

ALASKA LEGISLATURE

HOUSE and SENATE FINANCE COMMITTEE FILES, 2005-2006 2774

CITY OF KETCHIKAN, ALASKA

RESOLUTION NO. 05-2160

A RESOLUTION OF THE COUNCIL OF THE CITY OF KETCHIKAN, ALASKA REAFFIRMING SUPPORT FOR THE GRAVINA ISLAND ACCESS PROJECT, URGING THE GOVERNOR TO BEGIN CONSTRUCTION; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, Gravina Island represents the best opportunity for future growth of our community and Southern Southeast Alaska; and

WHEREAS, the Gravina Island Access project, including the Ralph M. Bartholomew Veterans Memorial Bridge, has been a community priority for over 30 years; and

WHEREAS, the Gravina Island Access project was overwhelmingly supported by a 2-1 vote of the people of Ketchikan, and, in addition, federal funding for both the Gravina Island and Knik Arm projects was supported by 65% of all Alaskans in a recent poll; and

WHEREAS, construction of the Gravina Island Access project will allow the implementation of the Gravina Island Development Plan which was recently completed by local government and which provides access to non-federal land for commercial, industrial, residential, and recreational purposes, specifically providing for land and infrastructure to support fisheries development, the wood products industry, and tourism; and

WHEREAS, the Council has through resolutions adopted in 1997, 2003, and 2004 previously supported the project in light of its long-range economic benefits to our community; and

WHEREAS, Ketchikan suffered a great economic loss as a result of federal policy changes on the Tongass National Forest which resulted in the decimation of a vibrant timber industry, from which the community is still struggling to recover; and

WHEREAS, after the significant decline of the local timber industry the Gravina Island Access project took on a more critical role in Ketchikan's economic recovery; and

WHEREAS, in 1998 over \$20 million in federal TEA-21 funds were made available for this project and authorized and matched by the Alaska Legislature, to date \$9.2 million in federal funds and \$2.3 million in state funds have been spent on the project scoping and EIS, and a record of decision has been issued; and

WHEREAS, the Alaska Congressional Delegation has fought long and hard for funding for these projects and has provided funding for the projects in both the TEA-21 and in the SAFETEA-LU legislation as passed by the Congress just recently; and

WHEREAS, in his inaugural State of the State address Governor Murkowski identified the Gravina Island Access and Knik Arm projects as his top statewide priorities, and

WHEREAS, Governor Murkowski consistently thereafter identified both the Gravina Island Access and Knik Arm projects as priorities for federal funding earmarks in his requests to the Alaska Congressional delegation; and

**WHEREAS**, Governor Murkowski consistently thereafter identified both the Gravina Island Access and Knik Arm projects as priorities for federal funding earmarks in his requests to the Alaska Congressional delegation; and

**WHEREAS**, despite the loss of earmarks the Alaska Congressional delegation has been successful in its efforts to keep funding intact for both the Gravina Island Access and Knik Arm projects; and

**WHEREAS**, delays in completing the projects will result in additional economic harm to the community as well as increased construction costs for the project.

**NOW, THEREFORE, BE IT RESOLVED** by the Council of the City of Ketchikan, Alaska, as follows:

Section 1. The Council of the City of Ketchikan, Alaska urges Governor Murkowski to reaffirm his support for the Gravina Island Access and Knik Arm projects as transportation priorities and to assure that construction plans are in the final 2006-2008 STIP.

Section 2. The Council of the City of Ketchikan, Alaska urges Governor Murkowski and the Alaska State Legislature to use federal funds as intended by the Alaska Congressional delegation, specifically by including sufficient federal and state funds in the FY 2007 capital budget to keep the Gravina Island Access and Knik Arm projects on schedule.

Section 3. The Council of the City of Ketchikan, Alaska requests that Governor Murkowski instruct the Alaska Department of Transportation to move both the Gravina Island Access and Knik Arm projects to construction as soon as possible.

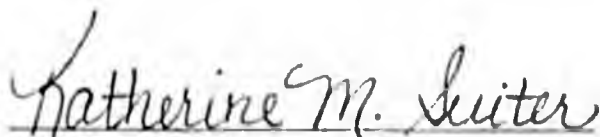
Section 4. The Council of the City of Ketchikan, Alaska expresses its sincere thanks to the Alaska Congressional Delegation for its long efforts to provide funding for these projects and urges the Delegation to communicate to the Governor and the Alaska State Legislature its clear intention that funding provided in the SAFETEA-LU bill be authorized and spent for both projects as originally intended.

Section 5. This resolution is effective immediately upon passage and approval.

**PASSED AND APPROVED** this 17<sup>th</sup> day of November, 2005.

  
\_\_\_\_\_  
Bob Weinstein, Mayor

ATTEST:

  
\_\_\_\_\_  
Katherine M. Suiter  
City Clerk

# Primer on the Federal Highway Program for Alaska

House Finance  
January 2005

## Abbreviations

- SAFETEA-LU – Name of most recent highway authorization bill, passed in August 2005 and addressing federal program through 2009.
- STIP – Statewide Transportation Improvement Program
- NHS – National Highway System
- AHS – Alaska Highway System
- CTP – Community Transportation Program
- TRAAK – Trails and Recreational Access for Alaska
- STP – Surface Transportation Program, a kind of federal funding
- MPO – Metropolitan Planning Organization (2 in Alaska)
  - AMATS – Anchorage Metropolitan Area Transportation Solutions
  - FMATS – Fairbanks Metropolitan Area Transportation System
- HTF – Highway Trust Fund
- PM – Preventative Maintenance
- M&O – Maintenance and Operations



## STIP Issues

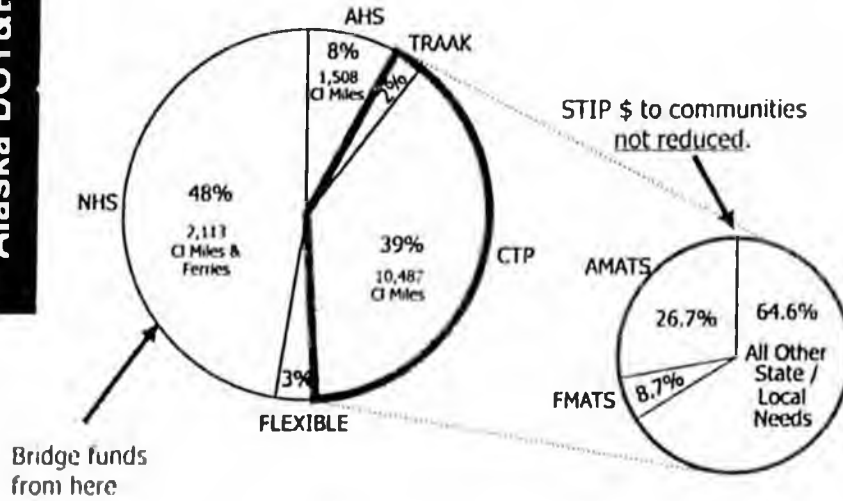
- Explanation of how the bridge funding was determined.
- Eligibility of STIP funds in Alaska has grown substantially.
- STIP funds to address road needs is limited by several factors.



## Bridge Math Explained

- Explain the \$91 M and \$93.6 M allocations:
  - 'Renamed' bridge earmarks are flexible
    - No project named, very flexible eligibility (= to STP)
  - Funds subject to Alaska STIP regulations.
    - State formula allocates funds to NHS, local needs, etc
  - 48% of funds allocated to NHS, subject to use on two bridges.
  - Further reduction to 85% to address expected shortfall in appropriations.

### Distribution of Federal-Aid Transportation Formula Funds Per 17 AAC 05.155-200



Bridge funds from here

STIP \$ to communities not reduced.

December 2005

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### Bridge Math Shown

- Knik Arm
  - \$229.4 M\* in earmarks
  - @48% = \$110.1 M
  - @85% = \$93.6 M in capital budget
- Gravina Island
  - \$223 M\* in earmarks
  - @48% = \$107.0 M
  - @85% = \$91 M in capital budget

48% is the regulatory portion of unrestricted STIP funds allocated to the NHS program  
 85% accounts for less than full appropriations to fund the earmarks, based on status of the Highway Trust Fund and past appropriation history.

\* Funds authorized to each bridge over 5-year life of SAFETEA-LU.

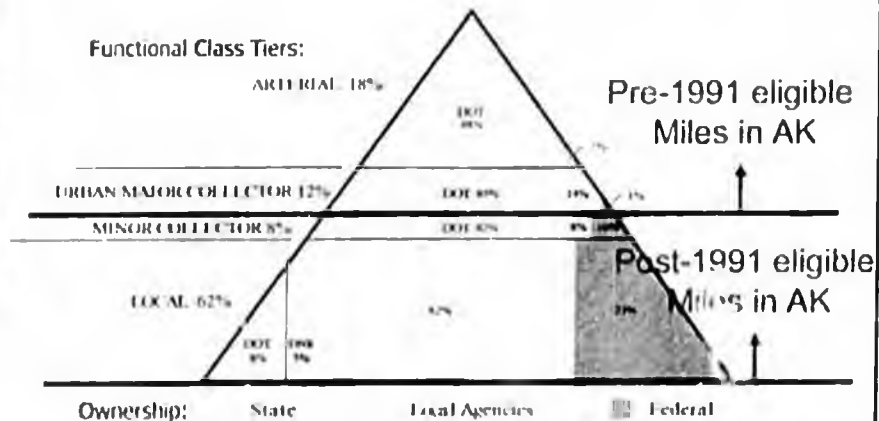


# Mission Statement

- Providing for the movement of people and goods and the delivery of state services.
- All roads are not equal in this regard.



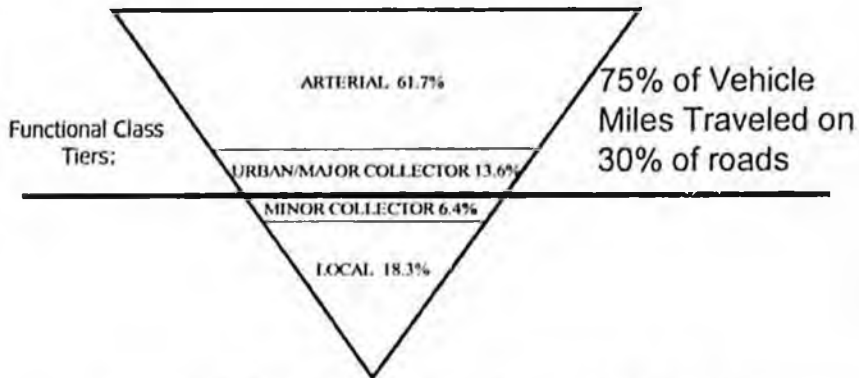
ALASKA PUBLIC ROAD MILES:  
Arterial, Collector, and Local Road Mileage by Ownership  
As of December 2003



Impact: Eligibility of funds more than tripled!



ALASKA PUBLIC ROAD MILES:  
Distribution of 2003 VMT by Functional Class  
(13,540,000 vehicle miles traveled)

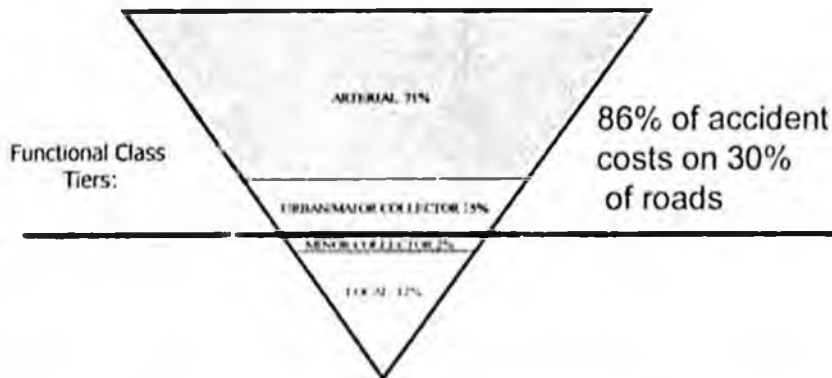


Impact: Only 30% of the highways carry most of the traffic.

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ALASKA PUBLIC ROAD MILES:  
Distribution of 2003 Accidents by Functional Class



Impact: Fixing major roads can best address safety.

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## Eligibility Issues (1)

- Nationwide, only 20-30% of highways eligible for federal STIP funds.
- In Alaska, 100% of roads and highways are eligible (due to Federal law unique to Alaska).
- Impact: We are trying to address more needs than funds can serve.

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## Eligibility Issues (2)

- Alaska distributes more STIP funds to local needs than any other state!
  - AMATS/FMATS and other communities get >40% under state-formula
  - US average is < 20%
- Impact: High level roads are less well funded than they would be if national formula and eligibility was followed.

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## Eligibility Issues (3)

- Some earmarks have further shrunk funding for Alaska's highway program.
- Parking garage, loan repayments, rail, port and shipyard and other types of projects were earmarked from Alaska's highway dollars.
- Further, most of the earmarks are not fully funded.
- Impact: While worthy projects, these non-highway earmarks have subtracted from original purpose of federal-aid highway program.
- Partial funded earmarks create an "expectation" of future STIP dollars.

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## Eligibility Issues (4)

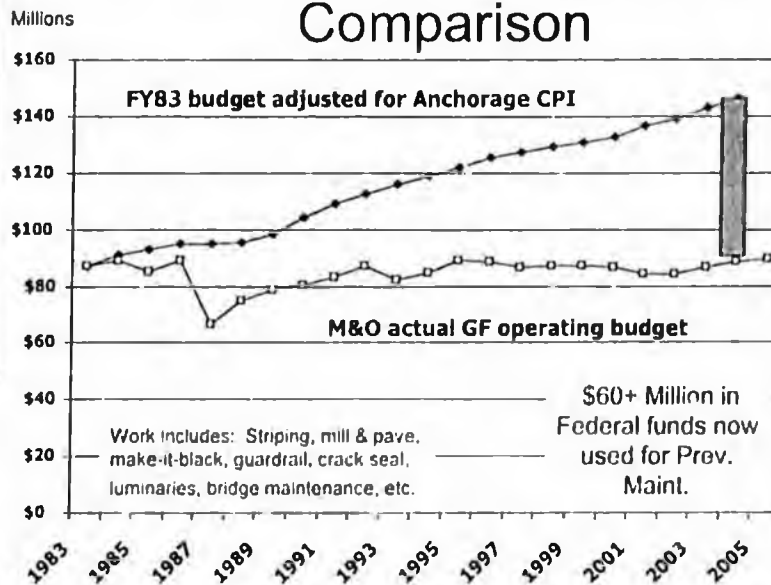
- Operations and preventative maintenance have shifted to federal funds over past two decades.
- Since late 80's budget pressure to preserve GF has shifted considerable costs to STIP.
- Impact: Many fewer rehabilitation, safety and capacity projects are possible.

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Alaska DOT&amp;PF

## M&O Operating Budget And CPI Comparison



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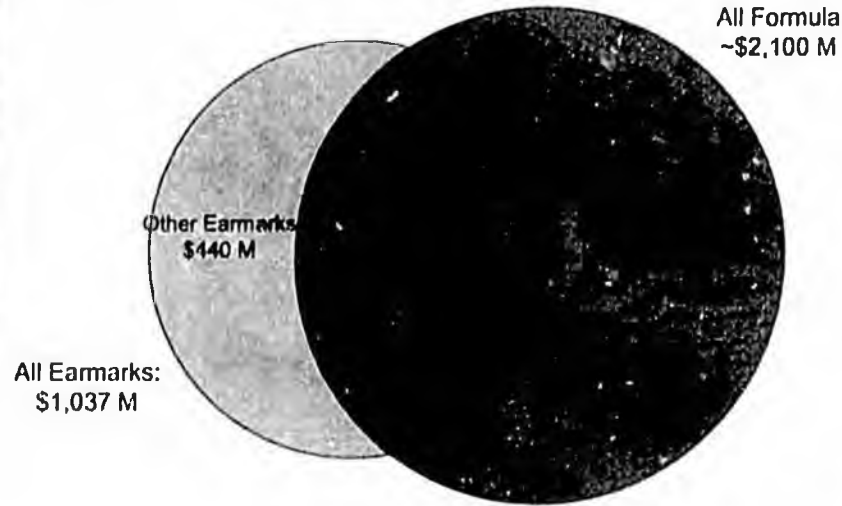
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Alaska DOT&amp;PF

## Dollars are Limited (1)

- SAFETEA-LU earmarks were much more extensive than just two bridges.
- Another \$269 M in earmarks were deductive too. In addition, > \$440 M in earmarks were non-deductive.
- Impact: The loss of STIP funds to bridge earmarks is only part of the picture.

## 5 Year Earmarks & Formula



All Earmarks:  
\$1,037 M

Authorized levels

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## Bridge Earmarks by Type (in Millions, 5-year Authorization\*)

• Gravina Island	• Knik Arm
– Subtractive \$148	– Subtractive \$179.4
– Additive \$75	– Additive \$50
– Total \$223 M	– Total \$229.4

\*Authorized\* dollars will generally arrive in 5 equal installments, between 2005 and 2009. Due to federal budget process, appropriations are expected to actually provide only 85% of the authorized amounts.

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## Dollars are Limited (2)

- Other changes in law have reduced funding.
- Several new federal category\* of funds, and enlarged existing set-aside categories have shrunk funding to regular program.
- Impact: Approximately \$25 M of annual funds previously flexible in nature were made restrictive.

\*Eligibility for federal hwy. funds are set by the "apportionment" or category. Each apportionment type has unique eligibility rules.

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## Dollars are Limited (3)

- Highway Trust Fund (HTF) not delivering as expected.
- 2005 appropriations delivered only 80% of authorization; lowest in decades.
- Several national reports suggest HTF is facing continued difficulty.
- Impact: The HTF is the principal source of Alaska highway funds thus this apparent downturn is of utmost concern!

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## Dollars are Limited (4)

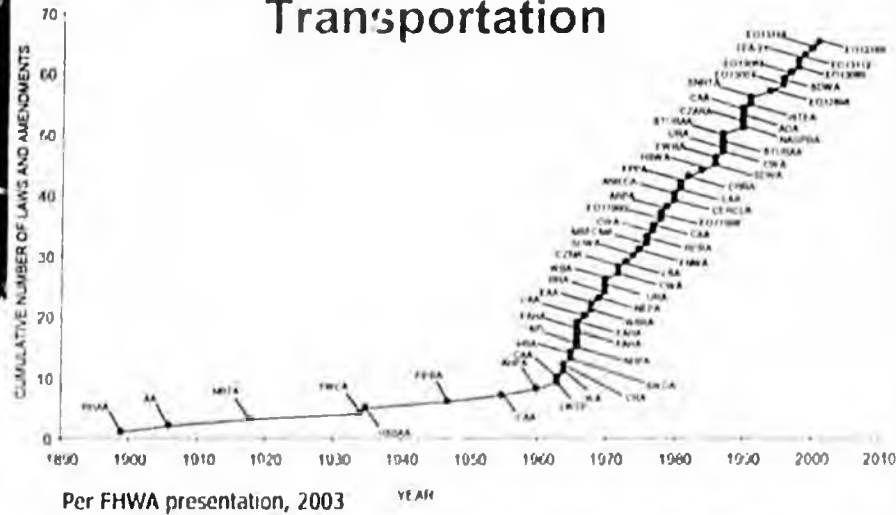
- Construction inflation has ramped up sharply.
- All major inputs to construction such as labor, right-of-way, commodities (energy, steel, cement, asphalt) are up sharply. National estimate is 30% or greater!
- Impact: As project costs rise, the number of transportation projects the STIP can fund drops.



