

ALASKA LEGISLATURE SPECIAL COMMITTEE/SUBJECT FILES 8672

2613 SCOMM 114: HOUSE SPEC. COMM ON FISHERIES, 1999-2000

1 to read:

2 TRANSITION. The first report required by AS 43.80.050, as amended by secs. 1 -
3 3 of this Act, is due September 30, 2000, must cover the period of May 1, 2000, through
4 August 31, 2000, and must be filed by a fish processor whose business sold more than
5 240,000 pounds of salmon products at wholesale during the 12-month period ending
6 August 31, 2000.

7 * Sec. 13. This Act takes effect September 1, 2000.

Representative John Harris, Co-Chair
Special Committee on Fisheries
HB 363
Additions to Packet

EXPLANATION OF INTENT

The intent of this amendment is:

- To change the reporting submitted by a processor for the quantities of products produced to a one-time per year report, on Jan. 31 (as opposed to three times per year). This will address the concern of potentially unforeseen consequences as a result of providing fish buyers with valuable in-season inventory information. (This will not change the wholesale price reporting, it will remain as it is - three times per year, May 31, Sept. 30, and Jan. 31.)
- To change the department's annual report to include one annual amount for quantities produced along with the monthly and annual wholesale price averages for products sold.
- In the paragraph detailing the "production areas", for the purpose of clarification, the word "produced" is replaced with "processed by a fish processor". And, in definitions, the word "produce" is defined to mean the action of processing.
- To clarify the concern brought up with the previous amendment addressing "secondary processing" by eliminating that term altogether and clarifying the definition of "wholesale" to mean the first sale at wholesale for which the fishery business tax was paid.
- For housekeeping purposes, changing the date for the department's report to be available to the legislature.

AMENDMENT

OFFERED IN THE HOUSE

TO: CSHB 363(FSH), Draft Version "H"

1 Page 1, line 8:

2 Delete "(1)"

3 Page 1, lines 10 - 11:

4 Delete "; and

5 (2) the quantity of salmon products produced by the processor or
6 an affiliate of the processor"

7 Page 2, lines 4 - 27:

8 Delete all material and insert:

9 "(b) A report submitted by a processor under (a) or (c) of this section must
10 include

11 (1) the requested information for the following salmon product forms:

12 (A) thermally processed salmon products;

13 (B) fresh headed and gutted salmon products;

14 (C) fresh fillet salmon products;

15 (D) frozen headed and gutted salmon products;

16 (E) frozen fillet salmon products;

17 (F) salmon roe products;

18 (2) the requested information regarding the total quantity of each
19 salmon product form sold by providing the total number of

20 (A) each size of container in which thermally processed salmon
21 products were sold by the processor or its affiliate; and

22 (B) pounds for each of the other salmon product forms sold by
23 the processor or its affiliate; and

(3) for sales to buyers that are not affiliates of the processor, the total quantity of each salmon product form sold by area of production by species, and the wholesale price received."

Page 3, following line 5:

Insert a new bill section to read:

"* Sec. 4. AS 43.80.050 is amended by adding a new subsection to read:

(f) Each fish processor who submits a report under (a) of this section during a reporting year shall also submit an annual report of the quantity of salmon products produced by the processor or an affiliate of the processor between January 1 and December 31 of the reporting year. The report shall be submitted to the department not later than January 31 of the following reporting year. The report must include

(1) a description of the products and the total quantity of each salmon product form produced by area of production by species for each of the salmon product forms listed in (b)(1) of this section; and

(2) the requested information regarding the total quantity of each salmon product form produced by providing the total number of

(A) each size of container in which thermally processed salmon products were produced by the processor or its affiliate; and

(B) pounds for each of the other salmon product forms produced by the processor or its affiliate."

Renumber the following bill sections accordingly.

Page 3, lines 22 - 23:

Delete "the 15th day of each regular legislative session"

Insert "**March 15** [THE 15TH DAY] of each **year** [REGULAR LEGISLATIVE SESSION]"

Page 3, line 25, following "**products**":

Insert "**and a report of the quantity of salmon products produced during the preceding calendar year**"

- 1 Page 3, line 27, through page 4, line 3:
- 2 Delete all material.
- 3 Renumber the following bill sections accordingly.
- 4 Page 4, line 10:
- 5 Delete "finished [THERMALLY"
- 6 Insert "[FINISHED THERMALLY"
- 7 Page 4, line 11:
- 8 Delete "less than retail"
- 9 Insert "wholesale [LESS THAN RETAIL]"
- 10 Page 4, line 18:
- 11 Delete "a new paragraph"
- 12 Insert "new paragraphs"
- 13 Page 4, line 20:
- 14 Delete "produced"
- 15 Insert "processed by a fish processor"
- 16 Page 4, line 29:
- 17 Delete "."
- 18 Insert ";
- 19 Page 4, following line 29:
- 20 Insert new paragraphs to read:
- 21 "(9) "produce" means to process salmon into a salmon product;
- 22 (10) "wholesale" means the first sale of a salmon product at wholesale
- 23 after the fishery business tax was paid or became payable on the salmon from which
- 24 the salmon product was produced;"

- 1 Page 5, line 5, following "at":
- 2 Insert "first"



P.O. Box 762 • Kodiak • AK • 99616

Phone: (907) 486-6899 • Fax: (907) 486-7058 • Email: kodiak@unitedsalmon.org

Dear Committee Members,

United Salmon Association (USA) would like to address several points of testimony from the February 28, 2000 hearing in House Fisheries concerning HB363.

1) "Who will be required to report and how many will report?"

Although USA and Department of Revenue (DOR) estimated about 50 processors would be reporting, PSPA testified as "fact" that this bill would require 98 reporters. Enclosed please find a report of March 2, 2000 from ADF&G on the actual break down of reporters and the various results of different poundage breaks. As you can see, HB363 as written, would require only 51 of the more than 600 "Processors to report" but would report 99.1% of the production.

2) "Reporting production is not possible"

As you can see in your CSHB363 the word "production" has been changed to "Processed". Testimony was very repetitive that reporting fish by area produced couldn't be done; because tender transfers fish from area to area to be processed and no one can keep track of them. If this were the case, I would hope ADF&G would ask what they are reporting on fish tickets and harvest information. Fish transferred between areas are required by ADF&G to be reported and tracked wherever they go and of course they are for logical business reasons!

But HB363 doesn't refer to round fish anywhere. HB363 is about products produced from Raw Round fish. USA sees this type of negative testimony a only one avenue to confuse the issue and the committee as the intent and content of this bill is obvious.

3) "Reporting Product and Value by Area produced is Impossible."

Once again, this is a requirement that the processors are already adhering too.

The Commercial Operators Annual Report (COAR) requires the sale and value of these same products to be not only reported by area, as in HB363, but by the plant at which they were produced within that area. I ask (If it's "Impossible" to report as HB363 asks, then "what have they been reporting in COAR for years?"

Any processing worker can tell you that every box and every can that leaves a processing plant has a code on it that designates "place, date, product description and weight." These are shipped either to a buyer or to storage where they are stored in lots, segregated by species and product. Of course this is all quite logical and it is necessary to comply with ADF&G regulations, as well as marketing and sales demands by customers as they ask for species products from specific area's such as "Copper River" or "Kenai River" sockeye etc...

4) "Is there competition among Processor for the Raw fish"

For some species in some areas YES. But for the majority of the harvest, the answer is basically NO.

An economic illustration of this is in Prince William Sound (PWS). PWS has probably the highest exvessel value of the seine fisheries, but the lowest permit value. The reason for this is it is virtually impossible for a new entrant to get a market. South East (S.E.) Alaska seine and Kodiak are nearly the same. USA members across the state report these problems on a regular basis. It is one of the reasons for the continued decline in fleet size in the face of large runs and basically stable price.

HB363 has been designed to consider the least new impact to reporters while taking into consideration the actual business practices as they exist today. There are no new physical or practical requirements placed on reporters in HB363 that will cause any new equipment or policy changes. It may however cause present software and accounting to change for the better.

Finally after listening to the testimony against HB363 and knowing the actual specific practices of the industry, USA can do no more than interpret "We can't do it!" to "We don't want to"

Sincerely,



Bruce Schaeffer / USA president

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME DIVISION OF COMMERCIAL FISHERIES

TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, AK 99802-5526
PHONE: (907) 465-6133
FAX: (907) 465-2804

March 2, 2000

Mr. Bruce Schactler
USA
Kodiak, AK 99515

Dear Mr. Schactler:

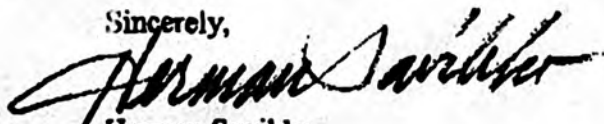
You asked that I run some numbers from our Commercial Operators Annual Report database to determine salmon processing statistics.

I completed those today. While individual data is confidential, I can summarize some numbers for you with reference to HB 363.

The most current available data is for 1998. That year there were 165 companies (unique Federal Identification numbers) processing salmon in Alaska. Using the Alaska Department of Revenue's 240,000-pound limit, there would be 51 companies that fall above that poundage limit. Those 51 companies also process 99.1% of the total production volume for that year (442.7 million pounds net weight was the reported total for salmon production that year). If the cutoff requirement were raised to 540,000 pounds instead of 240,000, there would be 39 companies falling within those limits. If the limit were raised to 1,000,000 pounds then 32 companies would fit that category. Those 32 companies account for nearly 97% of all salmon production in Alaska. Finally, if the limit was 10 million pounds, 12 companies would be involved, accounting for approximately 79% of Statewide salmon production.

If you have any additional questions, please contact me.

Sincerely,



Herman Savikko
Fishery Information Officer/Fishery Biologist
Fisheries Coordination Section



UNITED FISHERMEN OF ALASKA

March 2, 2000

211 Fourth Street, Suite 110
Juneau, Alaska 99801-1172
907/586-2820
Fax: 907/463-2545
E-Mail: ufa@alaska.net

Representative Carl Morgan, Jr.
Representative John Harris
Co-Chairs
House Special Committee on Fisheries
Alaska State Legislature
State Capitol (MS 3100)
Juneau, AK 99801-1182

Dear Representatives Morgan and Harris,

United Fishermen of Alaska represents 23 commercial fishermen's groups and over 8,000 fishermen. We support HB 363.

This bill is intended to modernize and clarify the economic value of Alaska's commercial salmon fisheries for all stakeholders and to end the mystery of how ex-vessel salmon prices are determined.

All Alaskans are stakeholders in commercial salmon fisheries. There is a clear link between stakeholders and the salmon resources, for the salmon belong to all Alaskans.

But the connection between stakeholders other than harvesters and commercial salmon fisheries may not be so clear. Given that commercial salmon fisheries generate fisheries business taxes that go into Alaska's general fund and 50% is passed on to local government, all Alaskans are clearly stakeholders in those fisheries.

History shows us that for the first seventy years of the last century the salmon industry was the largest industry in Alaska and a major contributor to this nation's food production. Canned salmon was a staple on food shelves particularly through out the British Commonwealth. Through this time a business culture developed between processors and harvesters based on a "buy now settle later" price arrangement. In this arrangement grounds prices are paid to fishermen in season, then later when the harvest is over and the bulk of fish have been sold, final payments are made to fishermen based on wholesale prices, known only to the processors.

Also during this time, it was established that the taxes the industry pays are based on ex-vessel prices. This "buy now settle later" price arrangement on which all taxes are paid clearly impacts harvesters and all stakeholders in the outcome of wholesale prices. But to this day stakeholders are denied the price information needed to know and understand their position in wholesale markets that determine salmon prices.

MEMBER ORGANIZATIONS

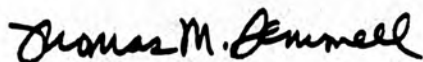
Alaska Longline Fishermen's Association • Alaska Trollers Association • Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association • Copper River Salmon Producers Association • Cordova District Fishermen United
Kenai Peninsula Fishermen's Association • Kodiak Regional Aquaculture Association • Kodiak Seiners Association • North Pacific Fisheries Association
Northern Southeast Regional Aquaculture Association • Northwest Setnetters Association • Petersburg Vessel Owners Association
Prince William Sound Aquaculture Corporation • Purse Seine Vessel Owners Association • Seafood Producers Cooperative
Southeast Alaska Seiners Association • Southern Southeast Regional Aquaculture Association
United Cook Inlet Drift Association • United Southeast Alaska Gillnetters

Without knowledge of wholesale prices the "buy now settle later" arrangement between processors and harvesters leaves an unaccounted hole in the price structure of Alaska's salmon industry. This is the mystery of commercial salmon prices. How much money does the commercial salmon harvest generate at first wholesale and how does that compare to ex-vessel prices where taxes are collected? All stakeholders directly or indirectly have an interest in salmon markets and it is important to have a clear picture of this revenue source for the use and benefit of all Alaskans.

Passage of SB 363 will fill this unaccounted hole in salmon pricing and provide all stakeholders in Alaska's most precious natural resource the information they require to know and understand the benefits of the commercial salmon industry.

We are aware of some concerns raised by some processors and are willing to work toward a reasonable resolution of this issue.

Sincerely,

A handwritten signature in dark ink, appearing to read "Thomas M. Gemmell". The signature is fluid and cursive, with the first name "Thomas" being more prominent.

Thomas M. Gemmell
Executive Director

Copy: Representative Alan Austerman

Subject: [Fwd: HB 363]

Date: Wed, 01 Mar 2000 12:11:27 -0900

From: Cliff Stone <Cliff_Stone@legis.state.ak.us>

Organization: Alaska State Legislature

To: Joanie Waller <Joanie_Waller@legis.state.ak.us>

fyi

Subject: HB 363

Date: Tue, 29 Feb 2000 19:03:10 -0900

From: "Toby Sullivan" <tobys@ptialaska.net>

To: "Cliff Stone" <Cliff_Stone@legis.state.ak.us>

CC: "Duncan Fields \ Shoreside Consulting" <dfields@ptialaska.net>,
"Dan Ogg" <danogg@ptialaska.net>, "Bruce Schactler" <kvrg@ptialaska.net>,
"Lacey Berns" <lberns@ptialaska.net>

Dear Cliff

Please let Alan know that the Northwest Setnetters Association supports HB 363, the bill addressing salmon reporting requirements for processors. By refining and expanding the list of processed salmon products, this bill will help fishermen, processors, and the state to better understand where Alaska's fish go once they arrive on the dock. All parties will benefit from a more open and transparent salmon marketplace- a hoped for consequence of this bill.

Toby Sullivan
Board of Directors
Northwest Setnetters Association
d

Ms Susan L Aspelund,
PO Box 1715
Cordova, AK 99574

344-7

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/23/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for in this bill is very important to the state of Alaska in determining the value of the seafood industry here, and to the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB363

Email Address

Mr Victor E Jones,
PO Box 1831
Cordova, AK 99574

424-3518

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/23/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for in this bill is very important to the state of Alaska in determining the value of the seafood industry here, and to the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB363

Email Address

Mr Joe B Cook Jr, Jr
PO Box 215
Cordova, AK 99574

387-7

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/23/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for in this bill is very important to the state of Alaska in determining the value of the seafood industry here, and to the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB 363

Email Address

Ms. Carol E Kouris,
2101 W 29th Ave #25
Anchorage, AK 99517

277-8241

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/24/2000

N

HB 363

Supports

I think it is very important that this bill goes through. It will be a big help to the State of Alaska and as a voter, I strongly urge you to pass this bill.

Email Address

Mr. Nick Kouris,
2101 W 29th Ave #25
Anchorage, AK 99517

277-8241

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/24/2000

N

HB 363

Supports

It is vitally important to me, it is my livelihood. I am a commercial fisherman.

Email Address

Mr Henry M Wiese,
PO Box 1708
Cordova, AK 99574

366-7

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/24/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for n this bill is very important to the state of Alaska in determining the value of the seafood industry here, and it the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB 363

Email Address

Mr James D Dundas,
PO Box 406
Cordova, AK 99574

590-1

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/24/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for n this bill is very important to the state of Alaska in determining the value of the seafood industry here, and it the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB 363

Email Address

Mr Charles M Deville,
PO Box 632
Cordova, AK 99574

331-0

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/24/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for in this bill is very important to the state of Alaska in determining the value of the seafood industry here, and to the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB 363

Email Address

Mr Michael B Scott,
PO Box 833
Cordova, AK 99574

358-4

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/24/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for in this bill is very important to the state of Alaska in determining the value of the seafood industry here, and to the programs dependent upon the ex-vessel value of our fisheries. I urge your support for HB 363

Email Address

Mr John K Renner,
PO Box 756
Cordova, AK 99574

756-3

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/28/2000

C

HB 363

Supports

I am in full support of this legislation. The information provided for in this bill is very important to the state of Alaska in determining the value of the seafood industry here, and to the ex-vessel value of our fisheries. I urge your support for HB363.

Email Address

Mr Jack M Babic,
P.O. Box 1208
Cordova, AK 99574

424-7244

Distribution

Affiliation

Reg Voter

7

U

Date POM Sent

Constituency

Bill Number

Response

Subject

02/28/2000

C

HB 363

Supports

I am in full support of this legislation. The information is very important to the state of Alaska in determining the value of the seafood industry here, and to the programs dependent upon the ex-vessel value of our fisheries. I urge your support for hb363.

