

ALASKA LEGISLATURE COMMITTEE FILES 2001-2002 8672

10160 ADMINISTRATIVE REGULATION REVIEW

(C) can be conducted at a reasonable cost; and

(D) can be coordinated with observer programs of other agencies, including the National Marine Fisheries Service, North Pacific Fishery Management Council, and the International Pacific Halibut Commission;

(14) establishing nonexclusive, exclusive, and superexclusive registration and use areas for regulating commercial fishing;

(15) regulating resident or nonresident sport fishermen as needed for the conservation, development, and utilization of fishery resources;

(16) requiring unlicensed fishing vessels present in or transiting the waters of the state to report to the department the quantity, species, and origin of fish on board; in this paragraph, "unlicensed fishing vessel" means a fishing vessel that is not licensed under AS 16.05.490 - 16.05.530.

(b) [Repealed, Sec. 12 ch 52 SLA 1986].

(c) If the Board of Fisheries denies a petition or proposal to amend, adopt, or repeal a regulation, the board, upon receiving a written request from the sponsor of the petition or proposal, shall in addition to the requirements of AS 44.62.230 provide a written explanation for the denial to the sponsor not later than 30 days after the board has officially met and denied the sponsor's petition or proposal, or 30 days after receiving the request for an explanation, whichever is later.

(d) Regulations adopted under (a) of this section must, consistent with sustained yield and the provisions of AS 16.05.258, provide a fair and reasonable opportunity for the taking of fishery resources by personal use, sport, and commercial fishermen. ←

(e) The Board of Fisheries may allocate fishery resources among personal use, sport, guided sport, and commercial fisheries. The board shall adopt criteria for the allocation of fishery resources and shall use the criteria as appropriate to particular allocation decisions. The criteria may include factors such as

(1) the history of each personal use, sport, guided sport, and commercial fishery;

(2) the number of residents and nonresidents who have participated in each fishery in the past and the number of residents and nonresidents who can reasonably be expected to participate in the future;

(3) the importance of each fishery for providing residents the opportunity to obtain fish for personal and family consumption;

(4) the availability of alternative fisheries resources;

(5) the importance of each fishery to the economy of the state;

(6) the importance of each fishery to the economy of the region and local area in which the fishery is located;

(7) the importance of each fishery in providing recreational opportunities for residents and nonresidents.

(f) Except as expressly provided in AS 16.40.120 (e) and 16.40.130, the Board of Fisheries may not adopt regulations or take action regarding the issuance, denial, or conditioning of a permit under AS 16.40.100 or 16.40.120, the construction or operation of a farm or hatchery required to have a permit under AS 16.40.100, or a harvest with a permit issued under AS 16.40.120. ←

(g) The Board of Fisheries shall consider a request of the commissioner for approval of a petition to the Alaska Commercial Fisheries Entry Commission to establish a moratorium on new entrants into a commercial fishery under AS 16.05.225 at the board's next regular or special meeting that follows the receipt by the board of the request for approval of the petition and that allows time for the notice required under this subsection. The board may consider the request of the commissioner for approval of the petition only after 15 days' public notice of the board's intention to consider approval of the petition. The board shall consider whether the commissioner, in support of the request for approval of the petition, has adequately shown that the fishery meets requirements for a moratorium on new entrants under AS 16.05.050. The board by a majority vote of its members at the meeting when the petition must be considered shall approve or disapprove the petition.

(h) The Board of Fisheries shall adopt by regulation a policy for the management of mixed stock fisheries. The policy shall provide for the management of mixed stock fisheries in a manner that is consistent with sustained yield of wild fish stocks.

Sec. 16.05.255. Regulations of the Board of Game.

(a) The Board of Game may adopt regulations it considers advisable in accordance with AS 44.62 (Administrative Procedure Act) for

(1) setting apart game reserve areas, refuges, and sanctuaries in the water or on the land of the state over which it has jurisdiction, subject to the approval of the legislature;

(2) establishing open and closed seasons and areas for the taking of game;

(3) establishing the means and methods employed in the pursuit, capture, taking, and transport of game, including regulations, consistent with resource conservation and development goals, establishing means and methods that may be employed by persons with physical disabilities;

(4) setting quotas, bag limits, harvest levels, and sex, age, and size limitations on the taking of game;

(5) classifying game as game birds, song birds, big game animals, fur bearing animals, predators, or other categories;

(6) methods, means, and harvest levels necessary to control predation and competition among game in the state;

(7) watershed and habitat improvement, and management, conservation, protection, use, disposal, propagation, and stocking of game;

(8) prohibiting the live capture, possession, transport, or release of native or exotic game or their eggs;

(9) establishing the times and dates during which the issuance of game licenses, permits, and registrations and the transfer of permits and registrations between registration areas and game management units or subunits is allowed;

(10) regulating sport hunting and subsistence hunting as needed for the conservation, development, and utilization of game;

(11) taking game to ensure public safety.

(b) [Repealed, Sec. 12 ch 52 SLA 1986].

(c) If the Board of Game denies a petition or proposal to amend, adopt, or repeal a regulation, the board, upon receiving a written request from the sponsor of the petition or proposal, shall in addition to the requirements of AS 44.62.230 provide a written explanation for the denial to the sponsor not later than

30 days after the board has officially met and denied the sponsor's petition or proposal, or 30 days after receiving the request for an explanation, whichever is later.

(d) Regulations adopted under (a) of this section must provide that, consistent with the provisions of AS 16.05.258, the taking of moose, deer, elk, and caribou by residents for personal or family consumption has preference over taking by nonresidents.

(e) The Board of Game shall adopt regulations to provide for intensive management programs to restore the abundance or productivity of identified big game prey populations as necessary to achieve human consumptive use goals of the board in an area where the board has determined that

(1) consumptive use of the big game prey population is a preferred use;

(2) depletion of the big game prey population or reduction of the productivity of the big game prey population has occurred and may result in a significant reduction in the allowable human harvest of the population;
and

(3) enhancement of abundance or productivity of the big game prey population is feasibly achievable utilizing recognized and prudent active management techniques.

(f) The Board of Game may not significantly reduce the taking of an identified big game prey population by adopting regulations relating to restrictions on harvest or access to the population, or to management of the population by customary adjustments in seasons, bag limits, open and closed areas, methods and means, or by other customary means authorized under (a) of this section, unless the board has adopted regulations, or has scheduled for adoption at the next regularly scheduled meeting of the board regulations, that provide for intensive management to increase the take of the population for human harvest consistent with (e) of this section. This subsection does not apply if the board

(1) determines that intensive management would be

(A) ineffective, based on scientific information;

(B) inappropriate due to land ownership patterns; or

(C) against the best interest of subsistence uses; or

(2) declares that a biological emergency exists and takes immediate action to protect or maintain the big game prey population in conjunction with the scheduling for adoption of those regulations that are necessary to implement (e) of this section.

(g) The Board of Game shall establish population and harvest goals and seasons for intensive management of identified big game prey populations to achieve a high level of human harvest.

(h) [Repealed, 2000 Ballot Measure No. 6].

(i) In this section,

(1) "harvestable surplus" means the number of animals that is estimated to equal the number of offspring born in a game population during a year less the number of animals required for recruitment for population maintenance and enhancement, when necessary, and the number of animals in the population that die from all causes, other than predation or human harvest, during that year;

(2) "high level of human harvest" means the allocation of a sufficient portion of the harvestable surplus of a game population to achieve a high probability of success for human harvest of the game population based on biological capabilities of the population and considering hunter demand;

(3) "identified big game prey population" means a population of ungulates that is identified by the Board of Game and that is important for providing high levels of harvest for human consumptive use;

(4) "intensive management" means management of an identified big game prey population consistent with sustained yield through active management measures to enhance, extend, and develop the population to maintain high levels or provide for higher levels of human harvest, including control of predation and prescribed or planned use of fire and other habitat improvement techniques.

(5) "sustained yield" means the achievement and maintenance in perpetuity of the ability to support a high level of human harvest of game, subject to preferences among beneficial uses, on an annual or periodic basis.

Sec. 16.20.500. Purpose.

The purpose of AS 16.20.500 - 16.20.690 is to protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose.

Sec. 16.20.520. Multiple land use.

Before the use, lease, or other disposal of land under private ownership or state jurisdiction and control, within state fish and game critical habitat areas created under AS 16.20.500 - 16.20.690, the person or responsible state department or agency shall notify the commissioner of fish and game. The commissioner shall acknowledge receipt of notice by return mail.

Sec. 16.20.530. Submission of plans and specifications.

(a) When a board determines that the following information is required, it shall instruct the commissioner, in the letter of acknowledgment required under AS 16.20.520, to require the person or governmental agency to submit:

- (1) full plans for the anticipated use;
- (2) full plans and specifications of proposed construction work;
- (3) complete plans and specifications for the proper protection of fish and game; and
- (4) the approximate date when the construction or work is to commence.

(b) The board shall require the person or governmental agency to obtain the written approval of the commissioner as to the sufficiency of the plans or specifications before construction is commenced.

Sec. 16.20.580. Fox River Flats Critical Habitat Area established.

The following described area is established as the Fox River Flats Critical Habitat Area:

(1) Township 4 South, Range 10 West, Seward Meridian

Section 20 SE 1/4 (not tide or submerged land)

Section 21 S 1/2 (not tide or submerged land)

Section 22 S 1/2

Section 23 S 1/2 (not tide or submerged land)

Sections 25 - 29

Sections 33 - 36;

(2) Township 4 South, Range 9 West, Seward Meridian

Section 30 W 1/2 (not tide or submerged land).

Sec. 16.20.590. Kachemak Bay Critical Habitat Area established.

The following described area is established as the Kachemak Bay Critical Habitat Area:

- (1) Township 4 South, Range 10 West, Seward Meridian (only tide and submerged land and waters);
- (2) Township 5 South, Range 10 West, Seward Meridian (only tide and submerged land and waters);
- (3) Township 5 South, Range 11 West, Seward Meridian (only tide and submerged land and waters);
- (4) Township 5 South, Range 12 West, Seward Meridian (only tide and submerged land and waters);
- (5) Township 6 South, Range 11 West, Seward Meridian (only tide and submerged land and waters);
- (6) Township 6 South, Range 12 West, Seward Meridian (only tide and submerged land and waters);
- (7) Township 6 South, Range 13 West, Seward Meridian (only tide and submerged land and waters);
- (8) Township 6 South, Range 14 West, Seward Meridian (only tide and submerged land and waters);
- (9) Township 7 South, Range 11 West, Seward Meridian (only tide and submerged land and waters);
- (10) Township 7 South, Range 12 West, Seward Meridian (only tide and submerged land and waters);
- (11) Township 7 South, Range 13 West, Seward Meridian (only tide and submerged land and waters);
- (12) Township 7 South, Range 14 West, Seward Meridian (only tide and submerged land and waters);
- (13) Township 8 South, Range 12 West, Seward Meridian (only tide and submerged land and waters);
- (14) Township 8 South, Range 13 West, Seward Meridian (only tide and submerged land and waters);
- (15) Township 8 South, Range 14 West, Seward Meridian (only tide and submerged land and waters);
- (16) Township 9 South, Range 14 West, Seward Meridian (only tide and submerged land and waters);
- (17) Township 9 South, Range 15 West, Seward Meridian (only tide and submerged land and waters east of a line from Anchor Point to Point Pogibshi);
- (18) Township 5 South, Range 15 West, Seward Meridian (including all tide and submerged land and waters east of a line from Anchor Point to Point Pogibshi);
- (19) Township 6 South, Range 15 West, Seward Meridian (including all tide and submerged land and waters east of a line from Anchor Point to Point Pogibshi);
- (20) Township 7 South, Range 15 West, Seward Meridian (including all tide and submerged land and waters east of a line from Anchor Point to Point Pogibshi);

(21) Township 8 South, Range 15 West, Seward Meridian (including all tide and submerged land and waters east of a line from Anchor Point to Point Pogibshi);

(22) Township 9 South, Range 12 West, Seward Meridian (only tide and submerged land and waters).



RECORDS CERTIFICATION



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William J. Carter

Signature of Camera Operator

10/14/2003

Date

3-20-01

CLOSURE

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(CONT.)

