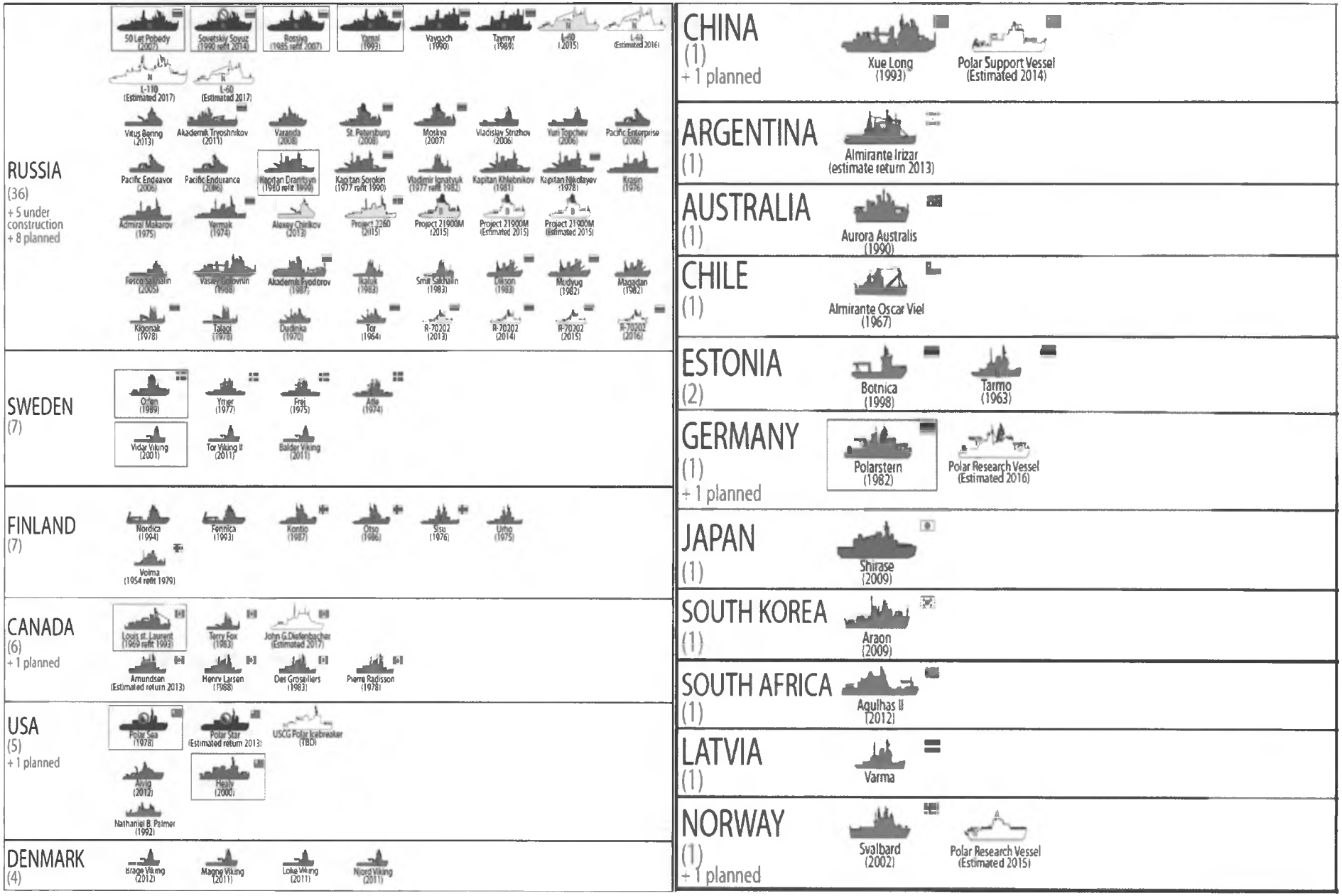
Arctic Shipping Routes



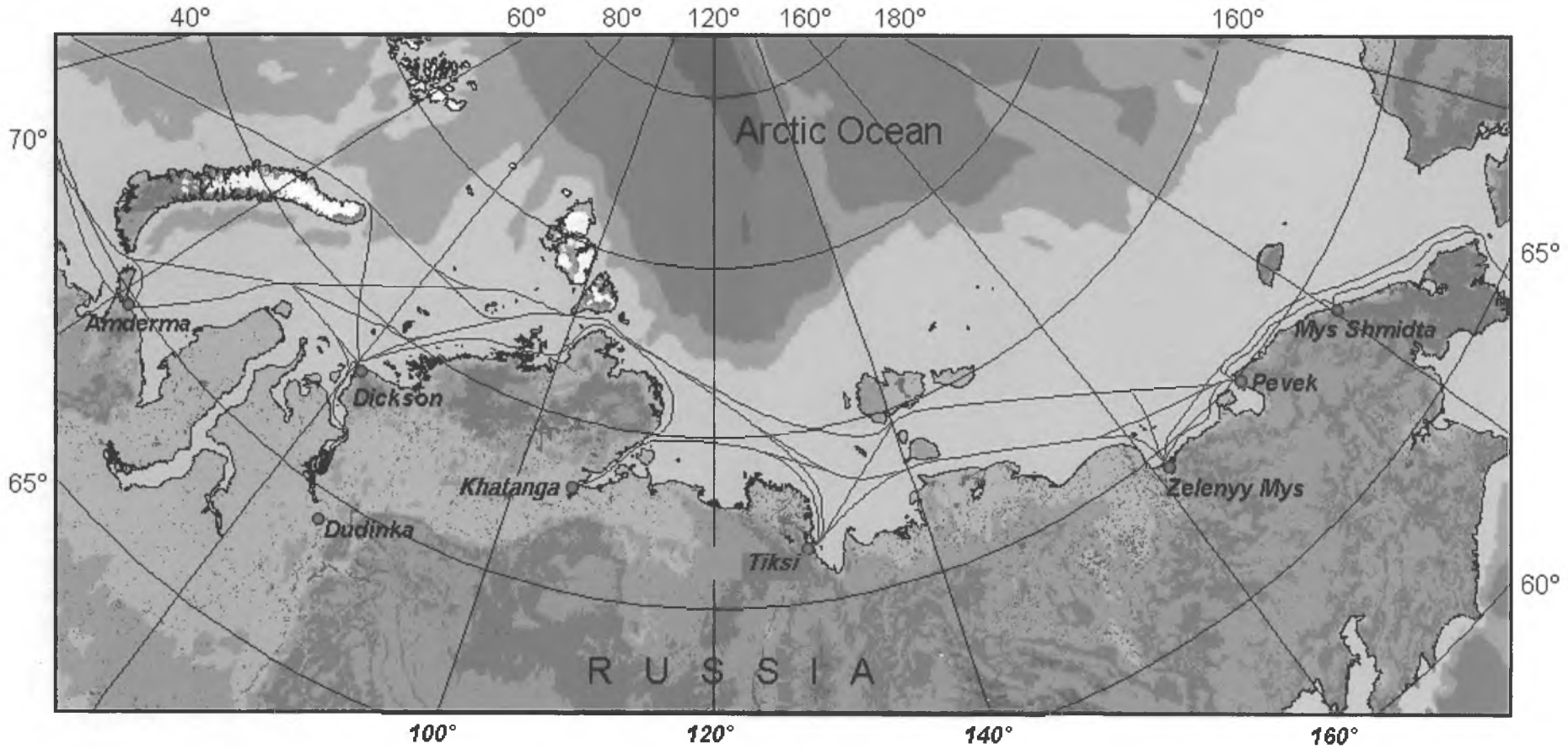
Carleton UNIVERSITY
Canada's Capital University

CIGI

Icebreakers of the World (Source: USCG)



Northern Sea Route



Carleton UNIVERSITY
Canada's Capital University

CIGI

Canada's *Northern Strategy* (July 2009)

- *Government of Canada's vision for its North is based on 4 pillars that guide its actions.*

Statement on Canada's Arctic foreign policy (2010)



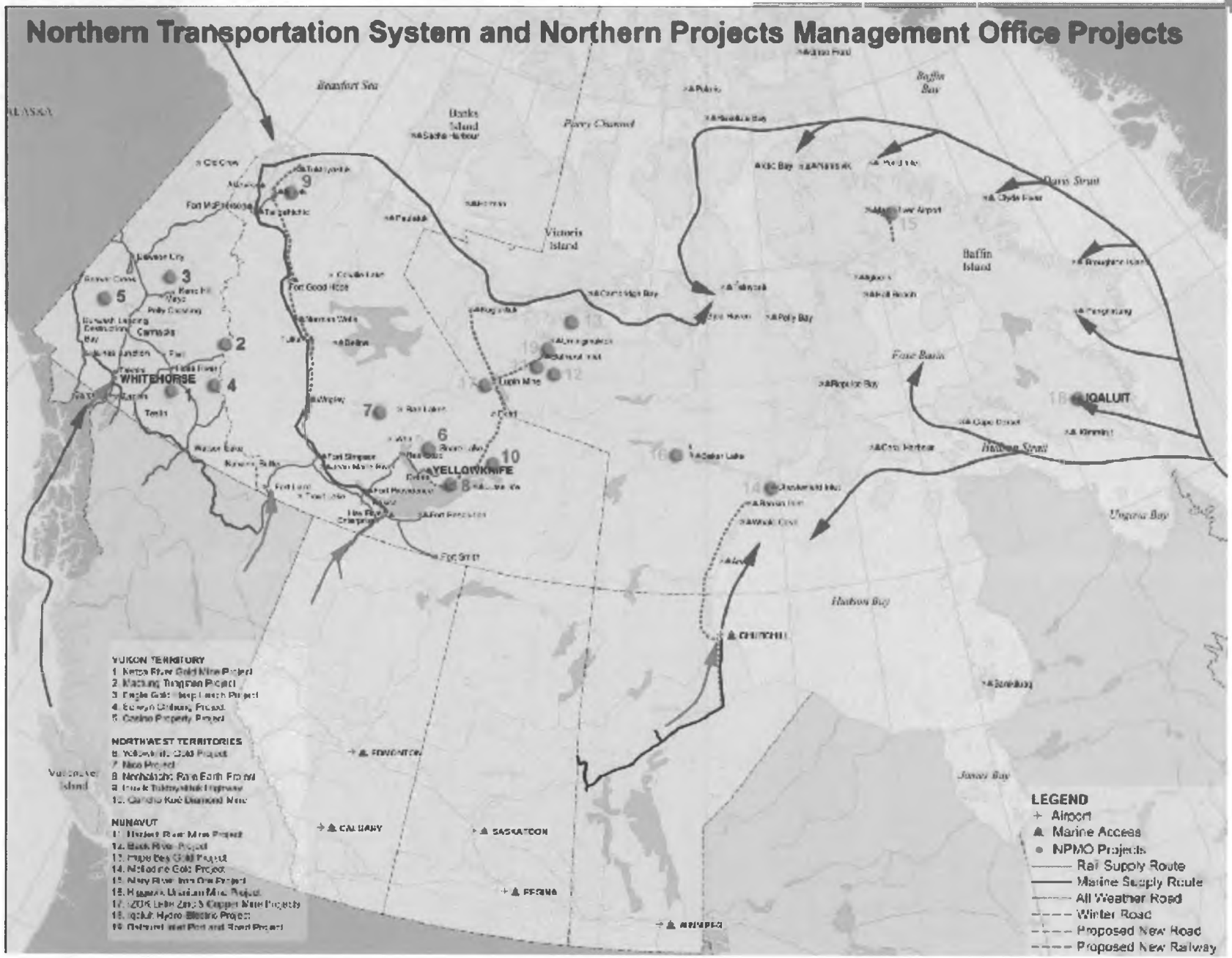
Sovereignty	Economic and Social Development	Environmental Protection	Governance
DOMESTIC AND INTERNATIONAL DIMENSION			
Exercising our Arctic sovereignty as international interest in the region increases.	Encouraging social and economic development and regulatory improvements that benefit Northerners.	Adapting to climate change challenges and ensuring sensitive Arctic ecosystems are protected for future generations.	Providing Northerners with more control over their economic and political destiny.
SCIENCE AND TECHNOLOGY UNDERPIN ALL FOUR PILLARS			

- Slide source: P. W. Lackenbauer, Assoc. Professor and Chair, History, St. Jerome's University, March 2013

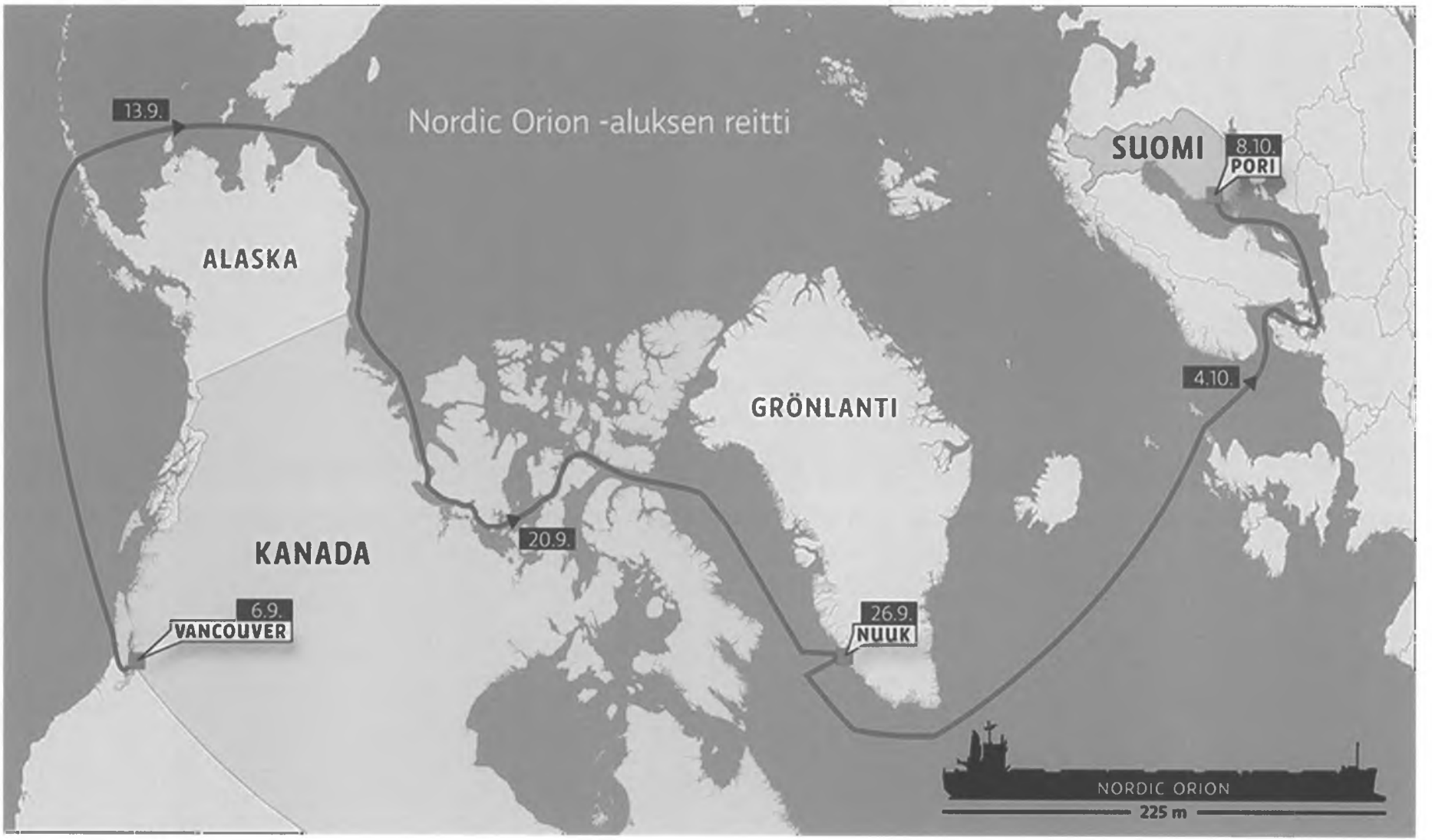
Canada's Arctic Council Priorities 2013-2015

- 1. Responsible Arctic resource development
- 2. Safe Arctic shipping
- 3. Sustainable circumpolar communities

Northern Transportation System and Northern Projects Management Office Projects



Nordic Orion's Voyage on the NWP



Source: http://yle.fi/uutiset/luoteisvaylan_avannut_nordic_orion_saapuu_porin_satamaan/6874171


The "North American Arctic Marine Highway"
Approximate Travel Distances
Seattle to New Jersey via NWP: 16 700 km
Seattle to New Jersey via Panama Canal: 18 000 km
Seattle, WA, USA
New Jersey, NJ, USA
PACIFIC OCEAN
Beaufort Sea
United States
0
500
1,000
2,000
Kilometers
Prepared by Larissa Pizzolato for John Higginbotham, Carleton University and CIGI, 2013
Sources: ESRI, NOAA, NAVTEQ, and other contributors

Point of No Return

Arctic Development is Here to Stay

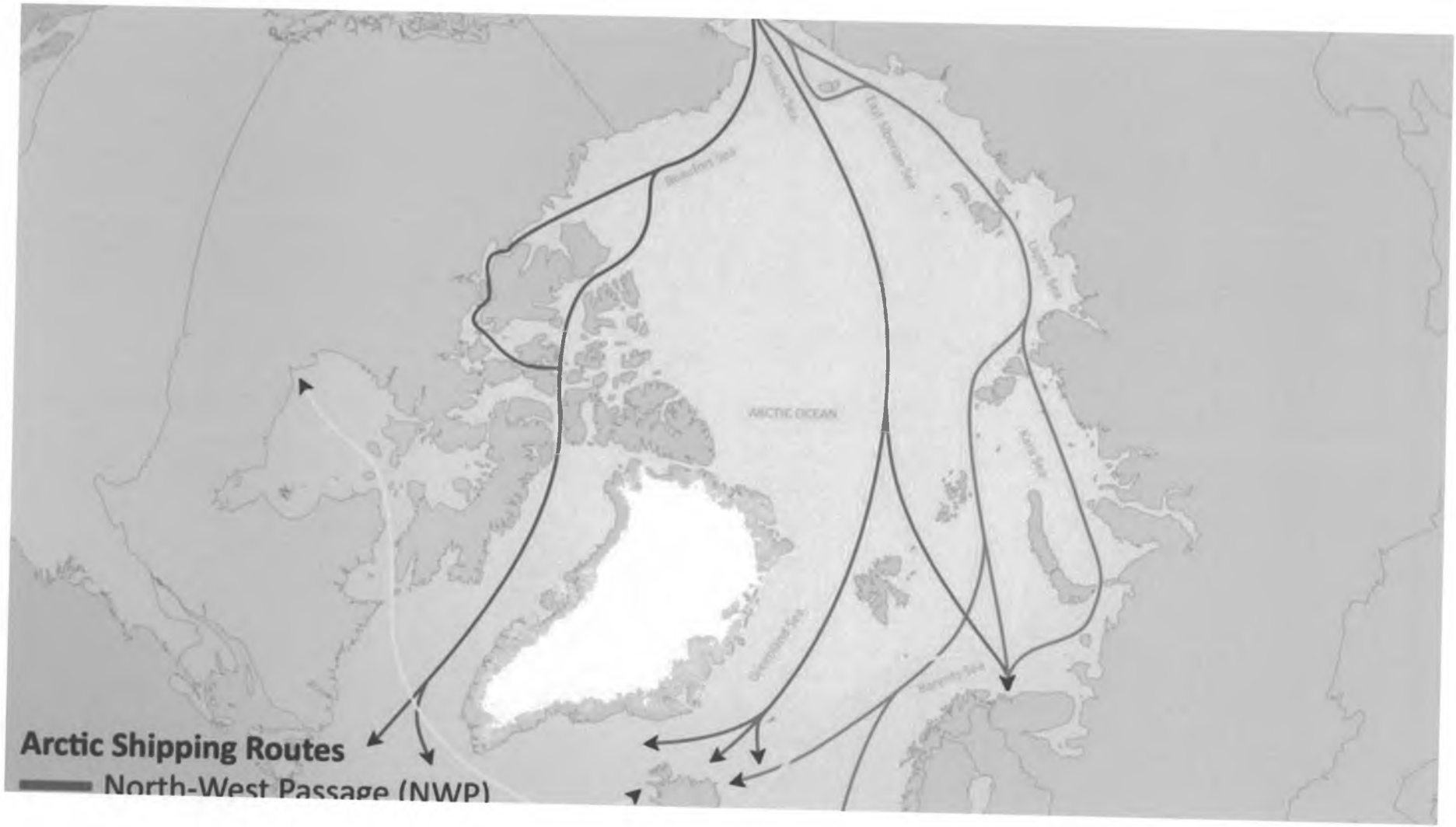


Humans Don't Go Back

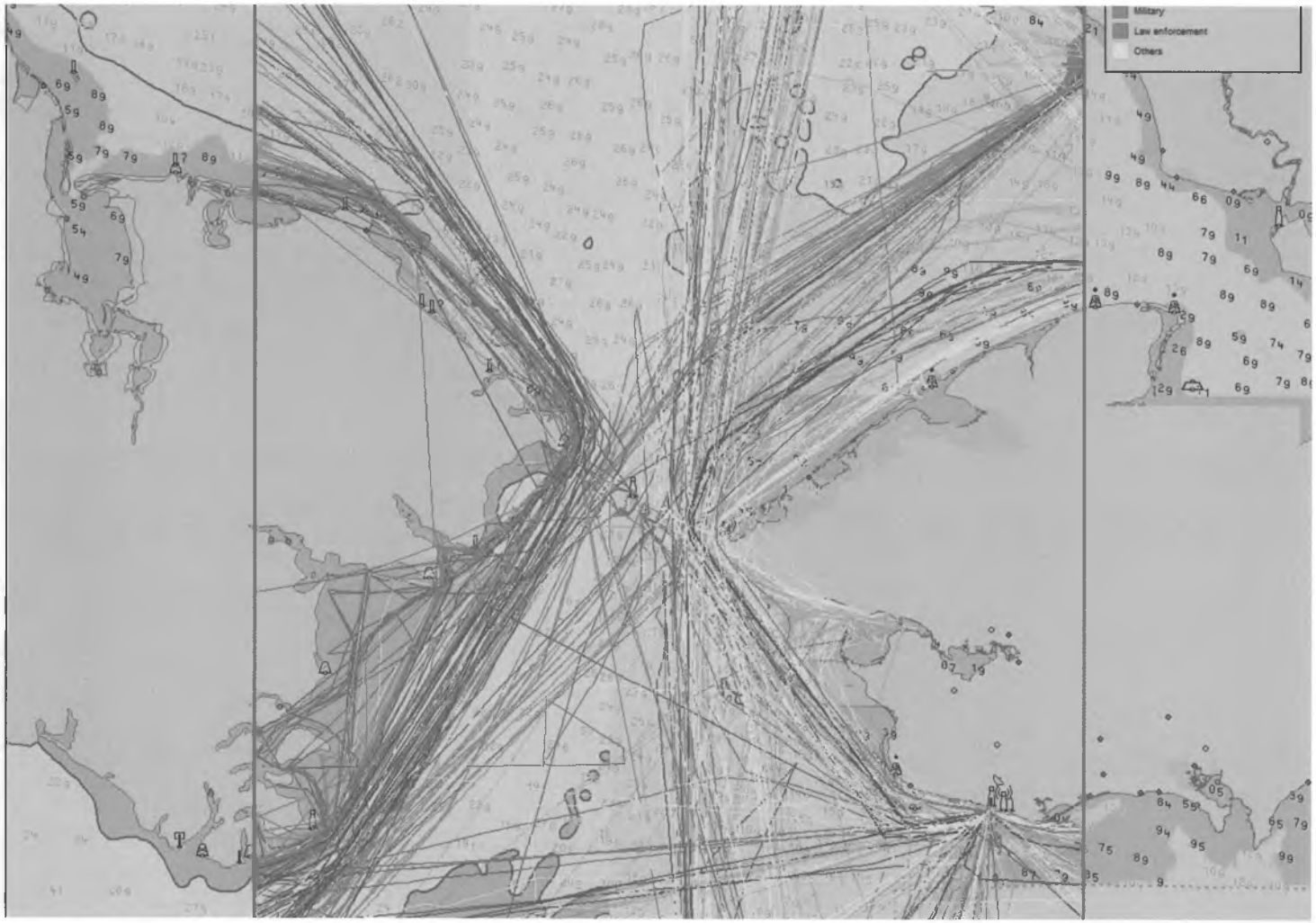
Inupiat Endurance 10,000 yrs.



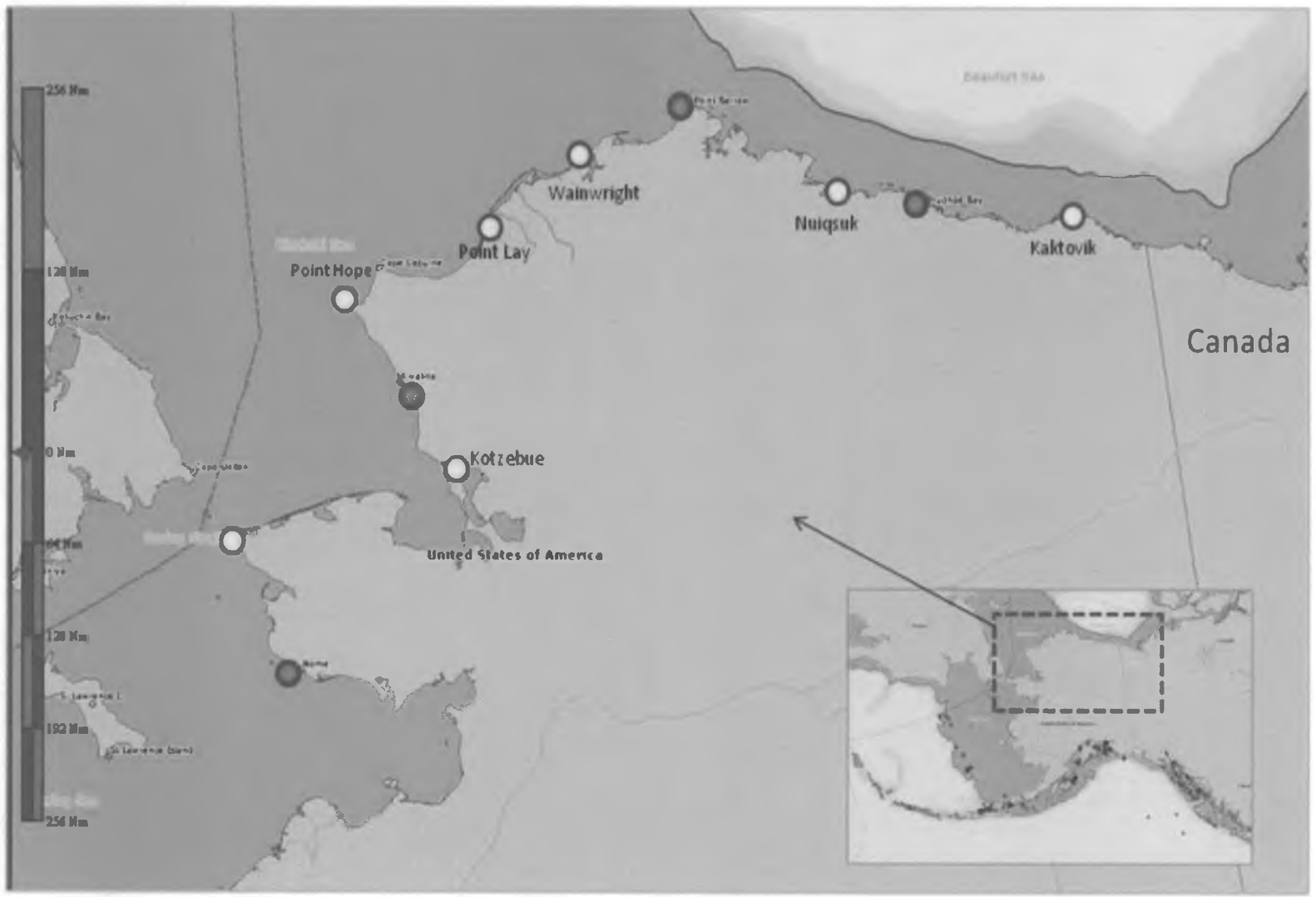
Arctic Shipping Routes



Bering strait
Vessel Traffic 2013

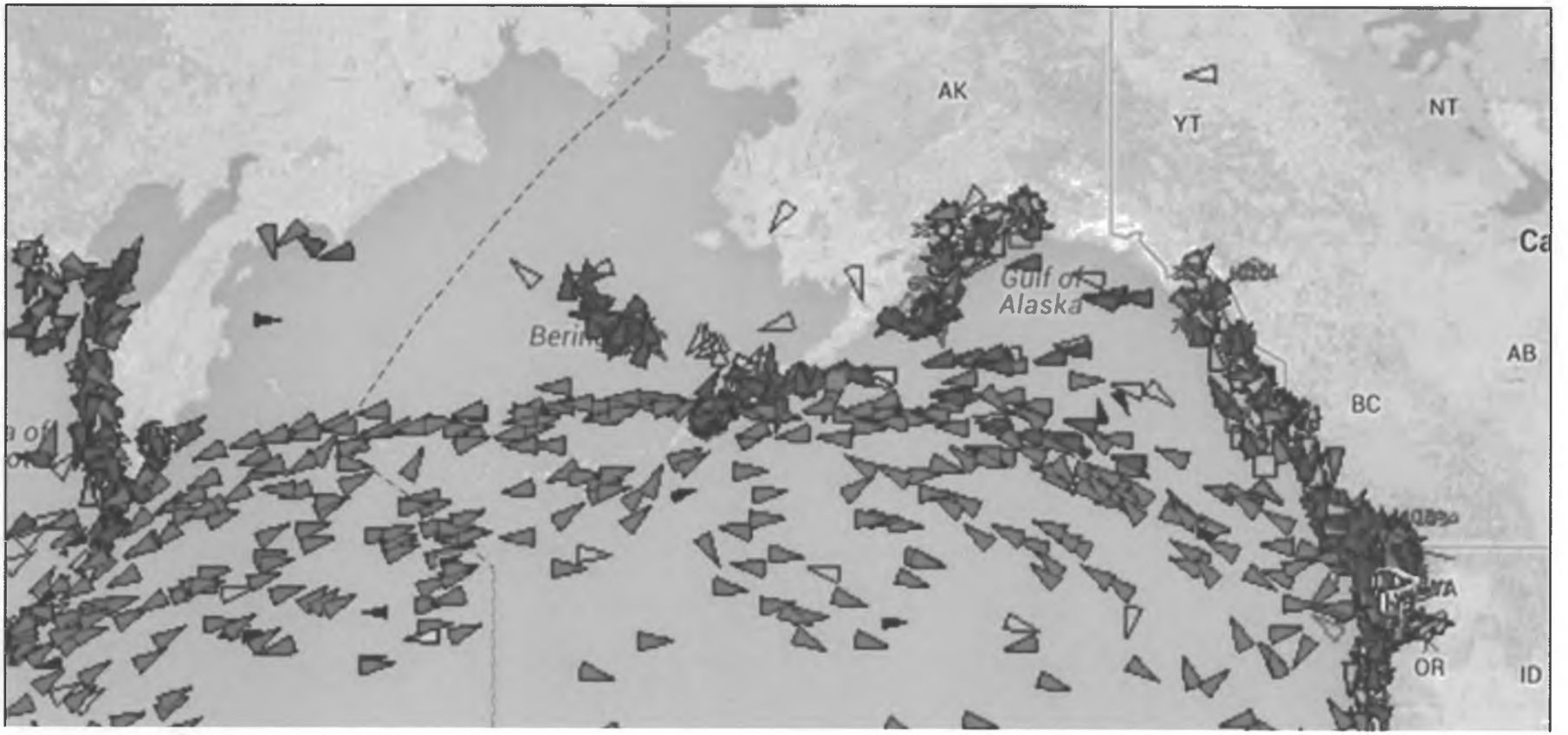


ARCTIC AIS SITES




NORTHERN SEA ROUTE
Adak / Dutch Harbor Hub
Nome Emergency Response Center
Kirkenes Hub
GREAT CIRCLE ROUTE
ARCTIC CIRCLE
Marco Polo
in the 21st century
Combining World Trade Routes
paulfuhs@earthlink.net

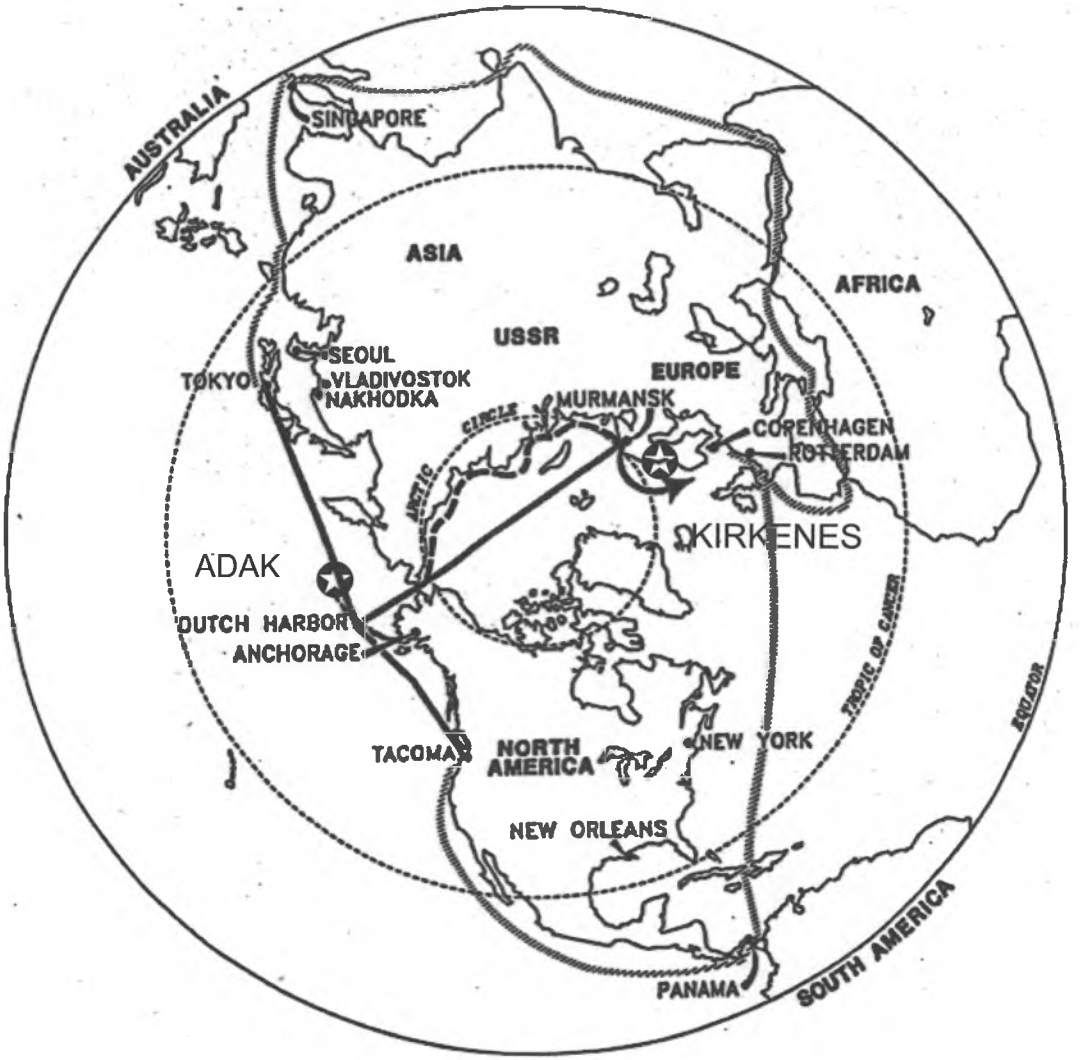
Great Circle Route
Vessel Traffic 1/22/14



NSR/Great Circle Route

Container Hub Operations

Adak routes cargo between Europe, Asia and US West Coast



Kirkenes routes cargo between Asia, the US West Coast and Europe

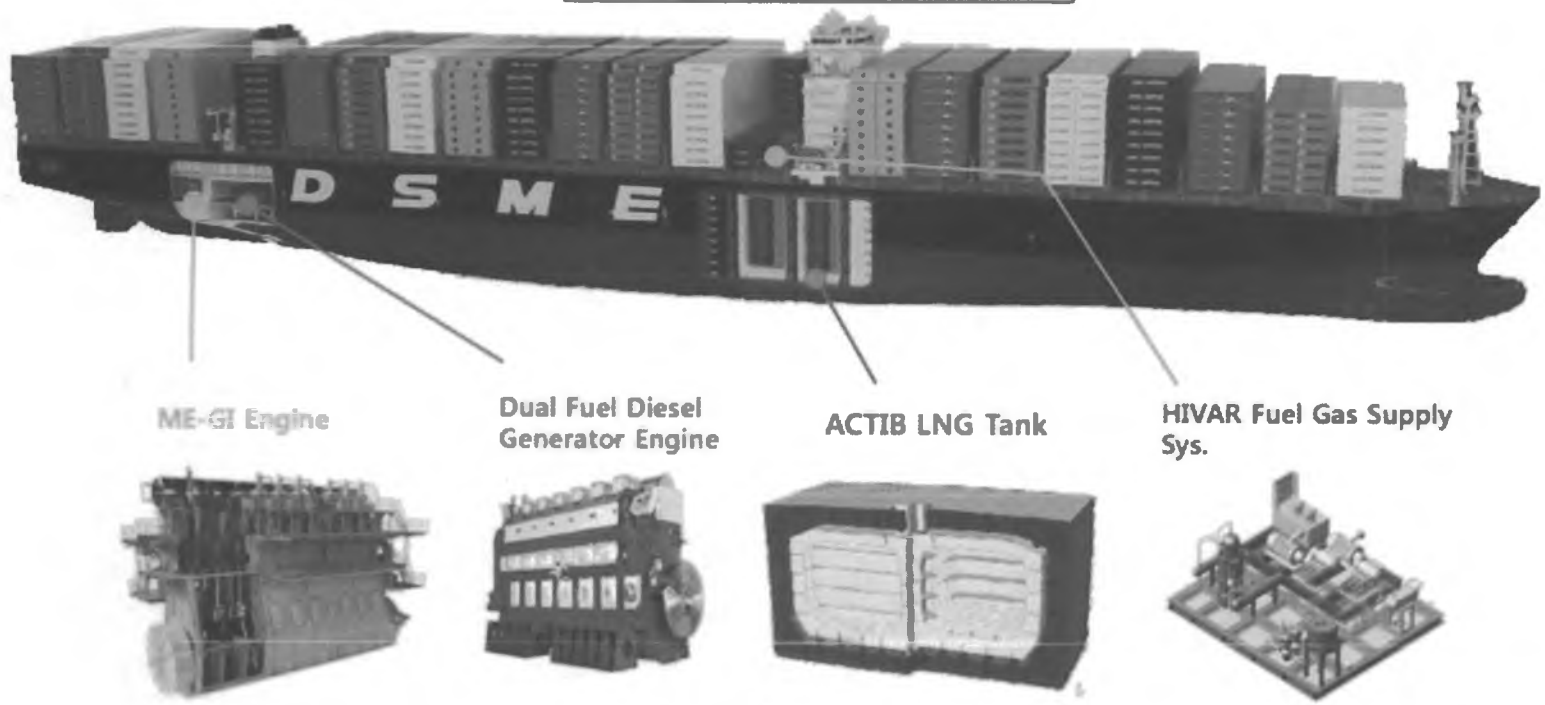
paulfuhs@earthlink.net

NSR voyages in dedicated ice strengthened vessels

Korean Icebreaking Containership

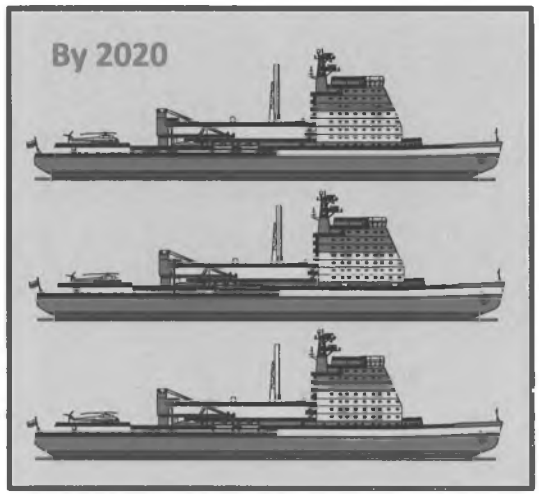
Overview of LNG-Fuelled Ship for NSR

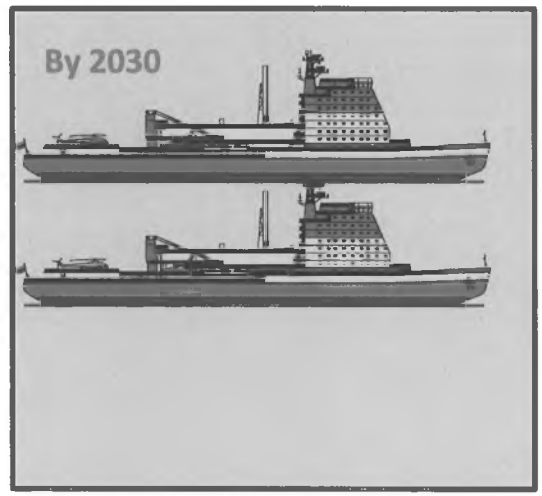
Zero(0) HFO Design



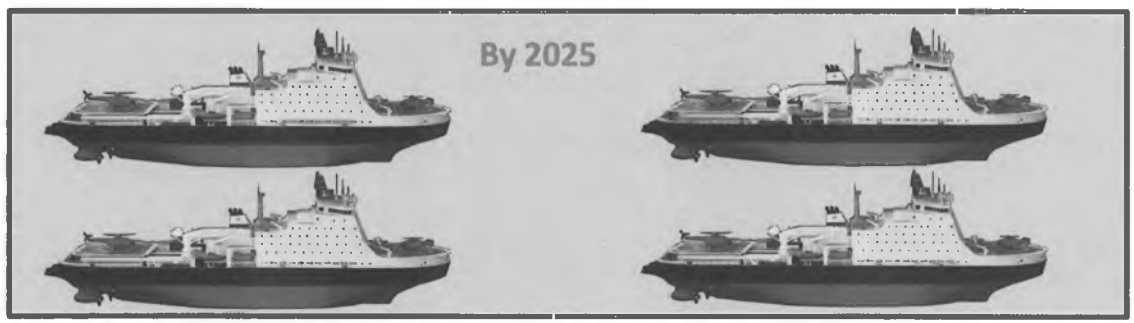
Russian Icebreaker Construction Schedule

Shaft power 60 MW





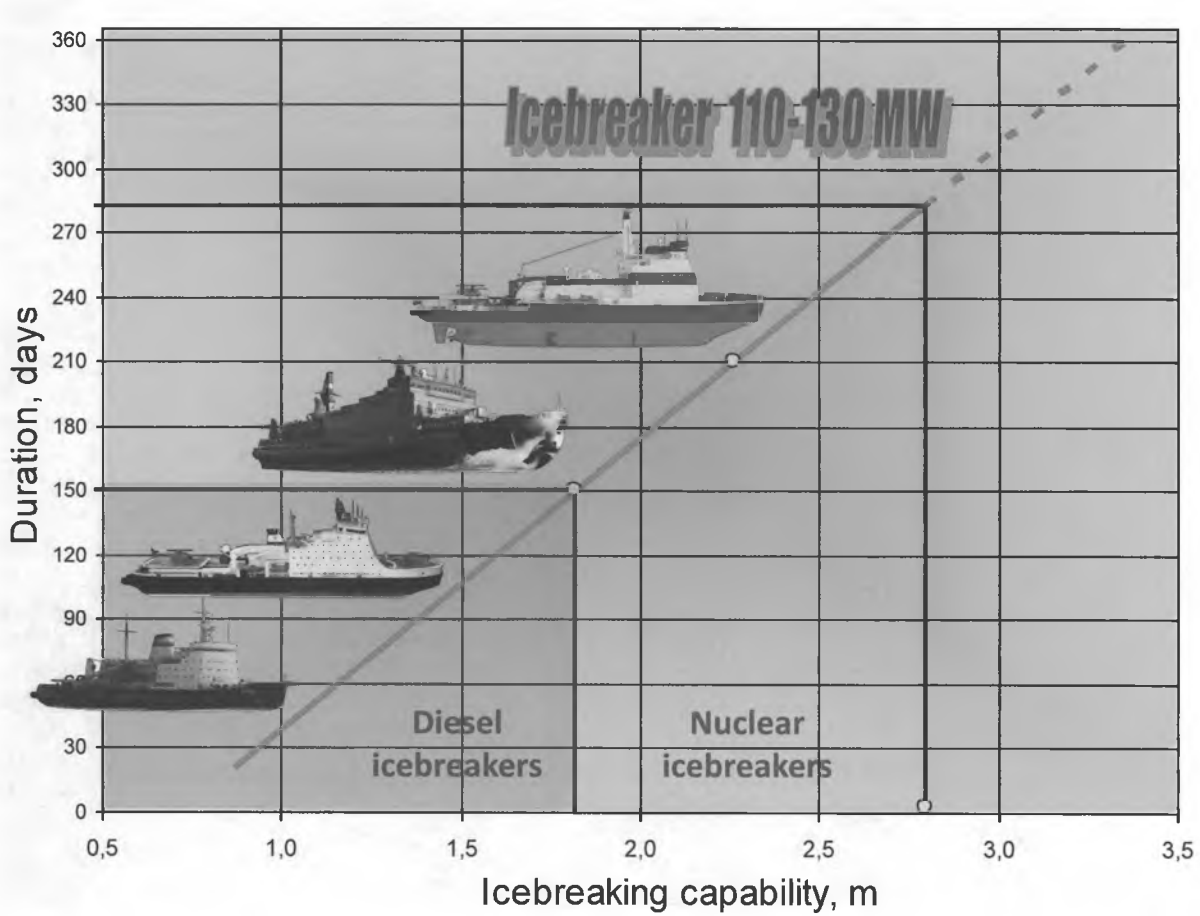
Shaft power 25 MW



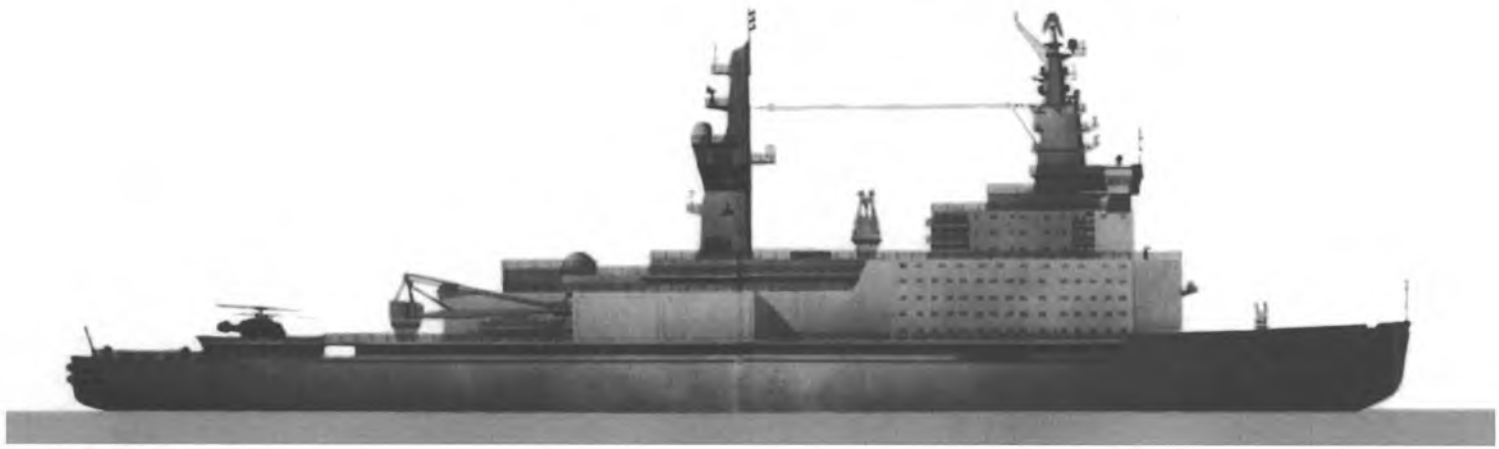
Shaft power 18 MW



Icebreaking Capacity



Breaking All Barriers



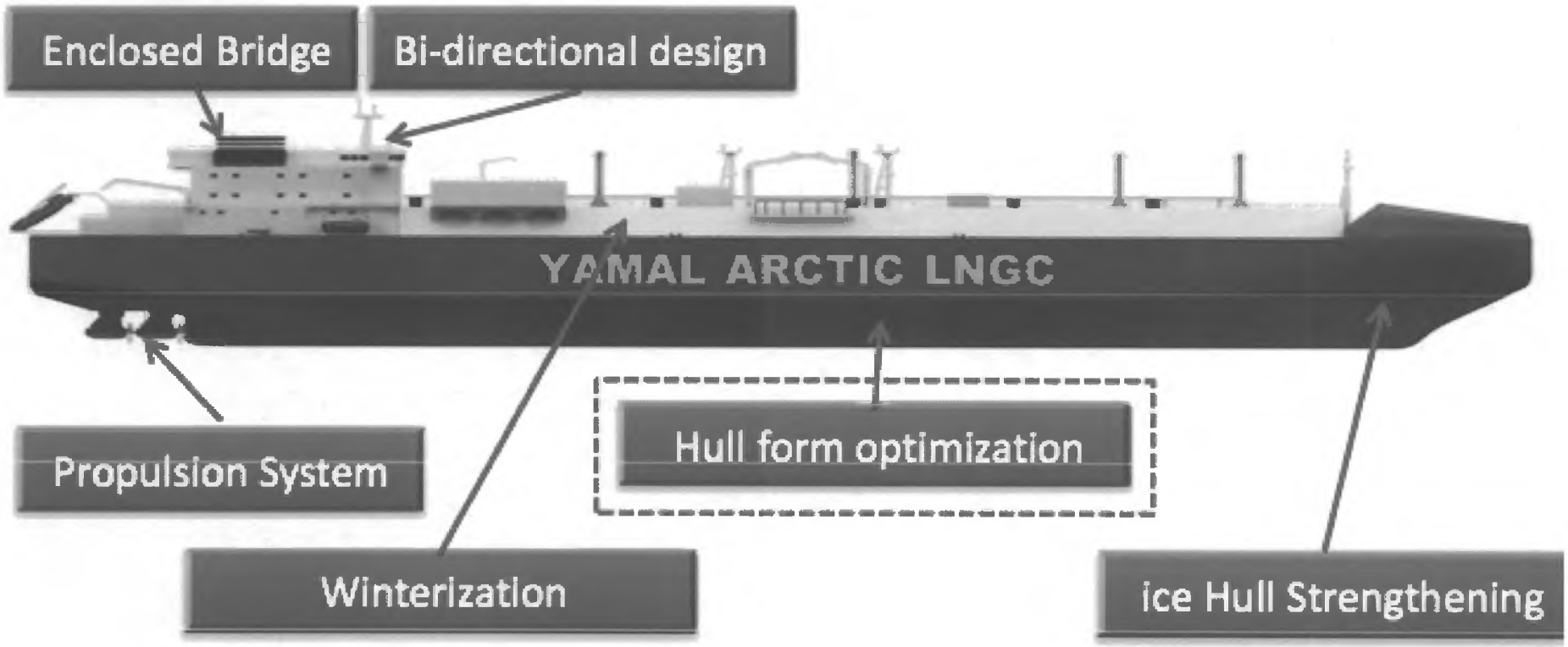
Operational tasks
Escorting of ships on the traditional transportation directions during winter-spring period.
Escorting of large capacity ships in the year-round export of raw resources extracted on the arctic seas shelf.
Servicing of the through transit transportation between Western Europe and Far East

