

SUMMARY OF ISSUES AND OPTIONS

DUNGENESS CRAB SEASON AND PERMIT RULES OCTOBER 23, 1998

Issue 1: Permit Regulations for Vessels Setting Crab Gear - ACTION

Option 1.1 (preferred): Exempt crab gear-setting vessels from crab permit requirement.

Option 1.2: Status quo - Crab pots may only be set by non-permitted vessels during the 64 hour preseason gear-setting period.

Option 1.3: No gear-setting without a crab permit.

Issue 2: California Season Delay Regulations - ACTION

Option 2.1: Authorize the Director to delay the Southern Oregon crab season in unison with Northern California, establishing a line north of Brookings (to be determined by industry consensus). Implement a 30 day wait period for vessels fishing earlier seasons (December 1 opening), prior to crabbing in area with delayed opening.

Option 2.2: Acknowledges the softshell delay line at the California border. Implements a 30 day wait period rule, for vessels fishing earlier (December 1 opening) seasons, prior to crabbing in Northern California area with delayed opening.

Option 2.3: (preferred) Status quo. Softshell delay line, when needed, will be at the California border. Vessels based in Oregon can not fish opening day in Northern California when season is delayed, unless they do not fish in earlier (December 1 opening) seasons. Violations will be prosecuted by California.

Issue 3: New Crab Permit Applications - ACTION

Option 3.1 (preferred): Amend OAR 635-006-1010 to define "initial eligibility" such that a vessel is eligible one time only to apply for and receive a crab permit under the "Eligibility for permit" statute (ORS 508.931).

Option 3.2: Status quo. Potential for permit abuse continues.

Issue 4: Summer Crab Fishery - Discussion

Request for Commission Guidance - Future Direction

DUNGENESS CRAB SEASON AND PERMIT RULES

**ODFW STAFF REPORT PRESENTED TO:
THE OREGON FISH AND WILDLIFE COMMISSION
OCTOBER 23, 1998**

Introduction

The Dungeness crab fishery is one of Oregon's oldest and most successful fisheries. It is currently the largest state-managed fishery in terms of participating vessels and fishermen, and consistently ranks as one of the most valuable. During the past 50 years, crab fishery landings have fluctuated in approximately ten to twelve year cycles between abundance peaks (Figure 1). Steady improvements in synthetic lines and hydraulic line haulers coupled with larger all-weather vessels have allowed the fishery to spread throughout the full range of the species. Despite three Separate state-level limited entry programs in place in Oregon, Washington and California, the fishery is regional in nature with many interstate linkages in the harvesting, processing and marketing sectors.

The Oregon restricted vessel permit system has been in effect for three complete seasons, beginning with the 1995-96 season. There are 457 permits issued or pending. Limited entry has not reduced effort in the fishery, but has stabilized the number of participating vessels at an average of 330 vessels the past 3 seasons. This is well below the peak levels of over 450 or more vessels in the early 1980's. The average number of crab pots fished per vessel remained below 300 until the 1991 season, but has climbed rapidly this decade to an average of 420 pots per vessel during the past three seasons. The total number of pots fished has been at record levels during the past three season openings, averaging 120,000 pots statewide. This compares with an annual average of 94,000 pots for the 1991 through 1993 seasons.

Need for Action

Most of the conservation aspects of the fishery are addressed by the existing regulations. Current concerns involve optimizing resource use at the beginning and end of the season, and related issues. The Dungeness crab season is currently eight and a half months long, from December 1 through August 14. During each of the last two seasons, more than eighty percent of the catch has been landed in the first two months. Recently reduced options in the groundfish, shrimp, salmon and tuna fisheries have increased the importance of annual crab fishery income to many permit holders, increasing the competition for the available resource. Almost any adjustment to the regulations can cause some re-distribution of crab resource benefits.

Issue 1: Permit regulations for vessels setting crab gear. This issue for Commission action concerns clarification of the "requirement for crab permit" rule. Recent enforcement action resulted in a new interpretation of when a vessel without a crab

permit may set gear for a permitted vessel. Many small-boat operators are not satisfied with the current interpretation, while others would prefer a stricter interpretation whereby no vessel could set gear without a permit. Staff presents a recommendation and analysis of options for rule changes to clarify when a crab permit is required.

Issue 2: California season delay regulations. This issue for Commission action is in response to recent California legislation which gives authority to the Director of the California Fish and Game Department to delay the Northern California crab season for quality improvement. Recommendations from the Tri-State Crab Committee of the Pacific States Marine Fisheries Commission have resulted in past Commission actions on regional quality control and related fair-start issues on the Northern Oregon coast. Staff presents a recommendation and an analysis of options to address season-opening issues in the event that the Northern California crab season opener is delayed.