## Dollars are Limited (5)

- Process and new legal requirements for federal funds continues to expand.
- This takes more time and money; some new requirements add significant costs.
- Impact: More is spent on intangibles, or non-transportation work, thus less on pavement.

## Federal Environmental Requirements Affecting Transportation



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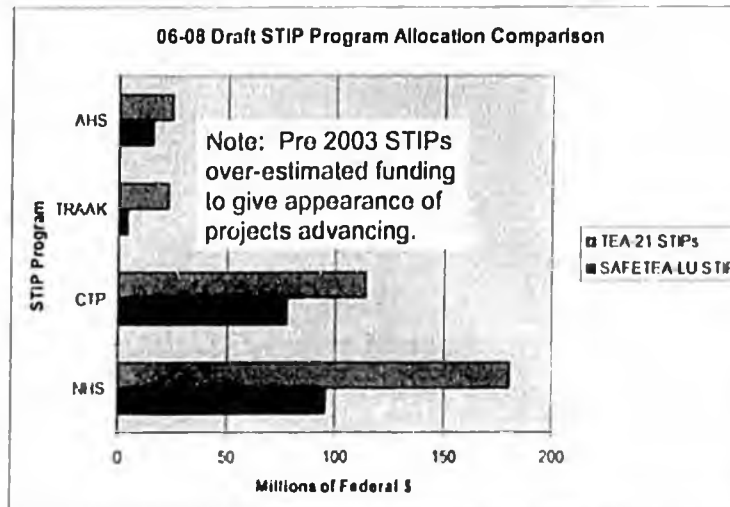
## Dollars are Limited (6)

- Alaska's STIP funds are reduced due to safety laws that do not meet federal goals.
- Open container and repeat offender laws cause deduction\* of 3% of flexible funds.
- Impact: One significant project (~\$12 M) is lost each year.

\*Deducted funds are returned to the Alaska highway safety program, but only certain safety work, or education and enforcement type projects may be funded.

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## Project Funds Lower Today



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## Is STIP Funding Adequate? (1)

- Backlog of work is significant
  - Needs List identifies more than \$10 Billion in projects.
  - Alaska flexible STIP addresses 1.5 - 2% of identified projects; 50+ years to address needs as identified today.
- Impact: STIP funding is not adequate!

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## Is STIP Funding Adequate? (2)

- Years needed to perform work on entire mileage of each system:
  - National Highway System: 66 years
  - Community Trans. Program: 125 years
  - Alaska Highway System: 132 years
- Above ratios assume no expansion of system miles.
- Calculation based on average cost per mile of \$1 M per mile, except NHS at \$2 M per mile.

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## Alaska vs. Other States

- **Alaska**
  - STIP funds all roads
  - No dedicated state funds for construction
  - Local gov'ts expect STIP to pay for local roads
  - Tolls used sparingly (Whittier Tunnel, Knik)
- **Other States**
  - STIP funds top 20%
  - State taxes fund other state/local needs
  - Local gov'ts use local funds on local roads
  - Tolls rapidly expanding
    - (Many states now using tolls)

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## STIP Shortfall to Regular Projects Stems From Many Causes

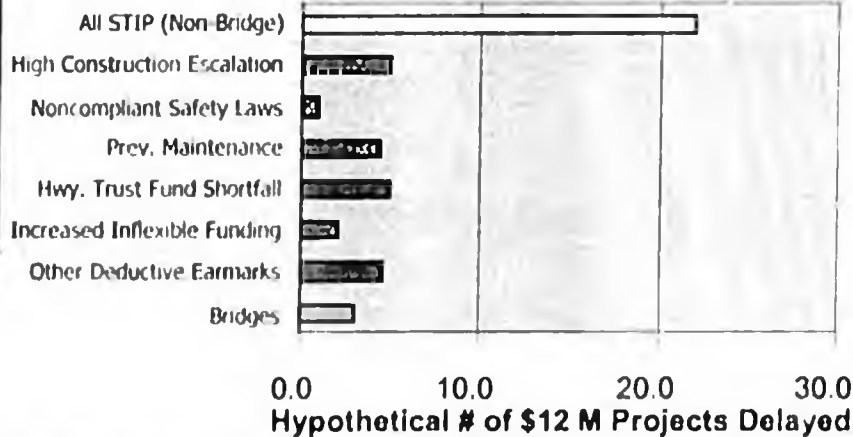
- Over the 5-year life of the bill, the two bridges represent ~\$184.6 M or \$36.9 M per year.
- Other factors, as explained, have resulted in far more lost project funding:

	5 Year Totals
- Other deductive earmarks*	\$269 M
- Reduced flexible funds*	\$125 M
- Hwy Trust Fund shortfall (est.)*	\$300 M
- Preventative maintenance	\$260 M
- Noncompliant safety laws	\$60 M
- Construction escalation (est.)*	\$300 M
- Total 5-year lost spending potential:	<b>\$1,315 M or \$263 M each year!</b>

\* These factors have emerged since the previous 04-06 STIP was prepared.



## One Year: Hypothetical # of \$12 M Projects Delayed



Issues in red emerged since prior STIP



## Key Takeaways

- Alaska relies on STIP funds for larger universe of projects than any other state!
- Alaska shares more STIP funds as % with local governments than any other state.
- STIP funds have effectively shrunk as a result of several factors beyond two bridges.
- State has no supplemental fund source for highway program which magnifies the current downturn in STIP funds.
- Highway Trust Fund is not robust!

## List of SAFETEA-LU Earmarks by House Election District

<u>Sec.</u>	<u>No.</u>	<u>Req</u>	<u>House District</u>	<u>Place</u>	<u>Project Description</u>	<u>Earmarks Authorized through FY 2009</u>	<u>% Federal Share</u>
1702	1760	SE	1	Coffman Cove	Coffman Cove IFA ferry terminal or IFA vessel debt repayment for MV Prince of Wales Ferry	\$3,200,000	90.97%
1702	3673	SE	1	Ketchikan	Improve marine Intermodal facilities in Ketchikan	\$14,000,000	90.97%
1702	3686	SE	1	Coffman Cove	Coffman Cove road paving in Coffman Cove	\$375,000	90.97%
1702	3714	SE	1	Ketchikan	Ketchikan: Improve marine dry-dock and facilities	\$2,000,000	90.97%
1934	13	SE	1	Ketchikan	Ketchikan: Improve marine dry-dock and facilities	\$20,000,000	90.97%
3044	416	SE	1	Ketchikan	Improve marine inter-modal facilities in Ketchikan	\$14,000,000	80.00%
3044	553	SE	1	Ketchikan	Ketchikan, Alaska-Transit Needs	\$250,000	80.00%
1702	1938	SE	2	Bradfield	Planning, design, and EIS of Bradfield Canal Road	\$2,000,000	90.97%
1702	2260	SE	2	Sitka	Make necessary improvements to Indian river Road in City and Borough of Sitka	\$2,000,000	90.97%
1702	3681	SE	2	Petersburg	Various Road Improvements in Petersburg	\$2,000,000	90.97%
1702	3712	SE	2	Wrangell	Wrangell: Road improvements	\$4,000,000	90.97%
1702	3713	SE	2	Petersburg	Petersburg: Road improvements, including but not limited to design, engineering, permitting, and construction	\$1,500,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

10-11-1

## List of SAFETEA-LU Earmarks by House Election District

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1702	3715	SE	2	Bradfield	Southeast: Planning, design, and EIS of Bradfield Canal Road	\$2,000,000	90.97%
1702	3720	SE	2	Sitka	Sitka: Improvements to Indian River Road, including but not limited to design, engineering, permitting and construction	\$500,000	90.97%
1934	6	SE	2	Petersburg	Petersburg: Road improvements, including but not limited to design, engineering, permitting, and construction	\$500,000	90.97%
1934	11	SE	2	Sitka	Sitka: World War II Causeway Trail and Multi-use Pathway projects	\$1,000,000	90.97%
3044	616	SE	2	Sitka	Sitka, Alaska-Transit Needs	\$250,000	80.00%
3044	664	SE	2	Wrangell	Wrangell, AK-Ferry Infrastructure	\$1,000,000	80.00%
1702	3687	SE	5	Craig	Port Saint Nicholas road improvements in Craig	\$3,000,000	90.97%
1702	3691	SE	5	Hoonah	Intermodal ferry dock in Hoonah	\$2,000,000	90.97%
1702	3696	SE	5	Metlakatla	Metlakatla: Walden Point Road	\$5,000,000	90.97%
1702	3716	SE	5	Gustavus	Gustavus: Dock replacement for the Alaska Marine Highway	\$3,000,000	90.97%
3044	541	SE	5	Hoonah	Hoonah, AK-Intermodal Ferry Dock	\$2,000,000	80.00%
1702	3707	N	6	McCarthy	Upgrades for Road Access to McCarthy, AK, for design, engineering, permitting and construction	\$5,000,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## List of SAFETEA-LU Earmarks by House Election District

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1702	3708	N	6	Dalton Highway	Upgrades on the Dalton Highway, for design, engineering, permitting and construction	\$4,500,000	90.97%
1702	3710	C	6	Crooked Creek	Crooked Creek: Road to Donlin Mine, for design, engineering, permitting and construction	\$2,000,000	90.97%
1934	3	N	6	Dalton Highway	Upgrades on the Dalton Highway, including but not limited to design, engineering, permitting and construction	\$500,000	90.97%
1934	7	N	6	Tanana	Tanana: Dust Control Mitigation	\$500,000	90.97%
1934	12	C	6	McGrath	McGrath: Road erosion control along the Yukon River	\$500,000	90.97%
1702	3717	N	12	Richardson Highway	Upgrades on the Richardson Highway, including but not limited to design, engineering, permitting and construction	\$4,500,000	90.97%
1934	4	N	12	Richardson Highway	Upgrades on the Richardson Highway, including but not limited to design, engineering, permitting and construction	\$500,000	90.97%
1702	1847	C	35	Seward	Ferry Infrastructure at Seward Marine Center	\$3,000,000	90.97%
1934	9	C	35	Homer	Homer: Intermodal deep-water dock facility improvements	\$2,000,000	90.97%
1702	446	C	36	Lake Iliamna	Westside development Williamsport-Pile Bay Road	\$5,000,000	90.97%
1702	2474	AMH	36	Kodiak	Kodiak, AK Construction of AMHW ferry terminal and approach	\$7,500,000	90.97%
1702	3705	C	36	Lake Iliamna	Transportation Improvements in Cook Inlet for the Westside development/ Williamsport-Pile Bay Road	\$2,000,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

### List of SAFETEA-LU Earmarks by House Election District

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1702	161	C	37	False Pass	False Pass Road construction from small boat harbor dock to airport and town.	\$3,000,000	90.97%
1702	400	AMH	37	Unalaska	Unalaska, AK Construction of AMHW ferry terminal including approach, staging, and upland improvements	\$7,500,000	90.97%
1702	777	C	37	Akutan	Construct linking road from airport to port in Akutan	\$1,500,000	90.97%
1702	3191	C	37	Naknek	Construct access road and a bridge crossing the Naknek River terminus points in South Naknek-King Salmon Highway	\$3,000,000	90.97%
1702	3679	C	37	King Cove	Upgrade city roads and construct a road and acquire a hovercraft to transit the bay between King Cove and Cold Bay in King Cove	\$3,700,000	90.97%
1702	3684	C	37	Aleknagik	Float Plane Road in Aleknagik	\$1,000,000	90.97%
1702	3693	C	37	Bristol Bay Borough	Improvement to Lake Camp Road in Bristol Bay Borough	\$3,000,000	90.97%
1702	3698	C	37	Bristol Bay Borough	Bristol Bay: Transportation improvements to the access road and a bridge crossing at the Naknek River	\$3,000,000	90.97%
1702	3701	C	37	Aleknagik	Aleknagik: Wood River Bridge, or design, engineering, permitting and construction	\$3,000,000	90.97%
1702	3702	C	37	Chignik	Chignik: Inter-Village Road, for design, engineering, permitting and construction	\$5,000,000	90.97%
1702	3718	C	38	Bethel	Bethel: Dust Control Mitigation for Rural Roads	\$1,500,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## List of SAFETEA-LU Earmarks by House Election District

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1702	3719	N	39	Nome	Nomc. Dust Control Mitigation for Rural Roads	\$1,500,000	90.97%
1702	1073	N	40	Point Hope	Emergency evacuation road at Point Hope in North Slope Borough	\$3,000,000	90.97%
1702	3680	N	40	Kotzebue	Municipal Road Paving - Kotzebue	\$2,000,000	90.97%
1702	3690	N	40	Barrow	Access Roads for the Barrow Arctic Research Center in Barrow	\$3,000,000	90.97%
1702	3692	C	40	Shishmaref	Construction of relocation road in Shishmaref	\$5,000,000	90.97%
1702	3703	N	40	Kotzebue	Kotzebue: Cape Blossom Road, for design, engineering, permitting and construction	\$5,000,000	90.97%
1702	3709	N	40	Kotzebue	Kotzebue: Municipal Road Paving Project	\$2,000,000	90.97%
3044	596	N	40	North Slope Borough	North Slope Borough, AK-Transit Purposes	\$2,000,000	80.00%
1702	2002	C	50	Anchorage	Providence Hospital Public Access Road	\$3,000,000	90.97%
1702	2283	C	50	Whittier	For Completion of the Shotgun Cove Road, from Whittier, Alaska to the arca of Decision Point, Alaska	\$4,000,000	90.97%
1702	3020	C	50	Anchorage	Construction of and improvements to roads at Alaska Pacific University	\$3,000,000	90.97%
1702	3317	C	50	Anchorage	Anchorage Traffic Congestion Relief	\$5,000,000	90.97%

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High priority (deductive) earmarks are shaded.



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1702	3678	C	50	Anchorage	Intermodal facility improvements at the Port of Anchorage	\$25,000,000	90.97%
1702	3682	C	50	Anchorage	Construction and Improvements at Alaska Pacific University	\$3,000,000	90.97%
1702	3685	C	50	Girdwood	Olympic Circle road paving in Girdwood	\$500,000	90.97%
1702	3697	C	50	Anchorage	Anchorage: Traffic Congestion Relief	\$5,000,000	90.97%
1702	3721	C	50	Anchorage	Anchorage: handicapped and pedestrian access construction, surfacing and other improvements for 2006 National Veterans' Wheelchair Games	\$2,000,000	90.97%
1702	3725	C	50	Anchorage	Anchorage: Transportation Improvements to the Creekside development	\$3,000,000	90.97%
1702	3726	C	50	Anchorage	Anchorage: Dimond Center Intermodal Facility, including but not limited to design, engineering, permitting, and construction	\$2,500,000	90.97%
1702	3727	C	50	Anchorage	Anchorage: Transportation needs for Glacier/Winner Creek Development	\$1,000,000	90.97%
1934	5	C	50	Anchorage	Anchorage: Intermodal facility improvements at the Port of Anchorage	\$7,000,000	90.97%
1934	8	C	50	Anchorage	Anchorage: Dimond Center Intermodal Facility, including but not limited to design, engineering, permitting, and construction	\$500,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## List of SAFETEA-LU Earmarks by House Election District

<u>Sec.</u>	<u>No.</u>	<u>Req</u>	<u>House District</u>	<u>Place</u>	<u>Project Description</u>	<u>Earmarks Authorized through FY 2009</u>	<u>% Federal Share</u>
1934	10	C	50	Anchorage	Anchorage: Study, design, and engineering of Knik crossing approach routes to minimize traffic congestion	\$2,000,000	90.97%
3044	422	C	50	Anchorage	C Street Expanded bus facility and inter-modal parking garage, Anchorage, AK	\$5,000,000	80.00%
3044	425	C	50	Anchorage	CITE Non-profit Services Center inter-modal parking facility, Anchorage, AK	\$3,000,000	80.00%
3044	427	C	50	Anchorage	Alaska Native Medical Center Intermodal parking facility	\$5,000,000	80.00%
3044	436	C	50	Anchorage	Intermodal facility improvements at the Port of Anchorage	\$25,000,000	80.00%
3044	466	C	50	Anchorage	Anchorage-Transit Needs	\$1,000,000	80.00%
1306		N	60	Fairbanks	Freight Demonstration Project	\$5,000,000	90.97%
1702	494	N	60	North Pole	Citywide pavement rehabilitation in City of North Pole	\$1,000,000	90.97%
1702	2746	N	60	Fairbanks	Road Improvements in City of Fairbanks	\$5,000,000	90.97%
1702	2937	N	60	North Star	Road Improvements and upgrades to service road areas and miscellaneous projects within Northstar Borough	\$5,000,000	90.97%
1702	3704	N	60	Fairbanks	Fairbanks: Tanana River Bridge Replacement, for design, engineering, permitting and construction	\$5,000,000	90.97%
1702	3706	N	60	Fairbanks	Fairbanks/North Star Borough: Road improvements to service roads and other misc.	\$5,000,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## List of SAFETEA-LU Earmarks by House Election District

<u>Sec.</u>	<u>No.</u>	<u>Reg</u>	<u>House District</u>	<u>Place</u>	<u>Project Description</u>	<u>Earmarks Authorized through FY 2009</u>	<u>% Federal Share</u>
1702	3723	N	60	North Pole	AK-North Pole: Homestead Road/North Pole High School Boulevard Extension Project	\$500,000	90.97%
1702	3724	N	60	Fairbanks	Fairbanks: O'Connor Road Bridge Replacement	\$250,000	90.97%
3044	423	N	60	Fairbanks	Morris Thompson Cultural and Visitors Center Intermodal parking facility, Fairbanks, AK	\$2,500,000	80.00%
3044	597	N	60	North Star	North Star Borough, AK-Transit Purposes	\$1,000,000	80.00%
5401		N	60	Fairbanks	National University Transportation Centers, Univ. of AK	\$16,000,000	50.00%
1702	1047	C	70	Mat-Su	Bridge over Fish Creek in Matanuska-Susitna Borough	\$1,000,000	90.97%
1702	1661	C	70	Mat-Su	Bogard/Sheldon Extension in Matanuska-Susitna Borough	\$4,000,000	90.97%
1702	1975	C	70	Mat-Su	Point MacKenzie in Matanuska-Susitna Borough plan and design road access	\$1,000,000	90.97%
1702	3401	C	70	Wasilla	Wideband multimedia mobile emergency communication pilot project Wasilla, Alaska	\$5,000,000	90.97%
1702	3688	C	70		Construction of a road between Lake Lucille and Big Lake in Matanuska-Susitna Borough	\$2,000,000	90.97%
1702	3689	C	70	Mat-Su	Hatcher Pass Ski Development in Matanuska-Susitna Borough	\$1,000,000	90.97%
1702	3700	C	70	Mat-Su	Construction of a ferry between Anchorage and Port MacKenzie	\$5,000,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## List of SAFETEA-LU Earmarks by House Election District