Parameters	
Shaft power	110 MW
Length	193.6 m
Breadth	38 m
Draft	11-13 m
Displacement	55600 t
Icebreaking capability	3.5 m

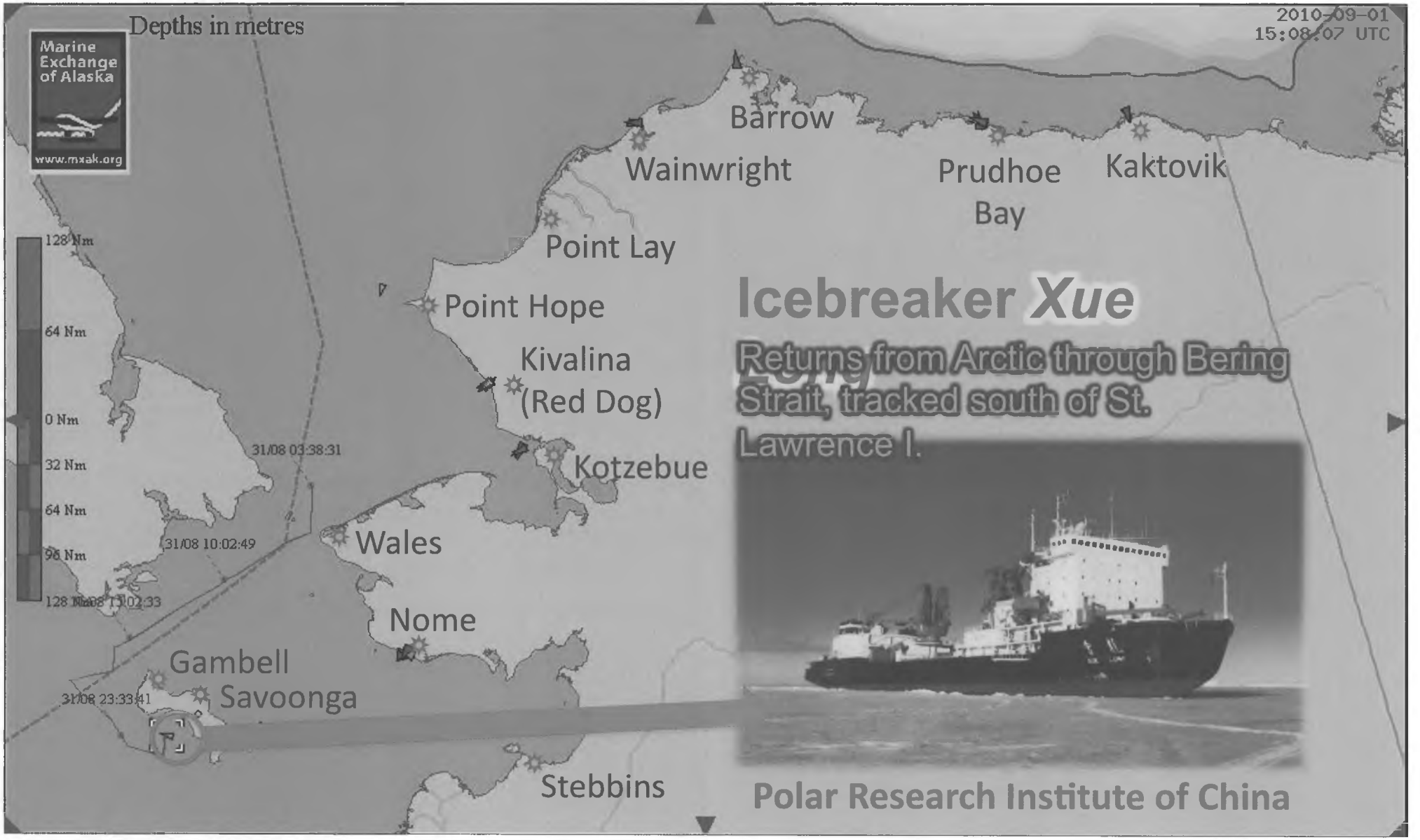
Korean LNG Vessels

Yamal Peninsula Petroleum Development

Technical features of Arctic Vessel



Maritime Domain Awareness – September 2010



Arctic AIS Sites: Kaktovik, Prudhoe Bay, Barrow, Wainwright, Point Lay, Point Hope, Kivalina, Kotzebue

Subarctic AIS Sites: Wales, Nome, Gambell, Savoonga, Stebbins

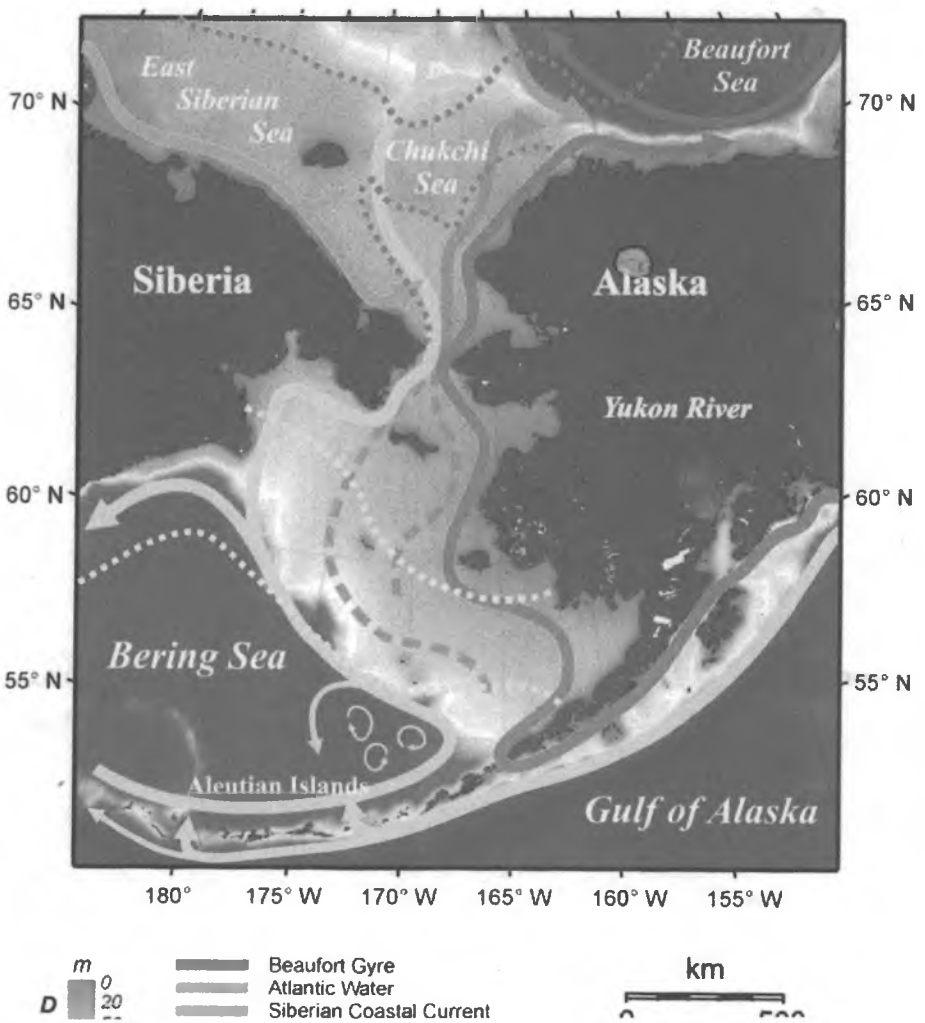
Everyone is Watching



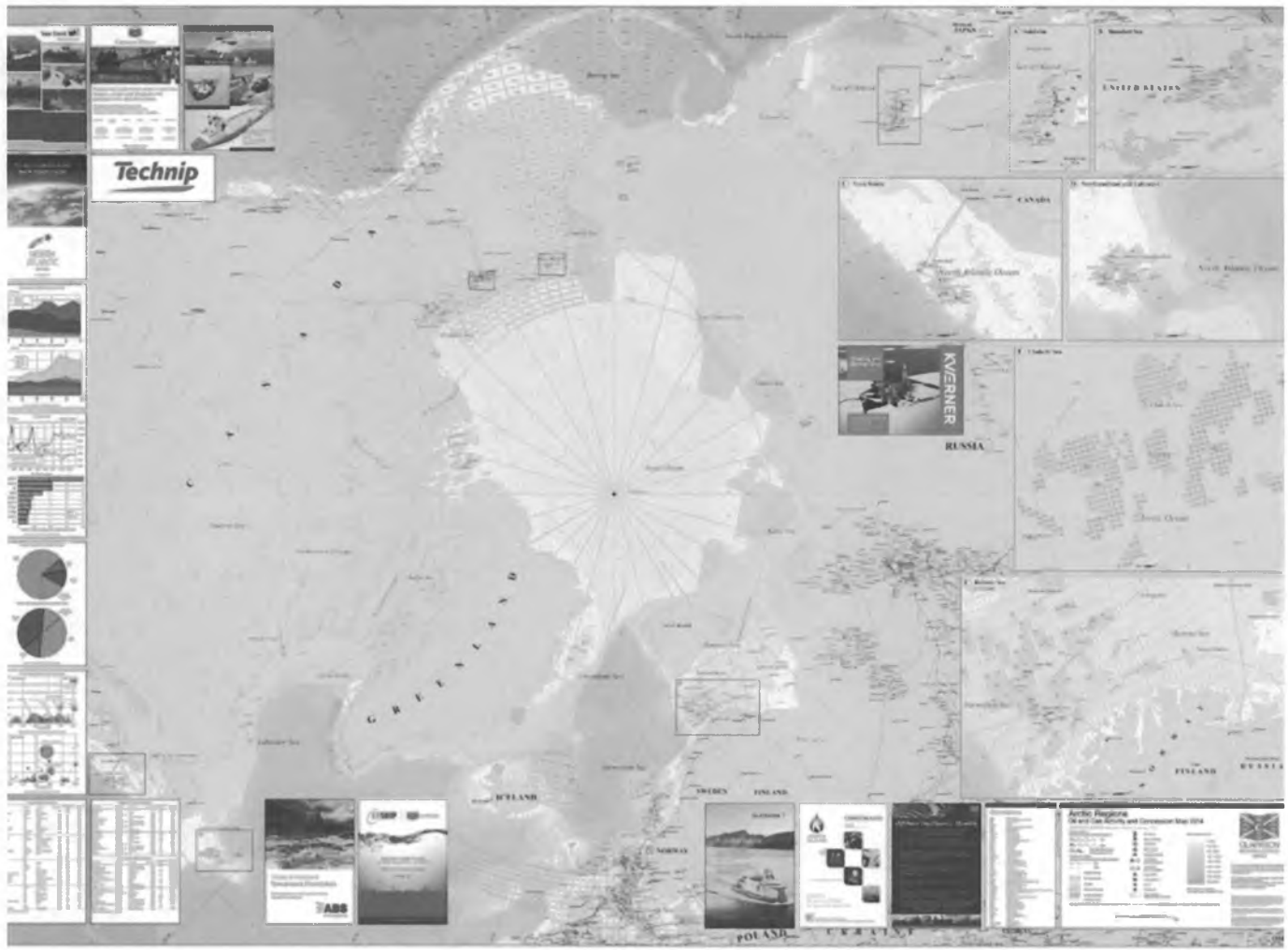
RISK FACTORS:1.3 million tons cargo 2013
800,000 tons petroleum products



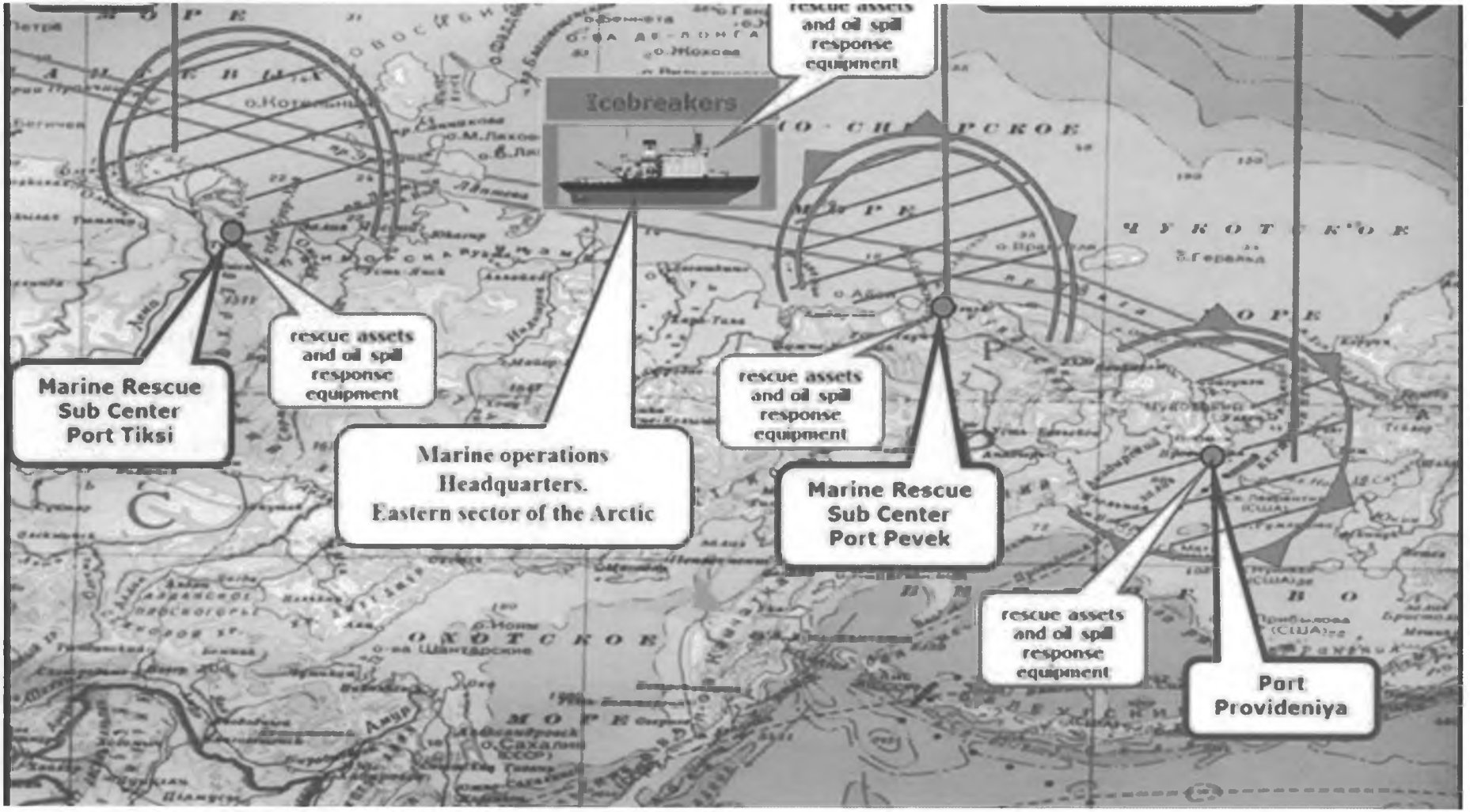
Arctic Circulation Patterns



ARCTIC OIL DEVELOPMENT



Russian Response Centers



Spectators or Actors?



Will we ride the wave or be rolled over by it?



Don’t Forget to Do It Right!



Door to a Brighter Future?
It's up to us



$10.50 ON FOOD AND DRINKS AT JALAPEÑOS FOR $20
dealsaver
SEE AD ON PAGE A2 dealsaver.com/alaska



GIFT GUIDE
Dave Barry's list of season's most puzzling presents
LIFE



TOURNEY
Harvard tips TCU to win title; UAA men finish last
SPORTS

GREAT ALASKA SHOOTOUT

$1.50

Final Edition

Anchorage Daily News

Sunday, December 1, 2013 BREAKING NEWS AT ADN.COM Alaska's Newspaper

UAA takes research projects to marketplace

On a near-zero sunny Tuesday in mid-November, workmen in T-shirts poured a new sidewalk for a University of Alaska Anchorage building just off campus near University Lake. They never felt the cold because their work site was encased in a giant plastic bubble pumped full of warm air.

This was a demonstration project for anybody interested in seeing how a sidewalk that de-ices itself gets installed. Before workers poured concrete, they adjusted frames stripped with black carbon fiber tape. Each panel is attached to an electrode, and transformers connected to the electrodes send low voltage through the carbon fiber strips to generate heat. On top of all that goes the concrete.

A product safety engineer from Underwriters Laboratories Inc. out of Washington state was there to certify the sidewalk's safety and place a UL sticker on its electric box. Other curious parties included folks from city public works, the state Department of Transportation, a town home developer, the housing nonprofit NeighborWorks and an Anchorage resident with a steep driveway that stays icy and dangerous all winter.

"If this works," said homeowner Larry Chen, "I want it."

The self-de-icing pavement is the first tangible fruit of a two-year drive to commercialize research by UAA faculty and students. This particular invention comes from Joey Yang, a professor of civil engineering who usually works on structural bridge safety, but ice problems at his own house fired him up to find a better solution than continually chipping it away. His new company, CFT Solutions, is looking for customers and commercial work space to begin manufacturing the panels.

Taking products like Yang's to market is Helena Wisniewski's mission. She is vice provost for research and graduate studies at UAA. Two years ago, when she arrived from Stevens Institute of Technology in Hoboken, N.J., she quickly launched the UAA Innovate awards, an annual pot of $200,000 in seed money for research, creative works and projects that might yield a patent and eventually income for the inventor and the university. Yang's idea was one of the first winners.

So far, Innovate dollars have contributed to 29 invention disclosures from faculty or students, 12 patents pending and two startup companies: Yang's CFT Solutions and Zensor, a company to manufacture cheap, battery-free wireless sensors for remote monitoring, developed by John Lund, a former UAA electrical engineering professor.



Photos by PHILIP HALL / UAA

Workers prepare to install a new snowless sidewalk at the University Lake Annex Building at the University of Alaska Anchorage. The sidewalk is the result of an effort by UAA to put academic research to commercial use.

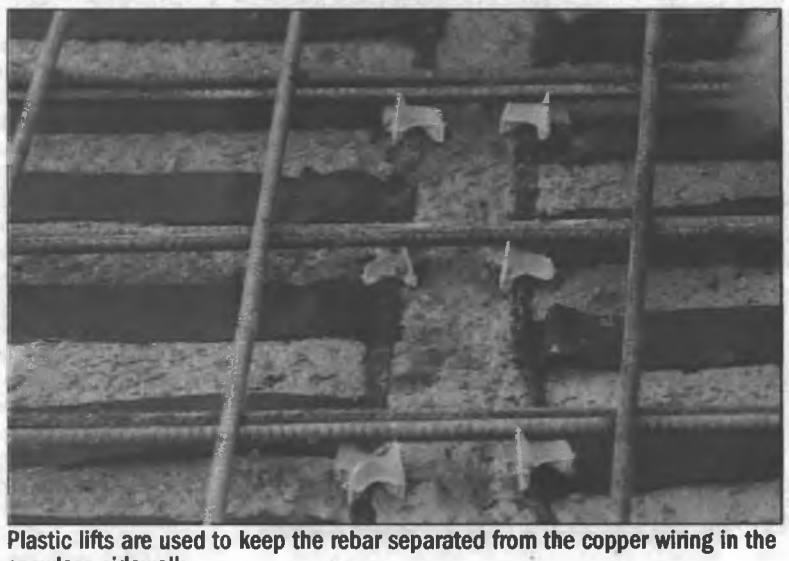


KATHLEEN MCCOY

HOMETOWN U

Other patents pending include a one-handed tool used in back surgery that lets doctors quickly shape support rods in the operating room; a mouth guard that collects data on head impact; a process for locating mineral deposits without the upfront costs of exploratory drilling; isolating the chemical compound in blueberries that staves off dementia; and a battery-operated knife that allows for more precise incisions during eye surgery.

To accommodate this new commercial direction, the UA Board of Regents approved Wisniewski's plan to create two entrepreneurial entities, Seawolf Holdings LLC and the Seawolf Venture Fund.



Plastic lifts are used to keep the rebar separated from the copper wiring in the snowless sidewalk.

The first company holds equity in the startups on behalf of UAA and limits university liability. The Seawolf Venture Fund will finance startups emerging from university research. To date, it has raised $1.5 million and is targeting $10 million. The fund is intended to benefit companies like CFT Solutions and Zensor; CFT is seeking an additional $500,000.

Wisniewski said she's happy with the pace of things. When she was at Stevens Institute of Technology, she launched nine startups and sold two. "One or two a year is about right," she said. Then it can take three to five years to build a company before it's attractive for acquisition.

She is especially proud of the team leading Seawolf Holdings LLC. Wisniewski as president is joined by Thomas Hook, CEO of Greatbatch Inc., a publicly traded company on the New York Stock Exchange; Stephen Socolof of New Venture Programs; John Wanamaker of Alaska Venture Partners; John Sibert, founding chairman of the National Association of Seed & Venture Funds; John Bischoff, former CFO of AOL; and UAA's provost, Elisha "Bear" Baker.

Springwell Partners, a private equity firm from Connecticut, has joined Seawolf Venture to manage that fund. What distinguishes the fund is access to new ideas coming right out of UAA, or as investors call it, a steady "deal flow."

All this demonstrates that Wisniewski has brought her experience and connections to Alaska. Partnerships and networks add expertise that can strengthen funding proposals, she said.

"In coming here two years ago, I saw a lot of untapped potential," she said. "There's more to come."

Indeed, she recently filed UAA's application to become a Center of Excellence for the Department of Homeland Security. That agency operates 12 such centers at universities around the United States to continually assess all kinds of risk, from terrorism to microbial hazards to food security.

This national center will focus on providing near real-time information on man-made and natural catastrophic events along the country's coastlines. How do you predict these events, prepare for them and survive them? With increasing arctic activity and Alaska's long shoreline, Wisniewski hopes UAA will be a serious contender.

Money for the center will be awarded in April 2014. Whichever university receives it will develop a facility to monitor coastline anomalies around the country. Partners in UAA's proposal include other coastline states that would benefit from the program, including Louisiana, Maryland, New York, California and Canada. Even the Port of Anchorage is a partner.

Just applying is an important step, Wisniewski said. If UAA's bid is not successful, she will still have forged new government and business connections around the country that can help put Alaska's potential on their radar.

Kathleen McCoy works at UAA, where she highlights campus life through social and online media.

ADN.com
UAA launches second start-up company

Posted on July 9, 2013



Carbon fiber strips in three of the five test panels kept them snow- and ice-free.

COURTESY UAA

ANCHORAGE, AK – The University of Alaska Anchorage launched its second start-up company, CFT Solutions™, an innovative approach to deicing and snow removal.

CFT Solutions™, a Seawolf Holdings company, was founded on the idea of creating an innovative, cost-effective and environmentally friendly approach to prevent snow and ice from accumulating.

CFT's patent-pending innovation is in embedding carbon fiber tapes under the pavement to heat the surface, which are easy to install and maintain. This system is ideal for high pedestrian traffic walkways, roads, high usage road intersections, bridges and roofs of buildings, as well as domestically for driveways and home roofs. It was successfully tested in Anchorage during the winter of 2011-12, which had a record snowfall for the area.

The company, created in May 2013, was established by UAA Vice Provost for Research and Graduate Studies Dr. Helena Wisniewski and faculty inventor Zhaohui "Joey" Yang, a UAA engineering professor.

But the idea for CFT Solutions™ began three years ago when Yang met his collaborator, Professor Gangbing Song from University of Houston. Song was experimenting with commercially available flexible

carbon fiber that is light, strong, non-corrosive and conducts low-voltage electricity generating a certain amount of heat. Song was using these to heat surfaces in his lab.

"Knowing how dangerous a slick sidewalk is to pedestrians in winter, I could not wait to test the material in more challenging winter conditions like we have here in Alaska," Yang said. With a generous grant from Alaska University Transportation Center, their collaboration was born.

This is the second start-up company for UAA since it established Zensor™ in April earlier this year.

"Creating our second start-up company within a few months of our first illustrates UAA's upward trend in commercialization and how our research can contribute solutions for local and national needs," said Wisniewski, who develops and oversees the business infrastructure for commercialization of faculty and student research. This infrastructure led to the establishment of Seawolf Holdings and Seawolf Venture Fund, and world-class Board of Directors including corporate CEOs, venture firm partners, and entrepreneurs.

For more information about Yang's research and the inception of CFT Solutions, visit:

http://greenandgold.uaa.alask.aedu/?p=10660

Read more about Professor Yang's work at:

http://www.uaa.alaska.edu/schoolofengineering/faculty-staff/yang.cfm

For more information about CFT Solutions™, contact Dr. Helena Wisniewski at hswisniewski@uaa.alaska.edu or Dr. Joey Yang at zyang2@uaa.alaska.edu.



Photo courtesy of Zensor LLC

University of Alaska Anchorage Faculty Inventor and Electrical Engineering Professor Dr. John Lund holding a Zensor sensor, which he invented. The low-cost wireless sensors are powered by two small solar panels and can be used for monitoring remote infrastructure, asset management, surveillance, and security. Zensor sensors are patent pending.

Zensor Sensors

Opening the door to research commercialization at UAA

By Vanessa Orr

When Dr. John Lund, a professor of engineering at the University of Alaska Anchorage (UAA), first began studying the remote monitoring needs of companies doing business in the Arctic, it spawned the idea of creating a longer-lasting, lower-cost, maintenance-free wireless sensor. It also launched UAA into a new role as the owner of its first ever startup company, Zensor.

While Zensor, established in February by Lund and UAA Vice Provost for Research and Graduate Studies Dr. Helena Wisniewski, is the first company to take part in UAA's new business infrastructure designed to commercialize innovative faculty and student research, it certainly won't be the last. Already more than twenty-five UAA entrepreneurs have filed invention disclosures; a number significantly higher than when Wisniewski joined the UAA staff less than two years ago.

The Entrepreneurial Approach

"I was hired for two main reasons—to increase the research enterprise and to get technology commercialization in place," explains Wisniewski, who has been at the university for a year and nine months. "I was delighted that they wanted to go in this direction; the talent was here, but they needed someone to come in and pull it all together. Now we've gone from three invention disclosures to more than twenty-five, and two of these are from UAA students. Also,

"I was delighted that they wanted to go in this direction; the talent was here, but they needed someone to come in and pull it all together. Now we've gone from three invention disclosures to more than twenty-five, and two of these are from UAA students. Also, nine of these have evolved into patents pending with more in process."



—Dr. Helena Wisniewski
UAA Vice Provost for Research and Graduate Studies

nine of these have evolved into patents pending with more in process."

"This is an exciting time for UAA," agrees Chancellor Tom Case, adding that there were a number of reasons why the university chose to become involved in the commercialization of research. "There is real value in experiential learning, or learning by doing, in addition to classroom lectures, which is why the university has long placed an emphasis on undergraduate research. This approach also contributes to the growth of interdisciplinary work on campus, such as when engineering, computer science, and business students and faculty collaborate to take an entrepreneurial approach.

"We are also responsible for helping to meet the state's needs, especially in the area of economic development, when those needs match the university's mission," he continues. "And over time, mutually beneficial partnerships between universities and industries can result in the development of research parks clustered close to universities, which provides a good interface between entrepreneurship and research."

The Sensor that Started it All

Zensor LLC, a Seawolf Holdings company, offers a new generation of wireless sensors for use in remote monitoring, asset management, and surveillance and security. The sensors require no batteries, are effective with a small power source, and cost much less than comparable sensors on the market. "Zensor sensors are intended to make monitoring remote infrastructure cheaper, easy, and reliable," Lund says.

Unlike other sensors that are dedicated to one use, Zensor sensors collect and transmit data on humidity, light intensity, temperature, color, sound, thermal images, vibrations, and the tilt of a stationary object, such as a telephone pole. Additional capabilities can be added, including GPS and gas sensing.

"Zensor sensors are designed to meet many market needs," explains Wisniewski. "In industrial installations such as the pipeline, for example, the sensors can tell if there is gas or liquid leaking or if there are any cracks or structural instabilities in real-time.



"In the area of surveillance and security, the sensors can be placed along the border to detect vibration and can distinguish if the movement is caused by a person or animal," she adds.

"Zensor sensors can also be used at remote sites over large expanses to provide information in difficult-to-reach geographic areas. Sensors can be dropped from UAVs [unmanned aerial vehicles] to cover the landscape and provide information on environmental changes such as ice flow or melt."

One of the main advantages of the Zensor sensors is that only one sensor needs to be near a power source in order to provide data on what all of the other sensors are doing. "If one malfunctions, it does not take the whole network down," Wisniewski says. Solar energy coupled with an ultra-capacitor means that no batteries are required, and sensors are estimated to last more than fifty years. Best of all, Zensor sensors cost less than $40 per unit, compared to approximately $150 and up for other sensors on the market.

According to Wisniewski, Zensor sensors are available in small quantities now, and an initial installation may be completed by the end of summer. "We would like to set up a manufacturing facility in Anchorage to produce these sensors; in the first phase of the plan, the facility would involve more hand assembly; in the second phase, there would be more automation using a robot system for assembly," she explains.

Taking a Product to Market

While the university has always been home to brilliant researchers and innovative ideas, marketing those ideas is a relatively new concept. Wisniewski, a technical entrepreneur who has successfully launched ten startup companies and who has worked for public and private companies in academia and for the federal government, set up the university's commercialization infrastructure that was approved by UAA's Board of Regents in August 2012. This infrastructure includes Seawolf Holdings and the Seawolf Venture Fund, which provides seed money for startups. The venture fund is planning to raise $10 million and already has a $1.5 million letter of commitment from the municipality of Anchorage's 49th State Angel Fund.

"We're planning on raising money from a combination of private corporations, individuals and venture funds, which is one way that the university and the community can work together on community investment," Wisniewski says. "We hope that this leads to more interactions that can help to fulfill some of the community's needs." Wisniewski adds that Seawolf will be considering proposals from the community or from outside of the state, provided that a company's offices relocate to Anchorage.

"Our goal is to build businesses based in Anchorage and Alaska, which will attract more corporate investments to the area and enhance Anchorage as a center for technological advancement and innovation," she continues.

When one of UAA's startup companies succeeds, it will benefit both the entrepreneur and the university. "The university has equity in the startup company and the founder has equity in the startup company, so if it's sold, they both benefit," Wisniewski explains. "Even if an inventor does not create a startup, if their technology is licensed, they still receive a portion of the net end royalty."

According to Wisniewski, of the first $10,000 that is received from licensing, the inventor gets 100 percent of net. Above $10,000, and the inventor receives 50 percent of net. If the company is sold and includes patents, the founder gets a portion of the royalties. If a faculty member is a founder of the startup company, they receive equity in the company. "The UAA policy on royalties is one of the best that I've seen throughout the country," she says. "Getting 50 percent of net after $10,000 is very nice; most universities offer 50 percent up to a point, and then a lower amount on a sliding scale."

While each contract is negotiated individually based on the amount of help that the university provides to a particular spinoff company, working together benefits everyone involved. "Some companies will fail, some will see moderate success, and others will be very successful," says Case. "There are a number of universities that have had one or more spinoffs become very successful—and they've seen significant cash flow back into their universities.

"When times are tough and money is hard to come by, this could also provide economic benefits to the state as it would reduce the university's reliance on legislative funding," he adds.

Incentive for Considering UAA

Both Wisniewski and Case agree that providing a way to get good ideas to market could serve as an incentive for faculty and students to consider UAA. "This model, when done well with a good concept, not only benefits the state and the university, but students who have great ideas," says Case. "While not all of the different kinds of research that we do here has commercialization potential, that does not make it any less worthy as it is adding to the body of knowledge. But for those ideas that do lend themselves to commercialization, this program provides a good step to take that opportunity."

"Not only does the commercialization aspect provide researchers with the opportunity to produce patents and create startup companies, but it also provides hands-on experience for students and faculty in how to become more entrepreneurial," Wisniewski adds. "While not all faculty members are interested in generating intellectual property, the research component is very integral to this process, and intellectual property often generates new research questions."

Now that Zensor sensors have opened the door, UAA is looking at launching its second startup in the next few weeks and has two more waiting in line. "We are also discussing a licensing opportunity for UAA's surgical rod bender for spinal surgery with interested partners, and are starting to receive revenues from licenses for our student success model, so there will be quite a few things happening in the next couple of months," says Wisniewski.

"Future commercialization could span a variety of areas, including embedded sensors, educational software, cyber security, biomedical devices, and further down the road, potential therapeutic pharmaceuticals to treat neurodegenerative diseases," she adds. "This is a very exciting time for UAA." ☼

Vanessa Orr is the former editor of the Capital City Weekly in Juneau.

Dr. Helena S. Wisniewski is Vice Provost for Research and Graduate Studies at the University of Alaska Anchorage (UAA). She is also President of Seawolf Holdings, LLC, a wholly owned subsidiary of UAA. In August 2011, UAA hired her to build the research efforts at UAA and to commercialize technology and innovation. Dr. Wisniewski brings a breadth of senior executive and entrepreneurial experience in academia, government, and private industry. She is a technological entrepreneur who has successfully launched and sold start-up companies and has received awards for outstanding leadership and significant contributions to scientific areas, including the 2002 Women in Technology Leadership Award for Entrepreneurship.

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ADN.com
UAA launches second start-up company

Posted on July 9, 2013



Carbon fiber strips in three of the five test panels kept them snow- and ice-free.

COURTESY UAA

ANCHORAGE, AK – The University of Alaska Anchorage launched its second start-up company, CFT Solutions™, an innovative approach to deicing and snow removal.

CFT Solutions™, a Seawolf Holdings company, was founded on the idea of creating an innovative, cost-effective and environmentally friendly approach to prevent snow and ice from accumulating.

CFT's patent-pending innovation is in embedding carbon fiber tapes under the pavement to heat the surface, which are easy to install and maintain. This system is ideal for high pedestrian traffic walkways, roads, high usage road intersections, bridges and roofs of buildings, as well as domestically for driveways and home roofs. It was successfully tested in Anchorage during the winter of 2011-12, which had a record snowfall for the area.

The company, created in May 2013, was established by UAA Vice Provost for Research and Graduate Studies Dr. Helena Wisniewski and faculty inventor Zhaohui "Joey" Yang, a UAA engineering professor.

But the idea for CFT Solutions™ began three years ago when Yang met his collaborator, Professor Gangbing Song from University of Houston. Song was experimenting with commercially available flexible

carbon fiber that is light, strong, non-corrosive and conducts low-voltage electricity generating a certain amount of heat. Song was using these to heat surfaces in his lab.

"Knowing how dangerous a slick sidewalk is to pedestrians in winter, I could not wait to test the material in more challenging winter conditions like we have here in Alaska," Yang said. With a generous grant from Alaska University Transportation Center, their collaboration was born.

This is the second start-up company for UAA since it established Zensor™ in April earlier this year.

"Creating our second start-up company within a few months of our first illustrates UAA's upward trend in commercialization and how our research can contribute solutions for local and national needs," said Wisniewski, who develops and oversees the business infrastructure for commercialization of faculty and student research. This infrastructure led to the establishment of Seawolf Holdings and Seawolf Venture Fund, and world-class Board of Directors including corporate CEOs, venture firm partners, and entrepreneurs.

For more information about Yang's research and the inception of CFT Solutions, visit:

http://greenandgold.uaa.alask.aedu/?p=10660

Read more about Professor Yang's work at:

http://www.uaa.alaska.edu/schoolofengineering/faculty-staff/yang.cfm

For more information about CFT Solutions™, contact Dr. Helena Wisniewski at hswisniewski@uaa.alaska.edu or Dr. Joey Yang at zyang2@uaa.alaska.edu.



Photo courtesy of Zensor LLC

University of Alaska Anchorage Faculty Inventor and Electrical Engineering Professor Dr. John Lund holding a Zensor sensor, which he invented. The low-cost wireless sensors are powered by two small solar panels and can be used for monitoring remote infrastructure, asset management, surveillance, and security. Zensor sensors are patent pending.

Zensor Sensors

Opening the door to research commercialization at UAA

By Vanessa Orr

When Dr. John Lund, a professor of engineering at the University of Alaska Anchorage (UAA), first began studying the remote monitoring needs of companies doing business in the Arctic, it spawned the idea of creating a longer-lasting, lower-cost, maintenance-free wireless sensor. It also launched UAA into a new role as the owner of its first ever startup company, Zensor.

While Zensor, established in February by Lund and UAA Vice Provost for Research and Graduate Studies Dr. Helena Wisniewski, is the first company to take part in UAA's new business infrastructure designed to commercialize innovative faculty and student research, it certainly won't be the last. Already more than twenty-five UAA entrepreneurs have filed invention disclosures; a number significantly higher than when Wisniewski joined the UAA staff less than two years ago.

The Entrepreneurial Approach

"I was hired for two main reasons—to increase the research enterprise and to get technology commercialization in place," explains Wisniewski, who has been at the university for a year and nine months. "I was delighted that they wanted to go in this direction; the talent was here, but they needed someone to come in and pull it all together. Now we've gone from three invention disclosures to more than twenty-five, and two of these are from UAA students. Also,

"I was delighted that they wanted to go in this direction; the talent was here, but they needed someone to come in and pull it all together. Now we've gone from three invention disclosures to more than twenty-five, and two of these are from UAA students. Also, nine of these have evolved into patents pending with more in process."



—Dr. Helena Wisniewski
UAA Vice Provost for Research and Graduate Studies

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"This is an exciting time for UAA," agrees Chancellor Tom Case, adding that there were a number of reasons why the university chose to become involved in the commercialization of research. "There is real value in experiential learning, or learning by doing, in addition to classroom lectures, which is why the university has long placed an emphasis on undergraduate research. This approach also contributes to the growth of interdisciplinary work on campus, such as when engineering, computer science, and business students and faculty collaborate to take an entrepreneurial approach.

"We are also responsible for helping to meet the state's needs, especially in the area of economic development, when those needs match the university's mission," he continues. "And over time, mutually beneficial partnerships between universities and industries can result in the development of research parks clustered close to universities, which provides a good interface between entrepreneurship and research."

The Sensor that Started it All

Zensor LLC, a Seawolf Holdings company, offers a new generation of wireless sensors for use in remote monitoring, asset management, and surveillance and security. The sensors require no batteries, are effective with a small power source, and cost much less than comparable sensors on the market. "Zensor sensors are intended to make monitoring remote infrastructure cheaper, easy, and reliable," Lund says.

Unlike other sensors that are dedicated to one use, Zensor sensors collect and transmit data on humidity, light intensity, temperature, color, sound, thermal images, vibrations, and the tilt of a stationary object, such as a telephone pole. Additional capabilities can be added, including GPS and gas sensing.

"Zensor sensors are designed to meet many market needs," explains Wisniewski. "In industrial installations such as the pipeline, for example, the sensors can tell if there is gas or liquid leaking or if there are any cracks or structural instabilities in real-time.



"In the area of surveillance and security, the sensors can be placed along the border to detect vibration and can distinguish if the movement is caused by a person or animal," she adds.

"Zensor sensors can also be used at remote sites over large expanses to provide information in difficult-to-reach geographic areas. Sensors can be dropped from UAVs [unmanned aerial vehicles] to cover the landscape and provide information on environmental changes such as ice flow or melt."

One of the main advantages of the Zensor sensors is that only one sensor needs to be near a power source in order to provide data on what all of the other sensors are doing. "If one malfunctions, it does not take the whole network down," Wisniewski says. Solar energy coupled with an ultra-capacitor means that no batteries are required, and sensors are estimated to last more than fifty years. Best of all, Zensor sensors cost less than $40 per unit, compared to approximately $150 and up for other sensors on the market.

According to Wisniewski, Zensor sensors are available in small quantities now, and an initial installation may be completed by the end of summer. "We would like to set up a manufacturing facility in Anchorage to produce these sensors; in the first phase of the plan, the facility would involve more hand assembly; in the second phase, there would be more automation using a robot system for assembly," she explains.

Taking a Product to Market

While the university has always been home to brilliant researchers and innovative ideas, marketing those ideas is a relatively new concept. Wisniewski, a technical entrepreneur who has successfully launched ten startup companies and who has worked for public and private companies in academia and for the federal government, set up the university's commercialization infrastructure that was approved by UAA's Board of Regents in August 2012. This infrastructure includes Seawolf Holdings and the Seawolf Venture Fund, which provides seed money for startups. The venture fund is planning to raise $10 million and already has a $1.5 million letter of commitment from the municipality of Anchorage's 49th State Angel Fund.

"We're planning on raising money from a combination of private corporations, individuals and venture funds, which is one way that the university and the community can work together on community investment," Wisniewski says. "We hope that this leads to more interactions that can help to fulfill some of the community's needs." Wisniewski adds that Seawolf will be considering proposals from the community or from outside of the state, provided that a company's offices relocate to Anchorage.

"Our goal is to build businesses based in Anchorage and Alaska, which will attract more corporate investments to the area and enhance Anchorage as a center for technological advancement and innovation," she continues.

When one of UAA's startup companies succeeds, it will benefit both the entrepreneur and the university. "The university has equity in the startup company and the founder has equity in the startup company, so if it's sold, they both benefit," Wisniewski explains. "Even if an inventor does not create a startup, if their technology is licensed, they still receive a portion of the net end royalty."

According to Wisniewski, of the first $10,000 that is received from licensing, the inventor gets 100 percent of net. Above $10,000, and the inventor receives 50 percent of net. If the company is sold and includes patents, the founder gets a portion of the royalties. If a faculty member is a founder of the startup company, they receive equity in the company. "The UAA policy on royalties is one of the best that I've seen throughout the country," she says. "Getting 50 percent of net after $10,000 is very nice; most universities offer 50 percent up to a point, and then a lower amount on a sliding scale."

While each contract is negotiated individually based on the amount of help that the university provides to a particular spinoff company, working together benefits everyone involved. "Some companies will fail, some will see moderate success, and others will be very successful," says Case. "There are a number of universities that have had one or more spinoffs become very successful—and they've seen significant cash flow back into their universities.

"When times are tough and money is hard to come by, this could also provide economic benefits to the state as it would reduce the university's reliance on legislative funding," he adds.

Incentive for Considering UAA

Both Wisniewski and Case agree that providing a way to get good ideas to market could serve as an incentive for faculty and students to consider UAA. "This model, when done well with a good concept, not only benefits the state and the university, but students who have great ideas," says Case. "While not all of the different kinds of research that we do here has commercialization potential, that does not make it any less worthy as it is adding to the body of knowledge. But for those ideas that do lend themselves to commercialization, this program provides a good step to take that opportunity."

"Not only does the commercialization aspect provide researchers with the opportunity to produce patents and create startup companies, but it also provides hands-on experience for students and faculty in how to become more entrepreneurial," Wisniewski adds. "While not all faculty members are interested in generating intellectual property, the research component is very integral to this process, and intellectual property often generates new research questions."

Now that Zensor sensors have opened the door, UAA is looking at launching its second startup in the next few weeks and has two more waiting in line. "We are also discussing a licensing opportunity for UAA's surgical rod bender for spinal surgery with interested partners, and are starting to receive revenues from licenses for our student success model, so there will be quite a few things happening in the next couple of months," says Wisniewski.

"Future commercialization could span a variety of areas, including embedded sensors, educational software, cyber security, biomedical devices, and further down the road, potential therapeutic pharmaceuticals to treat neurodegenerative diseases," she adds. "This is a very exciting time for UAA." ☼

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02/25/14 Presenta-tion: Matanuska-Susitna Borough

<TARGET><BILL></BILL><SUBJECT>02-25-14 Presentation Matanuska-Susitna Borough</SUBJECT><COMM>HEDT28</COMM></TARGET>

Ginger Blaisdell

From: Apache <apache@wwwjnu04.akleg.gov>
Sent: Monday, February 24, 2014 1:20 PM
To: LIO Juneau; Ginger Blaisdell
Subject: Teleconference Order Form

Meeting: new

Sponsor and/or Committee Name: Economic Development Trade and Tourism

Date of Teleconference: February 25, 2014

Start Time: 11:15am

End Time: 12:45pm

Chairing Site: capitol

Juneau Room: 124

Bill Information:

Streamed to akl.tv: yes

Executive Session: no

Contact Person: Ginger Blaisdell

Telephone Number: 465-5265

Email Address: ginger.blaisdell@akleg.gov

LIO Sites:

May other LIO's add: yes

Offnet Name(s):

none expected

Other Information:

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

AGENDA
February 25 , 2014

1. **Call to Order**

~Gavel~ Welcome members of the Economic Development, Trade and Tourism Committee.

2. **Roll Call**

- For the record, in attendance are: (representative xx, … and representative xx)
- I would like to introduce Debbie Tillinghast, the committee recording secretary
- Info services person
- Ginger Blaisdell, committee aide for EDT

3. **AGENDA**

Don Dyer, Economic Development Director, MSB
Larry DeVilbiss, Mayor Mat-Su Borough

4. **Before we ADJOURN:**

- No meeting Thursday
- Next week March 3 and 4, EDTT will be joining Energy and Transportation committees for presentations on biofuel energy plants and airships and the possibilities for Alaska ~ more info will follow via email on these meetings
- We are also working on the final details for a lunch time event on Earthquake preparedness on Wednesday March 5. Watch for elevator posters and I will send an email with more details on this event.

Thank you for wanting to be part of making Alaska one of the best economic environments in the nation. We are ADJOURNED." ~gavel~

2014

Mat-Su Borough

Point MacKenzie Enterprise Zone

Alaska's Link To Economic Certainty






Economic Development

"The Mat-Su Borough is today what Orange County California was in the 1950's"

John Schuetz - Principal, RSH Group

MSBA Lunch October 2012

Where is the Mat-Su?



