

SB

241

SENATE COMMITTEE REPORT
FIRST COMMITTEE OF REFERRAL

DATE: 4/5/91

FURTHER:

Date of 5-Day Notice: _____
(in accordance with Uniform Rule 23)

DATE TURNED
INTO OFFICE: _____

Resources Committee considered SB 241

Authorizing the Alaska Commercial Fisheries Entry Commission to establish a moratorium on new entrants into certain commercial fisheries and relating to qualifications for entry permits.

and recommended:

- replace with _____ CS _____ same title
- attached amendment(s) new title
- _____ letter of intent adopted
- do pass
- do not pass
- no recommendation
- individual recommendations
- further referral to _____

ATTACHES NEW FISCAL NOTE(S):

- | | |
|---|---|
| Department(s)/Date: | Department(s)/Date: |
| <input type="checkbox"/> fiscal note(s) _____ | <input type="checkbox"/> <u>zero</u> fiscal note(s) _____ |
| _____ | _____ |
| _____ | _____ |
| <input type="checkbox"/> appropriation-no fiscal note | <input type="checkbox"/> Governor's bill w/fiscal note |

SIGNING DO PASS:

OTHER RECOMMENDATIONS:

Chair: Signature and Recommendation

DEPARTMENT OF FISH AND GAME
POSITION PAPER

Bill No. Senate Bill 241
Sponsor Senator Jones
Division Commercial Fisheries
Bill Title: "An Act authorizing the Alaska Commercial Fisheries
Entry Commission to establish a moratorium on new
entrants into certain commercial fisheries and
relating to qualifications for entry permits."

Department Position: Support

SB 241 will establish a mechanism whereby the Commercial Fisheries Entry Commission (CFEC) may place a moratorium on new entrants to a fishery for a period of up to four years. The ability of CFEC to place a moratorium on new entrants to a fishery will be of benefit to the Division of Commercial Fisheries management programs. It will be of particular benefit when applied to new developing fisheries for which the division has little or no biological resource data, effort is growing rapidly, and funds for management of the fishery are lacking or inadequate.

The institution of a moratorium would stop the growth of effort in a fishery at a level that would most likely allow a continuance of the fishery at some harvest level which would provide an economic return to the industry and the state. The moratorium would provide an opportunity for the department to work with the public in development of a management plan for the fishery. That plan would then be presented to the Board of Fisheries for their consideration. The moratorium would also provide a time period during which the department and the industry could seek the funds needed for the management of the fishery.

Commissioner's Signature *Tom Somerville* Date 4/13/91

FISCAL NOTE

STATE OF ALASKA
1991 LEGISLATIVE SESSION

BILL NO SB 241

Revision Date: 4/5/91
Title: Moratorium on Commercial Fisheries Entry

Department Affected: Fish and Game
BRU: Commercial Fisheries
Component: Commercial Fisheries

Sponsor: Senator Jones
Requestor: Governor

COMPONENT SERIAL NO.

4	5	9
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Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES	0					
TRAVEL	0					
CONTRACTUAL	0					
SUPPLIES	0					
EQUIPMENT	0					
LAND & STRUCTURES	0					
GRANTS, CLAIMS	0					
MISCELLANEOUS	0					
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
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REVENUE	0	0	0	0	0	0
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FUNDING: (Thousands of Dollars)

GENERAL FUND	0					
FEDERAL FUNDS	0					
OTHER	0					
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0					
PART-TIME	0					
TEMPORARY	0					

Estimate of current year impact: None

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Bob Glasby Phone: 465-4210
Division: Division of Commercial Fisheries Date: 4/15/91

Approved by Commissioner: [Signature]
Agency: ADF & A Date: 4/13/91

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

SENATE BILL 241

"An act authorizing the Commercial Fisheries Entry Commission to establish a moratorium on new entrants into certain commercial fisheries and relating to qualifications for entry permits."

Senator Lloyd Jones, Chair of the Senate Resources Committee, has introduced legislation that would authorize the Commercial Fisheries Entry Commission (CFEC) to establish a moratorium in certain commercial fisheries. Senate Bill 241 has been cosponsored by Senator Dick Eliason, Senate President. A similar bill, House Bill 137, was also introduced in the House of Representatives by Representative Ben Grussendorf. Since the proposal was introduced, a number of questions have been asked. The following information is provided to address those questions.

QUESTIONS AND ANSWERS

WHAT IS A MORATORIUM AND WHAT WOULD IT DO?

A "moratorium" is a simple way to temporarily stop new people from entering a fishery. A moratorium does not directly affect anyone who is already actively participating in the fishery.

Under the terms of SB 241, during the time that a moratorium is in effect, the CFEC would be required to work with the Department of Fish and Game, the Board of Fisheries, and representatives of the industry to examine conditions within the fishery to devise an appropriate management plan (which could or could not include the establishment of a maximum number under the current limited entry authority).

No moratorium would remain in place for longer than four years; likewise, no fishery would be placed under a moratorium more than once.

WHY IS A MORATORIUM AUTHORITY NEEDED?

In new, emerging fisheries, experiencing a rapid growth in participation, there may not be enough information available on the biology of the resource to make informed decisions on how much effort the fishery can sustain and how to manage the fishery under the sustained yield principle. Rather than risking a closure of the fishery while the necessary data are gathered, a moratorium would allow the fishery to continue by establishing a temporary cap on the number of persons fishing in order to control growth and to provide an orderly fishery.

In existing fisheries, where the conservation of the resource and the economic viability of the fishery is threatened by increased effort, but where the current limited entry program may not be an appropriate management alternative, a moratorium would give managers, biologists and the industry time to develop an alternative management solution.

No person or agency within Alaska currently has the authority to implement a moratorium in commercial fisheries that occur in state waters.

HOW WOULD A MORATORIUM BE INITIATED; WHAT CRITERIA WOULD APPLY?

Work on establishing a moratorium would be initiated after receiving a petition from the ADF&G Commissioner. The public could also petition the ADF&G commissioner. The Commission would consider the request and decide whether or not to propose a regulation to establish a moratorium. If such a regulation were proposed, public hearings would be held

in the affected area prior to adoption of (or rejection of) the regulation(see attachment: **Steps in the Moratorium Process**)

Under SB 241, a moratorium could be proposed by CFEC if it is demonstrated that a threat to a fishery's conservation or economic stability may exist because of a rapid increase in participation; and if it is deemed there is insufficient information to conclude that limited entry would solve the problem. In those circumstances, the CFEC may adopt a moratorium.

WHAT WOULD HAPPEN DURING A MORATORIUM?

People **currently participating** in the fishery would continue to fish under existing regulations. CFEC, members of the industry, and fishery managers and biologists would work together to devise a management plan that would allow for as much participation in the fishery as would be consistent with sound management principles.

At any time during the moratorium period, the CFEC could repeal the moratorium regulations and return the fishery to its previous "open to entry" status.

As noted, the CFEC can repeal a moratorium regulation at any time; however, a period of four years allows time for the Board of Fish to meet (if new regulations are required), and it also allows time for multiple sessions of the Legislature(if new legislation is necessary to manage the fishery). Finally, placing a limit of four years on the length of time that a moratorium can be in effect insures that a "closed class" of participants is not created and sustained.

WHAT WOULD HAPPEN AT THE END OF THE MORATORIUM?

Assuming that the CFEC had not repealed the moratorium regulation before the moratorium expired, one of three things would happen at the end of the moratorium:

1. A new management plan could be adopted by the Board of Fish or the Legislature (or both);
2. Limited entry could be implemented by CFEC by adopting a maximum number under its existing authority; or,
3. The moratorium could expire and the fishery would again be open to new entrants.

WHO DECIDES WHO MAY FISH DURING A MORATORIUM?

Under SB 241, CFEC may establish the qualifications based upon past participation in the fishery, including specific years of participation and/or the minimum harvest during the qualifying years.

At a minimum, anyone who actively participated in the fishery in any of the four years prior to the moratorium would be qualified. In new fisheries that have not been open for four years, all participants would be qualified to participate during a moratorium.

WILL THE MORATORIUM BE USED FOR EXISTING FISHERIES OR JUST EMERGING FISHERIES?

The moratorium could be used in either emerging or existing fisheries.

HOW IS A MORATORIUM DIFFERENT FROM LIMITED ENTRY?

Under the Limited Entry Act, the purpose of both the moratorium and limited entry is to "promote the conservation and the sustained yield management of Alaska's fishery resource

and the economic health and stability of commercial fishing in Alaska." The main difference is that the moratorium is a **temporary** measure, while limited entry is permanent. Also, the moratorium includes everyone currently fishing, while limited entry would probably exclude some currently active participants from the fishery.

WON'T PEOPLE RUSH OUT AND BUY PERMITS IN RESPONSE TO TALK OF A MORATORIUM?

There is frequently an increase in the number of persons buying interim-use permits when there is discussion of limited entry in a fishery. But, just buying an interim-use permit would not qualify someone for an interim-use permit during the time that a moratorium is in effect, or qualify someone to apply for a permanent limited entry permit. To become eligible, a person must demonstrate active participation in the fishery by fishing his/her permit and recording landings on fish tickets.

DOES A MORATORIUM CREATE A "CLOSED CLASS"?

No. Since the moratorium expires after 4 years, and cannot be renewed, there is no danger of establishing a permanent closed class. Also, interim-use permits, issued during a moratorium, may be transferred through CFEC upon a showing of hardship. (Additionally, we note that the mid-Atlantic surf clam fishery was under a moratorium continuously for over a decade and was not subjected to a legal challenge).

CAN A FISHERY BE OPENED ONLY TO ALASKAN RESIDENTS AT THE END OF A MORATORIUM?

No. Although maintaining Alaskan fisheries exclusively for Alaskan residents may be an attractive idea, it is unconstitutional to discriminate against non-residents.

WON'T THIS BILL JUST MAKE IT EASIER TO IMPLEMENT LIMITED ENTRY?

Not necessarily; in fact, it may make it more difficult. The procedure for limiting entry in a fishery will not change if the moratorium authority is passed by the legislature. The CFEC will still have to propose a maximum number, hold hearings, and make findings on the record before implementing limited entry; however, during the time that the moratorium is in effect, those who are opposed to limited entry will be able to make their case for an alternative management plan. The moratorium authority will be an addition to existing CFEC regulatory authority. The moratorium will provide a less burdensome alternative to implementing limited entry.

ISN'T A MORATORIUM JUST ANOTHER WAY TO CUT PEOPLE OUT OF THE FISHERY?

No. It is a way to keep **new** participants out of a fishery until enough is known about the fishery to allow additional participation. Under a moratorium, everyone who had fished at some time during any of the 4 years prior to the moratorium would be allowed to continue fishing. Under the current limited entry program, some current participants would probably be excluded.

(The original of this document was prepared by the CFEC for HB 137; changes have been made by the Senate Resources Committee to comply with SB 241.)

Alaska State Legislature

Chair, Resources Committee
Vice-chair, Transportation Committee
Member, Rules Committee
Member, Committee on Committees

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Senator Lloyd Jones

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EXPLANATION OF PROPOSED CS SENATE BILL 241

The proposed committee substitute for Senate Bill 241 makes certain changes to the original bill. These changes are the result of staff from different offices working with the drafter and with the Limited Entry Commission and are especially in response to concerns voiced by some commercial fishermen.

Sec. 5 of the bill (the section which establishes the moratorium)

Page 4, line 18 petitions the commission under AS 44.62.220. The statutory reference was added to better define the formal petition process which is required.

Page 4, lines 28-30. A fishery that has been subject to a moratorium under this section may not be subjected to a subsequent moratorium under this section unless five years have elapsed since the previous moratorium expired. (deletes the language which limits a fishery permanently to only one moratorium). This language was added to allow for more flexibility if a fishery were threatened and met all the criteria at some point in the future, but it does not allow for more than one continuous four year moratorium period.

Page 5, lines 3-6. deletes [as necessary] to mandate that, during a moratorium, research will be conducted and consultation will be carried out with ADF&G, the Board of Fisheries and the fishery participants.

Sec. 12 - new section added

Page 7, line 14. Adds an immediate effective date. The original SB 241 did not provide for an effective date.

CS FOR SENATE BILL NO. 241 (RESOURCES)
IN THE LEGISLATURE OF THE STATE OF ALASKA
SEVENTEENTH LEGISLATURE - FIRST SESSION

BY THE SENATE RESOURCES COMMITTEE

Offered:
Referred:

Sponsor(s): SENATORS JONES, Eliason

A BILL

FOR AN ACT ENTITLED

1 "An Act authorizing the Alaska Commercial Fisheries Entry Commission to establish a
2 moratorium on new entrants into certain commercial fisheries and relating to qualifications
3 for entry permits; and providing for an effective date."

4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

5 * Section 1. FINDINGS AND PURPOSE. (a) The legislature finds that

6 (1) the continuation of a commercial fishery may be threatened by the lack of adequate
7 biological and resource management information necessary to determine the amount of fishing effort that
8 a fishery resource can sustain;

9 (2) the continuation of a commercial fishery may be threatened by an increase in fishing
10 effort that is coupled with a lack of sufficient biological and resource management information necessary
11 to ascertain, consistent with the principles of sustained yield, whether the fishery can support additional
12 fishing effort;

13 (3) the provisions of the current commercial fisheries limited entry statutes, developed
14 for commercial salmon fisheries, may not be appropriate for certain other commercial fisheries in the

1 state;

2 (4) the time consuming process required to consider, adopt, and implement a limited entry
3 program for a fishery, coupled with public discussion of a proposal for limiting entry into the fishery,
4 can stimulate a rush of new entrants into the fishery before the limited entry program can be
5 implemented.

6 (b) It is the purpose of this Act to

7 (1) authorize the Alaska Commercial Fisheries Entry Commission to temporarily prevent
8 additional participants from entering a threatened commercial fishery in order to

9 (A) allow the fishery to continue in an orderly and controlled manner until
10 additional data can be gathered from the commercial harvest and from biological research;

11 (B) protect the fishery and participating fishermen dependent upon the fishery by
12 lessening the risk of closure of the fishery for lack of an effective management plan; and

13 (C) allow control of the development of the fishery; and

14 (2) avoid a potential risk to a threatened commercial fishery, as well as a rush to limit
15 entry into the fishery, while allowing sufficient time for research and careful consideration and discussion
16 of all management alternatives for regulating the fishery and entry into the fishery among interested
17 parties, including the public, fishery managers, the Board of Fisheries, the Alaska Commercial Fisheries
18 Entry Commission, and the legislature.

19 * Sec. 2. AS 16.43.100(a) is amended to read:

20 (a) To accomplish the purposes set out in AS 16.43.010, the commission shall [:]

21 (1) regulate entry into the commercial fisheries for all fishery resources in the
22 state;

23 (2) establish priorities for the application of the provisions of this chapter to the
24 various commercial fisheries of the state;

25 (3) establish administrative areas suitable for regulating and controlling entry into
26 the commercial fisheries;

27 (4) establish, for all types of gear, the maximum number of entry permits for each
28 administrative area;

29 (5) designate, when necessary to accomplish the purposes of this chapter,
30 particular species for which separate interim-use permits or entry permits will be issued;

31 (6) establish qualifications for the issuance of entry permits;

- 1 (7) issue entry permits to qualified applicants;
- 2 (8) issue interim-use permits as provided in AS 16.43.210 and 16.43.220;
- 3 (9) establish, for all types of gear, the optimum number of entry permits for each
- 4 administrative area;
- 5 (10) administer the buy-back program provided for in AS 16.43.310 and 16.43.320
- 6 to reduce the number of outstanding entry permits to the optimum number of entry permits;
- 7 (11) provide for the transfer and reissuance of entry permits to qualified
- 8 transferees;
- 9 (12) provide for the transfer and reissuance of entry permits for alternative types
- 10 of legal gear, in a manner consistent with the purposes of this chapter;
- 11 (13) administer the collection of the annual fees provided for in AS 16.43.160;
- 12 (14) administer the issuance of commercial fishing vessel licenses under
- 13 AS 16.05.490;
- 14 (15) issue educational entry permits to applicants who qualify under the provisions
- 15 of AS 16.43.340 - 16.43.390;
- 16 (16) establish reasonable user fees for services;
- 17 (17) issue landing permits under [IN ACCORDANCE WITH] AS 16.05.675 and
- 18 regulations adopted under that section; [AND]
- 19 (18) establish and collect annual fees for the issuance of landing permits that
- 20 reasonably reflect the costs incurred in the administration and enforcement of provisions of law
- 21 related to landing permits; and
- 22 (19) establish a moratorium on entry into commercial fisheries as provided
- 23 in AS 16.43.225.

24 * Sec. 3. AS 16.43.180(a) is amended to read:

- 25 (a) The commission shall adopt regulations providing for the temporary emergency
- 26 transfer of entry permits and interim-use permits when illness, disability, death, required military
- 27 or government service, or other unavoidable hardship prevents the permit holder from
- 28 participating in the fishery. To alleviate hardship pending a final determination of the permit
- 29 holder's eligibility for an entry permit, the commission shall adopt regulations providing for the
- 30 temporary emergency transfer of an interim-use permit issued under AS 16.43.210(b) or
- 31 16.43.225.

1 * Sec. 4. AS 16.43.210(a) is amended to read:

2 (a) Pending the establishment of the maximum number of entry permits under
3 AS 16.43.240 and the issuance of entry permits under AS 16.43.270, the commission shall issue
4 interim-use permits under regulations adopted by the commission for each fishery, not subject
5 to a moratorium under AS 16.43.225, to all applicants who can establish their present ability
6 to participate actively in the fishery for which they are making application.

7 * Sec. 5. AS 16.43 is amended by adding a new section to read:

8 Sec. 16.43.225. MORATORIUM ON NEW ENTRANTS INTO CERTAIN FISHERIES.

9 (a) Subject to (b) of this section, the commission may establish a moratorium on new entrants
10 into a fishery that

11 (1) is experiencing increases in participation and fishing effort that significantly
12 exceed historic levels of participation and fishing effort known for the fishery; or

13 (2) has developed within the four calendar years preceding the calendar year in
14 which the commissioner of fish and game petitions the commission to adopt a regulation
15 establishing a moratorium on new entrants into the fishery.

16 (b) The commission may establish a moratorium on new entrants into a fishery described
17 in (a) of this section if

18 (1) the commissioner of fish and game petitions the commission under
19 AS 44.62.220 to establish a moratorium on new entrants into the fishery; and

20 (2) the commission finds that

21 (A) the fishery has reached a level of participation that may threaten the
22 conservation and the sustained yield management of the fishery resource and the
23 economic health and stability of commercial fishing; and

24 (B) the commission has insufficient information to conclude that the
25 establishment of a maximum number of entry permits under AS 16.43.240 would further
26 the purposes of this chapter.

27 (c) The commission may establish a moratorium under this section for a continuous
28 period of up to four years. A fishery that has been subject to a moratorium under this section
29 may not be subjected to a subsequent moratorium under this section unless five years have
30 elapsed since the previous moratorium expired.

31 (d) While a moratorium is in effect, the commission shall conduct investigations to

1 determine whether a maximum number of entry permits should be established under
2 AS 16.43.240 by

- 3 (1) conducting research into conditions in the fishery;
4 (2) consulting with the Department of Fish and Game and the Board of Fisheries;
5 and
6 (3) consulting with participants in the fishery.

7 (e) The commission must establish by regulation the qualifications for applicants for an
8 interim use permit for a fishery subject to a moratorium under this section. The qualifications
9 must include the minimum requirements for past or present participation and harvest in the
10 fishery. The commission may not issue an interim use permit for a fishery subject to a
11 moratorium under this section unless the applicant can satisfy the qualifications established under
12 this subsection and establish the present ability and intent to participate actively in the fishery.

13 * Sec. 6. AS 16.43.240(b) is amended to read:

14 (b) When the commission finds that a fishery, not designated as a distressed fishery under
15 AS 16.43.230 or not subject to a moratorium under AS 16.43.225, has reached levels of
16 participation that [WHICH] require the limitation of entry in order to achieve the purposes of
17 this chapter, the commission shall establish the maximum number of entry permits for that
18 fishery.

19 * Sec. 7. AS 16.43.240 is amended by adding a new subsection to read:

20 (c) When the commission finds that a fishery subject to a moratorium under
21 AS 16.43.225 has reached levels of participation that require the limitation of entry in order to
22 achieve the purposes of this chapter, the commission shall establish the maximum number of
23 entry permits for that fishery.

24 * Sec. 8. AS 16.43.260(a) is amended to read:

25 (a) The commission shall accept applications for entry permits only from applicants who
26 have harvested fishery resources commercially while participating in the fishery as holders of
27 gear licenses issued under AS 16.05.536 - 16.05.670 or [AND] interim-use permits under
28 AS 16.43.210(a) or 16.43.225 before the qualification date established in (d), [OR] (e), or (f) of
29 this section. The commission may specify by regulation the calendar years of participation that
30 will be considered for eligibility purposes.