DATE: March 19, 2001

TO: Administrative Regulation Review Committee
State Capital, Juneau

ATTN: Jim Pound

FROM: Bill Stockwell, Chair
Cooper Landing Fish & Game Advisory Committee
Phone & Fax: 595-1540

SENT BY FAX

SUBJECT: On-bottom Aquatic Farming in Kachemak Bay and
Fox River Flats Critical Habitat Areas

Dear Committee Members

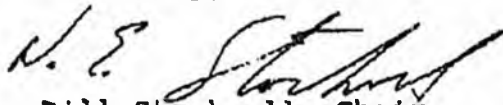
The Cooper Landing Fish & Game Advisory Committee will not be able to attend your 2:45 p.m. Tuesday, March 20 hearing. We wish to make the following our written comments to this proceeding.

The Cooper Landing AC is on record opposing On-bottom Aquatic Farming in the Critical Habitat Areas of Cook Inlet, especially Kachemak Bay and Fox River Flats, and supporting the position of ADF&G on this issue. Included are two letters to ADF&G that state our position and reasons for that position. We wish that these now be part of our testimony to your Committee.

The Cooper Landing Advisory Committee supports the regulatory rule making of ADF&G on this issue and ask you to please support that same position.

Thank you for allowing us to comment on this issue.

Sincerely,



Bill Stockwell, Chair
Cooper Landing Advisory Committee

att: Letters of 12/29/99 & 12/12/00

cc: Claudia Slater, ADF&G, Habitat
Sherry Wright, ADF&G, Board Support

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

COOPER LANDING FISH AND GAME ADVISORY COMMITTEE

P.O. BOX 721
COOPER LANDING, AK 99572
PHONE: (907) 595-1540
FAX: (907) 595-1540

December 29, 1999

Claudia Slater
ADF&G, Habitat Division
333 Raspberry Road
Anchorage, AK 99518-1599

COPY

**SUBJECT: Commercial On-Bottom Aquatic Farming on Intertidal
and Subtidal Habitat of Kachemak Bay and Fox River
Flats Critical Habitat Areas**

Dear Ms. Slater,

The Cooper Landing Fish and Game Advisory Committee discussed this subject at our December 21, 1999 Meeting. While Kachemak Bay is outside of our immediate area, many local residents and many visitors to our region of Alaska enjoy harvesting Cook Inlet clams including littlenecks from the Kachemak Bay Area. Thus we feel that commenting on this subject is well within our area of responsibility.

We have two major concerns with this proposal. First, it would be extremely poor public policy to privatize public beaches and fully allocated common use littleneck clams resources for private farmsites. Above being just bad policy, it might violate State plans, regulations, statutes and the Alaska Constitution. Second, if these farmsites are approved for Fox River Flats and Kachemak Bay, farmsites will spread throughout the best beaches of Cook Inlet denying the public all opportunity to harvest clams from area beaches.

For these reasons the Cooper Landing Fish and Game Advisory Committee is OPPOSED to permitting the use of intertidal and subtidal habitat for commercial on-bottom aquatic farming in Kachemak Bay and Fox River Flats Critical Habitat Areas.

Thank you for allowing us this opportunity to comment. If we can be of further assistance, please contact Bill Stockwell at 595-1540.

Sincerely,



Bill Stockwell, Chair

COPY

Serving the Alaska Board of Fisheries and Alaska Board of Game
Boards Support Section, 333 Raspberry Road, Anchorage, Alaska 99518-1599

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

COOPER LANDING FISH AND GAME ADVISORY COMMITTEE

P.O. BOX 721
COOPER LANDING, AK 99572
PHONE: (907) 595-1540
FAX: (907) 595-1540

December 12, 2000

Claudia Slater
ADF&G, Habitat and Restoration Division
333 Raspberry Road
Anchorage, AK 99518-1599

SENT BY FAX

SUBJECT: On-bottom Aquatic Farming in Kachemak Bay and
Fox River Flats Critical Habitat Areas

The Cooper Landing Fish and Game Advisory Committee reaffirms its previous public position. We supports the position of the Alaska Department of Fish and Game that on-bottom aquatic farming should be prohibited in the Kachemak Bay and Fox River Flats Critical Habitat Areas.

In our opinion the possible user conflicts and adverse impacts on fish, wildlife and habitat make this activity unwarranted. We have previously commented to the Department of Fish and Game and testified before the Alaska Board of Fisheries on this same subject. Rather than cover old ground again, please make our past comments and testimony on this subject a part of this comment letter.

Sincerely,



Bill Stockwell, Chair

COPY



The Homestead
Restaurant

P.O. Box 15282
Fritz Creek, AK 99603
(907) 235-8723

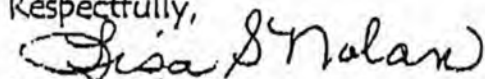
Representative Lesli McGuire
Regulation Review Committee

In the nine years that we have owned The Homestead Restaurant, we have had the pleasure serving fresh clams, mussels and oysters from our pristine Kachemak Bay. Our customers travel from Europe, Asia, the lower 48 and the Interior of Alaska to dine with us. The well traveled customers tell us repeatedly that the shellfish is the best that they have ever enjoyed anywhere in the world, and the customer from middle America that have grown up eating Mrs. Paul's frozen fish filet take delight in eating the oysters on the half shell. This is no small feat! The Kachemak Bay shellfish are a rare and wonderful product that needs to be nurtured.

I feel that I must address the need to cultivate and support the Maritime culture in Kachemak Bay. Last week, Lieutenant Gov. Fran Ulmer signed a regulation banning clam farming in the bay. To coin an old phrase, this is like feeling as though we are throwing the baby out with the bath water. Regulations are needed to keep the fisheries in check. However, banning yet another source of the economic base in our area further rocks this delicate balance. The maritime culture has no negative impact on the waters and surrounding lands; they use no fertilizers, pesticides or heavy equipment and the amount of acreage used is minimal.

We have watched while far too many of the other natural resources disappeared from the bay because the regulations came too late. Please, take the time to examine the situation, the area and the wonderful foods that are in our Kachemak Bay and make the regulations that will provide the avenue to keep them and the economic concerns all moving in a positive direction for us all. A reasonable and working compromise can be reached; a ban does not utilize, nor protect this Bay's bounties.

Respectfully,


Lisa S. Nolan

235-3447 am / 235-3448 fax

Alaskan Shellfish Growers ASSOCIATION



March 19, 2001

Rep. Lesil McGuire, chair
Administrative Regulation Review Committee
State Capitol, Room 418
Juneau, AK 99801-1182

Dear Rep. McGuire:

Your committee had requested information from the Alaska Department of Fish and Game regarding the status of the littleneck clam resource in Kachemak Bay.

We thought the committee might be interested in reviewing ADF&G's littleneck clam harvest statistics for the area. The following table was developed from harvest estimates obtained from ADF&G's Homer office.

Littleneck Clam Harvests in Kachemak Bay and Lower Cook Inlet* (ADF&G Statistics)

| <u>Year</u> | <u>Commercial</u> | <u>Recreational</u> | <u>Total Harvest</u> |
|-------------|-------------------|---------------------|----------------------|
| 1995 | 71,025 lbs | 172,644 lbs | 243,669 lbs |
| 1996 | 53,757 lbs | 230,886 lbs | 284,643 lbs |
| 1997 | 31,525 lbs | 80,971 lbs | 112,496 lbs |
| 1998 | 23,465 lbs | 105,664 lbs | 129,129 lbs |
| 1999 | 18,530 lbs | 67,754 lbs | 86,284 lbs |
| 2000 | 20,798 lbs | not available | not available |

* Recreational figures cover Kachemak Bay and Lower Cook Inlet, but ADF&G says more than 90 % is Kachemak Bay. Commercial harvest is restricted to Kachemak Bay.

Please let me know if you require additional information on this important issue. Thank you for your interest in ensuring the agencies are following proper procedures in the development of regulations.

Sincerely,



Rodger Painter

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4100
FACSIMILE: (907) 465-2332

March 16, 2001

The Honorable Georgianna Lincoln
Alaska State Legislature
Room 11
State Capitol
Juneau, AK 99801-1182

Dear Senator Lincoln:

At the March 8 Legislative Review Committee meeting, you requested that the Alaska Department of Fish and Game (ADF&G) respond to the comments raised in an undated paper by Mr. Ray RaLonde that Committee members had been provided in their packets for the meeting. A copy of this paper was provided to Habitat and Restoration Division Deputy Director Ellen Fritts toward the end of the meeting.

We checked our records and determined that Mr. RaLonde had submitted a virtually identical document to ADF&G on December 13, 2000, the last day of the public comment period for the proposed Kachemak Bay and Fox River Flats on-bottom mariculture regulation. We carefully considered Mr. RaLonde's comments when they were provided in December; the document provided to us on March 8 contained no "new" information that we had not previously seen and considered. Per your request, attached are responses to the key points raised in Mr. RaLonde's December 13 and March 8 documents.

In addition to responding to your specific request, I would like to take this opportunity to offer the following additional comments. While Mr. RaLonde is certainly passionate in his beliefs, his criticisms of ADF&G's literature review are actually based on a difference of opinion, not faulty science on the part of the department. ADF&G understands that Mr. RaLonde draws different conclusions from the literature than we do, and we respect his right to his opinion. Unfortunately, he has not extended ADF&G the same professional courtesy, but has instead attempted to discredit those who do not share his personal views. This has created a lot of unnecessary confusion and conflict.

One of Mr. RaLonde's key criticisms of ADF&G is that our literature review includes information on areas outside of Alaska and species other than littleneck clams. Yet in his critique of our literature review, Mr. RaLonde does the same thing. We do not fault him for this, because considering relevant information on other areas and species is a common scientific practice, as evidenced in any scientific journal or publication. In addition, some of Mr. RaLonde's comments on our literature review contradict information included in his own

publications. For example, he states unequivocally in his December 13 letter that substrate modification would not occur at farm sites in Kachemak Bay. Yet in his own manual on aquaculture of littleneck clams Mr. RaLonde notes that one of the five farming activities used to control the clam population is managing the beach substrate by removal of debris and substrate modifications. There are many such inconsistencies and contradictions in Mr. RaLonde's critique of ADF&G's literature review. While the department has neither the time nor inclination to identify them all, we thought it was important to provide a couple of examples because they typify the nature of Mr. RaLonde's comments.

When you are considering Mr. RaLonde's comments, it is important to recognize that Mr. RaLonde's job is to promote the interest of the aquatic farming industry. ADF&G must consider a wider range of factors in fulfilling its responsibilities in implementing the intent of the critical habitat area legislation and supporting regulations, ensuring consistency with public trust and common property resource provisions of the State Constitution, and implementing Board of Fisheries resource allocation and management decisions.

ADF&G stands by its conclusion that on-bottom mariculture in Kachemak Bay would alter natural habitat, reduce wildlife access to feeding areas, and reduce opportunities for common property commercial, recreational and personal uses of public resources. These impacts clearly conflict with the statutory and regulatory mandates for managing the Kachemak Bay and Fox River Flats Critical Habitat Areas. A more detailed discussion of this is included in Mr. Lance Trasky's February 6, 2001 memo to me, which was provided to the committee prior to the March 8 meeting.

It is also important to remember that, although on-bottom mariculture in the State of Washington is frequently cited as an example of what Alaska should emulate, there is a fundamental difference between the two states. As noted in Mr. RaLonde's letter, most clam farming in the State of Washington occurs on beaches that were privatized through state statute in 1890. Privatizing of common property public trust resources is not allowed under the State of Alaska Constitution.

Thank you for giving us the opportunity to provide additional information on this topic to you and the other committee members.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Rue", with a long horizontal line extending to the right.

Frank Rue
Commissioner

Attachment

cc: The Honorable Lyda Green
The Honorable Joe Hayes

The Honorable Jeannette James
The Honorable Lesil McGuire
The Honorable Drew Scalzi
The Honorable Robin Taylor

ATTACHMENT

1. Comment: There are glaring deficiencies in ADF&G's literature review and information on many example species, locations, and circumstances are inappropriately applied to aquaculture in Alaska.

Response: Prior to reviewing the available literature, Dr. Hauser contacted Mr. RaLonde and requested his help in identifying literature that ADF&G should review. Mr. RaLonde provided Dr. Hauser with a list of references, and the department reviewed and considered all of the recommended material, as well as other relevant publications (approximately 120 in all). Nearly 70 percent of the references cited in Mr. RaLonde's December 13, 2000 critique of ADF&G's literature review were considered by the department. Most of the remaining documents cited in Mr. RaLonde's letter would not have provided any new and relevant information, nor did any of the points raised in the body of his comments. Given this, there is no evidence to support the assertion that ADF&G's literature review has "glaring deficiencies."