Email Address

Salmon Product Forms

Fresh

Fresh Chum Bright No. 1
Fresh Chum Dark GMC No. 1
Fresh Chum Round Ocean-Run

Fresh Fillet Chum S/on No. 1
Fresh Fillet King Red S/on No. 1
Fresh Fillet Silver S/on No. 1

Fresh Green Roe Chum
Fresh Green Roe King
Fresh Green Roe Pink
Fresh Green Roe Silver
Fresh Green Roe Sockeye

Fresh King Red Bright No. 1
Fresh King Red SB No. 1
Fresh King Troll Red H/on No. 1
Fresh King Troll White H/on No. 1
Fresh King White Bright No. 1
Fresh King White SB No. 1

Fresh Pink Round Ocean-Run
Fresh Silver Blush No. 1
Fresh Silver Bright No. 1
Fresh Silver Round Ocean-Run
Fresh Silver Troll No. 1

Fresh Sockeye H/on No. 1
Fresh Sockeye No. 1
Fresh Sockeye Round Ocean-Run

FROZEN

Frozen Chum H/on A NS IQF
Frozen Chum H/on No. 1 2/4 IQF
Frozen Chum H/on No. 1 4/6 IQF
Frozen Chum H/on No. 1 6/9 IQF
Frozen Chum H/on NS NG IQF
Frozen Chum Bright A 2/4 IQF
Frozen Chum Bright A 4/6 IQF
Frozen Chum Bright A 6/9 IQF

Frozen Chum Bright No. 1 4/6 IQF
Frozen Chum Bright No. 1 6/9 IQF
Frozen Chum Bright No. 1 9/up IQF
Frozen Chum Bright No. 1 NS IQF
Frozen Chum Dark GMC No. 1 2/4 IQF
Frozen Chum Dark GMC No. 1 4/6 IQF
Frozen Chum Dark GMC No. 1 6/9 IQF
Frozen Chum Dark GMC No. 1 9/up IQF

Frozen Kings Troll Red Blush NO.1 -11IQF
 Frozen Kings Troll Red Blush NO1 11/18 IQF
 Frozen Kings Troll Red Blush NO1 18/UP IQF
 Frozen Kings Troll Red Bright A -11IQF
 Frozen Kings Troll Red Bright A 11/18 IQF
 Frozen Kings Troll Red Bright A 18/UP IQF
 Frozen Kings Troll Red Bright A NS IQF
 Frozen Kings Troll Red Bright NO1 -11 IQF
 Frozen Kings Troll Red Bright NO1 11/18 IQF
 Frozen Kings Troll Red Bright NO1 18/UP IQF
 Frozen Kings Troll Red Bright NO1 NS IQF
 Frozen Kings Troll Red Bright NS NG IQF
 Frozen Kings Troll White Bright NO1 -18 IQF
 Frozen Kings Troll White Bright NO1 18/UP IQF
 Frozen Kings Troll White Bright A NS IQF
 Frozen Kings Troll White Blush NO1 NS IQF
 Frozen Kings Troll White Blush A NS IQF

Frozen Fillet Silver PBO S/Off 1.0-2.5 NO.1 IQF
 Frozen Fillet Silver VP S/On 1.5-2.5 NO. 1 IQF
 Frozen Fillet Silver PBO S/Off 2.5-3.5 NO.1 IQF
 Frozen Fillet Silver PBO S/Off 3.5-UP NO.1 IQF
 Frozen Fillet Silver PBO S/Off A IQF
 Frozen Fillet Silver PBO S/Off NS NG IQF
 Frozen Fillet Silver PBO S/On 1.5-2.5 NO.1 IQF
 Frozen Fillet Silver PBO S/On 2.5-3.5 NO.1 IQF
 Frozen Fillet Silver PBO S/On 3.5-UP NO.1 IQF
 Frozen Fillet Silver PBO S/On A IQF
 Frozen Fillet Silver PBO S/On NS NG IQF
 Frozen Fillet Silver S/Off 1.0-2.5 NO.1 IQF
 Frozen Fillet Silver S/Off 2.5-3.5 No. 1 IQF
 Frozen Fillet Silver S/Off 3.5-UP NO.1 IQF
 Frozen Fillet Silver S/Off A IQF
 Frozen Fillet Silver S/Off NS NG IQF
 Frozen Fillet Silver S/On 1.5-2.5 NO.1 IQF
 Frozen Fillet Silver S/On 2.5-3.5 NO.1 IQF
 Frozen Fillet Silver S/On 3.5-UP NO.1 IQF
 Frozen Fillet Silver S/On A IQF
 Frozen Fillet Silver S/On NS NG IQF
 Frozen Fillet Silver VP PBO S/OFF NS NG
 Frozen Fillet Silver VP PBO S/ON 1.5-2.5 NO.1
 Frozen Fillet Silver VP PBO S/ON 2.5-3.5 NO.1
 Frozen Fillet Silver VP PBO S/ON 3.5-UP NO.1
 Frozen Fillet Silver VP PBO S/ON NS NG
 Frozen Fillet Silver VP S/Off 1.0-2.5 NO.1
 Frozen Fillet Silver VP S/Off 2.5-3.5 NO.1

Fillet King Troll Red VP NS NG
 Fillet King White Troll VP S/On No.1 NS

Fillet Sockeye S/On 1.5-2.5 NO.1 IQF
 Fillet Sockeye S/On 2.5-3.5 NO.1 IQF
 Fillet Sockeye S/On 3.5-UP NO.1 IQF
 Fillet Sockeye S/On A IQF
 Fillet Sockeye S/On NS NG IQF
 Fillet Sockeye S/On VP S/ON 1.5-2.5 NO1
 Fillet Sockeye S/On VP S/ON 2.5-3.5 NO1
 Fillet Sockeye S/On VP S/ON 3.5-UP NO

Frozen Ikura Chum Salmon Roe
 Frozen Ikura King Salmon Roe
 Frozen Ikura Pink Salmon Roe
 Frozen Ikura Silver Salmon Roe
 Frozen Ikura Sockeye Salmon Roe

CORRECTION

**THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION**



Rev. 6/98

Central Microfilm Services
Department of Education & Early Development
State of Alaska

Salmon Product Forms

Fresh

Fresh Chum Bright No. 1
Fresh Chum Dark GMC No. 1
Fresh Chum Round Ocean-Run

Fresh Fillet Chum S/on No. 1
Fresh Fillet King Red S/on No. 1
Fresh Fillet Silver S/on No. 1

Fresh Green Roe Chum
Fresh Green Roe King
Fresh Green Roe Pink
Fresh Green Roe Silver
Fresh Green Roe Sockeye

Fresh King Red Bright No. 1
Fresh King Red SB No. 1
Fresh King Troll Red H/on No. 1
Fresh King Troll White H/on No. 1
Fresh King White Bright No. 1
Fresh King White SB No. 1

Fresh Pink Round Ocean-Run
Fresh Silver Blush No. 1
Fresh Silver Bright No. 1
Fresh Silver Round Ocean-Run
Fresh Silver Troll No. 1

Fresh Sockeye H/on No. 1
Fresh Sockeye No. 1
Fresh Sockeye Round Ocean-Run

FROZEN

Frozen Chum H/on A NS IQF
Frozen Chum H/on No. 1 2/4 IQF
Frozen Chum H/on No. 1 4/6 IQF
Frozen Chum H/on No. 1 6/9 IQF
Frozen Chum H/on NS NG IQF
Frozen Chum Bright A 2/4 IQF
Frozen Chum Bright A 4/6 IQF
Frozen Chum Bright A 6/9 IQF

Frozen Chum Bright No. 1 4/6 IQF
Frozen Chum Bright No. 1 6/9 IQF
Frozen Chum Bright No. 1 9/up IQF
Frozen Chum Bright No. 1 NS IQF
Frozen Chum Dark GMC No. 1 2/4 IQF
Frozen Chum Dark GMC No. 1 4/6 IQF
Frozen Chum Dark GMC No. 1 6/9 IQF
Frozen Chum Dark GMC No. 1 9/up IQF

Frozen Chum Bright A 9/up IQF
Frozen Chum Bright No.1 2/4 IQF
Frozen Chum Dark PMC No.1 4/6 IQF
Frozen Chum Dark PMC No.1 6/8 IQF
Frozen Chum Dark PMC No.1 8/Up IQF
Frozen Chum Dark PMC NS NG IQF
Frozen Chum Dark UMC NS NG IQF

Frozen Chum NS A IQF
Frozen Chum NS B IQF
Frozen Chum NS NG IQF
Frozen Chum SB A 2/4 IQF
Frozen Chum SB A 4/6 IQF
Frozen Chum SB A 6/9 IQF
Frozen Chum SB A 9/up IQF
Frozen Chum SB A NS IQF
Frozen Chum SB No.1 2/4 IQF
Frozen Chum SB No.1 4/6 IQF
Frozen Chum SB No.1 6/9 IQF
Frozen Chum SB No.1 9/up IQF
Frozen Chum SB No.1 NS IQF

Frozen Chum Portions S/on PBO
Frozen Chum Portions S/off PBO

Frozen King Red A-/11 IQF
Frozen King Red A 11/18 IQF
Frozen King Red A 18/UP IQF
Frozen King Red A NS IQF
Frozen King Red Blush NS NG IQF
Frozen King Red Dark NS NG IQF
Frozen King Red H/ON NS NG IQF
Frozen King Red NO.1 -/11 IQF
Frozen King Red NO.1 11/18 IQF
Frozen King Red NO.1 18/UP IQF
Frozen King Red NO.1 NS IQF
Frozen King Red NS NG IQF

Frozen King White Blush NS NG IQF
Frozen King White Bright A NS IQF
Frozen King White Bright NO.1 NS IQF
Frozen King White Dark NS NG IQF

Frozen Kings Troll Red Blush A -/11 IQF
Frozen Kings Troll Red Blush A 11/18 IQF
Frozen Kings Troll Red Blush A 18/UP IQF

Frozen Chum Dark GMC NS NG IQF
Frozen Chum Dark PMC No.1 2/4 IQF
Frozen Fillet Chum PBO S/Off A IQF
Frozen Fillet Chum PBO S/Off NS NG IQF
Frozen Fillet Chum PBO S/Off 1.5-2.5 NO.1 IQF
Frozen Fillet Chum PBO S/Off 2.5-3.5 NO.1 IQF
Frozen Fillet Chum PBO S/Off 3.5-UP NO.1 IQF
Frozen Fillet Chum PBO S/ON 1.5-2.5 NO.1 IQF
Frozen Fillet Chum PBO S/ON 2.5-3.5 NO.1 IQF
Frozen Fillet Chum PBO S/ON 3.5-UP NO.1 IQF
Frozen Fillet Chum PBO S/ON A IQF
Frozen Fillet Chum PBO S/ON NS NG IQF

Frozen Fillet Chum S/Off 1.0-2.5 NO.1 IQF
Frozen Fillet Chum S/Off 2.5-3.5 NO.1 IQF
Frozen Fillet Chum S/Off 3.5-UP NO.1 IQF
Frozen Fillet Chum S/Off A IQF
Frozen Fillet Chum S/Off NS NG IQF
Frozen Fillet Chum S/On 1.5-2.5 NO.1 IQF
Frozen Fillet Chum S/On 2.5-3.5 NO.1 IQF
Frozen Fillet Chum S/On 3.5-UP NO.1 IQF
Frozen Fillet Chum S/On A IQF
Frozen Fillet Chum S/On NS NG IQF
Frozen Fillet Chum S/On SMC NS IQF
Frozen Fillet Chum VP PBO S/OFF 1.0-2.5 no.1
Frozen Fillet Chum VP PBO S/OFF 2.5-3.5 NO.1
Frozen Fillet Chum VP PBO S/OFF 3.5-UP NO.1
Frozen Fillet Chum VP PBO S/OFF A
Frozen Fillet Chum VP PBO S/OFFNS NG
Frozen Fillet Chum VP PBO S/ON 1.0-2.5 NO.1
Frozen Fillet Chum VP PBO S/ON 2.5-3.5 NO.1
Frozen Fillet Chum VP PBO S/ON 3.5-UP NO.1
Frozen Fillet Chum VP PBO S/GNA
Frozen Fillet Chum VP PBO S/ON NS NG
Frozen Fillet Chum VP S/OFF 1.0-2.5 NO.1
Frozen Fillet Chum VP S/OFF 2.5-3.5 NO.1
Frozen Fillet Chum VP S/OFF 3.5-UP NO.1
Frozen Fillet Chum VP S/OFF A
Frozen Fillet Chum VP S/OFF NS NG
Frozen Fillet Chum VP S/ON 1.5-2.5 NO.1
Frozen Fillet Chum VP S/ON 2.5-3.5 NO.1
Frozen Fillet Chum VP S/ON 3.5-UP NO.1
Frozen Fillet Chum VP S/ON NS NG

Frozen Fillet King Red S/On A IQF
Frozen Fillet King Red VP S/On NS NG

Frozen Kings Troll Red Blush NO.1 -11IQF
 Frozen Kings Troll Red Blush NO1 11/18 IQF
 Frozen Kings Troll Red Blush NO1 18/UP IQF
 Frozen Kings Troll Red Bright A -11IQF
 Frozen Kings Troll Red Bright A 11/18 IQF
 Frozen Kings Troll Red Bright A 18/UP IQF
 Frozen Kings Troll Red Bright A NS IQF
 Frozen Kings Troll Red Bright NO1 -11 IQF
 Frozen Kings Troll Red Bright NO1 11/18 IQF
 Frozen Kings Troll Red Bright NO1 18/UP IQF
 Frozen Kings Troll Red Bright NO1 NS IQF
 Frozen Kings Troll Red Bright NS NG IQF
 Frozen Kings Troll White Bright NO1 -18 IQF
 Frozen Kings Troll White Bright NO1 18/UP IQF
 Frozen Kings Troll White Bright A NS IQF
 Frozen Kings Troll White Blush NO1 NS IQF
 Frozen Kings Troll White Blush A NS IQF

Fillet King Troll Red VP NS NG
 Fillet King White Troll VP S/On No.1 NS

Frozen Fillet Silver PBO S/Off 1.0-2.5 NO.1 IQF
 Frozen Fillet Silver VP S/On 1.5-2.5 NO. 1 IQF
 Frozen Fillet Silver PBO S/Off 2.5-3.5 NO.1 IQF
 Frozen Fillet Silver PBO S/Off 3.5-UP NO.1 IQF
 Frozen Fillet Silver PBO S/Off A IQF
 Frozen Fillet Silver PBO S/Off NS NG IQF
 Frozen Fillet Silver PBO S/On 1.5-2.5 NO.1 IQF
 Frozen Fillet Silver PBO S/On 2.5-3.5 NO.1 IQF
 Frozen Fillet Silver PBO S/On 3.5-UP NO.1 IQF
 Frozen Fillet Silver PBO S/On A IQF
 Frozen Fillet Silver PBO S/On NS NG IQF
 Frozen Fillet Silver S/Off 1.0-2.5 NO.1 IQF
 Frozen Fillet Silver S/Off 2.5-3.5 No. 1 IQF
 Frozen Fillet Silver S/Off 3.5-UP NO.1 IQF
 Frozen Fillet Silver S/Off A IQF
 Frozen Fillet Silver S/Off NS NG IQF
 Frozen Fillet Silver S/On 1.5-2.5 NO.1 IQF
 Frozen Fillet Silver S/On 2.5-3.5 NO.1 IQF
 Frozen Fillet Silver S/On 3.5-UP NO.1 IQF
 Frozen Fillet Silver S/On A IQF
 Frozen Fillet Silver S/On NS NG IQF
 Frozen Fillet Silver VP PBO S/OFF NS NG
 Frozen Fillet Silver VP PBO S/ON 1.5-2.5 NO.1
 Frozen Fillet Silver VP PBO S/ON 2.5-3.5 NO.1
 Frozen Fillet Silver VP PBO S/ON 3.5-UP NO.1
 Frozen Fillet Silver VP PBO S/ON NS NG
 Frozen Fillet Silver VP S/Off 1.0-2.5 NO.1
 Frozen Fillet Silver VP S/Off 2.5-3.5 NO.1

Fillet Sockeye S/On 1.5-2.5 NO.1 IQF
 Fillet Sockeye S/On 2.5-3.5 NO.1 IQF
 Fillet Sockeye S/On 3.5-UP NO.1 IQF
 Fillet Sockeye S/On A IQF
 Fillet Sockeye S/On NS NG IQF
 Fillet Sockeye S/On VP S/ON 1.5-2.5 NO1
 Fillet Sockeye S/On VP S/ON 2.5-3.5 NO1
 Fillet Sockeye S/On VP S/ON 3.5-UP NO

Frozen Ikura Chum Salmon Roe
 Frozen Ikura King Salmon Roe
 Frozen Ikura Pink Salmon Roe
 Frozen Ikura Silver Salmon Roe
 Frozen Ikura Sockeye Salmon Roe

Frozen Fillet Silver VP S/Off 3.5-UP NO.1
Frozen Fillet Silver VP S/Off NS NG
Frozen Fillet Silver VP S/On 1.5-2.5 NO.1
Frozen Fillet Silver VP S/On 2.5-3.5 NO.1
Frozen Fillet Silver VP S/On 3.5-UP NO.1
Frozen Fillet Silver VP S/On NS NG

Frozen Pink Bright No1 -/2 IQF
Frozen Pink Bright No1 2/UP IQF
Frozen Pink A NS IQF
Frozen Pink B NS IQF
Frozen Pink NS NG IQF
Frozen Pink NS NG BLK
Frozen Pink NO.1 3/UP IQF
Frozen Pink NO.1 -/2 IQF
Frozen Pink NO.1 2/UP IQF
Frozen Pink A -/2 IQF
Frozen Pink A 2/UP IQF

Frozen Silver Troll Blush A 2/4 IQF
Frozen Silver Troll Blush A 4/6 IQF
Frozen Silver Troll Blush A 6/9 IQF
Frozen Silver Troll Blush A 9/UP IQF
Frozen Silver Troll Blush NO1 2/4 IQF
Frozen Silver Troll Blush NO1 4/6 IQF
Frozen Silver Troll Blush NO1 6/9 IQF
Frozen Silver Troll Blush NO.1 9/UP IQF
Frozen Silver Troll Blush NO1 NS IQF
Frozen Silver Troll Blush NS NG IQF
Frozen Silver Troll Bright A 2/4 IQF
Frozen Silver Troll Bright A 4/6 IQF
Frozen Silver Troll Bright A 6/9 IQF
Frozen Silver Troll Bright A 9/UP IQF
Frozen Silver Troll Bright NO1 2/4 IQF
Frozen Silver Troll Bright NO1 4/6 IQF
Frozen Silver Troll Bright NO1 6/9 IQF
Frozen Silver Troll Bright NO1 9/UP IQF
Frozen Silver Troll NS NG IQF
Frozen Silver Troll Redskin NO1 NS IQF
Frozen Silver Troll Redskin NS NG IQF

Frozen Sujiko Chum Salmon Roe
Frozen Sujiko King Salmon Roe
Frozen Sujiko Silver Salmon Roe
Frozen Sujiko Sockeye Salmon Roe

Frozen Silver A 2/4 IQF
Frozen Silver A 4/6 IQF
Frozen Silver A 6/9 IQF
Frozen Silver A 9/UP IQF
Frozen Silver A NS IQF
Frozen Silver B NS IQF
Frozen Silver NO.1 2/4 IQF
Frozen Silver NO.1 4/6 IQF
Frozen Silver NO1 6/9 IQF
Frozen Silver NO1 9/UP IQF
Frozen Silver NS NG IQF
Frozen Silver Blush A 2/4 IQF
Frozen Silver Blush A 4/6 IQF
Frozen Silver Blush A 9/UP IQF
Frozen Silver Blush NO1 2/4 IQF
Frozen Silver Blush NO1 4/6 IQF
Frozen Silver Blush NO1 6/9 IQF
Frozen Silver Blush NO1 9/UP IQF
Frozen Silver Redskin NO1 2/4 IQF
Frozen Silver Redskin NO1 4/6 IQF
Frozen Silver Redskin NO1 6/9 IQF
Frozen Silver Redskin NO1 9/UP IQF
Frozen Silver Redskin NS NG IQF

Frozen Sockeye H/On A 2/4 iqf
Frozen Sockeye H/On A 4/6 IQF
Frozen Sockeye H/On A 6/9 IQF
Frozen Sockeye H/On NO1 2/4 IQF
Frozen Sockeye H/On NO1 4/6 IQF
Frozen Sockeye H/On NO1 6/9 IQF
Frozen Sockeye H/On NS NG IQF
Frozen Sockeye A 2/4 IQF
Frozen Sockeye A 4/6 IQF
Frozen Sockeye A 6/9 IQF
Frozen Sockeye A NS IQF
Frozen Sockeye NO1 2/4 IQF
Frozen Sockeye NO1 4/6 IQF
Frozen Sockeye NO1 6/9 IQF
Frozen Sockeye B NS BLK FRZ
Frozen Sockeye NO1 NS BLK FRZ
Frozen Sockeye NS B IQF
Frozen Sockeye NS NG IQF
Frozen Sockeye NS S IQF
Frozen Sockeye Round A NS BLK
Frozen Sockeye Round NO1 NS BLK
Frozen Sockeye Round NS NG BLK

NOAA'S AQUACULTURE POLICY

I. Introduction

Worldwide fisheries production will be inadequate to meet the needs of the world's population, without supplementation through aquaculture. Constituent and Congressional support for aquaculture dictates that the National Oceanic and Atmospheric Administration (NOAA) bring together its diverse programs to develop a comprehensive aquaculture policy and strategy to provide a context for agency activities for the next ten to twenty years. The impetus for the development of aquaculture extends beyond food production. NOAA involvement in aquaculture can help to foster sustainable economic development and environmentally friendly technologies, create new employment opportunities, reduce the trade deficit in fish products, reduce fishing pressure on living marine resources, and rebuild depleted stocks.