31 * Sec. 9. AS 16.43.260(d) is amended to read:

1 (d) Except as provided in (e) or (f) of this section, an applicant shall be assigned to a
2 priority classification based solely upon the applicant's qualifications as of January 1, 1973.

3 * Sec. 10. AS 16.43.260(e) is amended to read:

4 (e) Except as provided in (f) of this section, when [WHEN] the commission establishes
5 the maximum number of entry permits for a particular fishery under AS 16.43.240 after
6 January 1, 1975, an applicant shall be assigned to a priority classification based solely upon the
7 applicant's qualifications as of January 1 of the year during which the commission establishes
8 the maximum number of entry permits for the fishery for which application is made.

9 * Sec. 11. AS 16.43.260 is amended by adding a new subsection to read:

10 (f) When the commission establishes the maximum number of entry permits under
11 AS 16.43.240 for a fishery that is subject to a moratorium under AS 16.43.225, an applicant for
12 an entry permit for the fishery shall be assigned to a priority classification based solely upon the
13 applicant's qualifications as of the effective date of the regulation establishing the moratorium.

14 * Sec. 12. This Act takes effect immediately under AS 01.10.070(c).

FISCAL NOTE

STATE OF ALASKA
1992 LEGISLATIVE SESSION

BILL NO. SB 241

Revision Date: 4/5/91 Department Affected: Fish and Game
 Title: Moratorium on Commercial Fisheries Entry BRU: Commercial Fisheries
 Component: Commercial Fisheries
 Sponsor: Senator Jones
 Requestor: Senate Resources Committee COMPONENT SERIAL NO.

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EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES	0					
TRAVEL	0					
CONTRACTUAL	0					
SUPPLIES	0					
EQUIPMENT	0					
LAND & STRUCTURES	0					
GRANTS, CLAIMS	0					
MISCELLANEOUS	0					
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE FUND SOURCE:	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

GENERAL FUND	0					
FEDERAL FUNDS	0					
OTHER FUND SOURCE:	0					
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0					
PART-TIME	0					
TEMPORARY	0					

Estimate of current year impact: None

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Bob Clasby Phone: 465-4210
 Division: Division of Commercial Fisheries Date: 12/18/91
 Approved by Commissioner: [Signature]
 Agency: Department of Fish and Game Date: 1/20/92

Alaska State Legislature

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Member, Rules Committee
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Senator Lloyd Jones

Sponsor Statement
Senate Bill 241
Senate Resources Committee
April 15, 1991

Senate Bill 241 would provide the Commercial Fisheries Entry Commission (CFEC) with a tool that could be utilized on a temporary basis to manage a certain fisheries.

At this point, the CFEC has only one tool at their disposal to regulate participation in a commercial fishery -- the implementation of a permanent limited entry program.

However, there are situations where there may not be sufficient information or data available on a particular resource to make informed decisions on how much effort a fishery can sustain. This is particularly true of fisheries which are experiencing a rapid growth in participation.

Rather than resorting to a closure of the fishery while data is being collected, a temporary moratorium on NEW participants would allow the fishery to continue while the necessary information is being collected.

In such instances, where the conservation and economic stability of the fishery is threatened by increased effort but where a full blown limited entry program may be inappropriate, a temporary moratorium, as proposed by Senate Bill 241, would buy time to look at data and alternative ways to manage the fishery.

Some of the provisions of Senate Bill 241 are as follows:

1. The CFEC would be authorized to initiate a moratorium under certain conditions. The commission would have to receive a petition from the ADF&G commissioner formally explaining the reasons for the need for a moratorium in a particular fishery.

1. The CFEC would be authorized to initiate a moratorium under certain conditions. The commission would have to receive a petition from the ADF&G commissioner formally explaining the reasons for the need for a moratorium in a particular fishery.

2. The moratorium would be placed on "new" participants in a fishery. The fishery must meet certain criteria to qualify for a moratorium and participants must satisfy certain requirements in order to qualify for an interim-use permit under the moratorium.

3. Regulations would have to be promulgated for the establishment of a moratorium and there would thus be public hearings.

4. A moratorium may only be in effect for a maximum of four years and cannot be renewed.

5. During the moratorium period, the CFEC, the Department of Fish and Game and the Board of Fish and the fishery participants will be working together and research will be conducted into the fishery to obtain the needed data.

6. At the end of the moratorium period, the moratorium automatically expires and the fishery is again open to new entrants unless a determination has been made to limit the fishery.

In short, Senate Bill 241 is not an attempt to "limit" a fishery; rather it is an attempt to buy time for a fishery that is threatened to learn about the resource and see what management tools are needed.

The bill is supported by the Department of Fish and Game and of course, by the Limited Entry Commission. Further support comes from certain commercial fishing groups, such as the southeast dungeness crab fishermen and the participants in the developing dive fisheries, such as sea cucumbers and sea urchins.

1. The CFEC would be authorized to initiate a moratorium under certain conditions. The commission would have to receive a petition from the ADF&G commissioner formally explaining the reasons for the need for a moratorium in a particular fishery.
2. The moratorium would be placed on "new" participants in a fishery. The fishery must meet certain criteria to qualify for a moratorium and participants must satisfy certain requirements in order to qualify for an interim-use permit under the moratorium.
3. Regulations would have to be promulgated for the establishment of a moratorium and there would thus be public hearings.
4. A moratorium may only be in effect for a maximum of four years and cannot be renewed.
5. During the moratorium period, the CFEC, the Department of Fish and Game and the Board of Fish and the fishery participants will be working together and research will be conducted into the fishery to obtain the needed data.
6. At the end of the moratorium period, the moratorium automatically expires and the fishery is again open to new entrants unless a determination has been made to limit the fishery.

In short, Senate Bill 241 is not an attempt to "limit" a fishery; rather it is an attempt to buy time for a fishery that is threatened to learn about the resource and see what management tools are needed.

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There is a series of "questions and answers" in the committee packets and representatives of the Limited Entry Commission are here to go through the bill by section, if you wish and to answer any questions. I should note that we are also on teleconference.

COMMERCIAL FISHERIES ENTRY COMMISSION

ST. VE COWPER, GOVERNOR

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JUNEAU, ALASKA 99811-0302
PHONE: (907) 485-4081

October 19, 1990

Glen A. Wilber
Vice-President
Alaska Underwater Harvesters Association
3311 Halibut Point Rd.
Sitka, Ak. 99835

Dear Mr. Wilber:

Thank you for your letter of Sept. 25, 1990, and the petition from concerned citizens and members of the Alaska Underwater Harvesters Association. Your petition asks us to "to issue an immediate "moratorium" on the issuance of any new permits for the harvest of sea cucumbers in Alaska and that a study be conducted into the possibility of future "limited entry".

We must deny your request for the moratorium as we lack the statutory authority to implement a simple moratorium. Under the existing limited entry statutes, the only way we can restrict the number of participants in a fishery is by committing to a full-scale, salmon-type limited entry program.

As the State's limited entry program can be relatively expensive to implement (due to the initial allocation process), we must necessarily be conservative in using the program. We usually do not undertake a limitation unless we are convinced that the program is appropriate, will serve the purposes of the statute, and will produce substantial benefits. At this point, we do not feel that we can draw such conclusions in this fishery.

As you may be aware, we recently directed our research staff to conduct a study into the possibility of using the existing limited entry program in the Southeastern Alaska diving fisheries. There are many issues to consider. We would like to see the results of our staff's study and hear the thoughts of the Board of Fisheries on appropriate management measures before we contemplate any full-scale limitation proposals.

In the meantime, we are hopeful that the interim management measures in the sea cucumber fishery will be adequate and will discourage those who might seek to enter the fishery on a speculative basis. Hopefully, the new plan will "buy time" so that other potential management measures can be considered more carefully.

Even though we lack the power to act, we are sympathetic toward your request for a moratorium on new entrants and we might consider using such authority if we had it. Representative Ben Grussendorf has indicated that he wants to explore the need for new legislation to provide the Commission with the authority to implement a simple moratorium in such situations. We plan to work with Representative Grussendorf to help in every way that we can.

Again, thank you for your letter and petition. We share your concerns about the fishery. Your continued help as we investigate these issues will be greatly appreciated. If you have further questions or thoughts on these matters, please do not hesitate to contact us.

By Direction of the

COMMERCIAL FISHERIES ENTRY COMMISSION

Bruce Twomley, Chairman
Phil Smith, Commissioner
Rich Listowski, Commissioner

By: 

cc: All Petitioners
The Honorable Ben Grussendorf
State House of Representatives
✓ Doug Rickey, Aide to Rep. Grussendorf
Eric Jordan, Chair - Sitka Advisory Committee

1125

RECEIVED

SEP 27 1990

COMMERCIAL FISHERIES
ENTRY COMMISSION

September 25, 1990

Entry Commission
Alaska Commercial Fisheries
8800-109 Glacier Highway
Juneau, Alaska 99801

Dear Sirs:

Please accept the enclosed petition from concerned citizens and members of the Alaska Underwater Harvesters Associated based in Sitka, Alaska. In this petition we ask that the commission issue an immediate "moratorium" on the issuance of any new permits for the harvest of sea cucumbers in Alaska and that a study be conducted into the possibility of future "limited entry".

If you have any questions, please feel free to contact me by correspondence (3311 Halibut Point Rd., Sitka, AK 99835) or phone (907-747-3177). Thank you for your assistance.

Sincerely,

Glenn A. Wilber
Vice President
Alaska Underwater Harvesters Association

Enclosure: Petition With 75 Signatures

47 322-8

Response
Deadline
10/29/90

WE THE UNDERSIGNED PETITION THE STATE OF ALASKA LIMITED ENTRY COMMISSION AS CONCERNED CITIZENS AND MEMBERS OF THE ALASKA UNDERWATER HARVESTERS ASSOCIATION. IN THIS PETITION WE ASK THAT THE COMMISSION ISSUE AN IMMEDIATE "MORATORIUM" ON THE ISSUANCE OF ANY NEW PERMITS FOR THE HARVEST OF SEA CUCUMBERS IN ALASKA AND THAT A STUDY BE CONDUCTED INTO THE POSSIBILITY OF FUTURE "LIMITED ENTRY".

PRINTED NAME	SIGNATURE	ADDRESS	DATE
Larry J. Smith	<i>Larry J. Smith</i>	1321 Summit Cr.	5/10/90
Shelia K. Smith	<i>Shelia K. Smith</i>	1321 Sme Rd.	5/10/90
Sharon Gillipie	<i>Sharon Gillipie</i>	2620 APR	5/10/90
Margaret Nettles	<i>MARGARET NETTLES</i>	Box 1995 SITKA	5/11/90
John McNulty	<i>John McNulty</i>	Box 1269 SITKA	5/11/90

SEP 27 1990

WE THE UNDERSIGNED PETITION THE STATE OF ALASKA LIMITED ENTRY COMMISSION AS CONCERNED CITIZENS AND MEMBERS OF THE ALASKA UNDERWATER HARVESTERS ASSOCIATION. IN THIS PETITION WE ASK THAT THE COMMISSION ISSUE AN IMMEDIATE "MORATORIUM" ON THE ISSUANCE OF ANY NEW PERMITS FOR THE HARVEST OF SEA CUCUMBERS IN ALASKA AND THAT A STUDY BE CONDUCTED INTO THE POSSIBILITY OF FUTURE "LIMITED ENTRY".

PRINTED NAME	SIGNATURE	ADDRESS	DATE
JACK WEDDEL	Jack Weddel	Box 920	5/8/90
RANDY SPIEGGS	Randy Spiggs	110 EAGLE WAY	5/8-90
Greta L Eliason	Greta L Eliason	207 Cedar Hts	5-8-90
MITCH COWAN	Mitch Cowan	Box 6349	5-8-90
MARIO KUEHA	Mario Kueha	808 Lince St.	5-8-90
Boquslaw Fryze	Fryze	806 Lince St	5-8-90
Glenn A Wilton	Glenn A Wilton	3311 HPR	
Joan N. Risher	Joan N Risher	3311-HPR	5-8-90
Greg Myers	Greg Myers	P.O. - Box 604	5-8-90
Clyde COURSEY	Clyde Coursey	230 KAGWOUTAN	9 MAY 90
KRIS HOFFMANN	Kris Hoffmann	10 1/2 WAKSOUTOFF	5-9-90
D. FORD	D. Ford	Box 2351 SITKA AK.	5/9/90
PAUL L DRAKE	Paul L Drake	1812 Sawmill Creek	5-9-90
Al Kueha	Al Kueha	470 KATHIAN SITKA	5-9-90
L.T. SMOTHERMAN	L.T. Smotherman	Box 6220 SITKA AK	
PAUL B MARENO	PAUL B MARENO	Box 295 SITKA AK	5-9-90
J.C. Loech	J.C. Loech	617 KATHIAN M-	
BERNARD H. REEDER	Bernard H. Reeder	107 SHELKOFF DR	
DEAN G. BENJAMIN	Dean G. Benjamin	212 LAKEVIEW DR SITKA	
GARY ATKINSON	Gary Atkinson	P.O. BOX 1953 SITKA	5-9-90

SEP 27 1990

DES

WE THE UNDERSIGNED PETITION THE STATE OF ALASKA LIMITED ENTRY COMMISSION AS CONCERNED CITIZENS AND MEMBERS OF THE ALASKA UNDERWATER HARVESTERS ASSOCIATION. IN THIS PETITION WE ASK THAT THE COMMISSION ISSUE AN IMMEDIATE "MORATORIUM" ON THE ISSUANCE OF ANY NEW PERMITS FOR THE HARVEST OF SEA CUCUMBERS IN ALASKA AND THAT A STUDY BE CONDUCTED INTO THE POSSIBILITY OF FUTURE "LIMITED ENTRY".

PRINTED NAME	SIGNATURE	ADDRESS	DATE
Liam Pearson	Liam Pearson	Box 1143	5-9-90
Jim Cushing	Jim Cushing	404 Lake St.	5/9/90
Terry Lindvall	Terry Lindvall	313 Lake	5/9/90
DIANNE LINDVALL	Dianne Lindvall	313 Lake	5/9/90
Thomas A Summers	Thomas A Summers	P.O. Box 21	5-14/90
Jim Giddard	Jim Giddard	Box 1362	5/9/90
Jim Stewart	Jim Stewart	717 Kattikan	5/9/90
Les Richardson	Les Richardson	214 Brady	5/9/90
STEPHEN C. SHAFER	Stephen C. Shafer	315 Seward St.	5-9-90
Carl R Sangster	Carl R Sangster	101 Kubie Dr	5-10-90
Ron Heathman	Ron Heathman	1511-3 SMC	5/10/90
Ross R. Bingham	Ross R. Bingham	3106 HPR	5/10/90
William Faust	William Faust	3109 HPR.	5/10/90
Larry S. Hou	Larry S. Hou	4014 HPR.	5/11/90
FRANK LOUCKS	Frank Loucks	Box 3154 SITKA	5/11/90
Brian Omann	Brian Omann	Box 2991 SITKA	5/11/90
George Kubik	George Kubik	1752 HPR	5/11/90
Jan Kubik	Jan Kubik	713 Kattikan	5/11/90
Pat Miller	PAT MILLER	Box 1284	5/11/90
Byron Paul	Byron J Paul	1022 Lance Dr Apt 2	5/11/90

SEP 27 1990

ES

SEP 27 1990

WE THE UNDERSIGNED PETITION THE STATE OF ALASKA LIMITED ENTRY COMMISSION AS CONCERNED CITIZENS AND MEMBERS OF THE ALASKA UNDERWATER HARVESTERS ASSOCIATION. IN THIS PETITION WE ASK THAT THE COMMISSION ISSUE AN IMMEDIATE "MORATORIUM" ON THE ISSUANCE OF ANY NEW PERMITS FOR THE HARVEST OF SEA CUCUMBERS IN ALASKA AND THAT A STUDY BE CONDUCTED INTO THE POSSIBILITY OF FUTURE "LIMITED ENTRY".

PRINTED NAME SIGNATURE ADDRESS DATE

Eric Quintin	Eric Quintin	3914 HPR	5-11-90
P-J Mulkey	P.J. Mulkey	P.O. Box 49	5-11-90
Ben Taylor	Ben Taylor	Box 965	5-10-90
MILTON HUNT	Milton Hunt	Box 2355	5-11-9
SANDRA HUNT	Sandra H. Hunt	BOX 2355	5-11-90
Bradley F. Scougale	Bradley F. Scougale	Box 6270	5-11-90
David M. Owens	DAVID OWENS	117 KAZIAN STR.	5-11-9
MIKE ANGUS	Mike Angus	Box 3204 SITKA	5-11-9
LAUREN ROGERS	Lauren Rogers	Box 6102 SITKA	5-11-90
TOM DEPU	Tom E. DePue	Box 4102 SITKA	5-11-9
Kirk Van Winkle	Kirk Van Winkle	P.O. 842	SITKA 5-11-9
Steve Branch	Steve Branch	Schaefer #23	SITKA 5-11-90
Jessie Brown	Jessie Brown	Box 1947	SITKA 5-11-90
Stuart Denslow	Stuart Denslow	Box 6191	SITKA 5-11-9
Garrell Campbell	Garrell Campbell	2604 Sawmill Creek	SITKA 5-11-90
Kelly L. White	Kelly L. White	P.O. Box 2402	SITKA 5/11/90
Beverly S. Brill	Beverly S. Brill	Box 1439	SITKA 5/11/90
JEFF D. BAUMANN	Jeff D. Baumann	310 Marine Blvd	5/11/9
EARL B. SHAFER	Earl B. Shafer	Box 1421	SITKA 5/11/9
ED CAITY	Ed Caity	Box 423	Verstovick Ave SITKA

March 24, 1991

From: Spencer Severson
F/V Snorkel
PO 6412
Sitka, Ak. 99835
(907) 747-0509

To: Lloyd Jones
PO Box V
Juneau, Ak. 99811

Re: Red Sea Urchins in S.E. Alaska
A Fledgling fishery with Potential

Dear Representative Jones,

I have been a harvest diver in S.E. Alaska for the past 10 years. We have had several sea urchin fisheries in that period, mostly in Ketchikan and Prince of Wales Island area.

We now are commencing a small fishery in Sitka, with a local processor in joint venture with the largest sea urchin buyer in California. It appears very viable.

The bad news is that F&G is unable to grant us an adequate quota to proceed because of lack of funding and directive to manage a new emerging fishery.

Please see the below outline which I am sending to each of our S.E. legislators explaining our objectives.

Any help would be greatly appreciated.

Sincerely,


Spencer Severson

SOUTHEAST DUNGENESS CRAB ASSOCIATION
P.O. BOX 935
PETERSBURG, ALASKA 99833

MARCH, 1991

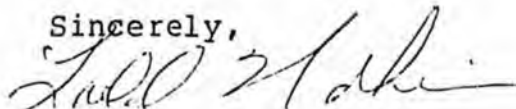
Senator Lloyd Jones
P.O. Box V
Juneau, Alaska 99811

Honorable Senator:

I urge you to support legislation introduced into the House and Senate granting the commercial fisheries entry commission authority to impose a temporary moratorium upon developing and potentially endangered fisheries.

This is a very responsible bill which will allow the resource and its effort to be studied while preventing further damage. We are very fearful of the adverse impact an infusion of large, non-resident boats will have on this fishery. Our livelihood is at stake.

Please consider this legislation carefully and the positive impacts it will have on Alaska's fisheries for Alaskans.

Sincerely,


LADD NORHEIM
SEDCA TREASURER

WPF:veb

cc: Tom Findley
Larry Cotter

SOUTHEAST DUNGENESS CRAB ASSOCIATION
P.O. BOX 935
PETERSBURG, ALASKA 99833

MARCH, 1991

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P.O. Box V
Juneau, Alaska 99811

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Sincerely,



ROCKY C. LITTLETON
SEDCA MEMBER

WPF:veb

cc: Tom Findley
Larry Cotter

SOUTHEAST DUNGENESS CRAB ASSOCIATION
P.O. BOX 935
PETERSBURG, ALASKA 99833

MARCH, 1991

Senator Lloyd Jones
P.O. Box V
Juneau, Alaska 99811

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Please consider this legislation carefully and the positive impacts it will have on Alaska's fisheries for Alaskans.