<u>Sec.</u>	<u>No.</u>	<u>Reg</u>	<u>House District</u>	<u>Place</u>	<u>Project Description</u>	<u>Earmarks Authorized through FY 2009</u>	<u>% Federal Share</u>
3044	574	C	70	Mat-Su	Matsu, Alaska-Transit Needs	\$500,000	80.00%
1702	547	SE	80	Juneau	Planning, design, and construction of Juneau access roads in Juneau, Alaska	\$15,000,000	90.97%
3044	236	SE	80	Juneau	Juneau, Alaska--transit bus acquisition and transit center	\$1,500,000	80.00%
3044	550	SE	80	Juneau	Juneau-Transit Bus Acquisition and Transit Center	\$1,500,000	80.00%
1702	137	C	90	Kenai Pen Borough	Keystone Drive Road Improvements	\$1,000,000	90.97%
1702	3683	C	90	Kenai	Various Road Improvements in the City of Kenai	\$1,000,000	90.97%
1702	3695	C	90	Kenai Pen Borough	Soldotna: Keystone Drive Road Improvement in Soldotna	\$3,000,000	90.97%
1702	3711	C	90	Kenai	Kenai: Borough road improvements	\$2,500,000	90.97%
1702	2263	SW	99	Alaska RR	Realign rail track to eliminate highway-rail crossings and improve highway safety and transit times	\$5,000,000	90.97%
1702	3694	SW	99	Gas Pipeline	Study on the feasibility of constructing a natural gas pipeline from the North Star Borough to South Central Alaska along the existing transportation corridors	\$2,000,000	90.97%
1702	3699	SW	99	Statewide	Statewide. Road culvert replacement and repair to improve fish habitat	\$5,000,000	90.97%

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## List of SAFETEA-LU Earmarks by House Election District

<u>Sec.</u>	<u>No.</u>	<u>Reg</u>	<u>House District</u>	<u>Place</u>	<u>Project Description</u>	<u>Earmarks Authorized through FY 2009</u>	<u>% Federal Share</u>
1702	3722	SW	99	Statewide	Statewide: Mobility coalition--job access transportation	\$250,000	90.97%
1801		AMH	99	Statewide	Ferry Boats & Ferry Terminals	\$50,000,000	80.00%
1907		SW	99	Statewide	Pavement Markings Demonstration Program AK/TN	\$2,000,000	100.00%
1934	1	SW	99	Denali Commission	Denali Commission for docks, waterfront development projects and related transportation infrastructure	\$20,000,000	90.97%
1945		SW	99	Statewide	Production of a documentary about infrastructure that demonstrates advances in AK	\$2,950,000	100.00%
1960		SW	99	Denali Commission	Village Road Program	\$60,000,000	90.97%
3011		SW	99	Denali Commission	Docks, waterfront development projects & related transportation infrastructure.	\$20,000,000	80.00%
3011		AMH	99	Statewide	New fixed guideway systems and extension of projects utilizing ferry boats & ferry boat terminal, or approaches to ferry boat terminals; split between Alaska and Hawaii	\$35,200,000	80.00%
3036		SW	99	Alaska RR	Improvements to AK Railroad Passenger Operations	\$4,811,150	50-80%

Total: \$585,736,150

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.  
High priority (deductive) earmarks are shaded.

## Summary of SAFETEA-LU Earmarks by House Election District

Earmark totals through FY 2009	Deductive Earmarks Totals through FY 2009	% Deductive	House Election Districts	Location
\$53,825,000	\$19,575,000	36.37%	1	Ketchikan
\$16,750,000	\$14,000,000	83.58%	2	Sitka / Wrangell / Petersburg
\$15,000,000	\$13,000,000	86.67%	5	Cordova / Southeast Islands
\$13,000,000	\$11,500,000	88.46%	6	Interior Villages
\$5,000,000	\$4,500,000	90.00%	12	Richardson / Glenn Highways
\$5,000,000	\$3,000,000	60.00%	35	Homer/Seward
\$14,500,000	\$14,500,000	100.00%	36	Kodiak
\$33,700,000	\$33,700,000	100.00%	37	Bristol Bay / Aleutians
\$1,500,000	\$1,500,000	100.00%	38	Bethel
\$1,500,000	\$1,500,000	100.00%	39	Bering Straits
\$22,000,000	\$20,000,000	90.91%	40	Arctic

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.

## Summary of SAFETEA-LU Earmarks by House Election District

Earmark totals through FY 2009	Deductive Earmarks Totals through FY 2009	% Deductive	House Election Districts	Location
\$105,500,000	\$57,000,000	54.03%	50	Anchorage-general - 17 Eagle River, 18 Anchorage-Military, 19 Anchorage-Muldoon, 20 Anchorage-Mt. View/Wonder Park, 21 Anchorage-Baxter Bog, 22 Anchorage-University/Airport Heights, 23 Anchorage-Downtown/Rogers Park, 24 Anchorage-Midtown/Taku, 25 Anchorage-East Spenard, 26 Anchorage-Turnigan /Inlet View, 27 Anchorage-Sand Lake, 28 Anchorage-Bayshore/Klatt, 29 Anchorage-Campbell/Independence Park, 30 Anchorage-Lore/Abbott, 31 Anchorage-Huffman/Ocean View, 32 Chugach State Park
\$46,250,000	\$21,750,000	47.03%	60	Fairbanks-general - 07 Fairbanks-Farmer's Loop / Steese Highway, 08 Fairbanks-Denali / University, 09 Fairbanks-City of Fairbanks, 10 Fairbanks / Fort Wainwright, 11 North Pole
\$19,500,000	\$19,000,000	97.44%	70	MatSu Areawide - 13 Greater Palmer, 14 Greater Wasilla, 15 Rural Mat-Su, 16 Chugiak / Southern Mat-Su
\$18,000,000	\$15,000,000	83.33%	80	Juneau Areawide - 03 Juneau Downtown/Lemon Creek/Airport, 04 Juneau Mendenhall Valley/Out the Road
\$7,500,000	\$7,500,000	100.00%	90	Kenai Areawide - 33 Kenai / Soldotna, 34 Rural Kenai
\$207,211,150	\$12,250,000	5.91%	99	Statewide
\$585,736,150	\$269,275,000	45.97%	Total	

Summary includes all SAFETEA-LU earmarks except those originally assigned to the two major bridges.

# Primer on the Federal Highway Program for Alaska

House Finance  
January 2005

## Abbreviations

- SAFETEA-LU – Name of most recent highway authorization bill, passed in August 2005 and addressing federal program through 2009.
- STIP – Statewide Transportation Improvement Program
- NHS – National Highway System
- AHS – Alaska Highway System
- CTP – Community Transportation Program
- TRAAK – Trails and Recreational Access for Alaska
- STP – Surface Transportation Program, a kind of federal funding
- MPO – Metropolitan Planning Organization (2 in Alaska)
  - AMATS – Anchorage Metropolitan Area Transportation Solutions
  - FMATS – Fairbanks Metropolitan Area Transportation System
- HTF – Highway Trust Fund
- PM – Preventative Maintenance
- M&O – Maintenance and Operations



## STIP Issues

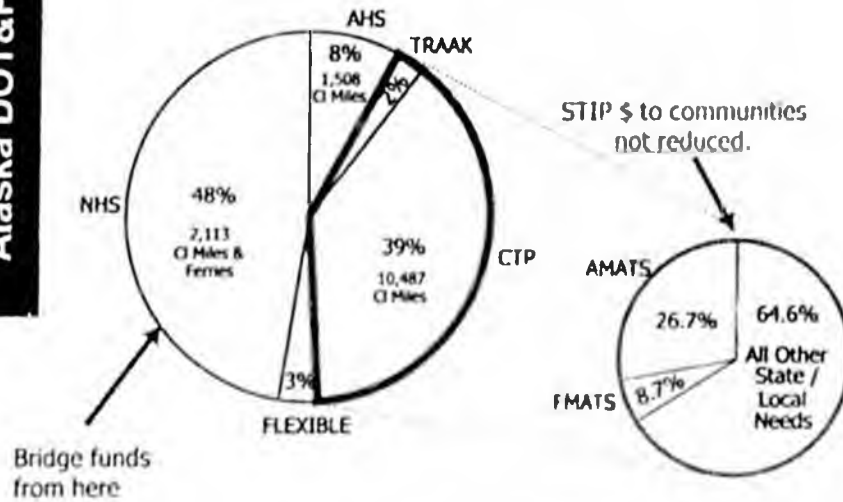
- Explanation of how the bridge funding was determined.
- Eligibility of STIP funds in Alaska has grown substantially.
- STIP funds to address road needs is limited by several factors.

Providing for the Movement of People and Goods and the Safety of State Services

## Bridge Math Explained

- Explain the \$91 M and \$93.6 M allocations:
  - 'Renamed' bridge earmarks are flexible
    - No project named, very flexible eligibility (= to STP)
  - Funds subject to Alaska STIP regulations.
    - State formula allocates funds to NHS, local needs, etc
  - 48% of funds allocated to NHS, subject to use on two bridges.
  - Further reduction to 85% to address expected shortfall in appropriations.

## Distribution of Federal-Aid Transportation Formula Funds Per 17 AAC 05.155-200



December 2005

Providing for the Movement of People and Goods and Delivery of State Services

## Bridge Math Shown

- Knik Arm
  - \$229.4 M\* in earmarks
  - @48% = \$110.1 M
  - @85% = \$93.6 M in capital budget
- Gravina Island
  - \$223 M\* in earmarks
  - @48% = \$107.0 M
  - @85% = \$91 M in capital budget

48% is the regulatory portion of unrestricted STIP funds allocated to the NHS program  
 85% accounts for less than full appropriations to fund the earmarks, based on status of the Highway Trust Fund and past appropriation history.

\* Funds authorized to each bridge over 5 year life of SAFETEA LU.

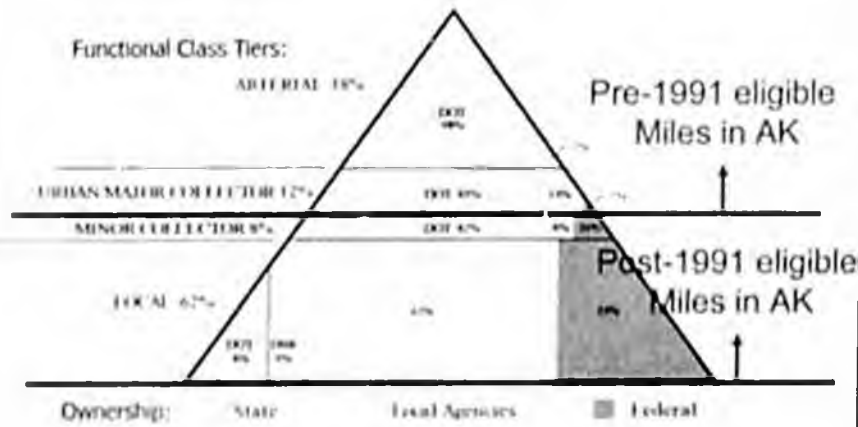
Providing for the Movement of People and Goods and Delivery of State Services

# Mission Statement

- Providing for the movement of people and goods and the delivery of state services.
- All roads are not equal in this regard.

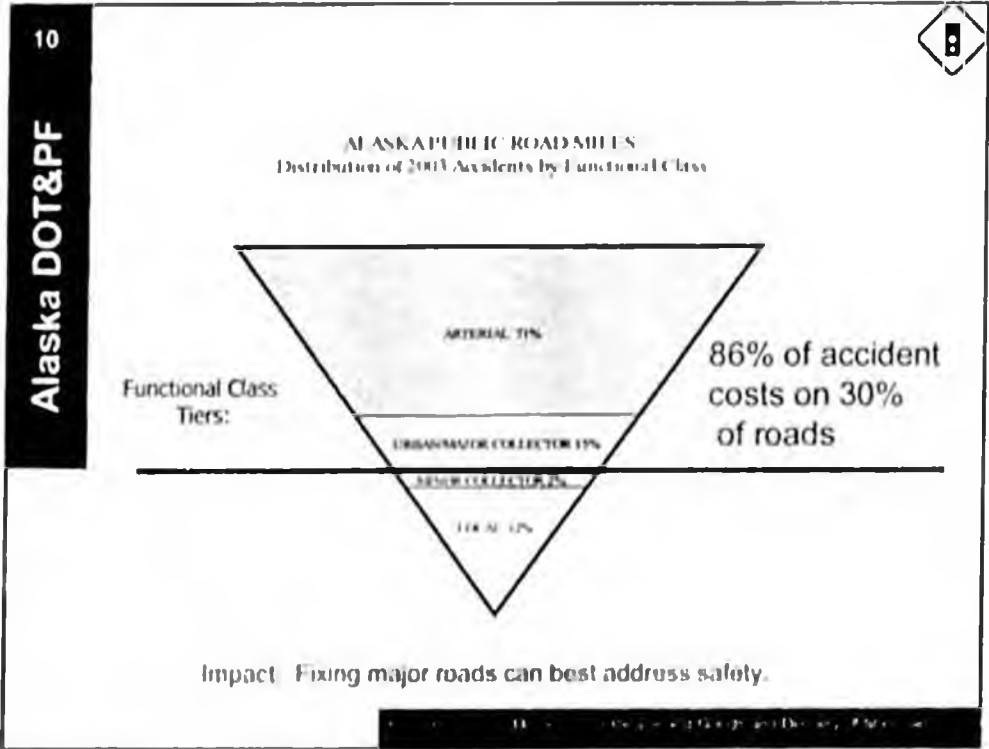
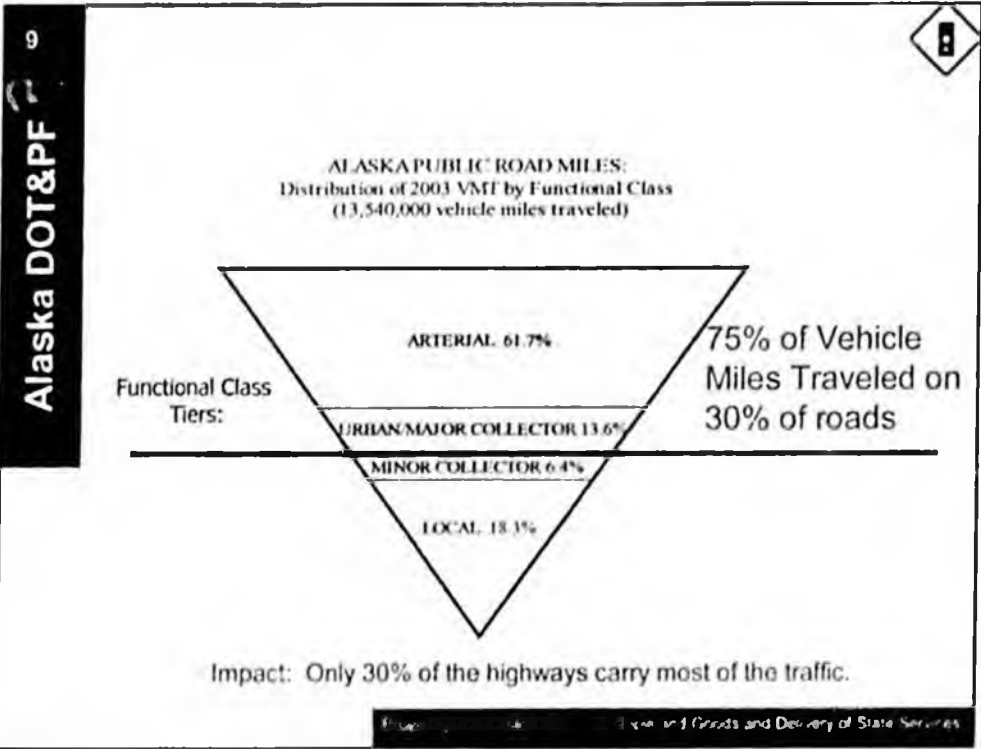
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ALASKA PUBLIC ROAD MILES  
Arterial, Collector, and Local Road Mileage by Ownership  
As of December 2003



Impact: Eligibility of funds more than tripled!

Providing for the Movement of People and Goods and the Delivery of State Services



## Eligibility Issues (1)

- Nationwide, only 20-30% of highways eligible for federal STIP funds.
- In Alaska, 100% of roads and highways are eligible (due to Federal law unique to Alaska).
- Impact: We are trying to address more needs than funds can serve.

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## Eligibility Issues (2)

- Alaska distributes more STIP funds to local needs than any other state!
  - AMATS/FMATS and other communities get >40% under state-formula
  - US average is < 20%
- Impact: High level roads are less well funded than they would be if national formula and eligibility was followed.

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## Eligibility Issues (3)

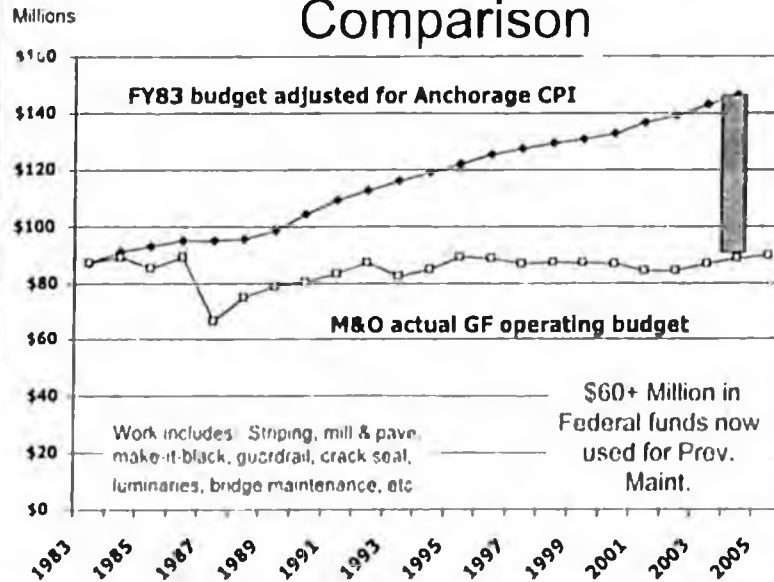
- Some earmarks have further shrunk funding for Alaska's highway program.
- Parking garage, loan repayments, rail, port and shipyard and other types of projects were earmarked from Alaska's highway dollars.
- Further, most of the earmarks are not fully funded.
- Impact: While worthy projects, these non-highway earmarks have subtracted from original purpose of federal-aid highway program.
- Partial funded earmarks create an "expectation" of future STIP dollars.



## Eligibility Issues (4)

- Operations and preventative maintenance have shifted to federal funds over past two decades.
- Since late 80's budget pressure to preserve GF has shifted considerable costs to STIP.
- Impact: Many fewer rehabilitation, safety and capacity projects are possible.