The 1980 Memorandum of Understanding (MOU) between the Departments of Agriculture (USDA), Commerce (DOC) and Interior (DOI), defined aquaculture as "the propagation and rearing of aquatic species in controlled or selected environments."

Pursuant to this MOU, DOC, through NOAA's National Marine Fisheries Service (NMFS), and the National Sea Grant College Program, carried out aquaculture research and development on marine, estuarine, and anadromous species. Work on anadromous species has been coordinated with DOI and USDA (Forest Service). The National Sea Grant College Program has conducted research, education, training and advisory services in aquaculture; its advisory services programs have been carried out in collaboration with USDA's Extension Service. Subsequent to the establishment of this MOU, the Fisheries Finance Program, administered by NMFS, and the Coastal Zone Management Act (CZMA), administered by NOAA's National Ocean Service (NOS), were amended to include comprehensive planning, conservation and management of aquaculture facilities within the coastal zone.

Furthermore, the National Aquaculture Development Act of 1980, amended in 1985, established a coordinating group, the Joint Subcommittee on Aquaculture (JSA), chaired by USDA. The JSA has been responsible for developing the National Aquaculture Development Plan, which identifies the relative roles of USDA, DOI and DOC, and establishes a strategy for the development of an aquaculture industry in the United States.

NOAA, the Federal Oceans agency, has a strong statutory basis for the promotion and regulation of marine aquaculture. A listing of the legislative authorities is attached (Attachment 1). NOAA, having the greatest responsibility for the sustainable use and conservation of marine resources and the environment, is best suited to oversee aquaculture activities that affect marine ecosystems and occur in public waters. NOAA has a variety of established responsibilities for marine, estuarine, and anadromous species aquaculture; including research, development, and outreach, for stock enhancement and private sector development, as well as the adoption of appropriate environmental safeguards and technology.

If the current estimates for world per capita consumption of seafood are accurate, the projected demand for seafood will not be met without growth and technological advancement in aquaculture to supplement the harvest of wild stocks. Aquaculture is one method to meet the projected demand, and should be conducted in concert with a variety of fisheries management techniques, including better product utilization, improved processing technology, improved habitat conditions to support natural

fisheries, and consumption of species currently not utilized.

The development of a robust aquaculture industry has the most potential to fill the seafood needs of the domestic market by reducing imports of fishery products and benefitting the nation's balance of trade. Aquaculture for the purposes of marine stock enhancement also has associated economic benefits, such as increased employment associated with the enhancement effort, and the continued health of the commercial fishing and recreational fisheries industries. In addition, aquaculture technologies and consulting services for private industry and enhancement efforts, as well as superior, disease-free strains of broodstock are valuable exports that contribute to the U.S. economy.

II. Current Status of Aquaculture in NOAA

NOAA's primary focus for aquaculture has historically been through programs in NMFS, and the National Sea Grant College Program in the Office of Oceanic and Atmospheric Research (OAR). Many aquaculture-based enterprises have benefitted from NOAA research and extension activities. In 1996, Congress, in amending the CZMA, administered by NOS, encouraged States to work with NOAA in aquaculture, siting, management and planning activities. The types of activities undertaken to support aquaculture in each of the three line organizations are described below.

NMFS

NMFS plays a significant role in promoting aquaculture that is environmentally sound, through scientific research and technology development, financial assistance and its regulatory programs. NMFS has carried out aquaculture programs since its inception as the United States Commission of Fish and Fisheries, 125 years ago; since then NMFS/NOAA has been involved in aquaculture research and development for finfish and shellfish in commercial applications and for enhancement. Intensive U.S. marine aquaculture research and development on salmon in the late 1960's provided the basis for the development of industries in the United States, Norway, the United Kingdom and Chile. NMFS basic research on finfish and shellfish biology and reproduction, habitat utilization and restoration, environmental impact assessment, and fish pathology supports private and government aquaculture and marine enhancement activities. Much of the information developed by NMFS has been used both in the commercial sector where it has been instrumental in the development of the farmed salmon industry, as well as

shellfish hatcheries and shrimp culture operations throughout the world. NMFS has also played an integral role in the rearing of threatened and protected species for stock recovery.

NMFS presently spends approximately \$10 million per year for the operation of 25 major salmon hatcheries in the Columbia River Basin through the 1938 Mitchell Act which was established to mitigate loss of salmon runs because of construction of hydroelectric projects. The Mitchell Act hatchery program is the largest Federally-funded marine fisheries enhancement program in the United States.

NMFS-administered state/Federal and industry grant programs have addressed aquaculture development in response to industry needs and state management priorities. In the last five years, the Saltonstall-Kennedy Grant Program has provided funding for commercial aquaculture projects of between \$500,000 and \$1.7 million dollars annually. In Alaska, since ratification of the U.S./Canada Pacific Salmon Treaty in 1985, NMFS has provided over \$20.0 million for salmon enhancement projects. In FY1994 and FY1995, the Northeast Fishing Industry Grants program supplied \$1.2

million and \$2.19 million respectively for aquaculture -related projects. These projects were aimed at creating commercial development opportunities for displaced New England fishermen. Additionally, the NMFS Fisheries Finance Assistance Program has been specifically authorized to guarantee aquaculture loans, facilitating financing for qualified applicants.

On the regulatory front, the Fisheries Management Councils are becoming involved in the decision-making process for offshore permitting for aquaculture. Because permit-granting may involve the granting of exclusive use in a designated area to an aquaculture business, the traditional users of the resource must be incorporated into the regulatory process. This process has involved the granting of a lease to an experimental scallop culture project off the coast of Massachusetts, through an amendment to the New England Scallop Fishery Management Plan, and the consideration of an experimental permit for the culture of red snapper in the Gulf of Mexico. NMFS, through the Magnuson-Stevens Fishery Conservation and Management Act of 1996, has regulatory responsibilities that will affect aquaculture development in the EEZ.

OAR

Aquaculture has been a major component of the National Sea Grant College Program's research and outreach activities since the program's establishment in 1968. Sea Grant, administered through OAR, has supported technology development for the existing U.S. industry in many areas including offshore and recirculating marine systems, hormonal control of growth and reproduction, growout technology, feeds and nutrition, disease control, regulation, marketing, food processing, and environmental technologies to meet water quality standards.

Aquaculture related projects account for approximately \$10 million direct and matching Sea Grant funds on an annual basis. This figure does not include approximately \$1.5 million annually in outreach-related activities provided through the Sea Grant Extension Service, or nationwide programs such as the Oyster Disease Research Program. Sea Grant supports aquaculture activities in research, education, and technology transfer. Sea Grant research on systems development, genetics, physiology and endocrinology, nutrition, disease, policy, and economics has contributed to the creation of several new industries including the Gulf of Mexico and South Atlantic soft shell crab industry, the Pacific Northwest oyster and clam industry, the hybrid striped bass industry, and the Mid-Atlantic hard clam industry. Sea Grant research and outreach has helped to establish scores of new businesses throughout the U.S., and to provide improved technologies to these businesses. The combined impact of Sea Grant-developed technology amounts to at least \$100 million annually and supports thousands of jobs in the U.S. economy.

Sea Grant has also collaborated extensively in the international arena, creating opportunities for aquaculture technology exchange between the U.S. and Japan, China, Israel, France, Russia and Ireland. NOAA, through Sea Grant, and Japan have been working together for more than 20 years to enhance the development of freshwater and marine aquaculture through the Aquaculture Panel of the U.S. Japan Cooperative Program in Natural Resources. Technology exchange between the U.S. and China on scallop culture has been conducted by Sea Grant through a bilateral agreement. The U.S. Israel Science and Technology Foundation has provided funds for aquaculture research with Sea Grant members. Sea Grant's efforts have been important in promoting NOAA as an important global resource in the development of aquaculture.

The Sea Grant program is also a participant in the Sustainable Development Extension Network, which is a collaboration among Federal education and extension services and their public/private

partners. DOC has pledged to assist communities in developing eco-industrial parks, stabilize and redevelop brownfield industrial sites, integrate environmental technical assistance into the manufacturing extension network, expand and improve access to environmental information, support research, and restore the Nation's fisheries. The network provides NOAA with an opportunity to facilitate Federal coordination in aquaculture extension.

NOS

Congress, in passing the CZMA of 1972, encouraged states and territories to exercise their responsibilities of wise use of the land and water resources of the coastal zone through the development and implementation of management programs. The national coastal zone management program balances competing demands on the coast and coastal waters. The CZMA created a partnership between the Office of Ocean and Coastal Resource Management (OCRM), state and territorial governments and Federal agencies. Under the CZMA, Federal actions that are reasonably likely to affect any coastal use or resource (including direct Federal agency activities, non-Federal activities requiring a Federal license or permit, and Federal funding to state or local governments) must be conducted in a manner that is consistent with the enforceable policies of state coastal management programs.

Aquaculture is an aspect of coastal management which has received increased attention in the past decade with the passage of amendments to the CZMA in 1990 and 1996. The 1990 amendments encouraged states and territories to support comprehensive planning, conservation and management for living marine resources including aquaculture facilities. The 1996 amendments provided new authorization for states to use CZMA funds for: (1) the adoption of procedures and policies to evaluate and facilitate the siting of public and private aquaculture facilities in the coastal zone; (2) to enable States to formulate, administer, and implement strategic plans for marine aquaculture; and (3) to develop a coordinated process among State agencies to regulate and issue permits for aquaculture facilities in the coastal zone.

Past and on-going projects have ranged from: development of aquaculture net-pen guidelines (Mississippi); impact of aquaculture on the eutrophication of coastal bays (Maine); revision of aquaculture lease rules (Maine); development of a marine aquaculture management plan and geographic information system (Rhode Island); and development and implementation of a marine aquaculture regulatory and leasing program (Virginia).

Additionally, OCRM's system of 14 marine protected areas, the National Marine Sanctuary Program, manages and protects significant natural and historic treasures. The National Estuarine Research Reserve System, currently totaling 21 sites, protects coastal resources and provides a network of laboratories for investigating estuarine processes and offers educational opportunities for coastal managers and the public. Although aquaculture has not been a major focus of the sanctuary and reserve programs, both have ample opportunities to address aquaculture issues.

III. NOAA Policy

For the purposes of this document aquaculture is defined as the propagation and rearing of aquatic organisms in controlled or selected aquatic environments for any commercial, recreational, or public purpose. Potential purposes of aquaculture include bait production, wild stock enhancement, fish culture for zoos and aquaria, rebuilding of populations of threatened and endangered species, and food production for human consumption.

A successful NOAA program to meet public needs for aquaculture development and environmental protection will focus on: 1) Research, Development, and Technology Transfer; 2) Financial Assistance to Businesses; 3) Environmental Safeguards including Regulatory and Permit Procedures; and, 4) Coordination. NMFS, OAR and NOS will incorporate these priorities into their aquaculture-related activities.

Research, Development, and Technology Transfer

Basic research and development through NMFS, NOS, and Sea Grant programs provide the scientific basis for further enhancement and commercial activities with species not currently being cultured as well as support for existing industries. NOAA considers the following topics to be important to the development of U.S. aquaculture:

Environmental impacts and standards - Research on ways to minimize any adverse impacts of aquaculture on the environment and wild stocks. Using scientific information develop criteria for marine aquaculture operations including determination of permissible discharges, optimal treatment of effluents, requirements for siting new operations, assessment of ecological impacts, both deleterious and beneficial, and necessary information for establishing siting protocols and standards to facilitate the permitting process. Deliver this information to Federal, state and local agencies for state planning, regulatory and permitting processes.

Systems development - Development of cost-effective, environmentally sound aquaculture and hatchery technology for transfer to the private commercial sector and to governmental agencies operating stock enhancement and habitat restoration programs. Focus on two areas for research and development identified as having high potential for involvement by NOAA: open ocean aquaculture and closed system (or "urban") aquaculture. Conduct research on recirculating technologies for inland facilities, and on environmentally sound systems for offshore development.

Growth and production of marine species - Maintenance of marine aquaculture species in captivity throughout their life cycle; control and synchronization of reproductive and growth cycles; improvement of technology for production and handling of larvae and all life stages in hatcheries; definition and improvement of nutritional requirements and nutritional value of live feeds; and definition of ecological and pheromonal factors affecting production and develop techniques for spawning and early-stage rearing.

Biotechnology - Development of DNA technology for manipulation, introduction, and expressing genes in aquaculture human food species and species with potential for use either in production of chemical products or in industrial processing to provide strains that grow faster, have higher feed efficiency, produce higher proportions of muscle or desirable compounds, synthesize metabolites at greater rates, or catabolize waste materials or toxic effluents more efficiently; production technology to produce sterile animals for commercial culture to reduce the possibility of genetic contamination from accidental escapements; development of gene probes, compound probes and molecular assays for assessment of endocrine activities and detection and measurement of pathogenic viruses and bacteria; development of vaccines and other measures for controlling disease and parasites.

Technology transfer - Technology transfer to the U.S. aquaculture industry and to Federal, state and local agencies relating to production system management, culture techniques, nutrition, disease diagnosis and control, business management, marketing and environmental technologies to meet

water quality standards, will continue to be an important part of NOAA's aquaculture program. Using education and training, develop logical and economically viable alternatives for displaced fishermen. Improve extension, outreach and education efforts to support aquaculture planning, regulatory and permitting efforts to support existing industry, and to train fishermen, students and other new industry entrants in aquaculture techniques.

Coastal Management - Coordination with management agencies to identify areas in Federal, state and local waters that are appropriate for aquaculture facilities. Develop more efficient Federal and state regulatory and permitting procedures and innovative management tools for resolving user conflicts. Plan for disaster mitigation and prevention related to aquaculture.

Financial Assistance to Businesses

The aquaculture industry has been slow to develop in the United States in part due to the difficulty in accessing capital for investment purposes. A statutory change to the Fisheries Finance Assistance Program (formerly known as the Fisheries Obligation Guarantee Program in 1992) provided authority to include aquaculture facilities. The Fisheries Finance Assistance Program, closed \$6 million in aquaculture guarantees in FY '94 and estimates that the majority of its \$25 million FY '95 loan authority will be expended on aquaculture projects. In addition the Capital Construction Fund (CCF) could be authorized to also include aquaculture projects. The Capital Construction Fund currently allows commercial fishermen to save pre-tax fishing income dollars (much like an individual's retirement IRA account) to acquire, construct, or reconstruct fishing vessels. The CCF at present allows withdrawals only for investment in fishing vessels. Taxes on deferred income are recouped by the Federal government as the vessel is used, since no depreciation deduction is allowed for CCF capital invested. Adding aquaculture to the CCF program would provide an alternative use for some of the \$240 million in existing CCF accounts.

Environmental Safeguards

Permit Procedures: A primary objective of a Federal aquaculture policy is to develop, in coordination with responsible agencies, more efficient Federal and state permit processes to promote industry development. This will involve establishment of national criteria for environmentally safe aquaculture operations. Federal and state agencies will be encouraged to use the national criteria to make consistent and reasonable Federal and state aquaculture regulations and permitting decisions. One Federal agency should be responsible for coordinating the administrative process for Federal aquaculture permitting decisions: the receipt of permit applications, consultation with all permitting agencies, and the issuance of Federal permits. This will reduce the time required for permit approval or denial, reduce the cost to industry, foster better cooperation between Federal and state agencies, and assure that sound science is used as the basis for decisions. To further facilitate the permit approval process within the Exclusive Economic Zone and promote responsible development of the industry, NOAA will identify areas that reduce conflicts with vessel transit lanes, traditional fishing grounds, and protected species habitat, as well as minimize the potential for negative impacts on the environment. Permit requests for aquaculture activities in these areas would receive rapid responses because the areas would have already been designated as approved for aquaculture. NOAA will work closely with coastal states to ensure that the identification of such areas and permit approvals are consistent with applicable provisions of Federally approved state coastal management programs.

Environmental Research and Planning: Growth of aquaculture has brought attention to its potential environmental effects. Most questions focus on the potential adverse impacts of disease,

loss of genetic diversity, introduction of non-indigenous species and potential habitat degradation. Federal and State governments must conduct strategic planning to cope with the expected economic development from aquaculture and to ensure that environmental quality is not compromised. These issues apply to most forms of aquaculture. If the U.S. aquaculture industry is to expand, a healthy aquatic environment must be sustained for all users, including the aquaculture industry. Given the high cost of applied research, every effort will be made to use commercial platforms to obtain environmental data, conduct basic biological research, and determine the environmental effects of aquaculture, particularly in the Exclusive Economic Zone. Other issues that merit consideration are the possible accumulation of marine toxins in cultured organisms; the effects of pollution on aquaculture operations; the effects of major discharges from aquaculture operations on fisheries and other biotic resources; the effects of nutrient enrichment, physical alteration (through dredging, filling or construction), and alteration of freshwater flows, to habitat upon which living resources depend.

Finally, it is important that the feedback derived from research is taken into account in the Federal and State regulatory and planning processes. The best scientific information available will be considered in guiding these processes, and where there is insufficient science a precautionary approach will be taken to adequately safeguard the environment and wild stocks. NOAA will accomplish this mainly through NMFS and the Coastal Zone Management Program administered by NOS' OCRM. NMFS has the ability to set environmental standards for regulation on the Federal level. OCRM can encourage and work with state coastal management programs to do the same on the State level.

Coordination

The responsibility and capability to assist in building an economically and environmentally sustainable aquaculture industry in the U.S. rests with various Federal agencies. By providing a coordinated effort between regulatory agencies, agencies offering economic incentives, the financial sector, and the potential user, NOAA can promote the use of environmentally sound aquaculture technologies and practices, while creating job opportunities in localized areas. NOAA will pursue opportunities to accomplish its policies through joint activities and programs with Federal, State and local agencies, as well as industry, academia and foreign institutions.

Conclusion

A strong NOAA role in aquaculture will stimulate job creation in public sector, help to revitalize communities suffering from the collapse of traditional fisheries stocks, utilize advanced technologies and management regimes to resolve natural resource conflicts and ensure that aquaculture is done in an environmentally sound manner, reduce the fisheries trade deficit, and increase domestic production of finfish and shellfish and recreational opportunities. Marine aquaculture can augment restoration efforts of depleted marine stocks and can provide safe, high-quality seafood for consumers.

AUTHORIZING LEGISLATION - Attachment I

Agriculture and Food Act of 1980

Anadromous Fish Conservation Act

Clean Water Act

Coastal Zone Management Act, 1990 and 1996 Amendments

Columbia River Basin Fishery Development Program

Commercial Fisheries Research and Development Act

Endangered Species Act

Fish and Wildlife Act of 1956

Fish and Wildlife Coordination Act

Interjurisdictional Fisheries Act

Magnuson-Stevens Fishery Conservation and Management Act

Marine Mammal Protection Act

Marine Protection, Research and Sanctuaries Act

National Sea Grant College Program Act

National Aquaculture Improvement Act of 1985

National Environmental Policies Act

National Aquaculture Act of 1980

Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990

Rivers and Harbors Act of 1899

Saltonstall-Kennedy Act

Title XI, Merchant Marine Act of 1936 as amended.