Sincerely,

Dennis J. O'Neil

DENNIS O'NEIL
SEDCA MEMBER

WPF:veb

cc: Tom Findley
Larry Cotter

Alaska State Legislature

Sen. Lloyd Jones, *Chair*
Sen. Sam Cotten, *Vice-Chair*
Sen. Dick Ellason, *Member*
Sen. Steve Frank, *Member*
Sen. Rick Halford, *Member*
Sen. Curt Menard, *Member*
Sen. Fred Zharoff, *Member*

P.O. Box V
Juneau, AK 99811

907 465-4907
Fax: 907 465-3922

Senate Resources Committee

SECTIONAL ANALYSIS

SENATE BILL 241

Section 1 Findings and Purpose

Findings:

The Legislature finds that 1) a commercial fishery may be threatened because of a lack of data which would provide information on how much fishing effort the fishery can sustain; 2) a commercial fishery may be threatened because of an increase in fishing effort, coupled with the lack of sufficient biological information; 3) a limited entry program might not be appropriate and it also extremely time consuming and expensive to implement in situations where it might not be necessary:

Purpose:

Senate Bill 241 would allow the Commercial Fisheries Entry Commission to establish a temporary moratorium on new participants in a threatened fishery so that the fishery can continue in an orderly manner while research is conducted into the fishery.

Section 2. Amends the general powers of the CFEC to allow for the establishment of a moratorium, as provided in Senate Bill 241.

Section 3. Amends the statutes enabling the CFEC to issue emergency transfers to provide for such transfers of interim use permits issued for a moratorium as provided in Senate Bill 241.

Section 4. Excludes a fishery which is subject to a moratorium under SB 241 from the interim-use permit qualifications established for the limited entry program. The provision for interim use permits under a moratorium is established in Section 5 and this eliminates duplicative language.

Section 5. This is the main section of the legislation which sets out the provisions under which a moratorium may be established.

For a fishery to qualify for a moratorium it must meet one of two criteria:

- 1) the fishery must show increases in fishing effort that significantly exceed historic levels of participation; or
- 2) the fishery has developed within four years previous to the year in which the ADF&G commissioner petitions the CFEC to adopt a moratorium.

Before the CFEC can establish a moratorium on a fishery, it must receive a formal petition from the Commissioner of Fish and Game and must find that the level of participation has

increased to a degree that threatens the fishery and that there is insufficient information to conclude that limited entry is warranted.

The moratorium on a fishery may only last for four continuous years and may not be renewed.

During the moratorium, the CFEC is required to conduct investigations and research and consult with the Department, the Board of Fish and the fishermen.

This section directs the Commission to establish regulations which include past or present participation and harvest in a particular fishery.

Section 6.

Clean-up language to separate out a fishery which is subject to a moratorium from a fishery that is not designated as a distressed fishery.

Section 7 Authorizes the commission to establish the maximum number of entry permits for a fishery under a moratorium if it is deemed that limited entry will be necessary.

Section 8-II. Application for initial issue of entry permits. Amends the statutes relating to applications for limited entry permits to include holders of interim-use permits under a moratorium.

Table 1. Statistical Area A (Southeast Alaska) Dungeness crab catch, number of participating vessels, number of landings, and average catch per landing, 1961 to present.

Year/ Season	Catch in Pounds	Number of Vessels	Pounds per Vessel	Number of Landings	Pounds per Landing
1961	1,449,405	-			
1961	671,455	.			
1962	2,985,939	-			
1963	3,296,362	.			
1964	3,996,100	-			
1965	2,392,395	-			
1966	1,968,117	-			
1967	2,033,156	.			
1968	1,900,690	.			
1969/70	1,149,111	20	57,456	392	2,931
1970/71	776,617	21	36,982	380	2,044
1971/72	451,281	23	19,621	315	1,433
1972/73	597,587	30	19,920	315	1,897
1973/74	748,519	41	18,257	483	1,550
1974/75	713,668	43	16,597	453	1,575
1975/76	611,621	36	16,989	346	1,768
1976/77	515,378	25	20,615	174	2,962
1977/78	127,345	12	10,612	87	1,464
1978/79	750,284	25	30,011	207	3,625
1979/80	801,753	37	21,669	313	2,562
1980/81	512,247	26	19,702	226	2,267
1981/82	2,935,110	76	38,620	748	3,924
1982/83	3,648,035	128	28,500	1,306	2,793
1983/84	2,152,738	133	16,186	1,533	1,404
1984/85	1,833,421	180	10,186	1,565	1,172
1985/86	2,314,322	215	10,764	2,071	1,117
1986/87	2,458,224	224	10,974	2,330	1,055
1987/88	3,390,845	241	14,070	2,810	1,207
1988/89	3,320,675	266	12,484	2,678	1,240
1989/90	1,922,408	249	7,721	2,116	909
1990/91 ^M	2,491,572	222	11,223	2,116	1,177

^M Most recent year's data should be considered preliminary.

DEPARTMENT OF FISH AND GAME
POSITION PAPER

Bill No. Senate Bill 241

Sponsor Senator Jones

Division Commercial Fisheries

Bill Title: "An Act authorizing the Alaska Commercial Fisheries Entry Commission to establish a moratorium on new entrants into certain commercial fisheries and relating to qualifications for entry permits."

Department Position: Support

SB 241 will establish a mechanism whereby the Commercial Fisheries Entry Commission (CFEC) may place a moratorium on new entrants to a fishery for a period of up to four years. The ability of CFEC to place a moratorium on new entrants to a fishery will be of benefit to the Division of Commercial Fisheries management programs. It will be of particular benefit when applied to new developing fisheries for which the division has little or no biological resource data, effort is growing rapidly, and funds for management of the fishery are lacking or inadequate.

The institution of a moratorium would stop the growth of effort in a fishery at a level that would most likely allow a continuance of the fishery at some harvest level which would provide an economic return to the industry and the state. The moratorium would provide an opportunity for the department to work with the public in development of a management plan for the fishery. That plan would then be presented to the Board of Fisheries for their consideration. The moratorium would also provide a time period during which the department and the industry could seek the funds needed for the management of the fishery.

Commissioner's Signature

Tom Somerville

Date

4/13/91

FISCAL NOTE

STATE OF ALASKA
1991 LEGISLATIVE SESSION

BILL NO. SB 241

Revision Date: 4/5/91
Title: Moratorium on Commercial Fisheries Entry

Department Affected: Fish and Game
BRU: Commercial Fisheries
Component: Commercial Fisheries

Sponsor: Senator Jones
Requestor: Governor

COMPONENT SERIAL NO.

	4	5	9
--	---	---	---

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES	0					
TRAVEL	0					
CONTRACTUAL	0					
SUPPLIES	0					
EQUIPMENT	0					
LAND & STRUCTURES	0					
GRANTS, CLAIMS	0					
MISCELLANEOUS	0					
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
---------	---	---	---	---	---	---

REVENUE	0	0	0	0	0	0
---------	---	---	---	---	---	---

FUNDING: (Thousands of Dollars)

GENERAL FUND	0					
FEDERAL FUNDS	0					
OTHER	0					
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0					
PART-TIME	0					
TEMPORARY	0					

Estimate of current year impact: None

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Bob Clasby Phone: 465-4210
Division: Division of Commercial Fisheries Date: 4/15/91

Approved by Commissioner: Don Amurill
Agency: ADF & A Date: 4/13/91

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

STATE OF ALASKA

COMMERCIAL FISHERIES ENTRY COMMISSION

MAR 12 1991

WALTER J. HICKEL, GOVERNOR

8800-109 GLACIER HIGHWAY
JUNEAU, ALASKA 99801
(907) 789-6150 Licensing Calls
(907) 789-6160 Other CTEC Calls
(907) 789-6170 FAX

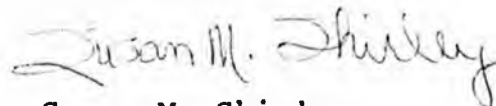
March 8, 1991

Paula Terrell
Capitol Room 9
Mail Stop 1100
Juneau, Alaska 99811

Dear Ms. Terrell:

Please find enclosed a table containing the number and percent of resident and non-resident participants in the Southeastern Alaska Dungeness crab fishery for the years 1986 through 1990. Do not hesitate to call if you have questions on this information or if I can be of further assistance.

Sincerely,



Susan M. Shirley
Research Analyst

Enclosure

RESIDENT VS. NON-RESIDENT PARTICIPATION
IN THE SOUTHEAST ALASKA DUNGENESS CRAB FISHERY
1986 TO 1990

YEAR	RESIDENTS	NON-RESIDENTS	Total
1986	181 87%	27 13%	208
1987	216 92%	19 8%	235
1988	249 92%	23 8%	272
1989	230 90%	26 10%	256
1990	227 84%	42 16%	269

State of Alaska
Commercial Fisheries Entry Commission
8800-109 Glacier Hwy
Juneau, AK 99801
(907) 789-6160 / Fax 789-6170

5/17/91 P.1

HONORABLE LLOYD JONES:

WE HAVE BECOME AWARE OF A PETITION PRESENTED TO YOU OPPOSING YOUR S.B. 241. WE BELIEVE THIS PETITION IS INDICATIVE OF THE DILEMMA FACING THE S.E. DUNGENESS CRAB RESOURCE. THESE PETITION SIGNERS FISHERMAN ARE POTENTIAL NEW ENTRANTS INTO AN ALREADY OVER-CROWDED FISHERY WHICH THREATEN THIS IMPORTANT RESOURCE.

S.B. 241/HB 137 IS A REASONED AND RESPONSIBLE SOLUTION TO OUR CURRENT RESOURCE PROBLEMS. AND WE URGE YOU TO STAND FIRM ON THIS IMPORTANT LEGISLATION.

THANK YOU,
WILLIAM FLOR, PRESIDENT
S-E DUNGENESS CRAB ASSOCIATION

SOUTHEASTERN ALASKA DUNGENESS CRAB FISHERIES
1974-75 TO 1989-90 SEASONS

CFEC Briefing Report 90-5

prepared by

Susan M. Shirley

June 5, 1990

Commercial Fisheries Entry Commission
8800-109 Glacier Highway
Juneau, Alaska 99801-8079
(907) 789-6160

SOUTHEASTERN ALASKA DUNGENESS CRAB FISHERIES
1974-75 TO 1989-90 SEASONS

CFEC Briefing Report 90-5

prepared by

Susan M. Shirley

June 5, 1990

Commercial Fisheries Entry Commission
8800-109 Glacier Highway
Juneau, Alaska 99801-8079
(907) 789-6160

Southeastern Alaska Dungeness Crab Fisheries
1974-75 to 1989-90 Seasons

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PREFACE

The purpose of this report is to examine participation, catch and earnings data from the southeastern Alaska Dungeness crab fishery and to provide background information for the Commercial Fisheries Entry Commission to use in its consideration of limited entry in this fishery.

The information contained in this report on the southeastern Alaska Dungeness crab fishery is from the 1974-75 season to the 1988-89 season. Data from the Yakutat fishery are not included. The 1974-75 season contains data only from 1975. The 1989-90 season consists only of data from 1989, which should be considered preliminary.

Data are from the D09B (pots, vessels \leq 50 feet in length), D91B (pots, vessels $>$ 50 feet in length) and D99B (ring nets) Dungeness crab fisheries. Data are not included for Dungeness crabs caught by divers.

Some of the tables have been edited to preserve the confidentiality of the data. Catch and earnings data are not disclosed when the number of persons (or vessels) is less than four, and additional data may be masked to preclude extraction of confidential data.

I. INTRODUCTION

Statistical Area A

The southeastern Alaskan Dungeness crab (Cancer magister) fishery occurs in Region I of the ADF&G (Alaska Department of Fish and Game) Division of Commercial Fisheries. Region I consists of Statistical Area A (Southeast Alaska) and Statistical Area D (Yakutat). This report concerns only data from Statistical Area A.

Statistical Area A includes all waters of the Alexander Archipelago and the outer coastline from the southern limit at the International Boundary at Dixon Entrance northwest to a line projected southwest from the western-most tip of Cape Fairweather (Figure 1).

In recent seasons, the intensity of effort in the Dungeness crab fishery in southeastern Alaska has increased, but effort has been concentrated in fewer areas. Four districts (Districts 6, 8, 14 and 16) produced 70% of the total catch in 1989-90. Within those four districts, 40% of the catch came from Duncan Canal, the Stikine River mouth, Glacier Bay and Cape Fairweather (1990 ADF&G Shellfish Report to the Board of Fisheries).

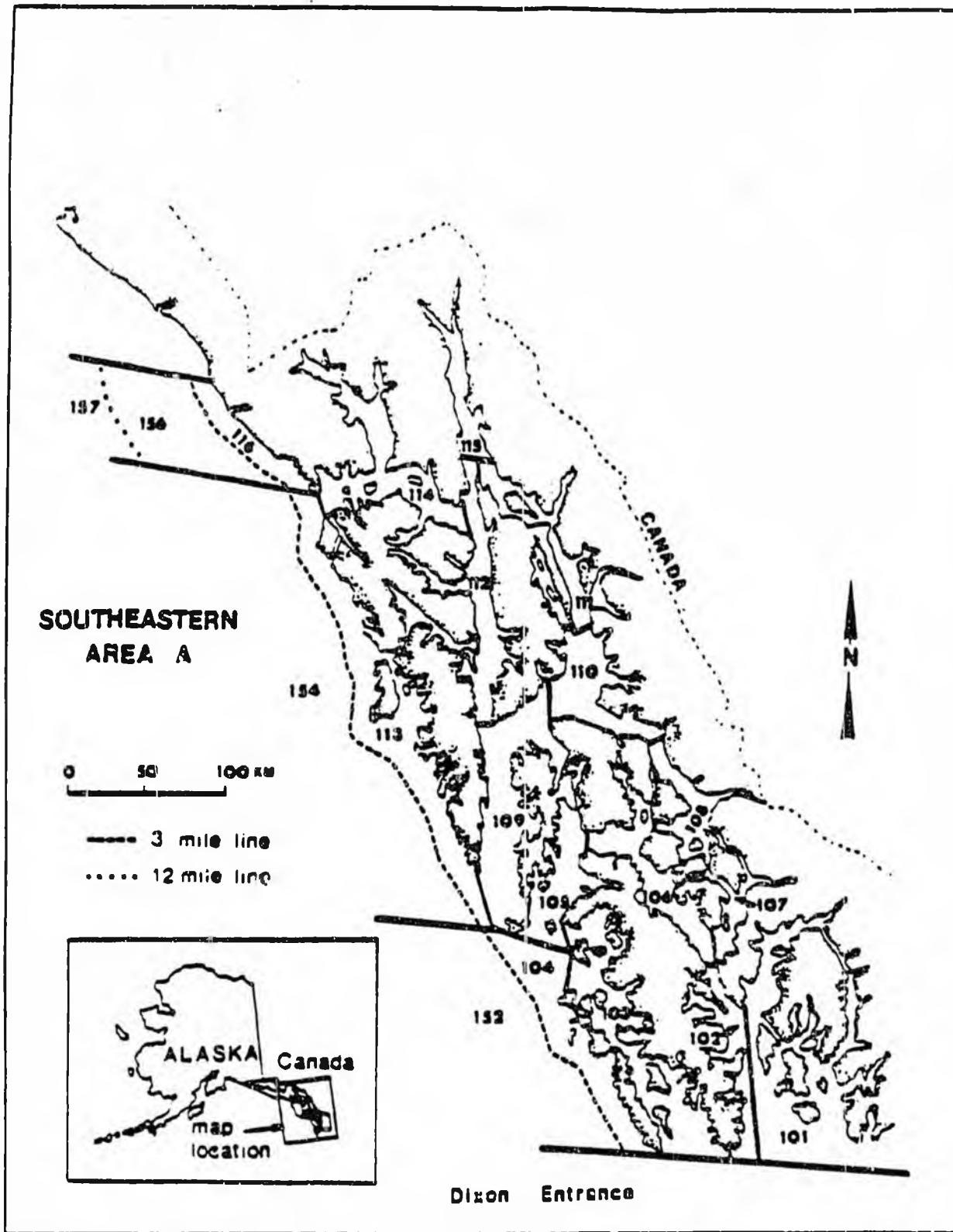


Figure 1. Map of Statistical Area A (Dixon Entrance to Cape Fairweather).

An aerial survey of Dungeness fishing effort in 1988 indicated very high effort in some areas while effort was low in other apparently suitable habitats. Concentration of effort was related to productivity of the area and not to location relative to port or processors (Ken Imamura, ADF&G). All fishing grounds are known and exploited during the fishing season, and conflicts between fishermen on the grounds are increasing.

Of all Dungeness crab caught in Alaska in calendar year 1988 (7 million pounds), 48% was caught in Statistical Area A. The Dungeness crab harvest from Statistical Area A was 11% of the total combined Dungeness catch of Alaska, British Columbia, Washington, Oregon and northern California in the 1988-89 season.

Limited Entry and the Southeastern Alaska Dungeness Crab Fishery

In May, 1984, the Commercial Fisheries Entry Commission (CFEC) received a petition from 33 crab fishermen requesting entry limitation in the southeastern Alaska Dungeness crab pot fishery (Appendix A). The Commission decided not to limit entry in the Dungeness fishery because (Appendix B):

1. Participation levels had been very high during the past few years, but were expected to decline as crab stocks down south recovered and prices dropped.

2. The catch per unit effort was declining and future effort should decrease.

3. The Dungeness fishery was dominated by gill net-size vessels, but included a wide range of vessel sizes. Vessel upgrading after limitation could result in increased fishing power.

The CFEC was petitioned in February, 1989, by 30 fishermen from Petersburg to "impose a moratorium on new permits being issued and institute a study of the limited resources of the Southeast Dungeness crab fishery" (Appendix C).

The CFEC denied the petitioned request explaining that CFEC did not have statutory authority to impose a moratorium, but was conducting research into the crab fishery (Appendix D).

II. MANAGEMENT OF THE DUNGENESS CRAB FISHERY

3-S Management

The southeastern Alaskan Dungeness crab fishery is managed by ADF&G through a modified 3-S system (size, sex and season) developed and utilized by other Pacific Coast Dungeness fisheries. Management in southeastern Alaska has been approached from a conservative standpoint because of the proximity of Alaskan crabs to the northern limit of the range of Dungeness crabs in North America.

The goal of 3-S management is to maintain stock reproductive potential by not harvesting male crabs until they have had an opportunity to participate in stock reproduction. A minimum legal-size carapace width (6.5 inches) was established for harvestable male crabs. In theory, 100% of the male crabs of minimum legal size or greater could be harvested in this recruit-only fishery. No female crabs are harvested, and harvesting of crabs is prohibited during the crabs' primary molting and mating periods.

The 3-S management plan is modified in southeastern Alaska by alteration of the fishing season. Prior to 1979, most areas were open for Dungeness crab fishing for the entire year. In 1979, new regulations were adopted which

specified an opening date of June 1 and a closing date of February 28 to protect molting and mating crabs. A season closure from August 15 to September 30 was instituted in 1985. The goal of the restrictions on season length in both 1979 and 1985 was to protect molting and mating crabs.

The molting period of crabs is highly variable and depends to a large extent on water temperature. Crabs molt sooner in years of warmer water temperatures than they would in years of cooler water temperatures. The molting period of adult male Dungeness crabs in Icy Strait begins in early May and continues through late August, with the primary molting period in mid-summer (Shirley and Shirley, 1988¹). The molting period of adult female Dungeness crabs begins in early July and ends in late September with the primary molting period in early fall.

Shellfish fisheries managers have acknowledged that fishing still occurs during significant portions of the crabs' molting and mating periods in southeastern Alaska (1989 ADF&G Shellfish Report to the Board of Fisheries). This problem is not unique to Alaska, however. Many unmarketable soft-shelled crabs were encountered in the Washington and Oregon Dungeness crab fisheries in December of 1988 and 1989 which prompted a postponement of the season

¹Shirley, S. M. and T. C. Shirley. 1988. Appendage injury in Dungeness crabs, Cancer magister in southeastern Alaska. Fishery Bulletin 86: 156-160.

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opening in 1990 from December 1 to January 1 (Steve Barry, Washington Department of Fisheries).

Even with a conservative approach to 3-S management, it is probable that all stocks are being exploited at a very high rate, with only minimal protection provided for molting and mating crabs. The effectiveness of 3-S management in maintaining the reproductive potential of the Dungeness crab population could be improved by closing the fishery during the summer months, but the Alaska Board of Fisheries has continued the summer fishery because of economic concerns expressed by fishermen. The abundant summer crabs with clean, new carapaces command a high price in the frozen-in-shell and live crab tourist season markets in Alaska and more southern ports (1990 ADF&G Shellfish Report to the Board of Fisheries). This is also the time that harvest levels decrease in the Dungeness crab fisheries in Washington, Oregon and California.

Vessel Registration

Other management practices have included seasonal closures of some areas, gear restrictions and vessel registration. Southeastern Alaska (Statistical Area A) is a superexclusive registration area. A vessel registered to fish Dungeness crab in this area cannot fish Dungeness crab in any other area of the state during the registration year.

Vessels must be registered annually. The registration year extends from January 1 to December 31. In 1988-89, 259 vessels registered to fish Dungeness crabs in Statistical Area A (1989 ADF&G Shellfish Report to the Board of Fisheries). No vessel inspection is required prior to the season opening for Dungeness crab in Statistical Area A.