2013 Alaska Revenue Sources

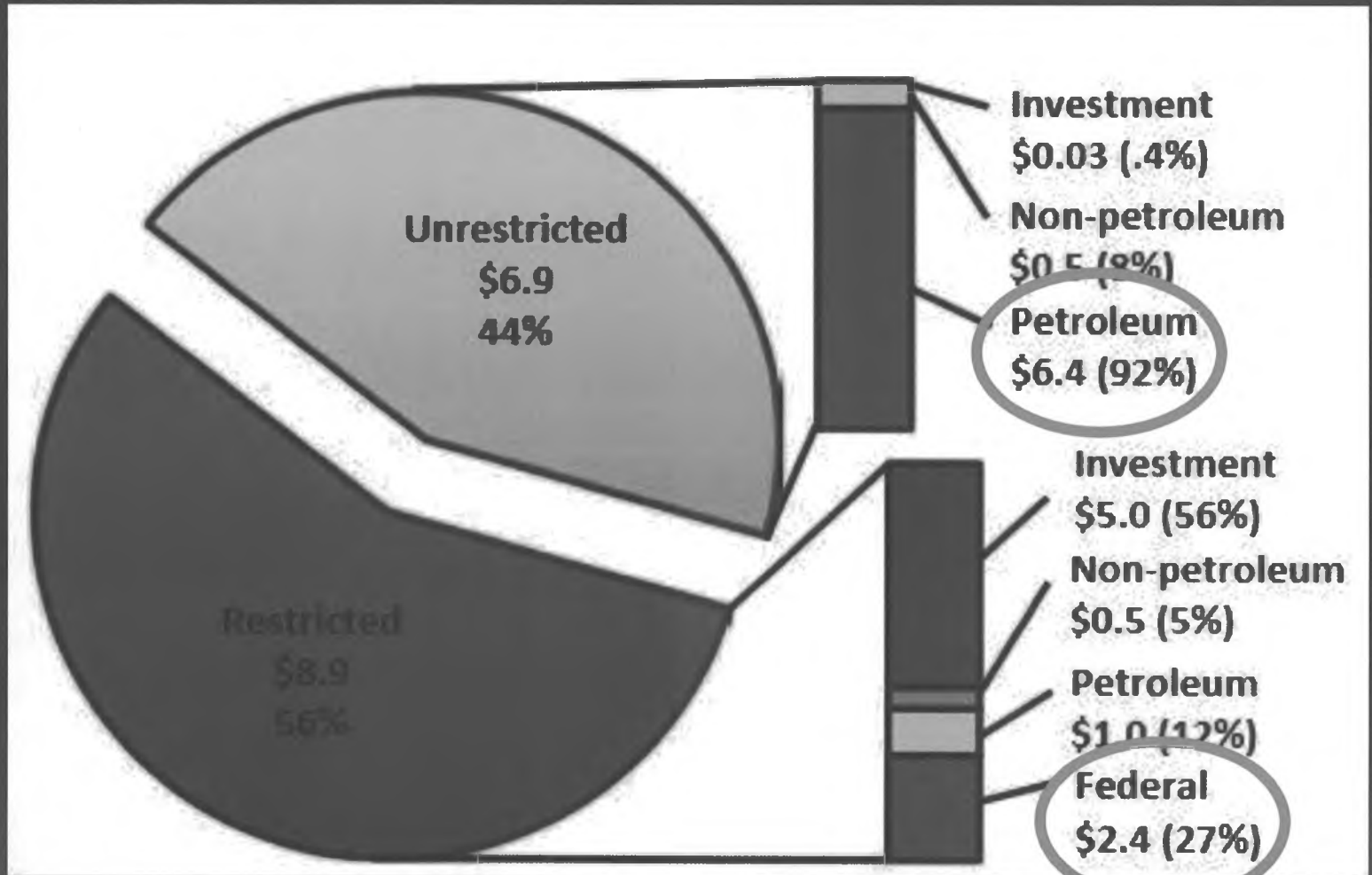
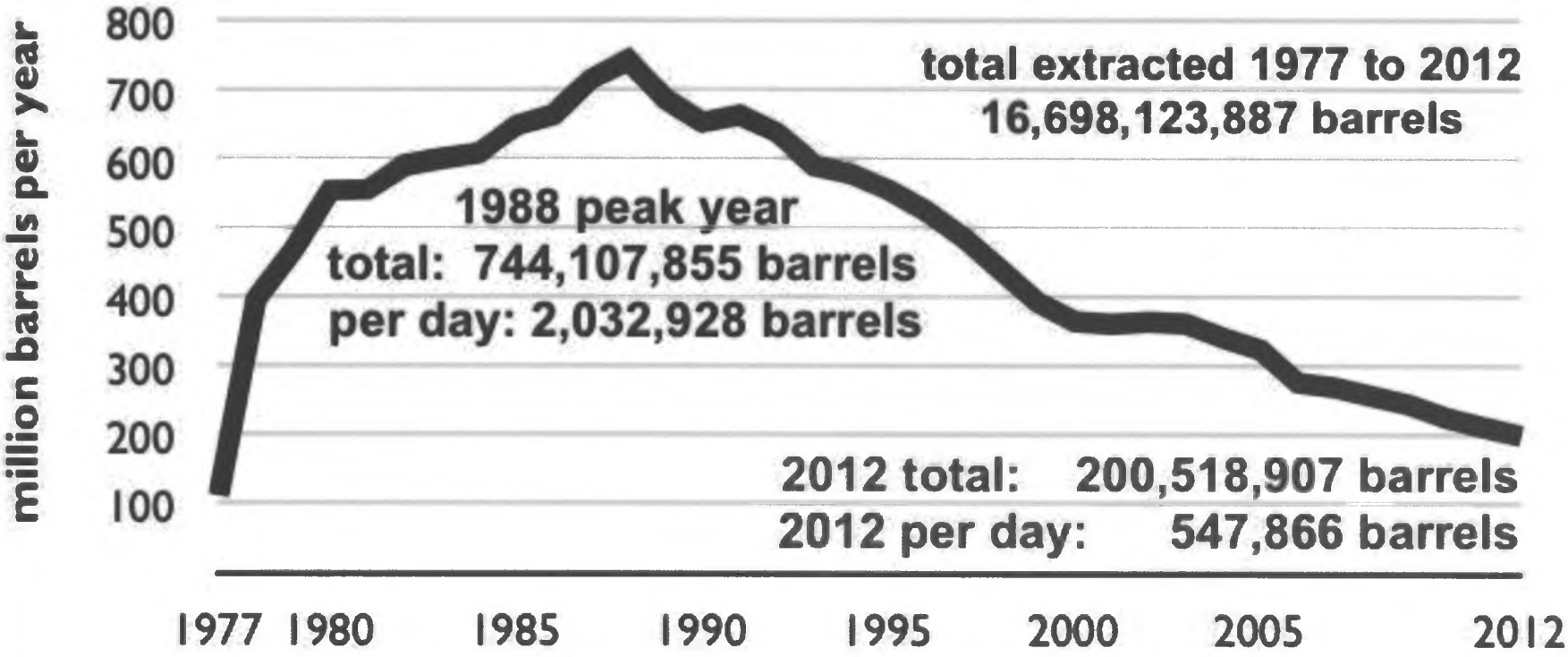


Figure 2-A: FY 2013 Total State Revenue, by restriction and type ($ billions)

Alaska Pipeline Peak & Decline

low flow threshold for Arctic winter estimated to be between 300 and 500 thousand barrels / day (109 million to 182 million / year)

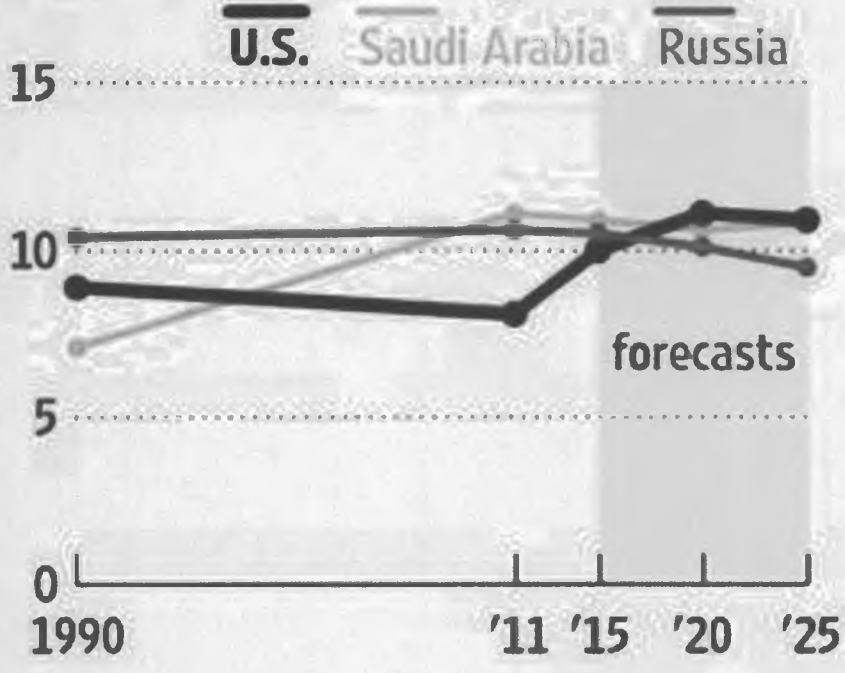


posted at www.oilempire.us/alaska.html
data source: www.alyeska-pipe.com/TAPS/PipelineOperations/Throughput

U.S. to Leapfrog Saudis

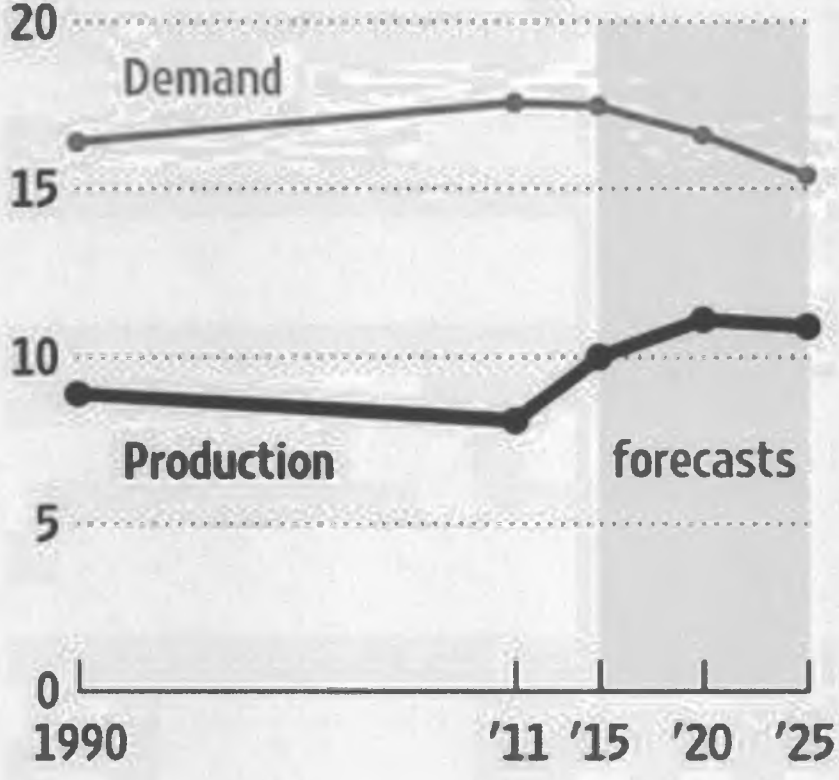
The U.S. is set to overtake Saudi oil output thanks to unconventional reservoirs...

Oil production,
in millions barrels a day



...while its oil demand is expected to fall

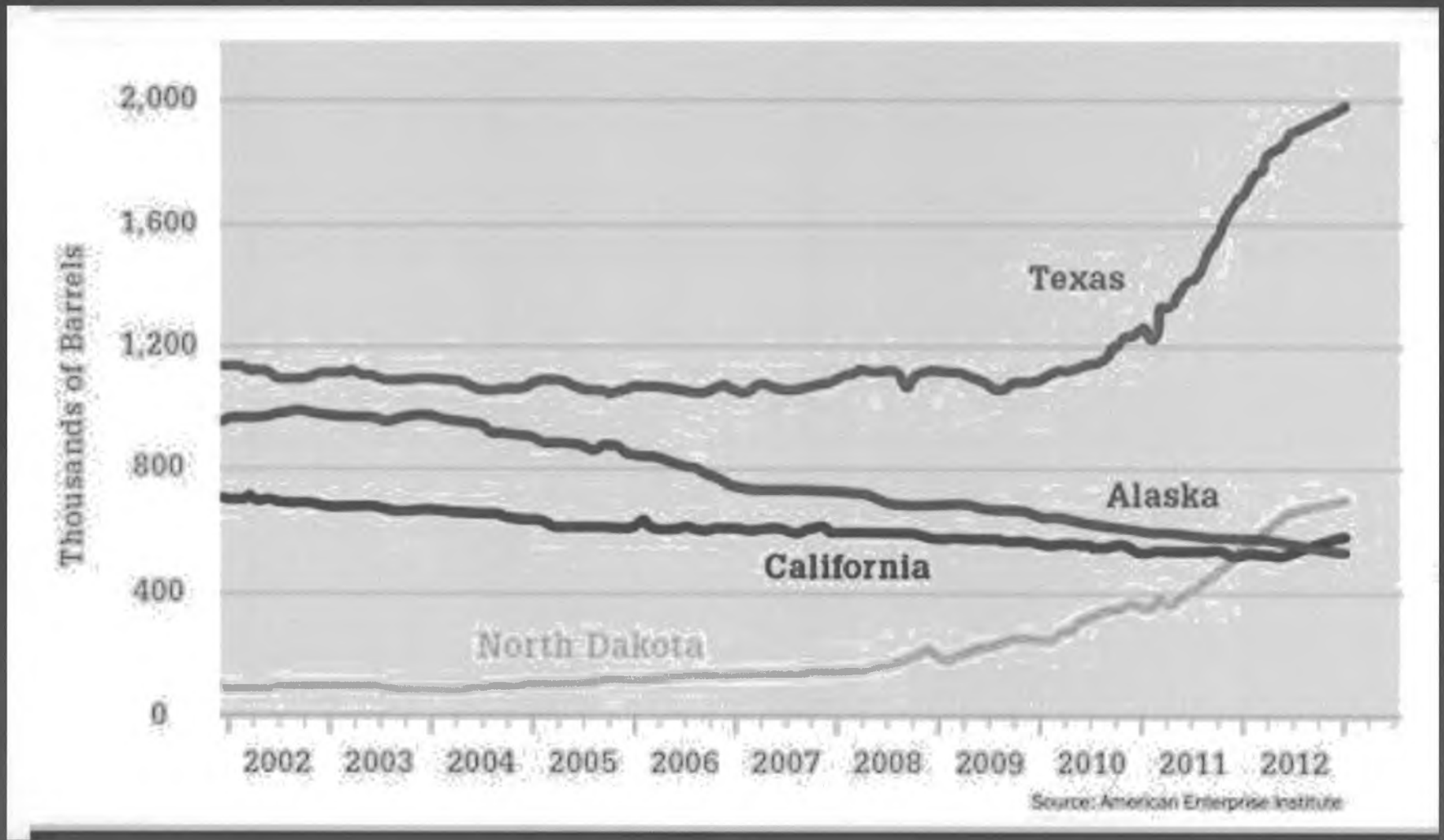
U.S. oil demand vs. production,
in millions of barrels a day



Note: Figures include crude and liquids
Source: International Energy Agency

The Wall Street Journal

The Oil Production Rank



Non Oil Threats to Alaskan Prosperity

- Federal Spending Cuts
- Downward Pressure on the Value of the Dollar
- Rising Interest Rates
- Geo Political Issues
- Glacial Pace Permitting
- Silo Politics
- Environmentalist Legal Actions
- Entry Level Workforce Retention

Unite & Diversify *NOW!*

Opportunity #1

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That Love Us



WORLD TRADE CENTER ALASKA

Greg Galik - Summer 2013

Invert the Alaska Economic Model

"Economies of Scale"

- Let go of the "Alaska as the consumer" model
- Alaska's 726,000 consumer base is too small for many industries
- *Think Like a Country!*
- Focus on Asia as the consumer
- 4.2 billion – *350 million more born by 2018!*
- *Focus on making 50 million Asian customers!*
- *Allocate 2% for Alaskans*
- *Security for 1 million Alaskans!*

Aberdeen

ASIA BY THE NUMBERS

The Economic Growth and Diversity of Established and Emerging Economies

Population Estimates

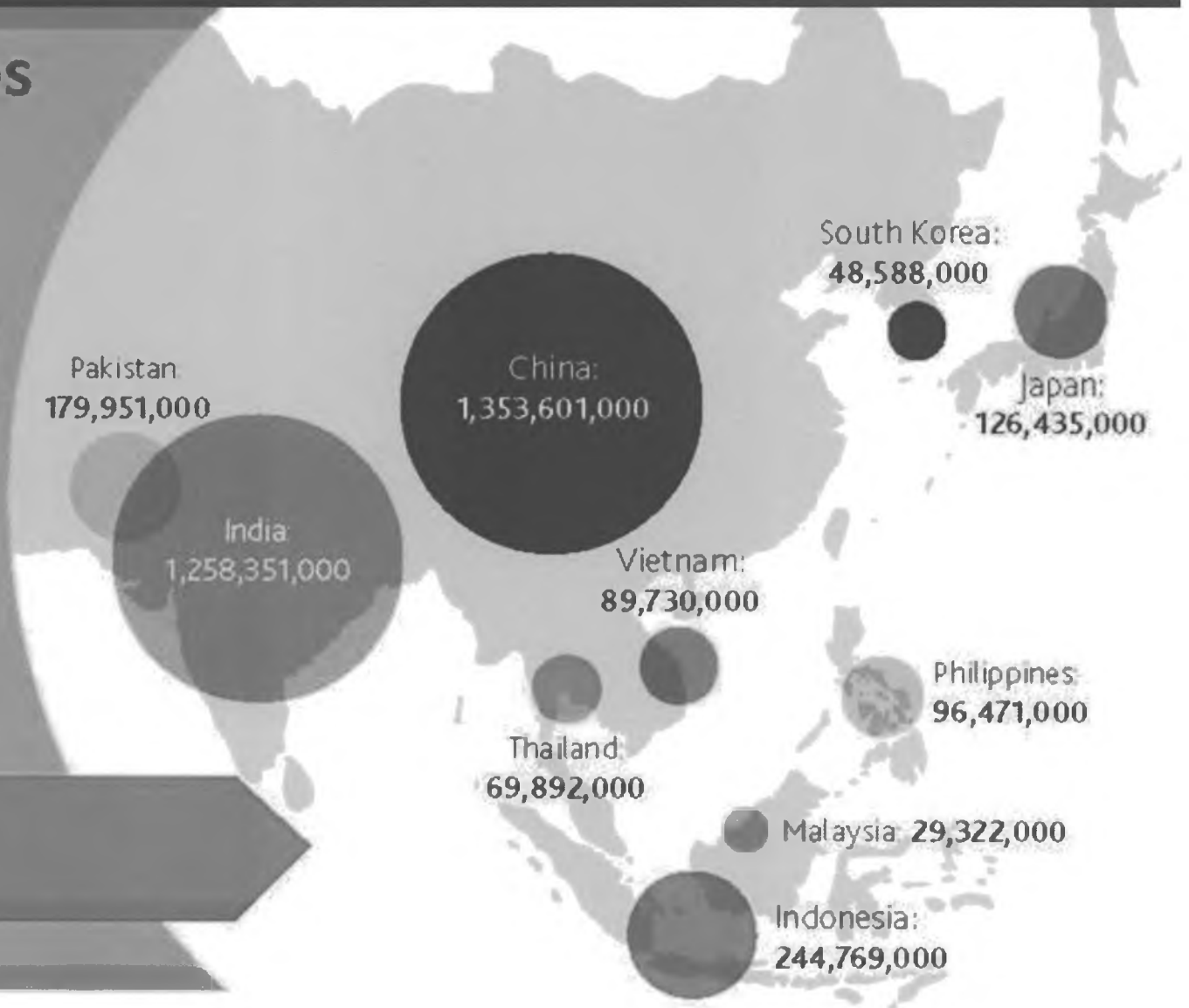
Continent with highest population density: 86.7 inhabitants/km²
#2: Europe: 70 inhabitants/km²

Asia: 86.7

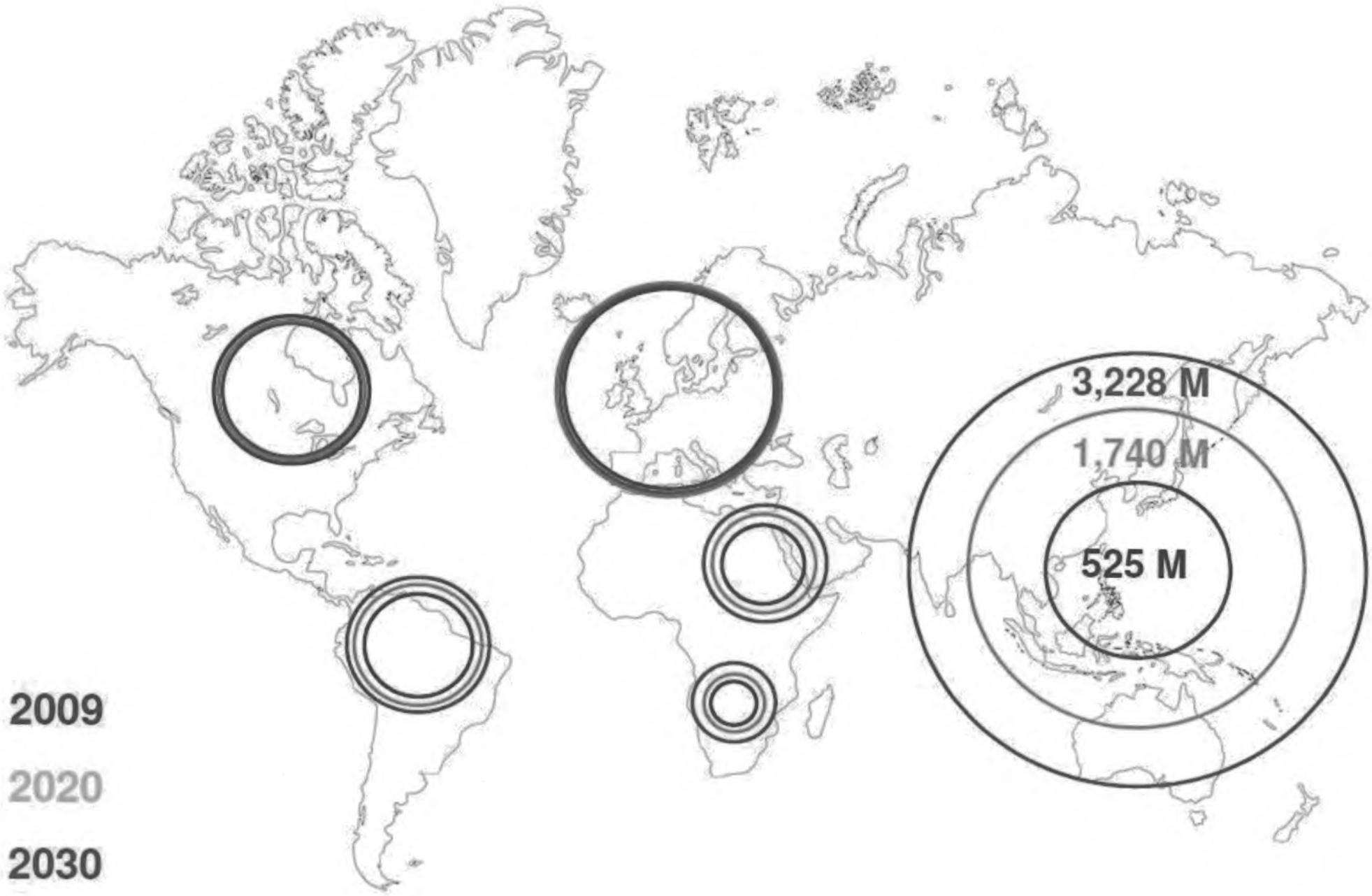
Europe: 70

4,250,361,000
people in Eastern, South-Central, Central, Southern, South-Eastern, and Western Asia

2012 Projected Populations of Major Economies

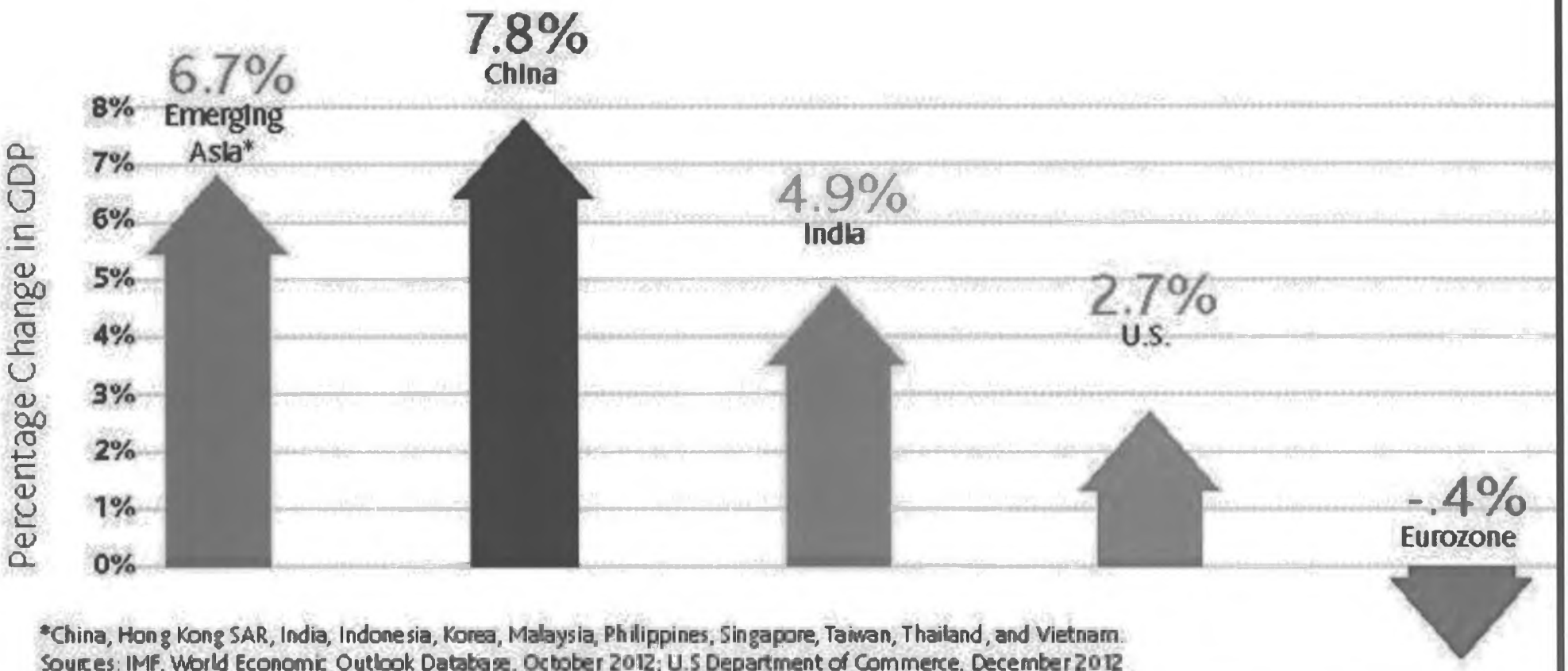


Source: United Nations, Department of Economic and Social Affairs, Population Division (2011). World Population Prospects, 2010 Revision.



Source: The Emerging Middle Class in Developing Countries, Homi Kharas, Jan 10

Economic Growth Compared to The West



*China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand, and Vietnam.
Sources: IMF, World Economic Outlook Database, October 2012; U.S Department of Commerce, December 2012

Go to the Presentation



- **Google: "The Merits of Investing in Asia"**

Alaska's Total Overseas Exports 2012 ($4.6 Billion)

Ranking	Country	Amount (USD Millions)
1.	China	$1,337
2.	Japan	$790
3.	South Korea	$691
4.	Canada	$462
5.	Germany	$274
6.	Spain	$151
7.	Singapore	$139
8.	Netherlands	$121
9.	Australia	$108
10.	Belgium	$59
11.	Others	$464
	Total:	$4,596

Source: U.S. Census Bureau

Alaska's China Era Continues

(2000 – 12 Full Year Comparison, USD Million)



Source: U.S. Census Bureau

Invest in Abundance

- Asian consumers will drive the future World Economy
- Asia wants what we have
- Alaska has *MASSIVE* capacity to produce for Asian markets
- They have the money to buy it

October 2015:

The On-Ramp to the Asian Marketplace

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ECONOMIC DEVELOPMENT
COUNCIL

The Power of Knowledge and Leadership



October 2014
Fort Worth, Texas

October 2015 – Anchorage Alaska



1,300+ IEDC Member Attendees

300+ Site Selectors



This Is Our Window To Prepare

Calendar	J	F	M	A	M	J	J	A	S	O	N	D
2014							(MSB 2015 Budget)					
2015							(MSB 2016 Budget)			IEDC		

20 Months

International Trade Education

WORLD TRADE CENTER ALASKA PRESENTS:



INTERNATIONAL TRADE

BOOTCAMPS in Mat-Su

a series of focused training sessions vital to your international business success

click on the banner to register

Point MacKenzie Enterprise Zone

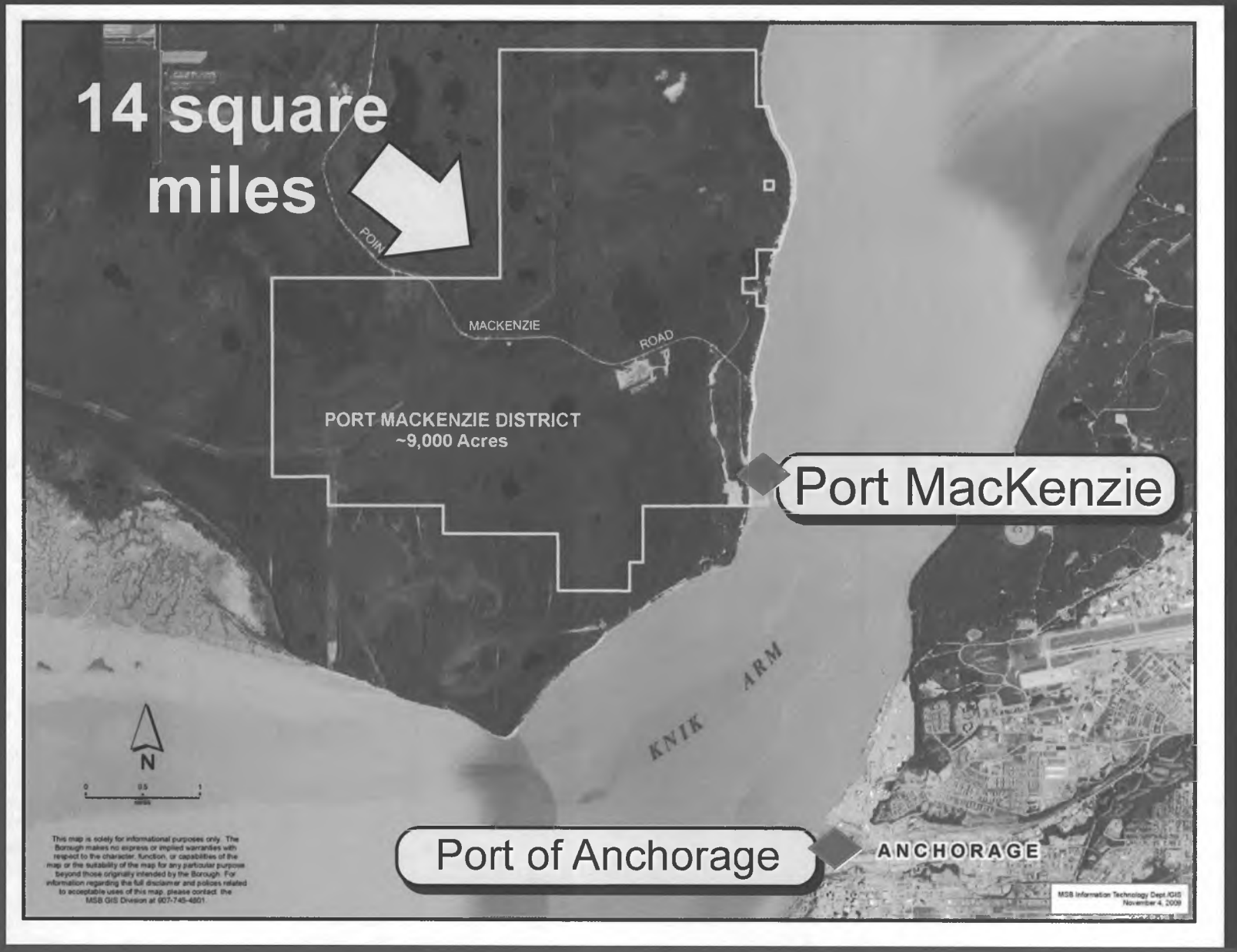
Where Four Critical Economic Engines Converge

1. Port MacKenzie
2. Port MacKenzie Rail Extension
3. Knik Arm Bridge
4. ASAP Pipeline

Port
MacKenzie

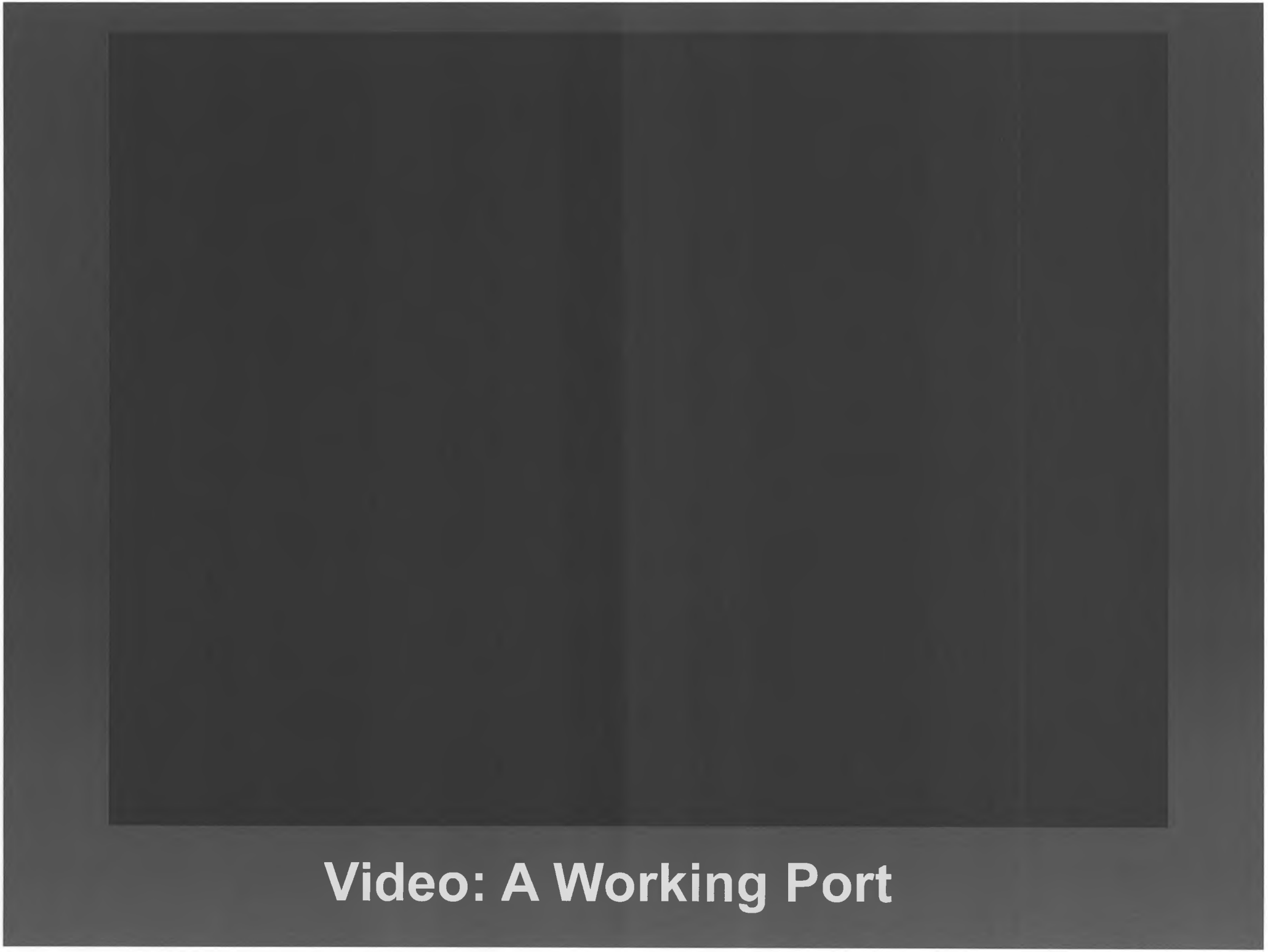


The Only Port in Alaska With Large Staging, Storage, and Industrial Areas




copyright 2010 Alaska Aerial Technologies


Largest Ship Ever Docked in
Upper Cook Inlet
JP AZURE
YOKOHAMA
Self Scouring☺
No Dredging $$
© Ken Graham Photography.com



Video: A Working Port





Barge dock staging area

Project Cargo

- Girders for bridges
- Pipe for gas lines and oil fields
- Fracking sand for oil shale development
- Heavy equipment
- Camp housing







Project Cargo

Lower transportation costs for PROJECT CARGO on Alaska's biggest projects:

- Natural gas pipeline(s)
- Susitna Dam
- Bridges
- Mines
- Industry



Bulk Imports





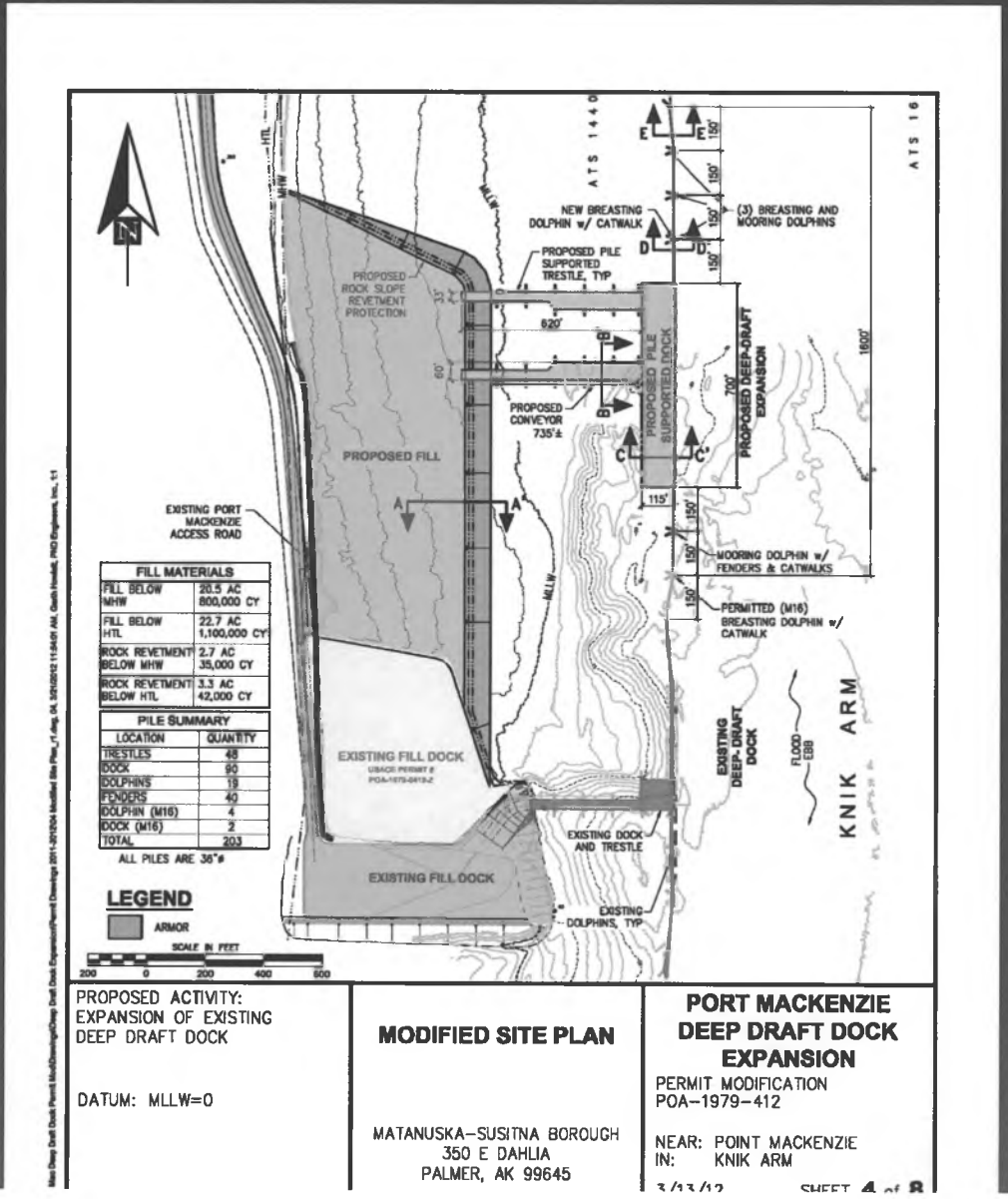
BIG Lease Lots





For BIG Projects

Phase 3 In Permitting Stage



Port
MacKenzie

PORT MACKENZIE
RAIL EXTENSION



The Critical Link: Port MacKenzie Rail Extension

32 Miles (51.5 km)

100 Rail Car Loop at Port

PERMITTING

✓STB Record of Decision (Nov 2011)

✓Corps Of Engineers Permit Approved (Aug 2012)

✓Environmental Lawsuit –Prevailed (Nov 2012)

✓Corp Permit Lawsuit (Pending),

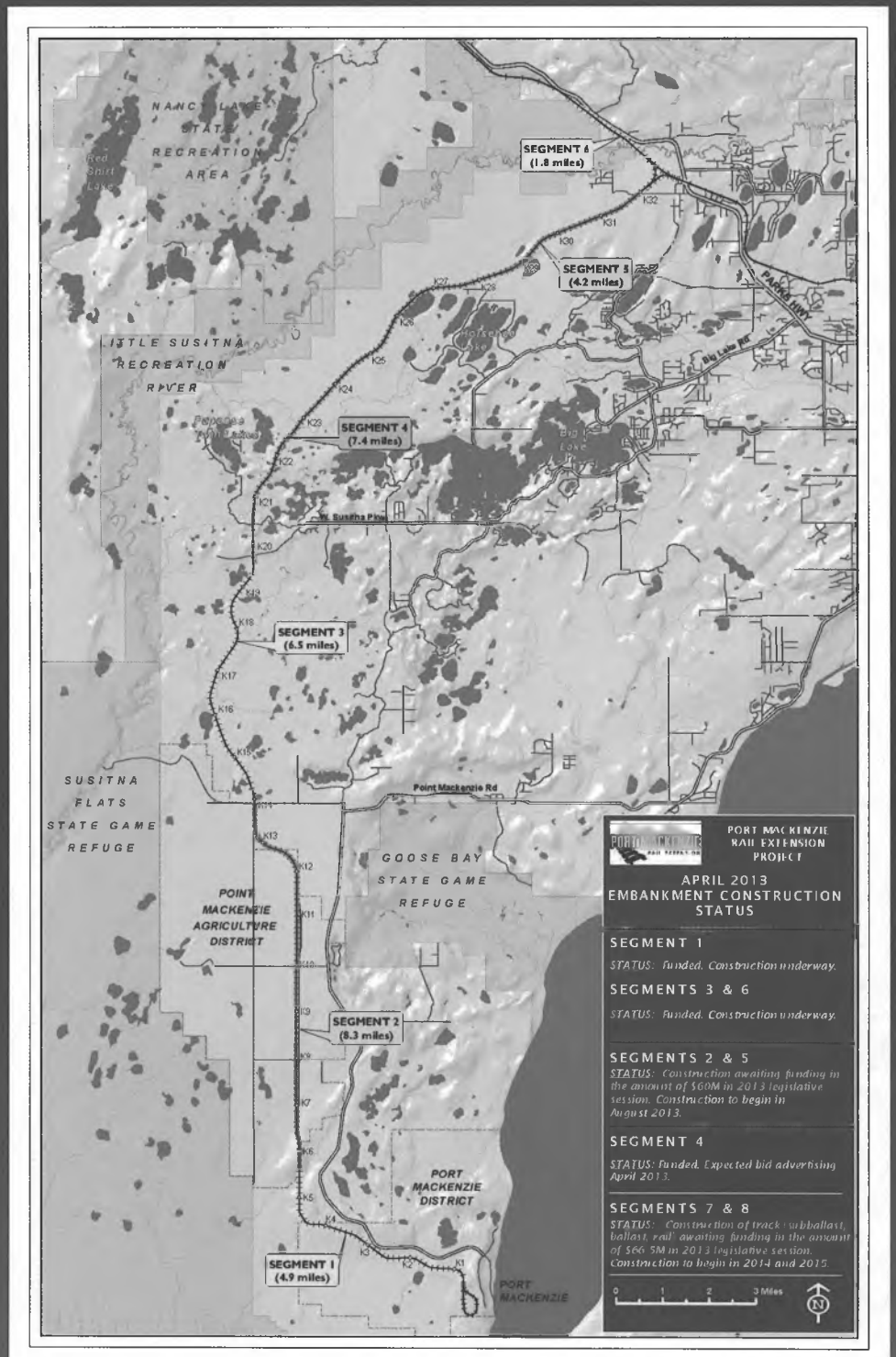
Two Stop- Work Injunctions Defeated

CURRENT STATUS

Under Construction

GOAL

Finish Fall 2016, dependent on funding



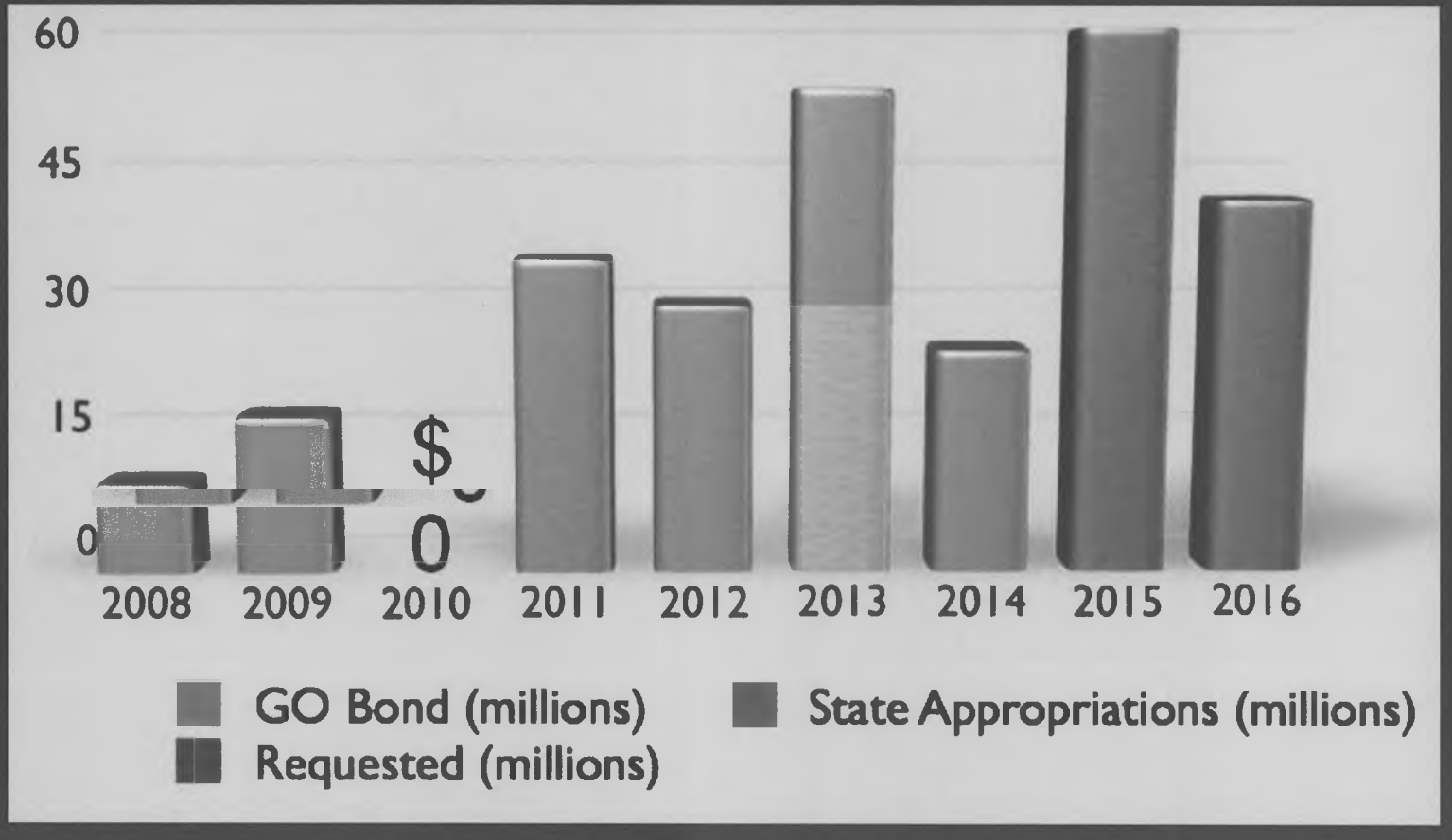


2013 PRME Progress

Rail At Houston NOW



Project Funding Over Time



Total funding to date: $171 million

Funding to go: $101.5 Million

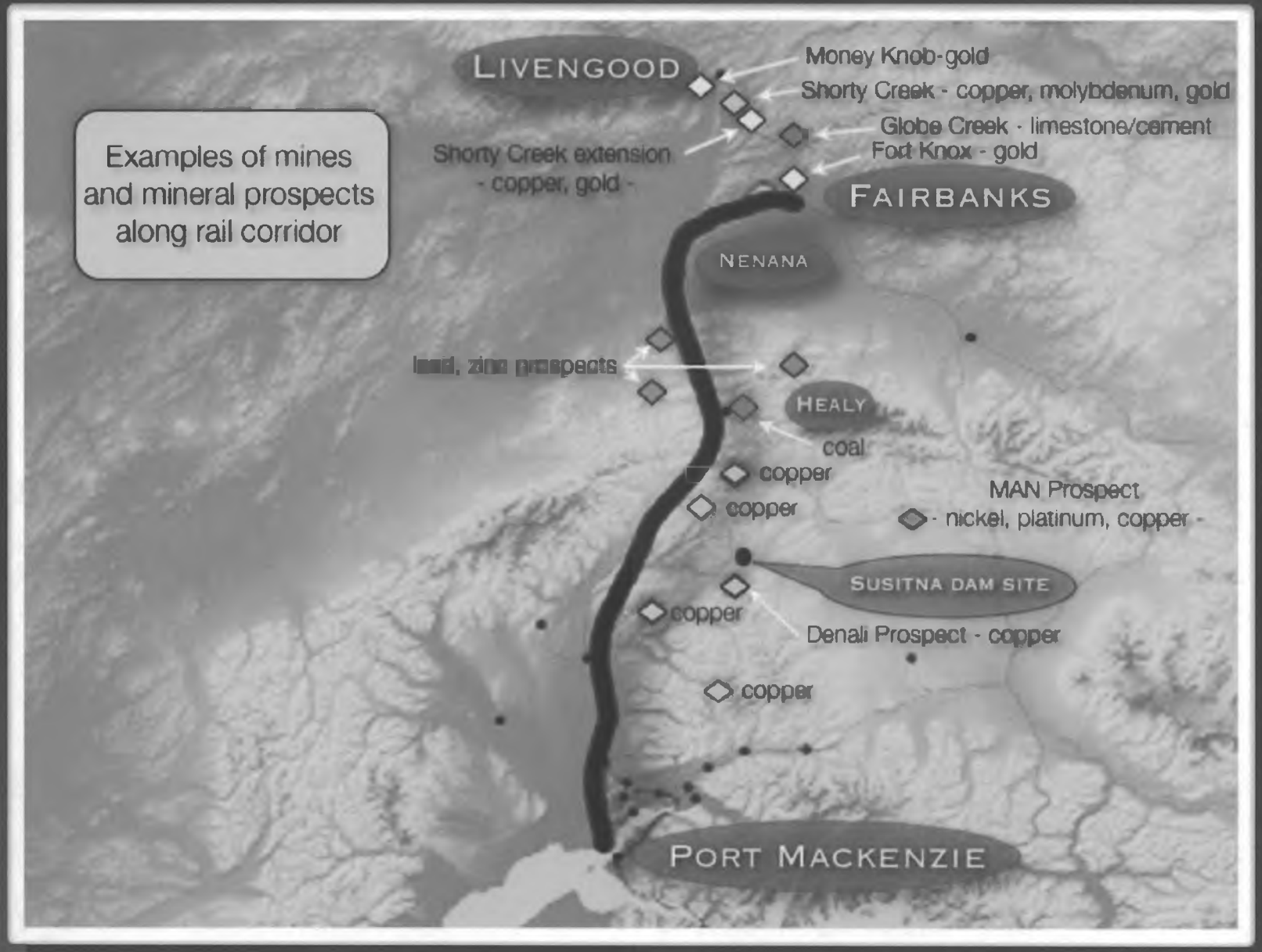

Greater Wasilla Chamber of Commerce
Raven Gold Alaska
Pogo Mine
Central Alaska Energy
JDM Consultants
West Pac
Klondike Concrete Co.
Houston Chamber of Commerce
Accelergy
Greater Fairbanks Chamber of Commerce
Alaska Gasoline Development Corp.
Alutiiq
Greater Palmer Chamber of Commerce
Alaska State Chamber of Commerce
Houston City
Kinross-Fort Knox
Alaska Railroad
Fairbanks North Star Borough
Resource Development Council
International Union of Operating Engineers
AEDC
The Alaska Miners Association