Water Resources Development Act

2/13/98

-
- [Aquaculture Links](#)
 - [Aquaculture Production](#)
 - [Southwest Region Home Page](#)

Agenda for Shellfish Overview Portion of Hearing

INDUSTRY OVERVIEW

- Industry overview of Geoduck Dive Fishery
 - *Gig Decker*
- Overview of Aquatic Farm Industry
 - *Rodger Painter*
 - *Bob Hartley*
 - *Ray RaLonde*
- Industry Efforts to Initiate On- Bottom Aquatic Farming
 - *Rodger Painter*
- Applicant Issues with Agency Reviews of Clam Farming Applications
 - *Ray RaLonde*
 - *Rodger Painter*
 - *Bob Hartley*
 - *Jon Agosti (teleconference)*
 - *Scott Thomas*
- Industry Proposals to Resolve the Issues
 - *Rodger Painter*
 - *Bob Hartley*

AGENCY OVERVIEWS

- Alaska Department of Fish and Game
 - Department progress in Aquatic Farm Act program development
 - *Frank Rue, Commissioner; Doug Mecum, Director Commercial Fisheries; Kevin Duffy, Deputy Commercial Fisheries; Ken Taylor, Director, Habitat Division; Confirmed. Scott Marshall, Regional Supervisor, Commercial Fisheries; Tentative.*
- Alaska Department of Natural Resources
 - Department progress in Aquatic Farm Act program development
 - *John Shively, Commissioner, Tentative*
 - Bob Loeffler, Ric Thompson, Kim Kruse by teleconference from Anchorage. Confirmed.*

- Division of Governmental Coordination
Division's Role in Coastal Management Program's consistency review process. Numbers of permit application reviewed, issued, appealed, etc.
- *Mr. Pat Galvin, Director. Confirmed*

Others wishing to testify. Please limit testimony to three minutes

Other Business

Adjournment

Alaska State Legislature

907) 465-2689; (800) 665-2689
FAX: (907) 465-3472



State Capitol, Room 411
Juneau, Alaska 99801-1182

Official Business

February 29, 2000

Commissioner Frank Rue
Department of Fish and Game
Box 25526
Juneau, AK 99802-5526

via fax 465-2332

Dear Commissioner Rue:

Following our recent meeting, it is clear in our minds that ADF&G has not fulfilled its promise to support aquaculture development. Some examples of obstacles the Department has put in the way of aquaculture development are:

- regulations not developed as promised to the Legislature for the past two years
- excessive application demands on farmers with additional, biased questions and requirements after applications submitted
- blank inconsistency recommendations submitted in initial response to the coastal zone management of all on-bottom farming permits; unaccountable science was done on these reviews with DGC eventually overturning F&G inconsistency
- interpreting the Kachemak Bay Critical Habitat Plan as opposing clam farming when no such prohibition is stated in the plan
- ignoring statutes and laws regarding development and legality of mariculture
- When Habitat Division did suggest that the KBCHP was open for review, the industry had the deck stacked against them by:
 - Scheduling the aquatic farming hearing the same time as the Jet Ski hearing, undoubtedly biasing the by-count comment cards that were distributed to hearing participants and submitted for testimony.
 - After objecting to this format, assured farmers that the comments would be considered by content only; final report has pages of "counts" for and against, with families of some opponents sending in numerous ballots.
 - Mail-in comment cards stuffed the ballot box and generated inaccurate data; oral comments count came out much more even.
 - The goals of the KBCHP clearly state that the public can identify issues and make comments about implementation of the plan, but there is no yea or nay vote on any specific aspect of the plan.
 - If F&G counts votes as evidence supporting denial of aquaculture in Kachemak Bay, it is in violation of its responsibility to "maintain and enhance fish and wildlife populations and their habitats." *It should be the science of the habitat and the organisms that hold priority over a vote, and science must be used to evaluate any habitat issue, not public opinion of which comments indicate a clear misunderstanding of the issues, biological consequences, and aquaculture in general.*

Delays in permitting have reached an unconscionable level for both farmers and legislators who have spent innumerable hours and energy to resolve this matter. In a 1998 House Resource Committee meeting, representatives of the Alaska Shellfish Growers Association were again assured by ADF&G that they would develop policies, but no action was taken. A permit opening was issued in January 1999 with no mariculture policy in place. In the 1999 Resource Committee hearing, the Alaska Shellfish Growers Association complained to the committee that no still policy was in place even though the permitting period was nearly half over. ADF&G again promised that a mariculture policy would be developed before closure of the opening period. Even at this late date, four years after the initial meeting of the clam farming task force in 1997, no mariculture policy is developed.

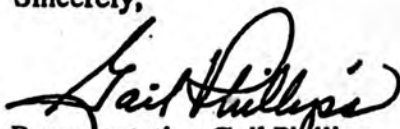
Another example of not following through was F&G's three-year moratorium on expansion of mariculture in Kachemak Bay in order to study the impacts of oyster culture on the Kachemak Bay ecosystem. Three years have passed and ADF&G has not conducted a study.

So that more delays are not forthcoming from F&G, we request in writing:

- Status report on all permit applications, and an assurance that F&G will issue all permits by April 15, except for the geoduck farm applications, so that we will have time in the Session to proceed with legislation we are drafting to remedy these ongoing problems.
- A clear response as to your plans for Kachemak Bay clam farming
- Your response to ASGA's letter of February 23 regarding a proposal for limited farming in Kachemak Bay while a collaborative effort is undertaken to develop impact studies and good scientific data on which to base future applications
- Your assurance that you and your immediate staff will attend the Fisheries Committee meeting on March 6 to respond to questions regarding this promising developing industry for Alaska

Thank you for your immediate attention to this matter; we look forward to receiving your response.

Sincerely,


Representative Gail Phillips

GP:ph

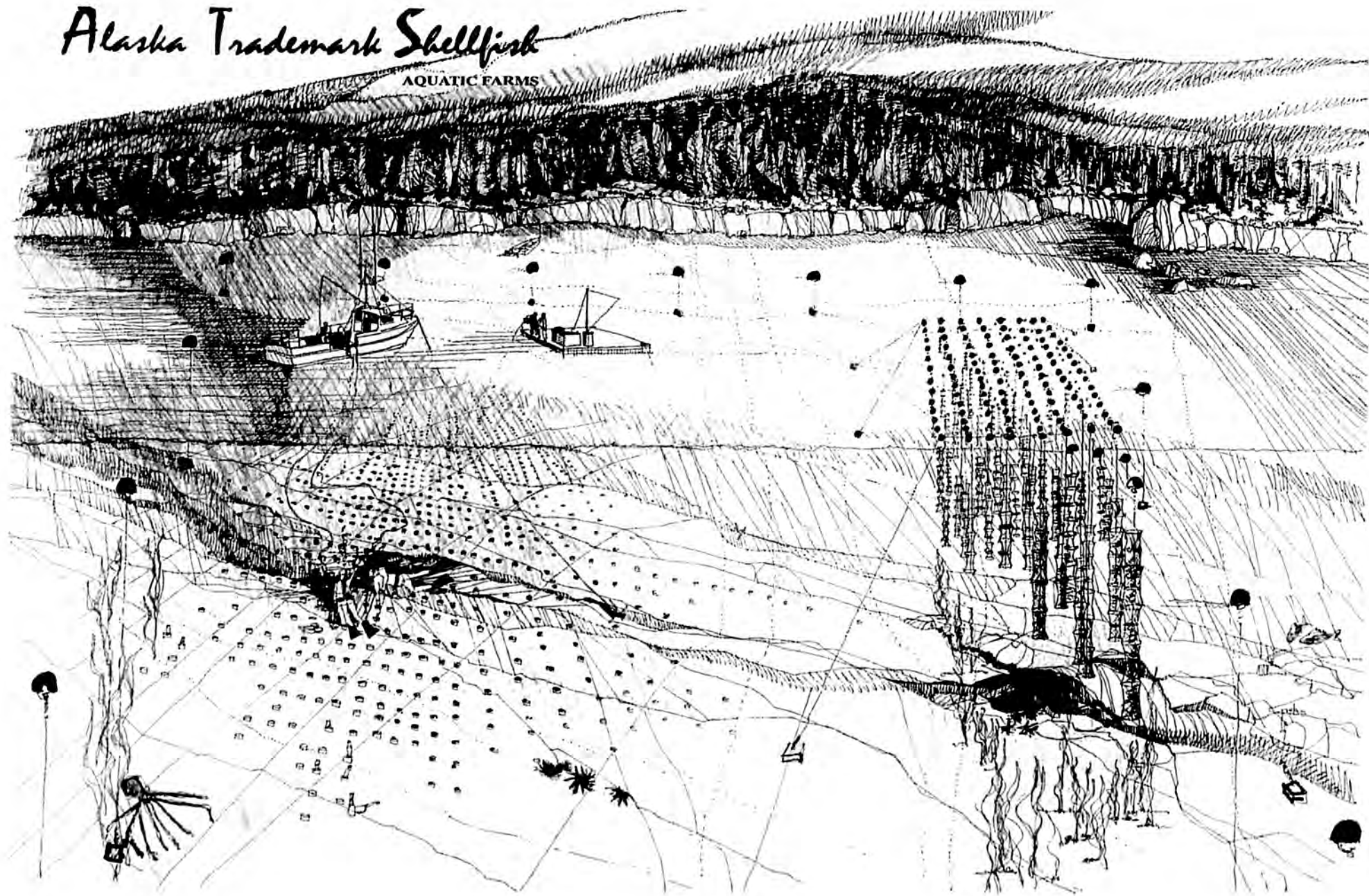
cc: Governor Tony Knowles
Dr. Bob Cheney, ASTF


Senator John Torgerson

AK Shellfish Growers Association
Prof. Ray RaLonde, UAA

Alaska Trademark Shellfish

AQUATIC FARMS



Executive Summary

The Business

Alaska Trademark Shellfish is creating a 33-acre geoduck clam aquatic farm, about 40 miles Southwest of Ketchikan. The enterprise will draw upon the success of similar farming operations in Washington and British Columbia, and is designed to obtain the best results from the unique aquatic habitat of Southeast Alaska.

The business is vertically integrated from primary production to delivery of product to customers in China, Japan and the United States. In addition to producing high value geoduck clams, ATS will grow oysters, mussels and scallops to diversify its production base and take full advantage of the infrastructure created for culturing geoducks.

ATS has conducted a thorough investigation of its farm sites, retained one of the pioneers of geoduck aquaculture, obtained guaranteed markets for its products, secured a joint venture agreement with Alaska's only shellfish hatchery to ensure seedstock is available to the operation, and initiated a major geoduck aquaculture research project.

The project is being launched at a time when the Alaska aquatic farming industry is prepared to take a great leap forward with seed for new species becoming available through the Qutekcak Shellfish Hatchery and when the federal government has initiated a major effort to develop U.S. aquaculture production.

Alaska Trademark Shellfish is a limited liability company formed in the State of Alaska in 1999 specifically for shellfish aquaculture in Southeast Alaska.

The Marketplace

Geoduck clams are one of the highest valued seafood products in the world; wholesale prices in Hong Kong varied between \$10-15 per pound during 1999. Primary markets for live geoducks targeted by ATS are seafood distributors Hong Kong and China, high-end sushi bars in the U.S., and seafood buyers in Japan. Market demand for geoducks far outstrips production.

In addition to selling its high quality live oysters, clams and scallops into a strong U.S. market, ATS will secure markets with the luxury hotels of Hong Kong for its live shellfish production.

ATS has market commitments for its geoduck production.

Location

The farm site is located just offshore of Long Island on the southwest coast of Prince of Wales Island, about 40 air miles west of Ketchikan. Most activities will be completed on site, although some processing will be completed at leased facilities in Ketchikan.

Geoduck clams will be planted under 20-40 feet of water on submerged lands leased from the State of Alaska, while the other species will be cultivated in nets and trays suspended from surface longlines.

Management and Staffing

ATS has assembled a highly qualified, experienced management team for its business operations. Scott Thomas, an experienced geoduck diver and long-time manager of Alaska seafood businesses, is president and managing member, while Dean Haltiner, a seasoned fishing businessman with a degree in financing, is the financial manager. Brian Mattson, a long time fishing businessman and geoduck diver, is field operations manager. Marketing manager is Ringo Tsang, who also handles sales for one of the largest geoduck trading companies in the world, deals daily with geoduck buyers in Hong Kong, Singapore and mainland China.

A team of consultants will provide the level of scientific and business expertise necessary for the success of Alaska Trademark Shellfish. The chief scientific advisor to the company is Lynn Goodwin, who recently retired after 35 years with the Washington Department of Fisheries where he helped create the state's thriving geoduck fishery and pioneer geoduck aquaculture. Also serving as scientific advisor to ATS is Ray RaLonde, an aquaculture extension agent for the Marine Advisory Program and a leading expert in paralytic shellfish poisoning. The third member of the consulting team is Rodger Painter, manager of the state's largest shellfish farming company, shellfish researcher and long time director of the Alaska Seafood Marketing Institute.

Economic Projections

Geoduck aquaculture represents one of the most exciting opportunities in the North American seafood industry. Three large companies in Washington and British Columbia have sold their first crops at premium prices (\$10-\$15/lb.) and the cost of production is relatively low for such a high value product.

Geoducks, the world's largest burrowing clam, reach two pounds within four to five years as an aquaculture crop, producing a relatively quick cash flow for such a valuable crop. Each two-pound clam is worth \$20-\$30, compared to oysters at about \$.40 or littleneck clams at \$.09 each, both of which reach market size in about three years.

ATS plans to reach a production of 750,000 pounds within eight years of planting its first crop of geoducks. Sales will reach \$8 million a year, and the company will support a workforce 25 persons with an annual payroll of more than \$500,000. ATS will become one of the larger, year-round private employers in the region. Two Ketchikan divers have received advanced dive training at one of the nation's leading dive schools in California under a training grant obtained by ATS.

ATS has been capitalized through private financing with some assistance from government training and research grants. Additional private investment capital to cover start-up costs currently is being raised, and the company is investigating long-term financing that may come available through federal initiatives to develop the U.S. aquaculture industry.



October 23, 1999

**Bob Tkacz
Alaska Fisherman's Journal
Juneau, Alaska**

Dear Mr. Tkacz:

I thought I might follow up our interview in Juneau with some more information on what Alaska Trademark Shellfish is trying to accomplish, and how our geoduck aquaculture project is an appropriate use of the state resources.

The goal of our company is to develop a profitable year-round seafood business that will employ 15-25 Alaskans. Our company was formed by three long-time Southeast fishermen (salmon, longline and dive fisheries) who were concerned about our ability to continue to make a decent living and decided to gain more control over our business of producing high quality seafood.

As active participants in the geoduck dive fishery, we were particularly concerned about the management of the fishery and slow progress toward making it a viable harvesting business endeavor for participants. What prompted us to action was the realization that Alaska's geoduck resources will never support a large harvest because of limited habitat and that our tiny fishery is about to be overwhelmed by farmed product from Washington State and British Columbia.

My decision to become involved in aquaculture was not easy. I was born and raised in Ketchikan and always have made my living as a fisherman. My salmon seining business had become very marginal over the past decade, my longline quotas were too small to remain viable, and the geoduck quota was being cut. It became difficult to see how I could continue to adequately provide for my wife and two young children. I sold my fishing business to help finance our new business venture, and my partners have made similar sacrifices.

Alaska Trademark Shellfish has carefully prepared to make our entry into the aquaculture business by visiting geoduck farms in Washington, contacting scientists, researchers and farmers, and hiring an knowledgeable expert on geoduck biology and aquaculture. We have collaborated with the University of Alaska and the Qutekcak Shellfish Hatchery in Seward in projects to conduct controlled growth studies, broodstock collection and research into sub tidal planting methods. The Marine Advisory Program plans to develop a husbandry manual for Alaska farmers using project results.

We applied for sites on the west coast of Prince of Wales Island following careful research into selection of suitable habitat in relatively protected areas. The choice also was based upon minimizing potential conflicts with other users, including the geoduck fisheries, the nearest of which are 45 (Gravina Island) and 60 (Noyes Island) air miles away. The area is not included

in sea urchin or sea cucumber harvest areas, and there are no other commercial fisheries nearby. Likewise, the isolated area does not support sport, personal use or subsistence fisheries or pose any other conflicts.

Yes, the sites do contain significant numbers of geoduck clams, and we do plan on utilizing these standing stocks to offset propagation costs and support the hatchery's high research and development costs for producing the seed we need for planting activities.

The following table uses ADF&G's biomass estimates for our proposed sites to show what the resource might mean on an annual basis for the geoduck fishery. The figures also assume an exploitation rate of 2%, a 1998 \$2/lb. grounds price, and participation by 160 (moratorium number) and 104 (proposed number of limited entry permits) divers.

Site	Acreage	Biomass	Annual Harvest	Annual Value	\$/Diver (160)	\$/Diver (104)
Dall Is.	8.78	198,057	3,961	\$7,922	\$49.51	\$76.17
Long Is.	6.82	73,348	1,467	\$2,934	\$18.34	\$28.21
Long Is.	18.01	343,880	6,877	\$13,754	\$85.96	\$132.25
Totals	33.61	615,285	12,305	\$24,610	\$153.81	\$236.63

The 12,000 pound annual harvest would be about the size of the Seymonds Bay geoduck fishery on Biorka Island in Sitka Sound, a fishery that ADF&G generally is nervous about opening for fear of over-harvesting. The fleet is capable of taking a 12,000 pound quota in a two-hour opening.

In contrast to the 12,000 lb. annual harvest, Alaska Trademark Shellfish's farming operations would produce one million pounds of geoducks per year at the site and provide year-round employment for 15-25 Alaskans, including most of which will be divers. ATS has secured funds to send several Alaskans to a first-class advanced dive school in California and we plan to recruit other divers to work on the project.

Limited entry has been proposed for the Southeast geoduck fishery. Participation would be limited to 104 divers. While non-resident divers will get about 60 percent of the permits, these more experienced divers take about 80 percent of the quota. Limited entry will eliminate 56 mostly resident divers from the fishery.

Alaska captures very little from the geoduck fisheries which are managed to take the quota very quickly, effectively relegating the fishery to lower-value processed markets. A slower paced fishery could cater to the more lucrative live market in China, doubling the grounds price to divers.

This is in stark contrast to the estimate of one of the region's largest shellfish farm which estimates 90 per cent of its revenues are spent in Alaska because of the year-round nature of the business. I believe it is in the state's best interest to encourage and support development of geoduck aquaculture by local residents. Approval of applications like those submitted by my company is the best thing the state could do to help residents develop year-round businesses in rural Southeast Alaska.

My partners and I believe other Southeast geoduck divers would be better off getting involved in aquaculture operations. I was one of the first Alaskans to get involved in the geoduck dive fishery, helped start the state's first dive fishery association, and was a leader in the effort to obtain legislative approval of the self-assessment funding mechanism for the dive fisheries. Despite the resolution opposing geoduck aquaculture from the Southeast Alaska Regional Dive Fishery Association, I know that many other divers support farming the species in Alaska.

Thank you for considering these comments as you write your article.

Sincerely,

Scott Thomas

U. S. DEPARTMENT OF COMMERCE

AQUACULTURE POLICY

Vision for U.S. Aquaculture: To assist in the development of a highly competitive, sustainable aquaculture industry in the United States that will meet growing consumer demand for aquatic foods and products that are of high quality, safe, competitively priced and are produced in an environmentally responsible manner with maximum opportunity for profitability in all sectors of the industry.

DOC Aquaculture Mission: A mission of the Department of Commerce(DOC) is to create sustainable economic opportunities in aquaculture in a manner that is environmentally sound and consistent with applicable laws and Administration policy. This mission complements and is an integral part of the Department's effort to restore and maintain sustainable wild stock fisheries in order to maximize the benefits of U.S. coastal resources for its citizens. Aquaculture in the United States can make major contributions to the local, regional, and national economies by providing employment in a new and diverse industry and by creating business opportunities both here and abroad. The United States can lead the world in the development of aquaculture technologies and advance international guidelines for the industry in order to maintain a healthy environment.