## M&O Operating Budget And CPI Comparison

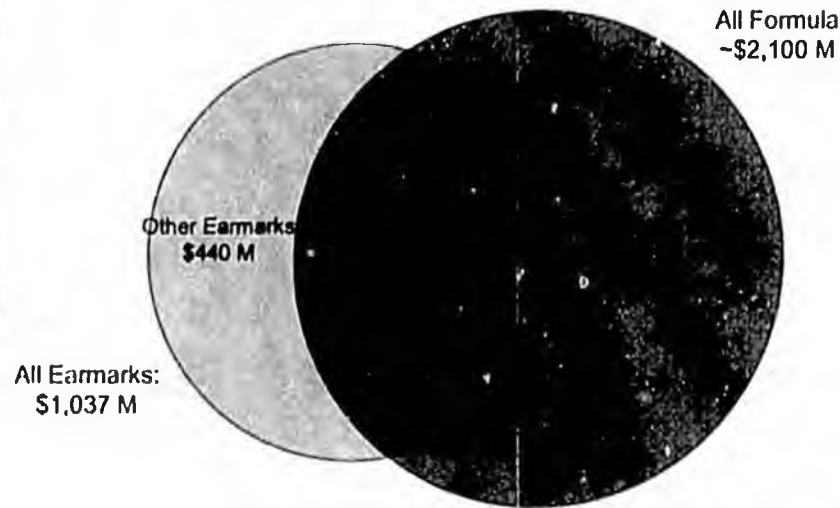


Department for the Movement of People and Goods and Delivery of State Services

## Dollars are Limited (1)

- SAFETEA-LU earmarks were much more extensive than just two bridges.
- Another \$269 M in earmarks were deductive too. In addition, > \$440 M in earmarks were non-deductive.
- Impact: The loss of STIP funds to bridge earmarks is only part of the picture.

## 5 Year Earmarks & Formula



Authorized levels

Providing for the Maintenance of People and Goods and Delivery of State Services

## Bridge Earmarks by Type

(in Millions, 5-year Authorization\*)

• Gravina Island	• Knik Arm
– Subtractive \$148	– Subtractive \$179.4
– Additive \$75	– Additive \$50
– Total \$223 M	– Total \$229.4

\*Authorized" dollars will generally arrive in 5 equal installments, between 2005 and 2009. Due to federal budget process, appropriations are expected to actually provide only 85% of the authorized amounts.

Providing for the Maintenance of People and Goods and Delivery of State Services





## Dollars are Limited (2)

- Other changes in law have reduced funding.
- Several new federal category\* of funds, and enlarged existing set-aside categories have shrunk funding to regular program.
- Impact: Approximately \$25 M of annual funds previously flexible in nature were made restrictive.

\*Eligibility for federal hwy. funds are set by the "apportionment" or category. Each apportionment type has unique eligibility rules.

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## Dollars are Limited (3)

- Highway Trust Fund (HTF) not delivering as expected.
- 2005 appropriations delivered only 80% of authorization; lowest in decades.
- Several national reports suggest HTF is facing continued difficulty.
- Impact: The HTF is the principal source of Alaska highway funds thus this apparent downturn is of utmost concern!

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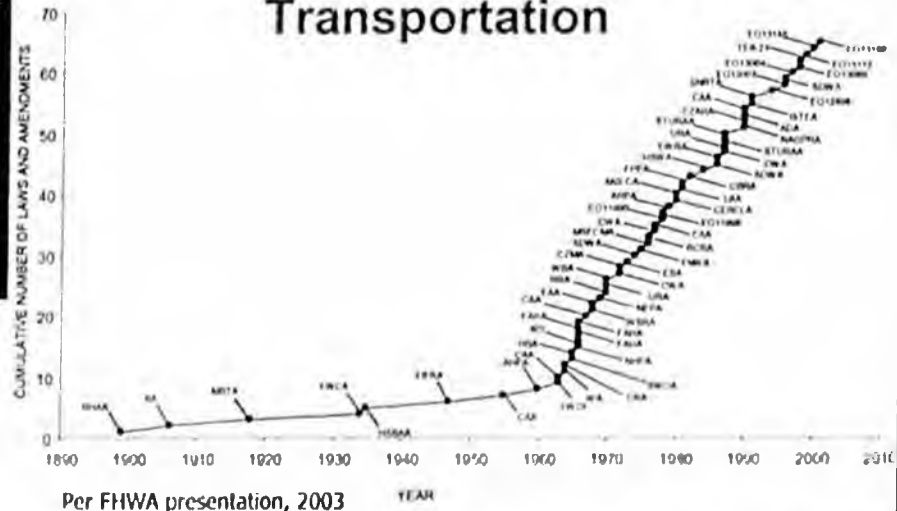
## Dollars are Limited (4)

- Construction inflation has ramped up sharply.
- All major inputs to construction such as labor, right-of-way, commodities (energy, steel, cement, asphalt) are up sharply. National estimate is 30% or greater!
- Impact: As project costs rise, the number of transportation projects the STIP can fund drops.

## Dollars are Limited (5)

- Process and new legal requirements for federal funds continues to expand.
- This takes more time and money; some new requirements add significant costs.
- Impact: More is spent on intangibles, or non-transportation work, thus less on pavement.

## Federal Environmental Requirements Affecting Transportation



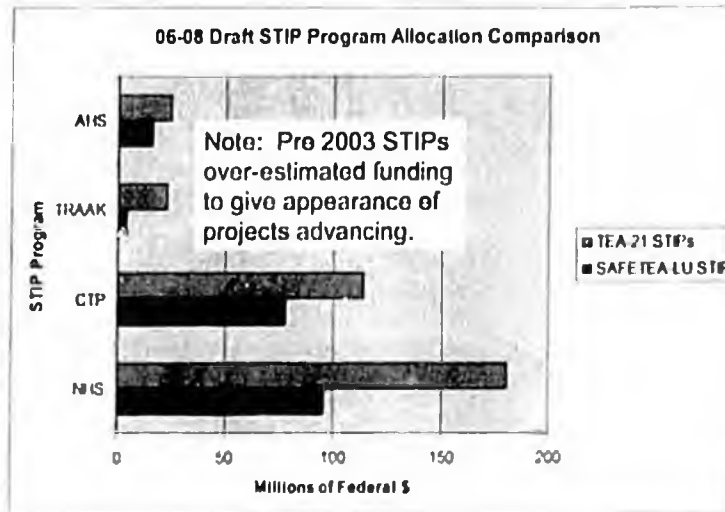
Planning for the Movement of People and Goods and Delivery of State Services

## Dollars are Limited (6)

- Alaska's STIP funds are reduced due to safety laws that do not meet federal goals.
- Open container and repeat offender laws cause deduction\* of 3% of flexible funds.
- Impact: One significant project (~\$12 M) is lost each year.

\*Deducted funds are returned to the Alaska highway safety program, but only certain safety work, or education and enforcement type projects may be funded.

## Project Funds Lower Today



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## Is STIP Funding Adequate? (1)

- Backlog of work is significant
  - Needs List identifies more than \$10 Billion in projects.
  - Alaska flexible STIP addresses 1.5 - 2% of identified projects; 50+ years to address needs as identified today.
- Impact: STIP funding is not adequate!

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## Is STIP Funding Adequate? (2)

- Years needed to perform work on entire mileage of each system:
  - National Highway System: 66 years
  - Community Trans. Program: 125 years
  - Alaska Highway System: 132 years
- Above ratios assume no expansion of system miles.
- Calculation based on average cost per mile of \$1 M per mile, except NHS at \$2 M per mile.

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## Alaska vs. Other States

- **Alaska**
  - STIP funds all roads
  - No dedicated state funds for construction
  - Local gov'ts expect STIP to pay for local roads
  - Tolls used sparingly (Whittier Tunnel, Knik)
- **Other States**
  - STIP funds top 20%
  - State taxes fund other state/local needs
  - Local gov'ts use local funds on local roads
  - Tolls rapidly expanding
    - (Many states now using tolls)



## STIP Shortfall to Regular Projects Stems From Many Causes

- Over the 5-year life of the bill, the two bridges represent ~\$184.6 M or \$36.9 M per year.
- Other factors, as explained, have resulted in far more lost project funding:

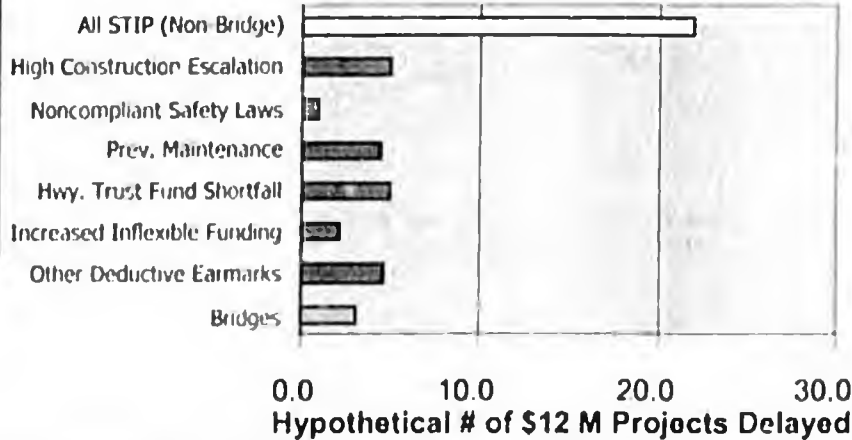
	5 Year Totals
- Other deductive earmarks*	\$269 M
- Reduced flexible funds*	\$125 M
- Hwy Trust Fund shortfall (est.)*	\$300 M
- Preventative maintenance	\$260 M
- Noncompliant safety laws	\$60 M
- Construction escalation (est.)*	\$300 M
- Total 5-year lost spending potential:	<b>\$1,315 M or \$263 M each year!</b>

\* These factors have emerged since the previous 04-06 STIP was prepared.

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## One Year: Hypothetical # of \$12 M Projects Delayed



Issues in red emerged since prior STIP

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## Key Takeaways

- Alaska relies on STIP funds for larger universe of projects than any other state!
- Alaska shares more STIP funds as % with local governments than any other state.
- STIP funds have effectively shrunk as a result of several factors beyond two bridges.
- State has no supplemental fund source for highway program which magnifies the current downturn in STIP funds.
- Highway Trust Fund is not robust!

1/17/06

OVERVIEW:

DEPT. OF

REVENUE

FALL

FORECAST



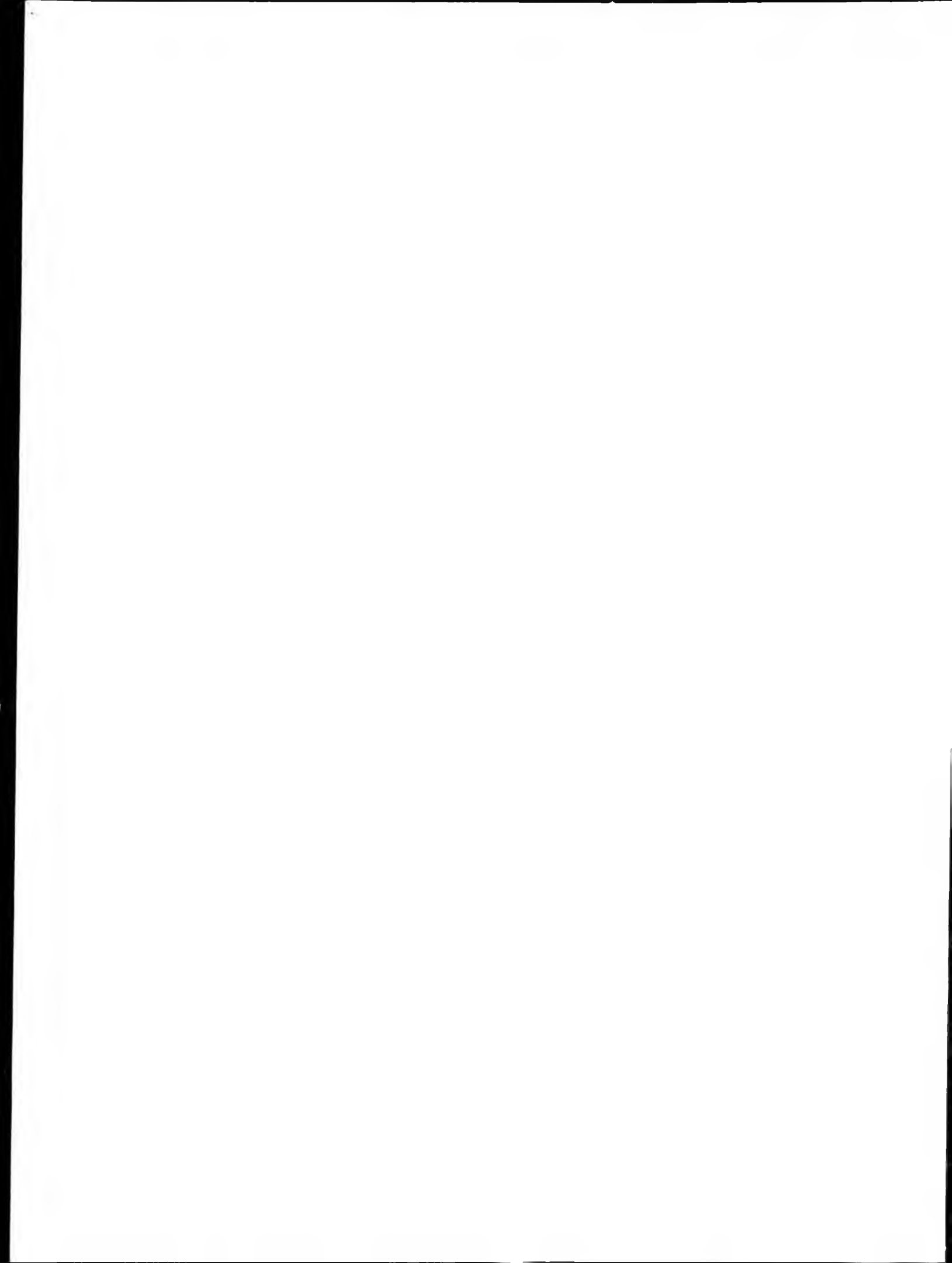
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**FILE**



**FALL 2005**  
**REVENUE SOURCES BOOK**

**ALASKA DEPARTMENT OF REVENUE - TAX DIVISION**



# STATE OF ALASKA

## DEPARTMENT OF REVENUE

OFFICE OF THE COMMISSIONER

FRANK H. MURKOWSKI, GOVERNOR

P.O. BOX 110400  
JUNEAU, ALASKA 99811-0400  
TELEPHONE: (907) 465-2300  
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December 15, 2005

The Honorable Frank H. Murkowski  
Governor of Alaska  
P.O. Box 110001  
Juneau, Alaska 99811-0001

Dear Governor Murkowski:

I present you, the Legislature and the Alaska public with the Department of Revenue's latest Revenue Sources Book. Our Fall 2005 report includes a preliminary accounting of state revenues received in FY 2005 and projections for Fiscal 2006 through Fiscal 2016.

We project Alaska North Slope crude oil prices will average \$57.30 per barrel for the fiscal year ending June 30, 2006. The fiscal year-to-date average is currently above \$58 per barrel but price instability continues. We believe, given world supply uncertainties and market concern over shortages, prices for the rest of the fiscal year will remain volatile.

Eventually, we do see new oil supplies coming online, and a more rational approach in the markets, with prices backing off next year. Our forecast for Fiscal 2007 is \$49.20 a barrel for Alaska North Slope crude, and \$40.95 a barrel for fiscal year 2008.

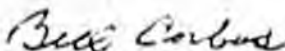
Our forecast for Fiscal 2009 and beyond is \$25.50, our Spring 2005 long-term forecast. Yes, this is lower than today's markets and certainly lower than many pundits predict. As you know, however, our approach is to not frequently change our long-term price forecast. Caution is an appropriate response to volatile oil markets.

Alaska North Slope crude oil production projections have been adjusted and are projected to decrease 5.6 percent (to 865,000 barrels per day) in Fiscal 2006, and 2.6 percent (to 843,000 barrels per day) in fiscal year 2007. After, the decline of ANS production will slow to a ten-year average of 0.9 percent per year due to smaller fields under development coming on-line and the start-up of production from the NPR-A in Fiscal 2011.

The Fall 2005 Revenue Sources Book also provides you with our inaugural natural gas price forecast at the Henry Hub location in Louisiana. December's Henry Hub natural gas prices average about \$13.50 per million British Thermal Units [BTU]. Natural gas prices are extremely difficult to predict but, we know they are at historical highs and we believe they will decline. For Fiscal 2006, we predict Henry Hub prices will average \$9.19 per million BTU, and \$7.79 per million BTU for fiscal year 2007. We invite you to read fully this new natural gas section in our biannual report.

I invite questions on this report and wish you, the Legislature and all Alaskans a safe and happy holiday season, a prosperous new year and a productive 2006.

Sincerely,



William A. Corbus  
Commissioner

# Fall

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# 2005

Alaska Department of Revenue  
Tax Division

# Fall 2005

## Revenue Sources Book

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# Fall

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# 2005

## 1.

# Introduction

## General Discussion

The purpose of the semi-annual Revenue Sources Book is to provide the governor, legislature and citizens of the state with a summary of our past collections of state revenue and a forecast of future revenue. Revenues are categorized into four major components: oil and gas royalties and taxes, income from sources other than oil including non-oil taxes and fees, federal dollars and investment revenues.

Oil revenues continue to dominate the unrestricted revenue picture—and will continue to provide 85% of Unrestricted General Purpose Revenue through FY 2008 and 75% through FY 2011. However, North Slope oil production has declined. In FY 2005 ANS output was 0.917 million barrels per day compared to a peak of 2.006 million barrels a day in FY 1988. While production declined by 54.3% over that period, the market price of oil almost tripled.

In 10 of the past 14 years, the state has relied on annual withdrawals from the Constitutional Budget Reserve Fund (CBRF) to fill the gap between unrestricted revenues and budget outlays. In the other four years unrestricted revenues have been sufficient to pay for budgeted spending without a draw on the CBRF.

Alaska's total revenue picture also includes earnings from the Permanent Fund, federal revenue and reserves in the CBRF. Also in this publication, the Department of Revenue examines natural gas in a special section designed to provide the reader with background information on natural gas—including supply, demand, prices, and the relationship between natural gas prices and crude oil prices. We hope that the information provided in this book provides greater insight not only into the sources of revenue that support the state today, but also into future revenues from these and potential new revenue sources on the horizon.

Please note that totals in the tables throughout this publication may not equal the sum of components due to rounding.