While the department's report focused on littleneck clams in Kachemak Bay, it was necessary and appropriate to draw on information about other species and areas outside of Alaska. As noted in Mr. RaLonde's December 13 letter (page 4), there are only three on-bottom clam farms in the state; all are located in southeast Alaska, and farming techniques are still being developed. Despite permit reporting requirements, no reports about these farming operations have ever been produced or made available. Thus, the limited amount of site- and species-specific information necessitated broadening the department's literature review. Considering relevant information on other areas and species is a common scientific practice, as seen in most scientific journals or publications. Some of the citations in Mr. RaLonde's December 13 letter suggest he understands this principle. For example, on page 6, Mr. RaLonde notes the progressive invasion of the green crab from San Francisco to British Columbia. ADF&G drew on information about other species and areas cautiously and with an understanding of the scientific limitations inherent in using the information. Similar caution was used in considering information about culture techniques pertaining to other areas or species.

2. Comment: A shellfish biologist familiar with shellfish ecology should have written the literature review, or it should have been peer reviewed by shellfish biologists outside of ADF&G to assure accuracy.

Response: The staff member that summarized the literature is a Ph.D. fishery biologist with over 20 years tenure with ADF&G, including 14 years experience in aquaculture and related activities. Three other senior habitat biologists, with over 70 years of combined professional experience, reviewed and commented on the document before it was completed. Department staff (some of whom have performed research in Kachemak Bay) with expertise in shellfish management,

genetics, pathology, and other relevant disciplines also reviewed and commented on appropriate portions of the document. These staff members are more than qualified to review and summarize scientific literature.

3. Comment: The literature review does not recommend banning on-bottom clam aquaculture in Kachemak Bay.

Response: The literature review alone was never intended to represent ADF&G's decision document. Rather, it was one of several elements that the department considered in evaluating whether on-bottom mariculture should be allowed in Kachemak Bay. ADF&G also carefully considered: a) the statutes and regulations governing management of the Kachemak Bay and Fox River Flats Critical Habitat Areas; b) recommendations of the interagency planning team, which was established to assist and help guide ADF&G; c) public comments received on the proposed regulation, including Mr. RaLonde's; and d) advice provided by the Department of Law.

4. Comment: ADF&G's discussion of potential disease and parasite introductions is the most irresponsible section of the literature review. It is replete with errors and misinformation and should be excluded from any consideration on environmental impacts in Kachemak Bay

Response: Mr. RaLonde argues that considering information on aquaculture disease problems in other areas is irresponsible. ADF&G believes the exact opposite; it would be irresponsible not to consider this information. The department's technical review merely cited several examples of disease and exotic species introductions to demonstrate that, in the history of aquaculture, many disease outbreaks, disease organisms and other unintended plant and animal introductions have occurred despite precautionary measures. Several of the publications reviewed by ADF&G noted that disease organisms and parasites are common among shellfish, and that clam mariculture should be approached cautiously.

To think that unwanted introductions could never happen in Kachemak Bay would be foolhardy. In fact, a recent report prepared by marine ecologists with the Smithsonian Environmental Research Center, entitled *Biological Invasions of Cold-Water Ecosystems: Ballast Mediated Introductions in Port Valdez/Prince William Sound*, documented 24 species of plants and animals that have been introduced into Alaskan marine waters. Only two of these species (Pacific oyster and softshell clam) were purposefully introduced. In addition to ballast water, the investigators identified aquaculture introductions as a potentially important mechanism of transport for many other associated species. Four of the species introduced into Alaska were found at aquaculture facilities in Prince William Sound, including a boring sponge that preys on oysters.

5. Comment: ADF&G's literature review discounts the potential long drift patterns of bivalve larvae as a means of recruitment to more distant beaches.

Response: The department's literature review did not dismiss the hypothesis of long larval drift; rather, it acknowledged that there are two schools of thought regarding the mechanisms of dispersal and recruitment (downstream larval drift versus local dispersion). ADF&G's review also pointed out that local geography, tidal current patterns, seasonal and annual weather patterns, and inflowing currents from the Gulf of Alaska create strong circulation gyres in both inner and outer Kachemak Bay that could retain planktonic organisms leading to complex dispersal and recruitment mechanisms. Although these mechanisms are poorly understood, they could significantly affect littleneck clam recruitment in Kachemak Bay and must be considered.

6. Comment: ADF&G's literature review found no evidence of bird or marine mammal entanglement in predator netting. However, the author implies that no evidence raises the question of non-reporting of entanglement. Such an argument has no merit. Either evidence exists or it does not.

Response: The literature review actually states: "While no reported incidents of entanglement were found, it also appears that this aspect of mariculture practices has never been studied." This statement was not intended to imply non-reporting. Its purpose was to point out that the lack of information on this aspect of aquatic farming may be a function of the apparent lack of research on predator netting. Interpreting this absence of data as proof that entanglement does not occur would be contrary to both basic scientific principles and common sense.

In addition, there is a large body of scientific literature on the effects of derelict and loose netting, or netting-like material, on fish and wildlife. The literature review acknowledges that properly deployed netting (i.e., secured tightly to the substrate) should present minimal danger to most swimming organisms. However, concerns about possible entanglement of birds and sea otters remain, particularly at remote sites where it would be difficult to maintain predator netting during inclement weather.

7. Comment: Before asserting that clams are removed from the food web, critics should consider that clams protected by predator exclusion netting still experience 40 to 60 percent mortality, much of it caused by predators within and on the substrate.

Response: ADF&G's literature review did not assert that all clams would be removed from the food web as a result of on-bottom aquatic farming. Instead, the report summarized relevant information from a clam enhancement project recently funded by the Exxon Valdez Trustee Council. This project reported that survival of unprotected clams at experimental locations in Port Graham and Nanwalek, near Kachemak Bay, and in Prince William Sound ranged from 0 to 18

percent, while the survival of protected clams in bags and under nets ranged from 25 to 69 percent. This information illustrates that predator nets at least reduce the ability of some species to feed on clams – which is, after all, the intended purpose of predator netting. Animals that feed on littleneck clams include oldsquaws, eiders, scoters, sea otters, halibut, several species of crab, and numerous other marine organisms. These species would effectively be blocked from feeding in areas covered by the $\frac{5}{8}$ " x $\frac{3}{4}$ " netting used to protect clam farms from predators. These are the fish and wildlife resources that the critical habitat areas were specifically established to protect.

8. Comment: Citing of Bourne (1984) as evidence of scoter predation is not the best choice of documentation since Bourne states clearly in his publication that his estimate is crude because a feeding study on scoters had not been done.

Response: Mr. RaLonde's statement implies that ADF&G has not provided conclusive evidence that scoters, which are present in Kachemak Bay in large numbers, prey on littleneck clams. The further implication is that this invalidates ADF&G's position that clam farming, which appropriates wild clam beds and excludes clam predators such as scoters, is incompatible with the critical habitat statute. Nothing could be further from the truth. Mr. Bourne's paper was based on collections of three species of wintering scoter ducks at clam beaches in southern British Columbia. Analysis of the gizzard showed that the commercially important littleneck and manila clams comprised two thirds of the gut contents. The information contained in ADF&G's literature review that Mr. RaLonde apparently didn't like was Mr. Bourne's estimate that a wintering flock of 200 scoters could remove 5 to 14.5 metric tons of littleneck and/or manila clams from these two beaches in a six-month period.

ADF&G's literature review also included information from another study which reported that in northern California, mollusks -- mostly littleneck clams -- were in 85 percent of white-winged scoter stomachs and comprised 81 percent of the total volume of food in the sampled birds. In addition, a paper published in 1984 reported that littleneck clams that averaged 13.6 mm (.05 in.) in size consistently made up nearly a third of the diet of white-winged scoters in Kachemak Bay from January through April 1978.

Although Mr. RaLonde may not be convinced that littleneck clams are a critical food source for scoters in Kachemak Bay and Fox River Flats, and may feel that exclusion nets allow predators to continue to feed, his colleagues in the aquatic farming industry do not agree. On the British Columbia Shellfish Growers web site, it states: "After seeding, the plots are protected from predators by overlaying them with a plastic mesh cover commercially called "car cover" (so called because it was made to put over open top rail cars loaded with sawdust or wood chips). It is strong and lightweight with a mesh of approximately $\frac{5}{8}$ " by $\frac{3}{4}$ ". *It provides protection for the clams from their main predators: scoter ducks, starfish and crabs. Unprotected areas can lose as much as 90% of the clam*

stock to ducks. They are unable to scoop into the substrate to remove clams when the net is covering the surface.” (emphasis added)

ADF&G believes that the scientific information summarized in the literature review provides clear and convincing evidence that converting wild clam beds in Kachemak Bay and Fox River Flats to clam farms, and excluding scoters and other waterfowl from a critical food source, is inconsistent with the statutory mandate to protect and preserve habitat crucial to the perpetuation of fish and wildlife resources and to restrict all uses not compatible with that primary purpose.

9. Comment: A number of prominent errors are evident in the effects on habitat section. For example, trampling of the inter-tidal bed will be minimal because predator netting will be deployed, no graveling of beaches will occur, and mechanical digging and dredging devices will not be used.

Response: The effects of trampling, graveling (adding gravel), and use of dredging devices were reported in some of the literature and, therefore, included in the department's literature review. However, the review also acknowledges that the actual effects of a farming operation will depend on numerous factors such as site location and the specific culture techniques employed (e.g., substrate preparation, harvesting method and use of predator netting). Considering that there are no regulations prohibiting use of the culture techniques mentioned, it is unclear to ADF&G how Mr. RaLonde can unequivocally state that certain techniques (e.g., graveling) would never be proposed and other techniques (e.g., use of predator netting) would always be employed by future applicants. In fact, during the 1999 – 2000 aquatic farm opening, several on-bottom farm applicants indicated that they intended to remove rocks and alter their proposed farm site to maximize available littleneck clam habitat.

Mr. RaLonde's own manual on the aquaculture of littleneck clams states that one of the five farming activities that control the clam population is "managing the beach substrate by removal of debris and substrate modifications." Additionally, the British Columbia Shellfish Growers Information Resource System web site's advice to prospective farmers is: "Managing and maintaining productive intertidal areas is no different than it would be in agriculture. The substrate will likely need improvement and this will take time and resources. It will need to be cleared and prepared for planting, and those areas may be fenced or defined. A strip of rigid plastic mesh such as VEXAR, 8-12", buried below the substrate held in place by re-bar pins will prevent stock from being washed out. It may also be possible to build a breakwater berm 50 to 100 m out from the plots to protect them from storm damage. A landscape rake can be used to clear and turn the substrate to a depth of 6-8"."

It is also important to note that, although the literature review focused on littleneck clams because that has been the species of interest to date, the

regulation is not restricted to littleneck clams. One individual that commented on the proposed regulation indicated that culturing of other species might be of interest in the future. As pointed out by Mr. RaLonde, culture techniques and the potential environmental effects associated with those techniques can vary depending on the species being cultured.

10. Comment: ADF&G's statement that removing highly productive clam beds will affect the animals that feed on them is misleading for two reasons. First, what is a highly productive clam bed? Second, some predators will actually benefit from clam culture because the predator exclusion netting will allow them to compete for food over other predators.

Response: The department's statement regarding this aspect of clam farming was very straightforward. If you remove a primary food source used by sea otters, eiders, scoters, and many species of marine fishes and invertebrates it will not benefit the species that depend upon that food source. Removing a portion of the available food in an area will reduce the number of animals that habitat can support. Instead of providing evidence to refute this basic principle, Mr. RaLonde begs the question by asking what is a productive clam bed? He then attempts to further obscure the issue by stating that some species would benefit from use of predator netting because it would enhance their ability to compete for food over other predators. The implication being that the advantage to these species, which are not identified, would offset the disadvantage to others. ADF&G is not convinced that this assertion is correct and Mr. RaLonde did not provide any scientific evidence to support this claim. Regardless of its accuracy, however, ADF&G does not support the concept of this type of tradeoff because it would be detrimental to at least many of the fish and wildlife species that the critical habitat areas were created to protect.

11. Comment: Why does ADF&G believe that the populations of littleneck clams in Kachemak Bay are doing fine when all the evidence I see shows a constant decline in the population and the commercial and recreational fisheries?