Definition: Aquaculture is defined as the propagation and rearing of aquatic organisms in controlled or selected aquatic environments for any commercial, recreational, or public purpose.

DOC Aquaculture Objectives: The DOC and its agencies, working in partnership with USDA, DOI, other Federal agencies, state, local, and tribal governments, environmental organizations, industry, academia, and other stakeholders at the national and regional levels will create a business climate and technological base for industry to develop environmentally sound aquaculture. The specific objectives by the year 2025 are to:

- A. Increase the value of domestic aquaculture production from the present \$900million annually to \$5 billion, which will help offset the \$6-billion annual U.S. trade deficit in seafood.
- B. Increase the number of jobs in aquaculture from the present estimate of 180,000 to 600,000.
- C. Develop aquaculture technologies and methods both to improve production and safeguard the environment, emphasizing where possible those technologies that employ pollution prevention rather than pollution control techniques.
- D. Develop a code of conduct for responsible aquaculture by the year 2002 and have 100% compliance with the code in Federal waters.
- E. Double the value of non-food products and services produced by aquaculture in order to increase industry diversification.
- F. Enhance depleted wild fish stocks through aquaculture, thereby increasing the value of both commercial and recreational landings and improving the health of our aquatic resources.
- G. Increase exports of U.S. aquaculture goods and services from the present value of \$500 million annually to \$2.5 billion.

Policy Implementation: To achieve these objectives, the Department of Commerce and its agencies, working in partnership with USDA, DOI, other Federal agencies, state, local, and tribal governments, environmental organizations, industry, academia, and other stakeholders at the national and regional levels will:

- Work with stakeholders to develop a set of aquaculture guidelines for DoC aquaculture activities by the end of the year 2000 and ensure that all subsequent Departmental activities conform to these guidelines.
- Conduct research and help develop guidelines for an environmentally sound and sustainable aquaculture industry and promote domestic and international compliance with the guidelines.

- Consistent with these guidelines, conduct basic and applied research to domesticate additional species, giving preference to high-value species and to those that are least likely to create problems for the environment.
- Deliver U.S. government aquaculture services, assistance, and research to state and local governments and industry in a comprehensive and coordinated manner.
- Hold national and regional meetings with aquaculture constituents to inventory present resources and issues and set priorities for the future.
- Develop an efficient and transparent permitting process for aquaculture.
- Accelerate the implementation of new aquaculture production methods by developing both pilot scale and demonstration projects where necessary.
- Develop effective enhancement strategies, where appropriate, for aquatic species to help wild stock fisheries recover and to provide additional recreational opportunities.
- Integrate aquaculture development with wild fish stock management and environmental stewardship to maximize the value of our aquatic resources for the benefit of the nation.
- Minimize the adverse impacts of aquaculture on protected species through proper design and siting of facilities and the application of appropriate deterrent technologies.
- Provide financial, marketing, and trade assistance to the aquaculture industry.
- Provide extension, training, and education programs to ensure a competitive, safe industry.
- Provide an information clearinghouse and information dissemination system to facilitate achieving aquaculture objectives.

AQUATIC FARM AUTHORIZATION GUIDELINES

The following guidelines are offered by the agencies to assist in selecting an aquatic farm site that has the best chance for approval. DEC, Environmental Health Certification Guidelines are included at the end of this packet. These guidelines are not meant to be all inclusive and are in addition to any prohibitions or mitigating requirements that may be included in a district coastal management plan, a state land use plan, municipal or borough land use plans and/or local ordinances or zoning requirements. If your project is located within any of the above areas you should consult the appropriate document before you submit your application.

SENSITIVE AND UNACCEPTABLE AREAS

The following guidelines to Sensitive and Unacceptable areas are provided by ADFG, DEC, and DNR. They concern siting issues separate from the health certification guidelines at the end of this package. Please contact the representatives of the departments identified on page 4 if you have questions regarding the guidelines.

State tidelands and submerged land adjacent to federal conservation units such as National Parks, Forests, and Wildlife Refuges will be managed consistent with the management intent of the uplands. DNR will consult with the upland manager when determining compatibility of activities.

The siting of aquatic farm facilities may be more difficult on tidelands designated for log transfer or storage, mineral transfer or access, commercial activities or recreation and areas designated for settlement purposes.

ADFG Habitat maps identifying the location of habitat types which fall in Sensitive and Unacceptable categories are available at ADFG, Habitat and Restoration Division offices statewide. The Catalog of Waters Important to the Spawning, Rearing or Migration of Anadromous Fishes (Anadromous Waters Catalog) and the map atlas to that catalog show documented anadromous fish streams and is available for viewing at all ADFG offices.

UNACCEPTABLE AREAS

Applications for aquatic farm sites located in an Unacceptable Area will be rejected or denied. During application review, if an application is determined to be in an Unacceptable Area, it will be rejected or denied. Please consult the ADFG Habitat Maps and contact state agency personnel if you have questions related to this category.

- **Seabird Colonies:** No aquatic farms or facilities will be sited within 1 mile of seabird colonies.

- **Bald Eagle Nests:** Aquatic farms or facilities must be sited at least 330 feet from bald eagle nest trees.

- **Sea Lion Haulouts and Rookeries:** No aquatic farms or facilities will be sited within 1 mile of sea lion haulouts or 3 miles of rookeries.

- **Harbor Seal Haulouts and Pupping Areas:** No aquatic farms or facilities will be sited within 1 mile of harbor seal haulouts or pupping areas.

- **Walrus Haulouts:** No aquatic farms or facilities will be sited within 1 mile of walrus haulouts.
- **Anadromous Fish Streams:** No aquatic farms or facilities will be sited within 300 feet of anadromous fish streams.
- **Hatchery Harvest Areas:** No aquatic farms or facilities will be sited within Special Harvest Areas (SHA) or Terminal Harvest Areas (THA).

In addition to areas designated Unacceptable due to habitat concerns, applications will not be accepted in:

**Peterson Bay, Southcentral Region
China Poot Bay, Southcentral Region
Pt. Couverden, Southeast Region**

SENSITIVE AREAS

Applications will be accepted in Sensitive Areas, however, these are areas where potential conflicts with fish and game habitats or uses thereof may occur. If an applicant chooses to apply in a Sensitive Area, the application will be processed, but the burden of proof is on the applicant to demonstrate that the proposed farm can be sited in the area in accordance with aquatic farm and other pertinent statutes and regulations.

- **Herring Spawning:** Avoid siting aquatic farms or facilities within herring spawning areas.
- **Shorebird Concentration Areas:** Avoid siting aquatic farms or facilities in shorebird concentration areas.
- **Waterfowl Concentration Areas:** Avoid siting aquatic farms or facilities in waterfowl concentration areas.
- **Clam Concentration Areas:** Avoid siting aquatic farms or facilities within 300 feet of clam concentration area (bed) when proposed activity is destructive to the bed or significantly conflicts with customary and traditional uses of the bed.
- **Sea Otter Concentration Areas:** Avoid siting aquatic farms or facilities in sea otter concentration areas.
- **Undocumented Anadromous Fish Streams:** Avoid siting aquatic farms or facilities within 300 feet of undocumented anadromous fish streams.
- **Kelp and Eelgrass Beds:** Avoid siting aquatic farms or facilities within 300 feet of kelp or eelgrass beds.
- **Areas Subject to Significant Predation:** Avoid siting aquatic farms or facilities in

areas subject to predation or in such a manner as to attract predators.

- **Shallow areas, less than 10 feet (at MLLW):** Avoid siting aquatic farms or facilities in shallow areas that serve as nursery areas for fish, shellfish or aquatic plants.
- **Poor Current Circulation Areas:** Avoid siting aquatic farms or facilities in areas where currents are too weak to disperse biological wastes.
- **Black and Brown Bear Concentration Areas and Travel Corridors:** Avoid siting aquatic farms or facilities in black or brown bear concentration areas and travel corridors.
- **Subsistence Harvest Areas:** Avoid siting aquatic farms or facilities within or adjacent to subsistence harvest areas.
- **Recreational or Personal Use Harvest Areas:** Avoid siting aquatic farms or facilities within or adjacent to:
 - Intensively used non-commercial hunting and fishing areas
 - Intensively used non-commercial harvest areas for fish and shellfish
- **Commercial Harvest Areas:** Avoid siting in or adjacent to:
 - Intensive Commercial Fish Harvest Areas; Purse seine hook offs.
- **Heavily Used Anchorages:** Avoid siting aquatic farms or facilities in heavily used anchorages of local or regional importance.
- **Float Plane Access Areas:** Avoid siting aquatic farms or facilities in intensively used float plane access areas.
- **Oiled Areas:** Avoid siting facilities in areas depicted on maps as lightly, moderately or heavily oiled in Southcentral coastal waters.

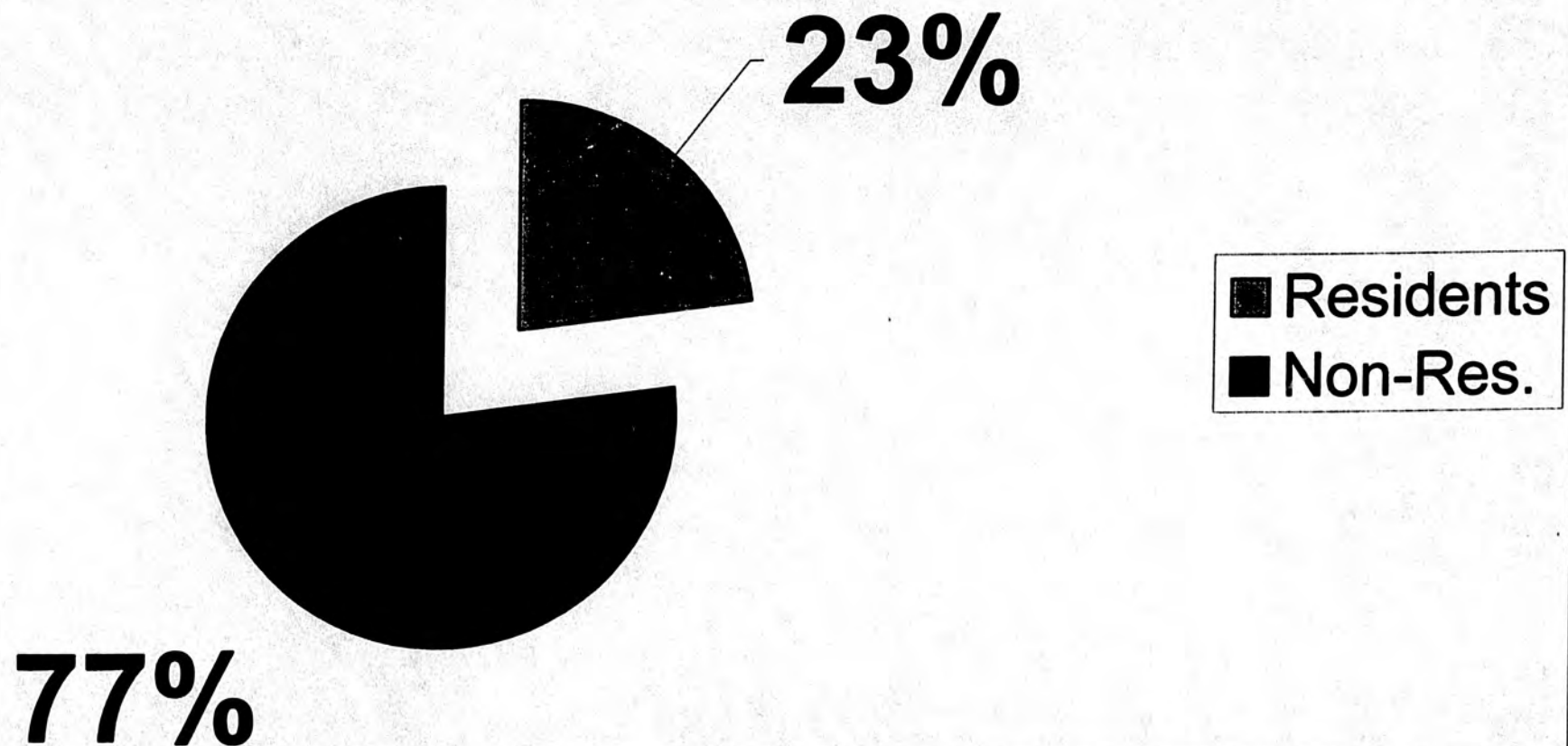
Applications within the following locations were denied during prior application filing periods due to land use or user conflicts. Applications located in these areas will receive the same scrutiny and be subject to the same requirements as Sensitive Areas.

Dunbar Inlet, Sukkwan Island, Southeast Region
William Henry Bay, Southeast Region
Stedman Cove, Southeast Region
Idaho Inlet, Southeast Region
North Bight, Neka Bay, Southeast Region
El Capitan Island, Southeast Region

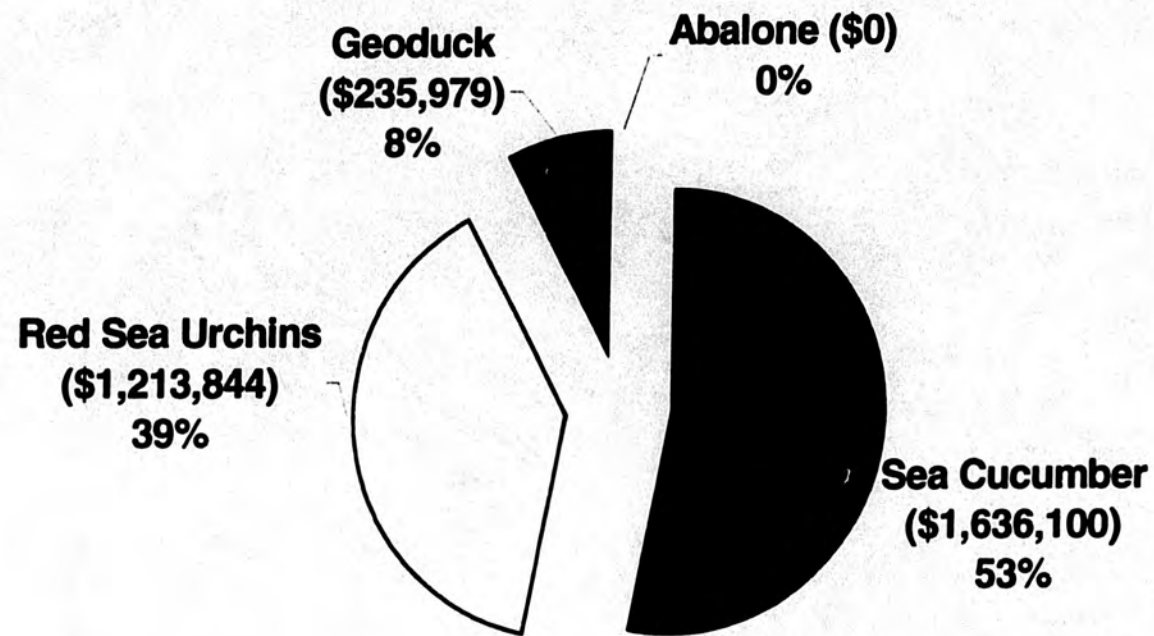
1999 Southeast Alaska Geoduck Fishery

Quota	200,000
Ex-Vessel Price	\$1.70 per lb.
Self Assessment @ 5%	\$17,000

Southeast Alaska Geoduck Fishery Landing Average By Residency Since 1990



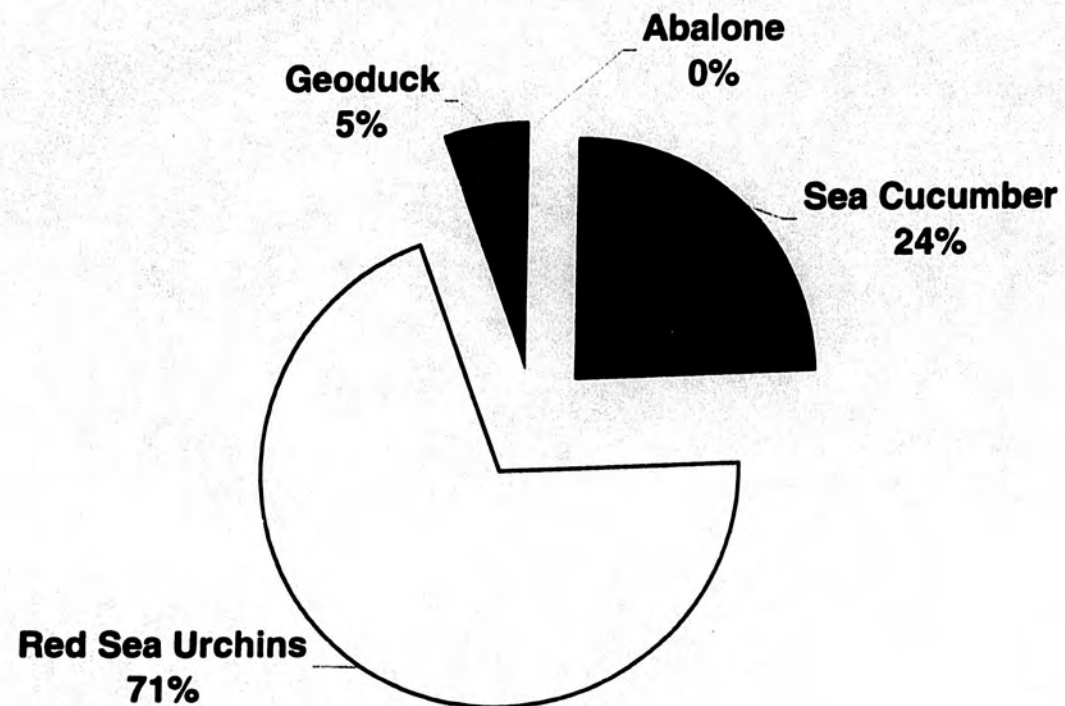
1998/99 DIVE FISHERIES Exvessel Value by Species



Total Exvessel Value = \$3,086,000



1998/99 DIVE FISHERIES Harvest by Species



Total Harvest = 4,326,200 pounds



Developing a capture fishery for geoduck clams in SE Alaska is problematic for three primary reasons:

- 1. The complexity of developing and managing a fishery of variant populations of clams spread over an expansive coastline is manpower intensive and too expensive to accomplish.**
- 2. Water quality certification required by the Alaska Department of Environmental Conservation is logistically complicated and expensive to perform and maintain on an annual basis**
- 3. Testing harvested shellfish for paralytic shellfish poison toxin is complicated by the remoteness of the fisheries, logistical problems of sending samples, and the shipping costs.**

Short Form, Detail Next page

Chronology of Clam Farming Policy Efforts

- 1988** Aquatic Farm Act adopted
- 1990** First permits under new law issued
- 1992** Industry approaches ADF&G about obtaining permits to farm littleneck clams
- 1993** First clam farming applications submitted
- 1994** First clam farming permits issued
- 1995** ADF&G commissioner Rue appoints clam farming task force which meets and disbands without issuing any recommendations or findings
- 1996** Three more clam farming permits issued
- 1997** At the request of ADF&G, the Alaskan Shellfish Growers Association (ASGA) and the Marine Advisory Program organize a major three-day conference in Anchorage designed to produce clam farming policy recommendations for Alaska. The agencies did nothing with the conference results.
- 1997** Alaska Supreme Court issues opinion which clouds legality of all aquatic farm permits. Legislature passes new law correcting problem and replacing 3-year permits with 10-year leases.
- 1998** ADF&G tells House Resources Committee it would have on-bottom aquaculture policies in place prior to January 1999 permit opening, but no policy statements or draft regulations were ever produced.
- 1999** ADF&G tells House Resources Committee that clam farming policies are being fast-tracked and should be in place by closure of application period on April 30. This deadline too was missed without apparent effort to draft policies or regulations.
- 1999** 45 aquatic farm applications submitted during first permit opening since Supreme Court decision.
- 2000** ADF&G recommends all on-bottom aquaculture permits be found inconsistent with ACMP or decides to deny operational permits. ADF&G also suspends ACMP to provide time to draft regulations addressing on-bottom aquaculture permits.