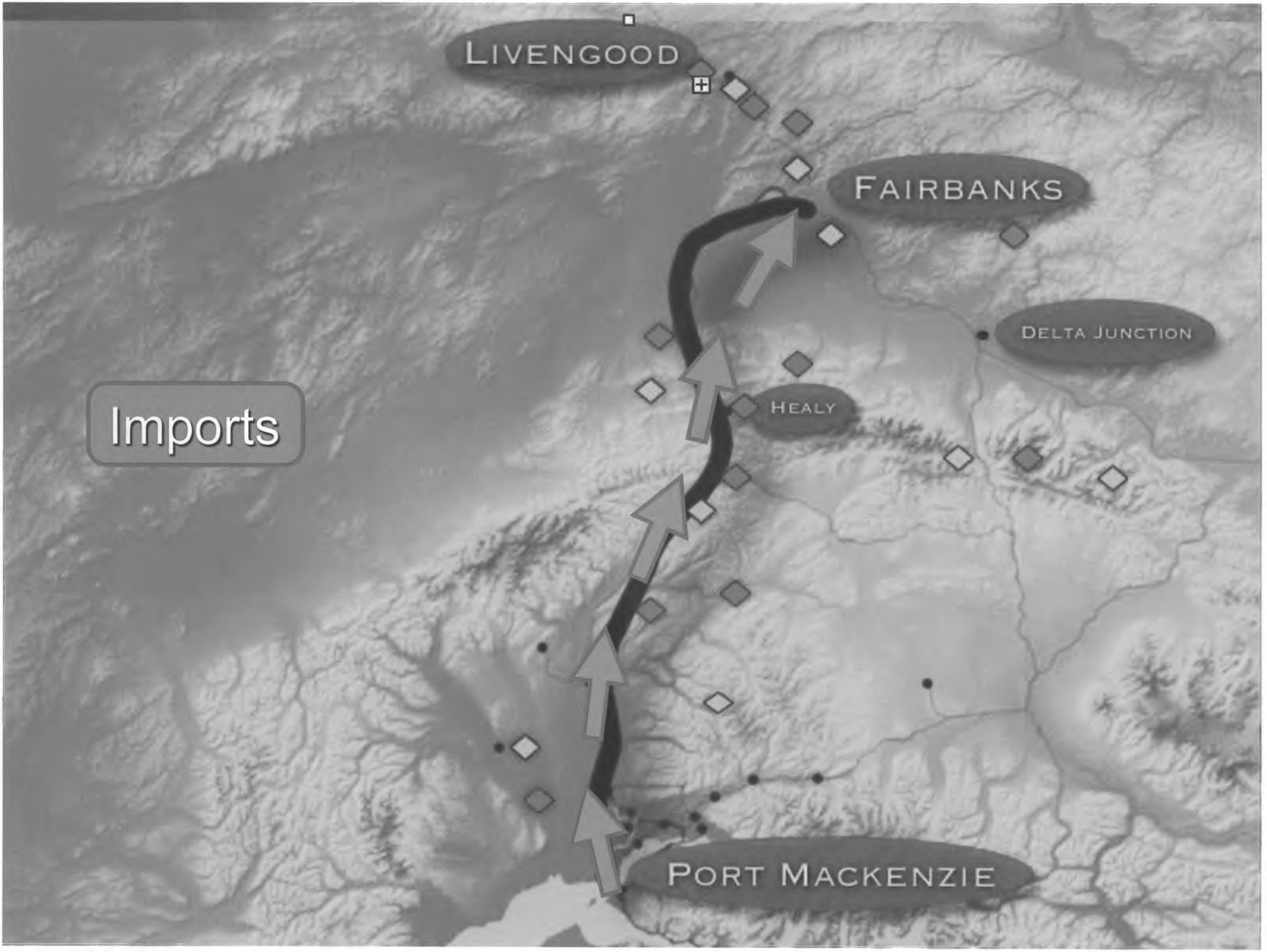
WORLD TRADE CENTER ALASKA

Greg Wolf - Summer 2013

Interior Natural Resource Opportunities




Imports


LIVENGOOD
FAIRBANKS
DELTA JUNCTION
HEALY
Imports
PORT MACKENZIE

Projects to Support









Pipeline Construction Support

Cost Savings Related to Use of the Port MacKenzie Rail Extension to Support Alaska Gas Pipeline Construction



northern economics inc.

Prepared for the

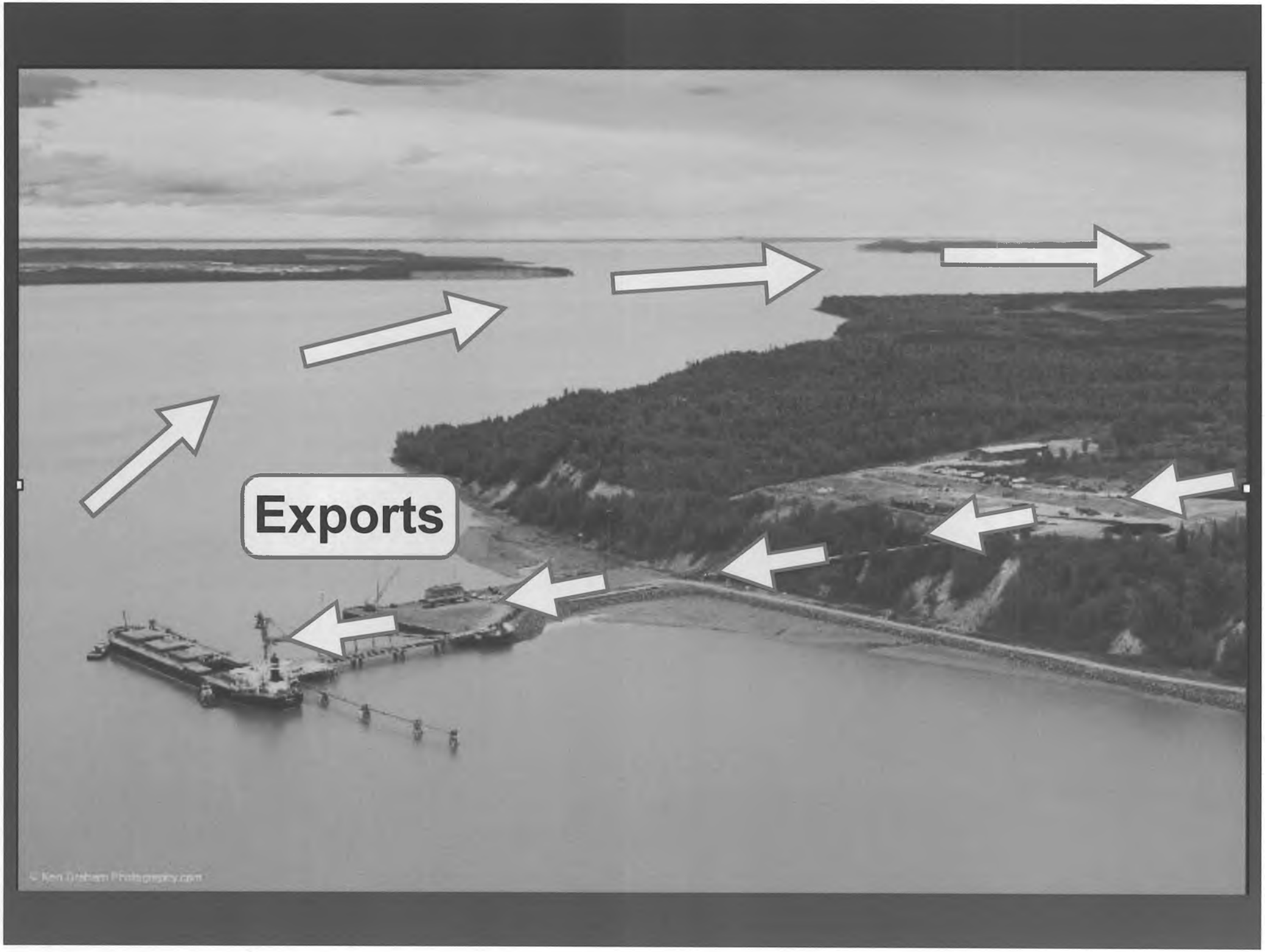
Matanuska-Susitna Borough

March 2008

Avoided Costs

$122 million - $176 million


LIVENGOOD
FAIRBANKS
DELTA JUNCTION
HEALY
Exports
PORT MACKENZIE


Exports

Alaska's *Only* 100 Railcar Loop

High Efficiency Loading & Unloading





Companies & Freight on Port MacKenzie Rail

WestPac Logistics
Central Alaska Energy
Sumitomo Metal Mining
Alutiiq
QAP
Usibelli
More under NDA

MSB - WTC - AKRR Partnership

WORLD TRADE CENTER ALASKA

Export & Rail Belt Market Development
Building the market to ride the rail!

Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge



Mat-Su / Anchorage Workforce

- The Mat-Su provides 20,870 workers to the Anchorage workforce daily.
- This data comes by comparing Workmans comp insurance data to PFD data to determine employment vs. residence addresses.
- W2 type workers only. This does not include contractors, business owners, and other non W2 personnel.

Anchorage / Mat-Su Jobs

- Goose Creek Correctional Facility

  371 Jobs, 72 miles

- The Port MacKenzie area

  5,000 Jobs and up as industry builds

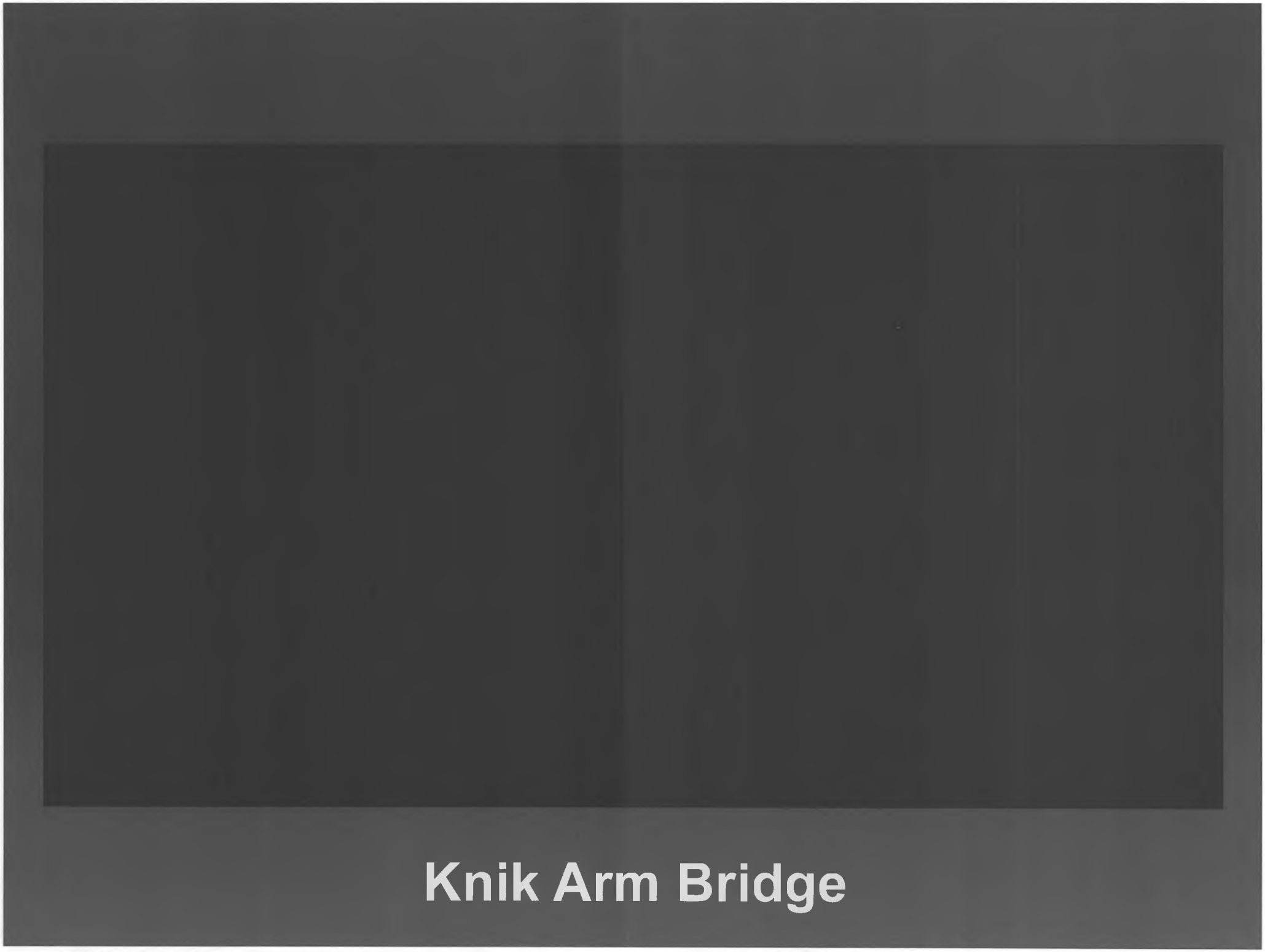
Knik Arm Bridge





Knik Arm Bridge
Sends Mat-Su Consumers to Anchorage

- 16,300+ consumers and workforce of Knik-Fairview will be 30 miles CLOSER to Anchorage
- In 2012, Knik-Fairview was the #1 fastest growing community in Alaska and #7 in nation
- Residents of the of the new Point MacKenzie Town Site will have better access to Anchorage than Wasilla



Knik Arm Bridge

Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

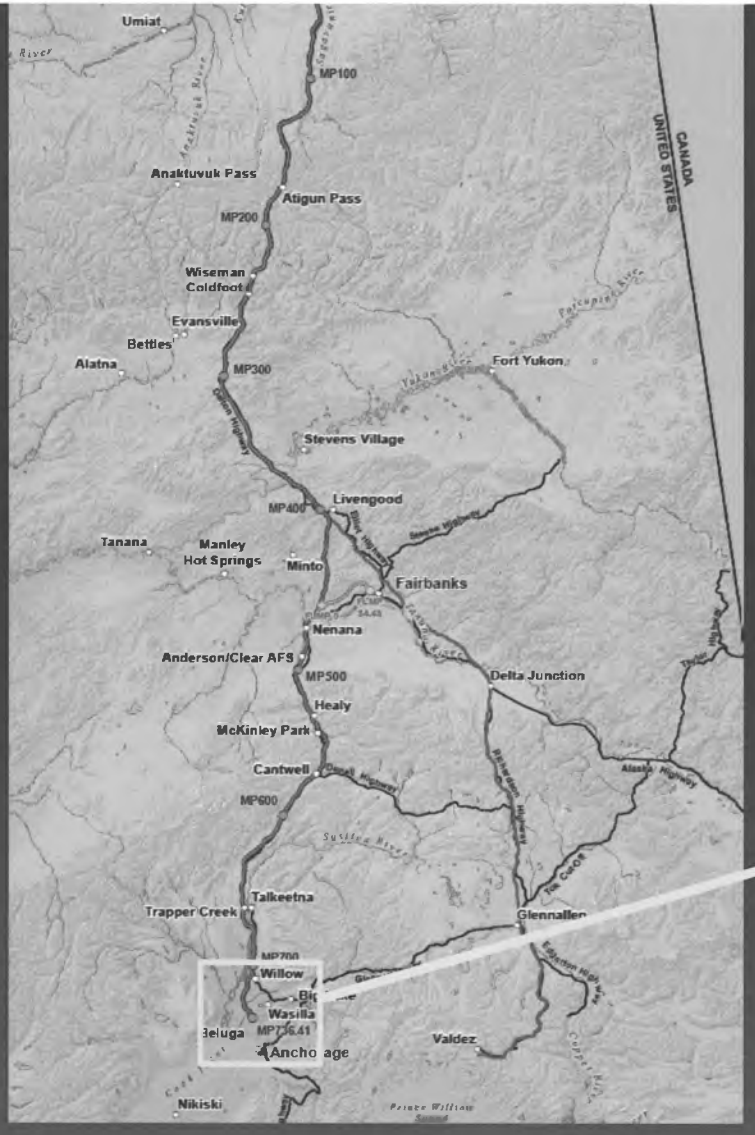
Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

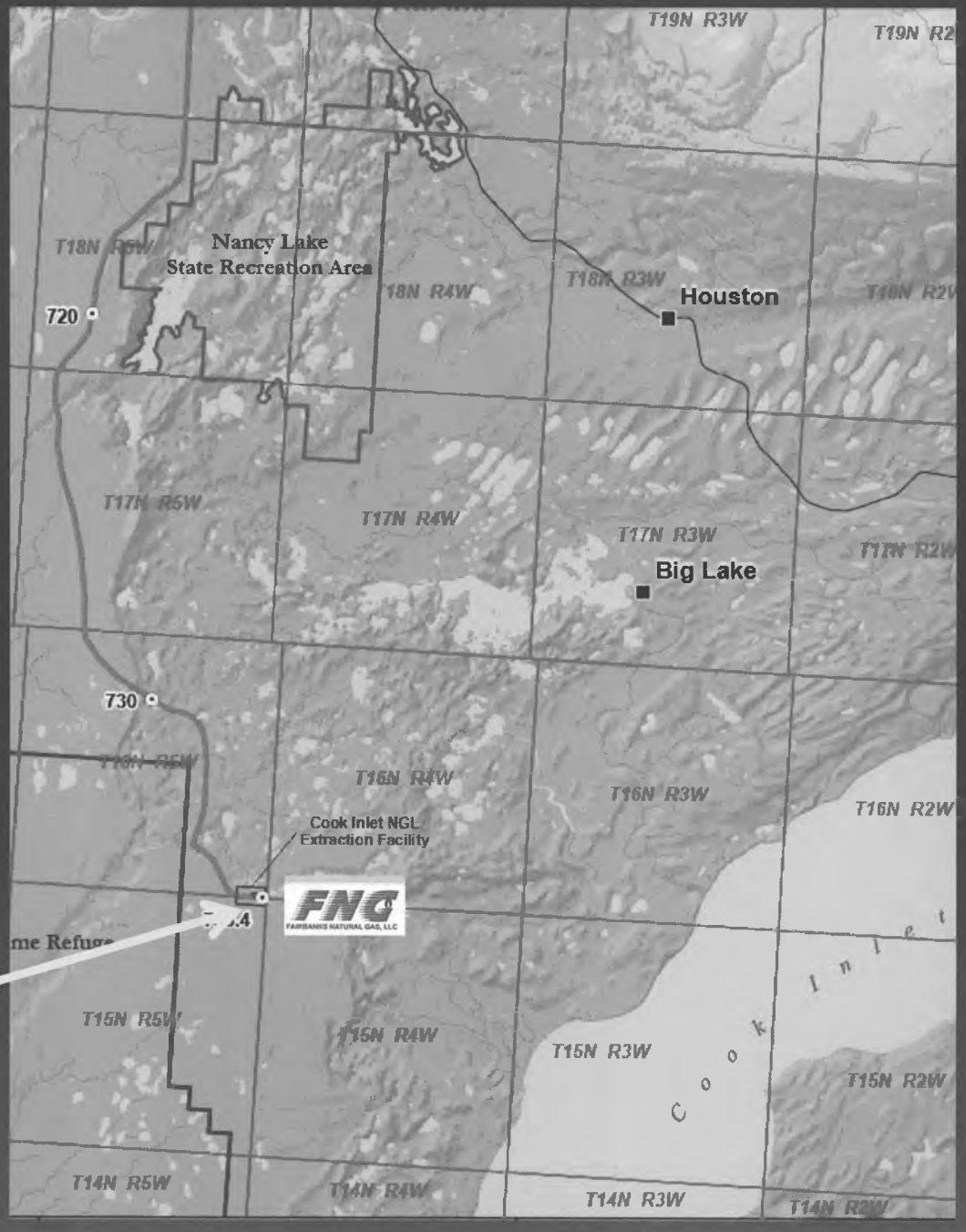


ASAP

Alaska's In-State Gas Pipeline



Pipeline Route



AGDC & REI



News

FOR IMMEDIATE RELEASE
February 12, 2014

AGDC Encouraged by Export Interest in ASAP Project Natural Gas

Japanese LNG Developer Presents Multiple Investment Options to AGDC Board

Anchorage, AK – The Alaska Gasline Development Corporation (AGDC) Board of Directors welcomed Resources Energy Inc. (REI) President and CEO Shun-ichi Shimizu to their regularly scheduled board meeting held in Anchorage on Monday. Mr. Shimizu, accompanied by REI Vice President and Alaska Manager Mary Ann Pease, presented an update on REI's plans for developing LNG facilities on the Kenai Peninsula and *at Point MacKenzie in Alaska*...

Following the presentation, AGDC President Dan Fauske commented "REI would be an excellent anchor tenant for the ASAP project and the alignment of our project timelines is an encouraging sign as we prepare to hold our 2015 open session. Today's presentation reaffirms our belief that we have a commercially viable project capable of delivering gas to Alaskans by 2020".

Port MacKenzie: Imports
Port MacKenzie Rail: Transportation
Knik Arm Bridge: Workforce







Point MacKenzie Enterprise Zone

Where Four Critical Economic Engines Converge

1. Port MacKenzie
2. Port MacKenzie Rail Extension
3. Knik Arm Bridge – *To nowhere?*
4. ASAP Pipeline

And More…

Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP

Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility



Goose Creek Correctional Facility

- 1,500 Inmates
- 371 Jobs







Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

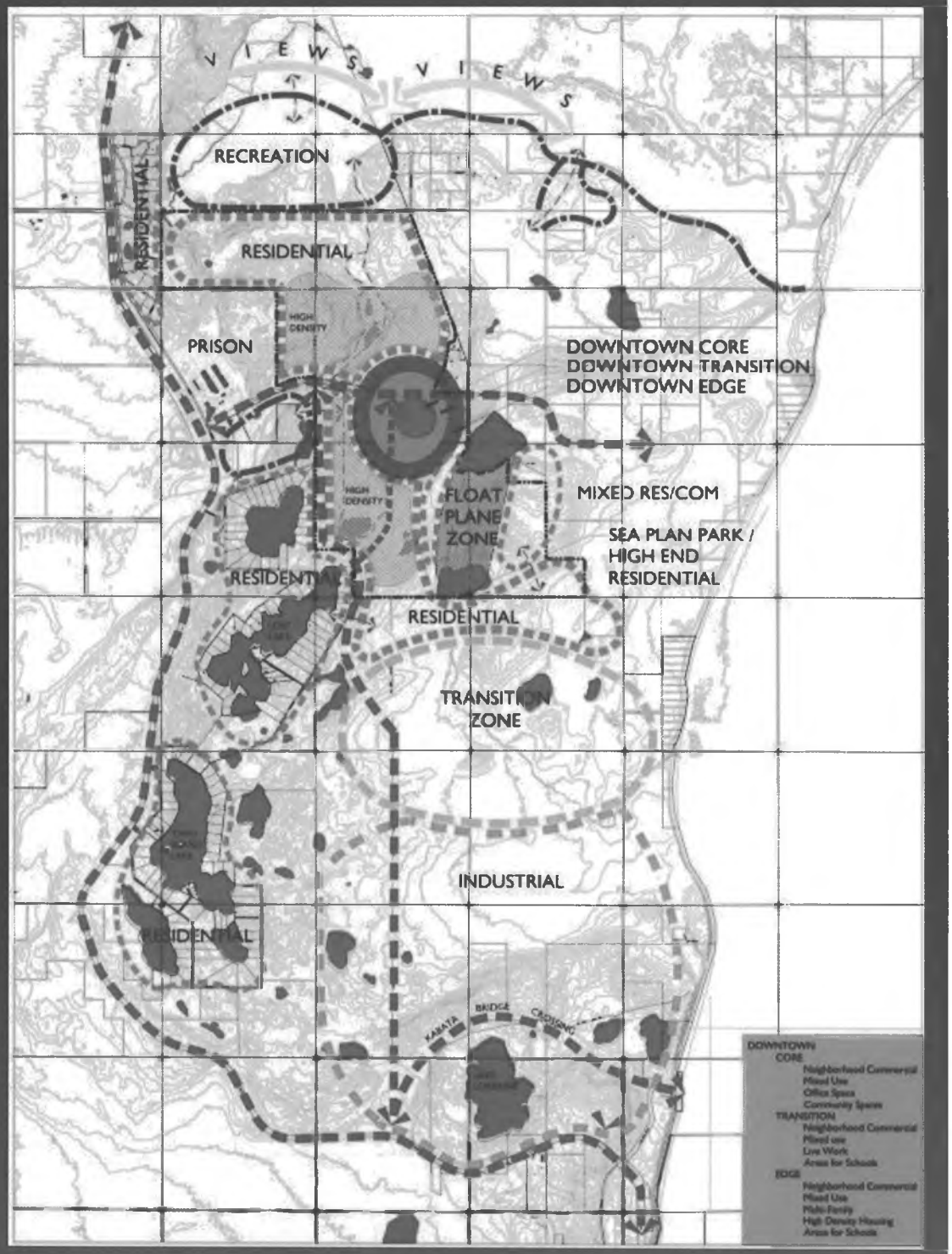
Goose Creek Correctional Facility

Alsop Town Site



Alsop Town Site

- 5,000 residents
- Walking distance to Goose Creek CF
- Float Plane Zone



Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility

Alsop Town Site

FNG
FAIRBANKS NATURAL GAS, LLC



Fairbanks Natural Gas

FAIRBANKS NATURAL GAS, LLC











Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility

Alsop Town Site

FNG
FAIRBANKS NATURAL GAS, LLC

MEA

NSTAR

MOA Natural Gas Supply



Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility

Alsop Town Site

FNG
FAIRBANKS NATURAL GAS, LLC

MFA

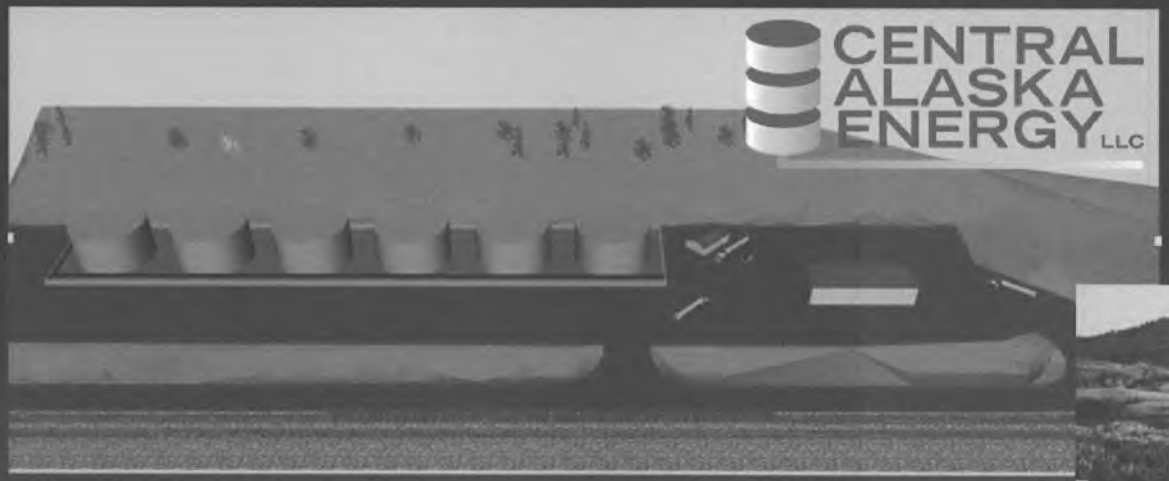
MOA Natural Gas Supply

CENTRAL ALASKA ENERGY LLC



Fuel Imports

- **Lower Cost Fuel For the Interior**
- 6.9 M gallon fuel tank farm
- Low sulfur diesel fuel
- Unleaded gasoline
- $15 million construction project, start May 2014
- Funded by AIDEA- ***LOAN***





Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility

Alsop Town Site

FNG
FAIRBANKS NATURAL GAS, LLC

MEA

MOA Natural Gas Supply

CENTRAL ALASKA ENERGY LLC



CHUGACH
POWERING ALASKA'S FUTURE

Power to South Central & Interior



Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility

Alsop Town Site

FNG
FAIRBANKS NATURAL GAS, LLC

MEA

MOA Natural Gas Supply

CENTRAL ALASKA ENERGY LLC

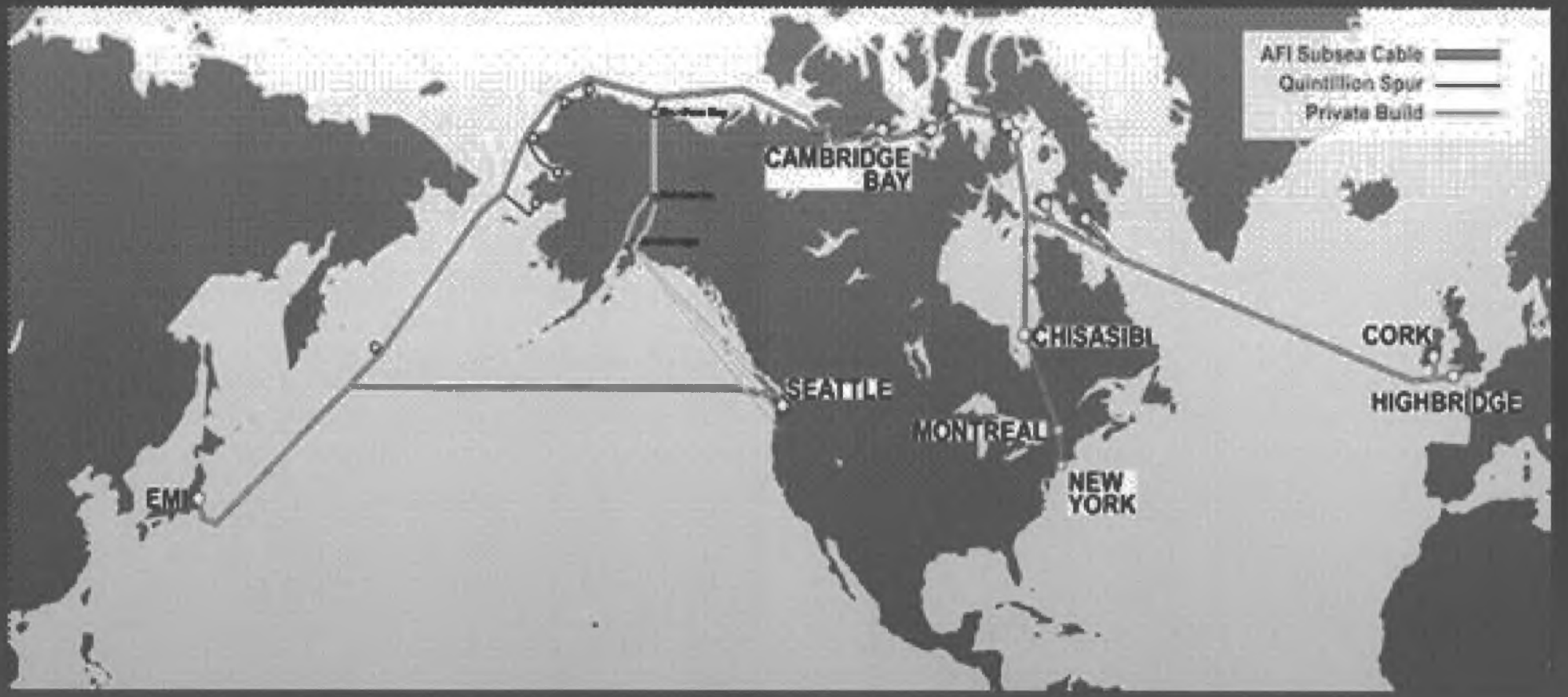


CHUGACH
POWERING ALASKA'S FUTURE

QUINTILLION NETWORKS

futaris

Arctic Fiber Project



What Arctic Fiber Delivers

- The key tool for attracting tech sector businesses
- Family Wage jobs
- Entrepreneurial / e-commerce businesses
- Competitive on a GLOBAL scale
- Medical sector growth – e-medicine – distance medicine
- Lower cost public sector health, safety, and security services
- Opportunities for data centers and big data industries
- Improved educational opportunities
- Increased quality of life
- Better tools for marketing Alaska to the world

Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

Goose Creek Correctional Facility

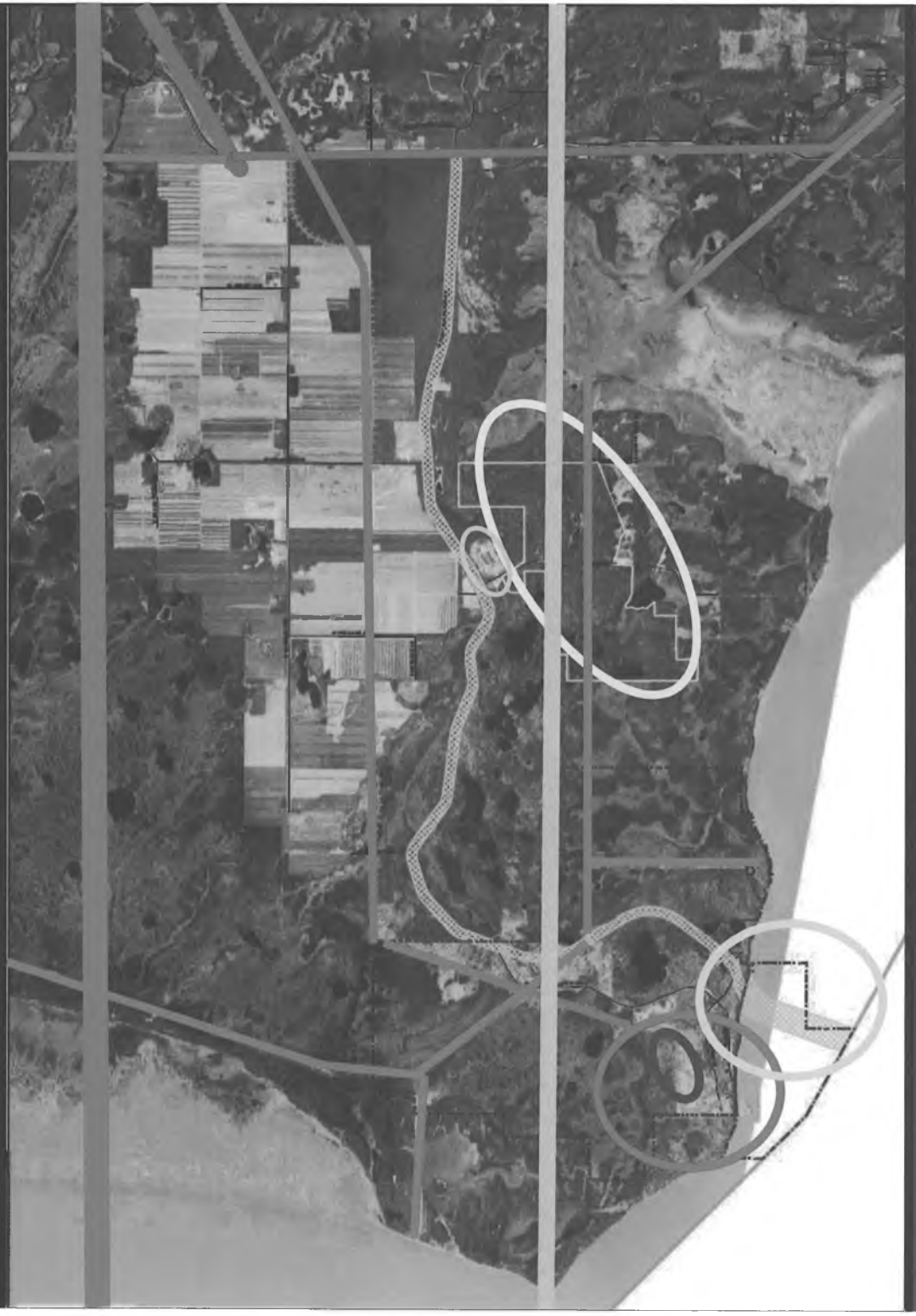
Alsop Town Site

FNG
FAIRBANKS NATURAL GAS, LLC

MEA

MOA Natural Gas Supply

CENTRAL ALASKA ENERGY LLC



CHUGACH
POWERING ALASKA'S FUTURE

QUINTILLION NETWORKS

futaris

WestPac LOGISTICS LLC

Project Forwarding Lessee

WestPac
LOGISTICS LLC



Port MacKenzie

PORT MACKENZIE RAIL EXTENSION

Knik Arm Bridge

ASAP
Alaska's In-State Gas Pipeline

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Alsop Town Site

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FAIRBANKS NATURAL GAS, LLC

MEA

MOA Natural Gas Supply

CENTRAL ALASKA ENERGY LLC



CHUGACH
POWERING ALASKA'S FUTURE

QUINTILLION NETWORKS

futaris

WestPac LOGISTICS LLC

Alutiiq
A Wholly Owned Subsidiary of Afognak Native Corporation

Alutiiq

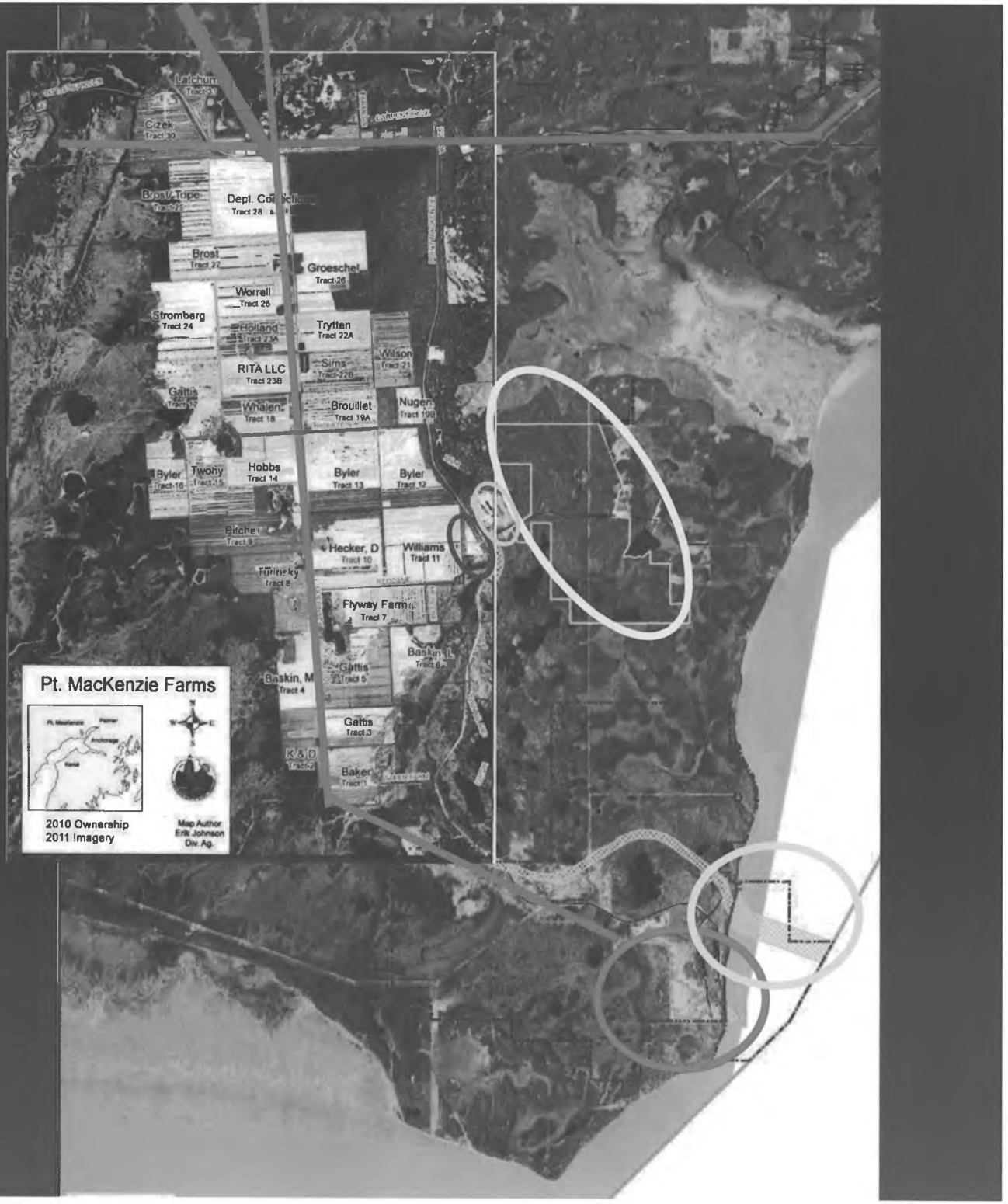
A Wholly Owned Subsidiary of Afognak Native Corporation