Response: Mr. RaLonde's assertions that littleneck clams in Kachemak Bay are seriously depleted and over harvested are based exclusively on ADF&G survey and harvest information. Having collected these data, ADF&G believes that its shellfish biologists are more qualified than Mr. RaLonde to interpret the results. Department biologists responsible for these data collection and for management of the fisheries believe that the littleneck clam population is healthy and capable of producing sufficient larvae to seed the available habitat. Many environmental factors effect recruitment of juvenile clams into the population and, consequently, the numbers of wild clams vary annually. ADF&G believes that maintaining healthy productive habitat for all of the organisms in Kachemak Bay is the best management strategy for the long-term health of fish and wildlife resources. This is consistent with the statutory language directing the department to preserve and protect habitat areas especially crucial to the perpetuation of fish and wildlife.

Alaskan Shellfish Growers ASSOCIATION



March 9, 2001

Honorable Lesil McQuire
State Capitol, Room 418
Juneau, AK 99801-1182

Dear Representative McGuire:

Thank you for making the opportunity for the public to question the foundation of the Alaska Department of Fish and Game's proposed regulation to ban clam farming in Kachemak Bay.

The committee was very perceptive in zeroing in on the issues and pressing the department to respond more specifically to the issues raised during the public comment period. I'd like to provide some information on one of the critical issues raised during committee discussions: the status of the littleneck clam resource in Kachemak Bay.

This issue is important as one of ADF&G's primary justifications for banning on-bottom aquaculture is that the transfer of beaches from public harvests to private farming would diminish public access to a common property resource. If the beaches in question were productive clamming areas this might be a concern, but a look at ADF&G's own data shows this isn't the case. In spite of ADF&G's statements to the contrary during the hearing before your committee, the littleneck clam resource in Kachemak Bay has been steadily declining for the past decade. Ironically, on-bottom shellfish aquaculture, the very activity the regulation is designed to ban, may be the best answer to resources declines.

I have attached: (1) results of ADF&G's 1999 littleneck clam surveys of Kachemak Bay beaches; (2) comments by James Brady, then director of ADF&G's Southcentral Region Commercial Fisheries programs, at a March 1996 conference on clam farming in Alaska; and (3) a spreadsheet I developed comparing digging opportunities in Kachemak Bay and healthy littleneck clam beaches in Southeast.

The decline in the littleneck clam resources of Kachemak Bay is readily apparent in an examination of this information. The two-page summary in the survey report shows a steady decline since the first surveys in 1992. Of particular concern should be the sharply declining trends in sublegal (below 1.5 inches) size.

Mr. Brady's comments (taken from conference proceedings prepared by the University of Alaska) confirm the decline:

"From these sampling projects we have found that recruitment of clams on the heavily utilized beaches has diminished as have the number of clams in the legal size category. This decline is of concern and formed the justification for closures and restrictions on the Chugachik beaches last season. Our studies since 1992

have found the densities of littleneck clams at the sample sites to range from 18 to 148 clams per square meter. We would consider a beach with an average density greater than 115 total clams per square meter with at least 65 clams per square meter greater than legal size to be a productive beach. Densities of this magnitude were observed on the beaches sampled in 1992 but have subsequently have fallen to about half of that density at present time."

Interesting to note is that none of the beaches surveyed in 1999 met Brady's definition of a "productive beach," i.e., at least 65 harvestable clams per square meter or 5.85 clams per square foot.

The spreadsheet converts ADFG survey results to clams per square foot and calculates the amount of area a digger would have to overturn to fill a five-gallon bucket with 40 lbs of clams. The Kachemak Bay results are compared to the results of my sampling of littleneck clams beaches my company (Tenass Pass Shellfish) just leased for conversion to farm plots

I have participated in or conducted surveys of littleneck clam beaches in Cook Inlet, Prince William Sound, Kake, Blashke Islands, and Sea Otter Sound, and have been farming or harvesting littleneck clams commercially for the past ten years. I would not conduct commercial clamming operations on any of the Kachemak Bay beaches surveyed by ADF&G in 1999. In fact, the densities are so low I seriously doubt whether even personal use or recreational diggers would harvest in these areas.

The beaches Tenass Pass Shellfish Company recently obtained in Sea Otter Sound off Prince of Wales Island are examples of healthy littleneck clam beaches. The densities at three of the S.E. beaches have 20-30 times the yield of harvestable clams than the Kachemak Bay beaches on which Don and Robert Fell proposed to farm.

I'd also like to suggest the committee might want to clarify its request for written responses to criticism of the literature review conducted by Dr. Hauser includes comments by Dr. Cheney as well as professor RaLonde, as both papers offer valuable information. I believe it is very revealing the degree to which ADF&G downplayed Dr. Hauser's paper, as department officials are worried about the peer review comments.

Prior to the release of the recent memorandum obtained by the committee, the department had consistently cited Dr. Hauser's paper as the basis of its decision to ban clam farming in Kachemak Bay. The flawed analysis also was the basis for the task force decision endorsing the ban and influenced the legislative audit decision. Now that it has been discredited, ADF&G is finding it difficult to find a solid foundation for the regulation.

Thank you for the hearing. Please let me know if I can supply any additional information.

Sincerely,



Rodger Painter

MEMORANDUM

State of Alaska

TO: Charlie Trowbridge
Shellfish/Groundfish Regional Management Biologist
Comm. Fish Div.
Homer

DATE: September 10, 1999

FAX NO: 235-2448

TELEPHONE NO: 235-8191

FROM: Richard Gustafson
Shellfish. Biologist
Comm. Fish. Division
Homer

SUBJECT: 1999 Clam surveys of
proposed clam farm
sites

May 14-16, 1999 clam surveys were conducted by a joint effort of ADF&G, Habitat and Restoration, and Commercial Fisheries Divisions at proposed Aquatic Farm sites in Bear Cove, Chugachik Island, Peterson Bay's Moss Island, and two sites in Little Jakolof Bay. The clam surveys target Pacific littleneck clams, *Prothaca staminea*, however other clam such as butters *Saxidomus giganteus*, cockles *Clinocardum nuttali*, *Macoma* (sp.), *Hiatella* (sp.), *Maya truncata*, and other species are dug and enumerated. Although other animals and plants were encountered during the survey, only clams were enumerated due to the varied biological expertise of sampling participants.

Methods

Surveys were conducted during low tides that elevations ranged from a -3.6 ft to -5.9 ft with sampling beginning two hours prior to the low tide ebb and lasting until the water floods to the blue mussel beds. At Bear Cove and Little Jakolof west shore, sites were dug during the ebb. At Chugachik Island and Little Jakolof east shore sites, were dug during the flood. At Moss Island the sampling occurred during both the ebb and flood. Clams were collected using quadrat sampling.

A two-stage systematic sample design was used. The first stage consisted of 2 to 4 transects set perpendicular to the water line evenly spaced along the beach within the proposed aquatic farm site. The location of the first transect was randomly selected. The length of each transect was measured from low tide to the blue mussel beds or higher elevation if the proposed aquatic farm location was at a higher elevation. The second stage consisted of two to seven quadrats systematically placed at approximately 20 to 50 cm elevation intervals along each transect. Transect lengths and the distance between transects were measured so the area surveyed could be estimated. The tide level was determined by using a hand level and elevation rod during the ebb, or recording the time a quadrat location was covered by rising water.

A plastic pipe square with inside dimensions of 0.5 by 0.5 m was used to dig a consistent size quadrat. All substrate to a depth of approximately 30 cm was removed with a clam fork (four-pronged garden rake). During the removal and subsequent replacement of the substrate, all observed clams were placed in bags, labeled and frozen at the laboratory for later, length, and weight measurements.

Results

Bear Cove

May 16, 1999 a total of 22 quadrats were dug from 4 transects with 4 to 6 quadrats dug from tide levels of -5.4 ft to 8.6 ft. The following clams were dug:

| Species | Legal | Sublegal | Total |
|-------------------------------|-------|----------|-------|
| <i>Prototheca staminea</i> | 150 | 149 | 299 |
| <i>Saxidomus gigantus</i> | 4 | 23 | 27 |
| <i>Clinocardium nuttallii</i> | | | 7 |
| <i>Macoma (spp.)</i> | | | 43 |
| <i>Hitella (spp.)</i> | | | 2 |
| <i>Mya truncata</i> | | | 1 |

The resulting littleneck clam density was 27.3 legal, 27.1 sublegal, and totaling 54.4 clams/m².

Chugachik Island

May 16, 1999 a total of 16 quadrats were dug from 4 transects with 3 to 5 quadrats dug from tide levels ranging from 4.1 to 11.9 ft. The following clams were dug:

| Species | Legal | Sublegal | Total |
|----------------------------|-------|----------|-------|
| <i>Prototheca staminea</i> | 22 | 14 | 36 |
| <i>Saxidomus gigantus</i> | 1 | 4 | 5 |
| <i>Macoma (spp.)</i> | | | 22 |

The resulting littleneck clam density was 5.5 legal, 3.5 sublegal and totaling 9.0 clams clams/m².

Moss Island (Peterson Bay)

May 14, 1999 a total of 24 quadrats were dug from 6 transects with 2 to 6 quadrats dug from tide levels ranging from -3.4 to 7.2 ft. The following clams were dug:

| Species | Legal | Sublegal | Total |
|----------------------------|-------|----------|-------|
| <i>Prototheca staminea</i> | 71 | 58 | 129 |
| <i>Saxidomus gigantus</i> | 8 | 13 | 21 |
| <i>Macoma (spp.)</i> | | | 67 |
| <i>Hitella (spp.)</i> | | | 1 |

Littleneck clam density was 11.8 legal, 9.7 sublegal, and totaling 21.5 clams /m².

Little Jakolof West Shore (below Mr. Fell's runway)

May 15, 1999 a total of 22 quadrats were dug from 4 transects with 5 to 6 quadrats dug per transect from tide levels ranging between -4.7 and 10.6 ft. The following clams were dug:

| Species | Legal | Sublegal | Total |
|-----------------------------|-------|----------|-------|
| <i>Prototheca staminea</i> | 95 | 48 | 143 |
| <i>Saxidomus gigantus</i> | 12 | 3 | 15 |
| <i>Clinocardium nuttali</i> | | | 1 |
| <i>Macoma (spp.)</i> | | | 28 |
| <i>Hitella (spp.)</i> | | | 18 |

Littleneck clam density was 17.3 legal, 8.7 sublegal, and totaling 26.0 clams /m².

There were an additional 5 quadrats dug at tide levels between 11.4 and 23.9 ft. No clams were found in these quadrats and were not included in clam density calculations. In past Kachemak Bay clam surveys conducted by ADF&G the upper margin of clam habitat is usually at 5-ft tide level. If quadrats are dug above that level, they are not used in clam density calculations and abundance estimates.

Little Jakolof East Shore (across Little Jakolof Bay from Mr. Fell's runway)

May 15, 1999, a total of 20 quadrats were dug from 4 transects with 3 to 7 quadrats dug per transect from tide levels ranging from -2.3 to 8.5 ft. The following clams were dug:

| Species | Legal | Sublegal | Total |
|-----------------------------|-------|----------|-------|
| <i>Prototheca staminea</i> | 54 | 52 | 106 |
| <i>Saxidomus gigantus</i> | 6 | 4 | 10 |
| <i>Clinocardium nuttali</i> | | | 1 |
| <i>Macoma (spp.)</i> | | | 42 |
| <i>Hitella (spp.)</i> | | | 4 |
| <i>Mya truncata</i> | | | 6 |
| <i>Diplodonta impolita</i> | | | 2 |

Littleneck clam density was 10.8 legal, 10.4 sublegal, and totaling 21.2 clams /m².

Discussion

Abundance and biomass estimates have not been completed for the proposed aquatic farm sites. Currently I am waiting for biometrics assistance on the variance formulas for the systematic estimators and will forward those estimates when complete.

Littleneck clam density from past surveys and 1999 surveys can be found on Table 1. Chugachik 1999 data is preliminary. The clam density may increase once final analysis accounts for elevation of the quadrats dug. I anticipate the density will increase slightly. The 1999 Peterson commercial, 1999 east shore of Sadie Cove and 1999 west shore of Tutka Bay clams density estimates are also preliminary.

The data from the 1999 proposed aquatic farm sites has been reviewed more thoroughly. The low density at the proposed Chugachik aquatic farm site is most likely due to the high elevation of site. This site was in blue mussel beds. Littleneck clams prefer lower tide levels. This site is just above the Chugachik Island beach that has had a commercial harvest since 1986. The proximity of this site to the commercial beach would make it easy to supplement a farm's production by harvesting from the commercial during closed periods.