SARDFA
Southeast Alaska Regional Dive Fisheries Association
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Legislators of the State of Alaska
Capitol Building
Juneau, AK

March 1st, 2000

RE: SARDFA's position on aquatic farming of geoducks

Dear Legislators,

I am writing to you on behalf of the Board of Directors of the Southeast Alaska Regional Dive Fisheries Association, SARDFA. The Board of Directors is composed of eight directors: one mayor, one processor from the dive industry, and six divers (one at-large, and one from each community - Ketchikan, Craig, Sitka, Petersburg, and Wrangell). SARDFA was officially recognized by the State on March 5th, 1998. SARDFA is a non-profit, economic development corporation with the following mission statement:

- The mission of the Association is to develop, expand and enhance new and existing dive fisheries in Southeast Alaska. This is to be done by implementing the Regional Dive Fishery legislation, CSHB198 (self-assessment), and by collecting, organizing, and utilizing other appropriate resources.
- The Association views the local knowledge, experience, and talents of dive fishermen as a primary resource to be used and coordinated by ADF&G to help develop commercial dive fisheries in an economically feasible manner.

The divers voted to assess themselves (7% for urchins, 5% for geoducks and sea cucumbers) and began collection of the assessments in 1999. The assessments are expected to total \$330,000 the first year, and these funds will go to increase management activities and areas open to harvest. This background information will help to better understand SARDFA's position regarding aquatic farming of geoducks.

SARDFA is not opposed to aquatic farming. In fact, SARDFA is interested in supporting any economic development activities for Southeast and its residents. However, SARDFA cannot currently support geoduck farming due to the serious conflicts it raises between farming and wild harvesting of geoducks. In the last Board of Directors' meeting, February 25th, 2000, the Board expressed the following concerns about the current geoduck farm applications.

Standing Stocks

Greg Wood (SARDFA Director): "Can geoduck farming work in Southeast Alaska without utilizing standing stocks?"

Scott Thomas (farm applicant): "I think so, but you would need about \$5 million dollars to do it."
-taken from the minutes of the SARDFA Board of Directors' meeting, 2/25/00

The largest concern within the geoduck dive industry is the use of standing stocks to finance the farm operations. SARDFA believes allowing the geoduck farmers to use standing stocks to finance their operations will drastically hinder SARDFA's plans for development of the common property geoduck dive fishery.

The areas requested in the farm permit applications have not been fully utilized at this point by the common property geoduck fishery due to a lack of funding within the State to do so. ADF&G has not had the money to survey these unutilized areas in order to set guideline harvest levels and allow commercial harvests. The hindrance of the development of the dive industry, because of this lack of State funding, has been the main reason for organizing SARDFA and the dive assessments. The dive industry has been planning this development for five years with financial support from the communities, divers, and processors of Southeast. With this funding mechanism in place, the geoduck industry is poised to open these unutilized areas to increase the annual quota available for harvesting. Now is the first year that the dive assessment will return to the geoduck fishery to help fund this development.

Several of the geoduck farm applicants are actually divers who have been intimately involved in the planning of the development for the geoduck fishery for the past five years. These applicants are now asking the State for exclusive rights to standing stocks, which would seriously impair development of the common property geoduck fishery. These applicants did not come to SARDFA for support during the application period, nor have they supplied information regarding their farming operations to SARDFA when asked, until this past Board of Directors meeting.

Some farm applicants have implied that they have not requested much area compared to the entirety of Southeast. However, it is the nature of the wild geoduck to grow in small, concentrated pockets, called "beds". These beds do not occur everywhere throughout Southeast. It has been a part of the planning of the development of the geoduck fishery to find these beds and fund the surveying of them. However, several of the largest known beds to divers have been requested by farm applicants.

Enforcement & Lack of Guidelines

The next most important issue to the SARDFA Board of Directors is enforcement. If a farm is operating 365 days/year in a remote area, it would seem next to impossible to enforce regulations about how much product is sent out and from where. Also, there are currently not adequate guidelines for establishing and managing the geoduck farms.

Brood Stock

There remain two important questions to SARDFA surrounding the taking of brood stock to supply "seed" to the geoduck farms: How much brood stock is needed? From where will it be taken?

Funding State Activities

Since the dive industry was required to put forth an assessment to develop its industry in the face of dwindling State finances, it would only seem fair to expect the same of the aquaculture industry.

Disease and Competing Markets

As with finfish farming, the impacts of disease and competing markets on the wild geoducks as a result of geoduck farming has not been adequately discussed.

Options

In conclusion, the SARDFA Board of Directors offers the following options to help solve these conflicts:

- 1) Geoduck farm applicants choose sites that do not contain commercial amounts of geoducks, as defined by ADF&G.
- 2) Geoduck farm applicants seek outside funding in order to pay for any necessary start-up costs, instead of financing farms with the use of standing stocks from a developing common property fishery.
- 3) If the previously stated concerns cannot be resolved at this time, geoduck farm permits should not be issued until these concerns can be resolved.

Thank you for your time and consideration in this matter. Over 100 individual small businesses within Southeast will be affected by your decision.

Sincerely,

Julie Decker, Executive Director, SARDFA

Cc: Representative Harris, Co-Chair, FSH
Representative Morgan, Co-Chair, FSH
Representative Hudson, Co-Chair, RES
Representative Masek, Co-Chair, RES
Representative Phillips, Chair, ECT
Senator Halford, Chair, RES
Senator Taylor, Vice-Chair, RES
Senator Torgerson, Co-Chair, FIN
Doug Mecum, ADFG
Jackie Timothy, ADGC
Guyla McGrady, ADNR
Scott Thomas, Alaska Trademark Shellfish
Roger Painter, Tenass Pass Shellfish Co.
Board of Directors, SARDFA

Alaskan Shellfish Farming: Year 2000 Update

By
Raymond RaLonde
University of Alaska
Marine Advisory Program

Since Alaska Legislature passed Aquatic Farm Act in 1988, the shellfish farming industry has grown from a single farm to 56 farms permitted to grow shellfish on 219 acres of state tidelands spread throughout the southcentral and southeastern regions. In 1998, 46 new applications were submitted requesting an addition 561 acres. The applications are now under review by the Alaska Departments of Fish and Game and Natural Resources.

Although industry growth has been level during the past few years, significant developments lead the Alaskan shellfish farming industry to project a potential increase of shellfish sales from the current \$450,000 to over \$13 million by the year 2005. The optimistic production increase is due to intense cooperative efforts to solve the biological, economic, and regulatory problems that have constrained industry growth since its inception.



An oyster farm in Kachemak Bay.

Solutions to Industry Constraints

The cold temperatures of Alaska's pristine marine waters produce premium quality shellfish, but the corresponding slow growth of cultured shellfish challenges farmers to meet their production goals and pay their operational expenses. Alaska also has the strictest exotic species import regulations in the nation that prevents farming of valuable species grown in the Pacific Northwest and Canada. Until recently, farmers could only grow Pacific oysters for the live market since oyster seed, available from shellfish hatcheries outside the state, is the only shellfish allowed across the state border. In addition, imported oyster seed has often been poor quality and displayed unpredictable survival on Alaskan farms, and seed from any other native species has not been available. However, the picture is now considerably different. Since completion of the Qutekcak Shellfish Hatchery in Seward in 1997, littleneck clam and purple hinge rock scallop seed are now available for purchase. In addition, a grant from the Alaska Science and Technology Foundation, is funding the hatchery to conduct seed production



Qutekcak Shellfish Hatchery - Nearly 10,000 square feet utilizing leading edge technology to produce shellfish seed.

research for geoduck clams and cockles. These valuable, high demand shellfish will make an enormous contribution to the economic viability of Alaskan shellfish farming. In an effort to produce a Pacific oyster strain specifically suited for Alaska growing conditions, the shellfish industry is also participating in the West Coast Molluscan Broodstock Program (MBP). The aim of MBP is to develop selectively bred fast growing oyster family lines. The first two-year growth trial of 52 oyster family lines produced by MBP ended in the spring of 1999, and adults from top six performing brood lines are now in

the Qutekcak Shellfish Hatchery as broodstock for future seed production. Seed from a second set of oyster families is now under cultivation at the research growout site in Prince William Sound, and in two years will be evaluated for inclusion into the hatchery broodstock.

Success of the Shellfish Hatchery and Nursery Culture

Since the water was first turned on in the winter of 1997, the Qutekcak Shellfish Hatchery has demonstrated unprecedented success producing seed for three important shellfish species. Most shellfish hatcheries need over a decade of troubleshooting the systems to show such results. While seed production is

impressive, the hatchery needs a growing industry that will buy the seed. For this reason, the hatchery operators are extremely nervous about the current permitting process and the delays caused by the review.

A nursery culture research project to improve the seed quality of oysters was conducted from 1997-98 as a cooperative effort between the Alaskan Shellfish Growers Association, Kachemak Shellfish Mariculture Association, Alaska Department of Fish and Game, Alaska Science and Technology Foundation, and the University of Alaska Marine Advisory Program. This project exemplified the tremendous benefit of conducting joint research. The nursery culture research has resulted in production of larger, higher quality oyster seed that will substantially shorten oyster growout time and reduce operational costs of the farm by as much as 40%.

Tidelands Leasing

For farmers, 1998 marked an important year with a change of Alaska Department of Natural Resources tidelands lease regulations. Before the tidelands regulatory change, farmers operated under a three-year tidelands permit program at the time they received a shellfish farming permit. Now farmers receiving permits will possess a ten-year renewable tidelands lease. For the first time since the industry began, farmers have the security needed to obtain financing.

Market Potential

Always in Alaska's favor, water quality problems continue to plague farmers in the lower 48. In the March 2 Anchorage Daily News, an article "Puget's water, wildlife, threatened, report says", summarizes a report from the Puget Sound Water Quality Action Team, that water quality is "...heading downhill." Both 1998-99 have also been years where harmful algal blooms in the Pacific Northwest and British Columbia have caused closures of areas for shellfish harvest. To date, Alaskan farmers have been able, utilizing the efficient paralytic shellfish toxin testing program from the Department of Environmental Conservation, to manage around any marine toxin problem. Pristine water quality remains our best asset.

Marketing efforts by the Alaska Shellfish Growers Association have successfully shifted in-state oyster retail sales from predominantly imported oysters to Alaskan cultured product. For several years now, the farmers have sold every oyster they grow and for premium prices. Incorporated into upcoming clam, cockle, and scallop research the University of Alaska Marine Advisory Program and the Alaskan Shellfish Growers Association has submitted a joint proposal to develop a marketing program. Preliminary estimate shows that the Anchorage market alone can absorb over one million pound of littleneck clams annually. Associated with the marketing effort are research proposals to investigate shelf life characteristics of clams and the potential for freezing oysters for distant markets.

Growout research projects for geoduck and littleneck clams have been funded, and the littleneck clam project is scheduled for spring 2000. During the three years required for these projects, the research will provide farmers essential information on site selection, clam biology, and farming protocols necessary to maximize production.

The greatest challenge now facing the industry is the flaws evident in the current aquatic farm application review process. The 1999 round of application review can best be described as chaotic. With ill-defined policies in place allowing for on bottom aquaculture, comments and recommendations made by reviewing agencies have lead to fierce confrontation. The industry and agencies must come to some agreement and develop policies to prevent this type of review from happening again.

Each research and developmental success and regulatory reform improves the prospects for growth in Alaska's shellfish aquaculture industry. The shellfish aquaculture industry provides year around income and employment, farms spend most of their money locally, and any adverse environmental effects are minimal. In an era where Alaska's coastal communities are feeling major economic hardship, opportunities in shellfish farming and businesses supporting the industry can contribute to improving their economic wellbeing.



Halibut Cove Shellfish Nursery - Nursery culture can take a year off the production time for oysters, and increase farm efficiency by reducing gear requirements and labor cost.

Why Clam Farming?

Alaska has enormous potential as a supplier of littleneck clams, often called steamer clams, to the seafood market. Past and current efforts to develop a commercial fishery on the abundant clam resources of Alaska have resulted in limited harvest caused by logistics and economic problems associated with managing the fishery. At present, only Kachemak Bay has a commercial harvest of littleneck clams, and because of depleted stocks, the fishery is limited to only 25,000 pounds annually.

The topic of clam farming in Alaska first appeared as an agenda item at the 1987 4th Alaska Sea Grant Aquaculture Conference. With high worldwide consumer demand for steamer clams and short supply of littleneck clams for the Alaska seafood market, new and existing farms are eager to pursue clam farming.

In 1991, Alaska's original clam farmers were allowed to harvest clams only under commercial fisheries regulations of the Alaska Department of Fish and Game (ADF&G). The first official clam farms were permitted in 1993. Expecting broader interest in clam farming a conference, titled Broadening Shellfish Farming Opportunities in Alaska, was sponsored in 1996 by the ADF&G, the Alaskan Shellfish Growers Association, and the University of Alaska Marine Advisory Program. The purpose of the conference was to begin development of a regulatory program for on-bottom aquaculture in Alaska. At the conference, ADF&G representatives issued a clear statement that the department did not have the resources to manage a commercial clam fishery beyond that existing in Kachemak Bay and favored development of clam farming.

By the end of 1997, three aquatic farmers have obtained tidelands leases to farm littleneck clams in southeastern Alaska. Their combined 1998 harvest was 35,014 pounds of clams worth nearly \$87,535.

What is Clam Farming?

Farming clams requires application of well established farming practices to an existing clam population that will increase the beach productivity and allow for a sustained harvest of the enhanced clam population. In Alaska, farming activities include:

1. Regular inventories of standing stock and determination of the size composition of the clams.
2. Optimizing growth and production of clams by controlling their density by harvest planning, redistribution of seed from overstocked parts of the bed, and/or planting hatchery produced clam seed.
3. Reducing clam mortality by appropriate use of predator exclusion netting.
4. Maintaining the beach free of major deposits of large debris and improving the substrate quality.
5. Harvesting clams to maximize their value and marketability.
6. Complying with the required Alaska Department of Environmental Conservation water quality testing program, and marine toxin certification of farmed product.

Performance of these farming activities, is far beyond what is required of a commercial clam harvester.

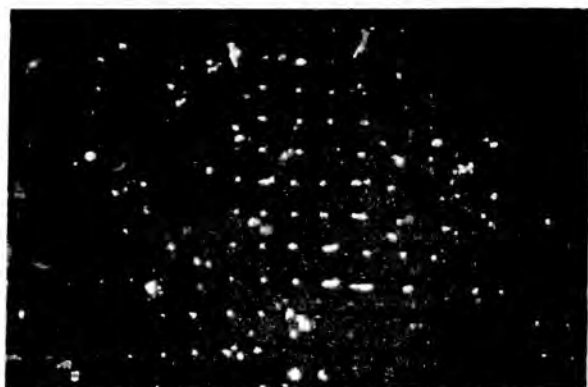
What is a clam farm? A pictorial tour



Clam farming may require application of predator exclusion netting. In this picture, a trench has been dug to anchor the margins of the net.



Predator exclusion netting is rolled out over the prepared plot.



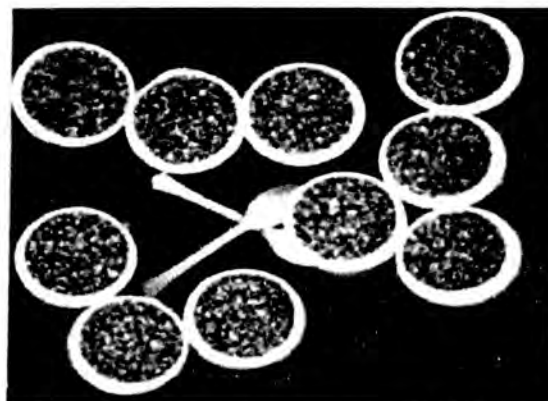
Predator netting is about 1" square mesh. It is not intended to exclude all predators. Crabs and starfish are the farmers primary concern. Birds can feed through the netting



Predator nets anchored and ready for seeding clams.



The farm plot after a few months. Predator netting is partially covered by sediment and algae growth.



Measured quantities of clam seed ready for planting the farm.



Planting clam seed over the netting. Clams are smaller than the net mesh and will dig themselves in as the tide covers them.



In Alaska, clam harvesting is done by hand.

Impacts of clam farming

Environmental (Statements in parenthesis are editorial comments needed for clarification).

Mojica, R. and W.G. Nelson. 1993. Environmental effects of a hard clam (*Mercenaria mercenaria*) aquaculture site in the Indian River Lagoon, Florida. *Aquaculture*. Volume 113, page 326.

- "Measurements of water column nutrients and chlorophyll concentrations gave no indication of changes "
- "sediment differences were not associated with significant changes in benthic dwelling organisms."
- "Differences in mobile macrofauna were minimal " (between aquaculture and natural sites)

Spencer, B.E., M.J. Kaiser, and D.B. Edwards. 1997. Ecological effects of intertidal Manila clam cultivation: observations at the end of the cultivation phase. *Journal of Applied Ecology*. Number 34. Page 451.

Our results suggest that the biotic and abiotic changes caused as a result of clam cultivation are relatively benign compared to other forms of marine cultivation

Kaiser, M.J., I. Laing, S.D. Utting, G.M. Burnell. 1998. Environmental impacts of bivalve mariculture. *Journal of Shellfish Research*. Volume 17. Number 1. Page 63.

the benthic community within dredged plots was indistinguishable only 3 months after harvesting regardless of the scale of disturbance,

Brooks, K. 1996. Intensive clam culture and the environment. *Proceedings of the conference: Broadening Alaska's shellfish farming opportunities: A conference and workshops focusing on public issues involved with the development of on-bottom culture of indigenous shellfish*. University of Alaska Marine Advisory Program. Anchorage, Alaska. Page 41.

Of all the forms of aquaculture, intertidal shellfish culture is undoubtedly the most benign. If you minimize encroachment on eel grass beds and find effective methods of predator control, the several hundred pages of literature reviewed in preparing this talk suggest only positive environmental affects associated with either intensive clam or oyster culture.

Economic Impacts

The current commercial harvest limit for littleneck clams in Kachemak Bay is 40,000 lbs. Local management has set the commercial harvest at 25,000 lbs having a market value at \$2.50/lb or \$62,500. Actual 1998 harvest was less than 20,000 lbs.

An aquatic farm can produce, with predator protection and seeding, about 10 times the biomass of clams as a natural population. By any definition, this level of production increase would be considered enhancing the clam population of the beach.

Aquatic farming in can produce an estimated conservative production of 12 harvestable clams per square foot per year. From a 10 acre plot, the total harvest would be 435,000 lbs. worth approximately \$1.1 million.

What is the market?

Homer

- Lands End during the summer buys 6,000 lbs and had indicated that they could sell more than 20,000 lbs if more clams were available.
- His Catch Seafood, Homer, Alaska indicated a sales potential of over 40,000 lbs. annually.