Gear Regulations

Dungeness crab pots, ring nets and diving gear are lawful gear for Dungeness crab. No more than 300 pots may be fished by a vessel in Statistical Area A. Other gear regulations include restrictions on the dimensions of pots, numbers of tunnels and escape rings, prohibition of pot storage in the water during season closures and a requirement for part of the mesh in the side wall of the pot to be made of degradable cotton twine.

Other Management Strategies Considered

Guideline harvest regulations were rejected as an additional management tool because they were not part of the traditional 3-S management system for Dungeness crabs.

Limited entry was considered and rejected in 1984 partly because participation levels had been extraordinarily high during the previous few years and were expected to decline as stocks of Dungeness crabs in other non-Alaskan areas recovered and prices decreased.

III. PARTICIPATION

Number of Total Participants

From 1974-75 to 1989-90, 732 unique persons have participated in the Dungeness crab fishery in southeastern Alaska. The cumulative total participants (sum over all seasons of the number of participants fishing in each season) during the same time period was 1,783. Until 1980-81, the number of people fishing Dungeness crab was 35 or less. The number doubled from 22 to 68 in 1981-82 and doubled again in 1982-83 from 68 to 122. Participation has steadily increased since 1982-83 to a high of 255 in the 1988-89 season (Figure 2).

Most of the increase in participation has occurred in the D09B fishery. The numbers of fishermen in the D91B and D99B fisheries have remained relatively constant since 1981-82. The number of D12A (diving or hand picking) permits fished has varied from 1 in 1984-85 and 1988-89 to 6 in the 1981-82 and 1989-90 seasons.

Although the numbers are preliminary, the total number of participants in the 1989-90 season was 239. This may be the first season since 1980-81 that effort in the southeastern Dungeness crab fishery has decreased.

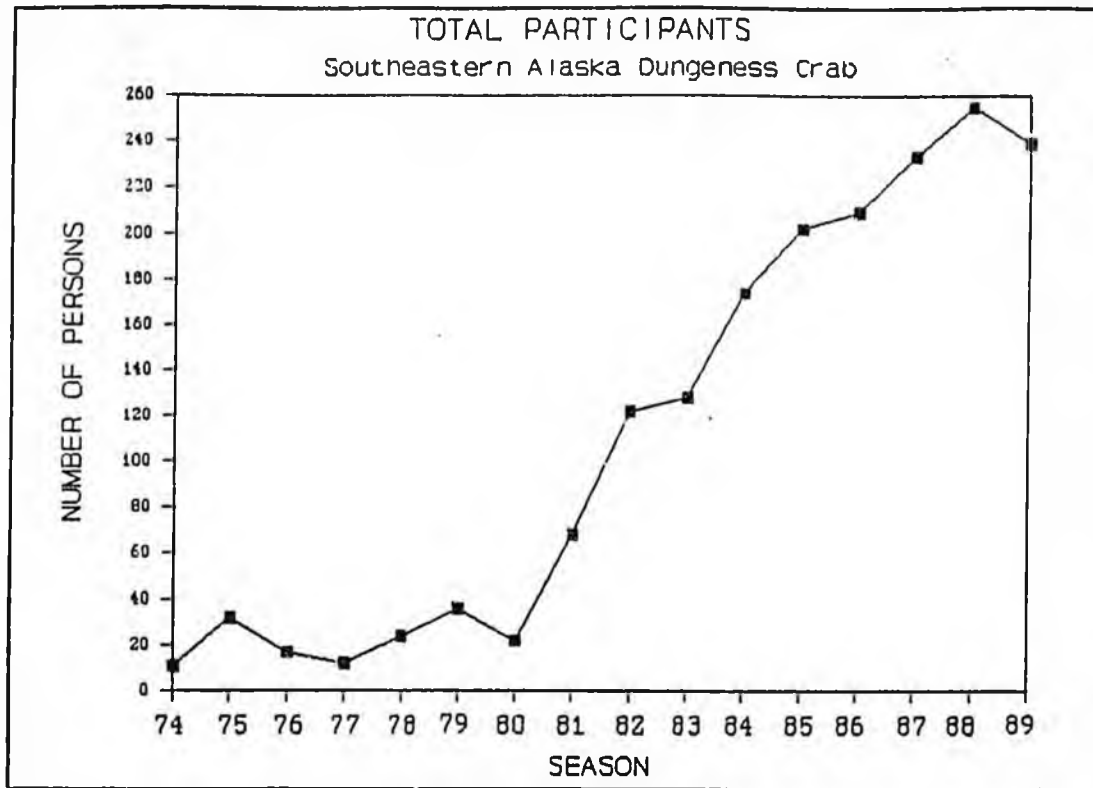


Figure 2. Total number of participants in the southeastern Alaska Dungeness crab fishery. On the x-axis, 74 represents the 1974-75 season, 75 represents the 1975-76 season, etc.

First-Year Participants

In 1981-82, fifty first-year participants entered the fishery. This was a significant increase over the numbers of first-year fishermen in previous years. Since 1982-83, an average of 82 ± 12 (standard deviation) new fishermen have entered the Dungeness crab fishery in southeastern Alaska every season, with the largest number of new participants, 94, occurring in 1985-86 (Figure 3).

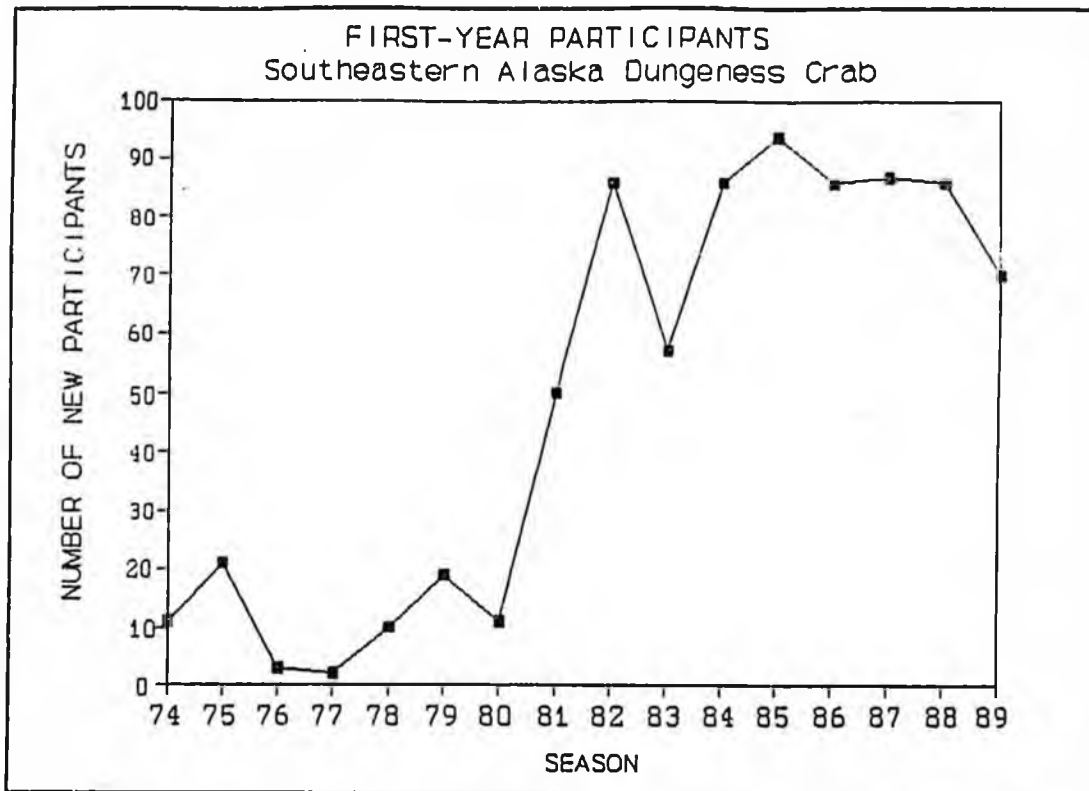


Figure 3. Number of first-year participants in the southeastern Alaska Dungeness crab fishery. On the x-axis, 74 represents the 1974-75 season, 75 represents the 1975-76 season, etc.

Residency

Before 1977-78, only 10% of the participants in the southeastern Alaskan Dungeness crab fishery were not Alaskan residents. Non-resident participation began to increase in 1978-79 and was greatest in 1982-83 at 30% (36 persons) of the total number of participants (Figure 4). Participation by non-Alaskans has since decreased from 1982-83 to the 1988-89 level of 9% (23 persons).

Participation by non-resident fishermen may be related to decreased harvest in non-Alaskan Pacific Coast (British Columbia, Washington, Oregon and California) Dungeness crab fisheries (Figure 4). The number of non-residents in the southeastern Dungeness crab fishery was highest in 1982, historically one of the lowest harvest periods in the Pacific Coast fishery. Although the Pacific Coast harvest has improved greatly in the 1988-89 and 1989-90 seasons, the percentage of non-resident participants in the southeastern Alaska fishery has not changed significantly.

Of the 28 unique non-resident participants in 1982-83, 61% were from Washington, 36% were from Oregon and 4% were non-residents with Alaskan addresses. In the 1988-89 season, 27% of the unique non-residents were residents of Washington, 8% were from California, and the remaining 55% were from Colorado, Idaho, Vermont or were non-residents with Alaskan addresses.

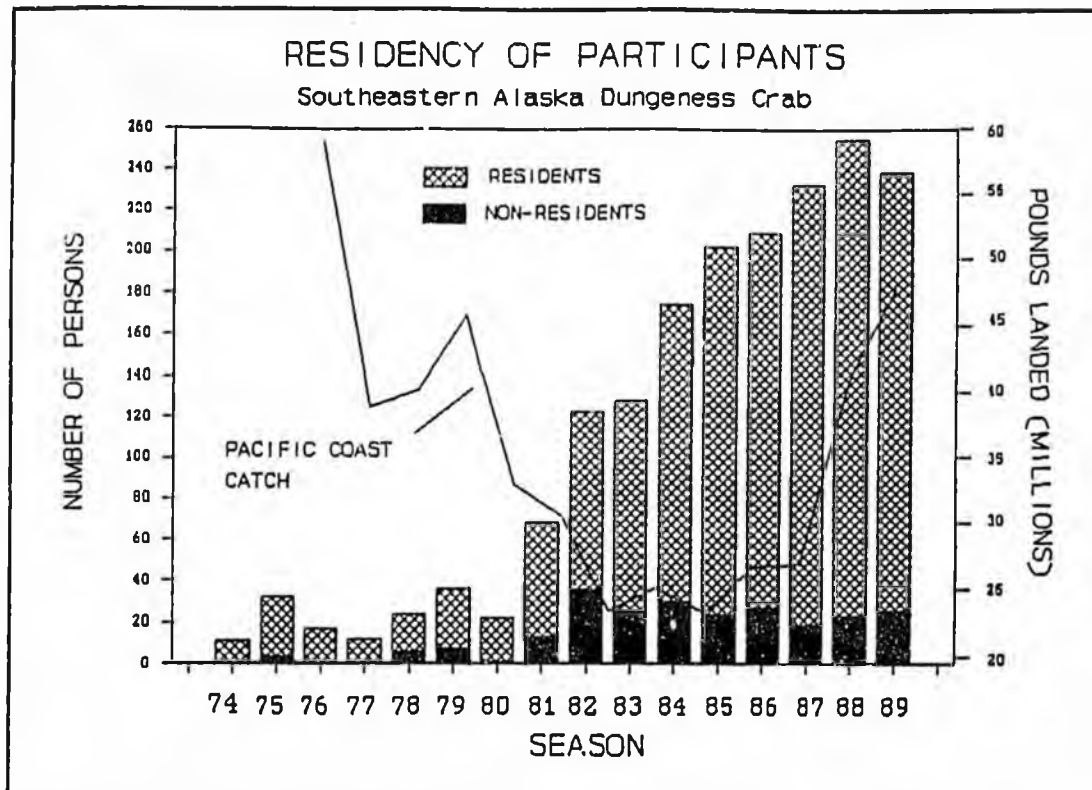


Figure 4. Relationship of the Pacific Coast (Washington, Oregon, California and British Columbia) Dungeness crab harvest to the residency of participants in the southeastern Alaska Dungeness crab fishery.

Influence of Other Fisheries on Effort in Southeastern Alaska

The price for southeastern Dungeness crab appears to have been inversely related to crab harvests in Washington, Oregon and California since the mid-1970's (Figure 5). Low catches from non-Alaskan Pacific Coast areas raised Dungeness crab prices in southeastern Alaska and led to increased effort. In the early 1980's, the decline of the Pacific Coast fisheries created an increased demand for Alaskan product.

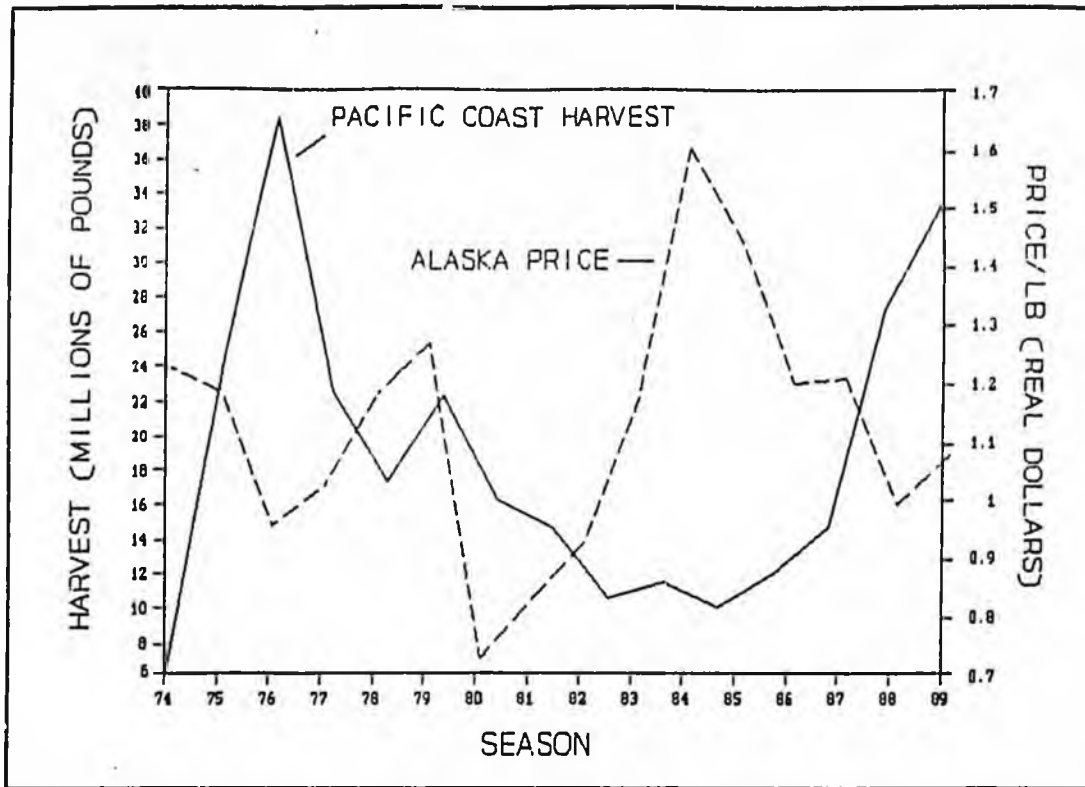


Figure 5. Combined harvests of Pacific Coast Dungeness crab fisheries (British Columbia, Washington, Oregon and California) and the price of Dungeness crab (in real dollars based on the Consumer Price Index value in December, 1989) in southeastern Alaska. On the x-axis, 74 represents the 1974-75 season, 75 represents the 1975-76 season, etc.

In recent years, the number of participants has continued to increase despite increased production in British Columbia, Washington, Oregon and California, and apparent declines in the real ex-vessel price per pound of Dungeness crab in southeastern Alaska. The average CFEC ex-vessel price for Dungeness crab in southeastern Alaska in 1988 was estimated at \$0.95 per pound. The number of processors buying Dungeness crab in southeastern Alaska increased from 6 in 1979 and 1980 to 11 in 1981 and 13 in 1982 (Processor Annual Reports). About

12 to 14 processors have reported Dungeness crab purchases on their Processor Annual Reports every year from 1984 to 1988.

Cycles of Dungeness Crab Populations

The Dungeness crab populations in northern California, Oregon and Washington have exhibited cyclic variations in abundance which were somewhat independent of variations in fishing effort. The period of the cycle has been regular at about ten years for northern California, Oregon and Washington (Figure 6), but the amplitude has been variable. Crab populations in central California crashed in the late 1950's and have not recovered.

Dungeness crabs in British Columbia and Alaska do not appear to be cyclic in abundance (Botsford, 1986²). However, significant changes in effort in the southeastern Alaska fishery affect biological interpretation of population abundance and may mask cycles of abundance.

Proposed causal mechanisms for the cycles have been predator-prey interactions, density-dependent recruitment, cyclic environmental variables or

²Botsford, L. W. 1986. Population dynamics of the Dungeness Crab (Cancer magister). In: Jamieson, G. S. and N. Bourne (eds.) Canadian Special Publication of Fisheries and Aquatic Sciences 92: 140-153.

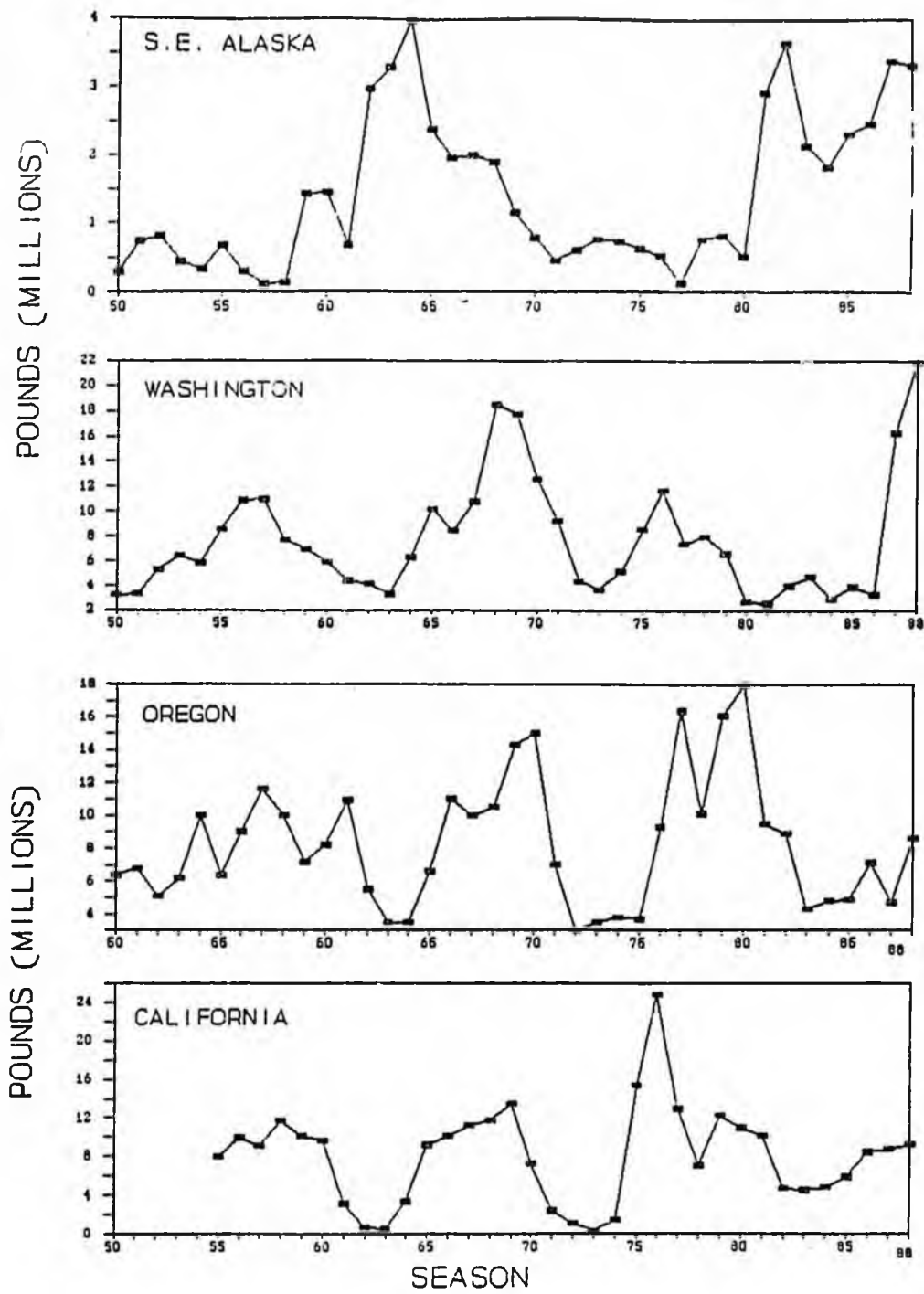


Figure 6. Harvest of Dungeness crabs in northern California, Oregon, Washington and southeastern Alaska.

combinations of the three (for review, see Botsford, 1986). Changes in effort may be partially responsible for cycles of harvest levels.