The proposed Bear Cove aquatic farm site had the clam highest clam density of the aquatic farm sites sampled. Historically Bear Cove has been very productive for littleneck clams. The clam density at Moss Island site in Peterson Bay, and the Little Jakolof Sites are comparable to the adjacent areas in Kachemak Bay.

cc: Bill Bechtol

Table 1. Preliminary Results from the ADF&G Pacific littleneck clam surveys in DEC certified areas of Kachemak Bay, 1990 to 1999.

| Clam Subdistrict | Bay or Area Year | Sample Effort | | Clams /m ² | | | Survey Design |
|----------------------|--------------------------------------|---------------|----------|-----------------------|----------|--------------------|------------------------|
| | | Sites | Quadrats | Legal | Sublegal | Total | |
| 1 | Chugachik | | | | | | |
| | 1992 | 1 | 12 | 67.2 | 50.4 | 117.6 | Randomly selected |
| | 1993 | 1 | 16 | 41.0 | 48.8 | 89.8 | " |
| | 1994 | 1 | 33 | 36.4 | 42.8 | 79.2 | " |
| | 1995 | 1 | 35 | 33.8 | 19.4 | 53.2 | " |
| | 1996 | 1 | 33 | 63.3 | 25.0 | 88.3 | " |
| | 1997 | 1 | 40 | 60.2 | 22.4 | 82.6 | " |
| | 1998 | 1 | 50 | 48.5 | 10.9 | 59.4 | " |
| | 1999 | 1 | 53 | 41.2 | 8.5 | 49.7 | " |
| | Chugachik Proposed Aquatic Farm site | | | | | | |
| | 1999 | 1 | 16 | 5.5 | 3.5 | 9.0 | 2-Stage Systematic |
| | Bear Cove | | | | | | |
| | 1995 | 1 | 6 | 75.3 | 69.3 | 144.6 | 2-Stage Systematic |
| | Proposed Aquatic Farm Site | | | | | | |
| | 1999 | 1 | 22 | 27.3 | 27.1 | 54.4 | 2-Stage Systematic |
| | Bear Island | | | | | | |
| | 1995 | 1 | 6 | 80.0 | 68.7 | 148.7 | Systematic |
| | 1996 | 1 | 5 | 53.6 | 70.4 | 124.0 | Systematic |
| | Aurora Lagoon (east) | | | | | | |
| | 1998 | 1 | 19 | 69.5 | 52.6 | 122.1 | 2-Stage Systematic |
| Aurora Lagoon (west) | | | | | | | |
| 1998 | 1 | 24 | 12.5 | 4.8 | 17.3 | 2-Stage Systematic | |
| Aurora to Bear Cove | | | | | | | |
| 1998 | 2 | 34 | 11.5 | 3.6 | 15.1 | 3-Stage Systematic | |
| 2 | Ismailof Island | | | | | | |
| | 1994 | 1 | 8 | 77.6 | 96.4 | 174.0 | 3-Stage Systematic |
| | 1996 Med. density | 1 | 9 | 92.4 | 80.4 | 172.8 | 3-Stage Systematic |
| | 1996 High | 1 | 7 | 120.0 | 52.6 | 172.6 | 3-Stage Systematic |
| | 1996 Pooled | 1 | 16 | 104.5 | 68.3 | 172.8 | Stratified /Systematic |
| | 1997 | 1 | 32 | 59.5 | 18.5 | 78.0 | 3-Stage Systematic |
| | 1998 | 1 | 33 | 71.0 | 48 | 119.0 | 3-Stage Systematic |
| | 1999 | 1 | 27 | 50.1 | 33.2 | 84.2 | 3-Stage Systematic |

Table 1. Continued

| Clam Subdistrict | Bay or Area Year | Sample | | Legal | Clams /m ² | | Survey Design |
|------------------|----------------------------------------------------|--------|----------|-------|-----------------------|-------|--------------------|
| | | Sites | Quadrats | | Sublegal | Total | |
| 2 | Peterson Bay | | | | | | |
| | 1999 Moss Island | 1 | 24 | 11.8 | 9.7 | 21.5 | 2-Stage Systematic |
| | 1999 Commercial | 1 | 27 | 7.3 | 27.0 | 34.3 | 2-Stage Systematic |
| 3a | Sadie Cove (east shore) | | | | | | |
| | 1997 | 6 | 99 | 23.0 | 24.7 | 47.7 | 2-Stage Systematic |
| | 1999 | 12 | 270 | 11.2 | 8.0 | 19.2 | 3-Stage Systematic |
| 3b | Sadie Cove (west shore) | | | | | | |
| | 1993 | 2 | 17 | 27.6 | 35.2 | 62.8 | 2-Stage Systematic |
| | 1994 ^{a/} | 4 | 24 | 35.2 | 27.6 | 62.8 | 2-Stage Systematic |
| | 1995 ^{b/} | 4 | 27 | 36.9 | 16.4 | 53.3 | 2-Stage Systematic |
| | 1996 ^{c/} | 4 | 58 | 26.4 | 21.0 | 47.4 | 2-Stage Systematic |
| | 1998 | 6 | 117 | 14.7 | 12.8 | 27.5 | Random/ Systematic |
| | Tutka (west shore) | | | | | | |
| | 1990 ^{d/} (3 transects) | 1 | 24 | 24.8 | 36.8 | 61.6 | 2-Stage Systematic |
| | 1999 (all west shore) | | | | | | 3-Stage Systematic |
| 3a & 3b | Tutka (east & west shore, multiple sites bay wide) | | | | | | |
| | 1992 | 8 | 39 | 16.8 | 2 | 18.8 | 3-Stage Systematic |
| | 1993 | 4 | 22 | 13.6 | 4.8 | 18.4 | 3-Stage Systematic |
| 4 | Little Jakolof | | | | | | |
| | 1999 (west shore) | 1 | 22 | 17.3 | 8.7 | 26.0 | 2-Stage Systematic |
| | 1999 (east shore) | 1 | 20 | 10.8 | 10.4 | 18.4 | 2-Stage Systematic |
| | Jakolof (bay wide estimate) | | | | | | |
| | 1992 | 6 | 42 | 22.1 | 2.2 | 24.3 | 3-Stage Systematic |
| | 1993 | 11 | 53 | 26.2 | 10.4 | 36.6 | 3-Stage Systematic |
| | 1998 | 7 | 187 | 19.7 | 3.5 | 23.2 | 3-Stage Systematic |

^{a/}The legal component may be comparable.

^{b/}In 1994, two sites were the same in 1993.

^{c/}The 1995 sites were different from previous years.

^{d/}Substrate was washed through small screens in the 1990 survey only.

Management of Alaska's Clam Fisheries, Southcentral Alaska

James Brady, Southcentral Region Management Coordinator, ADF&G

Good morning. My name is James Brady, I'm the regional biologist for Southcentral Alaska with the Division of Commercial Fisheries and Management Development. I work with both finfish and shellfish commercial fisheries principally within the waters of Prince William Sound and Lower Cook Inlet. For the purposes of my talk here today, I will be focusing on the hard-shell clam fishery in Kachemak Bay, which is the most developed commercial clam fishery in the Southcentral region. This fishery targets primarily on Pacific little neck clams (*Protothaca staminea*) and to a lesser degree on butter clams (*Saxidomus giganteus*).

Kachemak Bay is located on the southern portion of Cook Inlet in the vicinity of the community of Homer. We have both recreational and commercial utilization of hard-shelled clams in Kachemak Bay. Recreational users (sport and personal use) have a longer history of utilization and larger annual harvests which have been as high as 214,000 pounds in some years. The magnitude of the commercial harvests have ranged from 15,000 to 60,000 pounds annually. The commercial harvest is composed primarily of littleneck clams with lesser amounts of butter clams and cockles. We have had commercial harvests for other bivalve species in Kachemak Bay, especially mussels, but these have generally been very small with the exception of 1989 when about 170,000 pounds were harvested to feed otters as a result of the Exxon Valdez oil spill otter rehabilitation program. The commercial fishery is confined to beaches that are certified by the Alaska Department of Environmental Conservation (DEC), of which there is limited acreage. The commercial fishery started about ten years ago when the first beaches were certified. The fishery began to expand in the early 1990's, generating a concern for conservation of the resource and displacement of recreational users.

In 1993, the department began working through the public process to address regulation of harvest for sustained yield and the allocation concerns of the recreational users. Recreational users voiced objection to the development of a commercial fishery within the boundaries of Kachemak Bay State Park for esthetic reasons. Further, they voiced concern that combined commercial and recreational utilization on the limited number of certified beaches in Kachemak Bay would result in over exploitation of the clam populations. The outcome of this process was a management plan which addressed concerns expressed by both recreational and commercial diggers coupled with a harvest strategy to protect the resource. The plan was taken to the Board of Fisheries in the subsequent meeting cycle, and adopted into regulation.

The elements of the plan included:

- 1.) A rotational harvest program. Kachemak Bay was divided into four subdistricts, only two of which would open on any given year. The two open subdistricts were alternated each year to allow for a recovery period for each subdistrict.
- 2.) A minimum size limit for commercially harvested littleneck clams of one and a half inches and two and a half inches for the butter clams.

3.) Permanent closures of recognized recreational beaches. As the plan was developed, accommodations were made to preserve the recreational fishery. Those areas that had a history of high recreational use and value to Kachemak Bay State Park were closed permanently to commercial harvest.

4.) Weekend closures of the commercial fishery. An effort to provide for a more controlled and moderated fishery resulted in closures during the weekends, particularly during the summer months.

5.) Mandatory registration of commercial diggers. A registration period was established which enabled our managers to assess the number of diggers and better regulate the fishery.

Integral to this management plan was an initiative on the part of DEC to certify more beaches, thus minimizing potential for a concentrated commercial utilization on limited beach areas. This has happened in part and is continuing.

Along with these efforts came the obligation for the Department of Fish and Game to track the success of the new management strategies and monitor the health of the resource. Fiscal restrictions prevented us from launching an assessment project encompassing the entire bay. However we were able to implement a small scale project on a limited budget which in large part has been successful due to the dedication of the shellfish biologists in the Homer office.

The study design focused on a few representative beach areas which are then used as indicators of general population trends elsewhere in Kachemak Bay. The study locations included sites in Bear Cove, on Chugachik Island, in Jakalof Bay and in Sady Cove. The study sites were sampled for clam density using a systematic standard quadrant sampling approach. Population estimates for the sample sites were generated using standard techniques. Clams were measured and size frequency histograms were generated as a means of monitoring the health of the stock

From these sampling projects we have found that recruitment of clams on the heavily utilized beaches has diminished as have the number of clams in the legal size category. This decline is of concern and formed the justification for closures and restrictions on the Chugachik beaches last season. Our studies since 1992, have found the densities of littleneck clams at the sample sites to range from 18 to 148 clams per square meter. We would consider a beach with an average density greater than 115 total clams per square meter with at least 65 clams per meter greater than legal size, to be a productive beach. Densities of this magnitude were observed on the beaches sampled in 1992 but have subsequently have fallen to about half of that density at present time.

Review of these data have given us insight into how to proceed with future management of hard-shelled clams in the Kachemak Bay area. For the 1996 season we are looking at a guideline harvest of about 65,000 pounds of clams for the commercial fishery. We divided that guideline harvest into quarterly segments disbursed throughout the year to spread out the harvest. We are concerned with the increased stress and mortality that results from digging in cold air temperatures during the winter months. Our managers intensively regulate the wintertime fisheries to prevent harvest when the chill factor drops below 20 °F. They track weather trends

during the cold months, and schedule openings only when they anticipate two or more consecutive days with wind chill not falling below 20 °F is anticipated. If the weather is colder than that, openings are postponed. Harvesting during warmer weather reduces mortality on smaller clams.