Anchorage

- Favco, Anchorage's largest seafood wholesaler, estimates the Anchorage market demand for littleneck clams at over 1,000,000 lbs. annually.

Western Region of U.S. (Aquaculture situation outlook, Western Regional Aquaculture Center)

- "In 1997, it is estimated that over 5.4 million pounds of clams were produced at an estimate of over \$13.7 million." Farmers are converting oyster production into clam farms, and by 2002 production will increase to 7.7 million pounds

United States

- The long term trend (1988-1998) for clam landings showed an overall decrease, however, imports have increased.

Export market

- The long term trend of clam exports (1988-1998) have shown an increase of 196.16% from 661 metric tons to 1,958 metric tons.
- Recently, exports of clams have been somewhat variable depending on the economic circumstances in Asia. In 1998 exports rose 8% while in first half of 1999, exports declined by 15%. We do know, however, that water quality in Asia is a great concern, and shellfish grown in clean water will have an economic advantage.

Effect clam farming on other clam fisheries in Alaska

- There is no littleneck clam fishery outside of Kachemak Bay
- The Kachemak Bay clam commercial fishery is very limited
- In a hearing before the Alaska Legislature: House Resources Standing Committee Mr. Kevin Duffy, acting deputy director of the ADF&G Division of Commercial Fisheries Management and Development was asked by Representative Harris.

Rep Harris: "Is there anything about this industry that has a negative effect on any other seafood industries that it works around or that it's processed around?"

Kevin Duffy: "The clear answer to that is no."

Clam Aquaculture in Kachemak Bay is:

- **NOT a public access problem**

Clam farming occurs in the intertidal zone between +2 and -2 tide level. The only evidence of clam farming may be the deployment of predator exclusion netting to the beach. The netting is durable and walking on it will not be a problem. Clam farming will not deny access to the beach.
- **NOT a navigational hazard**

Clam farming does not use any floating structures. If necessary, to improve clam seed survival, predator netting may be secured to the beach at between +2 and -2 tide level. The margins of the netting are anchored to the bottom with U shaped rebar stakes or the margins may be buried in the substrate. The netting and anchoring methods are no hazard to boats.
- **NOT monoculture**

By definition, monoculture is the practice of culturing a single organism to the exclusion of all other organisms. Many studies (Mojica and Nelson, 1993; Spencer et al. 1997; Kaiser et al. 1998; Brooks 1996) show that clam aquaculture does not significantly effect the natural species composition of the bottom (infauna), and off bottom (epifauna) of the intertidal zone. In some instances, production of other species is enhanced because the clam density is actually reduced to optimize clam growth. Even beaches covered with predator exclusion netting.
- **NOT disruptive to salmon migration**

Clam aquaculture is located high on the beach, and farm siting must follow Alaska Department of Natural Resources guidelines that require farms to be located at least 300 feet away from any anadromous fish stream. Predator netting is attached tightly to the beach, and the 1" mesh size is not large enough to entangle adult salmon.
- **NOT a commercial fishery**

Clam farmers intensively manage the clam population of the farm site by seeding juvenile clams, excluding predators, taking regular inventories, enhancing the substrate, and marketing the harvest to maximize the value. A commercial fishery does none of these activities. Clam farming will actually increase the number of clams per square foot from 2-5 at the present level to 30-40.
- **NOT hazardous to birds**

Predator netting is not a hazardous entanglement to feeding birds. The mesh size of the netting is large enough for birds to feed through the netting.
- **NOT a polluting industry**

Shellfish aquaculture requires the purest water quality standards of any marine use. Clams are an important benthic organism since they link nutrients from the water and direct them into beach substrate via their waste products that enable use by bottom dwelling organisms.



CHRONOLOGY OF INDUSTRY EFFORTS TO ESTABLISH A POLICY FOR DEVELOPMENT OF "ON-BOTTOM" AQUACULTURE

- 1992** Tenass Pass Shellfish Company (TPS) discusses opportunities for expanding limited (5,200 lbs./person annually) littleneck clam harvesting opportunities with various officials within ADFG, including commissioner Carl Rosier. ADFG warns commercial harvest permits might be cut off in the near future; TPS determines aquatic farming is the only real opportunity.
- April 1993** TPS applies for clam permits for commercial test plots within bays where oyster permits already provided for aquatic farming activities and commercial harvesting had occurred under commercial fishing permits. Proposal essentially calls for existing clam beds to be managed as aquaculture plots with natural sets, applying aquaculture techniques of predator protection, maintenance at optimum densities, culling of competitors and rotating harvests.
- April-June 1994** Issuance of TPS clam farming permits delayed while DNR-ADFG work out policy issues. ADFG surveys TPS clams beds. Results shows abundant populations of littleneck clams, but slow growth and most existing stocks exceeding recommended stocking densities for clam culture. Drawings of beds reconfigured according to survey results.
- July 1994** TPS submits 4-page management plan for .5 acre of clam beach, including request to harvest one bed to 33 mm [Board of Fisheries minimum size for commercial harvests is 38 mm or 1.5 inches] to reduce densities from 83.7 to 48 clams/ft.² There was no departmental response to this request, despite much interaction with ADFG regional and headquarters managers.
- Aug. 16, 1994** Clam tideland permit (.5 acres) approved for TPS. Permits included requirements of a 38 mm minimum size, submit "fish tickets" for clam harvesting, and work beds using aquatic farming techniques, such as rotational harvesting (a schedule was required), control of predators and removal of competitors, improvement of beaches for digging, and stocking plots at optimum densities. ADFG and DNR advise that policy issues

(standing crops of clams, compensation to the state for loss of common property resources, enforcement, etc.) must be settled before additional permits are issued.

January 1995

Meeting with newly appointed ADFG commissioner Frank Rue to discuss the policy roadblocks against expansion of clam farming opportunities ends with agreement to appoint a working group to hammer out a policy.

February 1995

ADFG clam policy work group chaired by ADFG deputy commissioner Rob Bosworth begins work. TPS meets with task force at beginning of process. No results were made public, except closure of commercial harvesting of littleneck clams in Southeast, while allowing littleneck clam farming to proceed statewide. During the process, asst. attorney general Steve White apparently advises that the TPS operation fits the statutory definition of aquatic farming and meets other constitutional tests such as privatization of common property resources and the "public trust" doctrine.

April 1995

TPS submits applications for 2 acres of clam beaches.

March 1996

Clam conference in Anchorage organized by the Alaskan Shellfish Growers Association (ASGA) and the University of Alaska Marine Advisory Program at the request of ADFG and DNR. Agenda focused on clam management issues and involved officials and farmers from Alaska, Washington and B.C. Conference produces three page of issues involved in the development of a comprehensive clam policy and clam farming industry.

Jan. -Aug. 1996

ADFG-ADNR clam policy work group meets prior to the clam conference to explore policy issues and responses; some of these draft concepts were revealed at the clam conference. Many of these initial ideas (special taxes, expensive third party surveys, etc.) were strongly criticized by Alaska farmers, who were not consulted in the process, as unfair and overly restrictive. Follow-up focused upon clam conference recommendations and revised policies apparently submitted to the department of law for review, but no part of this proceeding was made public, and no policy developments revealed.

August 1996

TPS receives permits for an additional 1.3 acres of clam beaches. Two other farms, Canoe Lagoon Oysters and Blue Water Seafoods each receive 1-acre littleneck clam permits. Final permits included no direction to permit holders on how to "prove up" increases in productivity on clam beaches from aquaculture management.

February 1997	ADNR informs applicants that no applications for littleneck clam beaches would be accepted until policy issues are resolved. 1997 applications for permits later returned when Alaska Supreme Court ruling cast all permits in doubt.
April 1997	Legislature replaces three-year permits with ten-year leases. Remainder of year spent working on regulations to implement new law.
March 1998	Pending legislative overview on aquatic farming results in commitment by commercial fisheries director Bob Clasby to work with ASGA on a clam farming policy.
April 1998	Hearing before the House Resources Committee results in commitment to work with ASGA on policy issues over the interim and invitation to report back during 1999.
October 1998	ASGA president Bob Hartley writes letter to commissioner Rue requesting changes to Kachemak Bay Critical Habitat Area Management plan and asking questions about on bottom aquatic farming. This letter was never answered, although ADF&G staff drafted several responses.
December 1998	ASGA meets with commissioner Rue with outline of clam farming policy issues and obtained promise to deliver a department policy for on-bottom shellfish culture by the end of February.
January 1999	First opening for new aquatic farm sites since 1996. Period open until April 30.
February 1999	ASGA meets with ADFG directors and deputy commissioner Bosworth prior to Feb. 17, 1999, schedule for House Resources Committee meeting on aquatic farming. At the hearing, Kevin Duffy, deputy director of ADF&G's commercial fisheries, assured legislators the department would adopt a policy by the time the application period closed in April.
February 1999	Members of ASGA and a representative of F&G met with Governor Knowles who directed ADF&G to respond to ASGA's written concerns within 10 days. Response came about a month later and still no policy, except for pledge to consider applications on a case-by-case.
March 1999	Commissioner Rue confirms in a letter to ASGA that ADF&G will not accept clam farming applications for Kachemak Bay, as it is not allowed within the critical habitat area.

- April 1999** Rep. Gail Phillips received letter from Department of Law stating that clam farming in Kachemak Bay was not prohibited and applications must be accepted and considered on a case-by-case basis, but that ADF&G could probably deny permits under special area permit process.
- April 1999** Commissioner Rue proposes to ASGA that Kachemak Bay farmers be allowed to have small experimental farms near or adjacent to their farms to provide solid data on impacts. ASGA ask for longer duration and better legal standing for participants. ADF&G later backed away from this proposal.
- September 1999** ADF&G proposed to hold hearings on whether Kachemak Bay Critical habitat area management plan should be changed to address personal watercraft and clam farming.
- October 1999** ADF&G Habitat Director Ken Taylor reveals at ASGA annual meeting ADF&G policy on processing pending applications for on-bottom aquatic farming. The "policy" was handwritten on a notepad and was never formally adopted. The "policy" appears to have changed several times since.
- November 1999 – January 2000** Despite assurances that on bottom aquaculture applications would be considered on a case-by-case basis, ADF&G initially recommends all be rejected and all suspended aquaculture applications be accepted. ADF&G requests numerous delays in process as they are struggling with policy issues. By early January, DGC grants ADF&G request to suspend ACMP consistency process for all on-bottom aquaculture applications. ADF&G recommended all littleneck clam applications be found inconsistent or refused to issue special area or operating permits. Geoduck applications will be on hold for development of regulations, a process that takes at least a year.
- December 1999** ADF&G holds hearings in Anchorage, Seldovia and Homer on clam farming and personal use watercraft in Kachemak Bay after several delays. Public opinion on clam farming was mixed.

Not shown in this chronology of events are numerous meetings between Rodger Painter, TPS managing partner and ASGA president, and ADF&G personnel, including Commissioners Rue and Rosier, commercial fisheries directors Jeff Koenigs, Bob Clasby and Doug Mecum, mariculture coordinators Cochran, Piorkowski and Imamura, and numerous commercial fisheries managers.

1999 Southeast Alaska Geoduck Clam Fishery

Description:

The Southeast geoduck dive fishery has operated as an experimental fishery since 1985. The overall harvest has dropped by about 20 percent since the fishery was initiated. The average price to fishermen in the Alaska fishery generally is less than \$2/lb., compared to a dockside price of \$7-10/lb. in Washington and B.C.

<u>Area</u>	<u>Biomass (lbs)</u>	<u>Quota (lbs)</u>	<u>Value</u>	<u>Fishing Time</u>
Steamboat Bay	3,665,000	53,300	\$ 90,610	72 hours
West Gravina Island	10,730,000	54,600	\$154,037	15 hours
Kah Shakes	3,900,000	39,500	\$118,500	36 hours
Sitka Sound	1,970,000	19,700	\$ 48,462 ¹	unknown

<u>1999 Alaska Geoduck Harvest</u>	
<u>Quota (lbs)</u>	167,100
<u>Estimated Value to Divers</u>	\$411,609
<u>Estimated Value to Alaska Divers</u>	\$94,670 ²
<u>Fisheries Business Tax Revenues</u>	\$4,116.09

¹ The Sitka Sound geoduck fishery was still in progress when these figures were compiled. The value was estimated using a mean price of \$2.46/lb. from the other three fisheries.

² Residents have harvested 23% of the geoduck quota since 1990, according to figures from the Commercial Fisheries Entry Commission.

How One Proposed Geoduck Farm Compares

Description:

Alaska Trademark Shellfish (ATS) has proposed a 33-acre aquatic farm located off the southwestern coast of Prince of Wales Island. The site was selected because of its suitability for geoduck aquaculture and avoidance of conflicts with subsistence, commercial fishing and other activities. For example, the site is located in an area closed to commercial diving and 45 air miles from the closest geoduck fishery. The harvest, value, payroll and tax revenues figures below are based upon ATS projections on what will be attained within 7-8 years after start-up. The biomass figure is the Alaska Department of Fish and Game estimate of the total amount of "standing stocks" of wild geoduck clams currently on the 33-acre site.

<u>Biomass (lbs)</u>	<u>Harvest (lbs)</u>	<u>Value</u>	<u>Annual Payroll</u>	<u>Fisheries Business Tax</u>
550,000	750,000	\$2,250,000	\$500,000	\$67,500

<u>Annual Estimates for One Geoduck Farm</u>	
<u>Harvest (lbs)</u>	750,000
<u>Estimated First Wholesale Value</u>	\$2,250,000
<u>Payroll</u>	\$500,000
<u>Fisheries Business Tax Revenues</u>	\$67,500



February 24, 2000

**Honorable Frank Rue
Alaska Dept. of Fish & Game
P.O. Box 25526
Juneau, AK 99802-5526**

Dear Commissioner Rue:

The Alaskan Shellfish Growers Association (ASGA) is very interested in settling issues related to the farming of littleneck clams in Kachemak Bay. We don't believe that lawyers, bruising political clashes, and popular polls are the best way to decide how to manage the critical habitat area. We'd like the decision to be based upon sound science, careful land use planning and enactment of state law.

ASGA proposes to follow the model you originally suggested a year ago of establishing some small pilot projects, gathering hard scientific data from the operations, and building a careful management plan based upon the results and thoughtful discussions of how to accommodate the varied uses of the critical habitat area. In this vein, ASGA recommends the following:

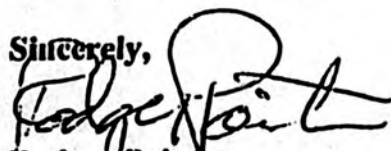
- ADF&G, ASGA and the three applicants for clam farms in Kachemak Bay negotiate a research model for gathering information on such issues as use of predator netting, biodiversity, sedimentation, interaction with sea otters, etc. The research project would be a joint effort between ADF&G, Marine Advisory Program, and ASGA.
- ADF&G approve permits to the three clam farming applicants for 2.5 acre plots. Conditions would be attached to the permits to provide for the research plots, planting schedules, monitoring and data collection. Research would be initiated in May 2000, first phase complete by October 2001, and ongoing through October 2002.
- ASGA support an ADF&G-proposed moratorium on applications for on-bottom aquatic farming sites in Kachemak Bay until the 2003 permit opening.
- Concurrently with the field project, ADF&G would initiate an extensive effort to gather existing research on the effects of on-bottom aquaculture, including interviews with leading U.S. scientists.
- First phase research results would be distributed to the public and discussed in a series of public workshops regarding on-bottom aquaculture in the Kachemak Bay/Fox River Flats critical habit areas. The research results and public comments would then be used in development of language addressing aquatic farming in the critical habitat area management plans.

This proposal would put the current effort to review the critical habitat area management plans for on-bottom aquatic farming on hold for a couple of years, but that should not create a

problem because of the permitting moratorium. The appeals by the three clam farming applicants and the current political impasse in Juneau over clam farming suggest that it is vital to act upon this proposed solution very quickly and not delayed until after your planning team effort is complete.

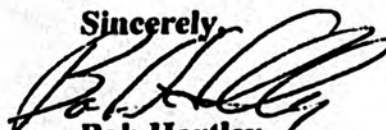
ASGA looks forward to moving into a much more constructive working relationship with the department, and we believe that resolution of clam farming in Kachemak Bay is vital. We look forward to your response.

Sincerely,



Rodger Painter

Sincerely,



Bob Hartley

c.c.

Rep. Gail Phillips
Sen. John Torgerson
John Sisk, Governor's Office



February 16, 2000

**Doug Mecum
Director, Division of Commercial Fisheries
Management and Development
Alaska Department of Fish and Game
P.O. Box 25526
Juneau, AK 99802-5526**

Dear Mr. Mecum:

The Alaskan Shellfish Grower's Association (ASGA) agrees with your belief that it is important to secure additional planning funding for on-bottom aquaculture, but we can not support the language in the proposed CIP. As we have suggested in the past, ASGA is very interested in working constructively with ADF&G on the issues related to on-bottom aquaculture and we are anxious to move discussions to a more cooperative atmosphere. In that vein, we offer these comments as a starting point for a joint effort to develop a mutually acceptable CIP project.

Here are the shortcomings with the language proposed by ADF&G:

1. We believe it is unrealistic for ADF&G to expect that it will have the resources to visit each proposed site to conduct on-site evaluations prior to processing an application, and for "active management and monitoring of the removal and planting operations..." While this might be the case in exceptional situations involving standing stocks of extraordinary value, it certainly would not be applicable for most operations.
2. We also object to introductory language that focuses the project upon standing stocks. The whole CIP seems to be written around the department's current dilemma with geoducks.
3. Every grower who has read the language has come to the same conclusion: this CIP would be used to survey geoduck beds in Southeast Alaska so they could be opened to commercial fishing. ASGA agrees. Consequently, we oppose both goals and objectives to survey wild stocks, unless they are restricted to areas identified for intensive development of on-bottom aquaculture.
4. ASGA opposes the development of comprehensive regional mariculture plans. These type of efforts require an extraordinary amount of funding and become outdated very quickly as land use patterns change, new technology develops and new species introduced. These regional

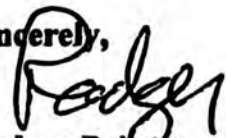
plans would become de facto planning and zoning documents used to block mariculture development in areas it may very well be appropriate.

Concepts ASGA would like to see incorporated into the CIP request:

1. Evaluate wild stock shellfish species with mariculture potential for potential subsistence, commercial and sport conflicts on a regional basis. For example, how important are littleneck clams as a subsistence food in Prince William Sound or Southeast? Identify areas of high subsistence usage and potential commercial conflicts. This would be accomplished by reviewing information compiled by the Subsistence Division, conducting surveys of subsistence users, and community meetings.
2. Analyze concerns for biological, environmental, and fish and wildlife impacts of on-bottom aquaculture to assist in the evaluation of applications on a case-by-case basis. This would involve identification of the issues (effects on biodiversity, potential of bird and mammal entanglement in predator netting, etc.), extensive literature searches and interviews with knowledgeable scientists. While most of the issues can be settled through these efforts, additional research objectives could be identified and funding sought for specific projects.
3. Call for industry nominations for areas of more intensive development of on-bottom aquaculture where the state could promote and support the development of on-bottom aquaculture. For example, Clarence Strait might be considered for geoducks or Tatitlek for littleneck clams. These areas could then be closely analyzed with thorough assessments of standing stocks, identification of areas of potential conflict and sensitive habitats, and interaction with local governments and residents. Conflicts with DNR area plans or USFS land use designations would be worked through with the affected agencies. DNR also would identify state uplands, if any, that could be made available for lease for support facilities.
4. Identify areas of high conflict on a regional basis, and create appropriate advisories to applicants. For example, Kachemak Bay beaches that are heavily used for personal use, sport and commercial harvests of littleneck clams would be identified.