- Port Tennant since 2003
- Manufactured Housing & Camp Facilities



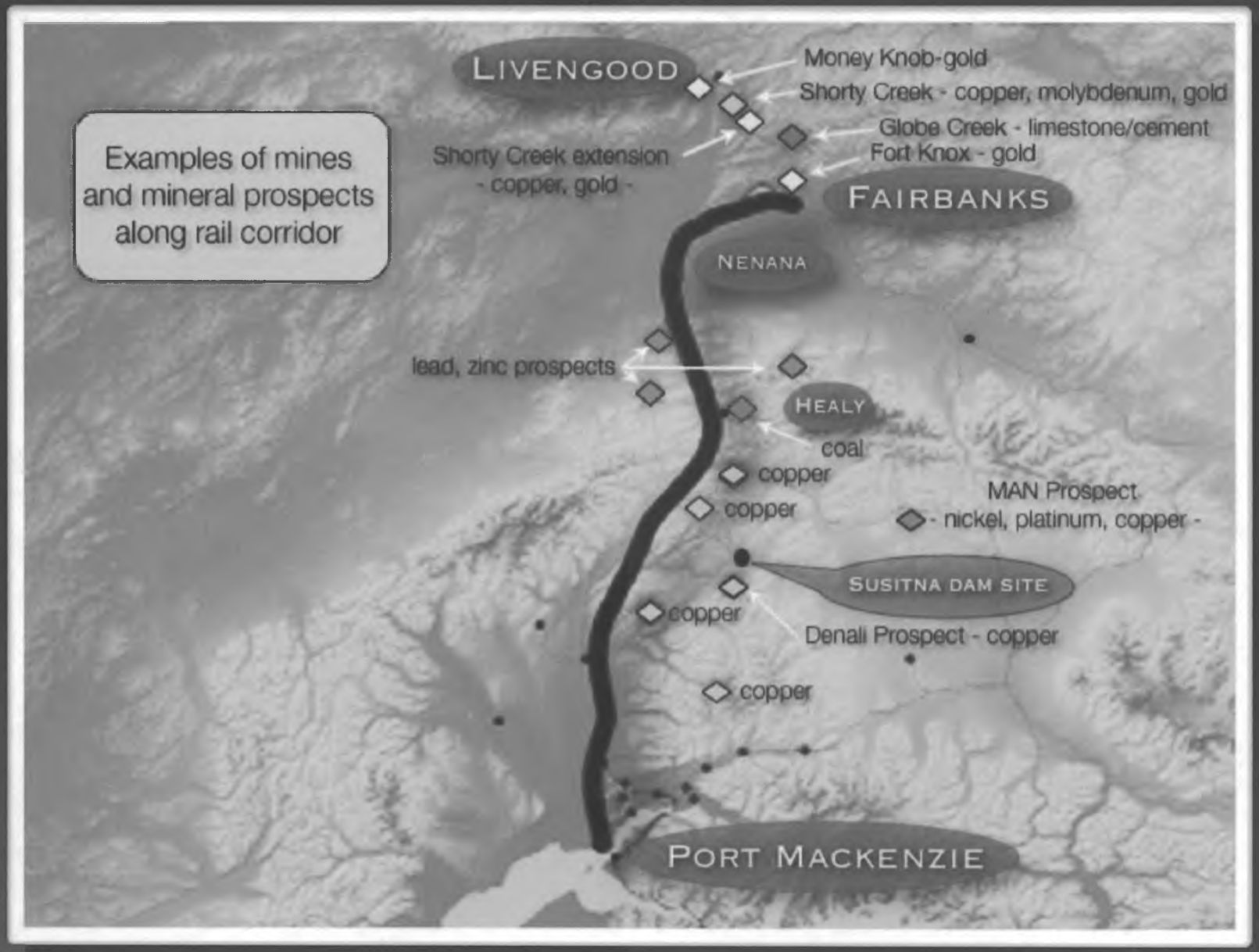
Pt. MacKenzie Agriculture

15,000 Acres

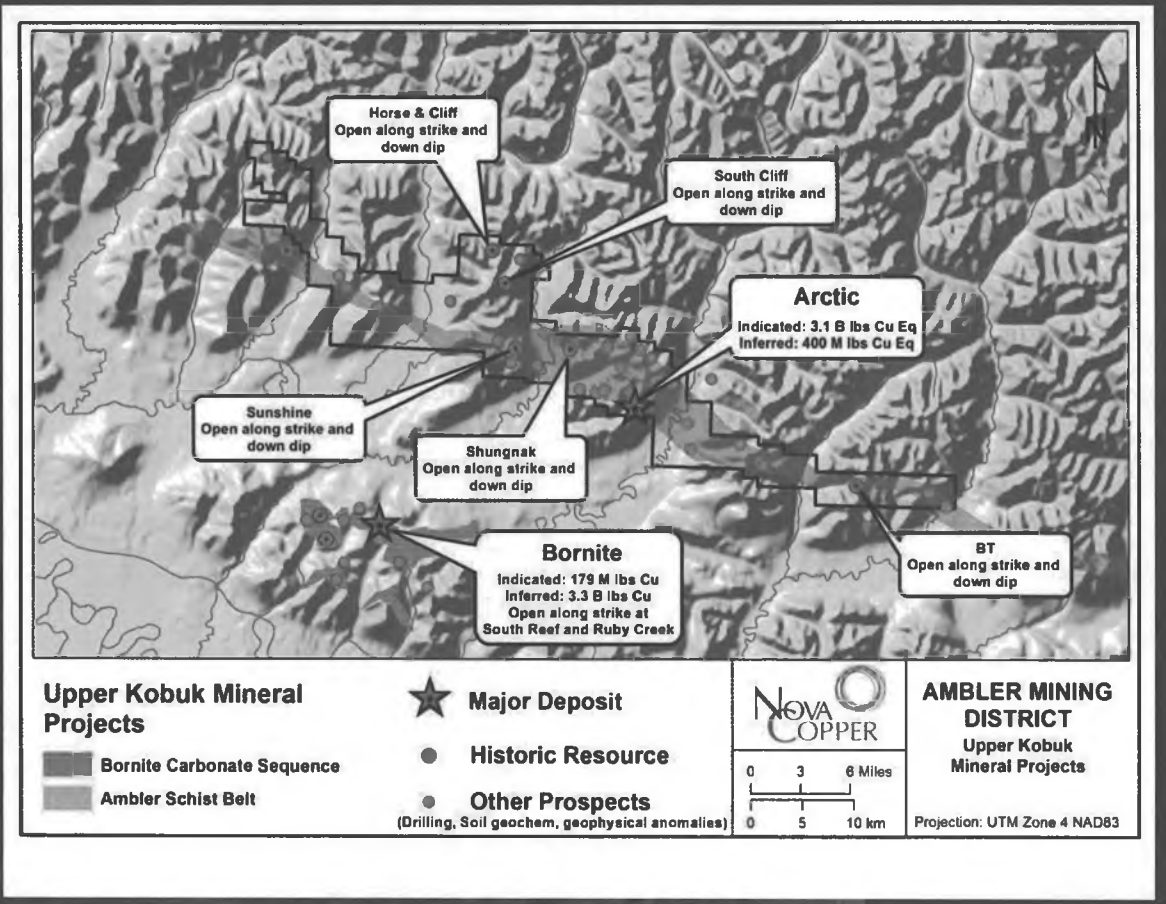


Value Added Industries

Interior Natural Resource Opportunities



Copper


Horse & Cliff
Open along strike and down dip
South Cliff
Open along strike and down dip
Arctic
Indicated: 3.1 B lbs Cu Eq
Inferred: 400 M lbs Cu Eq
Sunshine
Open along strike and down dip
Shungnak
Open along strike and down dip
Bornite
Indicated: 179 M lbs Cu
Inferred: 3.3 B lbs Cu
Open along strike at South Reef and Ruby Creek
BT
Open along strike and down dip
Upper Kobuk Mineral Projects
Bornite Carbonate Sequence
Ambler Schist Belt
Major Deposit
Historic Resource
Other Prospects
(Drilling, Soil geochem, geophysical anomalies)
NOVA COPPER
0 3 6 Miles
0 5 10 km
AMBLER MINING DISTRICT
Upper Kobuk Mineral Projects
Projection: UTM Zone 4 NAD83



Copper Ore: .05% - 1.0%

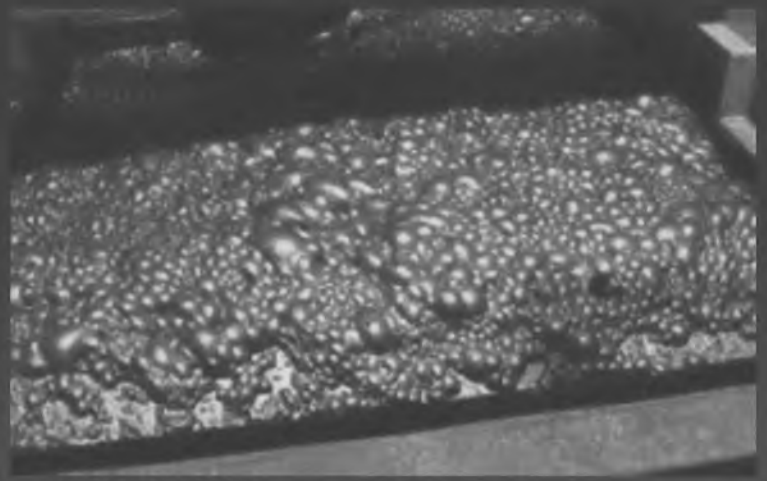


Value: Mining Payroll and Extraction Tax

Concentration 15 – 35%









Value: Mining & Transportation Payroll – $950/MT

Transport Concentrates To Port



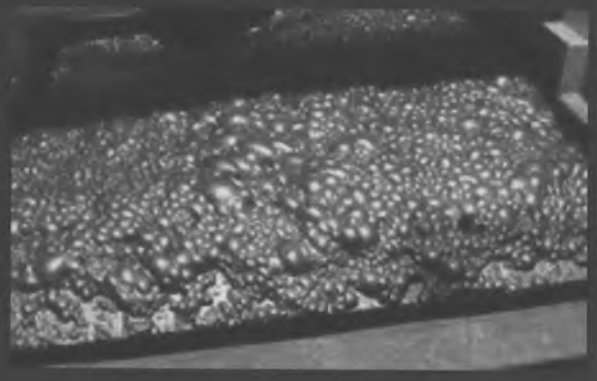
Value: Transportation Tariffs

Export Concentrates to Smelter



- Cargo Value: average $950 / Metric Ton
- ***Most of the value leaves Alaska to drive another economy.***

Capture The Rest of the Value With Value-Added Industries

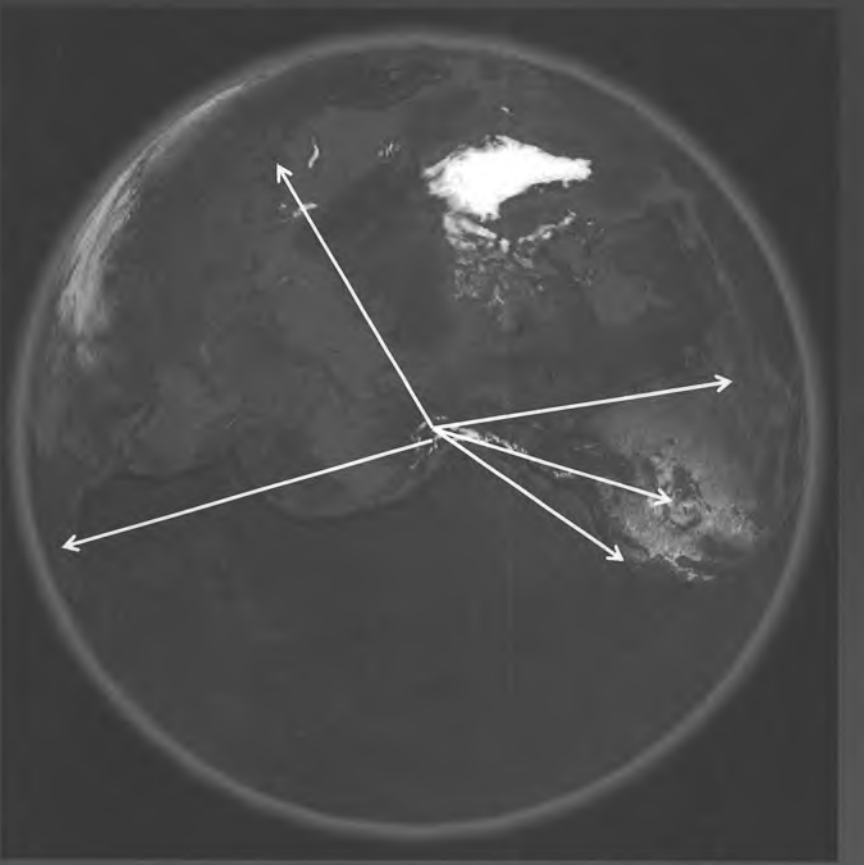




800,000%+ Value Increase

Alaska's Manufacturing Industry Deal Breakers

- Distance from Materials
- Distance from Market
- High Energy Costs
- Weak Workforce



Natural Gas, Rail, and Roads Will Collapse Alaska's Energy Costs and Supply Chains

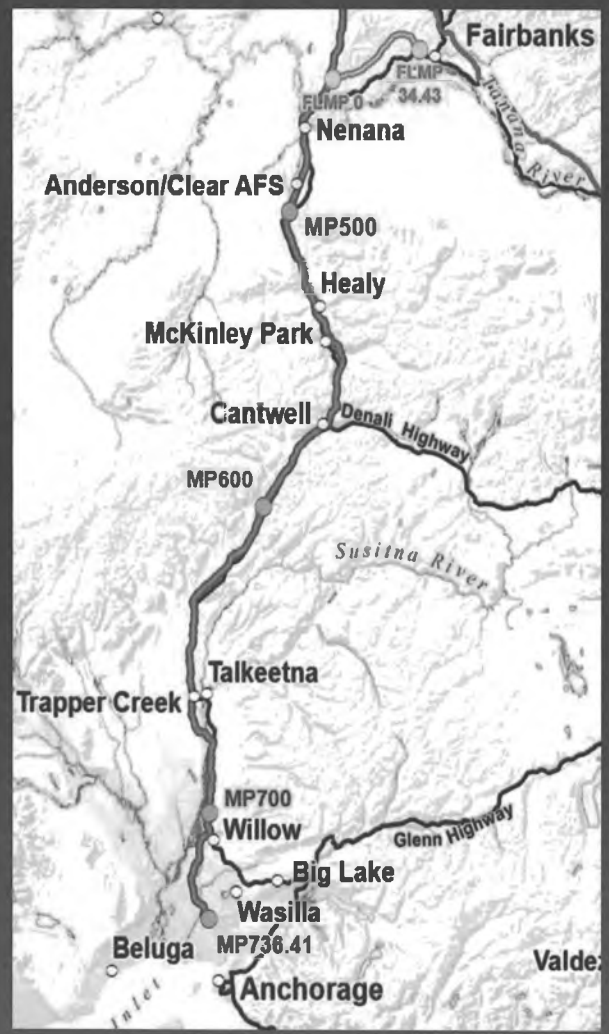






Alaska Manufacturing Industry Deal ~~Breakers~~ *Makers*

- Short - Distance from Materials to Manufacturing
  - Truck / rail- all within 400 miles
- Low Energy Costs
  - Less or equal to other markets
- Jobs & Transportation for Workforce
  - Retain our youth & quick access for Anchorage
- Short distance to Asian markets
  - 30% Closer than US West Coast + Air Backhaul



Anchorage International - 2,400 Cargo Aircraft Per Month, Many Bound for Asia Empty!




4,000+ Ships Per Year!
30% Closer Than LA!

Transport Concentrates To ~~Port~~ *Alaska Smelter*



Value: Transportation Tariffs

Smelt Copper In Alaska







99.0%
Pure





Value Increases To: $3,500 / MT

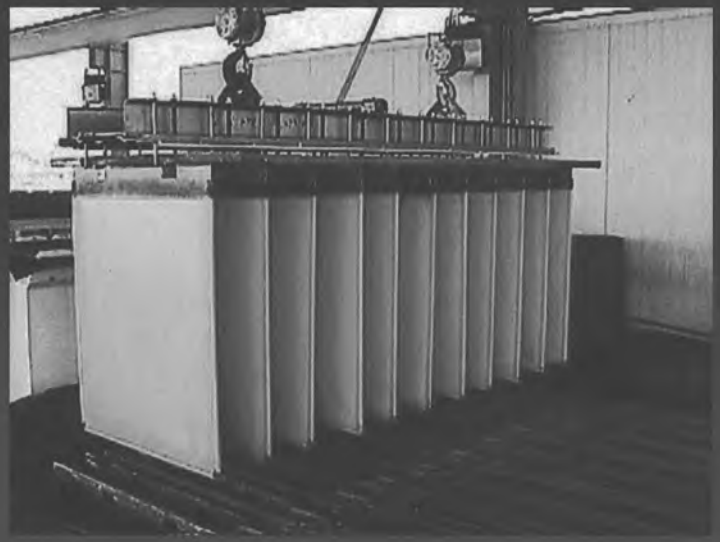
Refine Copper In Alaska







99.999% Pure





Value Increases To: $6,520 / MT

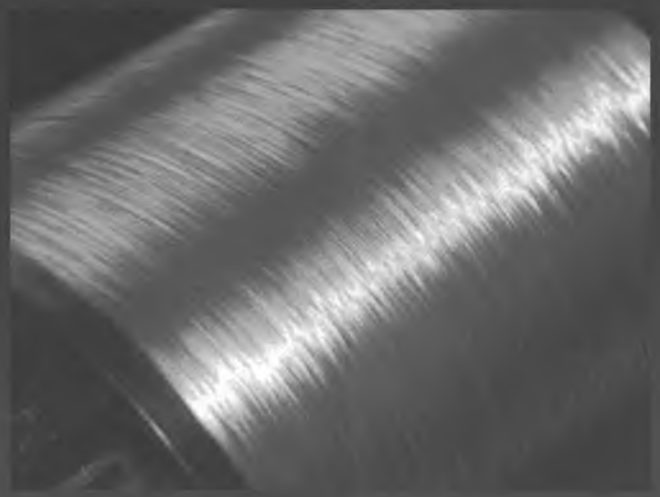
Make Copper Wire In Alaska













Value Increases To: *$40,093 / MT

* 0.008" Diameter, 39,300' @ $90.93 / 5 pound roll

Make Semiconductors In Alaska



+





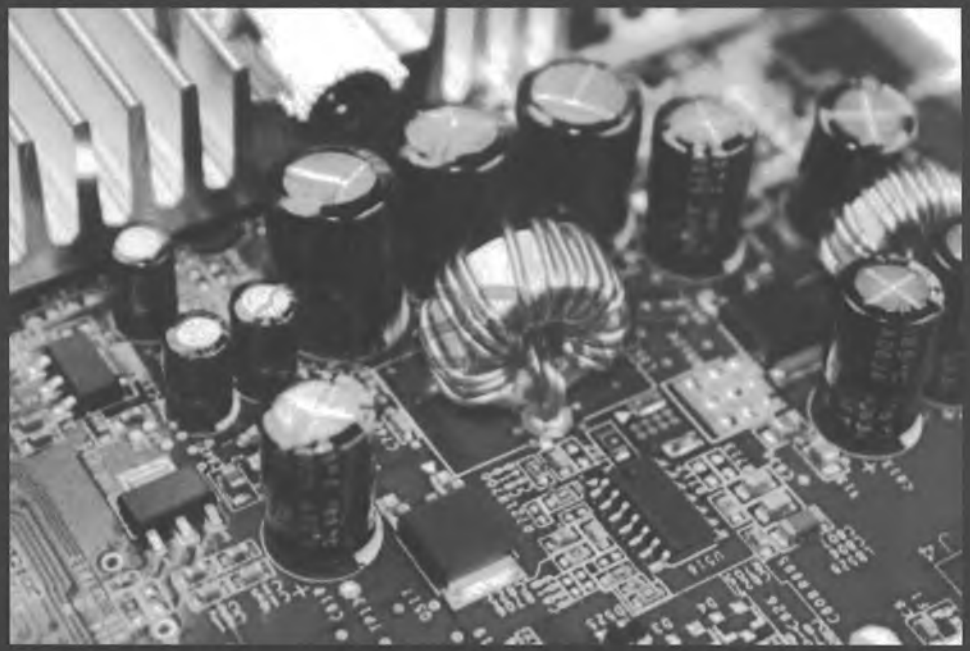


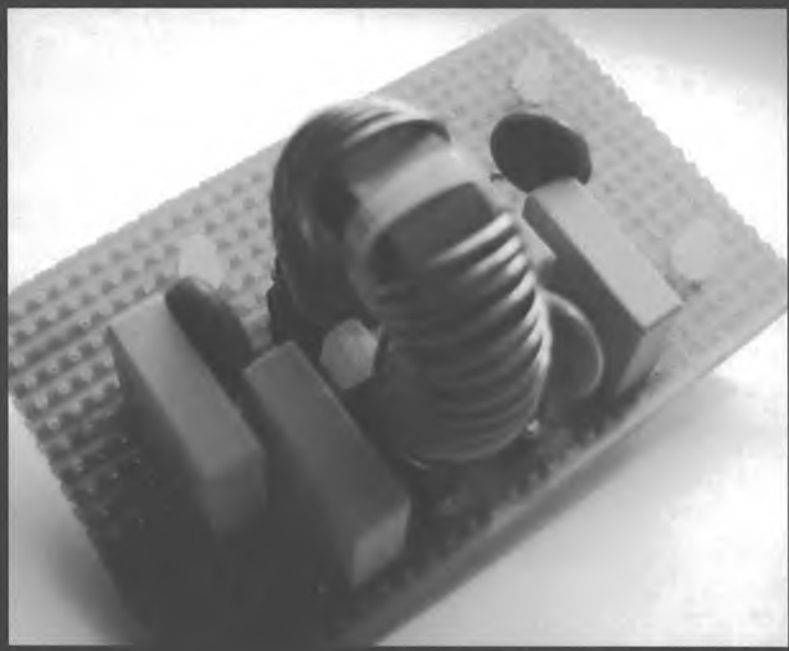


Value: Product Worth *$8,401,606

*Ferrite Toroid Choke @ $0.16 each using – 1 MT of .008" / 4 inches of wire

Electronic Sub-Assemblies: In Alaska







Value: A Component Industry Worth Billions

What's the Value of Value-Added?

Stage	Value/MT	Step Increase	Industries	Jobs	Tax Revenue
Ore	Dirt +	-	Mining	100's	1x
Concentrate	$ 950	-	Mining, Transportation, AKRR, Ports	100's	1x
Smelting	$ 3,500	368%	Smelting, Transportation, AKRR, Ports	100's	2x
Refining	$ 6,520	186%	Refining, Transportation, AKRR, Ports	100's	3x +
Wire	$ 40,093	615%	Manufacturing, Transportation, AKRR, Ports	100's	10x +
Semi-conductors (sales)	$ 8,401,606	20,955%	Manufacturing, Transportation, AKRR, Ports, Airports	1,000's	100x +
Sub-Assemblies	?	?	Manufacturing, Transportation, AKRR, Ports, Airports	1,000's	100x +

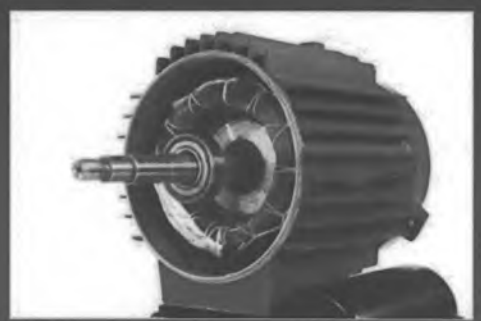
Thousands of Other Copper Based Products










How Many Future Projects Will Use Alaska Copper?









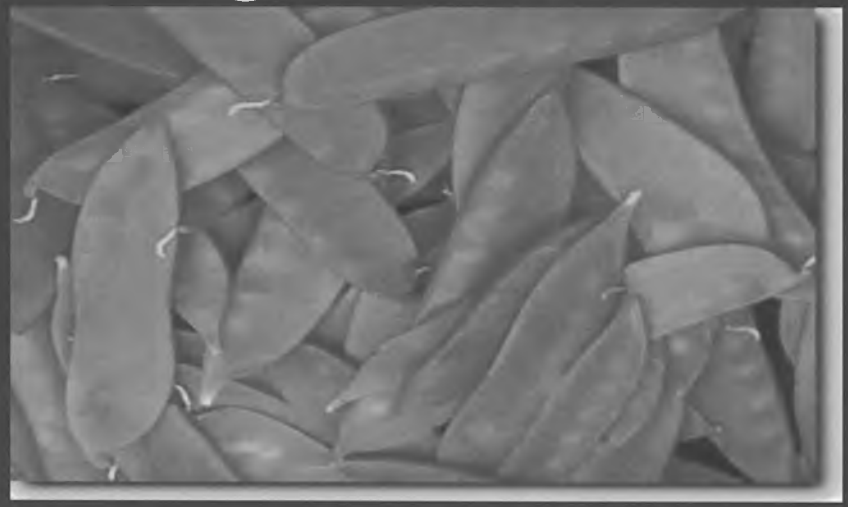
Agriculture

Pork / Poultry



- ✓Ractopamine Free
- ✓No Swine Diseases
- ✓$Billion Market

Vegetables



- ✓ We easily grow what Asia likes best!

Ebola stops Singapore-bound pork shipment

1072 × 0

The Philippines has stopped a shipment of 50,000 tonnes of pork to Singapore after traces of low pathogenic Ebola-Reston virus were found on some hog farms in the country, officials said on Monday.



The shipment was supposed to be the country's first-ever pork export. The pork products were set to be sent to Singapore on Dec. 10 when the government voluntarily stopped the shipment due to food safety concerns, said Davinio Catbagan, director of the government's animal industry bureau.

The Ebola Reston virus scare broke out

Eastern Europe unites to fight ASF

HEALTH / DISEASES

127 × 0

Belarus has held a meeting to discuss with Russia and Ukraine the issue of prevention of the further spread of African Swine Fever (ASF) in Eastern Europe.



According to the Belarus government, the "round table" in Minsk gathered heads of veterinary services of Belarus, Russia and Ukraine, as well as the head of the International Epizootic Bureau for Eastern Europe Kazimiras Lukauskas and vice president of the OIE Regional Commission for Europe Ivan Bisyuk.

It has been stated that the struggle with African Swine Fever has become a universal problem, because the spread of the virus is possible both in the food chain and

Korea bans pork imports from Poland over swine virus

Like 0 Tweet 0 Email Print

헤럴드 굿 뉴스, '마이뉴스' 설정으로

Published : 2014-02-20 19:43
Updated : 2014-02-20 19:43

South Korea placed an import ban Thursday on pork from Poland after the Eastern European country reported discovery of African swine virus.

The ban, effective immediately, affects all pork products, including processed ham, from Poland, according to the Ministry of Agriculture, Food and Rural Affairs.

Vegetables





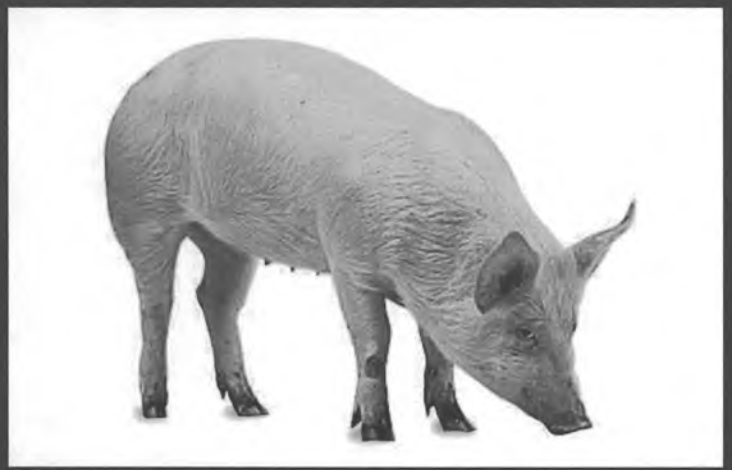








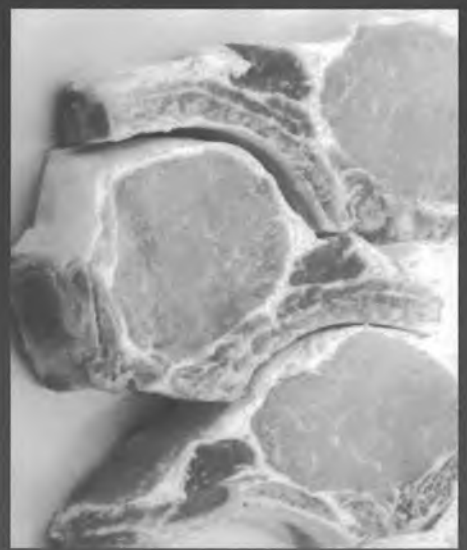
Pork, Poultry, & Vegetable Exports To Hungry & Wealthy Asia













Mat-Su - The Eye Of Alaska's Economic Storm



- Logistical advantage – On/Off ramp to the interior
- Largest port area in the state
- Only rail loop -100 cars
- Buildable Commercial land aplenty
- Supplier of 20,000 Anchorage personnel daily
- Best schools in state
- Cohesive political environment
- Gateway to interior AK tourism
- #1 business friendly tax model
- Best place for value added Ag production
- We have an ED Plan- The SOA and others DO NOT
- We have an organization to execute our plan

MATANUSKA-SUSITNA BOROUGH, ALASKA

Economic Development Strategic Plan

Prepared for:

The Mat-Su Borough



Prepared by:

T·I·P STRATEGIES, INC

APRIL 22, 2010

MSB Economic Development Plan Workgroups

Goal #1
Position Mat-Su for sustainable economic growth and vitality

- Strategy 1A: Develop professional & technical services sector
- Strategy 1B: Support the local expansion of the healthcare and education sectors
- Strategy 1C: Support the retention and expansion of existing businesses in the Borough
- Strategy 1D: Pursue developing opportunity sectors
- Strategy 1E: Promote entrepreneurship and small business development
- Strategy 1F: Support the preservation and expansion of the agricultural sector in the Borough
- Strategy 1G: Promote the sustainable development of Mat-Su's natural resources

Goal #2
Build capacity to conduct economic development within the Borough

- Strategy 2A: Expand internal resources for economic development
- Strategy 2B: Establish a Borough-wide business partnership to support economic development
- Strategy 2C: Expand regional economic development cooperation
- Strategy 2D: Link sub-regional economic plans to the MSB Economic Development Plan
- Strategy 2E: Develop the sport fishing& hunting business sectors for sustainable growth and stability.

Goal #3:
Expand Mat-Su's economic development infrastructure

- Strategy 3A: Continue developing multimodal transportation and industrial infrastructure at Port MacKenzie
- Strategy 3B: Increase the availability of commercial and industrial land
- Strategy 3C: Continue expanding basic tourism infrastructure
- Strategy 3D: Continue improving and expanding Mat-Su's transportation system
- Strategy 3E: Support the expansion and enhancement of technology infrastructure and services in the Borough
- Strategy 3F: Support the expansion and enhancement of the aviation infrastructure and industry in the Borough?

Goal #4
Attract, retain, and engage talent

- Strategy 4A: Expand business and education partnerships
- Strategy 4B Retain and engage military veterans and retirees.
- Strategy 4C: Leverage post-secondary instruction and research activities

Goal #5
Raise awareness of economic development opportunities

- Strategy 5A: Initiate a local campaign to promote a more positive image of Mat-Su
- Strategy 5B: Enhance the image of Mat-Su throughout Southcentral Alaska
- Strategy 5C: Increase tourism marketing efforts
- Strategy 5D: Leverage tourism marketing for talent attraction, entrepreneurship, and economic development
- Strategy 5E: Focus on quality development to improve the appearance of the Borough's built environment

ACTIVE WORKGROUPS

2012 ALASKA TAX MODEL COMPARISON

*Property****	MSB	Wasilla	Palmer*	Houston*	FNSB	Fairbanks*	au	Anchorage
Real Estate & Business Property	0.9956%	0.9956%	1.2956%	1.296%	1.297%	1.7	%	1.572%
Property Tax Score	1	1	3	4	5			6
Business Assets								
Infrastructure? (aka: Personal Property)	No	No	No	No			es	Yes
Inventory?	Yes	Yes	Yes	Yes			Yes	Yes
Exempt $	$1,000,000	$1,000,000	$1,000,000	$1,000			$100,000	$20,000
Tax on $50K of infrastructure?**	$0	$0	$0			/A	$526	$786
Tax on $500K of goods?	$0	$0	$0			N/A	$4,204	$7,546
Total Asset Tax Burden	$0	$0	$			N/A	$4,730	$8,332
Asset Tax Score	2	2			1	1	3	4
Commerce								
Sales Tax	0.00%			%	0.00%	0.00%	5.00%	0.00%
Purchase Cap	N/A			500.00	N/A	N/A	0.00	N/A
Commerce Tax Score	1			2	1	1	4	1
Tourism								
Bed			5.00%	5.00%	8.00%	8.00%	7.00%	12.00%
Car Rental			0.00%	0.00%	0.00%	0.00%	0.00%	8.00%
Marine Passenger Fee		.00%	0.00%	0.00%	0.00%	0.00%	$5.00	0.00%
Tourism Tax Score		1	1	1	3	3	2	4
A&T Taxes								
Alcohol	0.00%	0.00%	0.00%	0.00%	5.00%	5.00%	3.00%	0.00%
Tobacco	5.50%	5.50%	5.50%	5.50%	8.00%	8.00%	$1.00	$1.48
Wholesale Value Cigarette	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.00%
A&T Tax Score	1	1	1	1	3	3	2	5
Overall Score	6	7	10	10	13	15	13	20
Business Friendly Rank	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***

Opportunity!!!

Rank: #1 Most Friendly - # 8 Least Friendly
Taxes in $ are per sales unit

*Borough and City rate combined
** Assumes 100% of exemption used on inventory
*** There is a wide variation in services delivered. Some jurisdictions may have additional fees.

Mat-Su Business License Activity – Strong Investor Interest

- 2013 Active: Start: 8,078 End: 8,601
- New = 1,084
- Increase = 523 or 6.54%
- New Owners Outside Mat-Su = 232 – 21.4%
- New Owners Outside Alaska = 74 – 6.8%

Questions?

Thank You!

03/03/14 Presentation: Merged Energy Solutions - Multi- Industrial Greenhouse Facility and Transforming Alaska

<TARGET><BILL></BILL><SUBJECT>03-03-14 Presentation Merged Energy Solutions - Multi- Industrial Greenhouse Facility and Transforming Alaska</SUBJECT><COMM>HEDT28</COMM></TARGET>

Alaska State Legislature

Representative Shelley Hughes, Chair

Session Address:
Alaska State Capitol, Room 409
Juneau, Alaska 99801-1182
Phone: (907) 465-3743
Fax: (907) 465-2381
House District 8

Representative Lynn Gattis
Representative Bob Herron
Representative Pete Higgins
Representative Craig Johnson
Representative Kurt Olson
Representative Lance Pruitt
Representative Harriet Drummond
Representative Geran Tarr

House Special Committee on Economic Development, Trade and Tourism

To: House Economic Development, Trade and Tourism Committee Members

From: Representative Shelley Hughes, Chair

Date: February 26, 2014

Re: Committee Schedule for the Week Beginning March 3, 2014

The House Special Committee on Economic Development, Trade and Tourism (EDT) meets in the Barnes Room 124, on Tuesdays and Thursdays from 11:15am to 12:45pm.

Monday, March 3, 2014 8:00am in Room 124 (note time and date)
Joint meeting with House Special Committee on Energy
\+ Michael Smith, CEO Merged Energy Solutions
Kurtis Zell, Development Coordinator
"Multi-Industrial Greenhouse Facility" and "Transforming Alaska"

Tuesday, March 4, 2014 11:15am in Room 124
No meeting scheduled

Tuesday, March 4, 2014 1:00pm in Room 124 (note time and date)
Joint meeting with House Transportation Committee
\+ Michael Smith, CEO Merged Energy Solutions
Kurtis Zell, Development Coordinator
"Transforming Alaska"

Thursday, March 6, 2014 11:15am in Room 124
No meeting scheduled

\+ Teleconferenced

Ginger Blaisdell

From: Katherine Eldemar
Sent: Wednesday, February 26, 2014 12:02 PM
To: Ginger Blaisdell; Jeff Turner
Subject: RE: presentations for (H)ENE
Attachments: ENE Committee - Joint Committee Meeting - Notice - March 3-7, 2014.doc

Hi Jeff,

Rep Hughes is the lead on this joint hearing between the Energy committee and the House Special Committee on Economic Development, Trade and Tourism. Ginger has been great organizing the details for the presenters and has shared their PowerPoint presentation and agenda. As we discussed, the presenters are not able to be here in person but their pending business contract with Douglas is constraining their travel.

Here is the draft Energy committee agenda for the week March 3-7. 2014. The joint meeting language mirrors the House Special Committee on Economic Development, Trade and Tourism. It needs to be filed today with the Clerk's office so when my boss is done with session I will have him review the draft agenda. Your thoughts?

Thanks,

Katherine Eldemar
Committee Aide
House Special Committee on Energy
Rep. Doug Isaacson
House District 1
katherine.eldemar@akleg.gov

(907) 465-4936 direct line

From: Ginger Blaisdell
Sent: Wednesday, February 26, 2014 11:27 AM
To: Katherine Eldemar
Subject: presentations for (H)ENE

MES
MERGED ENERGY SOLUTIONS

Merged Energy Solutions
Multi-Industrial Greenhouse Facility

Vision and Mission

MES Vision

MERGED ENERGY SOLUTIONS

Generating tomorrows growth today

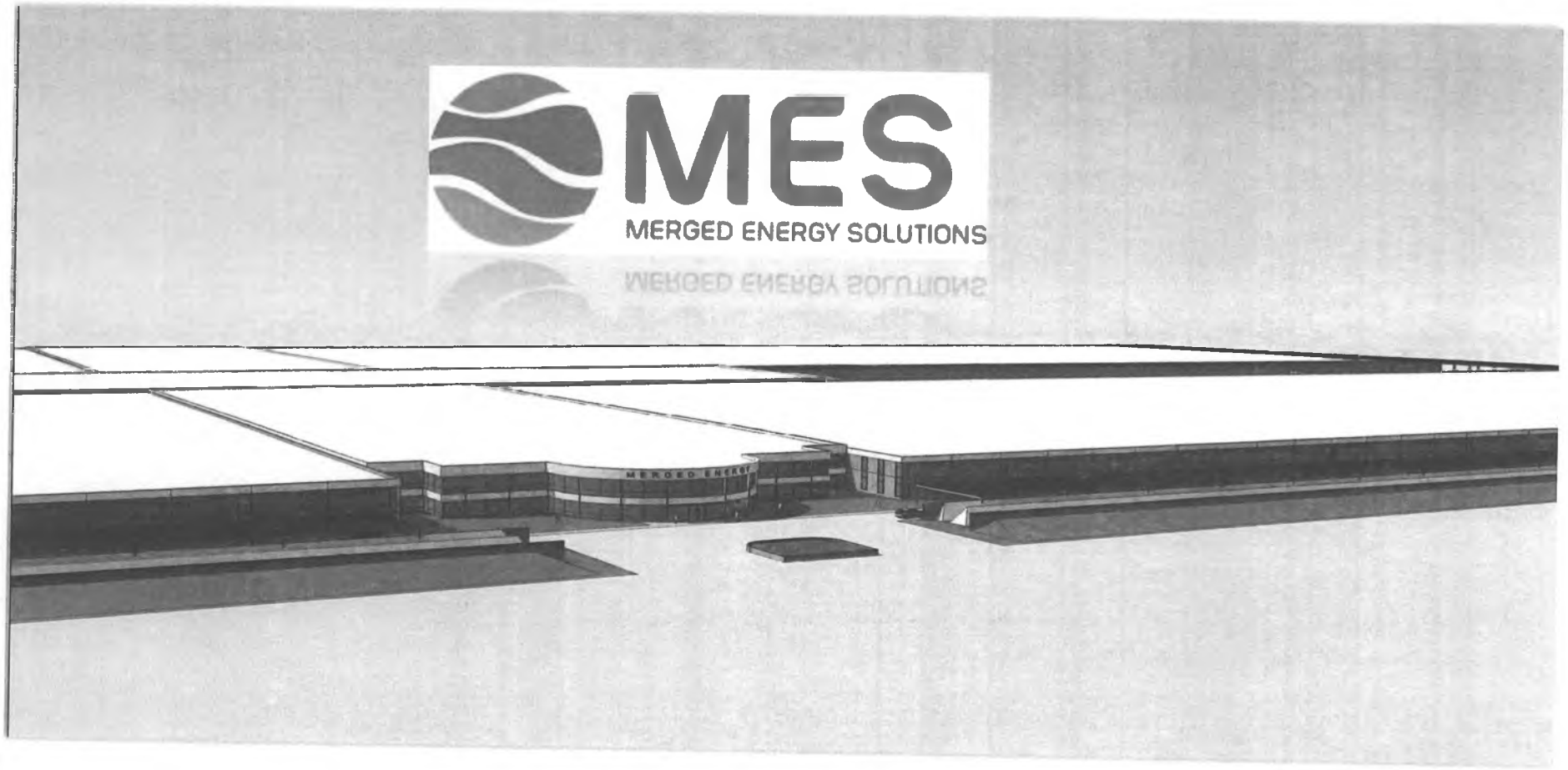
Mission Statement



Our mission is to **renew** and **build** a **sustainable** Earth by **empowering** and **educating** people throughout the world. We **collaborate** with **nature**, **technology**, and people to create sustainable **energy** and **food**. We realize our vision by committing **cutting-edge** technology, building **state-of-the-art** clean energy and agriculture projects, and **investing** in the **education**, **health**, and **well being** of **people** throughout the **world**.

MERGED ENERGY SOLUTIONS

Multi Industrial Greenhouse (MIG)



MERGED ENERGY SOLUTIONS

Multi Industrial Greenhouse (MIG)

Components

- Concentrating Solar Thermal
- Advanced Biomass Gasification (ABG)
- Geo Thermal
- High-Density Vertical Farm
- Aquaculture
- Water Desalination & Purification
- Academy of Advanced Technical Science



MERGED ENERGY SOLUTIONS

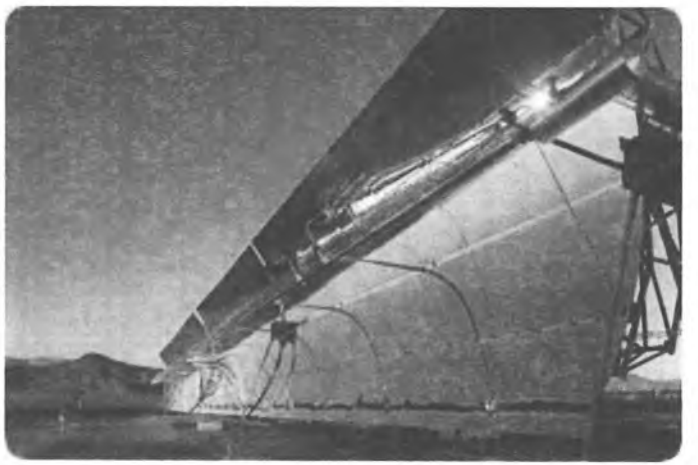
Concentrating Solar Thermal



Why Concentrating Solar Thermal?

The Process

A Concentrating Solar Thermal Roof **(CSTR)** produces electric power by converting the sun's energy into high-temperature heat, which is then channeled through a conventional generator.



Efficiency

The CSTR is one of the most efficient and dependable producers of solar energy available today. The CSTR is rated at **34-38% efficiency** in terms of translating the direct solar energy to electricity and has a useful life of 50 years.

Heating & Cooling

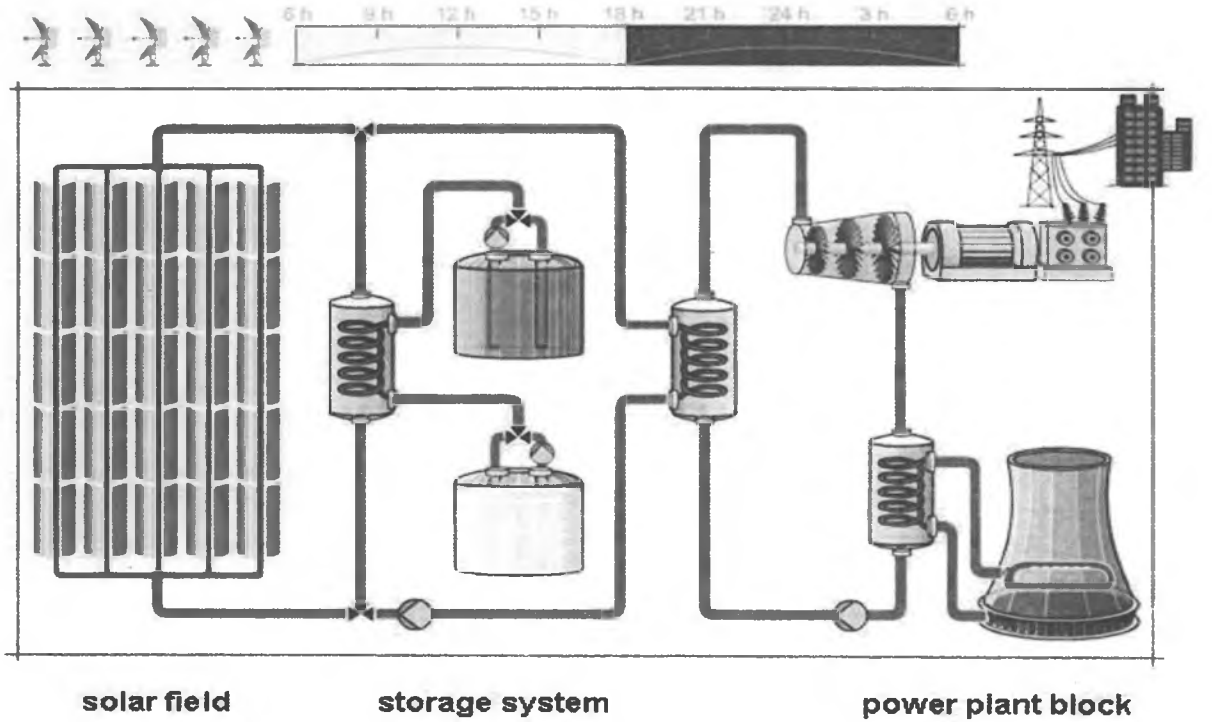
The thermal energy can also be used directly for heating and cooling purposes; running it to absorption chillers for cooling and a heat exchanger for heating.

Energy Storage Capability

Trough designs can incorporate thermal storage—setting aside the heat transfer fluid in its hot phase—allowing for electricity generation several hours into the evening.

Concentrating Solar Thermal

How it Works…



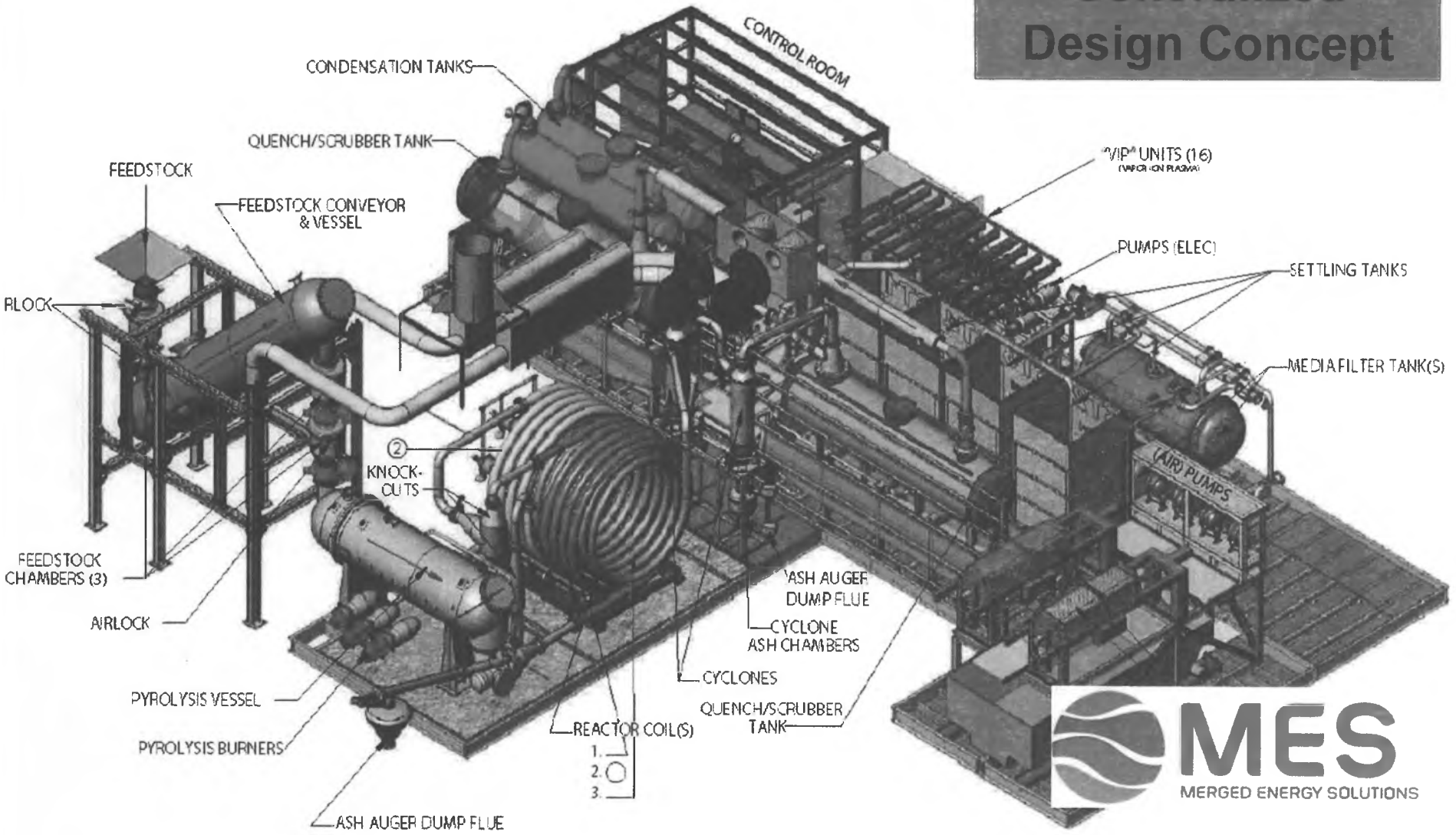
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Advanced Biomass Gasification (ABG)



Advanced Biomass Gasification (ABG)

Generalized Design Concept



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Advanced Biomass Gasification (ABG)

Products

Syngas

- Electricity
- Synthetic Diesel

Ash

- Soil Conditioner

Purified Water



Feedstock

- Agricultural or Municipal Waste

- Low Feedstock Cost
- Plant Adaptable to Any Location

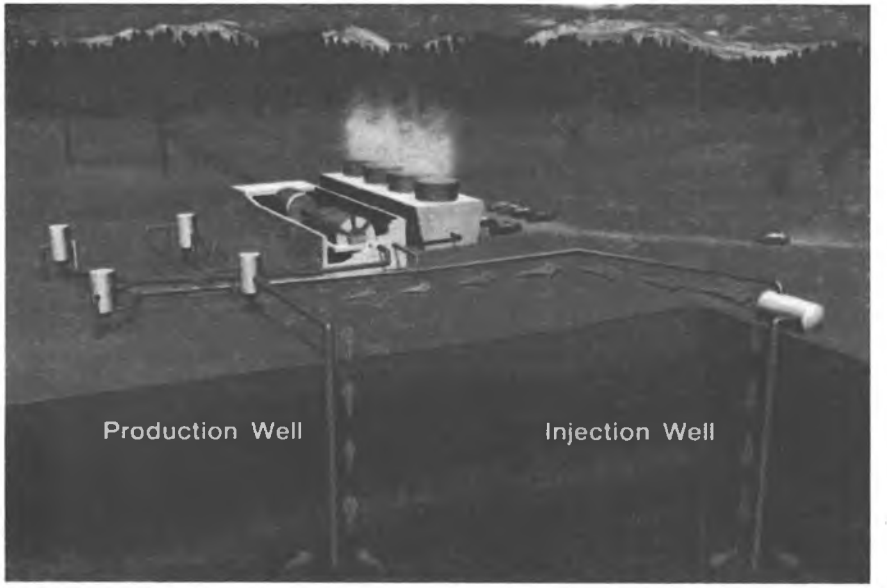
MERGED ENERGY SOLUTIONS

Geo-Thermal

Hydrothermal Power Systems

There are three geothermal power plant technologies being used to convert hydrothermal fluids to electricity - **Dry Steam**, **Flash**, and **Binary Cycle**. The type of conversion used depends on the state of the fluid (whether steam or water) and its temperature.