Comparison of Digging Opportunities between Two Proposed Aquatic Farm Sites in Kachemak Bay, Other Area Beaches, and S.E. Alaska

No. littleneck clams/square ft. From 1999 ADFG surveys in Kachemak Bay and 1999 surveys by aquatic farm in S.E. on beaches with healthy natural populations

Don Fell Site (Kachemak Bay)

| Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-------|----------|-------|--------------------------------------|
| 1.56 | 0.78 | 2.34 | 693.64 |

Robert Fell Site (Kachemak Bay)

| Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-------|----------|-------|--------------------------------------|
| 0.97 | 0.94 | 1.91 | 1111.11 |

Tenass Pass Site #1 (S.E.)

| Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-------|----------|-------|--------------------------------------|
| 28.00 | 28.50 | 56.50 | 38.57 |

Tenass Pass Site #2 (S.E.)

| Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-------|----------|-------|--------------------------------------|
| 20.00 | 13.70 | 33.70 | 54.00 |

Tenass Pass Site #3 (S.E.)

| Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-------|----------|-------|--------------------------------------|
| 28.50 | 47.50 | 76.00 | 37.89 |

Tenass Pass Site #4 (S.E.)

| Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-------|----------|-------|--------------------------------------|
| 30.00 | 55.00 | 85.00 | 36.00 |

Other Kachemak Bay Beaches Surveyed

| Location | Legal | Sublegal | Total | Square Feet of Digging/40 lb. Bucket |
|-----------------|-------|----------|-------|--------------------------------------|
| Chugachik | 3.71 | 0.77 | 4.47 | 291.26 |
| Bear Cove | 2.46 | 2.44 | 4.90 | 439.56 |
| Ismailof Island | 4.51 | 2.99 | 7.50 | 239.52 |
| Peterson Bay | 0.66 | 2.43 | 3.09 | 1643.84 |
| Sadie Cove | 1.01 | 0.72 | 1.73 | 1071.43 |

Sec. 44.62.040. Submitting regulations.

(c) Before submitting the regulations and orders of repeal to the lieutenant governor under (a) of this section, every state agency that by statute possesses regulation making authority, except boards and commissions and the office of the ombudsman, shall submit to the governor for review a copy of every regulation or order of repeal adopted by the agency, except regulations and orders of repeal identified in (a)(1) - (2) of this section. The governor may review the regulations and orders of repeal received under this subsection. The governor may return the regulations and orders of repeal to the adopting agency before they are submitted to the lieutenant governor for filing under (a) of this section,

(1) if they are inconsistent with the faithful execution of the laws or

(2) to enable the adopting agency to respond to specific issues raised by the Administrative Regulation Review Committee.

The governor may not delegate the governor's review authority under this subsection to a person other than the lieutenant governor.



FRAN ULMER
LIEUTENANT GOVERNOR
STATE OF ALASKA

March 14, 2001

The Honorable Lesil McGuire
Alaska State Legislature
State Capitol, Room 116
Juneau, AK 99801-1182

Dear Representative McGuire:

This morning I received your March 14 letter regarding the Department of Fish and Game regulations closing Kachemak Bay and Fox River Flats Critical Habitat Areas to on-bottom mariculture activity, and your request for a delay in filing the regulations.

As you know, the Lieutenant Governor's role in filing regulations is only ministerial for all regulations adopted by boards and commissions. Other regulations, such as these regulations, fall under AS 44.62.040(c), which provides limited authority for the Governor to review regulations prior to filing. After AS 44.62.040(c) was enacted into law in 1995, Governor Knowles delegated this authority to the Lieutenant Governor.

In implementing AS 44.62.040(c), I have always tried to work with agencies that are adopting regulations to ensure that whenever major issues arise during the course of developing the regulations, there is adequate public participation and that all issues are fairly heard and considered. I ask agencies when their regulations come to my office as the last step in the regulatory process: Have you had adequate public input and fairly considered the issues raised? This is consistent with legal standards set by the Administrative Procedures Act and the Constitution of Alaska.

Authority under AS 44.62.040(c) does not give the Governor, or by delegation, the Lieutenant Governor, any authority to refuse to file regulations for reasons not set out in AS 44.62.040(c). In other words, filing is mandatory, not discretionary. I do not have "veto authority" over regulations with which I disagree or that have been questioned by interest groups or individuals with concerns.

In the case of these regulations closing the two Critical Habitat Areas to on-bottom shellfish farming, there was an extensive public process starting almost a year and half ago. Three public meetings were held, as well as a written public comment period in November 1999 through January 2000. An inter-agency planning team consisting of six state and federal agencies and the City of Seldovia participated in the department's planning process and made recommendations. A second public comment period was

The Honorable Lesil McGuire
March 14, 2001
Page Two

made available during November and December, 2000. A summary of public comments and agency responses to comments is available for review.

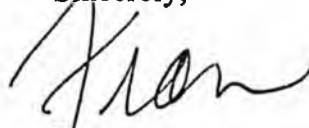
After regulations are drafted, reviewed, noticed, heard, and revised, they are adopted by the agency head and then subjected to a legal review by the Department of Law. Once all the technical legal changes are made, the regulations come to this office for filing. This office attempts to file regulations promptly (within a day or two) once they are transmitted to us, because there are often statutory or regulatory deadlines involved.

These regulations were reviewed by the Department of Law and, following the normal course, were forwarded to this office on Friday, March 9. I was out of town, so they came to me for filing this week. I was aware there had been an Administrative Regulation Review Committee hearing on these regulations on March 8, but I am not aware of any new information or specific issues being raised that hadn't been already addressed in the public process and already considered by the department in the adoption process.

As I do with all regulations, I reviewed the record, I reviewed the public process the regulations went through over the last 18 months and the issues raised, and on March 13 I filed the regulations as I am authorized to do by law.

At the time, I did not know that a specific date had been set for another hearing on the regulations. Timeliness in filing regulations, when they have undergone a fair and adequate public process, is something my office tries hard to provide as a matter of course. Absent any reason to return these regulations under AS 44.62.040(c), I feel it is my statutory duty to file the regulations, which is what I did.

Sincerely,



Fran Ulmer
Lieutenant Governor

ALASKA STATE LEGISLATURE

Rep. Lesil McGuire, Chair
Sen. Robin Taylor, Vice-Chair
Sen. Lyda Green
Sen. Georgianna Lincoln
Rep. Jeannette James
Rep. Joe Hayes



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Administrative Regulation Review Committee

March 14, 2001

The Honorable Fran Ulmer
Lieutenant Governor
State of Alaska
Post Office Box 110015
Juneau, Alaska 99811-0015

Dear Lieutenant Governor:

It is with great concern that it was learned today, that despite many unanswered questions by the Committee, the Department of Fish and Game has decided to proceed with filing Kachemak Bay Regulation additions to 5 AAC 95. Action that we feel, at this time to be premature. The committee is scheduled to continue its review of those proposed changes on Tuesday, March 20.

At the present time there are still many unanswered questions regarding the biological data being used for this decision, with two conflicting summaries available. The Department's decision appears to be based on data that precedes 1994, with a lot written in the '70s. I would reference the population counts in Cook Inlet of Beluga Whales in 1993 compared to today. This is clearly not acceptable biological data and could easily open the Department and therefore the State to a stakeholder's lawsuit.

Since the regulations are currently in your hands and they are Department, not Board regulations, I would request that you reserve your right and delay final action. Too many questions still need to be answered. I thank you in advance for your consideration in this matter.

Sincerely:

Lesil McGuire
Representative, District 17
Chair, Administrative Regulation Review Committee

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| Submitted by | Date Modified | Ak Admin Journal | Attachments | Public (Notes edit) |
|----------------------------------------------------|---------------------------|------------------|-------------------|---------------------|
| Carol Collins/OLG/Gov on 03/15/2001 at 03:06 PM | 03/15/2001 04:08:52 PM | [not printed] | No files attached | |

New Regulations Filed By Lt. Governor (Reg. 158)

Category: Regulations Filed by the Lieutenant Governor

Department: Office of the
Governor

Publish Date: 03/15/2001

Location: Statewide
Region: Statewide

Body of Notice:

REGULATIONS FILED BY THE LT. GOVERNOR

PERMANENT REGULATIONS

The following regulation projects have been adopted by the individual agencies, filed by the Lieutenant Governor and prepared for the July, 2001 Supplement, Register 158. To receive a copy of these regulations, please contact the adopting agency.

| DEPT | A.G. FILE NO | DATE FILED | EFFECTIVE DATE | SUBJECT / PART # / CHAPTER |
|------|--------------|------------|----------------|-------------------------------------------------------------------------------------------------------------------|
| DCED | 993.00.0161 | 03/02/01 | 07/02/01 | Consumer Credit Insurance (3 AAC 28) |
| | | 03/06/01 | 02/08/01 | *NON-APA: AK Industrial Development and Export Authority (3 AAC 99) |
| | 993.01.0014 | 03/07/01 | 04/06/01 | Big Game Guides & Transporters (12 AAC 75) |
| EED | 993.01.0043 | 03/02/01 | 04/01/01 | Bd. Of EED: Endorsements & scores for French and German (4 AAC 12) |
| FG | 993.01.0032 | 03/06/01 | 04/05/01 | Bd. Of Fisheries: Commercial Herring Fisheries Western Ak Areas, Pt. 2 (5 AAC 27) |
| | 993.01.0056 | 03/13/01 | 04/12/01 | Aquatic Farming Kachemak Bay & Fox River Flats Critical Habitat Areas (5 AAC 95) |
| DPS | 993.98.0038 | 03/13/01 | 04/12/01 | Ak. Police Standards Council: Minimum Standards for employment of municipal correctional officers (13 AAC 85; 87) |

*The Department of Law does not review these regulations. AHFC and AIDEA are exempt from the

The Honorable Lesil McGuire
Chair
Administrative Regulation Review Committee
Alaska House of Representatives

March 13, 2001

Dear Representative McGuire,

The Administrative Regulation Review Committee recently held a hearing on the Alaska Department of Fish and Game's proposed regulations to prohibit on-bottom aquatic farming in the Kachemak Bay and Fox River Flats Critical Habitat Areas. I was unable to attend the hearing, but I would like to present my views on this issue for consideration by the committee.

I am in full support of the Department of Fish and Game's proposed closure of the critical habitat area to on-bottom aquatic farming. Fish and Game held extensive public hearings on this issue, attended by a broad cross section of the residents and other users of the Kachemak Bay Area. The Department heard overwhelming opposition to on-bottom aquatic farming in Kachemak Bay for a wide variety of substantive reasons.

Briefly these include:

- On-bottom aquatic farming is inconsistent with the purposes for which the critical habitat areas were established. Privatizing potentially significant portions of the naturally occurring littleneck clam population, which is currently fully utilized by existing recreational and commercial fishermen, does not maintain and improve opportunities to recreate within the critical habitat areas. Application of farming practices such as the use of predator exclusion devices does not maintain and enhance fish and wildlife populations and their habitat. Littleneck clams are a very important food source of many marine mammals, fish, shellfish, and birds that the critical habitat area was established to protect.
- On-bottom aquatic farming in Kachemak Bay is also inconsistent with the Kenai Peninsula Borough Coastal Zone Management Program plan since it would conflict with existing usage of the area by recreational and commercial fishermen.
- As proposed by the aquatic farmers, this style of aquatic farming requires a transfer of ownership of all the publicly owned common property clam resources on a lease site to private ownership. Such a transfer is inconsistent with the Common Use and No Exclusive Right of Fishery clauses of the Alaska Constitution. Access to these resources by the general public is also protected under the Public Trust Doctrine.
- Lack of adequate biological protections such as a shellfish genetics policy, shellfish stocking policy, aquatic farm regulations (which are still under

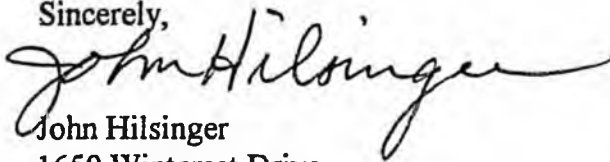
development), public planning process for shellfish stocking, and adequate fisheries enforcement raise serious concerns that on-bottom aquatic farming is inconsistent with the constitutional requirement to manage according to sustained yield principles. These protections are critical since aquatic farmers envision harvesting all wild clams on their lease site and replacing those wild clams with hatchery clams. It is inconceivable that this would be allowed in an area specifically set aside to protect wild fish and wildlife resources.

- The Alaska Board of Fisheries is charged with allocating fishery resources among user groups. Transferring ownership of naturally occurring littleneck clams to aquatic farmers via an Aquatic Stock Acquisition permit is a *de facto* allocation of resources not subject to review by the Board of Fisheries or input from local Fish and Game Advisory Committees. Littleneck clam resources are already fully utilized in Kachemak Bay - any allocation to aquatic farmers must result in a direct reduction in harvest by existing recreational or commercial users, which have numbered over 6,000 people according to Fish and Game statistics.

To provide more detail on these issues, I have attached a copy of the comments I submitted to the Department of Fish and Game during the open comment period for the proposed regulations. I believe all interested parties had more than adequate opportunity during the public meetings and the written comment period to bring forth all pertinent issues related to on-bottom aquatic farming in the Kachemak Bay and Fox River Critical Habitat Areas. The preponderance of substantive comment clearly supports the Department's proposal to close the critical habitat areas to on-bottom aquatic farming. By leaving the area open to hanging culture, the Department has struck an adequate compromise that allows for development of aquatic farming while not harming littleneck clams or impacting the existing common property uses of the area.