Recruitment in the Dungeness crab fisheries is inconsistent. Years with large population abundances may be a result of good recruitment years which support high harvest levels for a few years. Years with low abundances of Dungeness crabs may result from poor recruitment. Removal of a large year class by the fishery may pave the way for another year of good recruitment if recruitment is indeed density-dependent.

The southeastern Alaska Dungeness crab fishery is less inclined toward extremes in good and bad recruitment years (Ken Imamura, ADF&G). Most of the fishery occurs in inside waters, and is insulated from dramatic environmental changes that could affect recruitment. The Yakutat fishery with its open coastline experiences environmental and recruitment variations similar to the Washington, Oregon and California coasts. Patterns of recruitment in the southeastern fishery parallel those of Yakutat, but are less extreme.

The number of total participants, both resident and non-residents, in the Dungeness crab fishery may also be related to the declining harvests of other crab species in southeastern Alaska. At the time the total participants in the Dungeness crab fishery began to increase, the Tanner crab harvest in

southeastern Alaska was declining, as was the red and blue king crab harvest. Some king and Tanner crab fishermen may have switched over to Dungeness crabs in the wake of declining populations of other crabs in southeastern Alaska (Figure 7), and/or the limitation of the southeastern Alaska king and Tanner crab fisheries in 1984.

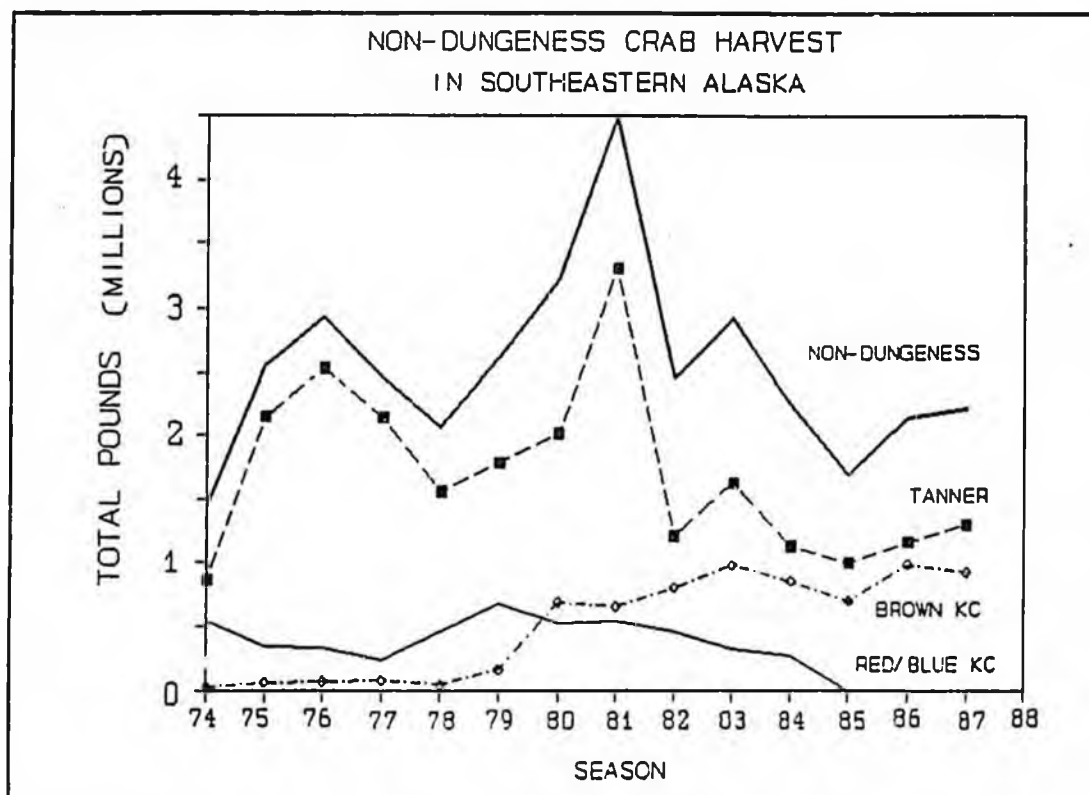


Figure 7. Commercial catch of Tanner crab, red and blue king crab, brown king crab and combined Tanner and king crab (non-Dungeness) in southeastern Alaska. On the x-axis, 74 represents the 1974-75 season, 75 represents the 1975-76 season, etc.

The increased effort in recent years in the Dungeness crab fishery may be due in part to limited entry of the Tanner and king crab fisheries in southeastern Alaska. Because Tanner and king crab pot permits have not been for sale, the only crab fishery open to new fishermen in southeastern Alaska is the Dungeness crab fishery. Some fishermen may be attempting to establish a participation history in anticipation of eventual limitation of the Dungeness fishery.

Limited entry, decreased populations of king and Tanner crabs, improved marketing and high prices of crab have contributed to consistently high effort in the southeastern Alaska Dungeness crab fishery.

Multiple Years of Participation

The number of unique persons (in the combined D09B, D91B and D99B fisheries) with specific year combinations of participation in the Dungeness fishery since the 1974-75 season are presented in Table 1. During the 16 seasons from 1974-75 to 1989-90, a total of 732 unique persons fished Dungeness crab in southeastern Alaska.

Only 1% of the participants have fished ten years or more. Thirteen percent have fished five to ten years, and 86% have fished for less than five years.

Fifty-two percent, or 384 persons, fished only one year; the largest number (66 persons or 17%) of those entered the fishery for the first time in 1989-90.

Table 1
 Southeastern Dungeness Crab Fisheries
 Participation History
 Number of Years Fished and Year Combinations

SEASONS FISHED	TOTAL PEOPLE	SEASON COMBINATIONS	SEASONS																
			89- 90	88- 89	87- 88	86- 87	85- 86	84- 85	83- 84	82- 83	81- 82	80- 81	79- 80	78- 79	77- 78	76- 77	75- 76	74- 75	
16	1	89-88-87-86-85-84-83-82-81-80-79-78-77-76-75-74	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
14	2	89-88-87-86-85-84-83-81-79-78-77-76-75-74	2	2	2	2	2	2	2	2	0	2	0	2	2	2	2		
12	2	89-88-87-86-85-84-83-82-81-80-79-78-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
10	5	89-88-87-86-85-84-83-82-81-80-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
		89-88-87-86-85-84-83-82-81-79-	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0		
		85-84-83-80-79-78-77-76-75-74	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1		
9	10	89-88-87-86-85-84-83-82-81-	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
		89-88-87-86-85-84-83-81-79-	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0		
		89-88-87-85-84-83-77-76-75-	1	1	1	0	1	1	1	1	0	0	0	0	1	1	1		
		89-88-84-83-79-77-76-75-74	1	1	0	0	0	1	1	0	0	1	0	1	1	1	1		
		88-87-86-84-83-82-81-78-77-	0	1	1	1	0	1	1	1	1	0	0	1	1	0	0		
8	16	89-88-87-86-85-84-83-82-	10	10	10	10	10	10	10	10	10	10	0	0	0	0	0		
		89-88-87-86-85-84-83-79-	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0		
		89-88-87-86-85-83-82-81-	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0		
		89-88-85-84-83-82-81-80-	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0		
		88-87-86-85-84-83-82-81-	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0		
		88-87-86-85-84-83-81-79-	0	1	1	1	1	1	1	1	0	1	0	1	0	0	0		
		84-83-82-81-79-78-76-75-	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1		
7	17	89-88-87-86-85-84-83-	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0		
		89-88-87-86-85-84-81-	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0		
		89-88-87-86-85-83-82-	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0		
		89-88-87-86-85-78-75-	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0		
		89-88-87-85-84-83-82-	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0		
		88-87-86-85-84-83-82-	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0		
		88-87-86-85-84-83-75-	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1		
		88-86-84-82-81-75-74	0	1	0	1	0	1	0	1	0	1	0	0	0	1	1		
6	23	87-86-82-77-76-75-74	0	0	1	1	0	0	0	0	1	0	0	0	1	1	1		
		89-88-87-86-85-84-	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0		
		89-88-87-86-85-82-	4	4	4	4	4	4	0	0	4	0	0	0	0	0	0		
		89-88-87-86-85-75-	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0		
		89-88-87-86-83-82-	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0		
		89-88-87-85-84-83-	2	2	2	0	2	2	2	0	0	0	0	0	0	0	0		
		89-87-86-85-84-83-	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0		
		88-87-86-85-84-83-	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0		
		88-87-85-84-83-82-	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0		
		88-87-85-84-79-78-	0	1	1	0	1	1	1	0	0	0	1	1	0	0	0		
		85-84-83-82-81-79-	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1		
		80-79-78-77-76-75-	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0		
5	29	89-88-87-86-85-	13	13	13	13	13	13	0	0	0	0	0	0	0	0	0		
		89-88-87-85-84-	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0		
		89-88-87-82-81-	2	2	2	0	0	0	0	0	2	2	0	0	0	0	0		

Table 1
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SEASONS FISHED	TOTAL PEOPLE	SEASON COMBINATIONS	SEASONS															
			89-90	88-89	87-88	86-87	85-86	84-85	83-84	82-83	81-82	80-81	79-80	78-79	77-78	76-77	75-76	74-75
88-86-85-			0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0
88-80-75-			0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0
87-86-85-			0	0	5	5	5	0	0	0	0	0	0	0	0	0	0	0
87-86-82-			0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0
87-86-79-			0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
87-85-84-			0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0
86-85-84-			0	0	0	4	4	4	0	0	0	0	0	0	0	0	0	0
86-84-83-			0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0
86-83-82-			0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
85-84-83-			0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0
85-84-82-			0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0
85-83-82-			0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
85-83-79-			0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
84-83-82-			0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
84-83-81-			0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0
84-83-80-			0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0
84-82-81-			0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	1
82-76-75-			0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
89-88-	2	126	31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89-87-			6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
89-86-			1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
88-87-			0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0
88-86-			0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
88-85-			0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
87-86-			0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0
87-85-			0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
87-84-			0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
87-83-			0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
86-85-			0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0
86-84-			0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0
86-83-			0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
86-81-			0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
85-84-			0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0
85-83-			0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
85-82-			0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0
85-76-			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
84-83-			0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
84-81-			0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
83-82-			0	0	0	0	0	0	9	9	0	0	0	0	0	0	0	0
82-81-			0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0
81-79-			0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0

Table 1
 Southeastern Dungeness Crab Fisheries
 Participation History
 Number of Years Fished and Year Combinations

SEASONS FISHED	TOTAL PEOPLE	SEASON COMBINATIONS	SEASONS															
			89-90	88-89	87-88	86-87	85-86	84-85	83-84	82-83	81-82	80-81	79-80	78-79	77-78	76-77	75-76	74-75
		79-78-	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0
		78-75-	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
		76-75-	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0
		75-74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
1	384	89-	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		88-	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		87-	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
		86-	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0
		85-	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	0
		84-	0	0	0	0	0	47	0	0	0	0	0	0	0	0	0	0
		83-	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0
		82-	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	0
		81-	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0
		80-	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
		79-	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
		78-	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
		76-	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		75-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
SEASON TOTALS			241	257	237	210	202	175	128	125	68	19	32	22	11	15	31	10
TOTAL UNIQUE PEOPLE=			732															

Note: The years in the Season Combinations column represent the first year of a season. For example, 88 represents the 1988-89 season; 87 represents the 1987-88 season, etc.

Table 2
 Southeastern Dungeness Crab Fisheries
 Participation History: Number of Participants
 By Fishery,
 Who Have Fished During the Given Time Period

FISHERY: D09B (Pots, <50 ft.)

<u>Year/Season Combination</u>	<u>Total Unique Individuals</u>
Jan. 1, 1989 to 89-90	222
Jan. 1, 1989 to 88-89	312
Jan. 1, 1989 to 87-88	373
Jan. 1, 1989 to 86-87	428
Jan. 1, 1989 to 85-86	487
Jan. 1, 1989 to 84-85	544
Jan. 1, 1989 to 83-84	574
Jan. 1, 1989 to 82-83	609
Jan. 1, 1989 to 81-82	626
Jan. 1, 1989 to 80-81	632
Jan. 1, 1989 to 79-80	639
Jan. 1, 1989 to 78-79	644
Jan. 1, 1989 to 76-77	647
Jan. 1, 1989 to 75-76	657

Table 2
 Southeastern Dungeness Crab Fisheries
 Participation History: Number of Participants
 By Fishery,
 Who Have Fished During the Given Time Period

FISHERY: D91B (Pots, >50 ft.)

<u>Year/Season Combination</u>	<u>Total Unique Individuals</u>
Jan. 1, 1989 to 89-90	13
Jan. 1, 1989 to 88-89	16
Jan. 1, 1989 to 87-88	21
Jan. 1, 1989 to 86-87	32
Jan. 1, 1989 to 85-86	36
Jan. 1, 1989 to 84-85	42
Jan. 1, 1989 to 83-84	46
Jan. 1, 1989 to 82-83	56
Jan. 1, 1989 to 81-82	63
Jan. 1, 1989 to 80-81	67
Jan. 1, 1989 to 79-80	69
Jan. 1, 1989 to 78-79	70
Jan. 1, 1989 to 76-77	71

Table 2

Southeastern Dungeness Crab Fisheries
 Participation History: Number of Participants
 By Fishery,
 Who Have Fished During the Given Time Period

FISHERY: D99B (Ring nets)

<u>Year/Season Combination</u>	<u>Total Unique Individuals</u>
Jan. 1, 1989 to 89-90	7
Jan. 1, 1989 to 88-89	13
Jan. 1, 1989 to 87-88	18
Jan. 1, 1989 to 86-87	30
Jan. 1, 1989 to 85-86	42
Jan. 1, 1989 to 83-84	43
Jan. 1, 1989 to 82-83	49
Jan. 1, 1989 to 80-81	50
Jan. 1, 1989 to 79-80	51

Table 2

Southeastern Dungeness Crab Fisheries
Participation History: Number of Participants
Who Have Fished During the Given Time Period

ALL FISHERIES COMBINED

<u>Year/Season Combination</u>	<u>Total Unique Individuals</u>
Jan. 1, 1989 to 89-90	239
Jan. 1, 1989 to 88-89	333
Jan. 1, 1989 to 87-88	399
Jan. 1, 1989 to 86-87	464
Jan. 1, 1989 to 85-86	532
Jan. 1, 1989 to 84-85	594
Jan. 1, 1989 to 83-84	627
Jan. 1, 1989 to 82-83	672
Jan. 1, 1989 to 81-82	695
Jan. 1, 1989 to 80-81	703
Jan. 1, 1989 to 79-80	713
Jan. 1, 1989 to 78-79	719
Jan. 1, 1989 to 76-77	722
Jan. 1, 1989 to 75-76	732

IV. CATCH IN THE SOUTHEASTERN DUNGENESS CRAB FISHERY

Total Catch

Average, median and total⁴ pounds of Dungeness crab caught in southeastern Alaska, and the 75th and 90th percentiles for catch are presented for all fisheries combined (D09B, D91B and D99B), by unique number of persons by season in Table 3. (See Table 9 for comparison of catch by vessels.)

The total catch has varied from 127,201 pounds in 1977-78 to 3,574,175 pounds in 1982-83 (Table 3). Prior to the 1981-82 season, the annual total catch was less than one million pounds. The total seasonal catch in 1988-89, 3,309,795 pounds, was the third largest catch for the southeastern fishery since the 1974-75 season.

About 90% of the total Dungeness catch since 1981-82 was harvested in the small boat fishery (D09B), and 10% or less from the large boat fishery (D91B). The ring net fishery (D99B) did not exist before the 1979-80 season and has averaged less than 1% of the total catch. The largest seasonal harvest of

⁴The database used to calculate catch statistics consisted of 99% of all pounds harvested.

Dungeness crabs in the D12A (diving) fishery, 3,740 pounds, occurred in 1989-90.

The distribution of catch in all seasons was skewed with a large percentage of participants harvesting a small percentage of the catch (Table 3). For example, in the 1988-89 season, 75% of the fishermen caught 19,730 pounds or less while 10% (25 people) caught 37,760 pounds or more.

Some fishermen believe that the increase in catch after 1981 was due not to a higher abundance of crabs, but to increased effort in the southeastern Dungeness crab fishery (Tim Koeneman, ADF&G). The number of people with landings tripled in 1981-82 and the total catch increased five-fold.

The high harvest levels in 1987-88 and 1988-89 in southeastern Alaska paralleled historically large harvests in the other Pacific Coast fisheries in those years (Figure 8). Management biologists in Alaska, Washington and Oregon attribute the recent good harvests to a strong 1984 year class that recruited into the fishery in 1987 and 1988. A decline in the 1989 Pacific Coast catch reflects the removal of the 1984 crabs by the fishery, and as a result, managers anticipate declining harvests in the future (Steve Barry, Washington Department of Fisheries).

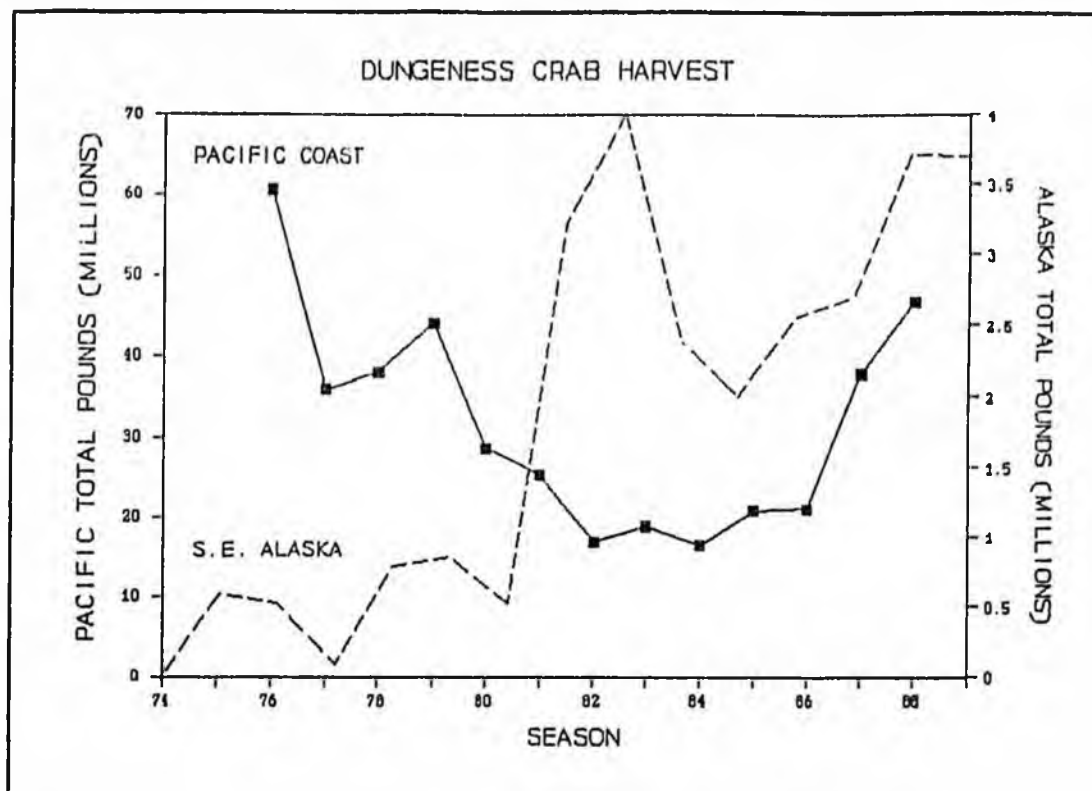


Figure 8. Total harvest of Dungeness crab from the Pacific Coast fisheries (British Columbia, Washington, Oregon and California) compared to the harvest from southeastern Alaska. On the x-axis, 74 represents the 1974-75 season, 75 represents the 1975-76 season, etc. Note that the scales for Alaska and Pacific Coast catch are different.

Average Catch

The average catch per person for the D09B fishery varied from 10,600 pounds per person in 1977-78 to 45,033 pounds per person in the 1981-82 season. In 1988-89, the average catch per person was 12,671 pounds.

Similarly, the average catch per person for all fisheries combined varied from 10,391 pounds per person in 1984-85 to 42,442 pounds per person in the 1981-82 season (Table 3). The average catch in 1988-89 was 12,980 pounds per person, approximately the mean average catch since the 1933-84 season.