## Fall 2005 Forecast

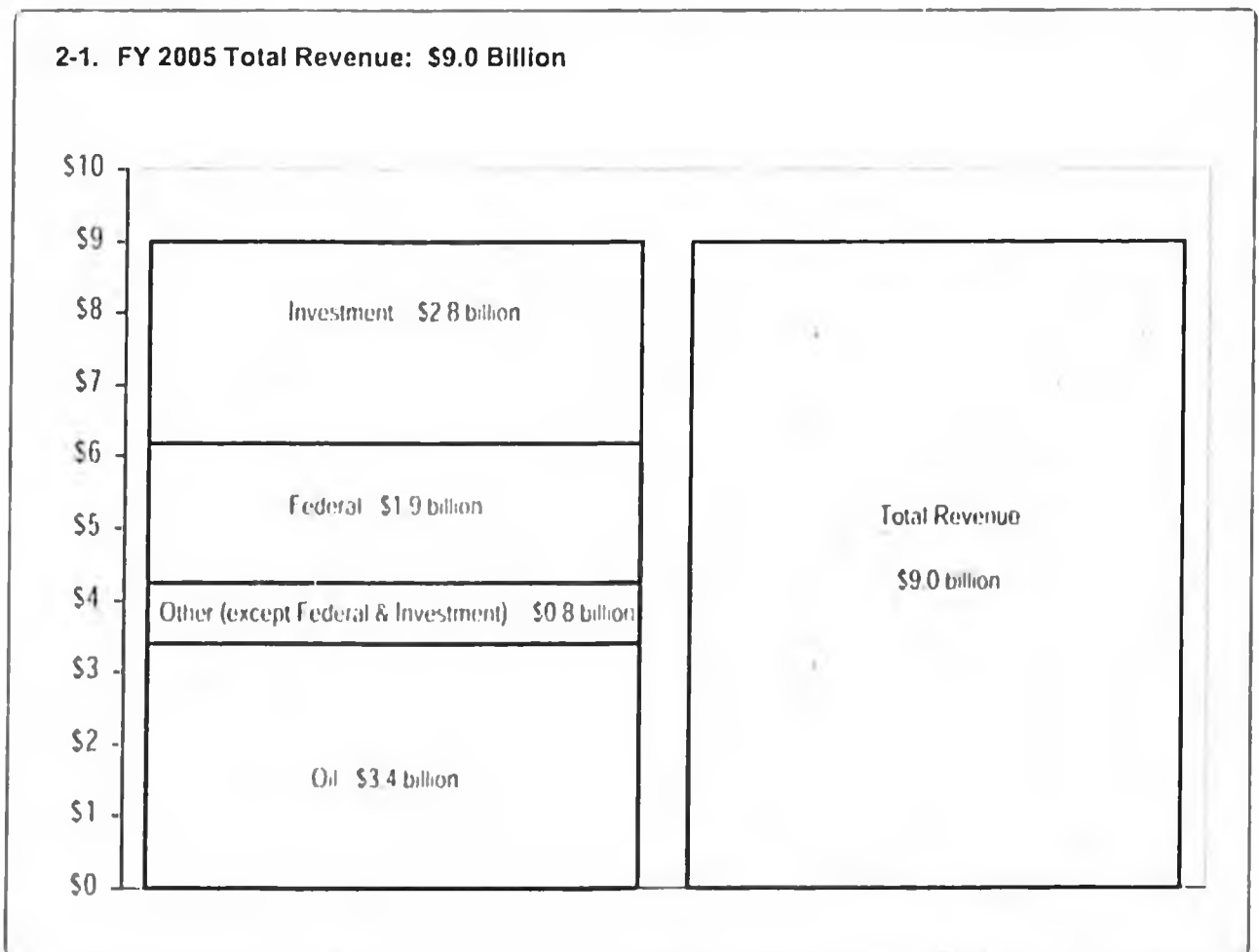
This publication is organized into the following 10 sections:

1. **Introduction**
2. **Executive Summary**
3. **On the Horizon - Natural Gas**  
This section provides an overview of the supply, demand and transport issues related to natural gas. It also includes the department's first forecast of natural gas prices and an analysis of the relationship between changes in crude oil and natural gas prices.
4. **Oil Revenue**  
In FY 2005, oil and gas production tax, corporate income tax, property tax and royalty revenues contributed 89% of the state's General Fund unrestricted revenue. Oil revenues will continue to play a key role in Alaska's future.
5. **Other Revenue (except Federal & Investment)**  
Revenue from non-oil sources includes non-oil taxes, charges for services, fines and forfeitures, licenses and permits, rents and royalties and other revenue sources.
6. **Federal Revenue**  
Federal funding continues to be one of Alaska's biggest sources of revenue.
7. **Investment Revenue**  
Investment earnings come from the Alaska Permanent Fund, Constitutional Budget Reserve Fund, General Fund and other state investments.
8. **State Endowment Funds**  
Alaska has six endowment funds.
9. **Public Corporations and the University of Alaska**  
Seven public corporations and the University of Alaska are treated as separate component units of state government for financial reporting purposes.
10. **Appendices**  
The appendices provide 30 years of historical and 10 years of forecast data on oil revenue, prices and production. Starting with this fall forecast, these numbers are provided in a different format than in the past. For a complete set of historical data, please visit our web site: [www.tax.state.ak.us](http://www.tax.state.ak.us)

## 2.

# Executive Summary

## Total Governmental Revenue



**2-2. Total Governmental Revenue by Major Component, FY 2005 and  
Forecasted FY 2006-2007**  
\$ Million

	History FY 2005	Forecast FY 2006    FY 2007	
<b>OIL REVENUE</b>			
<u>Unrestricted</u>			
Property Tax	42.5	42.5	36.7
Corporate Petroleum Tax	524.0	525.1	444.1
Production Tax	863.2	1,130.8	891.6
Royalties (including Bonuses, Rents & Interest)	<u>1,419.8</u>	<u>1,728.5</u>	<u>1,397.5</u>
Subtotal	2,849.5	3,426.9	2,769.9
<u>Restricted</u>			
Royalties to Perm Fund and School Fund (includes Bonuses & Rents)	486.5	589.9	474.9
Tax Settlements to CBRF	27.4	20.0	20.0
NPR-A Royalties, Rents and Bonuses	<u>31.6</u>	<u>2.9</u>	<u>12.6</u>
Subtotal	545.5	612.9	507.5
Subtotal Oil Revenue	3,395.0	4,039.8	3,277.3

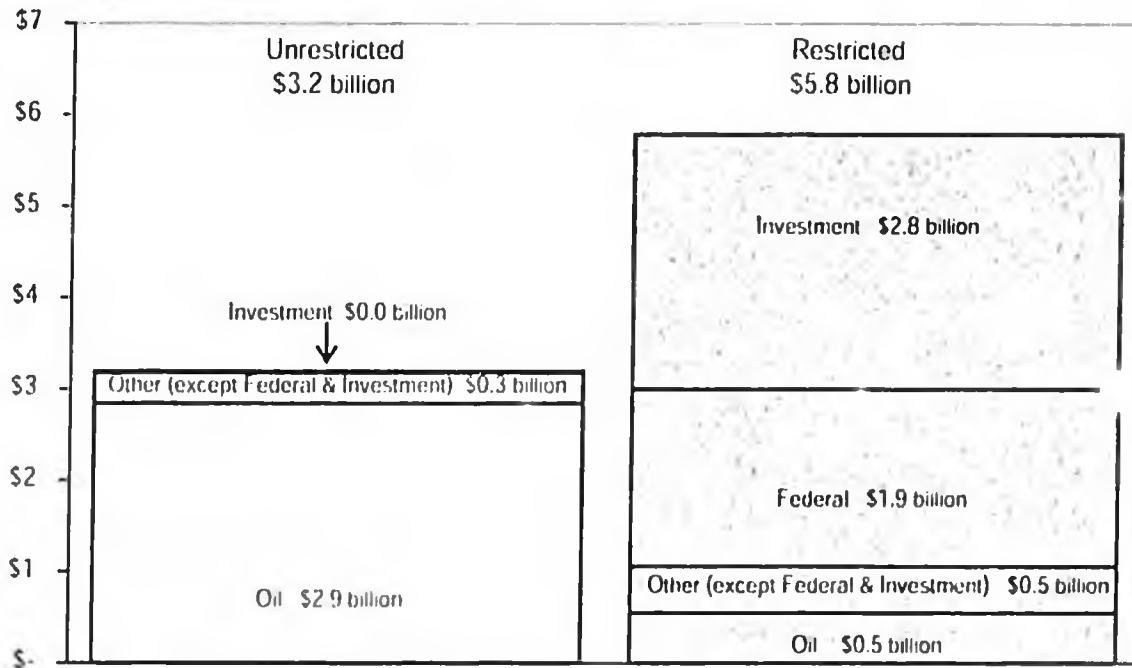
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**2-2. Total Governmental Revenue by Major Component** (continued from prior page)  
\$ Million

	History FY 2005	Forecast FY 2006    FY 2007	
<b>OTHER REVENUE (EXCEPT FEDERAL &amp; INVESTMENT)</b>			
<u>Unrestricted</u>			
Taxes	227.7	265.2	248.0
Charges for Services	17.9	18.1	18.1
Fines and Forfeitures	8.8	10.9	10.9
Licenses and Permits	42.7	41.6	42.4
Rents and Royalties	9.3	9.6	9.6
Other	<u>17.1</u>	<u>12.7</u>	<u>12.7</u>
Subtotal	323.5	358.1	341.7
<u>Restricted</u>			
Taxes	82.6	83.3	82.6
Charges for Services	233.3	260.8	262.0
Fines and Forfeitures	23.3	22.6	22.5
Licenses and Permits	29.9	31.7	36.5
Rents and Royalties	4.5	4.6	4.6
Other	<u>141.1</u>	<u>160.7</u>	<u>93.9</u>
Subtotal	514.7	563.7	502.1
Subtotal Other Revenue (Except Federal & Investment)	838.2	921.8	843.8
<b>FEDERAL REVENUE</b>			
<u>Restricted</u>			
Federal Receipts	<u>1,946.3</u>	<u>2,745.0</u>	<u>2,745.0</u>
Subtotal Federal Revenue	1,946.3	2,745.0	2,745.0
<b>INVESTMENT REVENUE</b>			
<u>Unrestricted</u>			
Investments	23.6	23.6	26.6
Interest Paid by Others	<u>1.1</u>	<u>1.1</u>	<u>1.1</u>
Subtotal	24.7	24.7	27.7
<u>Restricted</u>			
Investments	13.3	12.4	13.6
Constitutional Budget Reserve Fund	97.4	76.0	112.3
Other Treasury Managed Funds	22.7	21.0	21.9
Alaska Permanent Fund (GASB) <sup>(1)</sup>	<u>2,640.2</u>	<u>2,243.0</u>	<u>2,408.3</u>
Subtotal	2,773.6	2,352.4	2,556.1
Subtotal Investment Revenue	2,798.3	2,377.1	2,583.8
Grand Total	8,977.8	10,083.7	9,450.0

(1) Both realized and unrealized gains and losses are included per GASB 34 as interpreted by the Finance Division of the Department of Administration in its Comprehensive Annual Financial Report.

2-3. FY 2005 Unrestricted and Restricted Revenue: \$9.0 Billion



2-4. Unrestricted and Restricted Revenue by Major Source, FY 2005 and Forecasted FY 2006-2007  
\$ Million

	History FY 2005	Forecast FY 2006    FY 2007	
<b>Unrestricted<sup>(1)</sup></b>			
Oil Revenue	2,849.5	3,426.9	2,769.9
Non-Oil Revenue	323.5	358.1	341.7
Investment Earnings	24.7	24.7	27.7
<b>Subtotal</b>	<b>3,197.7</b>	<b>3,809.7</b>	<b>3,139.3</b>
<b>Restricted</b>			
Oil Revenue	545.5	612.9	507.5
Non-Oil Revenue	514.7	563.7	502.1
Investment Earnings	2,773.6	2,352.4	2,556.1
Federal Revenue	1,946.3	2,745.0	2,745.0
<b>Subtotal</b>	<b>5,780.1</b>	<b>6,274.0</b>	<b>6,310.7</b>
<b>Grand Total:</b>	<b>8,977.8</b>	<b>10,083.7</b>	<b>9,450.0</b>

(1) Total unrestricted revenue as reported from Alaska State Accounting System (AKSAS) with adjustments for certain municipal sharing of statewide taxes and additional spending restrictions.

## Unrestricted General Purpose Revenue

Unrestricted General Purpose Revenue is the amount generally used for budget planning purposes and is designated in budget documents as General Fund revenue. The table on the next two pages sets out FY 2005 Unrestricted General Purpose Revenue and our forecast for FY 2006 and 2007.

The Department of Revenue forecasts Unrestricted General Purpose Revenue by first estimating General Fund Unrestricted Revenue, which includes all unrestricted revenues in the Alaska State Accounting System (AKSAS), as well as certain program receipts. After consulting with the Governor's Office of Management and Budget and Legislative Finance, we adjust our forecast of General Fund Unrestricted Revenue to derive a forecast of total Unrestricted General Purpose Revenue. Reductions include: (1) revenue earmarked for specific programs, (2) pass-through revenue for qualified regional aquaculture and dive fishery associations, and (3) revenue shared with municipal governments and organizations (e.g., fisheries taxes.) Additions include transfers from the unclaimed property trust to the state treasury.

**2-5. Unrestricted General Purpose Revenue, FY 2005 and Forecasted FY 2006-2007**  
 \$ Million

	History	Forecast	
	FY 2005	FY 2006	FY 2007
<u>Oil Revenue</u>			
Property Tax	42.5	42.5	36.7
Corporate Income Tax	524.0	525.1	444.1
Production Tax			
Oil & Gas Production	854.9	1,122.7	883.6
Oil & Gas Hazardous Release	<u>8.3</u>	<u>8.1</u>	<u>8.0</u>
	863.2	1,130.8	891.6
Royalties (including Bonuses & Interest)			
Mineral Bonuses & Rents	17.4	16.1	23.5
Oil and Gas Royalties	1,401.0	1,707.4	1,364.0
Interest	<u>1.4</u>	<u>5.0</u>	<u>10.0</u>
Subtotal Royalties	1,419.8	1,728.5	1,397.5
Total Oil Revenue	2,849.5	3,426.9	2,769.9
<u>Other Revenue (except Federal &amp; Investment)</u>			
<u>Other Taxes</u>			
Sales and Use			
Alcoholic Beverages	17.3	17.6	17.8
Cigarette	17.4	28.9	33.8
Other Tobacco Products	7.7	8.1	8.4
Insurance Premium	45.9	47.2	47.7
Electric and Telephone Cooperative	0.2	0.2	0.2
Motor Fuel	39.4	39.4	40.1
Tire Fees	1.6	1.6	1.6
Vehicle Rental	<u>7.5</u>	<u>7.5</u>	<u>7.5</u>
Subtotal	137.0	150.5	157.1
Corporate Income	61.8	85.0	61.5
Fish			
Fisheries Business	10.7	12.1	13.5
Fishery Resource Landing	<u>3.9</u>	<u>4.3</u>	<u>4.3</u>
Subtotal	14.6	16.4	17.8
Other			
Mining	10.3	10.4	9.2
Estate	1.5	0.5	0.0
Charitable Gaming	<u>2.5</u>	<u>2.4</u>	<u>2.4</u>
Subtotal	14.3	13.3	11.6
Subtotal Other Taxes	221.7	265.2	248.0

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**2-5. Unrestricted General Purpose Revenue** (continued from prior page)  
\$ Million

	History	Forecast	
	FY 2005	FY 2006	FY 2007
<u>Other Revenue (except Federal &amp; Investment), cont.</u>			
Charges for Services			
General Government	14.7	14.9	14.9
Natural Resources	1.4	1.4	1.4
Other	<u>1.8</u>	<u>1.8</u>	<u>1.8</u>
Subtotal Charges for Services	17.9	18.1	18.1
Fines and Forfeitures	8.8	10.9	10.9
Licenses and Permits			
Motor Vehicle	39.9	38.8	39.6
Other	<u>2.8</u>	<u>2.8</u>	<u>2.8</u>
Subtotal Licenses and Permits	42.7	41.6	42.4
Rents and Royalties			
Land Leasing, Rental and Sales	7.7	7.9	7.9
Coals Royalties	1.3	1.4	1.4
Cabin Rentals	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>
Subtotal Rents and Royalties	9.3	9.6	9.6
Other			
Miscellaneous	7.6	8.2	8.2
Unclaimed Property	<u>9.5</u>	<u>4.5</u>	<u>4.5</u>
Subtotal Other	17.1	12.7	12.7
Total Other Revenue (except Federal & Investment)	323.5	358.1	341.7
<u>Investment Revenue</u>			
Investments	23.6	23.6	26.6
Interest Paid by Others	<u>1.1</u>	<u>1.1</u>	<u>1.1</u>
Total Investment Revenue	24.7	24.7	27.7
Total Unrestricted Revenue	3,197.7	3,809.7	3,139.3



## Crude Oil Price Forecast

Oil revenue will provide at least 75% of forecasted Unrestricted General Purpose Revenue through FY 2011. Two elements are critical to the oil revenue forecast: price and volume.

There is no price for Alaska crude oil on the New York Mercantile Exchange (NYMEX)<sup>(1)</sup> or other commodity exchanges. The spot price of Alaska North Slope (ANS) is calculated by subtracting a market differential from the price of West Texas Intermediate (WTI) quoted on the NYMEX. Four different assessment services estimate that market differential and report a daily spot price for ANS.

All of Alaska's oil production is delivered to refineries on the U.S. West Coast (including Alaska and Hawaii). Consequently, Alaska's royalty and production tax revenue depends in large part on the average market price of ANS crude oil at U.S. West Coast refining centers.

The table below contains crude oil prices for FY 2005 and the Department of Revenue's forecast of prices for the 11-year period beginning with the current fiscal year FY 2006 and continuing through FY 2016. The oil price forecast is based on a subjective assessment of market dynamics and trend analysis by participants at a Department of Revenue price scenario meeting.