Please consider these comments as your committee deals with this issue in the future. I would be happy to provide additional information or answer any questions.

Sincerely,



John Hilsinger
1650 Winterset Drive
Anchorage, AK 99508

Phone: (907)250-9240
e-mail: hoser@ptialaska.net

Claudia Slater
Alaska Department of Fish and Game
Habitat Division
333 Raspberry Road
Anchorage, Alaska 99518

December 8, 2000

ALASKA DEPT. OF
FISH & GAME

DEC 08 2000

REGION II
HABITAT AND RESTORATION
DIVISION

Dear Ms. Slater:

This letter is to provide comments in support of the proposed prohibition of on-bottom aquatic farming in the Kachemak Bay and Fox River Critical Habitat Areas (critical habitat areas).

On-bottom aquatic farming in Kachemak Bay will concentrate, at least initially, primarily on culture of littleneck clams. Depending on future markets and advances in culture technology, it is possible other species would be employed in the future. As proposed for Kachemak Bay, on-bottom aquatic farming is clearly inconsistent with the purposes for which the critical habitat areas were created.

Section I, Fish and Wildlife Populations and Their Habitat, includes the goal to "Manage the critical habitat areas to maintain and enhance fish and wildlife populations and their habitat". Due to the lack of biological protections, reliance on hatchery stocking, and unsustainable harvest rates on wild clams, on-bottom aquatic farming is clearly inconsistent with this goal.

Section II, Public Use includes the goals "B. Maintain or improve opportunities for hunting and fishing within the critical habitat areas" and "C. Maintain and improve opportunities to recreate in critical habitat areas." The transfer of ownership of wild common property resources (which are already fully utilized for commercial and recreational purposes) to on-bottom aquatic farms is clearly incompatible with the goals of improving opportunities for fishing and recreation. I believe these are appropriate goals for the critical habitat areas and I do not find on-bottom aquatic farming to be compatible with them.

In addition to concerns with the compatibility of on-bottom aquatic farming with the Kachemak Bay and Fox River Critical Habitat Areas plan, I have reviewed the Kenai Peninsula Borough Coastal Zone Management Program and I find on-bottom aquatic farming in the critical habitat areas to be inconsistent with this plan.

Specific Comments:

- I. "MANAGE THE CRITICAL HABITAT AREAS TO MAINTAIN AND ENHANCE FISH AND WILDLIFE POPULATIONS AND THEIR HABITAT".

The following seven points deal with the issues of lack of policies and regulations, sustained yield management, stock status of little neck clams in Kachemak Bay, lack of biological

protections, other biological concerns, fishery enforcement, and impacts to other species. Each of these points is a critical factor for maintaining and enhancing fish populations.

1. **Lack of Policy and Regulations.** The Alaska Department of Fish and Game does not have a written policy for on-bottom aquatic farming - neither does it currently have regulations governing the operation of on-bottom aquatic farms. While these regulations are currently under development, they are only at the internal departmental review stage and are not available to the general public. Therefore, the public has no way of knowing how the actual operation of the on-bottom aquatic farms will occur. Neither does the department have an official shellfish genetics policy that has been peer reviewed and approved by the appropriate staff and commissioner. Before any additional aquatic farm leases are issued in the critical habitat areas, the department must have a well thought out policy, and regulations, which have gone through the appropriate departmental and public review processes. It would be inappropriate to allow on-bottom aquatic farming when the department does not have in place the means to adequately plan for and regulate the development of the industry.
2. **Sustained Yield.** The Alaska constitution states in the SUSTAINED YIELD clause (Article VIII, Section 4) in part, that "...Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the state shall be utilized, developed, and maintained on the sustainable yield principle...". Under current practices, species subject to on-bottom aquatic farming are transferred to private ownership, and the state may not be able to regulate the harvest rate applied by the private owner. Even though Alaska Statute 16.40.120(e) states that "The Board of Fisheries may adopt regulations for the conservation, maintenance, and management of species for which an acquisition permit is required." - it is not clear that this would allow the Board to regulate the harvest rate of a specific farm. The state cannot ensure, in that case, that sustained yield principles are followed. Aquatic farmers who testified at the Department of Natural Resources hearing stated that they intended to harvest all wild clams off their leases in approximately five years. Such a harvest rate is not sustainable given the life history characteristics of little-neck clams. To maintain population size, these wild clams would be replaced with hatchery clams. Extirpation (localized extinction) of wild fishery resources and replacement with non-indigenous hatchery stock does not fulfill the requirement for management according to sustained yield principles - neither is it consistent with the purposes of the critical habitat areas. The legislature has already addressed this issue in AS 16.05.730 Management of Wild and Enhanced Stocks of Fish, which states, in part::

"(a) Fish stocks in the state *shall* be managed consistent with sustained yield of wild fish stocks and *may* be managed consistent with sustained yield of enhanced fish stocks" (emphasis added).

One of the main reasons for the existence of the critical habitat areas is to help protect the sustained yield of the resources contained therein. For some resources in the critical harvest area (such as marine mammals or shorebirds) the yield is not measured in units of harvest - but for clams, harvest in common property fisheries is the sustained yield. Any

activity that clearly impacts the ability to sustain yield of wild clams, such as on-bottom clam farming, is incompatible with the purposes of the critical habitat areas.

3. **Declining Resources.** Harvest of hard-shell clams in Kachemak Bay is declining dramatically in recent years. This indicates the resource may not be able to withstand the current level of harvest. Therefore, any additional usage would have to reduce existing harvests by one or both user groups.

| Year | Pounds Commercial | Pounds Recreational | Total Harvest |
|------|----------------------|------------------------|------------------|
| 1995 | 71,025 | 172,644 | 243,669 |
| 1996 | 53,757 | 230,886 | 284,643 |
| 1997 | 31,525 | 80,971 | 122,494 |
| 1998 | 23,465 | 105,664 | 129,129 |
| 1999 | 18,530 | 67,754 | 86,284 |
| 2000 | 20,756 | Not Available | |

Similarly, clam stock assessment surveys by the Department of Fish and Game document declining densities of clams in many areas. It is inconsistent with both the protection of resources and with the public use of those resources to transfer them to private ownership, with virtually no safeguards, at a time when the population is already declining and public usage is being restricted.

4. **Biological Protections.** The situation with on-bottom aquatic farms is clearly inconsistent with AS 16.05.730(a). Furthermore, the biology of clams in Alaska is little understood. Genetics and pathology policies for stocking of hatchery clams do not exist and little or no research has been directed at this issue. Salmon hatchery operation and salmon stocking in the state have been intensively researched and are heavily regulated and monitored by the state. Regional Planning Teams, Regional Aquaculture Associations, Regional Salmon Enhancement Plans, genetics and pathology policies and sampling, as well as project review and approval at all levels of the department from the local area biologist on up serve to protect wild salmon. None of these safeguards exist at the current time for shellfish stocking. Therefore it is not possible to go forward with on-bottom aquatic farming while still protecting the purposes of the critical habitat area.
5. **Biological Concerns.** As described above, wild clam densities appear to be declining in Kachemak Bay. This decline would be accelerated by the high harvest rates associated with on-bottom aquatic farming. As wild clam densities decline, hatchery clams stocked by farmers would begin to make up an increasing proportion of the clam resource. Hatchery clams would be expected to interbreed with wild clams. Since the hatchery clams are the offspring of a very limited number of adults, the genetic diversity and fitness of the entire population would be impacted over time. The stock recruitment relationship for clams is poorly understood. Available evidence suggests there may not be a good relationship between increased biomass of clams and increased recruitment. This could occur because other factors such as temperature, storms, and abundance of suitable substrate may play a more significant role in spawning success. Therefore, there is no

direct scientific reason to believe that stocking hatchery clams will help rebuild wild clam populations. Because clams are broadcast spawners, if the hatchery clams used for stocking are maladapted to the specific area stocked they may have a significant detrimental impact on wild clams on other beaches as well as the beach where they are stocked. Critical habitat areas were created to protect wild naturally occurring fish and wildlife resources – they were not created as a means to replace wild resources with non-indigenous resources such as hatchery clams. It should be noted here that the situation with stocking hatchery salmon, which does occur in Kachemak Bay, is very different from that of clams. As noted above (Part 4) a well-established set of safeguards is in place for salmon. Beyond that the homing biology of salmon allows stock specific harvest of hatchery fish while protecting wild fish and reduces the probability of hatchery fish interbreeding with wild fish.

6. **Fishery Enforcement.** In Kachemak Bay active commercial fisheries would exist side by side with on-bottom aquatic farms specializing in hardshell clams that operate under different rules creating significant enforcement problems. Such problems could further jeopardize clam stocks. For example, if farmers are not made to adhere to the same seasons and size limits as commercial diggers, a loop hole is created for unscrupulous operators to harvest undersized wild clams or harvest wild clams during closed seasons and sell those clams as farmed clams. This would be very difficult to detect since farmed clams would be moving to market at all times of the year, not just when the commercial season is open. This is especially problematic in Kachemak Bay where areas are open to commercial clam digging only on alternate years to help protect the clam resource. Another potential problem would be the digging of wild clams from non-lease areas for the stocking of leases without reporting the harvest to the department. The wild clams could then be sold as farmed clams not subject to any Guideline Harvest Level. The Division of Fish and Wildlife Protection is already underfunded for the job it has to do without increasing its workload. Enforcement problems are nearly always conservation problems. Creating a resource management situation which helps exacerbate, rather than solve, enforcement problems is not consistent with good conservation ethics.
7. **Impacts to Other Species.** In order to improve survival rates of farmed organisms, and therefore the chances for success for an on-bottom aquatic farm, farmers utilize a plastic mesh, called predator mat, over their shellfish beds to reduce predation. Clams are a well known, and critical, food source for a wide variety of sea birds, marine mammals, fish, and other shellfish, which the critical habitat areas were set up to help protect. Use of predator mat at farms would tend to concentrate predation on the remaining unprotected beds of wild clams. There is also some possibility of wildlife becoming entangled in the mat. Neither of these situations is consistent with protecting and enhancing wildlife.

II. "MAINTAIN OR IMPROVE OPPORTUNITIES FOR HUNTING AND FISHING WITHIN THE CRITICAL HABITAT AREAS" AND "MAINTAIN AND IMPROVE OPPORTUNITIES TO RECREATE IN CRITICAL HABITAT AREAS."

The following four points deal with privatizing common property resources, common use, allocation and reallocation of resources, and impacts on existing users. The primary species of interest to on-bottom aquatic farmers in Kachemak Bay at the present time is the littleneck clam. This species is already fully utilized and fully allocated in the critical habitat areas. Allocating a portion of the resource in these areas is clearly inconsistent with maintaining or improving opportunities for fishing and recreation.

1. **Privatizing Common Property Resources.** The permitting of aquatic farms utilizing on-bottom culture techniques involves leasing intertidal lands to a private party and then actually transferring ownership of the naturally occurring wild clams (in this case, principally littleneck clams) to that party via an Aquatic Stock Acquisition Permit. The hard-shell clam resources of Kachemak Bay are already fully utilized by the existing commercial and recreational fisheries. Therefore, transferring any of this resource to private ownership would require taking harvest away from the existing users. This would happen in two ways - first, reduction in allowable harvest by either lowering the commercial Guideline Harvest Level or by reducing the recreational bag limit; and second, by displacing both commercial and recreational clam diggers whom traditionally dug in those leased areas. Since over 6,100 recreational and commercial clam diggers utilize Kachemak Bay, this has the potential to affect a sizable number of people. There is apparently no legal limit to the amount of a beach or bay area may be leased. Since clams are not evenly distributed along a beach, there are areas with relatively few clams and areas with very many clams. Applicants are allowed to select the areas they want to lease. There is a distinct possibility they will choose areas with very high densities of clams. As a result, the number of clams transferred to private ownership may be disproportionately larger than the leased acreage would suggest - a small portion of beach could easily contain the majority of clams. Therefore the impact on existing users could be very much more substantial than the size of the lease applications would suggest. A primary reason for creating the critical habitat area was to help protect common property resources, and the habitat that they depend on, in order to ensure their continued viability and availability for common use. Transferring these common property resources to private ownership would negate the purposes of the critical habitat areas.
2. **Common Use.** There are significant constitutional questions surrounding on-bottom aquatic farming. Under Article VIII of the Alaska State Constitution, Section 15 NO EXCLUSIVE RIGHT OF FISHERY certainly states "No exclusive right or special privilege shall be created or authorized in the natural waters of the State. This section does not restrict the power of the state to limit entry into any fishery for purposes of resource conservation, to prevent economic distress among fishermen and those dependent upon them for a livelihood and to promote the efficient development of aquaculture in the State (emphasis added)." However, Section 3 COMMON USE states "Wherever occurring in their natural state, fish, wildlife, and waters are reserved to the people for common use." Clearly there is some tension between these two sections with regard to on-bottom aquatic farming. It seems that providing an exclusive right of fishery in order for the efficient development of aquaculture could be permitted only when it does not violate Section 3 which protects common use.