Table 3
 Southeast Commercial Dungeness Crab Fisheries
 Harvest Distributional Statistics By Season

SEASON	UNIQUE PEOPLE	AVERAGE POUNDS	MEDIAN POUNDS	TOTAL POUNDS	75TH PERCENTILE	90TH PERCENTILE
74-75	11	3,347	867	36,817	4,574	13,348
75-76	32	17,750	9,742	567,986	21,719	57,218
76-77	17	29,983	19,720	509,718	59,999	85,027
77-78	12	10,600	4,826	127,201	14,025	38,926
78-79	24	30,898	18,243	741,549	37,375	117,058
79-80	35	22,905	4,472	801,676	35,322	74,585
80-81	22	23,071	2,655	507,551	28,891	103,885
81-82	68	42,442	7,168	2,886,039	55,712	136,132
82-83	122	29,297	11,790	3,574,175	38,975	83,181
83-84	128	16,756	8,723	2,144,762	26,633	47,040
84-85	174	10,391	3,175	1,808,062	14,639	29,980
85-86	202	11,377	3,306	2,298,134	12,317	37,830
86-87	209	11,585	3,367	2,421,258	15,110	35,989
87-88	233	14,246	4,080	3,319,408	18,411	45,556
88-89	255	12,980	3,894	3,309,795	19,730	37,760
89-90	239	7,940	2,429	1,897,777	9,724	22,309

Note: The 1974-75 season consists only of data from 1975.
 The 1989-90 season consists only of data from 1989, and
 should be considered preliminary.

Summer vs. Winter Fisheries

The Dungeness crab fishery in southeastern Alaska has been predominately a summer fishery (June, July and August). About 62% of the total seasonal harvest was landed in the months of June, July and August (Table 4).

Legal-sized crabs are more abundant in the summer months after the new recruits molt into the fishery, and weather conditions are more favorable for the small boat fishery in the summer. Dungeness crabs are less active in the winter months and spend more time burrowed into the substrate. Because of their lower activity levels, crabs enter pots less readily in the winter than in the summer.

The largest monthly harvest has been in July, with an average of 37% of the total seasonal catch from 1984-85 to 1988-89. July has also been the month with the most people fishing and the largest average catch per person in the last few seasons.

The winter harvest (October through February) was greatest in 1987-88 at 924,802 pounds. Recent winter harvests have been much lower at 565,866 pounds in 1988-89 and 314,332 pounds in 1989-90 (without January or February catch included, 1990 ADF&G Shellfish Report to the Board of Fisheries).

Table 4

Southeast Commercial Dungeness Crab Fishery
 Number of Fishermen and Catch by Month and Season
 All Dungeness Crab Fisheries Combined

MONTH	SEASON													
	74-75		75-76		76-77		77-78		78-79		79-80		80-81	
	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH
	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM
JUN			15	101,889	9	105,864	.	.	6	123,469	10	165,728	5	62,684
JUL			23	134,639	11	206,112	.	.	12	203,898	16	184,630	11	157,122
AUG			15	109,187	11	89,889	4	29,570	14	152,623	16	137,043	11	119,007
SEP			13	69,486	8	46,068	5	31,376	12	104,609	17	137,417	10	69,865
OCT			18	48,924	7	30,554	7	15,897	11	70,330	18	75,079	7	36,342
NOV			12	25,424	7	9,373	6	24,956	10	43,301	12	52,067	10	29,949
DEC			7	11,677	7	11,670	.	.	5	17,926	9	30,098	9	15,064
JAN	6	6,298	5	5,344	.	.	.	.	.	.	.	.	4	7,434
FEB	5	13,717	.	.	.	.	4	7,971	.	.	.	.	.	.
MAR	8	16,802	.	.	.	.	.	.	.	.	.	.	.	.
APR			9	18,101										
MAY			12	35,906										
ALL	11	36,817	32	567,986	17	509,718	12	127,201	24	741,549	35	801,676	22	507,551

(CONTINUED)

Note: Where column is blank, data was not available.
 The 1974-75 season consists only of 1975 data.
 The 1989-90 season consists only of 1989 data.

Note: The number of unique people is given by season
 along with the total seasonal harvest in 'ALL'.

For confidentiality, if the number of persons is
 less than 4, the cell will contain a '.'

Table 4
 Southeast Commercial Dungeness Crab Fishery
 Number of Fishermen and Catch by Month and Season
 All Dungeness Crab Fisheries Combined

MONTH	SEASON													
	81-82		82-83		83-84		84-85		85-86		86-87		87-88	
	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH	PEOPLE	CATCH
	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM
JUN	19	450,460	67	883,972	79	737,396			97	330,090	98	267,150	108	567,866
JUL	33	886,041	77	1,046,229	75	451,013	96	670,284	124	861,069	122	795,339	136	1,175,349
AUG	33	553,393	68	735,259	66	334,480	93	487,335	100	445,269	111	447,525	119	644,540
SEP	31	422,004	52	450,122	63	267,533	83	271,486	.	.				
OCT	33	288,194	45	218,577	58	146,541	77	149,460	90	376,379	118	447,829	126	466,776
NOV	24	164,235	35	142,609	52	84,438	75	135,542	85	172,581	93	273,207	112	276,047
DEC	23	67,699	37	62,588	29	45,745	46	58,631	62	62,794	72	101,386	62	81,230
JAN	10	24,467	10	12,866	19	28,533	17	21,266	28	29,840	35	39,834	.	.
FEB	12	25,632	.	.	18	14,239	25	11,758	27	15,014	45	36,929	68	54,438
MAR	4	3,914	.	.	.	.	.	.	.	.	11	12,059	.	.
APR														
MAY														
ALL	68	2,886,039	122	3,574,175	128	2,144,762	174	1,808,062	202	2,298,134	209	2,421,258	233	3,319,408

(CONTINUED)

Note: Where column is blank, data was not available.
 The 1974-75 season consists only of 1975 data.
 The 1989-90 season consists only of 1989 data.

Note: The number of unique people is given by season
 along with the total seasonal harvest in 'All'.

For confidentiality, if the number of persons is
 less than 4, the cell will contain a '.'

Table 4

Southeast Commercial Dungeness Crab Fishery
Number of Fishermen and Catch by Month and Season
All Dungeness Crab Fisheries Combined

MONTH	SEASON			
	88-89		89-90	
	PEOPLE	CATCH	PEOPLE	CATCH
	SUM	SUM	SUM	SUM
JUN	134	774,169	149	494,873
JUL	153	1,387,390	161	816,401
AUG	128	581,410	134	272,171
SEP				
OCT	126	302,288	88	202,176
NOV	100	185,307	73	96,977
DEC	54	43,936	12	15,179
JAN	.	.		
FEB	34	18,677		
MAR	.	.		
APR				
MAY				
ALL	255	3,309,795	239	1,897,777

Note: Where column is blank, data was not available.
The 1974-75 season consists only of 1975 data.
The 1989-90 season consists only of 1989 data.

Note: The number of unique people is given by season
along with the total seasonal harvest in 'ALL'.

For confidentiality, if the number of persons is
less than 4, the cell will contain a '.'

V. EARNINGS IN THE SOUTHEASTERN ALASKA DUNGENESS CRAB FISHERY

Total Earnings

Average, median and total gross earnings⁵ of fishermen in the southeastern Alaska Dungeness crab fishery and the 75th and 90th percentiles for earnings are presented for all fisheries combined (D09B, D91B and D99B), by unique number of persons by season in Table 5. (See Table 10 for comparison of earnings by vessels.)

The total earnings in the southeastern Alaska Dungeness crab fishery were highest in 1987-88 at \$3,672,409 and lowest in 1977-78 at \$64,305 (Table 5). The gross earnings from the 1988-89 fishery was \$3,154,951.

The total earnings by fishery (Table 5) roughly parallel the catch data (Table 3).

⁵All earnings values in this report are CFEC estimates of gross earnings. Gross earnings refers to the amount received from the sale of crabs. No costs have been subtracted.

Average Earnings

The average gross earnings per person was \$12,372 in 1988-89. The average gross earnings per person has declined from a peak of \$26,489 in the 1981-82 season, and has varied between \$12,183 and \$15,761 since 1984-85 (Table 5).

Diversification of Fishing Income

Three years were chosen for examining diversification of fishing activity by the Dungeness crab fleet in southeastern Alaska. The years chosen were 1980, 1985 and 1988. Those years were chosen to look at the fishery before the large increase in effort began in the early 1980's and in the most recent year with complete gross earnings data (1988). A third year about mid-way between 1980 and 1989 was also chosen (1985).

In 1980, the southeastern Alaska Dungeness crab fishermen earned large percentages of their annual fishing income from the king crab (K09A, K91O), Tanner crab (T09B and T91B) and Dungeness crab (D09B, D91B) fisheries. They also earned significant income from the halibut (B61B) and southeastern herring purse seine fisheries (G01A) in late spring and early summer, and the southeastern salmon purse seine (S01A) and drift gill net fisheries (S03A) in the late summer. These fisheries accounted for 90% of the annual fishing income of

the Dungeness crab fishermen. Income from the Dungeness crab fishery alone comprised 32% of the annual fishing income.

In 1985, the Dungeness crab fishermen were more diversified in their fishing activities. There were more fishermen participating in the salmon hand troll (S05B) and power troll (S15B) fisheries in southeastern Alaska, and in the shrimp (P09B), sablefish (C61A) and miscellaneous fin fish (M61B) fisheries. Five people fished the Bristol Bay salmon drift gill net fishery (S03T) and four people fished the Prince William Sound salmon purse seine fishery (S01E) in addition to the southeastern Alaska Dungeness crab fishery. These fisheries accounted for 90% of the annual fishing income, with 31% of that coming from Dungeness crab alone.

Diversification of fishing activity had increased again by 1988. The fisheries mentioned in the previous paragraph contributed only 78% of the annual fishing income in 1988. The income produced by the Dungeness crab fishery increased to 38% of the annual fishing income, however.

The percentage of the total gross earnings from a fishery did not always parallel the number of Dungeness crab fishermen participating in that fishery. For example, in 1988 36% of the Dungeness crab fishermen participated in the halibut fishery, but the gross earnings from halibut were less than 1% of the

annual fishing income. Sizable percentages of the fishermen fished the southeastern hand troll and pot shrimp fisheries, but 1% or less of the total gross earnings for all fisheries combined for the year was generated by each of those fisheries. Conversely, only 4% of the Dungeness crab fishermen fished the southeastern salmon purse seine fishery, but they generated about 10% of the annual gross earnings.

The two fisheries generating the highest percentages of the total monthly income for the Dungeness crab fishermen, by month for 1980, 1985 and 1988 were as follows:

<u>MONTH</u>	<u>1980</u>	<u>1985</u>	<u>1988</u>
January	T91B, T09B	T91K, D091A	K69A, T91E
February	T91B, T09B	K69A, K49A	K69A, K49A
March	T91B, T09B	G34A, K69A/G01A	G34A, T91D
April	T91B, G01A	B61B, G01A	G01A, K29A
May	T91B, B61B	B61B, D091A	D091A, G34A
June	D091A, B61B	D091A, S03T	D091A, S03T
July	D091A, S03A	D091A, D03A	D091A, S03A
August	S01A, D091A	S01A, D091A	S01A, S01E/S03A
September	D091A, K09A	S03A, S04D	S04D, S03A
October	K91Q, K09A	D091A, C61A	D091A, K91E/K91T/P09B
November	K91O, K09A/D091A	D091A, K91E	D091A, K91E
December	K91O, K09A	D091A, K91E	D091A, P09B

Note: D091A represents the combined D09B and D91B fisheries.

K91E, K91O, K91Q are king crab pot fisheries (vessels >50 ft.) in Prince William Sound, Dutch Harbor and the Bering Sea, respectively.

K29A is the red/blue/brown king crab fishery in Southeast

K49A is the red/blue king crab and Tanner crab fishery in Southeast

K69A is the red/blue/brown king crab and Tanner crab fishery in Southeast

S04D is the salmon set gill net fishery in Yakutat

T91D, T91E, T91K are Tanner crab pot fisheries (vessels >50 ft.) in Yakutat, Prince William Sound and Kodiak, respectively.

The remaining fisheries were previously defined in the text above.

Table 5

Southeast Commercial Dungeness Crab Fisheries
Harvest Distributional Statistics By Season

SEASON	UNIQUE PEOPLE	AVERAGE EARNINGS	MEDIAN EARNINGS	TOTAL EARNINGS	75TH PERCENTILE	90TH PERCENTILE
74-75	11	\$1,694	\$434	\$18,632	\$2,333	\$6,696
75-76	32	\$9,270	\$5,066	\$296,656	\$11,705	\$29,321
76-77	17	\$13,276	\$9,709	\$225,691	\$24,754	\$35,711
77-78	12	\$5,359	\$2,945	\$64,305	\$8,305	\$17,517
78-79	24	\$19,659	\$11,606	\$471,822	\$23,828	\$74,917
79-80	35	\$17,691	\$4,427	\$619,195	\$20,656	\$66,421
80-81	22	\$11,638	\$1,432	\$256,034	\$14,446	\$52,369
81-82	68	\$26,489	\$4,664	\$1,801,236	\$33,465	\$81,664
82-83	122	\$21,116	\$9,194	\$2,576,114	\$26,581	\$59,933
83-84	128	\$15,785	\$8,166	\$2,020,501	\$24,875	\$44,462
84-85	174	\$13,881	\$4,422	\$2,415,220	\$19,302	\$38,670
85-86	202	\$14,181	\$4,222	\$2,864,508	\$15,866	\$46,539
86-87	209	\$12,183	\$3,557	\$2,546,151	\$16,288	\$38,328
87-88	233	\$15,761	\$4,582	\$3,672,409	\$20,539	\$50,886
88-89	255	\$12,372	\$3,723	\$3,154,951	\$18,783	\$35,984
89-90	239	\$8,582	\$2,489	\$2,051,214	\$10,333	\$23,902

Note: The 1974-75 season consists only of data from 1975.
The 1989-90 season consists only of data from 1989, and
should be considered preliminary.

VI. EFFORT

Number of Weeks Fished per Season

The number of weeks fished (weeks with landings) per season is given in Table 6a, by season, as an index of fishing activity. The number of people and the percentages of the total seasonal participants that fished within given "number of weeks fished" categories are presented.

Two patterns of fishing in the southeastern Dungeness crab fishery were evident. In most years, high percentages of participants had either 1 or 2 weeks with landings per season or 11 to 20 weeks with landings per season. About 55% of the fishermen had five weeks with landings or less in 1988-89, and about 22% had ten weeks or more. The percentages, by weeks fished categories, for all seasons combined were similar to those of the 1988-89 season.

Average Weekly Catch

The average weekly harvest of Dungeness crab was 1,000 pounds or less per week for 53% of the fishermen from 1974-75 to 1989-90 (Table 6b). Thirty-nine percent averaged between 1,001 and 5,000 pounds per week and only 8%

averaged more than 5,000 pounds per week. The average weekly harvests in recent years were consistent with the historical trends for the fishery.

Table 6a
Southeast Commercial Dungeness Crab Fisheries
Number of Weeks Fished per Season

WEEKS FISHED	SEASON																						
	74-75		75-76		76-77		77-78		78-79		79-80		80-81		81-82		82-83		83-84		84-85		85-86
	PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE
	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT
1	4	36	6	19	.	.	4	33	.	.	6	17	5	23	12	18	22	18	27	21	35	20	4
2	.	.	4	13	0	0	.	.	.	.	.	.	.	.	8	12	15	12	10	7.8	19	11	2
3	.	.	.	.	.	.	0	0	5	21	5	14	.	.	5	7.4	13	11	10	7.8	11	6.3	1
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	8.8	6	4.9	2	1.6	19	11	1
5	0	0	.	.	.	.	0	0	0	0	6	17	.	.	.	.	7	5.7	8	6.3	11	6.3	11
6	0	0	0	0	.	.	.	.	.	.	0	0	.	.	4	5.9	.	.	6	4.7	8	4.6	10
7	0	0	.	.	.	.	0	0	4	17	.	.	.	.	5	7.4	6	4.9	5	3.9	13	7.5	10
8	0	0	.	.	.	.	0	0	0	0	0	0	.	.	.	.	.	.	7	5.5	.	.	6
9	0	0	.	.	0	0	0	0	.	.	.	.	.	.	.	.	6	4.9	7	5.5	9	5.2	1
10	0	0	0	0	0	0	0	0	.	.	.	.	0	0	4	5.9	6	4.9	7	5.5	9	5.2	8
11 - 15	0	0	.	.	4	24	4	33	.	.	5	14	.	.	12	18	23	19	22	17	17	9.8	2
16 - 20	0	0	4	13	.	.	0	0	.	.	.	.	.	.	.	.	7	5.7	8	6.3	14	8.0	11
21 - 30	0	0	.	.	.	.	0	0	.	.	0	0	.	.	.	.	7	5.7	9	7.0	.	.	4
31 - 40	0	0	.	.	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0	0
ALL	11	100	32	100	17	100	12	100	24	100	35	100	22	100	68	100	122	100	128	100	174	100	202

(CONTINUED)

Note: The 1974-75 season consists only of data from 1975.
The 1989-90 season consists only of data from 1989, and
should be considered preliminary.

For confidentiality, if the number of persons is less than
4, the cell will contain a '.'

Table 6a
Southeast Commercial Dungeness Crab Fisheries
Number of Weeks Fished per Season

	SEASON										
	85-86	86-87		87-88		88-89		89-90		ALL	
	PEOPLE	PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE	
	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT
WEEKS FISHED											
1	21	34	16	35	15	52	20	54	23	343	19
2	11	15	7.2	21	9.0	25	9.8	28	12	178	10
3	9.4	14	6.7	25	11	22	8.6	24	10	165	9.3
4	6.9	17	8.1	14	6.0	22	8.6	13	5.4	123	6.9
5	5.4	18	8.6	17	7.3	18	7.1	21	8.8	124	7.0
6	7.9	15	7.2	14	6.0	11	4.3	18	7.5	100	5.6
7	5.0	12	5.7	.	.	19	7.5	24	10	116	6.5
8	3.0	10	4.8	15	6.4	18	7.1	16	6.7	87	4.9
9	6.4	13	6.2	16	6.9	13	5.1	8	3.3	94	5.3
10	4.0	.	.	15	6.4	15	5.9	10	4.2	87	4.9
11 - 15	12	30	14	28	12	26	10	19	7.9	220	12
16 - 20	5.4	20	9.6	18	7.7	9	3.5	4	1.7	103	5.8
21 - 30	2.0	.	.	.	.	5	2.0	0	0	.	.
31 - 40	0	0	0	0	0	0	0	0	0	.	.
ALL	100	209	100	233	100	255	100	239	100	1783	100

Note: The 1974-75 season consists only of data from 1975.
The 1989-90 season consists only of data from 1989, and should be considered preliminary.

For confidentiality, if the number of persons is less than 4, the cell will contain a '.'

Table 6b
Southeast Commercial Dungeness Crab Fisheries
Average Weekly Catch in Pounds

AVG LBS/WEEK	SEASON																					
	74-75		75-76		76-77		77-78		78-79		79-80		80-81		81-82		82-83		83-84		84-85	
	PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE	
	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT
0 - 1,000	7	64	.	.	5	29	6	50	8	33	12	34	14	64	28	41	42	34	55	43	98	56
1,001 - 5,000	4	36	18	56	8	47	6	50	12	50	17	49	.	.	22	32	54	44	59	46	69	40
5,001 - 10,000	0	0	.	.	.	.	0	0	.	.	4	11	.	.	8	12	19	16	.	.	7	4.0
10,001 - 20,000	0	0	0	0	.	.	0	0	.	.	.	.	.	.	5	7.4	4	3.3	0	0	0	0
20,001 - 30,000	0	0	0	0	0	0	0	0	0	0	.	.	0	0	.	.	.	.	.	.	0	0
30,001 - 40,000	0	0	0	0	0	0	0	0	.	.	0	0	0	0	.	.	.	.	0	0	0	0
40,001 - 50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	0	0	0	0	0	0
ALL	11	100	32	100	17	100	12	100	24	100	35	100	22	100	68	100	122	100	128	100	174	100

(CONTINUED)

Note: The 1974-75 season consists only of data from 1975.
The 1989-90 season consists only of data from 1989, and
should be considered preliminary.

For confidentiality, if the number of persons is less than
4, the cell will contain a '.'

Table 6b
 Southeast Commercial Dungeness Crab Fisheries
 Average Weekly Catch in Pounds

	SEASON											ALL	
	85-86		86-87		87-88		88-89		89-90		ALL		
	PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		PEOPLE		
	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT		PCT
AVG LBS/WEEK													
0 - 1,000	118	58	123	59	130	56	137	54	148	62	944	53	
1,001 - 5,000	72	36	71	34	88	38	100	39	82	34	687	39	
5,001 - 10,000	.	.	.	.	.	.	14	5.5	.	.	111	6.2
10,001 - 20,000	.	.	.	.	.	.	4	1.6	.	.	26	1.5
20,001 - 30,000	0	0	.	.	0	0	0	0	.	.	9	0.5	
30,001 - 40,000	0	0	0	0	0	0	0	0	0	0	.	.	
40,001 - 50,000	0	0	0	0	0	0	0	0	0	0	.	.	
ALL	202	100	209	100	233	100	255	100	239	100	1783	100	

Note: The 1974-75 season consists only of data from 1975.
 The 1989-90 season consists only of data from 1989, and
 should be considered preliminary.