Flash steam plants are the most common type of geothermal power generation plants in operation today. They use water at temperatures greater than 360°F (182°C) that is pumped under high pressure to the generation equipment at the surface. Binary cycle geothermal power generation plants differ from Dry Steam and Flash Steam systems in that the water or steam from the geothermal reservoir never comes in contact with the turbine/generator units.



Dry steam power plants systems were the first type of geothermal power generation plants built. They use the steam from the geothermal reservoir as it comes from wells, and route it directly through turbine/generator units to produce electricity.

Power Generation - Summary

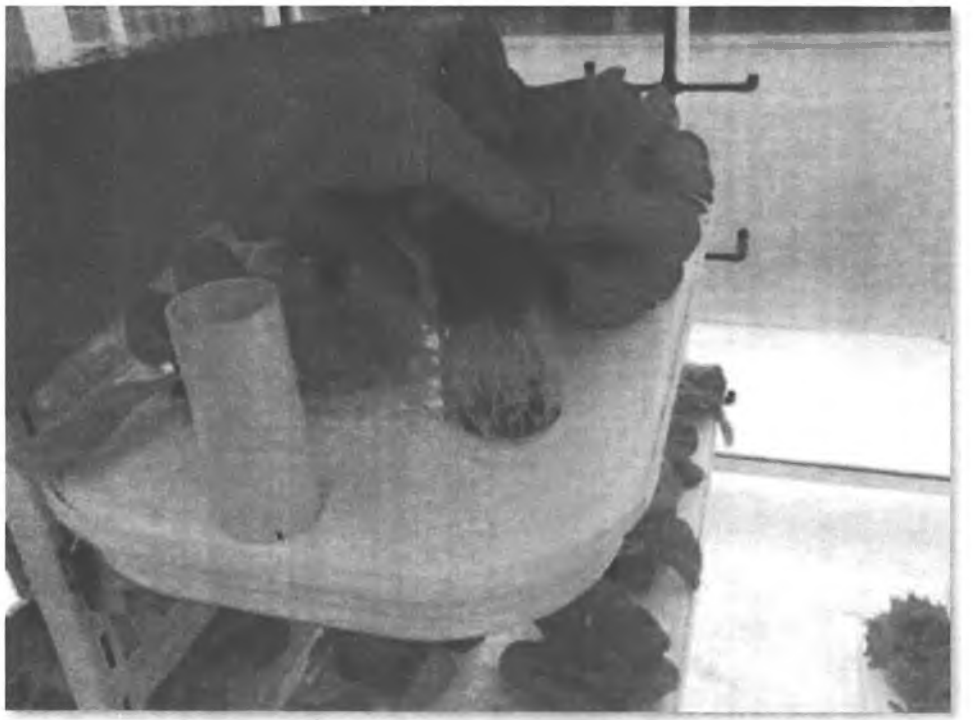
Between the **Concentrating Solar Thermal**, **Bio-Mass**, and **Geo-Thermal** outputs, a 150 acre MIG facility can generate ***20 to 40 megawatts*** of power. The MIG would consume approximately 3 to 4 megawatts.

One (1) megawatt will provide **power for approximately 2,400 average-sized homes**. This means an average of ***28,000 to 85,000 homes*** can be serviced by one facility, and can be taken off the power grid.

This is important when it comes to security because by being **independent from the grid**, earthquakes, tsunamis and other natural or man-made disasters will not impede the MIG from producing energy, water, fresh produce and fish .

Advanced High-Density Vertical Farming

The Advanced High-Density Vertical Farming (AHDVF) or hydroponic growing system does not use soil. The crops are either suspended in water or a water mist is periodically sprayed on the plant root structures of the crops. The water is infused with nutrients like those naturally found in the soil.



This system uses no pesticides or fertilizers in this growing environment. Additionally, for example, bees will be introduced into the system to provide a natural pollination cycle. Unlike any genetically modified organisms (GMOs), the seeds are free of any genetic alterations and use only a natural nutrient solution that will allow for organic certification of all the produce.

Advanced High-Density Vertical Farming

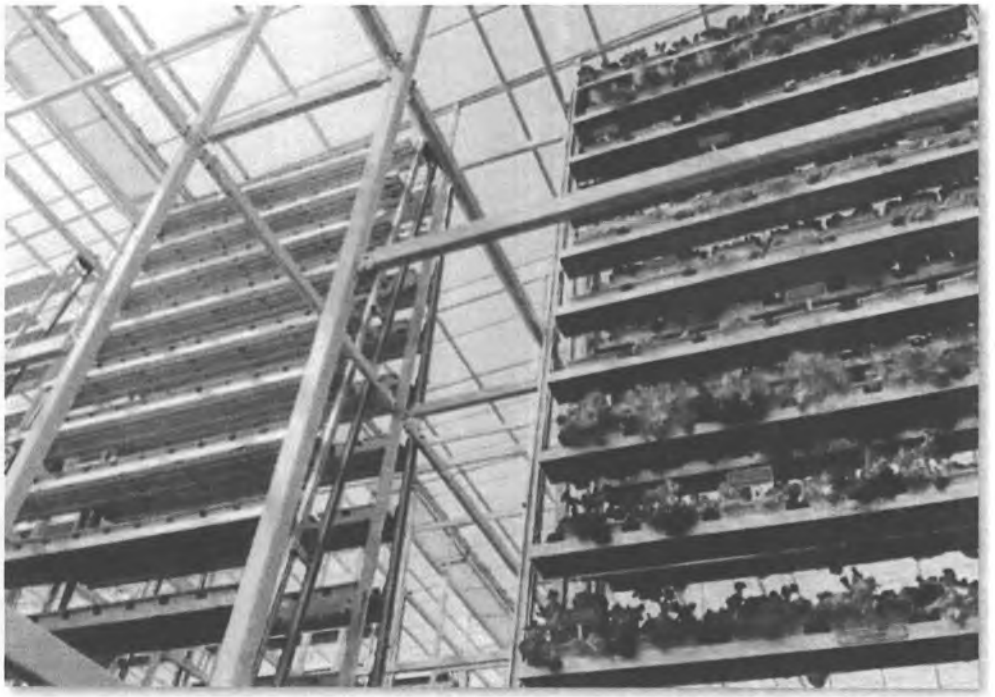
The current generation of hydroponic greenhouse technology in North America produces fresh tomatoes, bell peppers & cucumbers in sufficient quantities to market all over the country. The **MIG System** offers immense variety over and above that current level and type of production, including lettuce, herbs and some fruits, such as strawberries.

Quadrants of each greenhouse may be organized to maintain a specific growing environment, which will support the crops suited to that environment. The diversification of production will allow for a more balanced and complete produce offering to suit each market served.



MERGED ENERGY SOLUTIONS

Advanced High-Density Vertical Farming



The annual production level of the ADHVF described here is projected, at normal operation, to be approximately **90 million pounds** - enough produce to feed an average **population of 300,000** people **or 60,000 families.**

Water Desalination

MES recognizes that, today, **water** is a **precious commodity** and with water shortages around the world, it is essential that we are aware of how we can best utilize our resources.



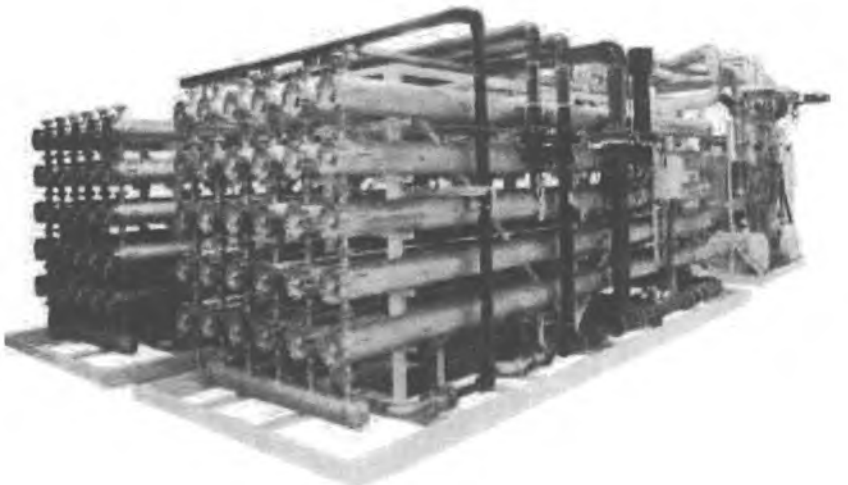
With this in mind, we have created a water treatment system known as Alpha Water that will desalinate, reclaim, purify and produce over **one and a Half million gallons** per day for use by the MIG and for neighboring city use.

By incorporating this **critical element**, we are reducing the amount of water that we use in our facility (or take from other users) and that we are producing the **highest quality** drinking water possible.

Water Purification

Applying the Technology

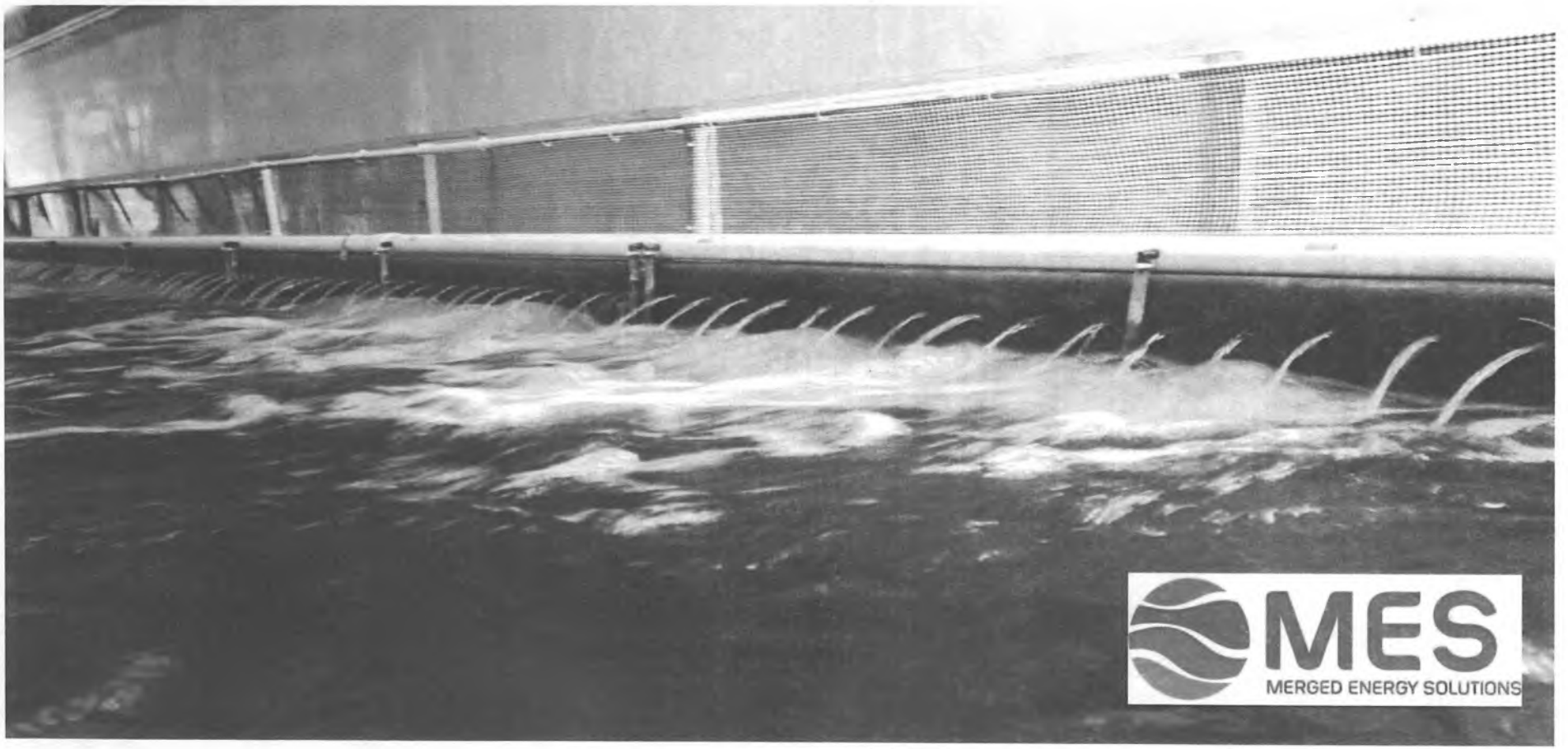
Until now, no one desalting process has **proven itself as** "the best." A variety of factors have come into play in choosing the appropriate process for a particular situation.



These factors include the quality of the source water, the desired quantity and **quality of the water produced**, pre-treatment, energy and chemical requirements, and methods of concentrate disposal. MES, however, has developed the most **advanced and unique** system, ***regardless of the water source***, by applying additional multiple-step **procedures**, including the use of quantum mechanics and a plasma bioreactor system. Due to the proprietary nature of this process, it is not detailed in this presentation.

Aquaculture: Opposing Flow Technology

The unique and patented "Opposing Flow" technology depicted below also creates a continual current in the culture tank. After the biofilter, the purified water is evenly distributed back into the culture tank, entering from both sides of the tank **causing the fish to align themselves** in the current, constantly swimming " upstream" facing either side of the 40' long tank. With this constant swimming motion, **the fish can metabolize the high protein feed into flesh which produces a higher yield**, compared to fish grown in circular aquaculture tanks.



Why Produce and Fish?

Prior to the early twentieth century, virtually all produce grown was what we now consider organic. No pesticides were used and the only fertilizer available was natural and nutrient rich manure and biodegraded foliage. The soil was also rich from years of continued farming. At that time, the variety of produce varied greatly – for example, there were some 4,000 varieties of potatoes and approximately 7,000 varieties of apples in the 1800s. Today, we are lucky to have maybe four different varieties of potatoes and apples commonly available.

After World War I, agriculture started using nitrogen fertilizer in mass quantities - a development derived from the nitrogen explosive used in bombs – to increase crop production. If that wasn't enough, we developed DDT from poison nerve gas to use as an insecticide.

By the mid 20th century, we moved into the period called the "Green Revolution" which was an attempt to **systematize the growing industry and increase food production**. However, this led to the dramatic **reduction in variety, often to a single crop type, causing further** vulnerability to insects and disease. **With more insects and disease,** the industry was forced to use more pesticides. This ultimately led to the Genetically Engineered seed that would be resistant to the pesticides.

All this engineering of nature's bounty is clearly not a positive development. One prime example of the negative effects of this process is the tomatoes today. These vegetables may be big and red, but they lack the taste and nutrients of naturally-produced tomatoes.

Why Produce and Fish?

Continued...

The same companies who developed the most common pesticides were also the first companies to patent the first genetically engineered or genetically modified organisms (GMOs), seeds that were immune to the pesticide.

Our obesity problem today is not necessarily based primarily on inherited genes and/or our poor eating habits. Rather, the prevalence of GMO products being grown under specific control have lost most of their nutritional value; in order for the human body to obtain its required nutrients, a person must eat more. In turn, by eating more we are taking in excessive calories, which turn to fat and, hence the contribute to the proliferation of obesity.

It is time we get back to basics... The **Advanced High Density Vertical Farming System** that is an integral part of the MIG System, is designed to grow these vegetables **the way nature meant them to be grown**, with all the nutrients and great taste and without any type of GMO or pesticide use. This is especially **important for the health and well-being** of the younger generation and for the generations to come.

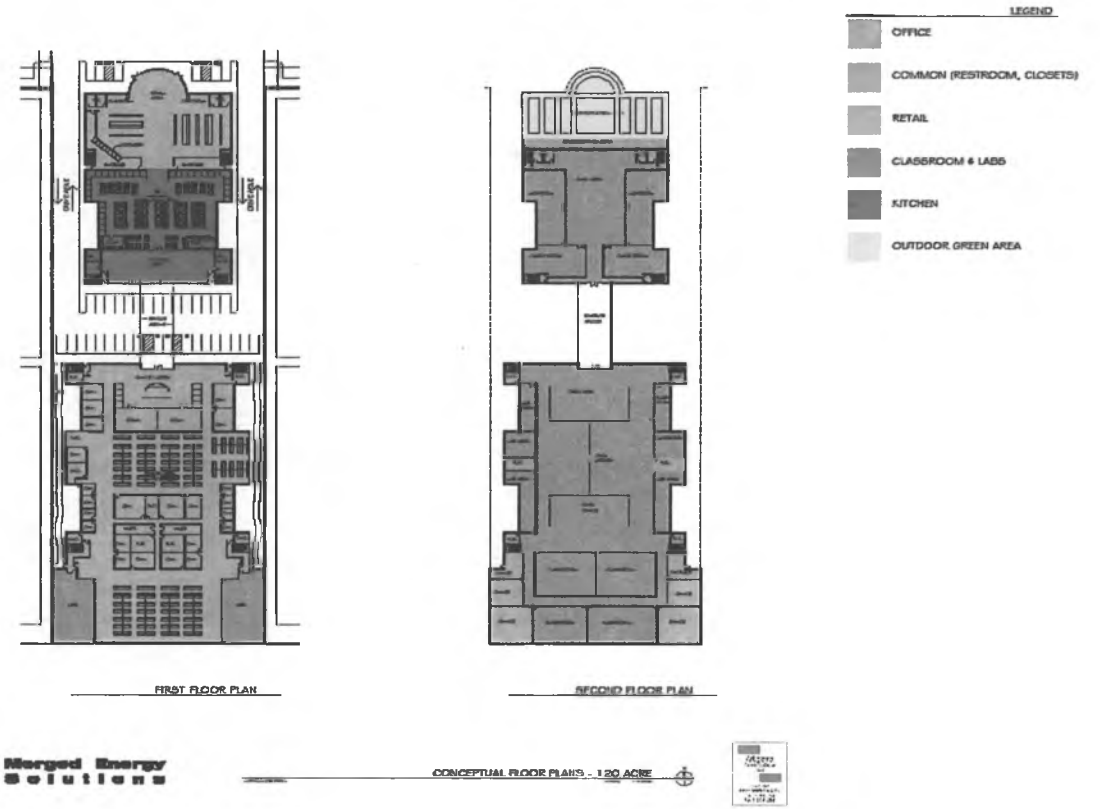
Why the Combination?

Reduced Land Area – Commercial-scale greenhouses produce as much as **30 times the yield** of conventional agriculture. That means a 100-acre greenhouse is equal 3,000-acres of horizontal farming production.

Reduced Water Consumption - Produce grown in a Multi Industrial Greenhouse (MIG) requires **10% of the amount of water** that conventional agriculture consumes. This is primarily due to the technology and management systems employed in the system.

The Synergies of Combining Solar, Geo-Thermal and Bio-Mass Energy Systems – Combining these creates particularly high levels of heat, which is required to make steam. This steam drives a turbine that generates electricity. The high-heat generation of the combined system significantly reduces the initial capital costs of the system. Also, while the solar or geo-thermal system is operational during daylight hours, the system requires less bio-mass to fuel the system.

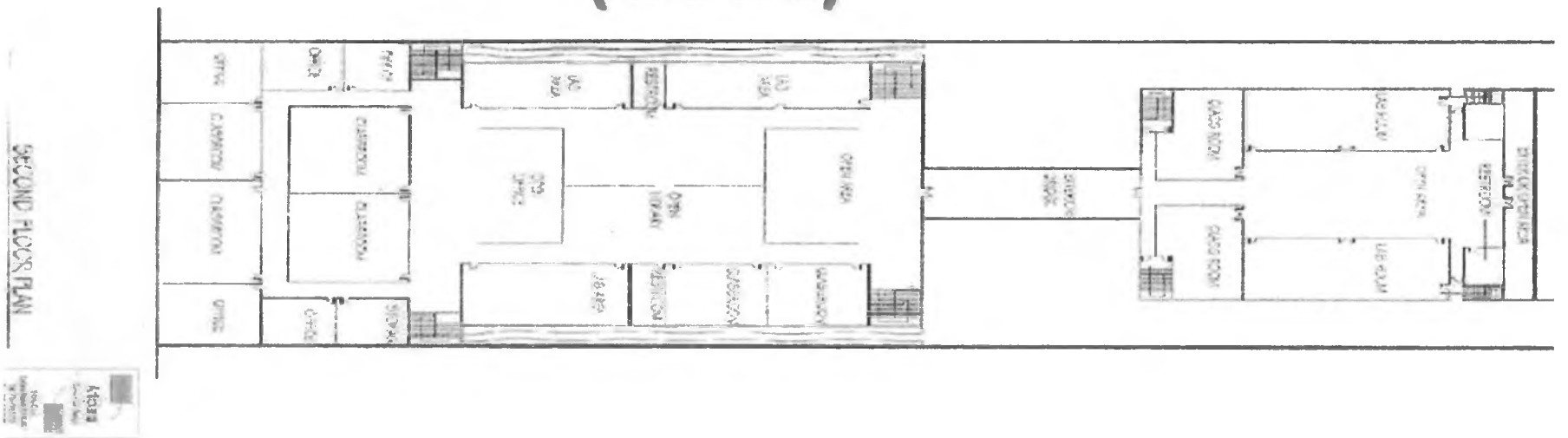
Academy of Advanced Technical Science (TAATS)



Academy of Advanced Technical Science

MERGED ENERGY SOLUTIONS

Academy of Advanced Technical Science (TAATS)



The Academy of Advanced Technical Science **(TAATS)** will be a **120,000 square-foot institute** located on the second floor of the main MIG facility.

TAATS will be devoted to **teaching students** of all walks of life the importance of combining the latest technology with a variety of applications such as agriculture, farming, water treatment, alternative energy, and sustainability, to name just a few.

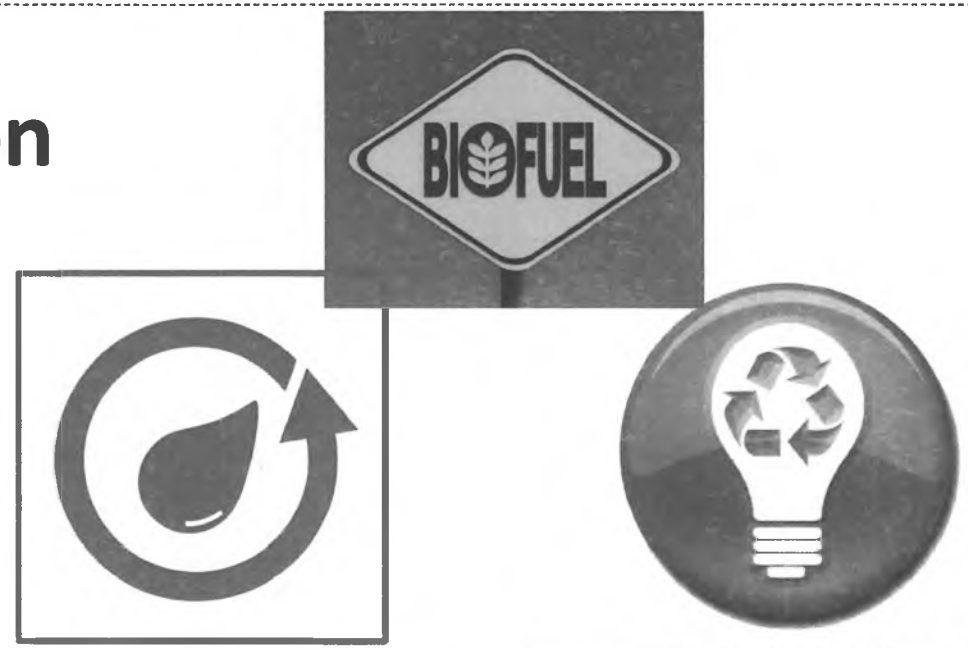
It is our belief that in order for the younger generation to thrive they must become proactive in **creating new strategies to enhance mankind's general advancement**. We will provide that training and **encourage creative thinking to bring new technologies to life.**

MERGED ENERGY SOLUTIONS

MIG Production – 120 acre

Annual Production

- **9 million** gallons Synthetic Fuel
- **40 MW** Electricity
- **90 million** pounds Organic Produce
- **5 million** pounds Fish
- **1.5 million** gallons Potable Water per day







MERGED ENERGY SOLUTIONS

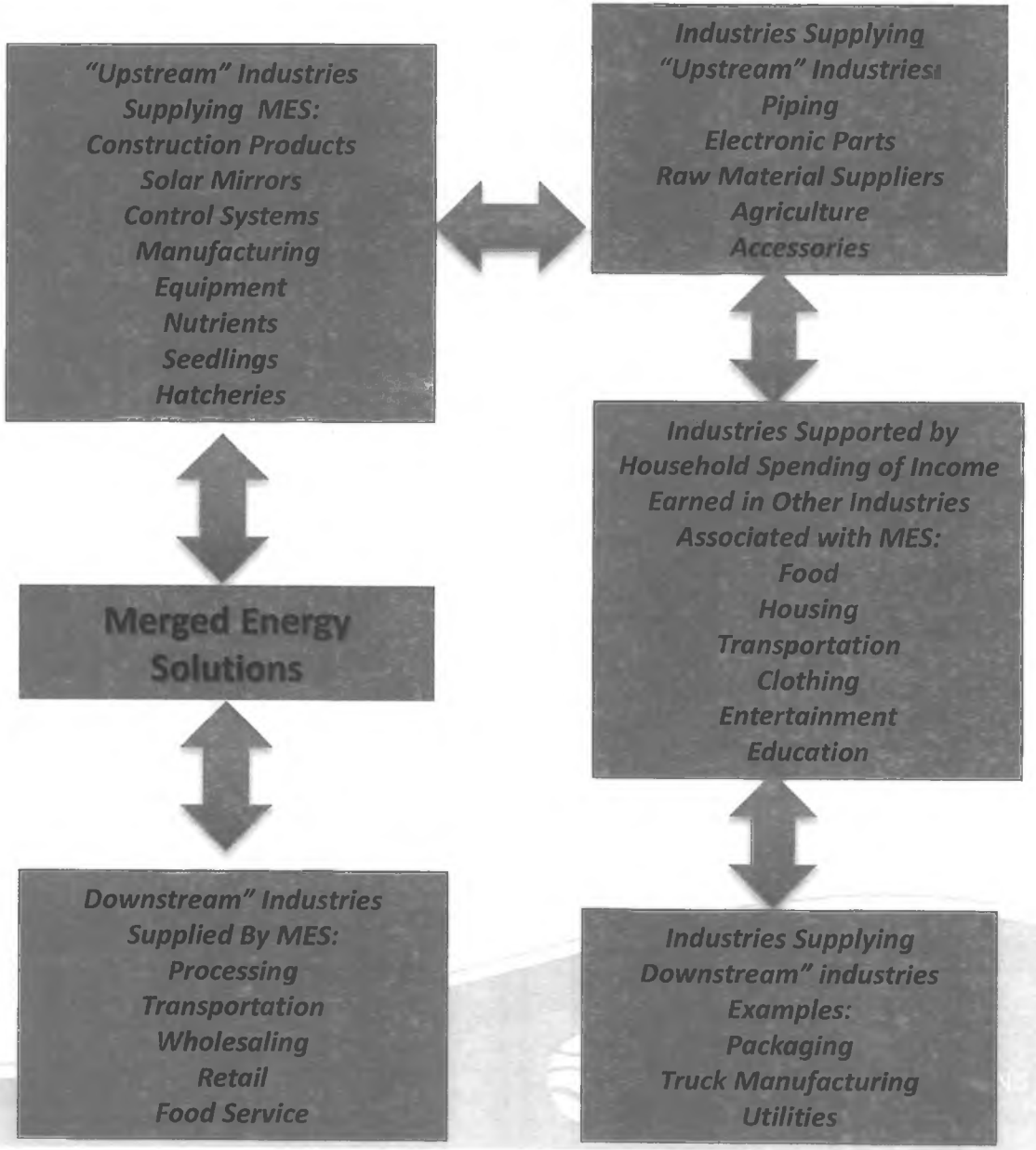
MIG Employment

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Number of Employees

Water :	20
Bio-Mass:	25
Solar:	25
Greenhouse	300
Packing	80
Sales & Mktg	20
Trucking	20
Aquaculture	50
Total	**540**

Employment is based on the averages for the type of industry and the size of the facility. These figures are also based on the facility operating 24 hrs a day, 7 days a week and 50 weeks out of the year. This does not take into account the branch jobs created up stream. The anticipated wages for this facility are estimated at $12 to $20 per hour, excluding upper management and technical positions.



Contact Us

MES
MERGED ENERGY SOLUTIONS

R. Michael Smith – CEO
Los Angeles, California
Phone: +1-714-262-6839
email: michael@mergedenergy.com

TRANSFORMING ALASKA

THROUGH INOVATIVE TECHNOLOGIES IN: AVIATION, RE ENERGY, SUSTAINABLE FOOD, CLEAN WATER, BIO FUELS AND HARDENED DATA CENTERS

SKY LIFT
AERONAUTICS

MES
MERGED ENERGY SOLUTIONS

BENNEFITS TO ALASKA

* **ECONOMIC GROWTH**
* **LOWER OPERATING COSTS Vs FIXED WING**
* **MORE PRODUCTIVITY**
* **NEW JOBS**
* **SAFER TRANSPORTATION**
* **EXPANDED COMMERCE DOMESTIC & INTERNATIONAL**
* **CLEANER ENVIRONMENT**

SKY LIFT
AERONAUTICS

MES
MERGED ENERGY SOLUTIONS

ECONOMICS

* **MINING**
* **ALTERNATIVE SHIPPING**
* **OIL AND GAS**
* **ALTERNATE TRANSPORTATION**
* **SURVEILLANCE AND MAPPING**
* **ON THE SPOT MEDICAL RESPONSE**

SKY LIFT
AERONAUTICS

MES
MERGED ENERGY SOLUTIONS

ECONOMICS

* **TOURISM INDUSTRY**
* **DISASTER RELIEF**
* **SEARCH AND RESCUE**
* **FISHING**
* **FIRE FIGHTING CAPABILITIES**
* **TIMBER / LOGGING INDUSTRY**

SKY LIFT
AERONAUTICS

MES
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MINING



Infrastructure Costs

- Roads
- Rails
- Power
- Equipment
- Trucks
- Earth movers

SKY LIFT

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MERGED ENERGY SOLUTIONS

SHIPPING - TRANSPORT



SKY LIFT

MES
MERGED ENERGY SOLUTIONS

ICE ROAD TRUCKING

Ice roads are a common feature across Alaska & Canada, and are typically the only way to access the most remote communities via ground transport.



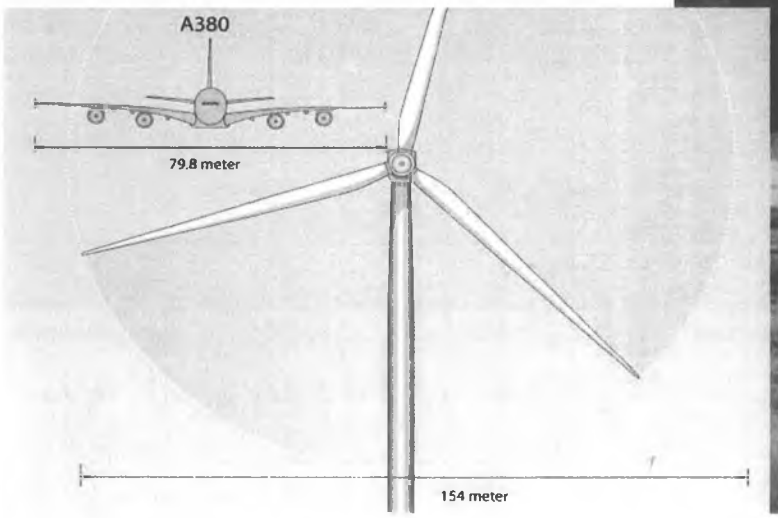


SKY LIFT
AERONAUTICS

MES
MERGED ENERGY SOLUTIONS

SPECIALTY TRANSPORT

B75 Quantum Blades are solid one-piece and 187 ft. long!





SKY LIFT
AERONAUTICS

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MERGED ENERGY SOLUTIONS

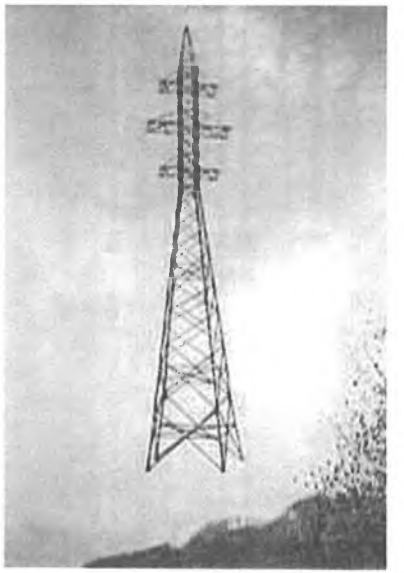
IT'S ABOUT THE PAYLOAD, AS WELL AS THE PLATFORM



Transportation



Power Grid/Cell Towers



Oil and Gas E&P (and remote areas)



Mining



SKY LIFT AEROSPACE

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Alaskan North Slope Oil & Gas Potential Production & Today's Market Value

ALASKA FACTS

- **First Major Oil Discovery:** 1957.
- **Industry Investment:** $50B+ to date.[1]
- **State Production:** 16+ billion barrels of oil (bbo).[1]
- **North Slope Oil Fields:** 4 of 10 largest in US; 12+ currently producing.[1]
- **North Slope Estimates:** ultimate recoverable oil reserves of 22.2 bbo; up to 124 trillion cubic feet (tcf) of natural gas.[1]
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- **Pipeline Infrastructure:** 800-mile Trans-Alaska Pipeline System (TAPS); 1.5+ million barrels per day of spare capacity; supplying American energy to Americans without environmental risks or 'dirty oil' associated with Keystone Pipeline.
- **Ongoing Development:** major operators such as Exxon Mobil (NYSE:XOM | Market Cap: $410.84B), BP (NYSE:BP | $139.96B) and ConocoPhillips (NYSE:COP | $71.86B) investing heavily in oil and gas-related projects.

1. Resource Development Council for Alaska (website), Oct. 18, 2012.
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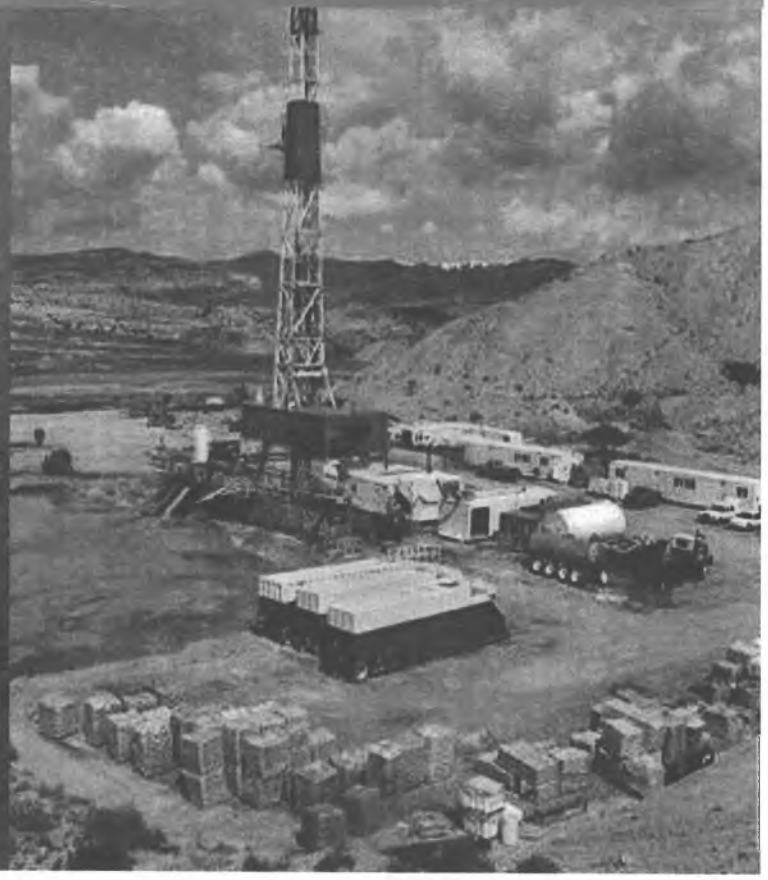
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OIL AND GAS - 1





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OIL AND GAS - 2

MACONDO INCIDENT

It is critical to get a craft onsite as quickly as possible for command & control, well control, SAR, firefighting/suppression, oil spill containment & collection

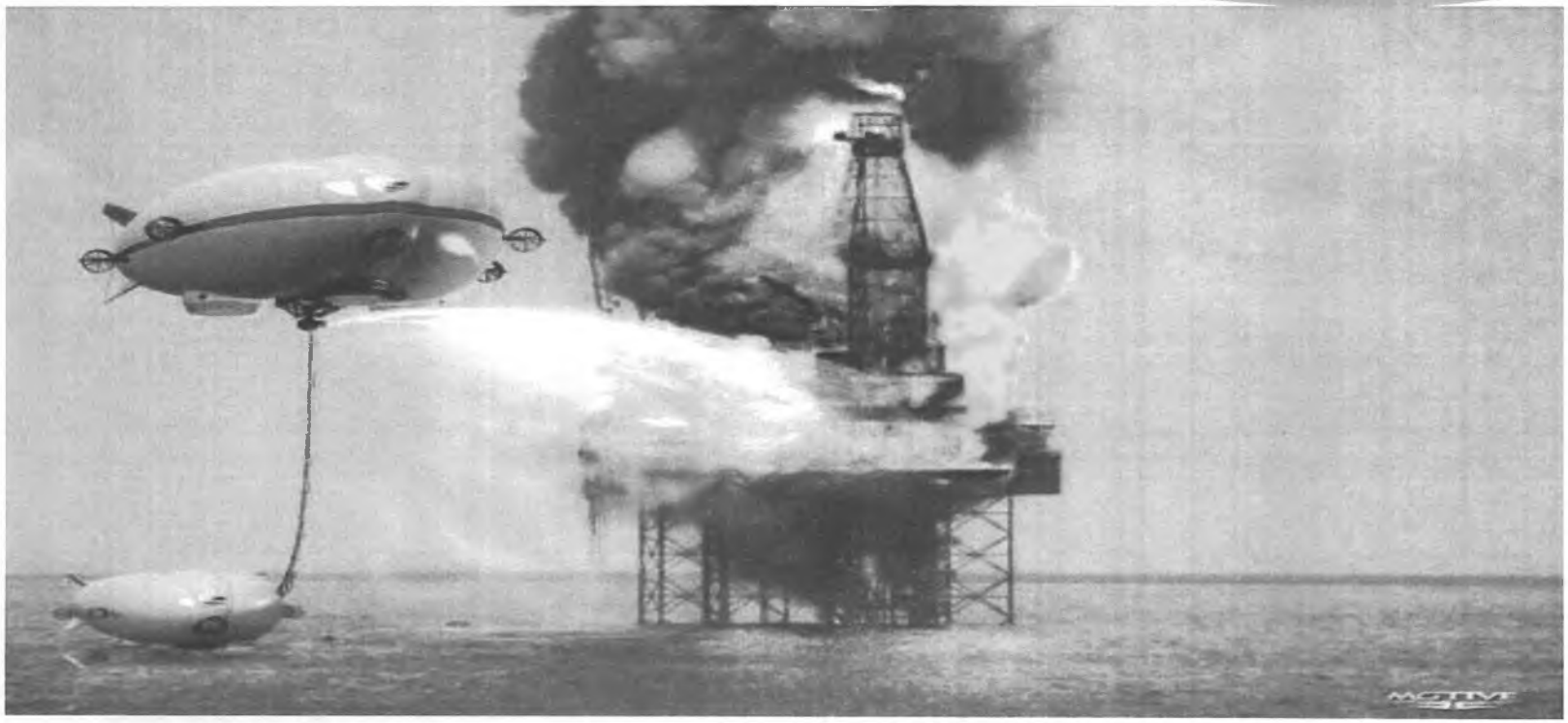


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APPLICATIONS OIL & GAS RAPID EMERGENCY RESPONSE

Emergency Response, Firefighting, Containment, Collection, Search & Rescue (Could have be on scene at Macondo Incident in 1l/2 hours)

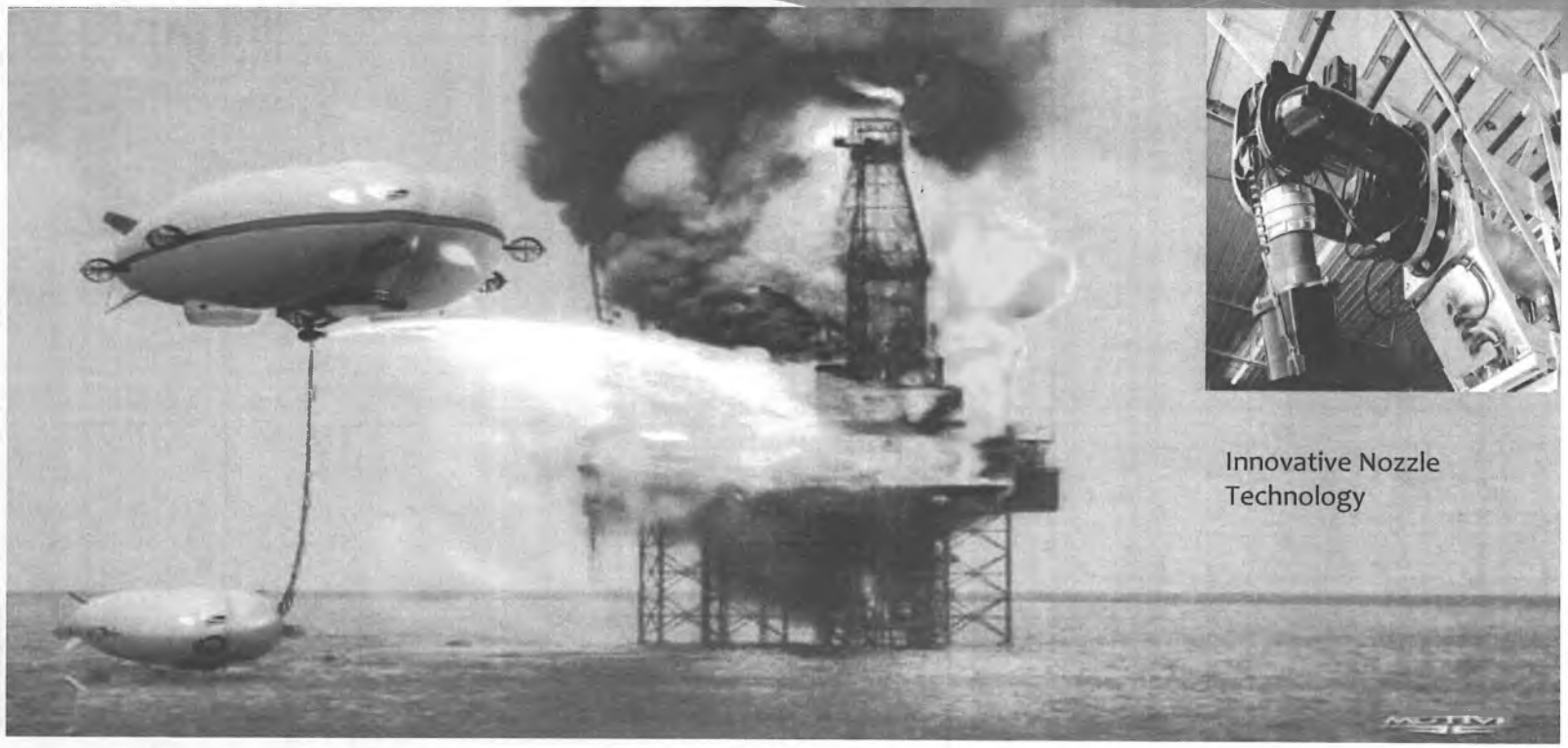


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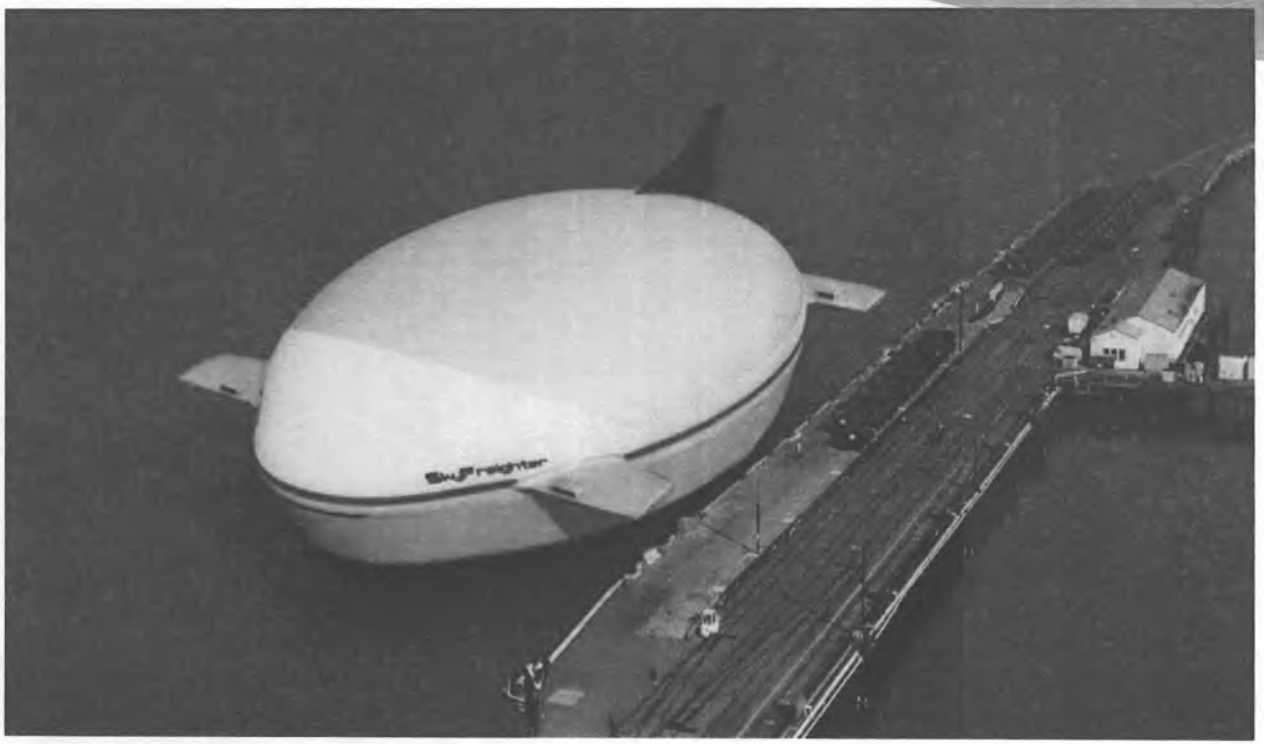
Innovative Nozzle Technology

New technology to lift & apply modified seawater

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LNG TRANSPORT



LNG GAS IS QUICKLY BECOMING A HIGHLY NEEDED COMMODITY BUT BEING ABLE TO DELIVER IT QUICKLY AND BE COST EFFECTIVE HAS BEEN AN ISSUE. ITS NOW POSSIBLE WITH THE SKYLIFT TANKER TO LOAD FROM ANY LOCATION AND DELIVER EASILY TO ALMOST ANYWHERE, MAKING THE USE OF LNG MORE PRACTICLE AND ECONOMICAL.