**2-6. Nominal WTI, ANS West Coast and ANS Wellhead, FY 2005 and Forecasted FY 2006-2016  
\$ per Barrel**

Fiscal Year	WTI	ANS West Coast	ANS Wellhead
2005	47.19	43.43	38.76
2006	59.65	57.30	51.56
2007	51.50	49.20	43.31
2008	43.25	40.95	35.08
2009	27.50	25.50	19.59
2010	27.50	25.50	19.53
2011	27.50	25.50	19.38
2012	27.50	25.50	19.35
2013	27.50	25.50	19.11
2014	27.50	25.50	18.87
2015	27.50	25.50	18.73
2016	27.50	25.50	18.57

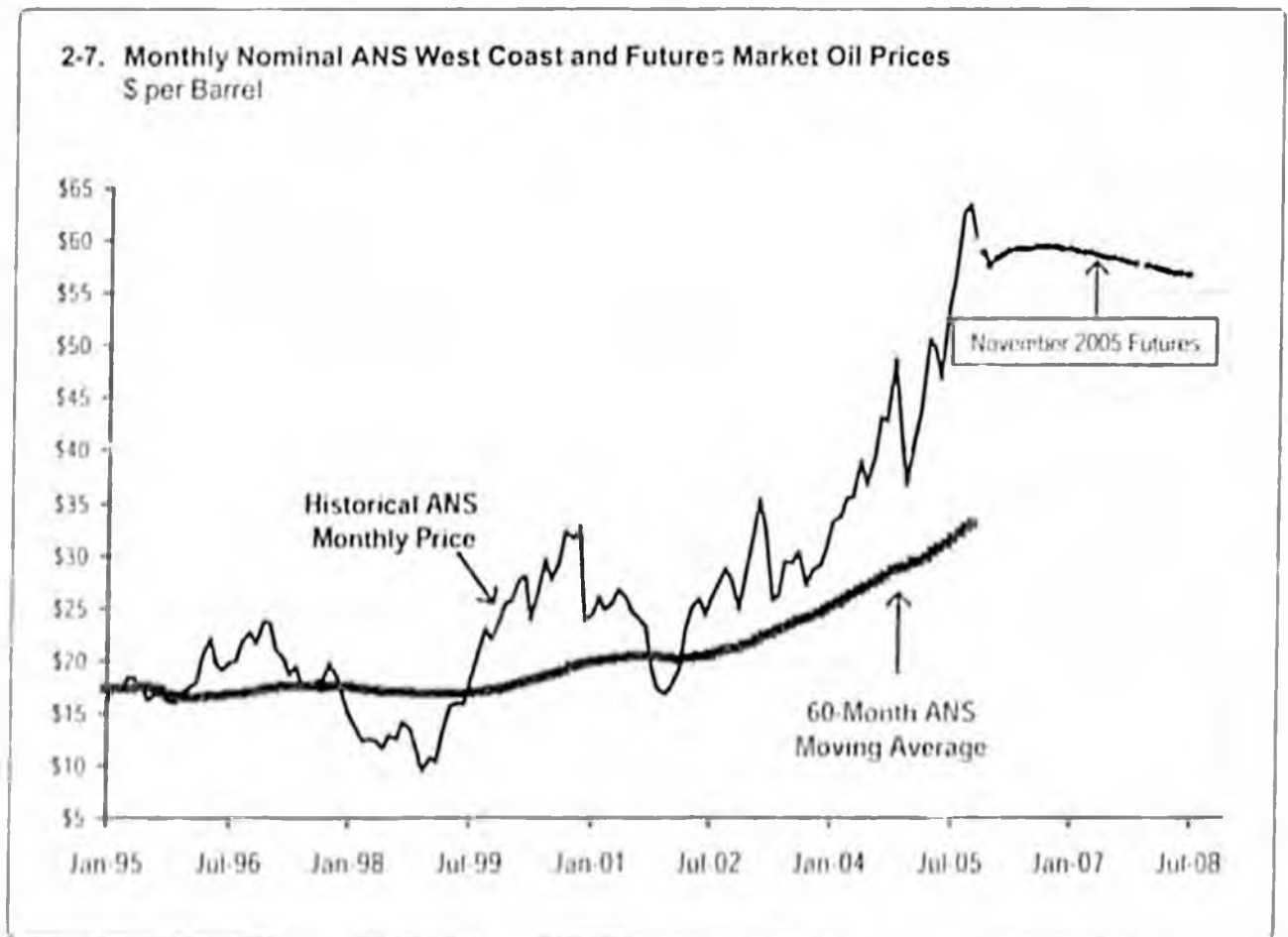
(1) The NYMEX futures market is one source for a WTI quote. A daily WTI spot quote could also be determined by a reporting service's daily assessment of the WTI spot market.

The figure below shows: (1) the monthly West Coast ANS market price from January 1995 through October 2005, (2) the 60-month moving average West Coast market price for the same period and (3) the derived NYMEX crude oil futures price of ANS from November 2005.

The figure below illustrates a number of issues with respect to oil prices including:

- the volatility of month-to-month crude oil prices—monthly ANS West Coast prices during this time period ranged from just under \$10 per barrel to \$63.50 per barrel
- the average of the 60-month moving average is \$24 per barrel and has increased dramatically since 1999
- the derived futures market price of November 2005 shows a slight downward trend

We assume that over the long-term, ANS oil prices will average \$25.50 per barrel in nominal terms. This price assumption is unchanged from our fall 2004 forecast<sup>(1)</sup> even though ANS West Coast prices averaged \$33.03 per barrel from November 2000 to November 2005. We will continue to evaluate our price assumptions, with our next forecast due in the spring of 2006.



(1) According to the department's price forecasting protocol, long-run crude oil price projections can only be changed every two years if price forecasting participants agree to a change over the two consecutive fall forecast sessions.

## Crude Oil Production Forecast

Alaska North Slope crude oil production peaked at 2,006 million barrels per day in FY 1988 and has steadily declined since. In FY 2005, ANS production averaged 0.917 million barrels per day, and we project FY 2006 production to decrease by 5.6% to 0.865 million barrels per day. FY 2006 ANS production has been affected by more than normal unplanned maintenance.

This production forecast has been revised since our spring 2005 forecast. We anticipate Fiord, Fiord-Kuparuk, Nanuq and Nanuq-Kuparuk will add almost 17,000 barrels per day in FY 2007. The National Petroleum Reserve-Alaska (NPR-A) and Liberty will add 55,000 barrels per day by FY 2011. We are also forecasting 10,000 to 40,000 barrels per day from additional known onshore and offshore fields starting in FY 2008.

More discussion of the fall 2005 oil production forecast can be found in Section 4, Oil Revenue. Also, a detailed field-by-field production forecast is included in the appendices section of this forecast.

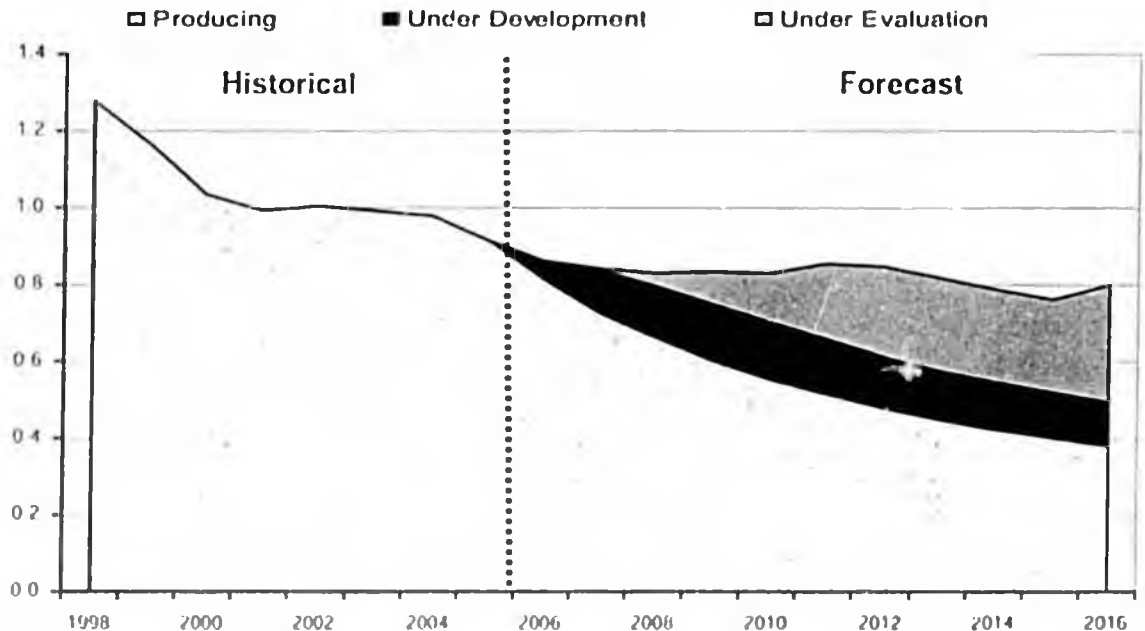
We continue to present the ANS production forecast in three parts: (1) currently producing, (2) currently under development and (3) currently being evaluated for development. We do this so that the reader will have an understanding about the uncertainty associated with the production forecast. We continue to forecast production of those reserves that have already been discovered and at minimum are being evaluated for development. Overall, the decline in crude oil production average is about 1.2% per year between FY 2005 and FY 2016.

**2-8. Alaska North Slope Production, FY 2005 and Forecasted FY 2006-2016 <sup>(1)</sup>**  
Million barrels/day

Fiscal Year	Currently Producing	Under Development	Under Evaluation	Total ANS
2005	0.917			0.917
2006	0.815	0.051		0.865
2007	0.724	0.114	0.005	0.843
2008	0.658	0.138	0.035	0.832
2009	0.602	0.146	0.086	0.834
2010	0.555	0.149	0.128	0.832
2011	0.514	0.145	0.194	0.853
2012	0.479	0.136	0.231	0.845
2013	0.449	0.127	0.242	0.818
2014	0.423	0.121	0.244	0.789
2015	0.400	0.118	0.244	0.762
2016	0.380	0.114	0.305	0.800

(1) Some of the oil forecasted in the Under Development and Under Evaluation categories are from new projects in fields currently producing.

2-9. ANS Production Forecast by Category, FY 1998-2005 and Forecasted FY 2006-2016 <sup>(1)</sup>  
 Million barrels/day



(1) Some of the oil forecasted in the Under Development and Under Evaluation categories are from new projects in fields currently producing.

## New Oil Development

As production from the Prudhoe Bay and Kuparuk fields continues to decline, some of the decline will be offset by new oil development. In our reference-case forecast, new oil is defined as crude already discovered and under evaluation or under development. By FY 2010, as the table below shows, one-third of our projected oil production will come from projects requiring significant new investment.

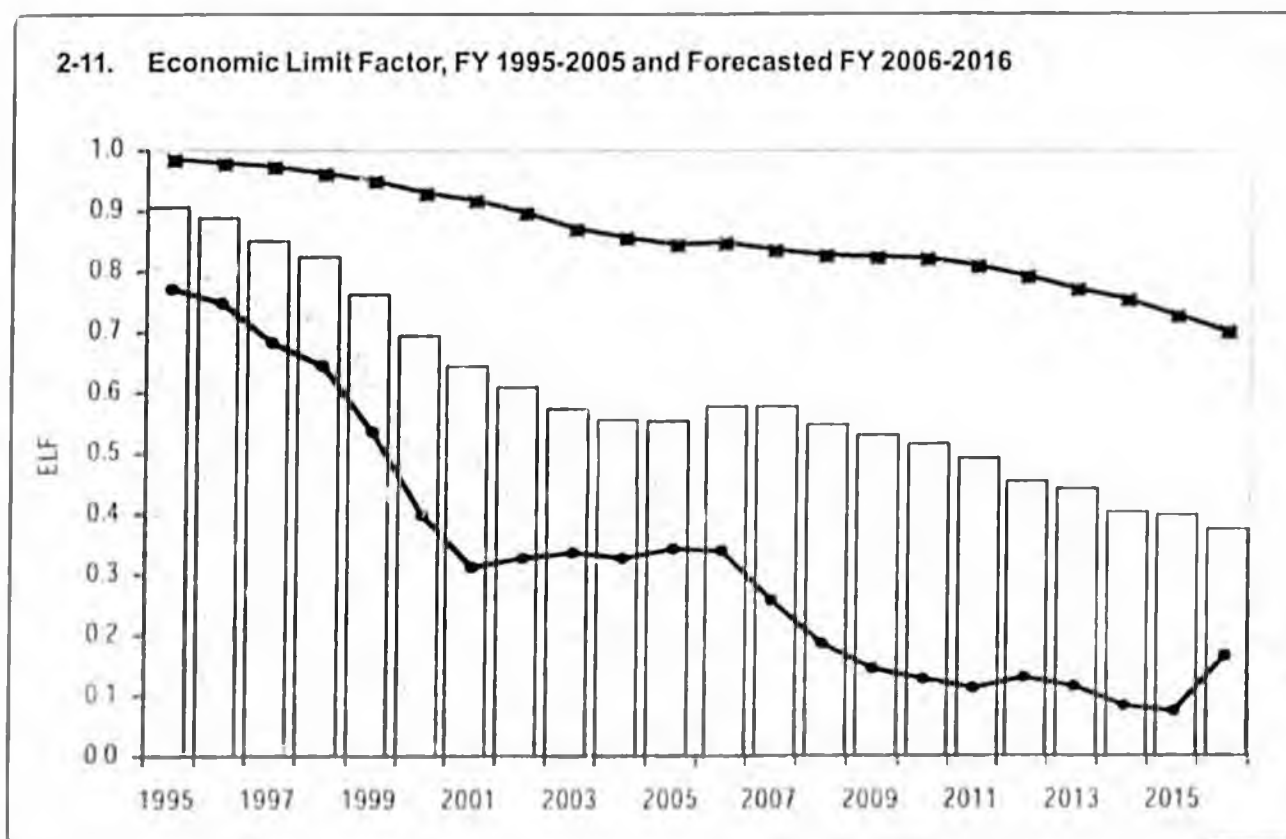
2-10. New Oil as a Percentage of Total Oil  
 Million barrels per day

Fiscal Year	Total New Oil	ANS Total	Percent New Oil
2006	0.051	0.865	5.9%
2007	0.119	0.843	14.1%
2008	0.173	0.832	20.9%
2009	0.232	0.834	27.8%
2010	0.277	0.832	33.3%
2011	0.339	0.853	39.8%
2012	0.367	0.845	43.4%
2013	0.369	0.818	45.1%
2014	0.366	0.789	46.4%
2015	0.362	0.762	47.5%
2016	0.420	0.800	52.5%

## Economic Limit Factor

The average production tax rate on the North Slope has been falling as the result of the tax adjustment known as the Economic Limit Factor (ELF). The ELF is a factor that results in an effective tax rate that is lower than the nominal tax rate on a producing lease or property based on the average rate of production and the average per-well productivity from that field.<sup>(1)</sup> Since oil production rates and well productivity decline over time as an oil field is being depleted, the average effective tax rate will fall as well. Further, the ELF reduces the tax rate on smaller oil fields such that most fields producing less than 20,000 barrels per day will pay little or no production tax.

An ever smaller percentage of Alaska's current and projected North Slope oil production will continue to come from old, declining fields, while new production will come from small fields. Therefore, in general, the average tax rate will continue to fall. The average effective oil production tax rate for North Slope production in FY 1995 was 13.5%; we project it will average 7.5% for FY 2006.



The bars in the figure above illustrate the actual weighted average ELF for North Slope oil production since FY 1995 and our projections of that weighted average through FY 2016. The increase in 2006 and 2007 reflects the effect of the department's January 12, 2005, decision to aggregate seven fields in the Prudhoe Bay Unit for purposes of calculating the ELF which is discussed more fully in Section 4, Oil Revenue.

The ELF of the Prudhoe Bay Initial Participating Area (IPA) is also shown, as well as the average ELF for all of the other North Slope Fields. The increase in the other fields average ELF in FY 2016 represents the impact of the assumed startup of Point Thomson production.

(1) The nominal production tax rate is 15% except during a field's first five years of production, when it is 12.25%.

## Longer-Term Unrestricted Revenue Outlook

Using the price and volume components developed for this fall 2005 forecast, the table below summarizes the department's forecast of total Unrestricted General Purpose Revenue through FY 2016.

**2-12. Total Unrestricted General Purpose Revenue, FY 2005 and Forecasted FY 2006-2016**  
\$ Million

Fiscal Year	Unrestricted Oil Revenue	Unrestricted Other (except Federal & Investment Revenue)	Unrestricted Investment Revenue	Total Unrestricted Revenue	Percent from Oil
2005	2,849.5	323.5	24.7	3,197.7	89%
2006	3,426.4	358.1	24.7	3,809.7	90%
2007	2,769.9	341.7	27.7	3,139.3	88%
2008	2,196.8	347.4	27.7	2,571.9	85%
2009	1,228.8	350.3	27.7	1,606.8	76%
2010	1,198.0	352.6	27.7	1,578.3	76%
2011	1,143.6	355.5	27.7	1,526.8	75%
2012	1,096.4	359.4	27.7	1,483.4	74%
2013	1,031.1	362.7	27.7	1,421.5	73%
2014	977.1	366.1	27.7	1,370.9	71%
2015	931.1	370.2	27.7	1,328.9	70%
2016	979.2	373.6	27.7	1,380.5	71%

## Spending, Forecasted Revenue and the Constitutional Budget Reserve

The table below reflects the difference between the Department of Revenue's forecast of Unrestricted General Purpose Revenue and the annual General Fund budget, shown here as a flat \$3,038.4 million going forward for all operating, capital, debt service and lease payments.

**2-13. Difference Between Unrestricted General Purpose Revenue and General Fund Spending**  
\$ Million

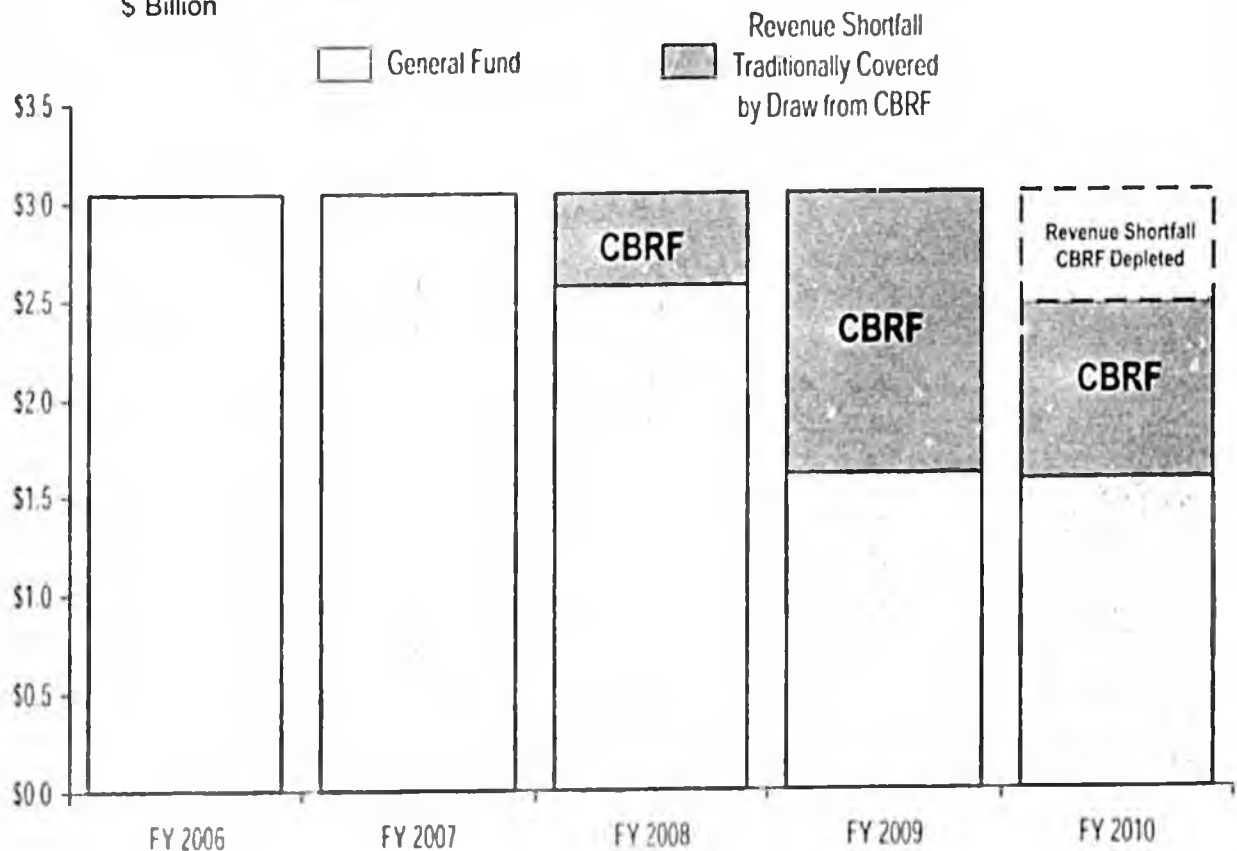
Fiscal Year	Total Unrestricted General Purpose Revenue	General Fund Appropriation	Difference <sup>(1)</sup>
2005	3,197.6	3,046.1	151.5
2006	3,809.7	3,038.4 <sup>(2)</sup>	771.3 <sup>(2)</sup>
2007	3,139.3	3,038.4	100.9
2008	2,571.9	3,038.4	(466.5) <sup>(3)</sup>
2009	1,606.8	3,038.4	(1,431.6)
2010	1,578.3	3,038.4	(1,460.1)
2011	1,526.8	3,038.4	(1,511.6)
2012	1,483.4	3,038.4	(1,555.0)
2013	1,421.5	3,038.4	(1,616.9)
2014	1,370.9	3,038.4	(1,667.5)
2015	1,328.9	3,038.4	(1,709.5)
2016	1,380.5	3,038.4	(1,657.9)

(1) The FY 2006-2016 budget of \$3,038.4 million is simply a reference point for analysis. Proposed general appropriation numbers are from the Office of the Governor, Management and Budget.