For confidentiality, if the number of persons is less than
 4, the cell will contain a '.'

Number of Pots Fished

The number of pots fished per vessel was obtained from the ADF&G vessel registration file for 1987 through 1989. At the time a vessel is registered, the owner is asked how many pots he plans to fish⁶. Ken Imamura of ADF&G explained that some fishermen report the actual number of pots on board, while others give the maximum allowable number of 300 pots whether they plan to fish that many or not.

Although the number of pots varied between vessels within the same size category, the average number of pots generally increased with vessel length. Vessels 1 to 29 feet averaged 158 ± 107 pots while vessels 30 to 39 feet averaged 190 ± 106 pots (Figure 9). Vessels 40 to 49 feet averaged 224 ± 109 pots; vessels 50 to 59 feet averaged 250 ± 87 pots. For most vessels 60 feet and larger the maximum limit of 300 pots was recorded at the time of vessel registration.

The vessels in the D09B Dungeness crab fishery have been fishing only 50 to 60% of the maximum pot limit for the last three years. The amount of gear

⁶Although the question posed to the fishermen may vary depending upon who asks at the time of registration, Ken Imamura of ADF&G asks how many pots a fisherman can realistically expect to fish during the season. This number can be interpreted as the maximum number of pots fished.

could theoretically double within the current pot limits. Many vessels cannot practically fish 300 pots, however. The maximum number of pots a vessel of 40 to 45 feet can transport at one time is between 50 and 75 (Ken Imamura, ADF&G). Vessels 20 to 25 feet in length could probably transport a maximum of 20 pots. Transportation of large numbers of pots would be difficult for the smallest vessels, but once the pots were in the water they could be fished from small boats. Small vessels may hire a larger vessel to transport their pots to and from the fishing grounds only if the hired vessel is registered with ADF&G as a tender. The tender can only transport the pots and cannot set the gear.

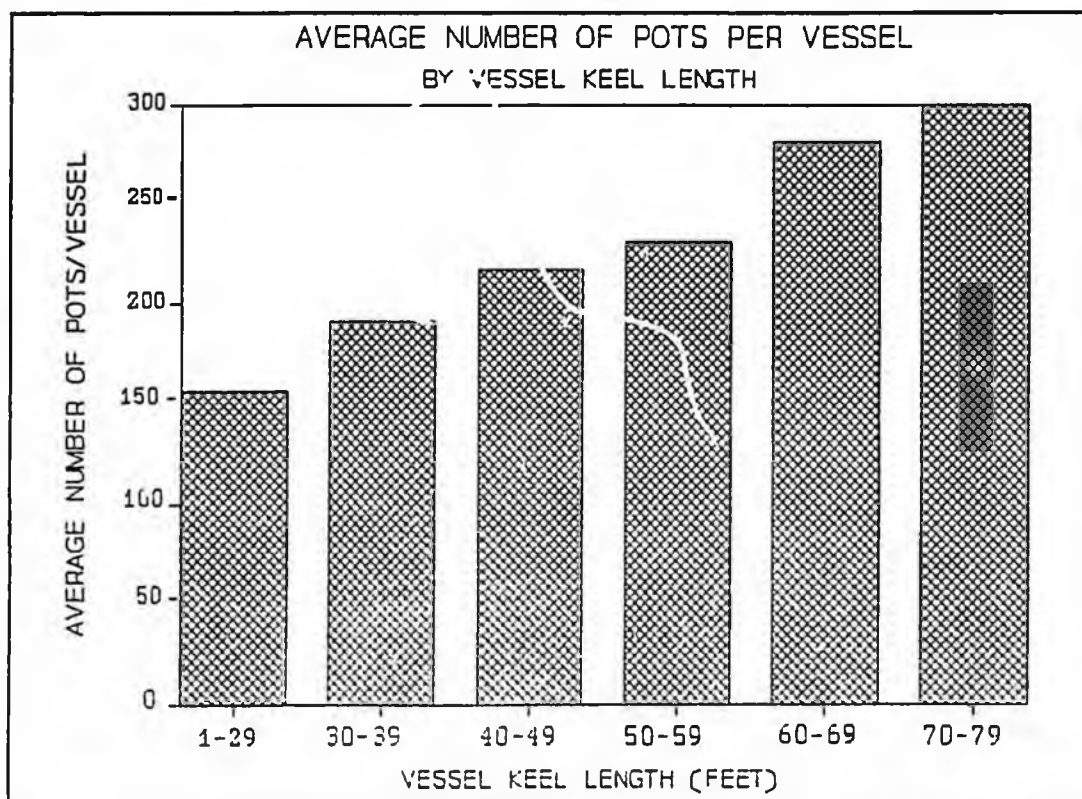


Figure 9. Average number of Dungeness crab pots reported by fishermen at the time of vessel registration in the years 1987 through 1989.

Experience

Dungeness crab fishermen with multiple seasons of experience had significantly ($P \leq 0.01$) more weeks with landings per season (in seasons that they fished) than less experienced fishermen. Using only the number of seasons fished as an index of experience, the average weekly catch for experienced fishermen did not differ from less experienced fishermen. But because experienced fishermen had more weeks with landings per season, their average seasonal catch was significantly ($P \leq 0.01$) greater than that of less experienced fishermen.

The average weeks with landings per season was calculated by summing the number of weeks with landings over all seasons that an individual had reported harvests of Dungeness crabs, and dividing the total number of weeks by the total number of seasons that person fished. Average weekly catch was calculated in a similar manner. The total pounds harvested by an individual over all seasons in which he had recorded harvests was divided by the total number of weeks fished by that individual.

Average weekly catch may be dependent on factors other than just the number of seasons a person fished, however. The time the fishing activity took

place within a season and also the area in which fishing occurred are only two factors which could significantly affect weekly catch.

VII. THE DUNGENESS CRAB FISHING FLEET

A wide range of vessel sizes and conditions exists among the southeastern Alaska Dungeness crab fleet. The protected waters of the inshore fishery allow considerable variability in the seaworthiness of the vessels (1990 ADF&G Shellfish Report to the Board of Fisheries).

Vessels range in size from small skiffs powered by outboard motors to a few large Bering sea-class crabbers. From 1974-75 to 1983-84 the predominant vessel size (30 to 50% of all vessels) was 30 to 39 feet in length (Table 7). Large vessels, 60 to 79 feet, entered the fishery in 1981-82 and remained until 1985-86. Since the 1986-87 season, less than 1% of the fleet has exceeded 60 feet.

Almost all of the new vessels that have entered the Dungeness crab fishery in recent years have been small (1 to 29 feet in length). In the 1988-89 season, the predominant vessel size class was 29 feet or less (45% of the fleet), and over 75% of the fleet was smaller than 40 feet.

Table 7
 Southeast Commercial Dungeness Crab Fisheries
 Number of Vessels By Vessel Length, By Season
 All Gear Types Combined

SEASON	VESSEL LENGTH (feet)														ALL	
	1-29		30-39		40-49		50-59		60-69		70-79		80+		ALL	
	VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS	
	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT
74-75	2	18.2	4	36.4	3	27.3	2	18.2	0	0	0	0	0	0	11	100
75-76	2	6.9	13	44.8	9	31.0	5	17.2	0	0	0	0	0	0	29	100
76-77	1	5.9	8	47.1	3	17.6	5	29.4	0	0	0	0	0	0	17	100
77-78	0	0	6	50.0	4	33.3	2	16.7	0	0	0	0	0	0	12	100
78-79	2	9.1	9	40.9	8	36.4	2	9.1	1	4.5	0	0	0	0	22	100
79-80	4	11.4	15	42.9	12	34.3	4	11.4	0	0	0	0	0	0	35	100
80-81	6	28.6	10	47.6	3	14.3	2	9.5	0	0	0	0	0	0	21	100
81-82	17	25.0	23	33.8	13	19.1	8	11.8	4	5.9	3	4.4	0	0	68	100
82-83	24	22.0	33	30.3	36	33.0	12	11.0	2	1.8	0	0	2	1.8	109	100
83-84	30	24.2	43	34.7	38	30.6	8	6.5	2	1.6	2	1.6	1	0.8	124	100
84-85	55	34.0	60	37.0	34	21.0	9	5.6	2	1.2	2	1.2	0	0	162	100
85-86	75	40.1	68	36.4	34	18.2	8	4.3	1	0.5	1	0.5	0	0	187	100
86-87	81	41.8	71	35.3	36	17.9	10	5.0	0	0	0	0	0	0	201	100
87-88	84	38.2	80	36.4	45	20.5	9	4.1	0	0	2	0.9	0	0	220	100
88-89	109	44.7	80	32.8	46	18.9	7	2.9	0	0	1	0.4	1	0.4	244	100
89-90	100	45.0	77	34.7	36	16.2	7	3.2	0	0	2	0.9	0	0	222	100
ALL	595	35.3	600	35.6	360	21.4	100	5.9	12	0.7	13	0.8	4	0.2	1684	100

Multiple Operators per Vessel

The number of vessels with Dungeness crab harvests recorded on fish tickets by more than one person within a season is presented, by season, in Table 8.

The number of vessels with two operators doubled from 1983-84 to 1984-85 and almost doubled again in 1985-86, but has remained relatively constant at about 18 vessels in recent seasons. Three or fewer vessels had three operators within a season from 1985-86 to 1988-89.

Table 8. Number of vessels with multiple operators within a season in the southeastern Dungeness crab fishery.

<u>Season</u>	<u>Vessels with 2 Operators</u>	<u>Vessels with 3 Operators</u>
1974-75	0	0
1975-76	1	0
1976-77	0	0
1978-79	0	0
1979-80	0	0
1980-81	0	0
1981-82	0	0
1982-83	6	2
1983-84	5	0
1984-85	10	0
1985-86	18	2
1986-87	18	3
1987-88	19	2
1988-89	17	2
1989-90	14	0

Catch and Earnings by Vessels

The average, median and total pounds of Dungeness crab caught in southeastern Alaska, and the 75th and 90th percentiles for catch are presented for all fisheries combined (D09B, D91B and D99B), by unique number of vessels by season in Table 9.

The average, median and total earnings in the Dungeness crab fishery in southeastern Alaska, and the 75th and 90th percentiles for catch are presented for all fisheries combined (D09B, D91B and D99B), by unique number of vessels by season in Table 10.

These tables are included for comparison of catch and earnings by people in Tables 3 and 5.

The catch and earnings by number of vessels is similar to catch and earnings by number of people (Tables 3 and 5) in all seasons. In seasons where the number of vessels was less than the number of people, more than one person fished from the same vessel. The difference between number of vessels and number of people was greatest in the seasons 1987-88 to 1989-90.

In some seasons the number of vessels was greater than the number of people indicating some individuals fished from more than one vessel in a season.

Table 9
Southeast Commercial Dungeness Crab Fisheries
Harvest Distributional Statistics By Season

SEASON	UNIQUE VESSELS	AVERAGE POUNDS	MEDIAN POUNDS	TOTAL POUNDS	75TH PERCENTILE	90TH PERCENTILE
74-75	11	3,347	867	36,817	4,574	13,348
75-76	30	18,933	10,173	567,986	24,004	59,655
76-77	17	29,983	19,720	509,718	59,999	85,027
77-78	12	10,600	4,826	127,201	14,025	38,926
78-79	22	33,707	19,773	741,549	40,752	119,999
79-80	36	22,269	5,105	801,676	32,736	76,014
80-81	21	24,169	3,071	507,551	32,283	104,203
81-82	68	42,442	8,101	2,886,039	55,712	121,221
82-83	109	32,791	17,603	3,574,175	46,631	99,507
83-84	124	17,296	8,668	2,144,762	26,633	50,418
84-85	163	11,092	3,934	1,808,062	15,921	30,299
85-86	192	11,969	3,774	2,298,134	15,243	38,802
86-87	201	12,046	3,117	2,421,258	14,686	36,150
87-88	221	15,020	4,125	3,319,408	20,000	46,640
88-89	245	13,509	4,129	3,309,795	19,944	41,815
89-90	222	8,549	2,828	1,897,777	10,824	24,614

Note: The 1974-75 season consists only of data from 1975.
The 1989-90 season consists only of data from 1989, and
should be considered preliminary.

Table 10

Southeast Commercial Dungeness Crab Fisheries
Harvest Distributional Statistics By Season

SEASON	UNIQUE VESSELS	AVERAGE EARNINGS	MEDIAN EARNINGS	TOTAL EARNINGS	75TH PERCENTILE	90TH PERCENTILE
74-75	11	\$1,694	\$434	\$18,632	\$2,333	\$6,696
75-76	30	\$9,889	\$5,504	\$296,656	\$12,695	\$30,465
76-77	17	\$13,276	\$9,709	\$225,691	\$24,754	\$35,711
77-78	12	\$5,359	\$2,945	\$64,305	\$8,305	\$17,517
78-79	22	\$21,446	\$12,335	\$471,822	\$26,081	\$76,799
79-80	36	\$17,200	\$4,098	\$619,195	\$18,376	\$65,852
80-81	21	\$12,192	\$1,536	\$256,034	\$16,141	\$52,430
81-82	68	\$26,489	\$5,303	\$1,801,236	\$33,465	\$73,264
82-83	109	\$23,634	\$13,164	\$2,576,114	\$34,663	\$70,692
83-84	124	\$16,294	\$8,096	\$2,020,501	\$24,875	\$47,515
84-85	163	\$14,817	\$5,425	\$2,415,220	\$20,641	\$40,392
85-86	192	\$14,919	\$4,509	\$2,864,508	\$19,077	\$49,071
86-87	201	\$12,667	\$3,295	\$2,546,151	\$15,743	\$38,530
87-88	221	\$16,617	\$4,588	\$3,672,409	\$22,050	\$51,788
88-89	245	\$12,877	\$3,931	\$3,154,951	\$18,986	\$39,855
89-90	222	\$9,240	\$2,904	\$2,051,214	\$11,076	\$26,476

Note: The 1974-75 season consists only of data from 1975.
The 1989-90 season consists only of data from 1989, and
should be considered preliminary.

Dungeness Crab Harvest by Vessel Length

Forty-one percent of the total harvest of Dungeness crabs from 1975 to 1989 was caught from vessels 30 to 39 feet in length (Figure 10). Less than 2% of the historical harvest was caught from vessels greater than 60 feet in length. Over half of the total harvest was from vessels 30 to 49 feet in length.

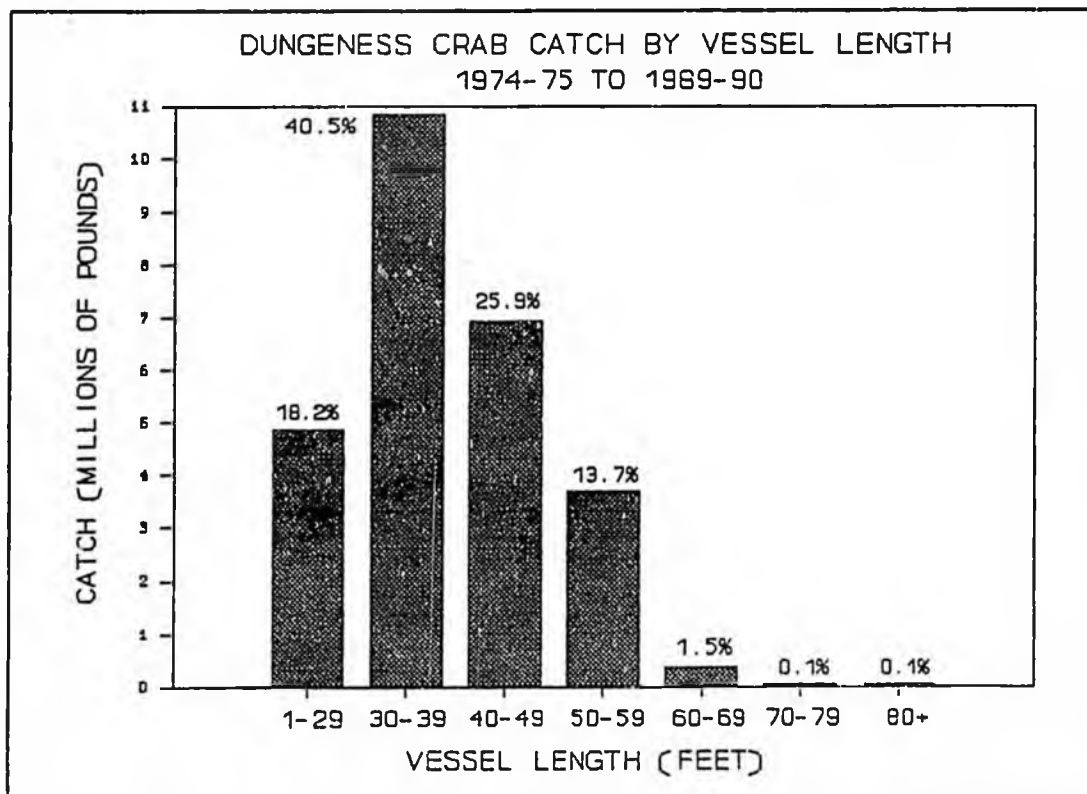


Figure 10. Percent of total Dungeness crab harvest (in pounds) in southeastern Alaska, from 1974-75 to 1989-90, that was caught from vessels in each vessel length category.

Average Seasonal Catch by Vessel Length

The average seasonal harvest from 1974-75 to 1989-90 by vessels in seven vessel length categories is presented in Table 11.

The percentage of vessels with average seasonal harvests of 5,000 pounds or less decreased with increasing vessel length up to 70 to 79 feet. The percentage of vessels with average seasonal catches of 5,000 pounds or less was 76% for vessels 1 to 29 feet in length, 56% for 30 to 39 feet, 49% for 40 to 49 feet, 27% for the 50 to 59 feet vessel class.

The average seasonal harvest for vessels greater than 70 feet in length closely resembled that of the smallest vessels (1 to 29 feet).

In contrast, the percentage of vessels with average seasonal harvests greater than 20,000 pounds increased with increasing vessel length. The percentages of vessels with average seasonal catches of 20,000 pounds or greater was 8% for vessels 1 to 29 feet in length, 17% for 30 to 39 feet, 25% for 40 to 49 feet, 42% for the 50 to 59 feet vessel class.

Table 11
 Commercial Southeast Dungeness Crab Fisheries
 Average Seasonal Catch in Pounds, by Vessel length
 1974-75 to 1989-90 Seasons

AVG LBS/SEASON	VESSEL LENGTH														ALL	
	1-29		30-39		40-49		50-59		60-69		70-79		80+		ALL	
	VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS	
	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT
0 - 1,000	142	45	69	29	35	26	4	11	0	0	.	.	.	.	255	34
1,001 - 5,000	98	31	63	27	32	23	6	16	.	.	.	.	.	.	205	28
5,001 - 10,000	30	9.6	31	13	20	15	7	18	0	0	0	0	0	0	88	12
10,001 - 20,000	17	5.4	31	13	15	11	5	13	.	.	.	.	0	0	71	9.6
20,001 - 30,000	9	2.9	16	6.8	14	10	6	16	0	0	0	0	0	0	45	6.1
30,001 - 40,000	12	3.8	13	5.6	9	6.6	.	.	.	.	0	0	.	.	38	5.1
40,001 - 50,000	.	.	.	.	6	4.4	.	.	.	.	.	.	0	0	14	1.9
50,001 - 75,000	.	.	.	.	.	.	.	.	.	.	0	0	0	0	14	1.9
75,001 - 100,000	0	0	5	2.1	.	.	.	.	.	.	0	0	0	0	.	.
100,001 - 150,000	0	0	.	.	0	0	.	.	0	0	0	0	0	0	.	.
ALL	313	100	234	100	137	100	38	100	8	100	8	100	4	100	742	100

Note: The 1974-75 season consists only of data from 1975.
 The 1989-90 season consists only of data from 1989, and
 should be considered preliminary.

For confidentiality, if the number of vessels is less than
 4, the cell will contain a '.'

Average Weeks Fished per Season by Vessel Length

The average number of weeks fished (weeks with landings) per season from vessels in seven vessel length categories is presented in Table 12 for the combined seasons 1974-75 to 1989-90.

The large vessels, 70 feet in length or larger, had the smallest average number of weeks with landings per season, with 91% fishing an average of 3 weeks or less per season. Approximately 30 to 40% of the vessels less than 60 feet in length had an average of 2 weeks with landings or less per season. Twelve to 19% of those vessels had an average of 11 to 20 weeks per season, which was consistent with the group of people that made landings in 11 to 20 weeks per season in Table 6a.