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ALTERNATE TRANSPORT

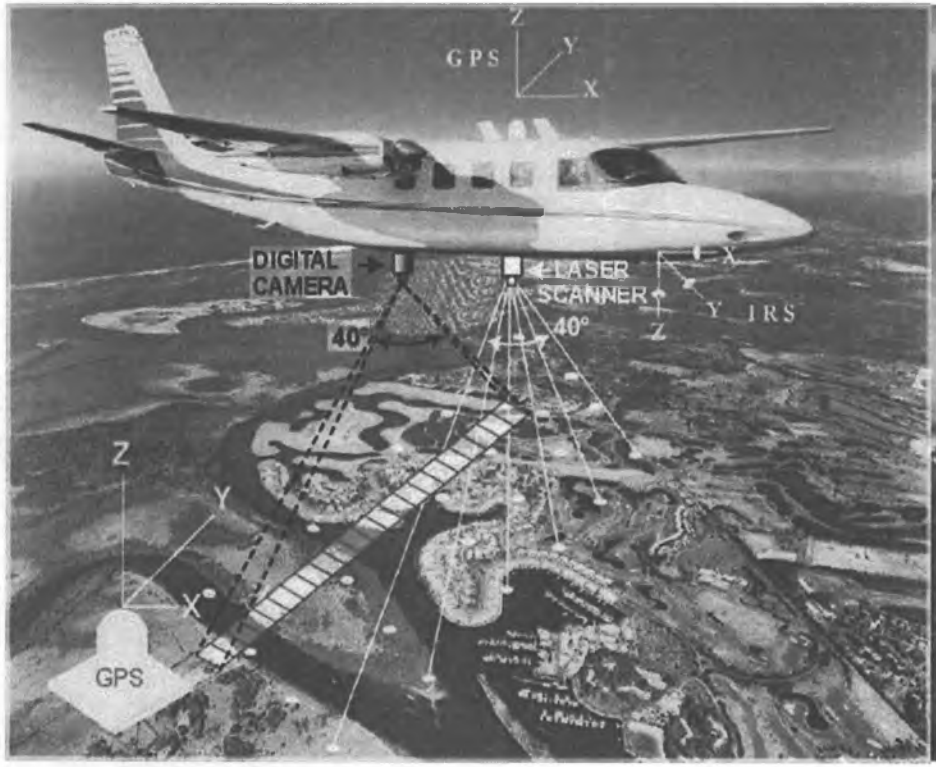


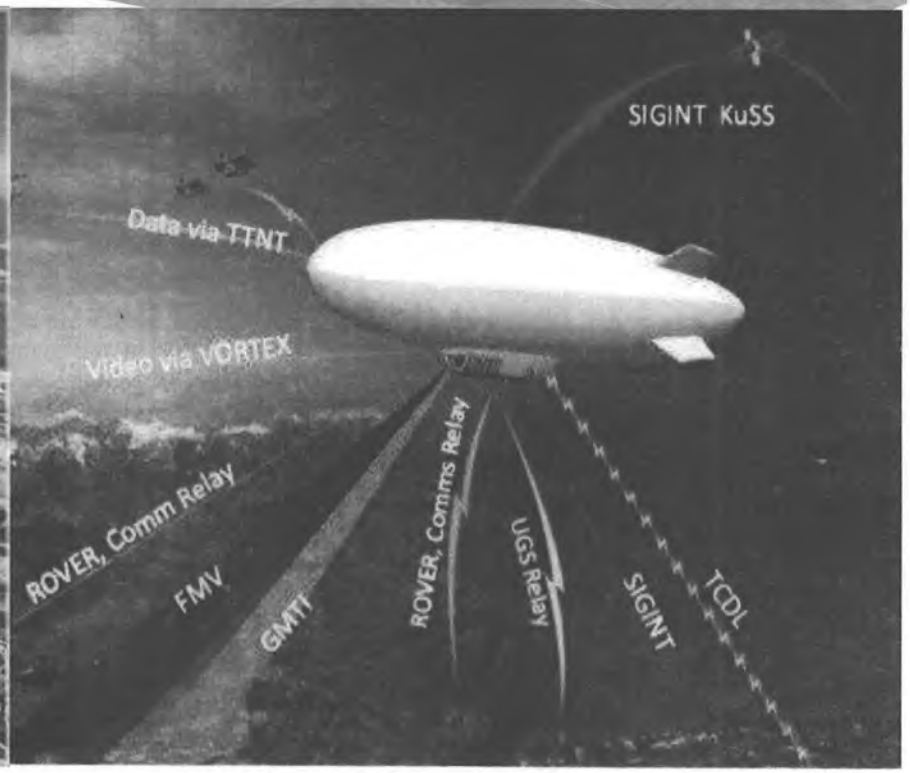


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SURVEILANCE AND MAPPING





courtesy: U.S. Air Force

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ON THE SPOT MEDICAL RESPONSE

100 TON VARIANT

WHEN TIME IS NOT AN OPTION



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TOURISM







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DISASTER RELIEF



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AEROSPACE

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DISASTER RELIEF

Hurricane Katrina



- 1,836 people died in the hurricane and
- An estimated $90 billion worth of damage.

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DISASTER RELIEF

Hurricane Katrina – A few people at a time by helicopter



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SEARCH AND RESCUE





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MERGED ENERGY SOLUTIONS

FISHING ENHANCEMENT



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FIRE FIGHTING

Wildfire Air Tanker Concept

An average of 50 Tankers are needed, but only 7 are operating*
Wildfire fighting experts agree 50 additional planes are needed to complement ground crews overwhelmed by the number and intensity of wildfires during the fire season.
The Cost of putting out wildfires is over $1.65 billion/year.

*July 3, 2012 Disaster Relief & Reuters, 2012

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HYBRID AIRCRAFT WILDFIRE AIR TANKER CONCEPT



NOT JUST A TANKER! A New Disruptive Firefighting System

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FOREST MANAGEMENT

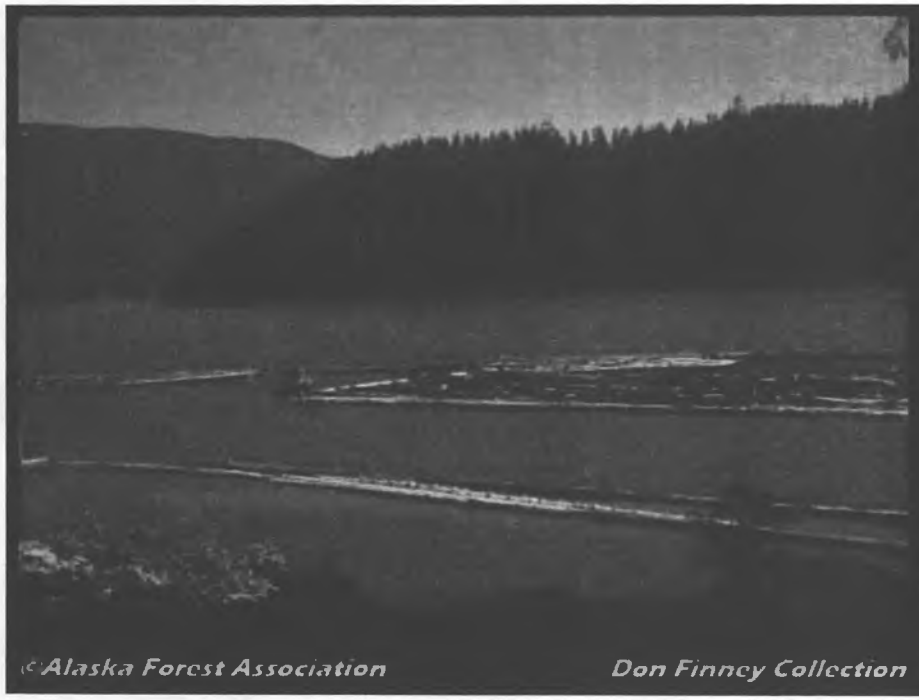




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TIMBER AND LOGGING



©Alaska Forest Association Don Finney Collection

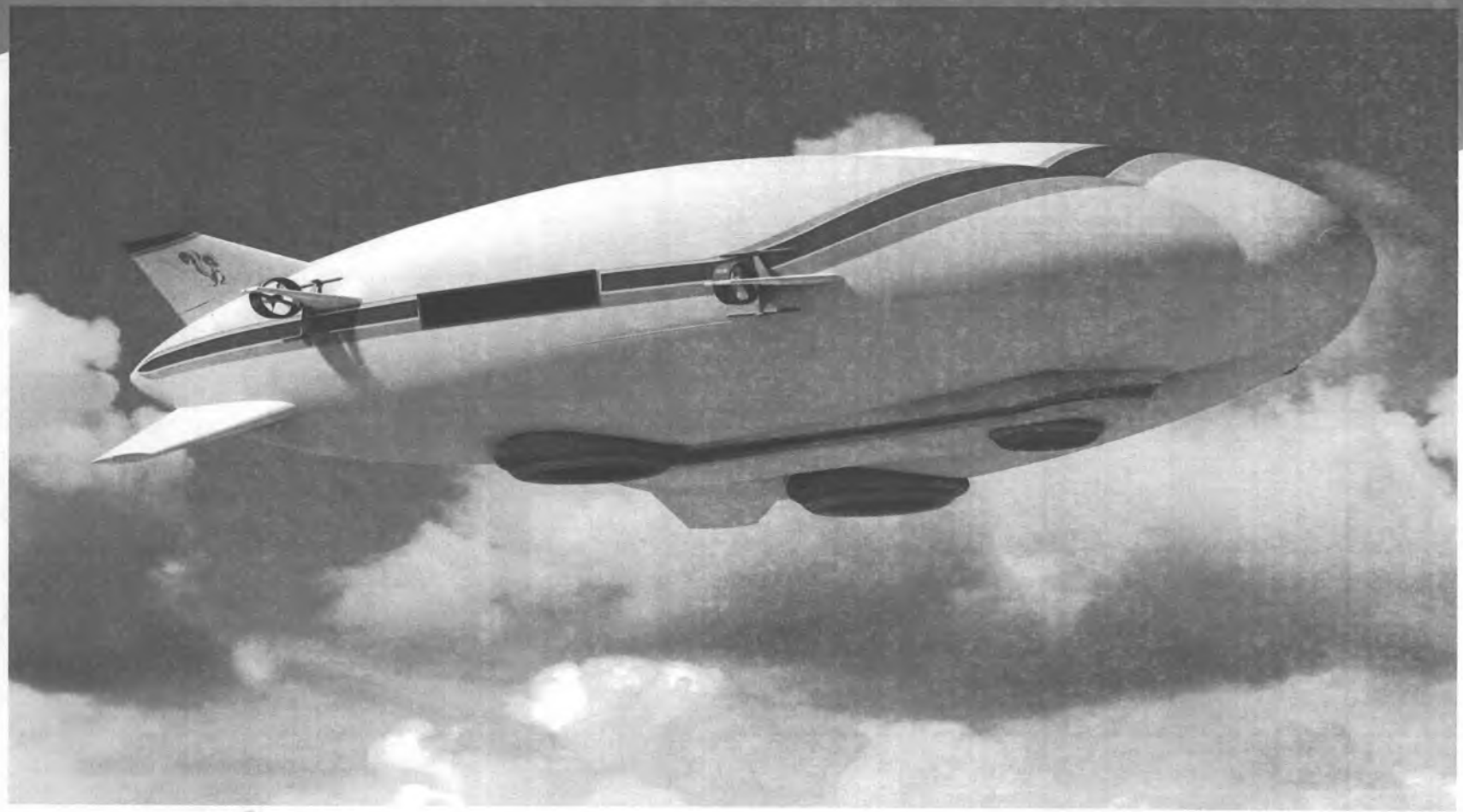


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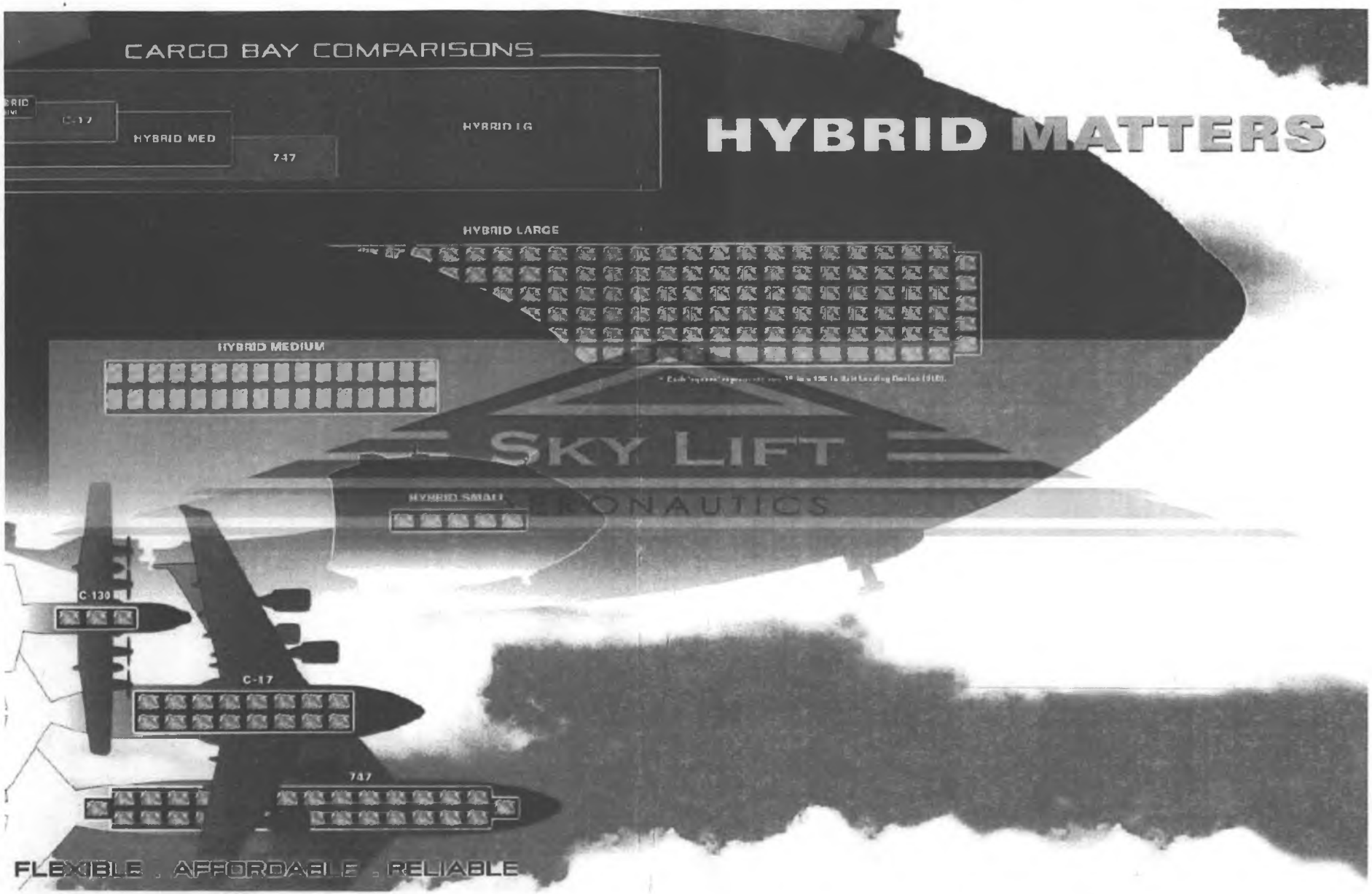
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SKYLIFT HYBRID AIRCRAFT



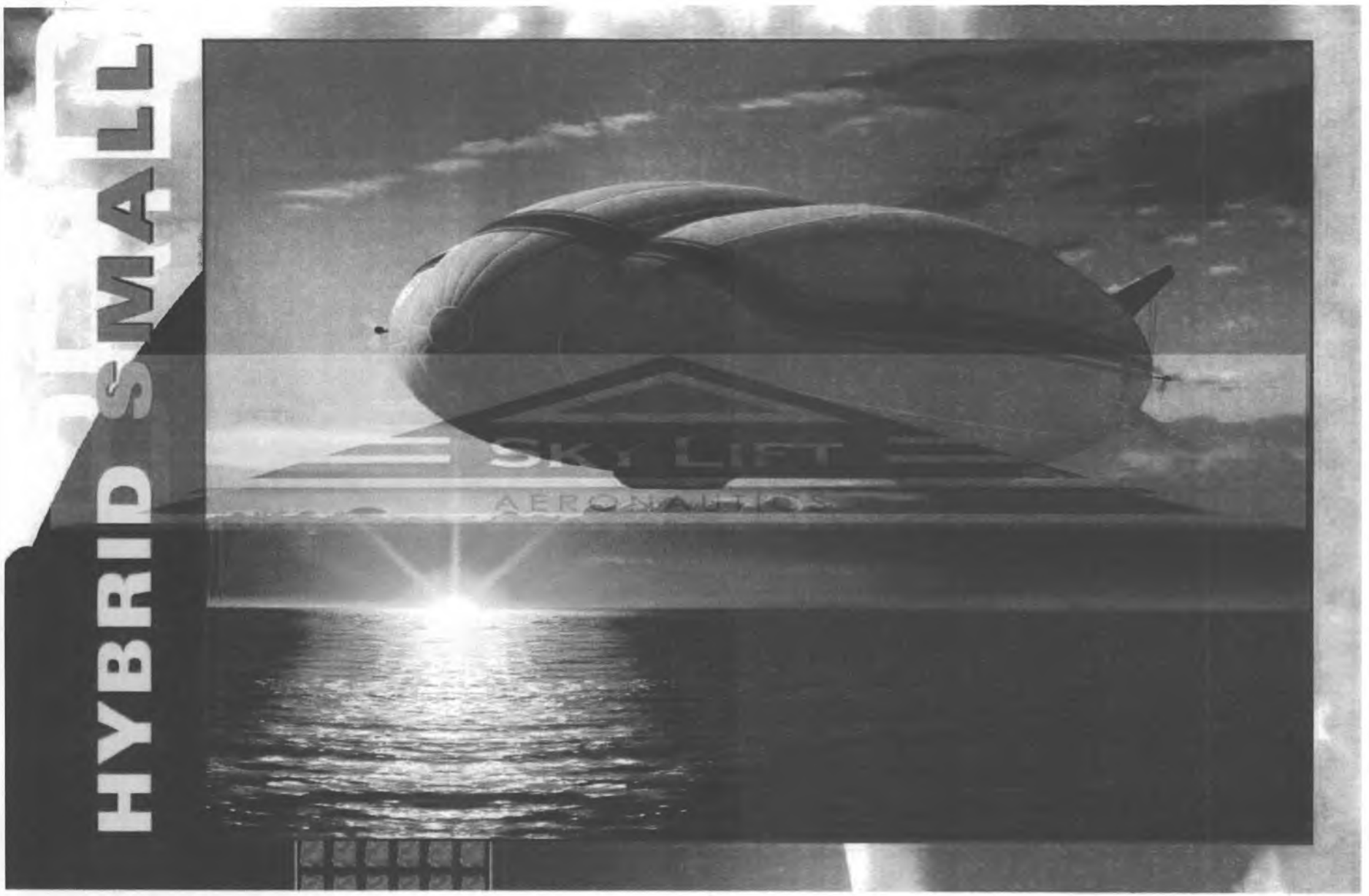
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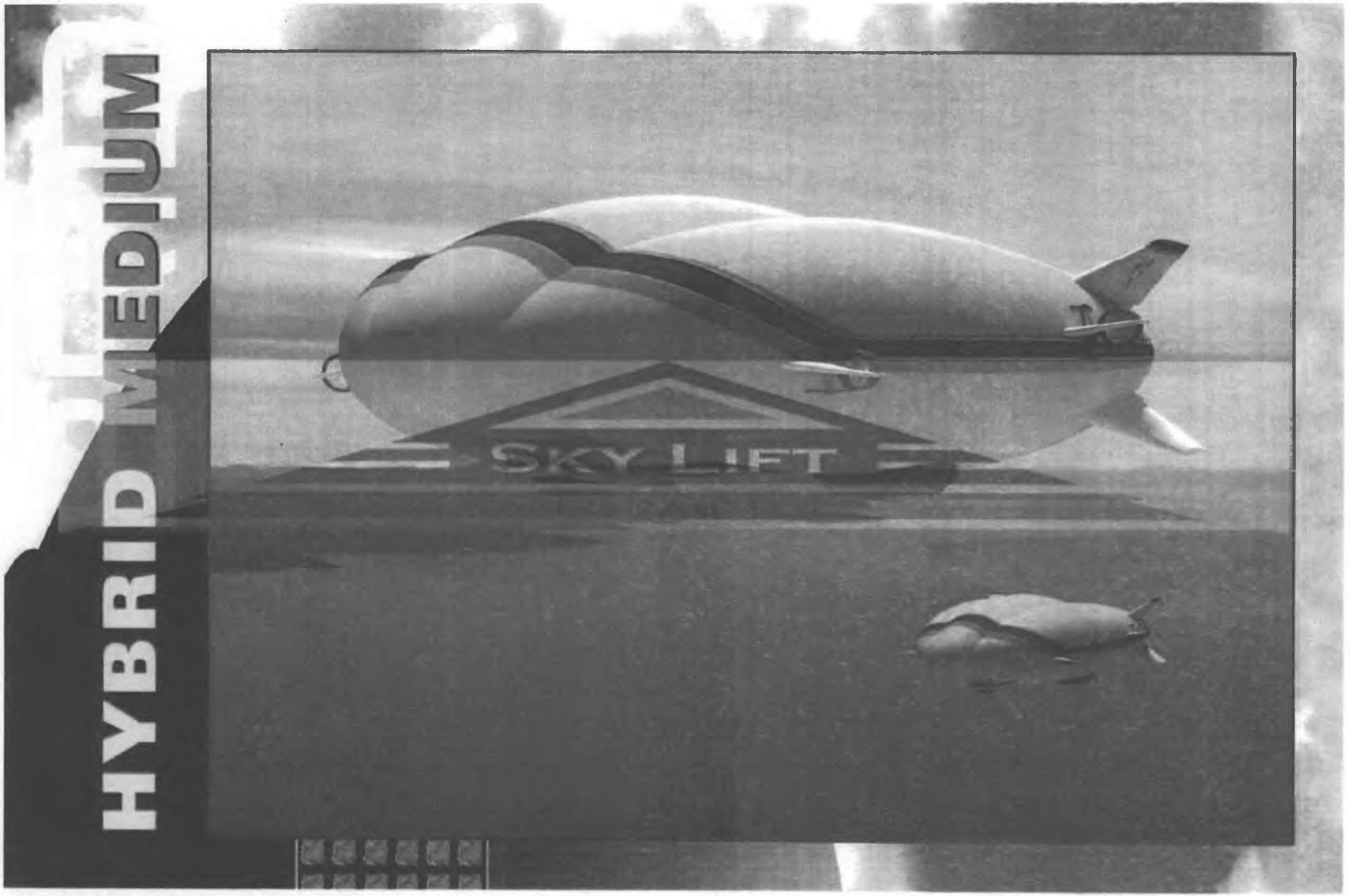
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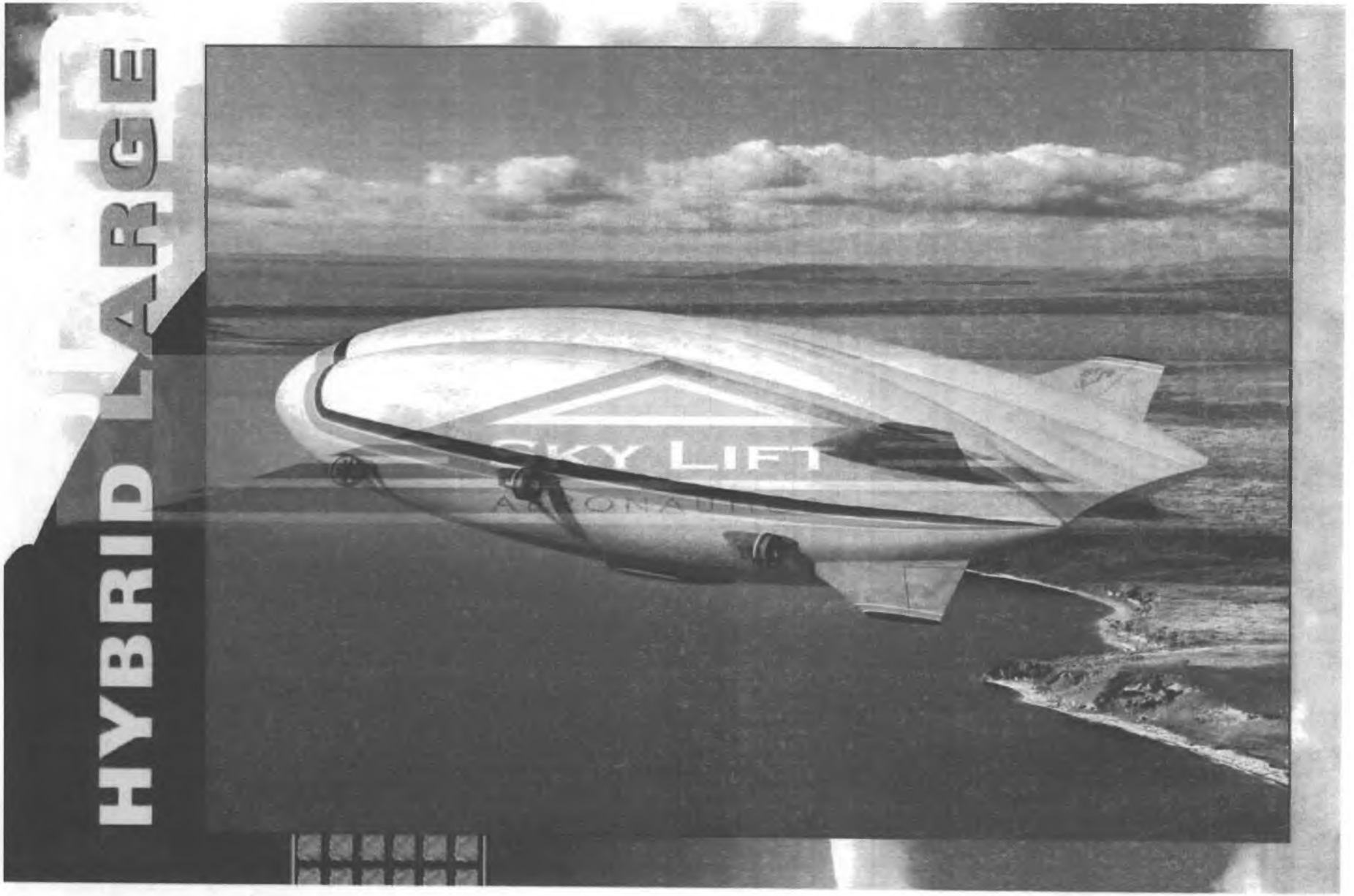
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4 Proven Technologies Merged Into 1 Transformational Technology



Vertical Airlift

Helicopter

Deltoid Shape Aerodynamic Lift



Cargo Airplane

Hybrid Aircraft



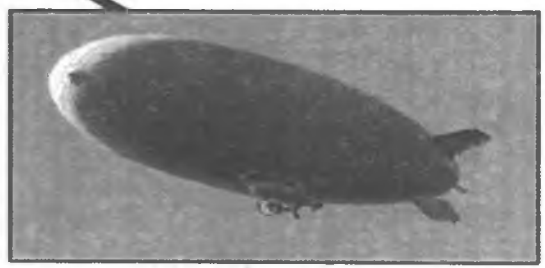
Vectored Thrust



Air Cushion Landing System (ACLS)

Hover Craft

Helium Filled Envelope Up to 80% Vertical lift



Airship (Blimp)

SKY LIFT AERONAUTICS

MES MERGED ENERGY SOLUTIONS

FOR MORE INFORMATION

ON HOW TO ORDER THE AIRCRAFT AND OR SPECIFICATIONS

HYBRID VARIANTS

20 TON CAPACITY
100 TON CAPACITY
500 TON CAPACITY

CONTACT:

R. MICHAEL SMITH
Michael.smith@skyliftaero.com
1-714-262-6839

Kurtis Zell
Kurtis.zell@skyliftaero.com
1 702 232 9029

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03/04/14 Presentation: Merged Energy Solutions - Transforming Alaska - Airships

<TARGET><BILL></BILL><SUBJECT>03-04-14 Presentation Merged Energy Solutions - Transforming Alaska - Airships</SUBJECT><COMM>HEDT28</COMM></TARGET>

Ginger Blaisdell

From: Rep. Peggy Wilson
Sent: Friday, March 07, 2014 2:19 PM
To: Rep. Shelley Hughes; Ginger Blaisdell
Subject: FW: Lockheed Martin Hybrid Airship

Hello Rep. Hughes and Ginger,

Rep Wilson asked that I forward the email below to both of you. She also wanted to know if you got a similar email?

Becky Rooney
Chief of Staff
Representative Peggy Wilson
907-465-4858
907-305-3003 (cell)

From: Johnston, Craig [mailto:craig.johnston@lmco.com]
Sent: Friday, March 07, 2014 7:11 AM
To: Rep. Peggy Wilson
Subject: Lockheed Martin Hybrid Airship

Dear Representative Wilson,

I am pleased that your committee took the time to increase your understanding of the benefits of a Hybrid Aircraft in the state of Alaska earlier this week. However, I would like to clarify Lockheed Martin's position in this market space. Mr. Michael Smith represented to your committee that "Sky Lift Aeronautics is the exclusive marketing, sales and leasing representative for Lockheed Martin's Hybrid Aircraft" and that all interested parties would have to go through Sky Lift Aeronautics for the purchase or operation. These statements are false. While Lockheed Martin has had discussions with Mr. Smith, there is no formal agreement in place or specifically contemplated with Sky Lift Aeronautics. Additionally, Mr. Smith discussed plans for the development, testing, cost, schedule, performance and use of the Lockheed Martin Hybrid aircraft that do not represent the position of Lockheed Martin, and in many cases were not factual.

Lockheed Martin remains enthusiastic about the uses of Hybrid Aircraft in regions like Alaska and we have supported multiple Alaska Airship conferences. Additionally, we have met with your Lt. Governor, numerous State Representatives, AIDEA, several business interests in the oil, gas and mining industry, and the Alaska Railroad Corporation. The next time we are in Alaska, Lockheed Martin would be happy to brief your committee on Lockheed Martin's Hybrid Airship.

Sincerely,

Craig Johnston
Director, Business Strategy & Development
Lockheed Martin Aeronautics Company
Advanced Development Programs (Palmdale)

661.572.5377 (w)

661.965.8986 (bb)

TRANSFORMING ALASKA

THROUGH INOVATIVE TECHNOLOGIES IN: AVIATION, RE ENERGY, SUSTAINABLE FOOD, CLEAN WATER, BIO FUELS AND HARDENED DATA CENTERS

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AERONAUTICS

MES
MERGED ENERGY SOLUTIONS

BENNEFITS TO ALASKA

* ECONOMIC GROWTH
* LOWER OPERATING COSTS Vs FIXED WING
* MORE PRODUCTIVITY
* NEW JOBS
* SAFER TRANSPORTATION
* EXPANDED COMMERCE DOMESTIC & INTERNATIONAL
* CLEANER ENVIRONMENT

SKY LIFT AERONAUTICS

MES
MERGED ENERGY SOLUTIONS

ECONOMICS

* **MINING**
* **ALTERNATIVE SHIPPING**
* **OIL AND GAS**
* **ALTERNATE TRANSPORTATION**
* **SURVEILLANCE AND MAPPING**
* **ON THE SPOT MEDICAL RESPONSE**

SKY LIFT
AERONAUTICS

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MERGED ENERGY SOLUTIONS

ECONOMICS

* TOURISM INDUSTRY
* DISASTER RELIEF
* SEARCH AND RESCUE
* FISHING
* FIRE FIGHTING CAPABILITIES
* TIMBER / LOGGING INDUSTRY

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MINING



Infrastructure Costs

- Roads
- Rails
- Power
- Equipment
- Trucks
- Earth movers

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SHIPPING - TRANSPORT



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AERO SERVICE

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MERGED ENERGY SOLUTIONS

ICE ROAD TRUCKING

Ice roads are a common feature across Alaska & Canada, and are typically the only way to access the most remote communities via ground transport.



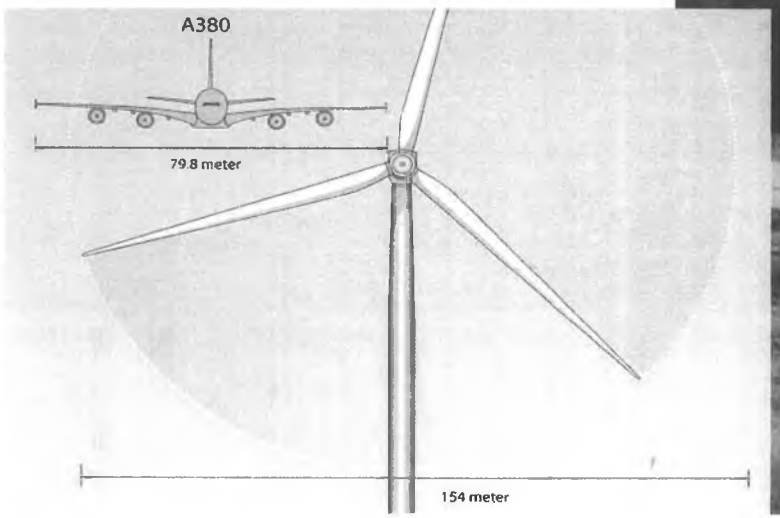


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AERONAUTICS

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SPECIALTY TRANSPORT

B75 Quantum Blades are solid one-piece and 187 ft. long!





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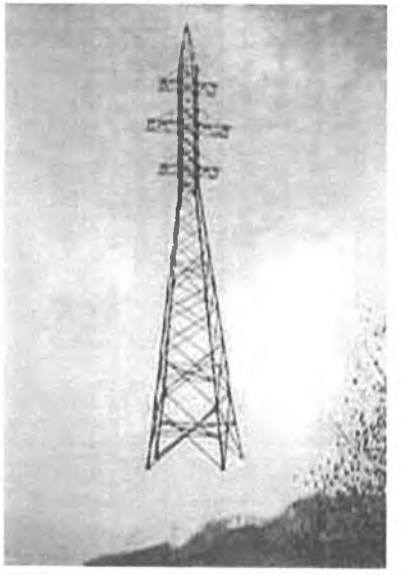
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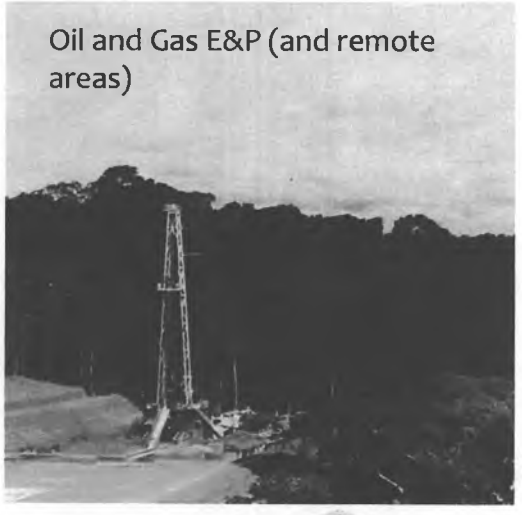
Transportation



Power Grid/Cell Towers



Oil and Gas E&P (and remote areas)



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SKY LIFT

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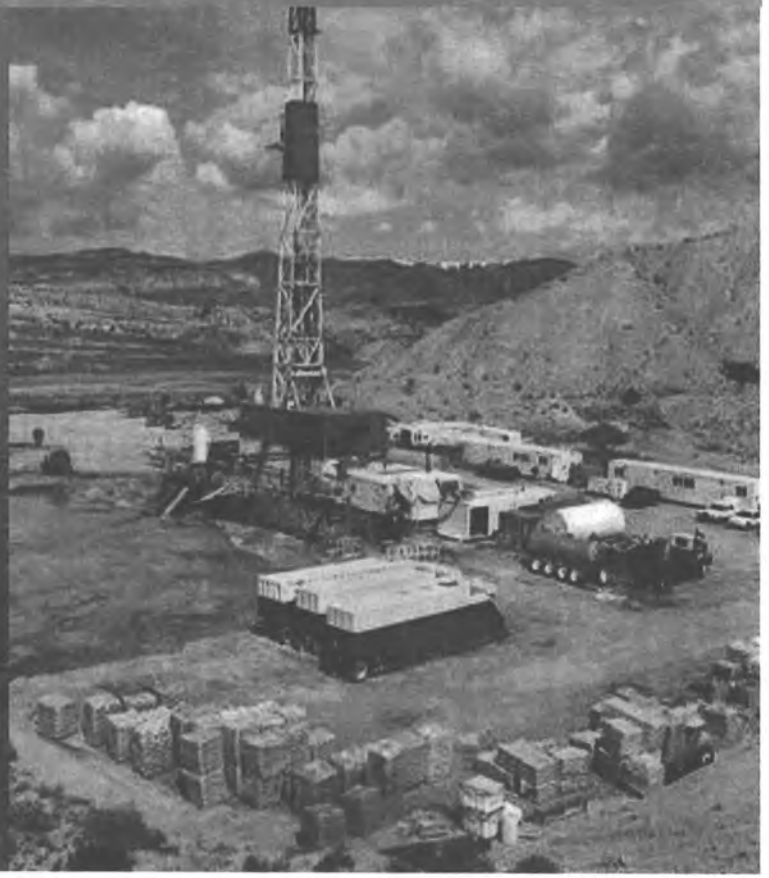
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OIL AND GAS - 1





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OIL AND GAS - 2

MACONDO INCIDENT

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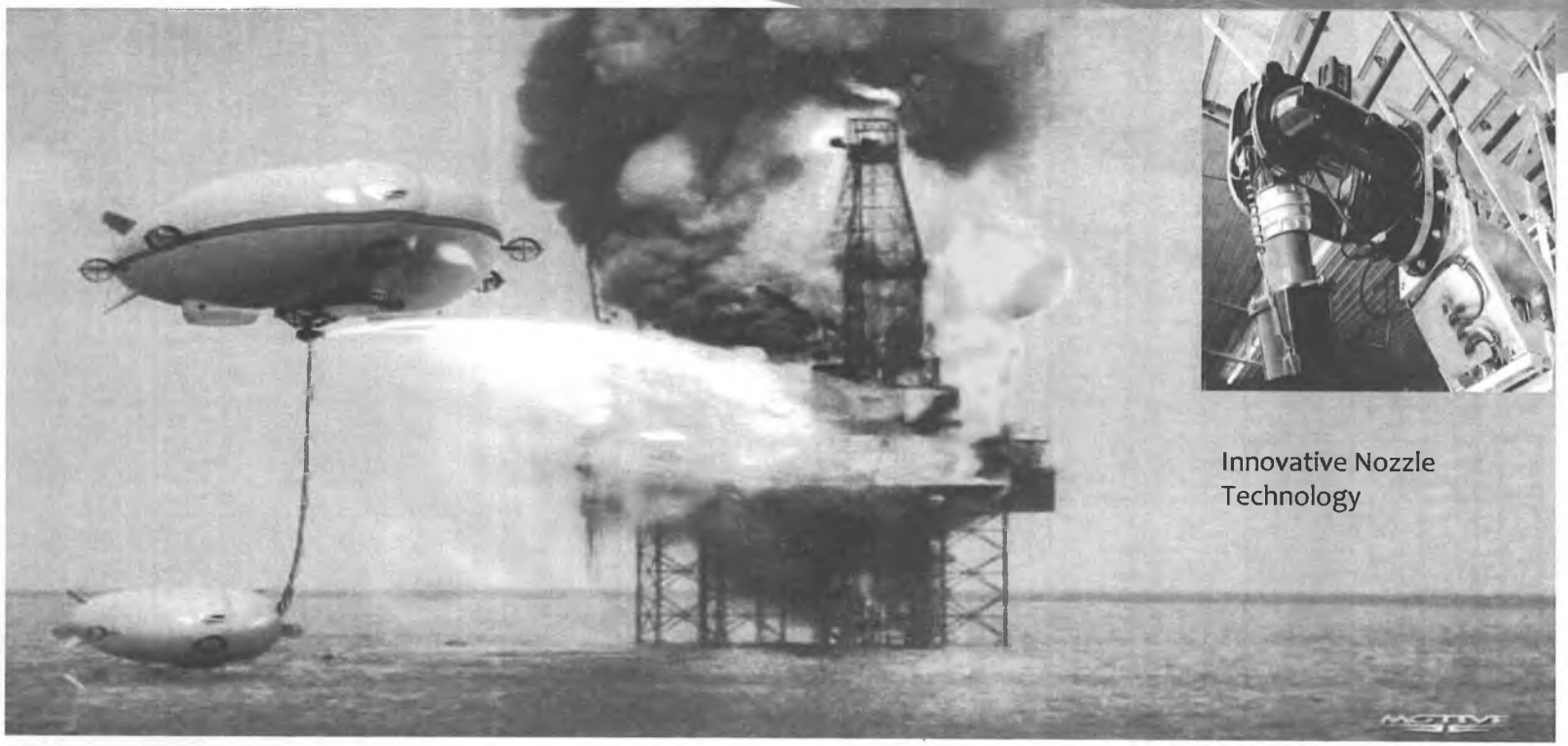


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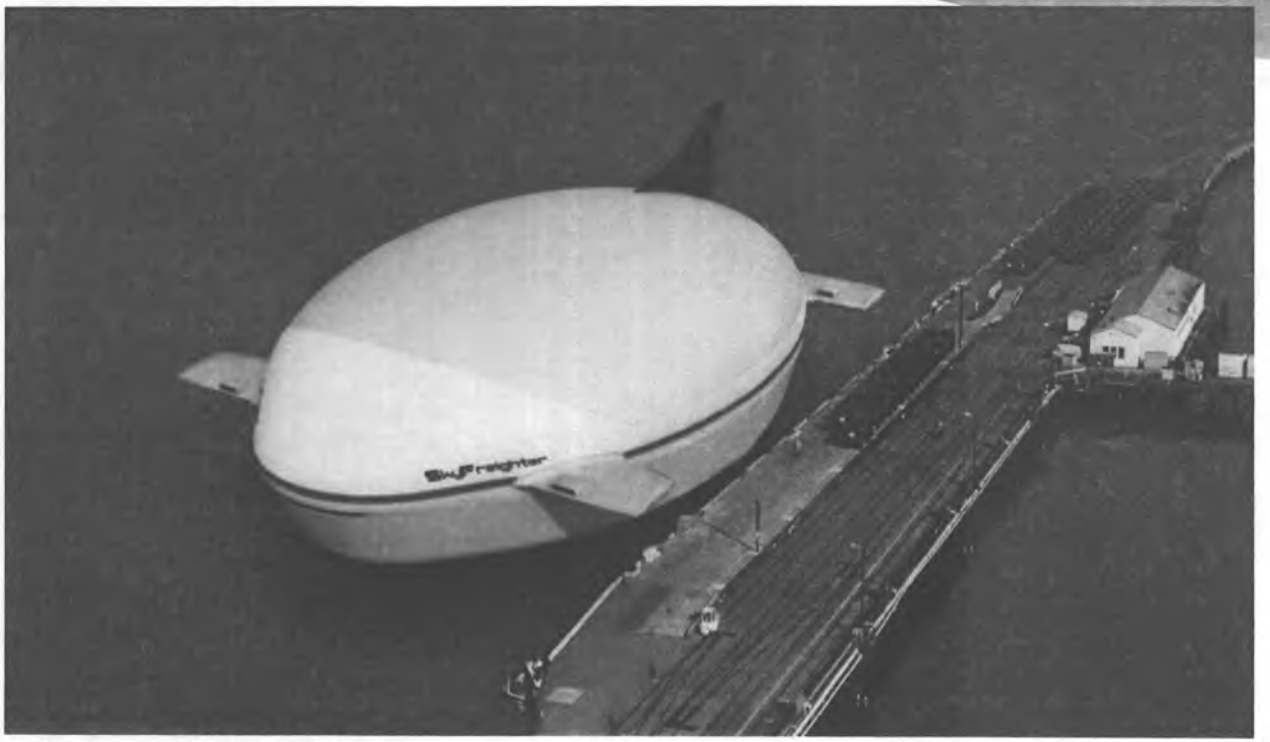
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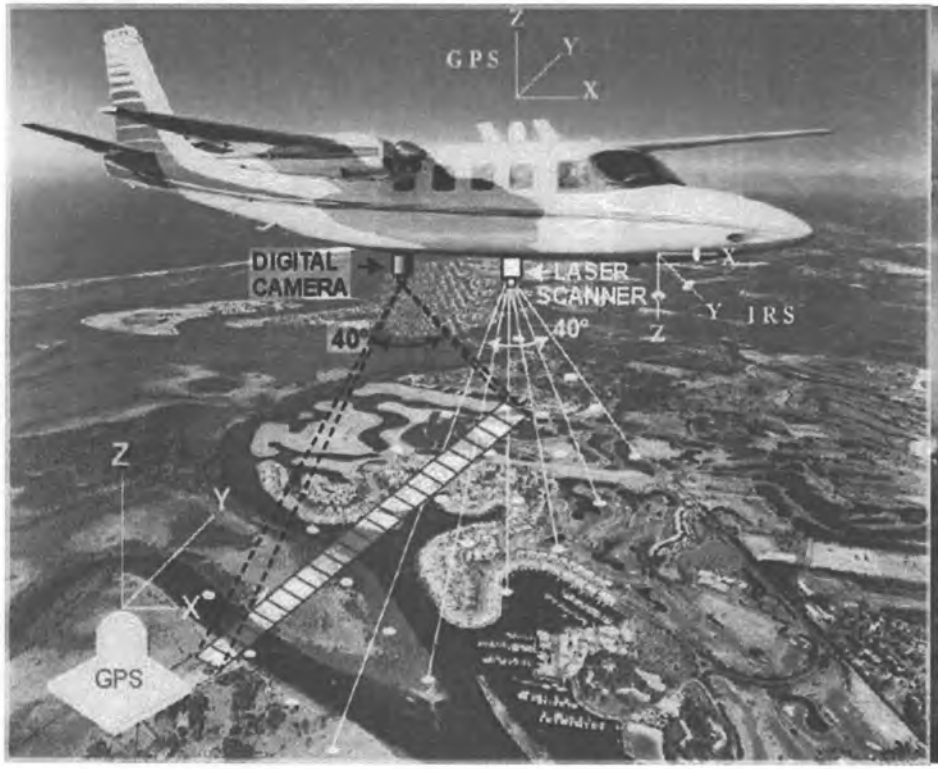


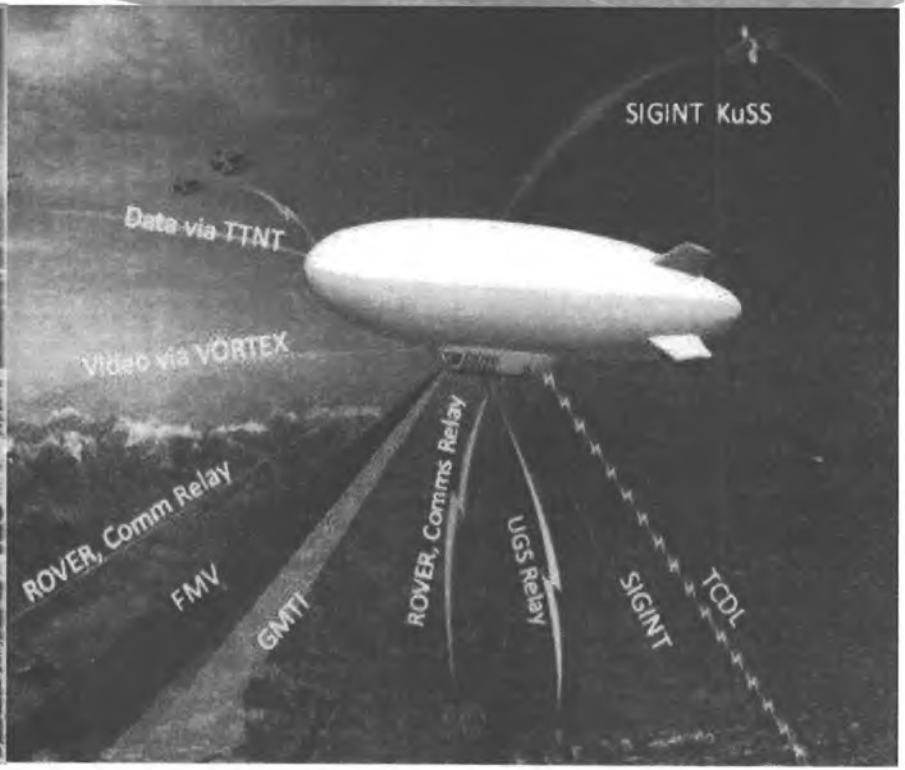


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SURVEILANCE AND MAPPING





courtesy: U.S. Air Force

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ON THE SPOT MEDICAL RESPONSE