This could potentially happen in three ways. First would be to lease an area where there was little or no pre-existing usage and an aquatic farm lease could be set up such that it would not impact other elements of the common use (*i.e.* clam farms small enough that they do not prevent other users from easily gaining access to the resource). This situation simply does not exist in the critical habitat areas where the resource is already fully utilized by over 6,100 people. It is difficult to conceive of a viable clam bed in the critical habitat areas that is not already someone's favorite spot to dig clams. Second would be to not allow the farmer to have ownership of the naturally occurring clams on the lease. Third is to issue on-bottom aquatic farm leases at sites where there are no wild clams. Unfortunately, all three methods are unacceptable to the aquatic farming industry and since enforcement is virtually non-existent and there is little to prevent an unscrupulous operator getting around these requirements.

3. **Allocation Criteria.** Transferring harvest opportunity from one user group to another, such as on-bottom aquatic farmers would clearly represent a reallocation of clam harvest among two competing user groups. Under current regulations, the Alaska Board of Fisheries is supposed to allocate, or reallocate, resources according to the "allocation criteria" set out by the legislature in AS 16.05.251(e). Failure to consider these criteria in any reallocation of resources is grounds for legal challenge. No such consideration by the Board is possible if state agencies effectively reallocate resources simply by issuing leases and transferring ownership of the wild clams found on those leases. AS 16.40.120(e) states: "The Board of Fisheries may adopt regulations for the conservation, maintenance, and management of species for which an acquisition permit is required." If the applied for leases are actually issued, the transfer will occur prior to the time that the Board can assess the allocation issues. This effectively circumvents the long established process by which such decisions are made. The public process utilized by the Board of Fisheries is a very open, accessible, and familiar process that most resource users are well aware of. Circumventing the Board's allocation process does not serve the interests of Alaskan resource user's. It is inconceivable that the department itself should help promote this circumvention by amending the management plan to allow on-bottom aquatic farming at this time.
4. **Impacts on Existing Users.** It is difficult to consider on-bottom aquatic farms anything other than a commercial enterprise. Therefore it is highly likely that any clams transferred to private ownership would result in a reduction of the harvest of clams available to commercial clam diggers. Because of the naturally declining harvest, the impact of any such transfer will be great. For example, the annual Guideline Harvest Level (GHL) set by the Alaska Department of Fish and Game for commercial harvest of littleneck clams has declined dramatically. From approximately 65,000 pounds prior to 1997, the GHL declined to 40,000 pounds in 1997 as a result of Board of Fisheries action. The GHL was further reduced to 30,000 pounds for 1998 and to 25,000 pounds for the 1999 season. Reductions the last two years are due to declining clam densities. Transfer of any substantial poundage of clams to private ownership would further erode the commercial take, possibly to the point where it effects the viability of the commercial fishery.

There is clear impact potential for recreational users as well as commercial clam diggers. First, the Board of Fisheries could decide to share the reallocation burden among both user groups by reducing harvest levels for each. Second, both recreational and commercial diggers used to digging in a particular location could find themselves in search of new beaches when confronted with angry clam farmers while digging on their traditional beaches. It is likely that displaced users from both groups would end up gravitating to some of the same beaches – increasing conflicts between them. Conflicts between recreational and commercial diggers are already severe in Kachemak Bay. The Board of Fisheries very nearly closed all of Kachemak Bay to commercial clam digging in 1997 because of the conflicts between recreational and commercial diggers as well as concerns over commercial clam digging around Kachemak Bay State Park and the Kachemak Bay and Fox River Flats Critical Habitat Areas. The Board did close Bear Cove to commercial clam digging during that meeting because of concerns expressed by local residents. Bear Cove has among the highest densities of littleneck clams found anywhere in Kachemak Bay and would be a very desirable location for a clam farm lease for this reason. It is highly likely that similar conflicts would occur between recreational diggers and clam farmers in such areas. Such a situation is clearly inconsistent with the desire to maintain and improve opportunities for the public to fish, hunt, and recreate in the critical habitat areas.

III. COASTAL ZONE MANAGEMENT

All aquatic farming in the critical habitat areas should be consistent with all other applicable plans, such as the Coastal Zone Management and Dept. of Natural Resources Area plans. These plans are developed with significant public input. In the case of the Kenai Peninsula Borough Coastal Management Program plan, it is stated on page 3-30 with respect to Aquatic Farming that part of the primary goal is to support development of shellfish mariculture "...where such activities can be conducted with minimal conflict with existing uses..." The plan further states "...Objective 1.2 – To minimize conflicts with existing or potential uses of coastal waters." On page 3-31 the plan discusses siting criteria and states in section 8.2.a. that "Potential mariculture sites shall be in areas of low conflict with existing uses." The plan further states in section 8.2.c that "Potential mariculture/aquaculture sites shall be in areas of low conflict with existing uses; the following areas shall be avoided where incompatible: ... - recreation, subsistence, or sport fishing and hunting areas receiving significant public use...". It is clear that siting clam farms in the critical habitat areas is incompatible with these sections of the Coastal Zone Management Program.

SUMMARY

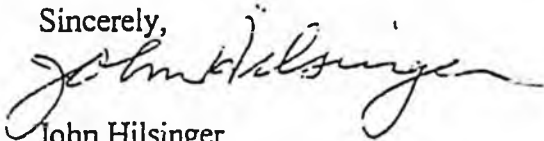
At the current time, the State of Alaska has no comprehensive plan for handling the development of aquatic farms. Decisions appear to be made on a case by case basis in the absence of a good understanding of the legal, constitutional, biological, and social issues. Critical information, such as stock status, details of pre-existing usage, and potential impacts of hatchery stocks on wild stocks are largely absent. Further, the state has not developed the

necessary protections such as genetics, pathology, and stocking policies, appropriate harvest rates, and regulations on how farms will be operated. Finally the role of the Board of Fisheries is unclear in this process and the public is largely left out. While all these elements may eventually come together, there is a high probability that many operations will have already been permitted. I believe that the state should close all critical habitat areas to on-bottom aquatic farming. When all the pieces are in place and agencies and public have had adequate chance for review and input, the state can decide whether or not to continue the prohibition. Issuing any on-bottom aquatic farm leases for critical habitat areas in the current climate of ignorance and uncertainty is a mistake that may well cause significant problems for the public and private sectors and the resources of Alaska.

The Kachemak Bay and Fox River Flats Critical Habitat Areas were created to help protect and enhance wild renewable fish and wildlife resources and to help maintain and improve the ability of the public to use them. Allowing on-bottom clam farming would degrade the biological protection provided to these resources and it would degrade the public common property usage of these resources. Both of these outcomes are incompatible with the original purposes for which the critical habitat areas were created.

Your thoughtful consideration of these comments will be greatly appreciated.

Sincerely,



John Hilsinger
3601 Raspberry Road #1A
Anchorage, AK 99502

Phone: (907) 245 -1199
E-mail: hoser@ptialsaka.net

[Fwd: Concerned about Kachemak Bay]

Subject: [Fwd: Concerned about Kachemak Bay]
Date: Wed, 07 Mar 2001 11:24:13 -0900
From: Representative Lesil McGuire <Representative_Lesil_McGuire@legis.state.ak.us>
Organization: Alaska State Legislature
To: Jim_Pound@legis.state.ak.us

Subject: Concerned about Kachemak Bay
Date: Sun, 4 Mar 2001 16:10:24 -0900
From: "jetski" <jetski@acsalaska.net>
To: <Representative_Lesil_McGuire@legis.state.ak.us>

Representative Lesil McGuire,

I am writing as a concerned Anchorage resident regarding the impending closure of Personal Watercraft (PWC) in Kachemak Bay in Homer, Alaska. The Department of Natural Resources has been reviewing testimony regarding the ban of PWC's, and the outlook is not good for those of us who participate in this activity. Anti-PWC activist's have gathered support for their cause using outdated information and literally made up statements bashing one of my favorite outdoor activities. Despite the PWC community submitting the most up to date statistics and testimony to DNR, it just seems to be falling upon deaf ears. PWC's are a safe, and viable means of water transportation, and recreation on many of Alaska's waterways. PWC's are not so unique that they should be singled out from the rest of the boating community. I hope that you are as concerned as I am about this issue and that we can prevent this unnecessary and discriminatory ban of PWC in Kachemak Bay.

Thank you

Sincerely,

Ross

[Fwd: Kachemak Bay on bottom mariculture regs]

Subject: [Fwd: Kachemak Bay on bottom mariculture regs]

Date: Thu, 08 Mar 2001 13:21:58 -0900

From: Representative Lesil McGuire <Representative_Lesil_McGuire@legis.state.ak.us>

Organization: Alaska State Legislature

To: Jim_Pound@legis.state.ak.us

Subject: Kachemak Bay on bottom mariculture regs

Date: Thu, 08 Mar 2001 12:26:02 -0800

From: Mary Griswold <mgrt@xyz.net>

To: Representative_Lesil_McGuire@legis.state.ak.us

Re: Clam farming in Kachemak Bay

Please support the proposed Alaska Department of Fish & Game regulations to prohibit clam farming in Kachemak Bay. These beaches are too popular for recreational uses to be tied up by private industry. The decision to prohibit clam farming here is the result of significant research and public testimony and will not interfere with such industry in other more appropriate areas.

Thank you for your consideration,

Mary Griswold
P.O. Box 1417
Homer, AK 9903

Subject: [Fwd: Kachemak Bay Mariculture Regs]
Date: Thu, 08 Mar 2001 13:25:10 -0900
From: Representative Lesil McGuire <Representative_Lesil_McGuire@legis.state.ak.us>
Organization: Alaska State Legislature
To: Jim_Pound@legis.state.ak.us

Subject: Kachemak Bay Mariculture Regs
Date: Wed, 7 Mar 2001 21:55:57 -0900
From: "Willy and Bonita Dunnlind" <wdunne@xyz.net>
To: <Representative_Lesil_McGuire@legis.state.ak.us>
CC: <Senator_John_Torgerson@legis.state.ak.us>, <Representative_Drew_Scalzi@legis.state.ak.us>

Dear Representative McGuire,

We reside by and derive our living from Kachemak Bay. Over the past year we have followed the progress of regulations developed to protect recreational and commercial digging of clams in our bay. Apparently a number of influential people want to lease some of our public tidelands for private clam farms. Unfortunately the clam resource here is fully utilized by personal use and commercial diggers. Any private clam farms allowed would reduce the area we have to harvest this public resource.

I understand that your Administrative Regulation Review Committee will hold a hearing on this issue tomorrow. Please do not change the regulations developed by ADFG and reviewed and commented on by the public over the past year.

Thank you,

Willy and Bonita Dunnlind



Alaska State Legislature

Please enter into the record my testimony to the

JARR-0308

committee name

committee on

Regulations mariculture
bill/subject

dated

3/08/01

Support prohibiting on-bottom aquatic farming.

In 1972 and 1974, respectively, Fox River Flats + Kachemak Bay Critical Habitats were created to protect + preserve areas crucial to fish + wildlife. To minimize harmful disturbance to waterfowl, shorebirds, + seabirds - to protect the quality + quantity of nesting, feeding, rearing, staging + wintering waterfowl + shorebirds + seabirds is crucial.

In the small areas that the public can use lands in Kachemak Bay for personal use clam digging, there would be reduced areas available if mariculture (on bottom) occurred.

Concerns arise over safety because of nets possibly rolling up the shoreline in storms, + endangering birds + wildlife. The many species of birds in Kachemak Bay + Fox River rely on natural stocks, which could be threatened by introduced bacteria + viruses. These birds might get feet + bills caught in the just below the surface netting that would extend along the intertidal lines of beaches for long distances.

Signed:

Testifier

Diane McBride

Representing (Optional)

self

Address

Box 956

Homer, AK 99603

Phone No.

907-235-6175