We look forward to the opportunity to work together with the department to develop a mutually acceptable project.

Sincerely,


Rodger Painter

c.c. Sen. John Torgerson
Rep. Gail Phillips
Geron Bruce

February 29, 2000

Representative Carl Morgan
Co-chair Fisheries Committee
State Capitol Building #409
Juneau, Alaska 99801-1182

RE: Alaska, Open For Business?

Dear Committee Members,

In November of last year I traveled to Juneau to attend a meeting coordinated by Jackie Timothy at DGC in an effort to clarify some of the confusion surrounding my applications and the approval process. Over 20 people were invited to the meeting. Only four showed up. Jackie was upset by that fact but it did not bother me at the time. I have since come to realize that because I am not a member of the Alaskan Fisheries Aristocracy my parties do not get attended. I am starting to understand the appropriate etiquette for doing business in Alaska.

The mistake that I made was not taking my plan to one of the major players in the fishing industry for approval before submitting it to the State for review. I am certain that if the application had the name of Trident or Wards Cove or Icicle on it that I would not be experiencing the mysterious difficulties that we are presenting to you today. Any problems would have been discretely resolved in the privacy of the smoking room.

I have been involved in the development of the sea urchin dive fishery since 1995. I have had the opportunity to witness how the system works. After overcoming many hurdles in pioneering this industry Steve Abernathy has finally settled comfortably into a relationship with Icicle Seafoods where they own 75% of the business. After joining forces with them he had access to their governmental affairs staff who eventually secured a federal grant for around \$800,000 for the Department to expand the industry. Problem solved. The aristocracy at ADF&G is now content. The tribute has been paid and no new commoners have penetrated the upper class. There is an old saying if you want to see how it works, follow the money. Follow this money and see how much of it ends up benefiting fishermen through expanded access to resource and how much of it goes to support the departments fleet.

Reading the draft of the Developing Fisheries Policy the Department has recently made available can unearth another example of how the upper class operates. The short course is this. If you are not a very large company with a million dollar developmental budget do not waste your time talking to them. You simply cannot afford the tribute. This policy contradicts all of the management policies and safeguards that are so clearly identified in Article VIII of the Alaska State Constitution.

I am not surprised by what I found in the Department's developmental policy manual. I have been working on development of the geoduck fishery since 1986. Unofficially the Department has been implementing this policy for the last 15 years that I have been aware of. I am not old enough to say with absolute certainty but it appears to me that if a species was not being fished at Statehood in 1959 that it probably is not being fished today. The history of the development of geoducks provides additional insight. The Department first became aware of the resource in 1980. When I first harvested in

1986 the quota was 300,000 pounds. We have not had a quota as large since. Initially the product was not valuable enough for the Department to invest in, now it's too valuable to let the commoners have it. The arbitrariness of this decision-making makes sense only in the context of the aristocracy and the failure by any of its members to pay the required tribute. In the intervening 15 years the Washington and BC fisheries have generated over 500 million dollars. How long are we going to allow the Department to stifle this kind of economic growth?

The issue that we are confronting here today is the arbitrary delays that have been imposed upon us by this aristocracy. They have indefinitely suspended the review of our applications. Do you think that it is because this issue is so complex? Is it because they do not have the staff to perform the tasks? Is it because of the need to clarify regulations? I think it is because the law does not allow for a payment of royalties to the aristocrats. They are unwilling to release their hold on any resource in this state without tribute. They are holding these leases as ransom notes.

All we are asking is that these administrators obey the law. It is clear they consider themselves above the law. Our only remedy is to bring civil action. If I were to violate State law I would be held criminally liable as well. The next time that this body has an opportunity confirm a Fisheries Commissioner please make certain that he is a fisherman not an aristocrat. Better yet, make it an elected office.

Sincerely yours,

Stephen La Croix

Alaska State Legislature

(907) 465-2689; (800) 665-2689
FAX: (907) 465-3472



State Capitol, Room 411
Juneau, Alaska 99801-1182

Official Business

February 29, 2000

Commissioner Frank Rue
Department of Fish and Game
Box 25526
Juneau, AK 99802-5526

via fax 465-2332

Dear Commissioner Rue:

Following our recent meeting, it is clear in our minds that ADF&G has not fulfilled its promise to support aquaculture development. Some examples of obstacles the Department has put in the way of aquaculture development are:

- regulations not developed as promised to the Legislature for the past two years
- excessive application demands on farmers with additional, biased questions and requirements after applications submitted
- blank inconsistency recommendations submitted in initial response to the coastal zone management of all on-bottom farming permits; unaccountable science was done on these reviews with DGC eventually overturning F&G inconsistency
- interpreting the Kachemak Bay Critical Habitat Plan as opposing clam farming when no such prohibition is stated in the plan
- ignoring statutes and laws regarding development and legality of mariculture
- When Habitat Division did suggest that the KBCHP was open for review, the industry had the deck stacked against them by:
 - Scheduling the aquatic farming hearing the same time as the Jet Ski hearing, undoubtedly biasing the by-count comment cards that were distributed to hearing participants and submitted for testimony.
 - After objecting to this format, assured farmers that the comments would be considered by content only; final report has pages of "counts" for and against, with families of some opponents sending in numerous ballots.
 - Mail-in comment cards stuffed the ballot box and generated inaccurate data; oral comments count came out much more even.
 - The goals of the KBCHP clearly state that the public can identify issues and make comments about implementation of the plan, but there is no yea or nay vote on any specific aspect of the plan.
 - If F&G counts votes as evidence supporting denial of aquaculture in Kachemak Bay, it is in violation of its responsibility to "maintain and enhance fish and wildlife populations and their habitats." *It should be the science of the habitat and the organisms that hold priority over a vote, and science must be used to evaluate any habitat issue, not public opinion* of which comments indicate a clear misunderstanding of the issues, biological consequences, and aquaculture in general.

Delays in permitting have reached an unconscionable level for both farmers and legislators who have spent innumerable hours and energy to resolve this matter. In a 1998 House Resource Committee meeting, representatives of the Alaska Shellfish Growers Association were again assured by ADF&G that they would develop policies, but no action was taken. A permit opening was issued in January 1999 with no mariculture policy in place. In the 1999 Resource Committee hearing, the Alaska Shellfish Growers Association complained to the committee that no still policy was in place even though the permitting period was nearly half over. ADF&G again promised that a mariculture policy would be developed before closure of the opening period. Even at this late date, four years after the initial meeting of the clam farming task force in 1997, no mariculture policy is developed.

Another example of not following through was F&G's three-year moratorium on expansion of mariculture in Kachemak Bay in order to study the impacts of oyster culture on the Kachemak Bay ecosystem. Three years have passed and ADF&G has not conducted a study.

So that more delays are not forthcoming from F&G, we request in writing:

- Status report on all permit applications, and an assurance that F&G will issue all permits by April 15, except for the geoduck farm applications, so that we will have time in the Session to proceed with legislation we are drafting to remedy these ongoing problems.
- A clear response as to your plans for Kachemak Bay clam farming
- Your response to ASGA's letter of February 23 regarding a proposal for limited farming in Kachemak Bay while a collaborative effort is undertaken to develop impact studies and good scientific data on which to base future applications
- Your assurance that you and your immediate staff will attend the Fisheries Committee meeting on March 6 to respond to questions regarding this promising developing industry for Alaska

Thank you for your immediate attention to this matter; we look forward to receiving your response.

Sincerely,


Representative Gail Phillips


Senator John Torgerson

GP:ph

cc: Governor Tony Knowles
Dr. Bob Cheney, ASTF

AK Shellfish Growers Association
Prof. Ray RaLonde, UAA

U. S. DEPARTMENT OF COMMERCE

AQUACULTURE POLICY

Vision for U.S. Aquaculture: To assist in the development of a highly competitive, sustainable aquaculture industry in the United States that will meet growing consumer demand for aquatic foods and products that are of high quality, safe, competitively priced and are produced in an environmentally responsible manner with maximum opportunity for profitability in all sectors of the industry.

DOC Aquaculture Mission: A mission of the Department of Commerce (DOC) is to create sustainable economic opportunities in aquaculture in a manner that is environmentally sound and consistent with applicable laws and Administration policy. This mission complements and is an integral part of the Department's effort to restore and maintain sustainable wild stock fisheries in order to maximize the benefits of U.S. coastal resources for its citizens. Aquaculture in the United States can make major contributions to the local, regional, and national economies by providing employment in a new and diverse industry and by creating business opportunities both here and abroad. The United States can lead the world in the development of aquaculture technologies and advance international guidelines for the industry in order to maintain a healthy environment.

Definition: Aquaculture is defined as the propagation and rearing of aquatic organisms in controlled or selected aquatic environments for any commercial, recreational, or public purpose.

DOC Aquaculture Objectives: The DOC and its agencies, working in partnership with USDA, DOI, other Federal agencies, state, local, and tribal governments, environmental organizations, industry, academia, and other stakeholders at the national and regional levels will create a business climate and technological base for industry to develop environmentally sound aquaculture. The specific objectives by the year 2025 are to:

- A. Increase the value of domestic aquaculture production from the present \$900 million annually to \$5 billion, which will help offset the \$6-billion annual U.S. trade deficit in seafood.
- B. Increase the number of jobs in aquaculture from the present estimate of 180,000 to 600,000.
- C. Develop aquaculture technologies and methods both to improve production and safeguard the environment, emphasizing where possible those technologies that employ pollution prevention rather than pollution control techniques.
- D. Develop a code of conduct for responsible aquaculture by the year 2002 and have 100% compliance with the code in Federal waters.
- E. Double the value of non-food products and services produced by aquaculture in order to increase industry diversification.
- F. Enhance depleted wild fish stocks through aquaculture, thereby increasing the value of both commercial and recreational landings and improving the health of our aquatic resources.
- G. Increase exports of U.S. aquaculture goods and services from the present value of \$500 million annually to \$2.5 billion.

Policy Implementation: To achieve these objectives, the Department of Commerce and its agencies, working in partnership with USDA, DOI, other Federal agencies, state, local, and tribal governments, environmental organizations, industry, academia, and other stakeholders at the national and regional levels will:

- Work with stakeholders to develop a set of aquaculture guidelines for DoC aquaculture activities by the end of the year 2000 and ensure that all subsequent Departmental activities conform to these guidelines.
- Conduct research and help develop guidelines for an environmentally sound and sustainable aquaculture industry and promote domestic and international compliance with the guidelines.
- Consistent with these guidelines, conduct basic and applied research to domesticate additional species, giving preference to high-value species and to those that are least likely to create problems for the environment.
- Deliver U.S. government aquaculture services, assistance, and research to state and local governments and industry in a comprehensive and coordinated manner.
- Hold national and regional meetings with aquaculture constituents to inventory present resources and issues and set priorities for the future.
- Develop an efficient and transparent permitting process for aquaculture.
- Accelerate the implementation of new aquaculture production methods by developing both pilot scale and demonstration

projects where necessary.

- Develop effective enhancement strategies, where appropriate, for aquatic species to help wild stock fisheries recover and to provide additional recreational opportunities.
- Integrate aquaculture development with wild fish stock management and environmental stewardship to maximize the value of our aquatic resources for the benefit of the nation.
- Minimize the adverse impacts of aquaculture on protected species through proper design and siting of facilities and the application of appropriate deterrent technologies.
- Provide financial, marketing, and trade assistance to the aquaculture industry.
- Provide extension, training, and education programs to ensure a competitive, safe industry.
- Provide an information clearinghouse and information dissemination system to facilitate achieving aquaculture objectives.

Top of Document

**ALASKA SCIENCE & TECHNOLOGY FOUNDATION**
— Putting Innovation to Work for Alaska —

March 22, 2000

Rep. Carl Morgan, Rm 409
Rep. John Harris, Rm 470
House Special Committee on Fisheries
State Capital
Juneau, AK 99801-2133

Post-It® Fax Note	7671	Date	# of pages
To	Bill Lawrence		
Co./Dept.	Co.		
Phone #	Phone #		
Fax #	465-2197	Fax #	

Dear Sirs:

On Monday, March 6th, I was on the telephone line for the hearing on the fish farming permit process. Due to time constraints, I did not make a statement. Therefore, I would like to submit this letter for your consideration and file.

Over the last eleven years, the Alaska Science and Technology Foundation (ASTF) has supported many projects in support of the shellfish industry. The total funding committed is in excess of \$2 1/4 million. There have been two thrusts to our support:

- first for grow-out and technique development studies
- second for paralytic shellfish poisoning (PSP) testing and monitoring.

Recently, our Board of Directors approved three projects which at least in some measure are dependent upon the issuance of the currently sought shellfish permits. The projects are:

1. #99-2-074; Qutekac Shellfish Hatchery Seed Stock, Jean Galvano
2. #99-2-078; Littleneck Clam Farm Development in Alaska; Rodger Painter
3. #99-2-092; Geoduck Aquaculture; Scott Thomas

ASTF has never assumed the role of evaluator of the permit applications, but rather made our funding commitments contingent upon permits being approved by the appropriate agencies.

The success of the first project (and the viability of the hatchery as a business) is dependent upon a sufficient amount of shellfish aquaculture capacity available to provide customers for the hatchery output.

The second project (littleneck clam grow-out studies) is taking place at four farm sites which already have permits and work is planned at an additional site in South Central to be determined after the permits are issued.

The third project for geoduck aquaculture was approved in two parts. The first part was for collection of wild stock for the hatchery to serve as brood stock - it was permitted and has been completed. The second part and the major portion of the work is to determine and

4500 Diplomacy Drive, Suite 515, Anchorage, Alaska 99508-5918

Telephone: (907) 272-4333
Fax (907) 274-6228

March 22, 2000
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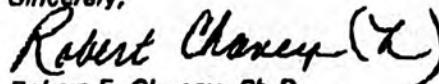
characterize the most appropriate farming techniques in SE Alaska for geoducks. That activity is directly dependent upon obtaining the aquaculture permits. ASTF funded that project contingent upon receipt of the permit. None of the proposed work is underway at this time.

The position of ASTF is that our shellfish aquaculture projects to date are appropriate to our mission to prove-up the technical and economic feasibility of the Alaskan shellfish industry. ASTF approved the projects assuming that the permitting process would yield a sufficient number of farms to conduct the research and to provide a large enough market for the hatchery's products so that its economic viability could be attained. At its February 2000 meeting, the ASTF Board discussed whether those assumptions were reasonable given what we knew then and what we know now about the permitting process.

In addition, ASTF convened a working group for the shellfish industry which met once in December 1999. The group was composed of representatives of all interested parties including: DEC, DNR, F&G (Com. Fish. And Habitat Divisions), the Shellfish Growers Association, and the Marine Advisory Program of the University of Alaska. The group identified two areas which would be most productive in which to work. They are 1) the uniform definition of terminology and 2) the identification of regions for development of future shellfish farms. ASTF will continue to be interested in establishing a common base of technical information necessary to expand shellfish aquaculture in Alaska.

Thank you for the opportunity to include this in the record. If there are any questions, please contact me.

Sincerely,



Robert E. Chaney, Ph.D.
Technology Administrator

cc. Lt. Gov. Fran Ulmer
Commissioner Frank Rue
Bill Lawrence



ALASKA SCIENCE & TECHNOLOGY FOUNDATION

— Putting Innovation to Work for Alaska —

March 22, 2000

Rep. Carl Morgan, Rm 409
Rep. John Harris, Rm 470
House Special Committee on Fisheries
State Capitol
Juneau, AK 99801-2133

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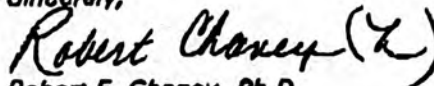
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Thank you for the opportunity to include this in the record. If there are any questions, please contact me.

Sincerely,



Robert E. Chaney, Ph.D.
Technology Administrator

cc. Lt. Gov. Fran Ulmer
Commissioner Frank Rue
Bill Lawrence

Kenai Peninsula Clarion



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Board of Fisheries postpones action on Kachemak Bay clam farms

ANCHORAGE (AP) -- Alaska fisheries officials on Friday took no action on a proposal that would have prohibited clam farming in Kachemak Bay.

The six-member Alaska Board of Fisheries voted unanimously to take no action on the proposal and review it at an October work session.

The proposal would have blocked an effort to privatize parts of what are now public beaches to set up private clam farms.

Fisheries board members voted only after getting an assurance by the Department of Fish and Game that it would not allow leasing of tidelands during the intervening period.

The department has been struggling with how it should handle requests to farm clams in Kachemak Bay, which already has mussel and oyster cultivation from floating rafts.

The board in 1997 set a harvest of 200,000 pounds a year of clams from Kachemak Bay beaches and divided it between recreational and commercial diggers.

Shellfish growers want to cultivate clam beds from Kachemak Bay to Southeast Alaska, privatizing bits and pieces of what are now public clamming areas and using enhancement techniques to boost production on them. The beaches are now open to recreational, subsistence and commercial clambers.

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JUDITH A. LAUTH, SECRETARY

BARBARA J. FAWCETT, TREASURER

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October 29, 1999

Honorable Representative Carl Morgan
State Capitol
Juneau, AK 99801-1182

Dear Representative Morgan

This letter is being sent on behalf of the undersigned dive fishermen of the Metlakatla Indian Community. It is sent to protest the refusal of the Commercial Fisheries Entry Commission to consider any fair and equitable means to determine eligibility for dive fishery permits. The legislature must, at its earliest opportunity, prevent the Commission from creating another lucrative opportunity for fishermen from the south at the expense of Alaska's own citizens.

Metlakatla, along with many other Alaska Citizens, repeatedly has tried to point out to the Commission that its method for determining eligibility for dive fishery permits favors those divers who were equipped to engage in the fisheries when they first opened—namely, fishermen from down south who had the equipment and experience to engage in what was a new fishing opportunity. These fishermen now stand to inherit an almost exclusive right to engage in the fishery. This unfairness is compounded by the Commission's insistence upon making up the rules as it goes along such that even those Alaska fishermen who were able to participate early on now find that they are ineligible for certain permits because they picked the wrong time or the wrong species to fish.

Metlakatla's fishermen are being discriminated against even more blatantly. They are told that, even though they engaged in a particular fishery at the right time, they did so in the wrong place. Harvest from within the Annette Islands Reserve does not qualify Metlakatla's fishermen for state dive permits. This is so even though Metlakatla is required by federal regulation to conduct its fisheries so that there is "conservation" and a "fair and equitable sharing of the fishery resource with other user groups in State waters under State law and within the State fisheries management system....." No notice at any time was given to Metlakatla's fishermen that failure to fish in state waters would forever bar them from participating in the state dive fishery. This is the result desired by the Commercial Fisheries Entry Commission but it is not in the least bit fair. If the Commission intended to so discriminate, it had an obligation to make its intentions known at a time when fishermen could react to preserve their rights?

Southeast Alaska's dive fisheries should provide an economic boost to an area of the state suffering much economic hardship. To the Limited Entry Commission, however, it is an opportunity to impose additional hardship, while rewarding southern 48 fishermen. We ask you to refuse to let this happen. Please require the Commission to allocate the state's fishery resources for the benefit of the citizens of the state. We ask you also to ensure that Metlakatla's fishermen are not carved out of the state's program, regardless of the Commission's intent.

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