100 TON VARIANT

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TOURISM







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DISASTER RELIEF

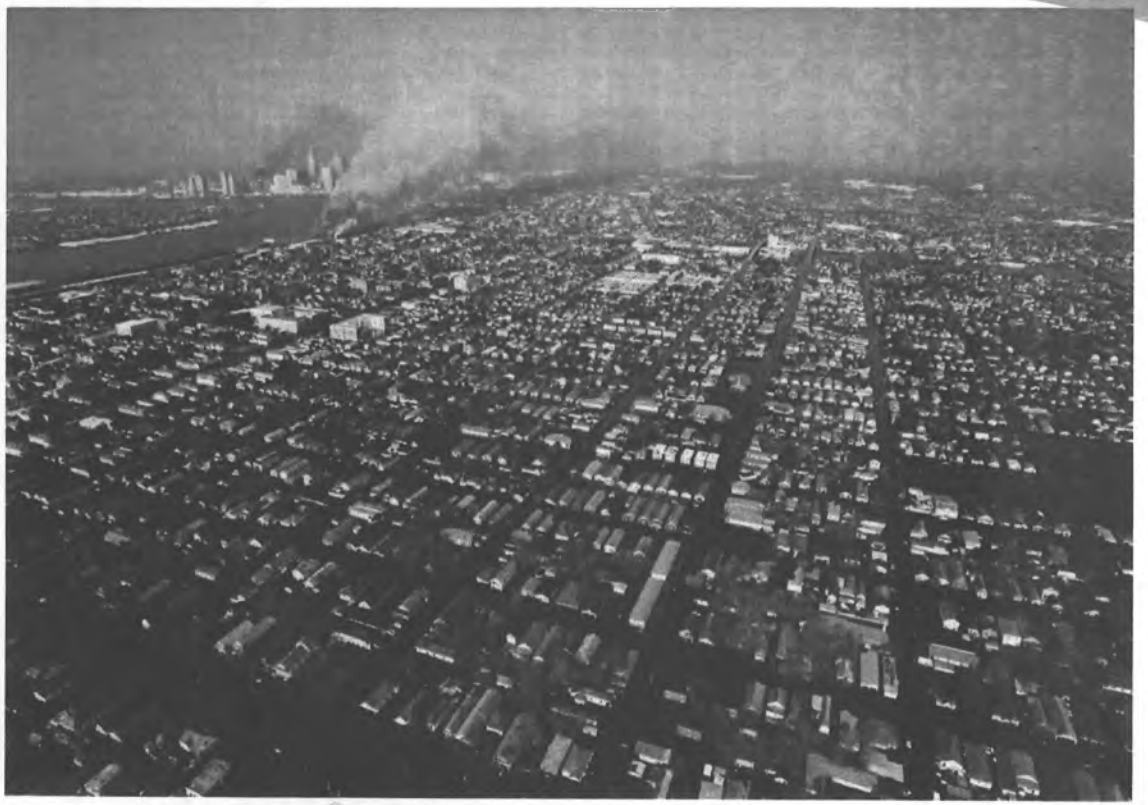


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AERO SERVICES

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SEARCH AND RESCUE



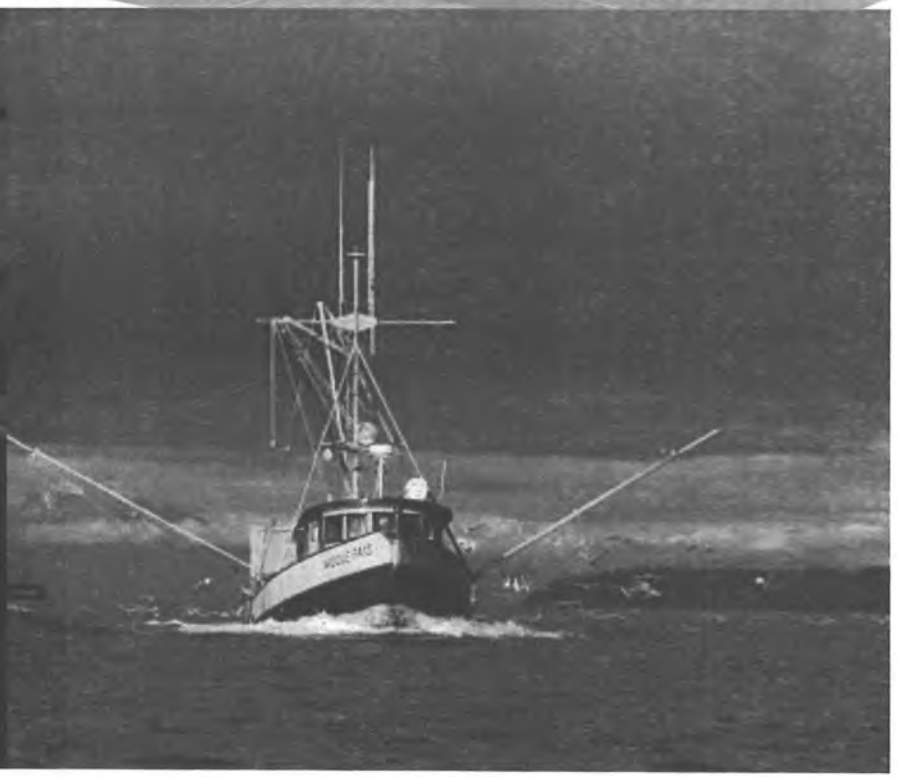


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FISHING ENHANCEMENT





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FIRE FIGHTING

Wildfire Air Tanker Concept

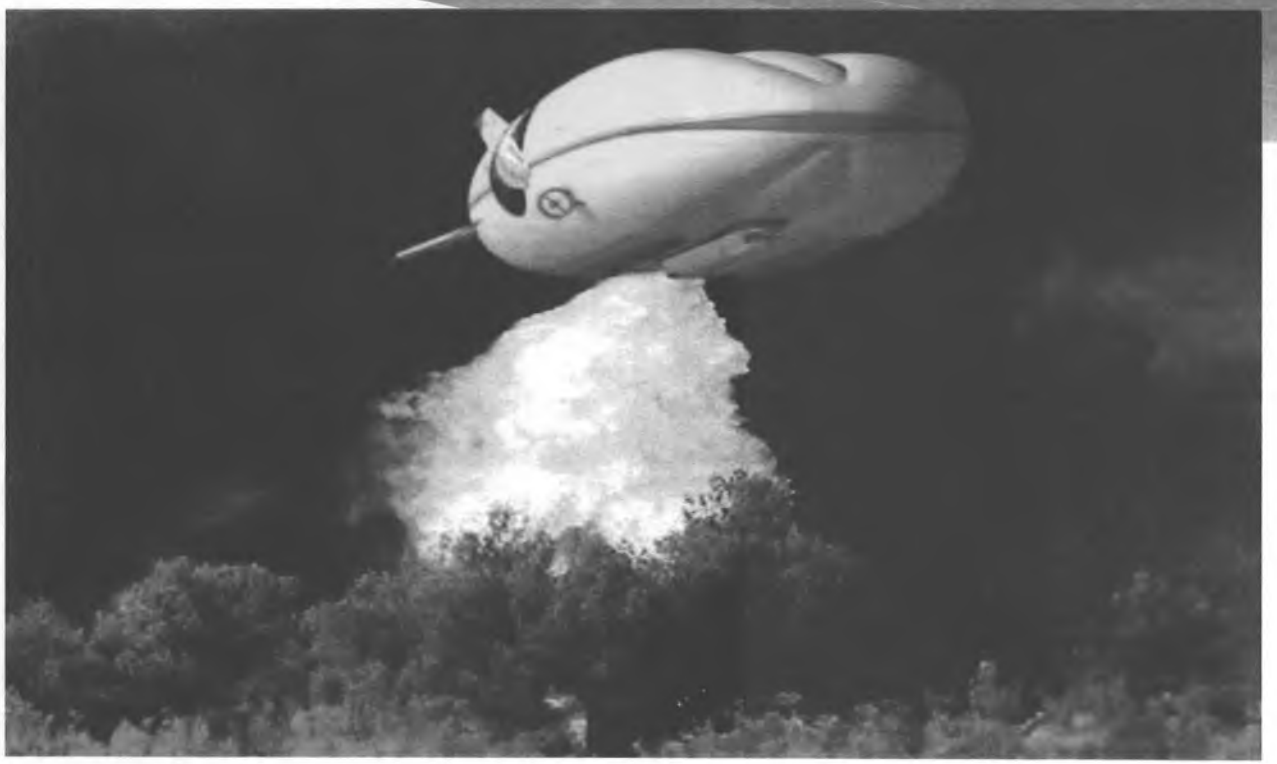
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MERGED ENERGY SOLUTIONS

HYBRID AIRCRAFT WILDFIRE AIR TANKER CONCEPT



NOT JUST A TANKER! A New Disruptive Firefighting System

SKY LIFT

MES
MERGED ENERGY SOLUTIONS

FOREST MANAGEMENT

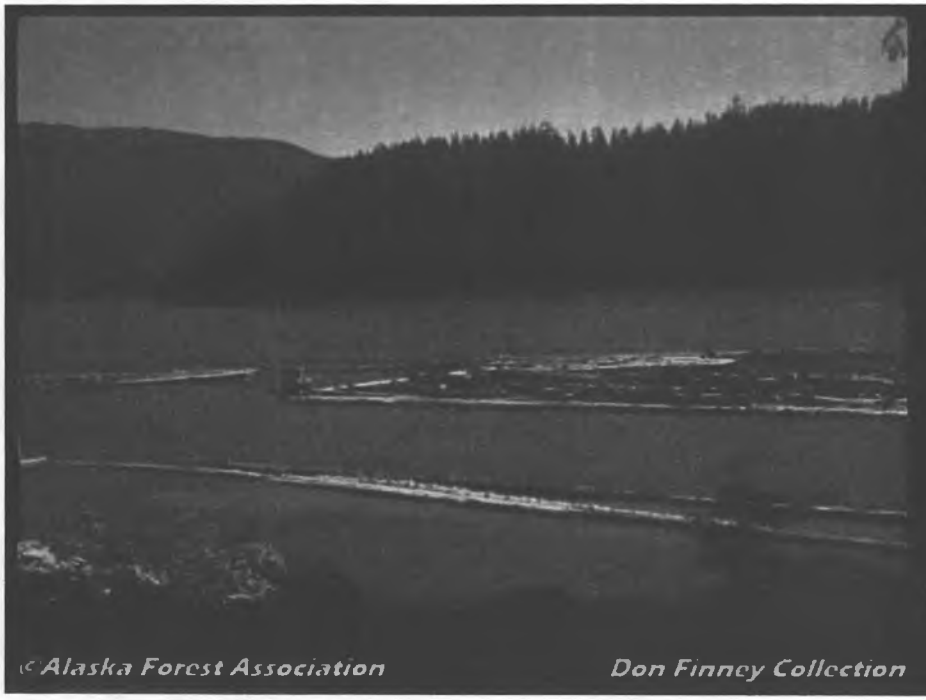




SKY LIFT
AERONAUTICS

MES
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TIMBER AND LOGGING



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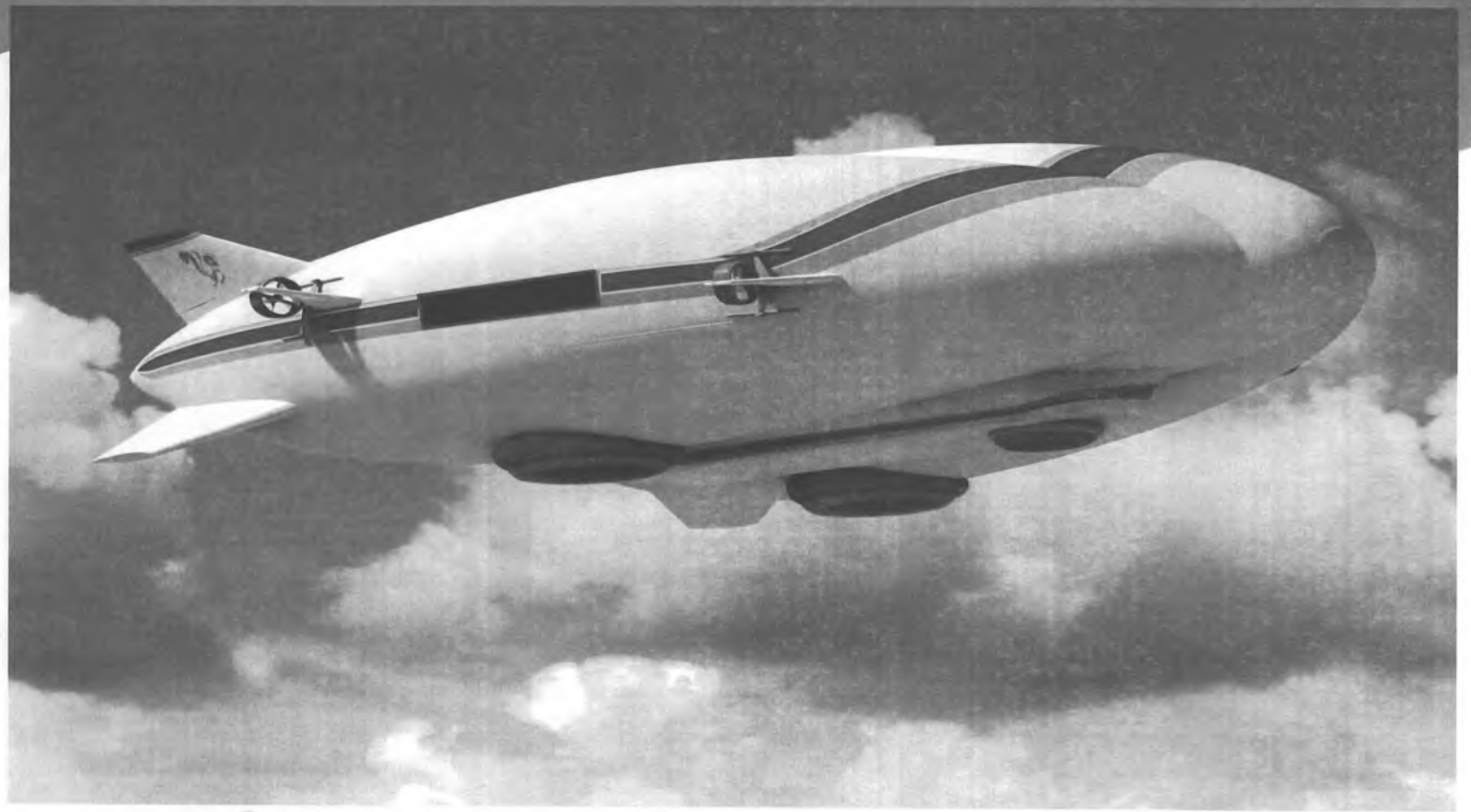


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AERONAUTICS

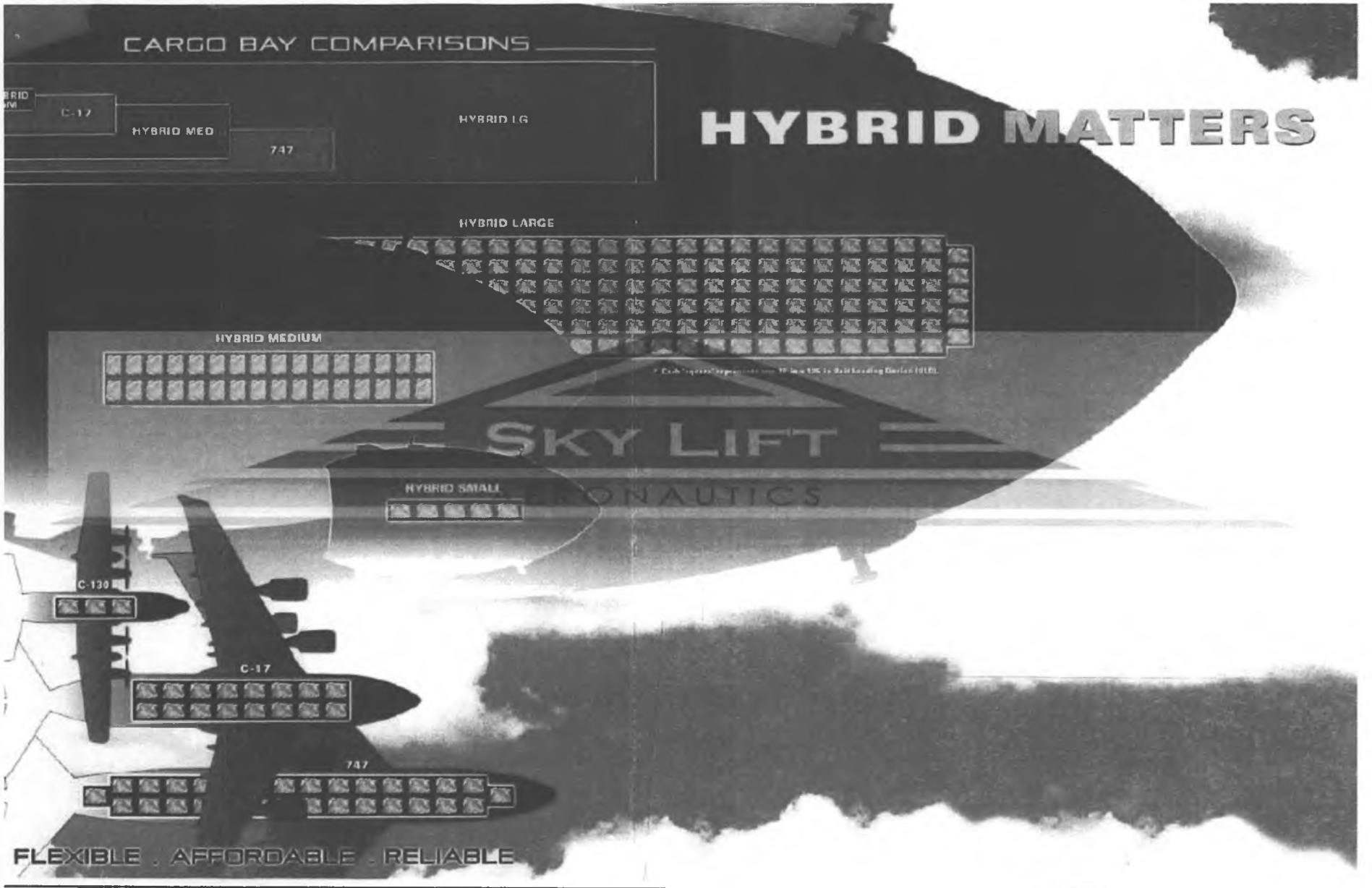
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SKYLIFT HYBRID AIRCRAFT



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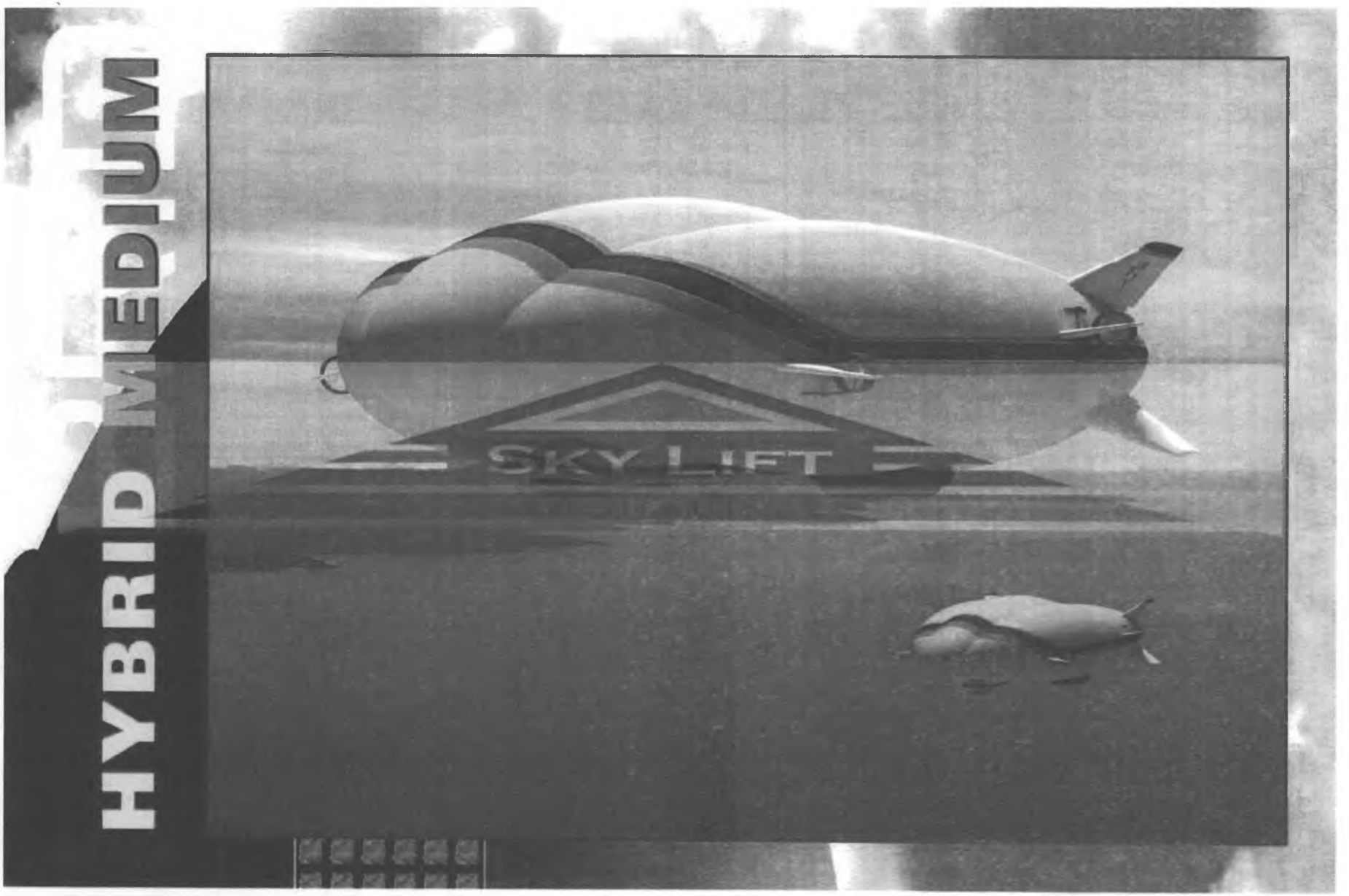
SKY LIFT
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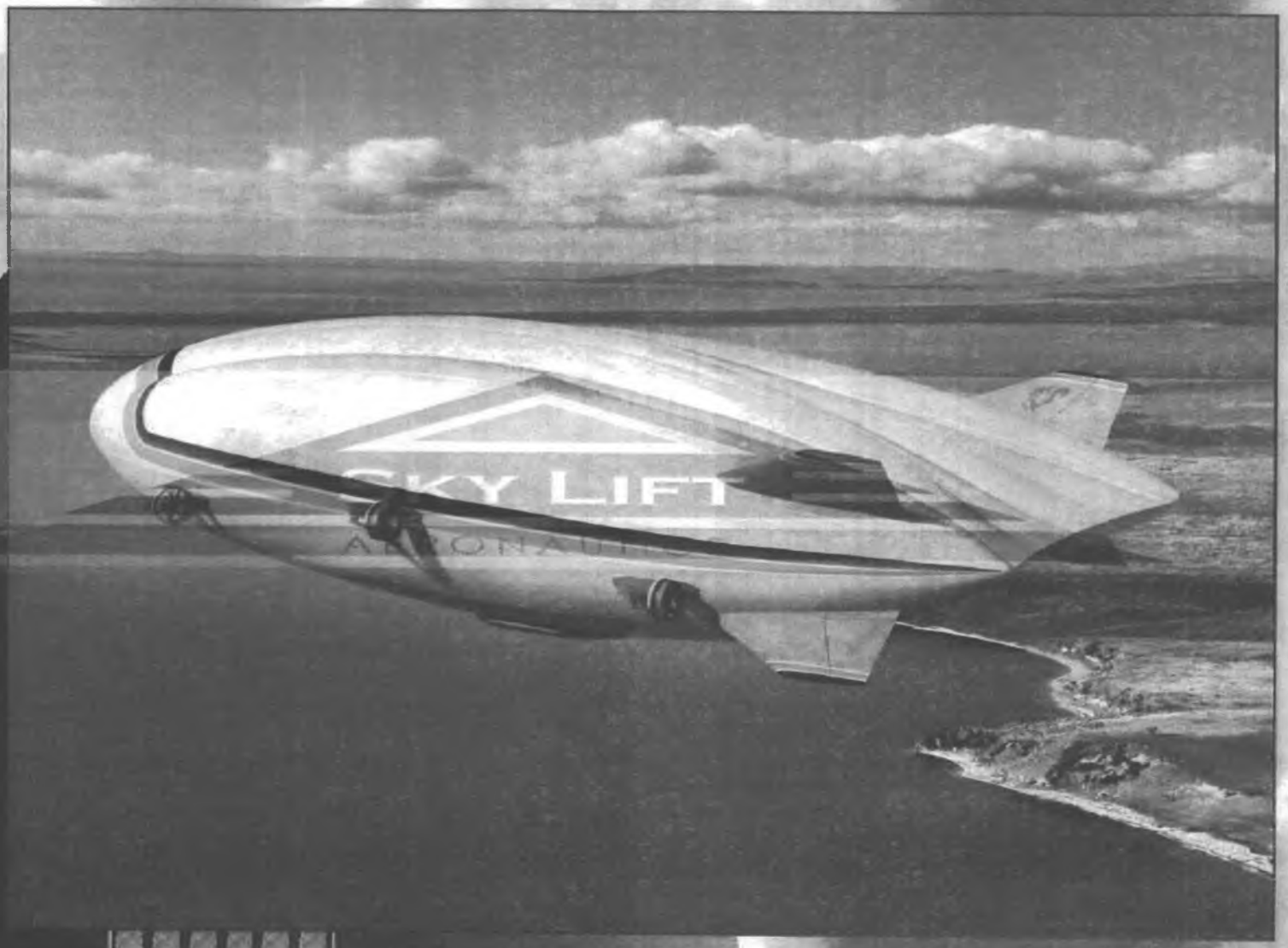
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SKY LIFT
AEROSTATICS

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HYBRID LARGE



SKY LIFT

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4 Proven Technologies Merged Into 1 Transformational Technology



Vertical Airlift

Helicopter

Deltoid Shape Aerodynamic Lift



Cargo Airplane

Hybrid Aircraft



Vectored Thrust



Air Cushion Landing System (ACLS)

Hover Craft

Helium Filled Envelope Up to 80% Vertical lift



Airship (Blimp)

SKY LIFT AERONAUTICS

MES MERGED ENERGY SOLUTIONS

FOR MORE INFORMATION

ON HOW TO ORDER THE AIRCRAFT AND OR SPECIFICATIONS

HYBRID VARIANTS

20 TON CAPACITY
100 TON CAPACITY
500 TON CAPACITY

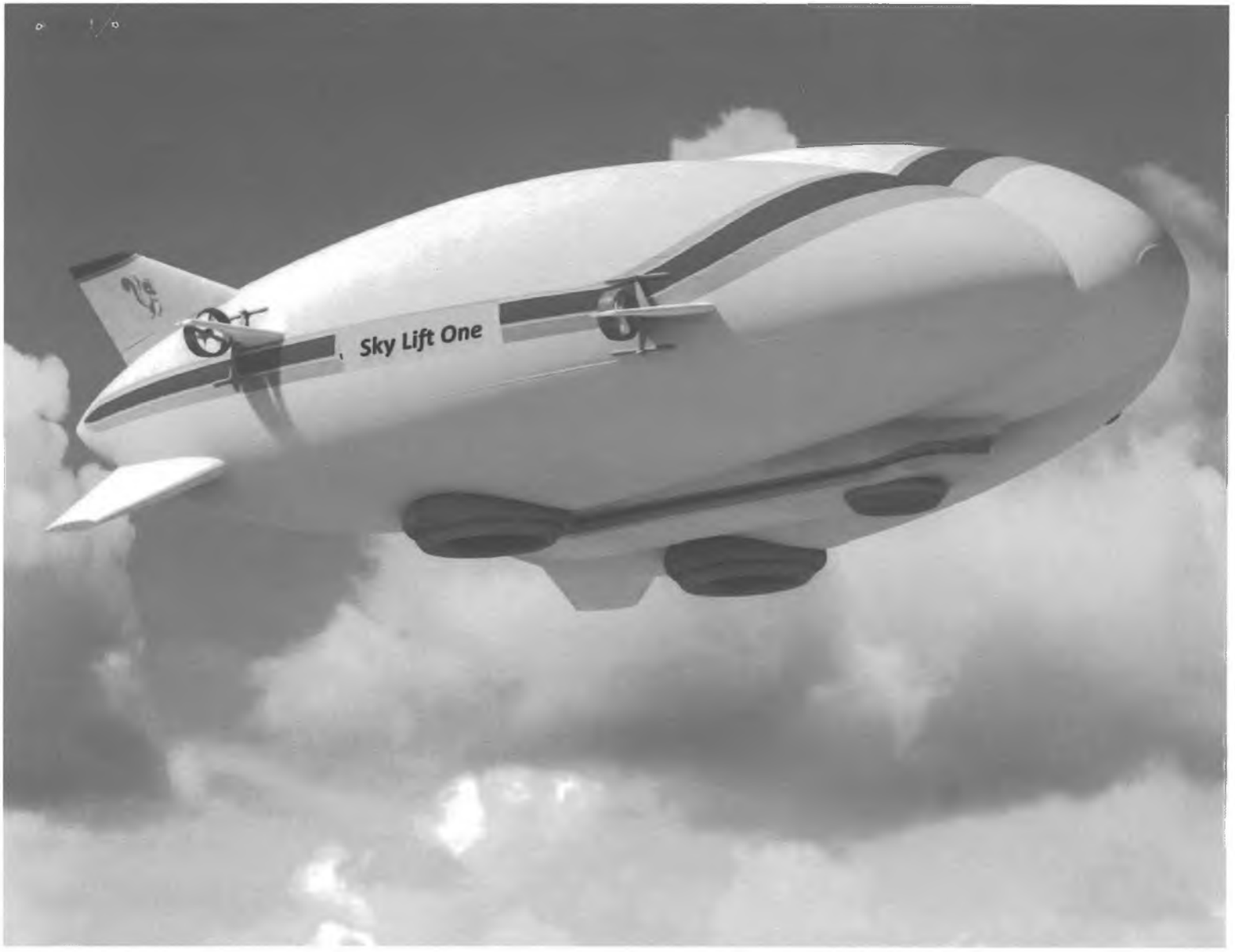
CONTACT:

R. MICHAEL SMITH
Michael.smith@skyliftaero.com
1-714-262-6839

Kurtis Zell
Kurtis.zell@skyliftaero.com
1 702 232 9029

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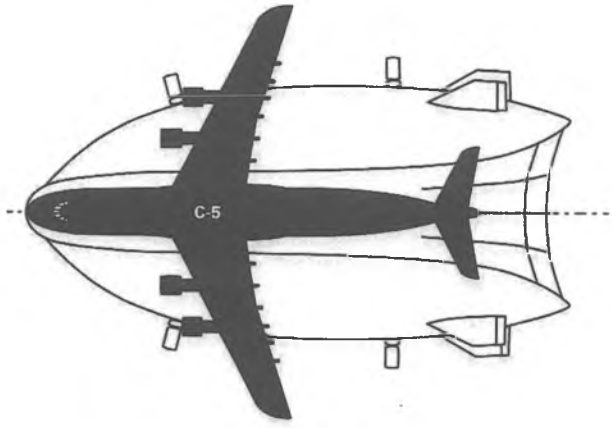


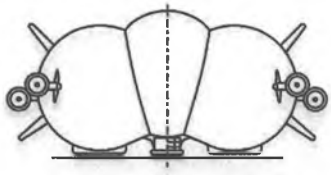
SKY LIFT

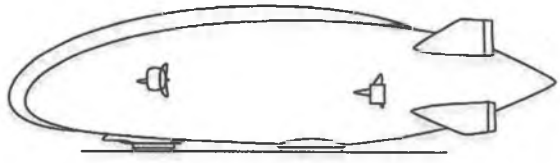
AERONAUTICS

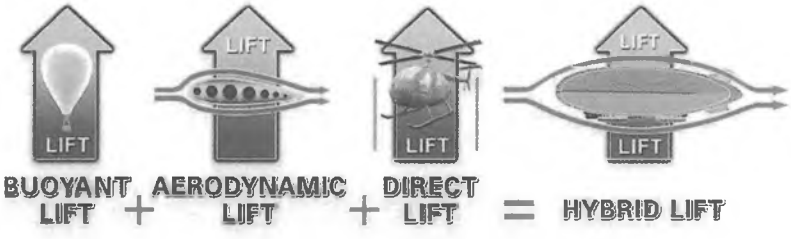
HYBRID SMALL

Dimensions	276' x 157' x 75'
Speed	60 kt
Range	1,400 nm
Payload	15-22 tons @ 5K' msl
Service Ceiling	10,000' msl
Modes	Standard Take-off, VTOL, Sling Load
Surfaces	Austere field, water, snow, sand

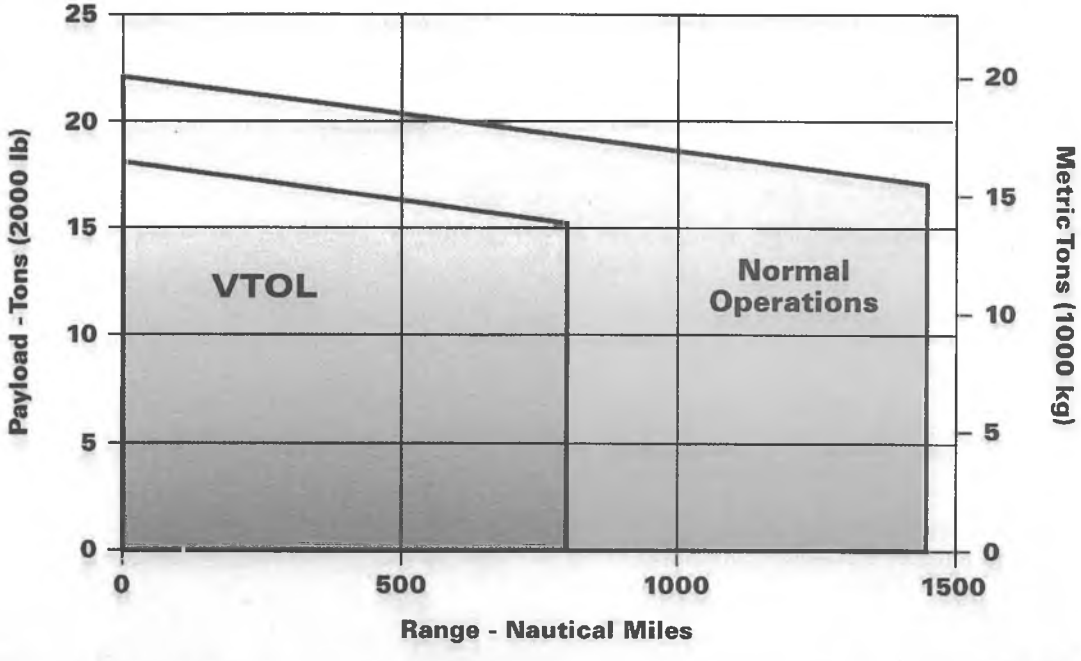








- 80% Lift from Buoyancy
- 20% Lift from Aerodynamics or Direct Lift

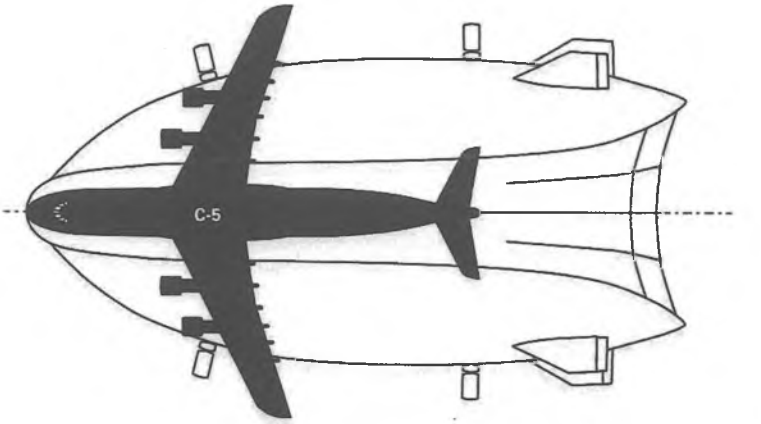


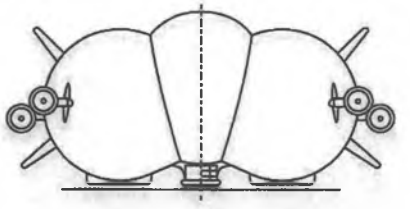
20 Ton Hybrid Specifications

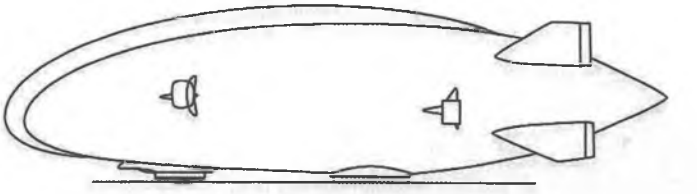
Feature	Specification Values
Cargo Capacity	40,000 lbs
Cargo Bay Length	55 feet
Cargo Bay Height	10 feet
Cargo Bay Width	10 feet
Cargo Bay Volume	5500 ft^3
Dedicated Diesel Fuel Tank Transport Capacity	30,000 lbs (4400 US Gallons)
Crew Member Seating	2
Passenger Seating	8
Engines	4 x 306 HP Diesel
Maximum Aircraft Fuel Capacity	10,000 lbs (1470 US Gallons)
Maximum Range	1,500 nm
Maximum Altitude	10,000 feet density Alt.
Cruise Speed	60 knots
Length	276'-11"
Span	157'-2"
Height	75'-2"
Envelope Volume	1,285,000 ft^3
Max VTOL Capability	30,000 lbs cargo
Sling Load Capability	Yes
Maximum Takeoff Distance	2,500 feet
Minimum Temperature	-40°F
Maximum Temperature	122°F
Landing Surfaces	Pavement, dirt, grass, snow, water, gravel, sand
Operating Conditions	VFR/IFR

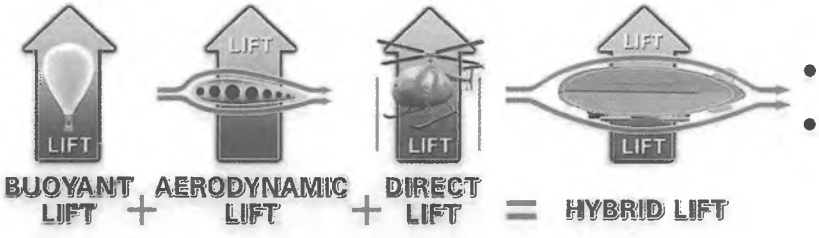
HYBRID MEDIUM

Dimensions	423' x 185' x 117'
Speed	80 kt
Range	3,200 nm
Payload	40-90 tons @ 5K' msl
Service Ceiling	10,000' msl
Modes	Standard Take-off, VTOL, Sling Load
Surfaces	Austere field, water, snow, sand

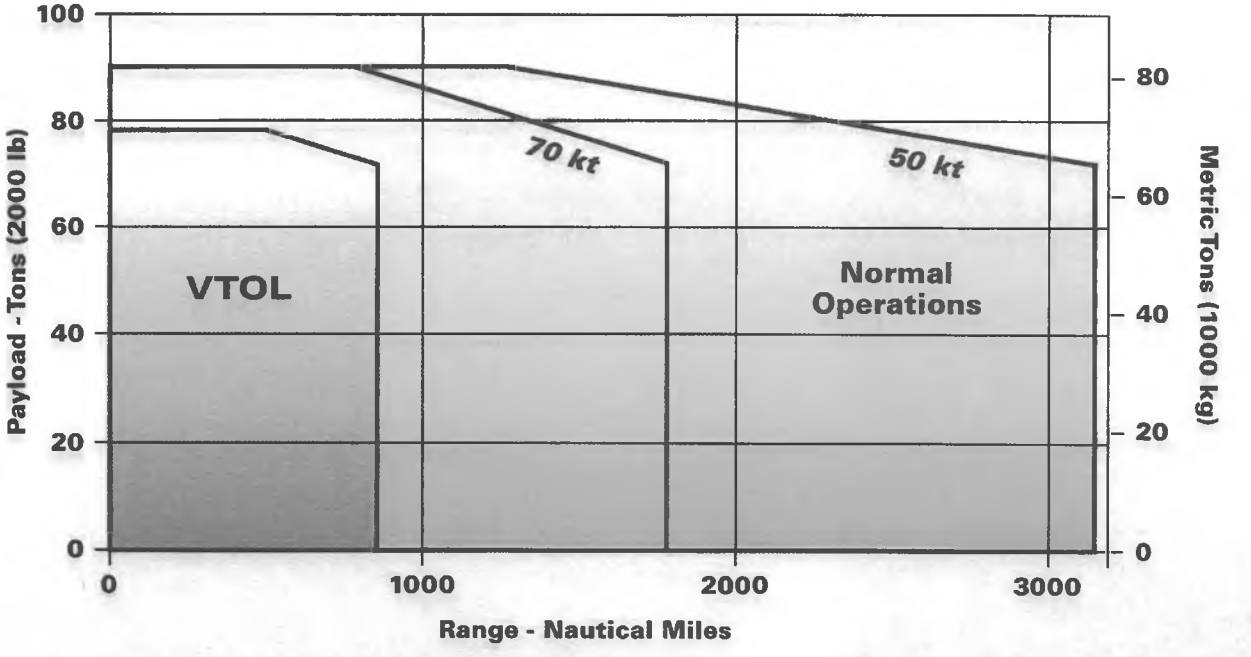








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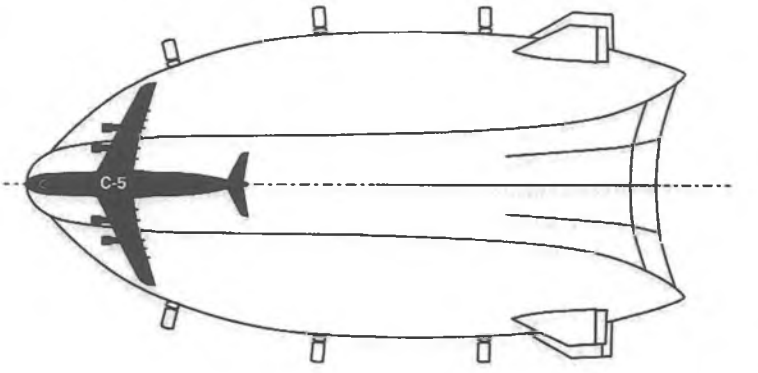


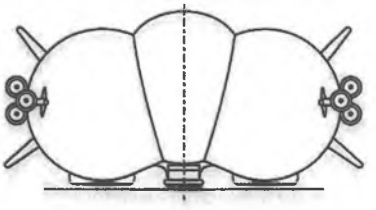
50/70 Ton Hybrid Specifications

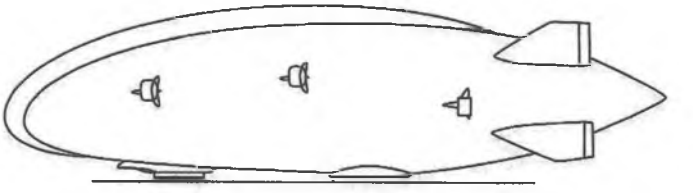
Characteristic	Description50/70T
Payload	50/70 ton
Passenger load	400
Crew size	2
Cargo box size Floor strength	140' x 20'w x 10'h
Range (unrefueled)	2,000/1,300 nm
Range-payload curve	
Range-speed-payload curve	
Combat radius	
Max Speed	70 kt
Cruise Speed	60 kt
Length	400'
Wingspan	160'
Maximum take-off weight	245,000 lb
Minimum take-off runway length	500' VTOL, 1000' CTOL *
Minimum landing runway length	1000' *
Minimum runway width	200' *
CBR	0
Load time	<1 hr
Off-load time	<1 hr
Operating altitude	5000'
Max altitude	10000'
Utilization rate	
Fuel burn rate (lbs/hr)	1400 lb/hr
Air refuelable (yes/no)	No
Fuel type	Jet A
Ballast type	Water
Air/sea interface	
MHE / ground handling	

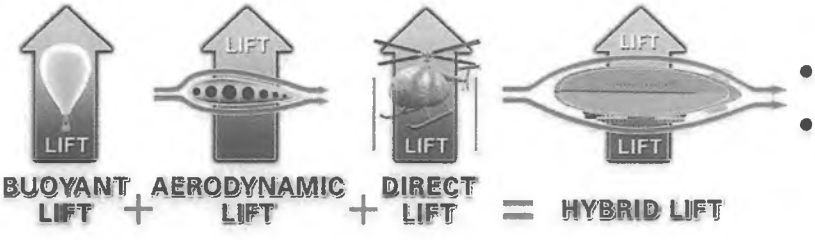
HYBRID LARGE

Dimensions	742' x 394' x 202'
Speed	100 kt
Range	6,800 nm
Payload	400 - 500 tons @ 5K' msl
Service Ceiling	10,000' msl
Modes	Standard Take-off, VTOL
Surfaces	Austere field, water, snow, sand

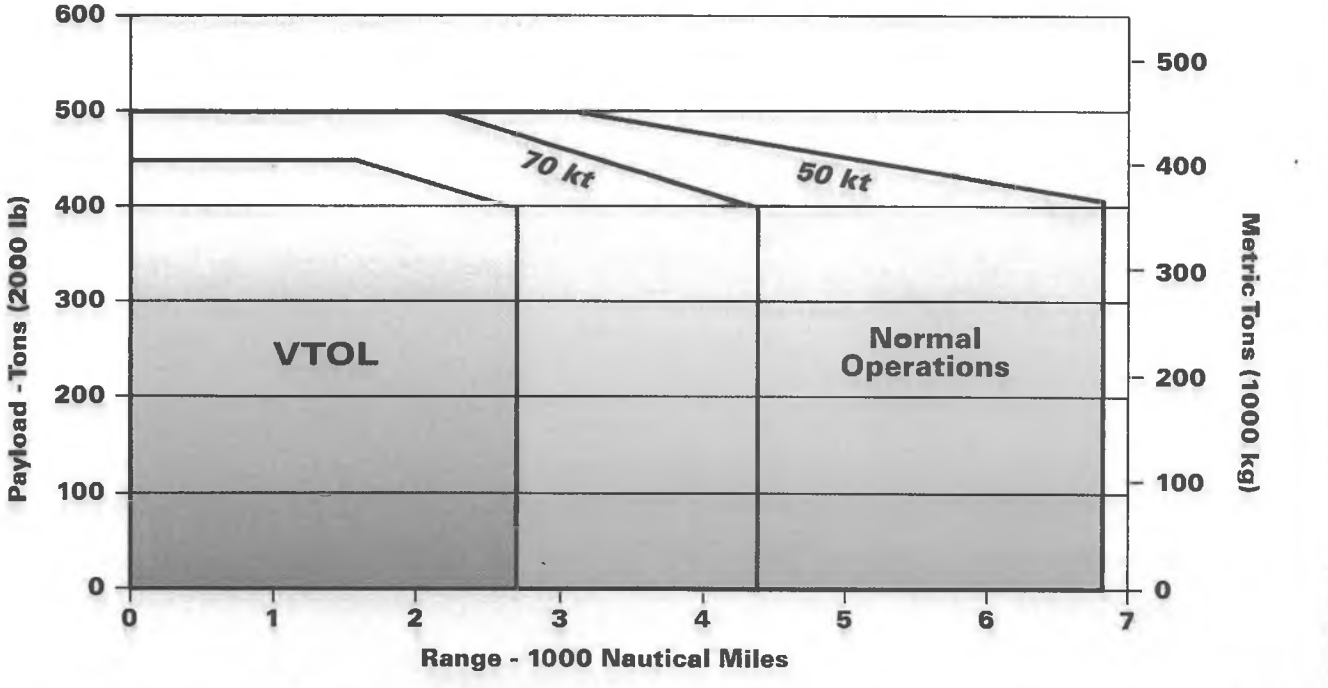








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500 Ton Hybrid Specifications

Characteristic	Description 500 Ton
Payload	500 ton
Passenger load	2,200
Crew size	2
Cargo box size Floor	290' x 48'w x 20'h
Range (unrefueled)	5,000 nm
Range-payload curve	
Range-speed-payload curve	
Combat radius	
Max Speed	80 kt
Cruise Speed	70 kt
Length	790'
Wingspan	420'
Maximum take-off weight	2,240,000 lb
Minimum take-off runway length	1200' VTOL, 2000' CTOL *
Minimum landing runway length	1500' *
Minimum runway width	500' *
CBR	0
Load time	<1 hr
Off-load time	<1 hr
Operating altitude	5000'
Max altitude	10000'
Utilization rate	
Fuel burn rate (lbs/hr)	4800 lb/hr
Air refuelable (yes/no)	No
Fuel type	Jet A
Ballast type	Water
Air/sea interface	
MHE / ground handling	