(2) The FY 2006 appropriation includes \$414 million in state spending from the Public Education Fund that was capitalized with FY 2005 surplus revenue. As a result, the FY 2006 projected difference is actually \$1,185.3 million.

(3) The CBRF has been tapped in the past to cover projected shortfalls such as this.

**2-14. Revenue Shortfall Projection With Flat \$3,038.4 Million General Fund Appropriation; Shortfall Traditionally Covered by CBRF Draw <sup>(1)</sup>**  
 \$ Billion



(1) Draws from the CBRF in FY 2008 of \$466.5 million, \$1,431.6 million in FY 2009 and \$891.4 million in FY 2010 deplete the CBRF by February 2010.



As approved by voters in 1990, all receipts from oil and gas tax and royalty settlements are deposited into the Constitutional Budget Reserve Fund (CBRF). The state has deposited about \$5.6 billion into the reserve fund, generating about \$1.7 billion in investment earnings. For 10 of the past 14 years, the state has relied on the CBRF to fill the difference between unrestricted revenue and the annual state budget. Through September 30, 2005, approximately \$5.1 billion had been withdrawn from the CBRF to balance the budget, leaving a balance of \$2.2 billion.

The table below reflects the CBRF depletion matrix and the time period the fund could continue to make up the difference between Unrestricted General Purpose Revenue and the General Fund budget at various oil prices and budget levels. For example, assuming no change in the state's fiscal system, and if we are correct in our oil price forecast and if we assume a flat total General Fund budget of \$3,038.4 million per year, the CBRF will be exhausted in February 2010.

**2-15. When Would the CBRF Be Gone? <sup>(1)</sup>**

\$Billion Annual State Budget	Fall 2005 Crude Oil Price Forecast <sup>(1)</sup>	Dates When the CBRF Goes to Zero				
		Assumes Crude Oil Prices Remain Unchanged Between FY 2007-2020				
		\$25/bbl	\$35/bbl	\$45/bbl	\$55/bbl	\$65/bbl
\$2.4 billion	Feb-2013	Nov-2009	Mar-2015	Dec-2020	Dec-2020	Dec-2020
\$2.6 billion	Oct-2011	Feb-2009	Jul-2012	Dec-2020	Dec-2020	Dec-2020
\$2.8 billion	Nov-2010	Sep-2008	Oct-2010	Oct-2017	Dec-2020	Dec-2020
\$3.0 billion	Mar-2010	May-2008	Sep-2009	Mar-2014	Dec-2020	Dec-2020
\$3.2 billion	Sep-2009	Feb-2008	Feb-2009	Jan-2012	Jan-2020	Dec-2020

(1) Department of Revenue fall 2005 forecast, Fiscal Driver Model of Oil Revenue and CBRF Performance. Matrix budget and price starts in FY 2007. The department's fall 2005 ANS price projection of \$49.20 per barrel is used for FY 2007, \$49.95 per barrel for FY 2008 and \$25.50 per barrel for FY 2009-beyond. The date Dec-2020 indicates that the CBRF does not run out during matrix timeframe.

# 3. On the Horizon – Natural Gas

This is the inaugural edition of our natural gas pricing forecast. As our Fall 2005 Revenue Sources Book goes to print, natural gas prices at the Henry Hub, a point on the nation's natural gas pipeline system, reached \$14.25 per million British Thermal Units (BTU), a 53% increase over this time last year. In fact, prices for natural gas have reached all time highs since they began their rise in early 2000, pushed to these levels by several factors, including an increase in demand and a relatively stagnant U.S. supply. As Federal Reserve Board Chairman Alan Greenspan warned in his 2003 address to the U.S. Committee on Energy and Commerce "Today's tight natural gas markets have been a long time in coming, and futures prices suggest that we are not apt to return to earlier periods of relative abundance and low prices anytime soon."<sup>(1)</sup>

The State of Alaska is embarking on the development of its natural gas resources in negotiations with private companies that will develop and transport natural gas to markets. To help the reader be more informed about natural gas, this section is intended to highlight some of the key issues surrounding natural gas supply, demand, regulation and pricing.

Over the past 25 years, worldwide consumption of natural gas has nearly doubled, increasing from just over 50 trillion cubic feet (tcf) to about 96 tcf per year. Natural gas consumption in the U.S. accounts for about 23 tcf of the worldwide total, and the U.S. Department of Energy predicts that the nation's usage could reach 31 tcf by 2025, a 35% increase over current consumption. This upward trend in natural gas demand may be attributed to several factors, including a continued emphasis on using cleaner burning fuels. Not to be overlooked, however, are the impacts that 60 years of regulation had on the natural gas industry, and how the relatively recent lifting of those regulatory controls has directed natural gas development onto a new and different course.

(1) Testimony of Federal Reserve Board Chairman Alan Greenspan before the Committee on Energy and Commerce, June 10, 2003

## A Brief History of Natural Gas Regulation

The natural gas industry has been subject to various levels of regulation since the 1930s. The Natural Gas Act, passed by Congress in 1938 as a means to prevent possible abuses by what the government feared could be a monopolistic industry, imposed regulations and restrictions on the price of natural gas to consumers. Over time, these controls increased demand for natural gas, attracting consumers who were lured by the artificially low prices. But the controls also had a negative effect on the supply side of the market—producers selling at or below cost had no incentive to find or develop additional gas resources. Not surprisingly, this supply/demand imbalance took its toll, resulting in natural gas shortages throughout the country. By the 1970s, the natural gas supply shortage was so severe in non-gas producing states that many factories had to close because they could not purchase sufficient gas supplies to run their facilities.

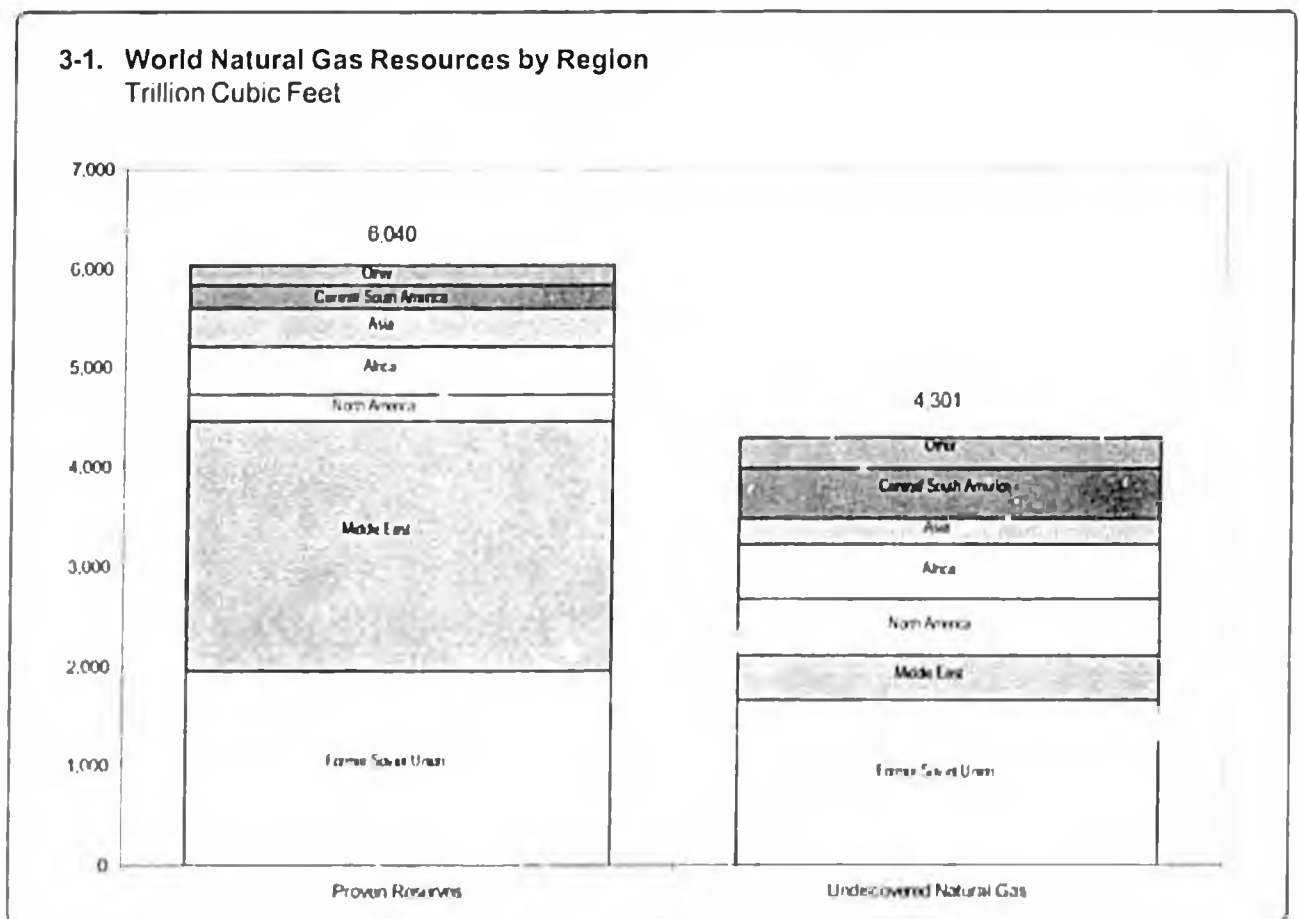
It was this supply crunch that led federal government officials to begin loosening the reins on the industry. The Natural Gas Policy Act of 1978, among other things, instituted a scheme for the gradual lifting of wellhead price controls, with complete deregulation of wellhead prices for new gas production by 1985. This act, and further regulatory reforms passed in the late 1980s and the 1990s, resulted in a strengthening of the natural gas market, which in turn led to increased efficiency and technological improvements for developing and delivering gas resources. The 1990s saw significant improvement in the stabilization of the U.S. natural gas market, and with it, a substantial increase in natural gas usage, particularly in the industrial sector of the economy.

## High Natural Gas Prices of the 2000s – Another Supply Crunch?

For close to 20 years following the initial steps towards deregulation, natural gas prices stayed within a fairly steady price range of \$2-\$4 per million BTU. In 2000, however, gas prices began their initial climb, approaching \$9 per million BTU late in the year. Although there was some reprieve from the high prices in 2002, natural gas prices resumed their upward surge, exceeding \$14 per million BTU in the fall of 2005, leaving price-shocked consumers to wonder whether the world is running out of gas.

By most accounts, the world is not running out of gas, although the circumstances surrounding today's high prices can be attributed to a supply crunch of sorts. The U.S. Department of Energy estimates that proven reserves of natural gas worldwide total around 6,000 tcf. At today's level of consumption, these reserves would be enough to last over 60 years. But proven reserves are only part of the gas reserve picture. The U.S. Geological Survey (USGS) provides estimates of *undiscovered* gas resources—which include those for which there is a likelihood of being discovered based on geology and field experience, and those which are currently known, but not proven.

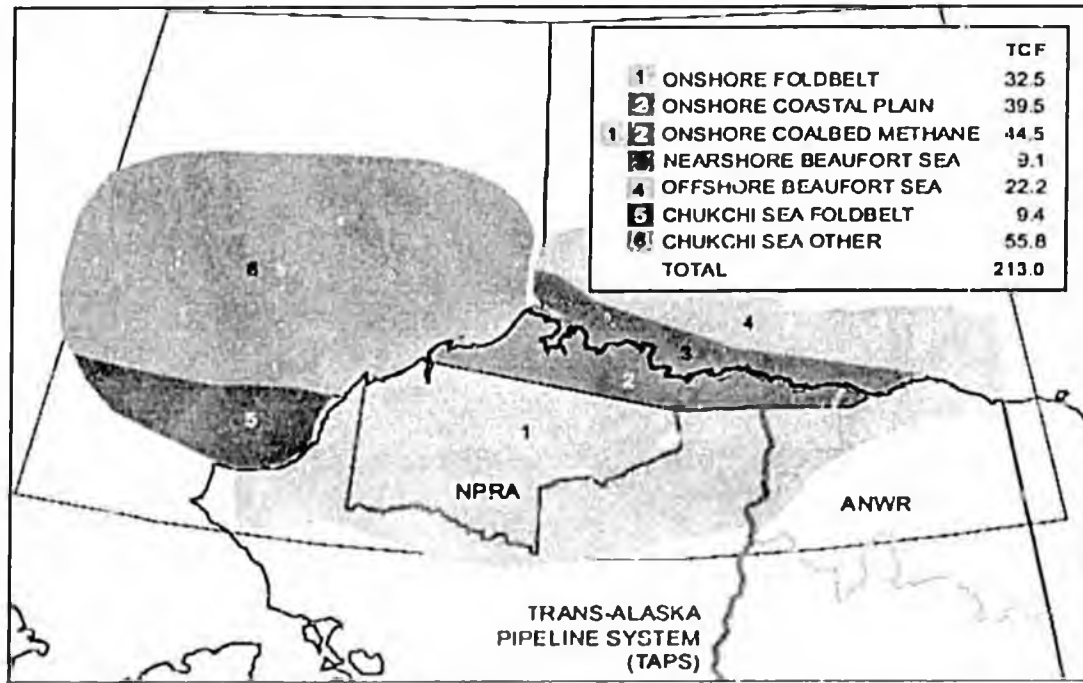
According to the most recent USGS estimate, an additional 4,300 tcf of natural gas fall into the undiscovered reserves categories, bringing the total of proven and undiscovered reserves to 10,300 tcf. As can be seen from the graph below, the vast majority of the proven and undiscovered natural gas resources are located in the former Soviet Union and the Middle East.



On a national level, Alaska's natural gas resources are significant and total about 35 tcf. When compared with the U.S. proven gas reserves of 189 tcf, Alaska's gas represents about 18% of the country's natural gas reserves. The undiscovered gas resource potential in Alaska is considerably higher, with reserve estimates of 213 tcf, when unconventional and offshore resources are included.<sup>(1)</sup>

(1) National Petroleum Council, "Balancing Natural Gas Policy," September, 2003, Chapter 4, p. 202.

3-2. Northern Alaska's Undiscovered Natural Gas Resource Potential



Source: National Petroleum Council

## Moving Natural Gas to Markets

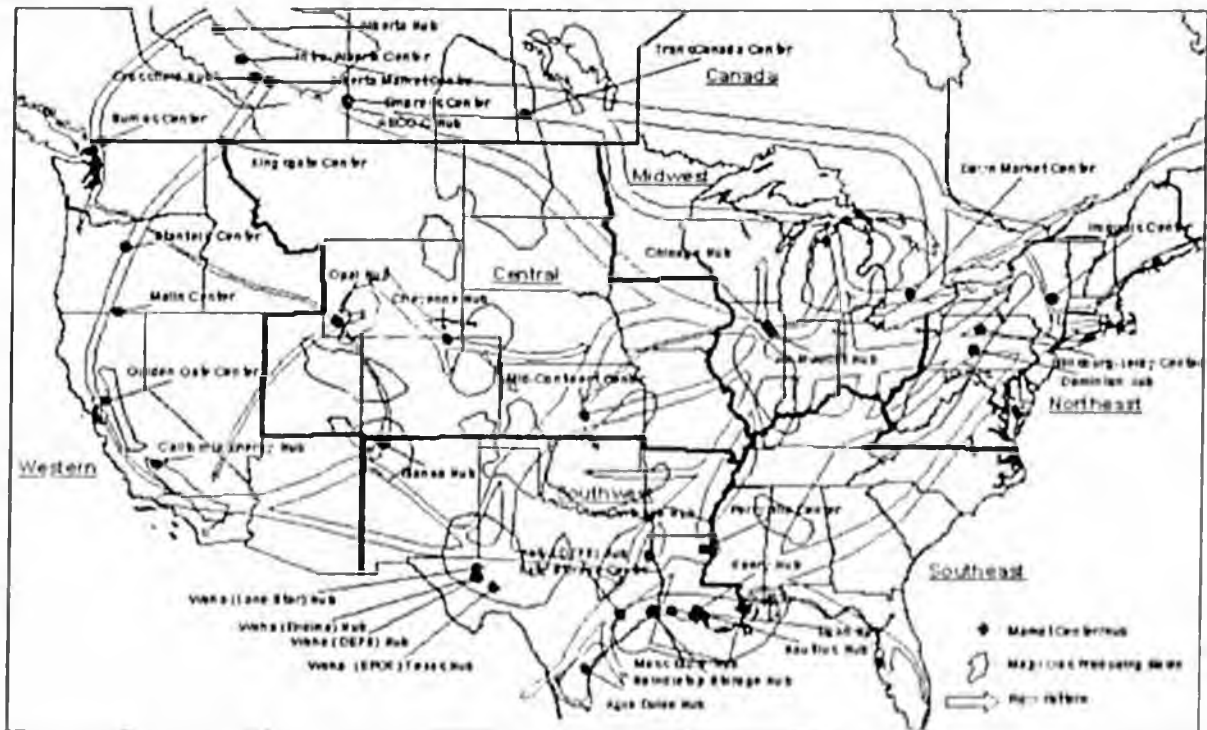
So if the demand for natural gas is strong, and there are ample supplies to balance that demand, why is natural gas still so expensive? Geography can partially explain this phenomenon. Many of the world's big gas fields are located in remote areas, away from market centers, in the same way that Alaska's gas sits thousands of miles away from lower 48 markets. Some gas fields, although not remotely located, are separated from the big consuming countries by oceans or by politically or geographically unstable regions. The simple task of transporting these reserves to markets often involves substantial financial commitments on the part of developers in addition to the expected engineering, permitting and construction obstacles.

There are currently two primary methods of transporting gas to market. The most predominant means of gas transportation is through natural gas pipelines. At present, about 95% of the gas the world consumes is delivered via pipeline. The other primary method of transporting gas is by sea through the use of large specially-designed tankers. Natural gas delivery by tanker involves liquefying the gas prior to tanker loading, and regasifying it upon arrival. Depending on the distance the gas must travel, and the topography between the source and the market, transporting natural gas via pipeline is generally the less expensive of the two methods.