Table 12
 Commercial Southeast Dungeness Crab Fishery
 Number of Weeks Fished per Season, by Vessel Length
 1974-75 to 1989-90 Seasons

AVG WEEKS/SEASON	VESSEL LENGTH (in feet)														ALL	
	1-29		30-39		40-49		50-59		60-69		70-79		80+			
	VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS		VESSELS	
	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT	CNT	PCT
1	77	25	40	17	30	22	5	13	.	.	5	63	.	.	162	22
2	44	14	22	9.4	21	15	4	11	.	.	.	.	.	.	97	13
3	31	9.9	30	13	22	16	6	16	0	0	.	.	.	.	90	12
4	26	8.3	29	12	7	5.1	.	.	0	0	0	0	.	.	65	8.8
5	25	8.0	19	8.1	9	6.6	.	.	.	.	.	.	0	0	58	7.8
6	18	5.8	15	6.4	8	5.8	4	11	0	0	0	0	0	0	45	6.1
7	17	5.4	15	6.4	6	4.4	4	11	0	0	0	0	0	0	42	5.7
8	15	4.8	13	5.6	6	4.4	.	.	0	0	.	.	0	0	35	4.7
9	10	3.2	13	5.6	.	.	.	.	.	.	0	0	0	0	33	4.4
10	.	.	12	5.1	8	5.8	.	.	0	0	0	0	.	.	32	4.3
11 - 15	22	8.9	22	9.4	12	8.8	.	.	.	.	0	0	0	0	64	8.6
16 - 20	11	3.5	.	.	.	.	.	.	0	0	0	0	0	0	.	.
21 - 30	.	.	.	.	0	0	0	0	0	0	0	0	0	0	.	.
ALL	313	100	234	100	137	100	38	100	8	100	8	100	4	100	742	100

Note: The 1974-75 season consists only of data from 1975.
 The 1989-90 season consists only of data from 1989, and
 should be considered preliminary.

For confidentiality, if the number of vessels is less than
 4, the cell will contain a '.'

Relationship of Fishing Activity, Catch and Earnings to Vessel Attributes

Vessel attributes were examined to determine if they influenced fishing activity, catch and earnings in the southeastern Alaska Dungeness crab fishery from 1974-75 to 1989-90. The vessel attributes examined were vessel length, gross tonnage, net tonnage, holding tank capacity, live tank capacity, depth, fuel capacity and horsepower. The activity, catch and earnings variables examined were mean and total catch per season, mean and total earnings per season and mean and total number of weeks fished (weeks with landings) per season.

Statistically significant positive relationships ($P \leq 0.01$) existed between vessel length and mean and total catch per season and mean and total earnings per season.⁷ As vessel length increased, catch and earnings increased.

Statistically significant negative relationships ($P \leq 0.01$) existed between mean number of weeks with landings per season and vessel size (vessel length, gross and net tonnage). As vessel size increased, the mean number of weeks with landings per season decreased. Fuel capacity, which is also related to vessel size, was negatively correlated with mean number of weeks with landings per season.

⁷These relationships were determined by calculating Pearson product-moment coefficients between each pair of variables, and using correlation analysis to measure the closeness of the linear relationship between the two variables.

No relationships existed with horsepower, holding or live tank capacity or depth.

The larger vessels made larger harvests of Dungeness crab and therefore had greater earnings in the fishery than the smaller vessels. The larger vessels harvested more and earned more even though they had fewer weeks with landings per season than the smaller vessels.

The large vessels may have spent more time fishing than the smaller vessels, however. There were significant direct relationships between the number of days between landings and vessel length, holding and live tank capacity and fuel capacity. The larger vessel size, holding and live tank capacity and greater fuel capacity enable large vessels to stay out on the fishing grounds longer than smaller vessels.

VIII. DATA SUMMARY

Participation in the southeastern Alaska Dungeness crab fishery has continued to increase since the fishery was last considered for limited entry in 1984. The largest number of fishermen in the fishery since 1974-75 was 255 in the 1988-89 season. Final counts for the 1989-90 season were not available at the time of this writing.

About 93% of the Dungeness crab fishermen had permits for the D09B (pots, vessel \leq 50 feet). Most of the increase in participation has been in the D09B fishery. The number of D91B (pots, vessel $>$ 50 feet) permits has remained relatively constant. In 1988-89, only 4 people were fishing ring nets (D99B) and only 2 people had both a D09B and a D99B permit.

Large numbers of first-year participants, predominantly Alaskan residents, continue to enter the fishery each year. Limitation of king and Tanner crab fisheries and closure of the red and blue king crab seasons may have resulted in concentration of effort, especially new effort, in the Dungeness crab fishery. Poor harvests in the Pacific Coast fisheries in the mid-1980's may have prompted further development of the southeastern Alaska fishery for Dungeness crabs.

As a result, the southeastern Alaska Dungeness crab fishery has become very intense. Effort has been concentrated in a few productive areas, with most fishing occurring primarily during the summer months of June, July and August. Abundant crabs, high prices, good weather and lower harvests in non-Alaskan Pacific Coast fisheries in the summer months contribute to high levels of fishing effort in the summer in southeastern Alaska. Season openings for southeastern Alaska drift gill net and purse seine fisheries in late June and July may constrain fishermen who fish both Dungeness crabs and salmon to the first few weeks of the crab fishery.

An additional problem for management, aside from concentrated effort, is the overlap of part of the Dungeness crab season with the sensitive molting and mating periods of the crab. An intense fishery such as this can inflict substantial handling mortality on newly molted crabs.

Seasonal harvests in the 1987-88 and 1988-89 seasons, 3.3 million pounds, approached the largest historical harvest of 3.9 million pounds in 1964. The recent high effort levels have resulted in almost record-level harvests.

Dungeness crabs in southeastern Alaska are fished predominantly from vessels less than 40 feet in length. Large numbers of small boats have entered the fishery in the last few seasons. In 1988-89, 45% of the fleet was less than 30

feet in length. Only 7 of the 244 vessels in 1988-89 were between 50 and 59 feet, and only 2 were larger than 70 feet.

Not only were the vessels less than 40 feet in length the most numerous, but they have harvested 59% of the total catch since 1974-75, with the 30 to 39 foot vessels harvesting the highest percentage of any vessel length category.

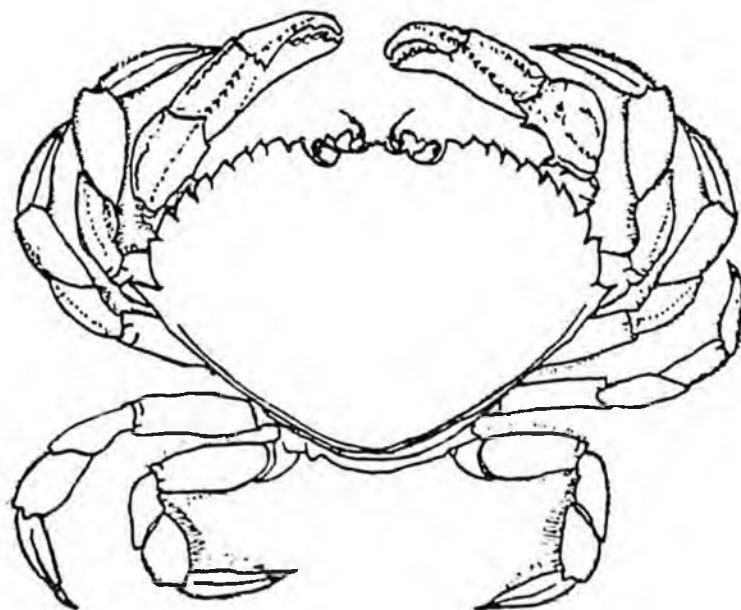
As vessel length increased, the average seasonal catch increased. The average number of weeks with landings per season decreased with increasing vessel length. The potential for effort to increase if the southeastern Alaska Dungeness crab fishery is limited exists through upgrading vessel size and, therefore, increasing the seasonal harvest. Larger vessels harvested more crabs with less time fishing than small vessels, even with a gear limit of 300 pots.

The vessels in the D09B Dungeness crab fishery have been fishing only 50 to 60% of the maximum pot limit for the last three years. The amount of gear could potentially double within the current pot limits even if the number of fishing operations was limited.

There appear to be at least two groups of people fishing Dungeness crabs in southeastern Alaska. One group consists of a large contingent of new participants with small vessels. These people make landings in only a few weeks

per season and harvest an average of 5,000 pounds or less of crab in a season. The second group of fishermen has been fishing 4 to 7 seasons, makes landings 11 to 20 weeks per season and harvests substantially more crabs. The second group tends to fish from vessels less than 40 feet in length. The fishermen with more seasons of experience in the Dungeness crab fishery had significantly more weeks with landings per season and had significantly larger seasonal harvests than fishermen with less seasons of experience.

If the new fishermen remain in the fishery for several more seasons, their impact on the fishery should theoretically increase. Through the process of increasing fishing efficiency through experience, the potential exists for further increase in effort following limitation of the fishery.



Appendix A.

10 - STATE of Alaska, Limited Entry Commission

Subject:

Limited Entry For Dungeness Crab Fisheries

Reason: Large influx of new boats into the dungeness crab fisheries

NAME	Address
John C. KAER	Box 716 Petersburg, Alaska
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Harold Bailey	Box 887 Wrangell, AK.
Walter T. Lushby	P.O. Box 1542, Wrangell, AK.
Bert H Eyr	Box 641 Wrangell AK
Edwin Hillman	Box 522 Wrangell AK
Wm J.C. White	P.O. Box 932 WRG AK.
Mrs. Jean E. White	P.O. Box 932 Wrangell AK.
Steven H. Thompson SR	P.O. Box 742 Wrangell AK
Steve Thompson JR	P.O. Box 742 Wrangell AK
Charles Harris Sorenson	P.O. Box 555 Petersburg AK
Jerry Dahl	Box 128 (Billu B) "J" "
JERRY DAHL JR.	PETERSBURG
Earl Lund	Box 265
Richard, Eide	Box 15 PETERSBURG
Walter J. Hillman	Box 770 PETERSBURG

Subject:

LIMITED ENTRY FOR DUNSMITH CRAB FISHERIES

REASON: LARGE INFLUX OF NEW BOATS INTO THE DUNSMITH CRAB FISHERIES

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Carl Mathisen	Box 413 Petersburg 99833
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Joe Hunt	Box 1224 Petersburg AK "
John Madson	Box 918 Petersburg AK
Max Mathisen	Box 331 Petersburg AK 99833
Ladd Vladimir	Box 935 Petersburg AK 99833
Carl W. Anderson	Box 1672 Petersburg AK
Gregory W. Jones	Box 1521 Petersburg AK
John Eide	Box 917 Petersburg AK
John Eide	Box 101 PETERSBURG
Dan Kowalski	Box 477 Petersburg, AK. 99833
W. A. GRIFFIN	Box 1141 " " "

RECEIVED

MAY 17 1984

DUNGENESS PETITION RECEIVED

May 17, 1984

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Dungeness Petition Received (cont.)
May 17, 1984

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Appendix B.

April 1, 1985

Southeast Dungeness Fishermen

Gentlemen:

Thank you for your petition regarding the Southeast Dungeness crab fishery. Your concern about the long term health of the Southeast Dungeness crab fishery is shared by the Commission. Nevertheless, we feel that limitation under existing conditions would be a mistake. In our view, the benefits of freezing Dungeness participation at current extraordinary levels would be few while costs could be substantial. We do not plan to limit the fishery but have asked our staff to continue to monitor ongoing developments.

To limit the number of participants in a fishery, the state must have adequate jurisdictional authority and the Commission must be convinced that such action will promote the conservation and sustained yield management of the resource and the economic health and stability of the fishery. In many of the state's shellfish fisheries, inadequate constraints on the fishing power of individual units make entry limitation an impractical exercise. If the limited number of participants can easily increase their fishing power, any benefits created by entry limitation may be quickly diminished. Thus the Commission will not limit a fishery unless we are convinced that the program in concert with other regulations will clearly serve the statutory purposes stated above.

Limited entry is a relatively expensive management measure and the Commission's budget is quite tight. These factors make it doubly important that we utilize this important management tool prudently. The Commission has not been able to conclude that limiting the Southeast Dungeness fishery would serve the purposes of the statute.

To date, management biologists have little solid research data concerning the biology and the extent of the Southeast Dungeness resource. There is no certainty as to the effort and harvest levels

Southeast Dungeness Fishermen

Page Two

April 1, 1985

which can be readily maintained over time. While fishery managers have expressed concerns about possible handling mortalities on female and sublegals due to the recent effort increases, the Board of Fisheries has followed a size, sex, and season management strategy and has seen no need to directly contain effort to prevent biological overfishing.

Harvest levels in the 1.9 to 4.0 million pound range occurred continuously over an eight year period during the sixties. From the 80-81 through 82-83 season, as participation levels increased the total harvest rose. Average catch and earning levels during the 82-83 season with 114 participants were roughly equivalent to average catch and earning levels during the 78-79 season with 24 participants.

Traditionally, ex-vessel prices and hence effort levels in Alaska's Dungeness fisheries have been inversely related to stock conditions down South. Current price and effort levels in Southeast are at least partially due to the present status of stocks in Washington, Oregon, and California. High prices for king and Tanner may also be having a positive impact on Southeast Dungeness prices.

Biologists in Washington, Oregon, and California indicate that their Dungeness stocks follow a long-term cycle. These scientists are optimistic that a significant upturn will occur within the next three seasons. When this occurs effort on Southeast stocks should decline as out-of-state fishermen and other transient fishermen exit the fishery.

The recent sharp decline in the Southeast Dungeness harvest to 1.9 million pounds during the 83-84 season and to approximately 1.4 million pounds during the past season are a cause for concern. This may be an indication that the stocks have entered a downcycle or that overfishing may have occurred and recent effort levels cannot be sustained over time. Should this downturn continue participation will naturally decline. Indeed, Alaska Department of Fish and Game data indicate that participation leveled off during the 84-85 season. To the extent that participation should naturally decline in the near future, freezing participation at these current high levels would be a mistake.

The Commission also feels that a lack of adequate control over other inputs which affect an operation's overall fishing power would make attempts to limit the number of Dungeness participants a futile endeavor.

Currently, gill net size vessels are the dominant vessel size in the fleet. The 300 pot limit does not appear to be a binding constraint for many of these participants. If the Commission limited the fishery, average vessel size and pots fished could easily increase thereby diminishing any benefits which limitation might provide.

At this point, we have no plans to limit the State's Dungeness fisheries. Limiting participation at these historically unprecedented levels would convey no relief or benefits, particularly if transient effort is expected to decline in the near future. Moreover, as noted above, we have doubts about the workability of a simple salmon type limited entry program for these fisheries. Thus, even if effort returns to more sustainable levels, we would have major reservations about using this management tool in the Dungeness fisheries.

You may be aware that the State Board of Fisheries at its recent March meeting in Anchorage, established a committee to review all Dungeness proposals (which committee included the advisory committee representatives). The report of the committee to the Board declined to recommend limited entry of Dungeness at this time, because limitation would not serve to reduce the current number of participants in the fishery.

We will continue to monitor developments in the Southeast fishery, and we'll pay particular attention to any new scientific information on the Dungeness stocks, as well as any significant changes in the management measures adopted by the Board of Fisheries. If it later becomes apparent that a salmon-type limited entry system could play a useful role, we would reconsider our position.

If you have questions about this matter or limited entry in general, please feel free to contact the Commission. Your group may be contacted by our research staff in the future. Any help you can provide the staff will be greatly appreciated.

By Direction of the
COMMERCIAL FISHERIES ENTRY COMMISSION

Bruce Twomley, Chairman
Richard Listowski, Commissioner
Philip Smith, Commissioner

By: _____

BT/dw

bcc: Lennie Boston
Special Staff Assistant
Office of the Governor

Appendix C.

WILLIAM P. FLOR
Box 262
PETERSBURG, ALASKA
99833

FEBRUARY 20, 1989

BRUCE TWOMLEY
COMMERCIAL FISHERIES ENTRY COMMISSION
Box KB
JUNEAU, ALASKA 99811

RECEIVED

FEB 23 1989

COMMERCIAL FISHERIES
ENTRY COMMISSION

DEAR MR. TWOMLEY:

ON FEBRUARY 4-6, 1989 THE BOARD OF FISH MET IN PETERSBURG TO ADDRESS SOUTHEAST DUNGENESS CRAB FISHERY PROPOSALS AND ISSUES. DURING THE MEETING BOTH THE BOARD AND FISHERMEN RECOGNIZED THAT THE DUNGENESS CRAB FISHERY IS SERIOUSLY JEOPARDIZED BY THE RECENT DRAMATIC INCREASE IN EFFORT.

ENCLOSED IS A PETITION OF CONCERNED FISHERMEN WHO WERE IN

ATTENDANCE AT THE MEETINGS AND
STRONGLY URGE THE LIMITED ENTRY
COMMISSION TO IMPOSE A MORATORIUM
ON NEW PERMITS AND TO INSTITUTE
A STUDY OF THE LIMITED RESOURCES
OF THE SOUTHEAST DUNGENESS CRAB
FISHERY.

THANK YOU FOR YOUR TIME.

SINCERELY,



WILLIAM P. FLOR

RECEIVED

FEB 23 1989

WE THE UNDERSIGNED AGREE THAT THE CURRENT STATE OF THE DUNGENESS CRAB FISHERY IS SERIOUSLY JEOPARDIZED BY THE DRA-
 MATIC INCREASE IN NEW PERMITS BEING ISSUED AND RECOGNIZE
 THE NECESSITY TO LIMIT THE NUMBER OF FISHERMEN TO THE LIMITED
 HABITAT OF DUNGENESS CRAB.

WE STRONGLY URGE THE LIMITED ENTRY COMMISSION TO IMPOSE A
 MORATORIUM ON NEW PERMITS BEING ISSUED AND INSTITUTE A STUDY
 OF THE LIMITED RESOURCES OF THE DUNGENESS FISHERY.

PRINTED NAME	ADDRESS	SIGNATURE
DAVID M BEEBE	Box 148 PETERSBURG AK 99833	David M. Beebe
WILLIAM FLOR	Box 262 PETERSBURG AK 99833	William Flor
DANIEL HICKMAN	" 108 " " "	Daniel Hickman
DAW FOLROY	Box 57 GUSTAVUS 99526	Daw Folroy
KURT WOHLMUETER	Box 1312 PSB. 99833	Kurt Wohlmutter
Otis Marsh	Box 666 Petersburg	Otis Marsh
RON SCHARNS	Box 432 PETERSBURG	Ronald R. Scharns
Chris L Kegan	Box 811 Petersburg	Chris L Kegan
Mike Nilsen	Box 1084 Petersburg	Mike Nilsen
Ole Nilsen	Box 1287 Petersburg	Ole Nilsen
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Nick Korman	Box 770 Petersburg AK	Nick Korman
Steve Bergman	Box 365 Petersburg AK	Steve Bergman
Kraig Norheim	Box 879 Petersburg AK	Kraig Norheim
MICHAEL FARZT	Box 145 Petersburg AK	Michael Farzt
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MIKE Bangs	Box 1733 Petersburg AK	Mike Bangs
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Carl K Anderson	Box 1672 PSB AK	Carl K Anderson

Appendix D.

COMMERCIAL FISHERIES ENTRY COMMISSION

P.O. BOX KB
JUNEAU, ALASKA 99811-0302
PHONE: (907) 465-4081

March 24, 1989

RE: PETITION TO IMPOSE A MORATORIUM ON NEW PERMITS ISSUED
IN THE SOUTHEASTERN ALASKA DUNGENESS CRAB FISHERY AND
INSTITUTE A STUDY OF THE LIMITED RESOURCES OF THE
FISHERY

Dear Crab Fishermen:

We received your subject petition on February 23, 1988. Thank you.

Regarding your request that the Commission impose a moratorium on the issuance of new permits in this fishery, please be advised the Commission does not have the statutory authority to do this. Your petition, therefore, is denied.

To accomplish your request would require new legislation. If it is your desire to pursue this, we would suggest you contact your legislators. We, of course, would assist you in any way we could.

Regarding your request that the Commission institute a study of the limited resources of this fishery, please be informed that prior to receiving your petition, our research section had already begun work to update our database regarding the crab fisheries. We cannot tell you how long this will take - our resources are limited as well - but our instructions to our research people are to continue with this project.

If you have any questions, please do not hesitate to contact this office again.

By Direction of the
COMMERCIAL FISHERIES ENTRY COMMISSION
Bruce Twomley, Chairman
Richard F. Listowski, Commissioner
Philip J. Smith, Commissioner

By: 

:SMS

Distribution: All signers of petition