Nearly all the natural gas that enters the U.S. market, whether domestically produced or imported, eventually finds its way into the country's underground natural gas pipeline network. This network consists of over a million miles of transmission and distribution pipelines that carry gas to manufacturers, businesses and residences. Some thirty natural gas market centers, called "hubs," are part of the vast pipeline system, located at major pipeline intersections throughout the U.S. and Canada. In addition to linking gas to smaller distribution pipelines, these hubs serve as regional pricing centers. The Henry Hub in Louisiana is one of the most widely known natural gas hubs, in part because it is the hub for which futures contracts for gas are traded on the New York Mercantile Exchange (NYMEX). The Chicago Hub serves Midwest markets and is linked with three pipelines that transport gas from the Henry Hub. For this reason, spot prices at the Chicago Hub are often compared with prices at the Henry Hub.

The country's natural gas hubs and transportation corridors are shown in the graph below.

3-3. U.S. Natural Gas Hubs and Transportation Corridors



DEFS = Duke Energy Field Services Co.; EPPT = EPGT Texas Pipeline Co.  
 Source: Energy Information Administration, Gas Trans Gas Transportation Information System, Natural Gas Market Hubs Database, August 2003

## Demand for Alaska's Natural Gas

The cost to build a natural gas pipeline to bring Alaska's gas reserves to market is expected to be \$20 billion and the project would take a number of years to complete from the day an agreement is reached. Under this scenario, Alaska gas would not reach markets until after 2012. An important consideration for any project of this magnitude is whether sufficient demand will exist upon the project's completion.

In its most recent forecast, the U.S. Department of Energy predicts that natural gas consumption in the U.S. alone will increase at an average annual rate of 1.3% reaching about 31 tcf by 2025. Outside of the U.S., emerging economies in China, India and Brazil are expected to drive worldwide consumption increases, with consumption in 2025 projected to be 156 tcf—60% more than the current worldwide consumption of 96 tcf.

With prices at all time highs and demand on the rise, it is likely that Alaska gas will have to compete with gas from other projects currently under development around the world. The Federal Energy Regulatory Commission has recently granted approval for the construction of additional U.S. terminals to receive Liquefied Natural Gas (LNG) from countries that want to supply our markets. Although LNG currently accounts for only 1% of the U.S. natural gas supply at 0.5 tcf per year, imports of LNG are expected to rise to 6.4 tcf in 2025—a 12-fold increase. An influx of LNG on the U.S. markets could quickly drive down prices, making Alaska's project less attractive than it is at today's gas prices.

Other factors that could influence the price of gas include the price of alternate fuels. Coal is generally cheaper than natural gas on an energy-equivalent basis, and given the country's substantial coal reserves, it is conceivable that there could be renewed interest in building electricity generating plants that use coal instead of gas. Fuel oils are also directly in competition for the gas market, as power generating plants are often equipped with "dual-fired" systems that can run on either natural gas or liquid fuel oils. During periods of high natural gas prices, these consumers may substitute lower priced fuel oils for their energy needs. Industry observers note that there appears to be a correlation between natural gas prices and oil prices, due in part to the fuel switching capabilities of these users.

Some industries, such as petrochemical manufacturers, are particularly vulnerable to high gas prices because of their reliance on natural gas for feedstock as well as for energy generation. In fact, the petrochemical industry in the U.S. has been shrinking for years due to competition from foreign producers. Additional contractions in the petrochemical sector combined with the substitution of coal or other fuels for power generation could severely impact natural gas demand and drive down prices.

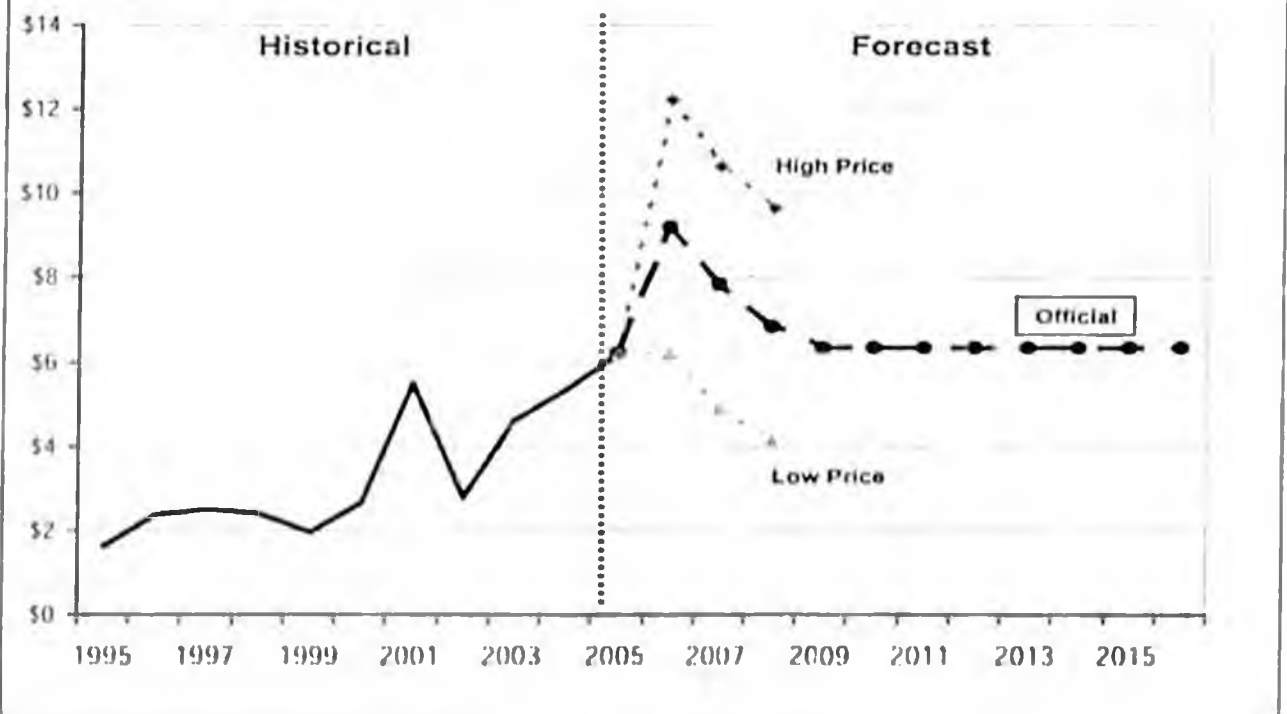
This fall, the Department of Revenue prepared its first natural gas price forecast. Based on a review of historical prices, market trends and other published forecasts, the Henry Hub and Chicago City Gate natural gas price forecast shown below was a product of a formal price scenario meeting held this past October.

**3-4. Natural Gas Price Forecast, FY 2005, Forecasted FY 2006-2008 and Long Term Nominal Dollars per Million BTU**

Fiscal Year	Henry Hub	Chicago Gate	Differential
2005	\$6.18	\$6.16	(0.02)
2006	\$9.19	\$9.12	(0.07)
2007	\$7.79	\$7.76	(0.03)
2008	\$6.79	\$6.76	(0.03)
Long-Term Forecast	\$6.28	\$6.25	(0.03)

Natural gas prices remained within a fairly steady price range of \$1.60 to \$2.60 per million BTU until FY 2001, when prices more than doubled, reaching \$5.47 per million BTU. The uncharacteristically volatile trend that evolved since that time has made natural gas prices extremely difficult to predict. Our forecast anticipates that natural gas prices will continue to exhibit some volatility in the short-term, but that they will level off over time as additional supplies become available. The graph below presents these three different scenarios for future natural gas prices.

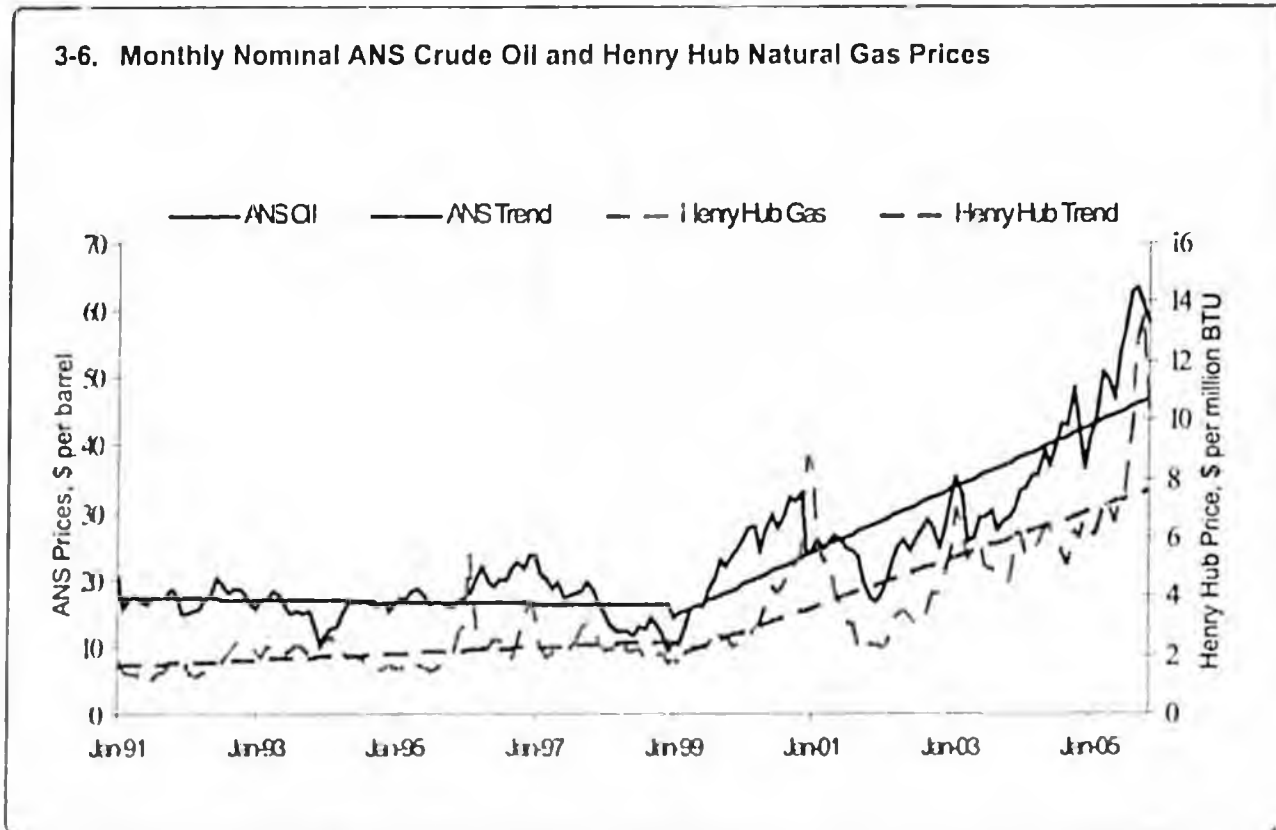
**3-5. Fall 2005 Official, Low and High Natural Gas Price Forecast Nominal Dollars per Million BTU**





## Is There A Relationship Between Crude Oil and Natural Gas Prices?

3-6. Monthly Nominal ANS Crude Oil and Henry Hub Natural Gas Prices

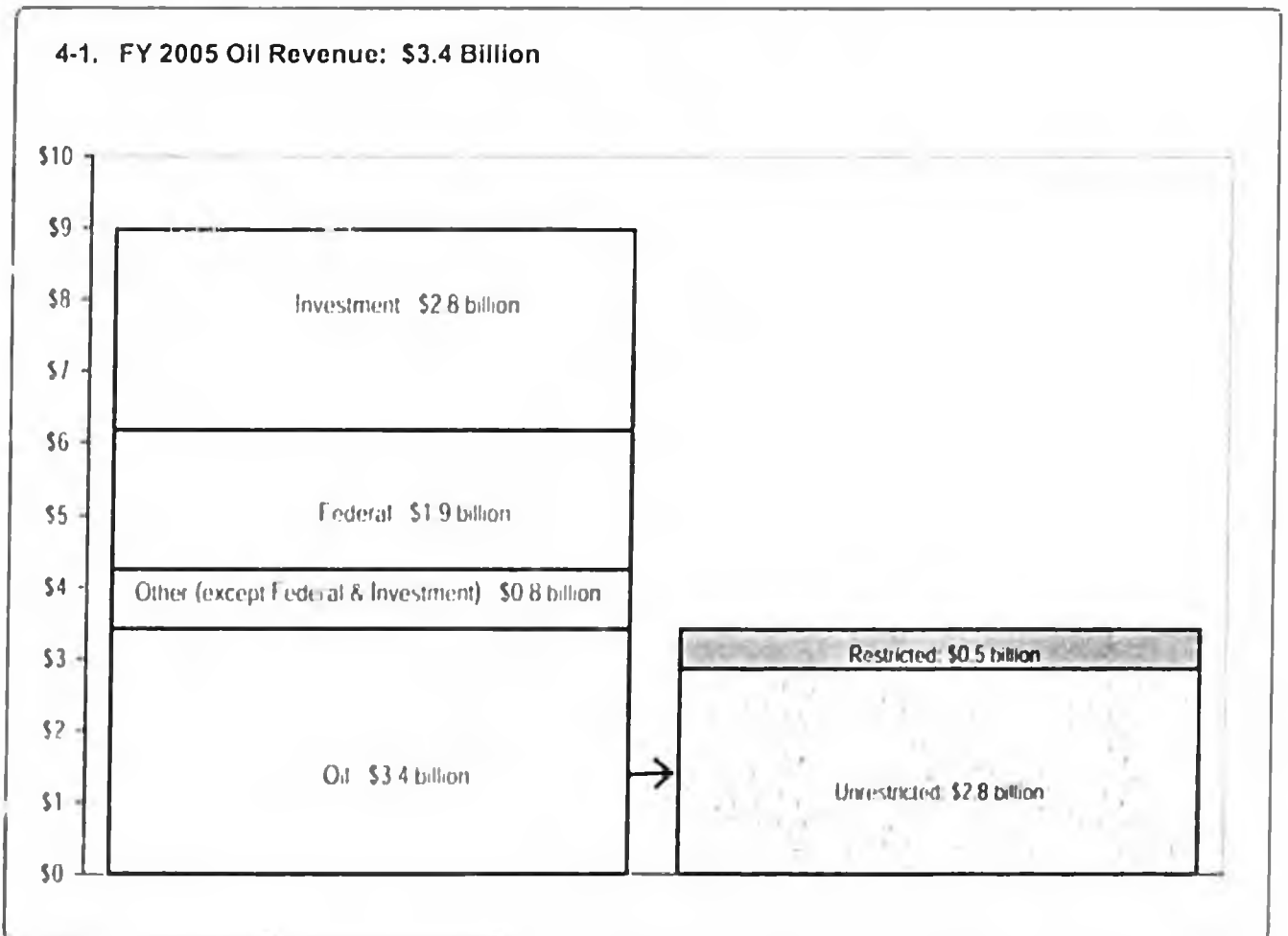


Since natural gas cannot easily be shipped except via pipeline, natural gas prices are set in the North American market, while oil prices are set on the world markets. Natural gas and oil can be substituted for one another, given enough time and money to replace equipment. Unsurprisingly, then, there is a relationship between natural gas prices and oil prices. Changes in oil prices usually precede similar changes in natural gas prices, and seem to drive the natural gas prices, as the graph above shows. The difficulty lies in determining the underlying causes for this pattern, and the extent to which oil prices might be used to predict natural gas prices.

Figure 3-6 shows ANS Crude and Henry Hub natural gas prices, and their trend lines. Before 2000, a combination of regulation, adequate supply and moderate demand kept North American gas prices low. Natural gas prices trended slowly upwards during that period, as environmental regulations caused an increase in demand. Environmental regulations and low prices both worked to encourage more use of clean-burning natural gas rather than oil or coal. In contrast, world oil prices were trending slightly downward during this period.

As the figure shows, natural gas prices and oil prices began to trend upwards around 1999-2000. The rising gas prices followed Federal Energy Regulatory Commission Order 637 in early 2000 which substantially deregulated the gas industry. The up-trend in natural gas prices was enabled by the regulation change, but was caused by the combination of few new supplies, a result of years of low prices relative to oil and by the increasing demand, mentioned above. The rapidly increasing oil prices during that period also seem to have exerted an upward pressure on natural gas prices. The volatility of natural gas prices have also increased significantly during this period.

## 4.

Oil  
Revenue

## 4-2. Total Oil Revenue, FY 2005 and Forecasted FY 2006-2007

\$ Million

	History	Forecast		
	FY 2005	FY 2006	FY 2007	
<b>Unrestricted</b>				
Property Tax	42.5	42.5	36.7	
Corporate Income Tax	524.0	525.1	444.1	
Production Tax	863.2	1,130.8	891.6	
Royalties (including Bonuses & Interest)	1,419.8	1,728.5	1,397.5	
Total Unrestricted Oil Revenue	2,849.5	3,426.9	2,769.9	
	\$ change from prior period	795.4	577.4	(657.1)
	% change from prior period	38.7%	20.3%	(19.2%)
<b>Restricted</b>				
Royalties to Permanent Fund & School Fund	466.5	589.9	474.9	
Tax Settlements to CBRF	27.4	20.0	20.0	
NPR-A Royalties, Rents and Bonuses	31.6	2.9	12.6	
Total Restricted Oil Revenue	545.5	612.9	507.5	
	\$ change from prior period	172.8	67.4	(105.4)
	% change from prior period	46.4%	12.3%	(17.2%)
<b>Total Oil Revenue</b>	<b>3,395.0</b>	<b>4,039.8</b>	<b>3,277.3</b>	
	\$ change from prior period	968.2	644.8	(162.5)
	% change from prior period	39.9%	19.0%	(18.9%)

## General Discussion

The state receives oil and gas revenue from four sources: oil and gas production tax, property tax, royalties and corporate income tax. The bulk of the revenue goes into the General Fund for general purpose spending. Of the royalties, 25% goes into the principal of the Alaska Permanent Fund and 0.5% goes into the Public School Trust Fund. There also are two other funds that receive specific oil and gas revenues: the National Petroleum Reserve-Alaska (NPR-A) Fund,<sup>(1)</sup> which receives the state's share of all lease bonuses; and the Constitutional Budget Reserve Fund (CBRF), that receives settlements of tax and royalty disputes between the state and oil and gas producers.

The figure on the next page shows the actual amount of each tax and royalty source in FY 2005. As can be seen from the figure, royalties and the production tax constitute the largest part — 67.2% — of restricted and unrestricted oil revenue combined. This section begins with a discussion of these two revenue sources, both of which are driven by price and volume. We then review the price forecasting methodology that underlies this biannual report, as well as explore how market prices determine wellhead value. We also review our production forecast, and close this section with a discussion of oil and gas property taxes, oil and gas corporate income taxes and the restricted portions of oil revenue.

(1) This fund implements a federal requirement that the state use its share of NPR-A oil revenue to satisfy the needs of local communities most affected by development in the NPR-A. For detailed information on this fund, see Section XII P of Treasury's Investment Policies and Procedures Manual.