Issue 3: Housekeeping issue regarding new crab permit applications for Commission action. There is a need to clarify the regulations regarding application for a crab. Currently, a vessel owner could apply for a new crab permit based on the initial criteria established by statute, despite the fact that the vessel had already held an originally-issued permit and subsequently transferred it to another vessel.

Issue 4: Summer crab fishery discussion. This issue is presented for discussion purposes and Commission guidance. There is a strong desire by many crabbers to prevent the handling and harvest of softshell crab in the summer months of the crab season. High levels of fishing effort in the summer pose a threat to fishery production in the following winter. Staff hopes to receive guidance from both the industry and the Commission on this long-standing issue. If the Commission instructs staff to pursue this issue, staff will continue discussions with industry members with the goal of developing management options for Commission consideration prior to the summer 1999 fishery.

Background

History of Crab Season Management

The Dungeness crab fishery is a classic example of a "recruitment" fishery. This means that no quota is set, but rather all animals of a certain size and sex are available for harvest. The fishery is managed by "3S" regulations: Size, Sex and Season. Size and sex regulations insure high levels of annual reproduction, by protecting all females from harvest as well as most adult males below 6.25 inches. Season regulations are designed to insure that the harvest occurs well after molting, to allow a period of protection for newly-molted softshell crabs of legal size (the "recruits") while they harden-up and reach an acceptable meat content. The traditional management goal has been to close the season during the period when the majority

of crabs are softshelled, in order to optimize the annual yield of crab meat from the harvestable crab resource.

The setting of season regulations has been an active issue since the early days of the crab fishery. As early as 1911, regulations were enacted to prohibit canning crab meat or shipping crabs out of the county of origin in July, August and September when crabs were in poor condition. There was no closed season. In 1948, these restrictions were replaced by a closed season designed to prevent the taking of crabs when they were in poor condition and the meat yield was low. Based on at-sea testing, the season was closed when more than 10 percent of the legal size males were softshelled, and the season opened when less than 10 percent softshells remained. The expense and uncertainty of this approach were prohibitive, so from 1950 to 1963 a fixed season was chosen based on available information on the timing of crab molting: November 15 to August 15 south of Cascade Head; and December 15 to September 15 north of Cascade Head. After 1964, the split areas were combined and the coastwide season opened December 1 and closed August 15 through 1978, with 30-day season extensions granted in five separate seasons.

From 1978 through 1983 the season closed September 15, with a 30-day extension in 1983. In 1984, following several years of high-volume fishing on low quality crabs at the end of the season, the Commission set the season closure date to the current August 14. Late-season landings and effort declined for several years but soon began to increase. In 1992, the Commission enacted a summer harvest quota, requiring the Director to close the season if landings after May 31 exceed ten percent of the previous December through May total landings. The ten percent quota has not been reached in any season since.

Since the late 70's, a long-time goal of the three Pacific states has been to achieve a uniform opening date to prevent effort shifts where vessels move their gear to take advantage of staggered opening dates. However, problems associated with intense fishing effort in December began to present serious quality problems in Northern Oregon and Washington. In 1991, the Pacific States Marine Fisheries Commission formed the Tri-State Crab Committee, an industry and agency work group whose first task was to develop the quality testing procedures and season delay regulations which have been adopted by all three states. The procedures have worked well, both to insure a minimum level of quality for the crab resource north of Cascade Head and to establish a fair-start scenario for all crab vessels.

Recent Events

On December 1, 1997, a vessel was cited for setting crab gear without a crab permit by an officer of the Oregon State Police. Based on their analysis, the current interpretation of the crab permit rules and statutes is that a permit is required to set gear during the open season, but not during the authorized 64 hour pre-season gear setting period. From a Tri-state perspective, Oregon is currently on the middle ground on this issue. Recent California statutes exempt a vessel from crab permit rules "when

it is being used solely to assist a permitted vessel transport or set traps". The Washington Department of Fish and Wildlife is in the process of drafting permanent rules to allow vessels to set gear without a permit ("coastal crab license"), and has already adopted an emergency rule to allow gear-setting in the upcoming season by non-permitted vessels.

Since the original Tri-State quality testing program was established, the Northern California crab industry identified an additional need for quality testing and has developed procedures and regulations to govern the eventuality of a season delay. The Director of the California Department of Fish and Game has requested that Oregon adopt additional regulations to support the "one vessel-one opener" philosophy embraced by the Tri-State Committee (see letter, Attachment A).

The Oregon Dungeness Crab Commission conducted four meetings in four ports over the past year, with a discussion of summer crab fishery problems each time. A fleet survey was also mailed to all permit holders. After gathering volumes of input, the Crab Commission voted 5 in favor and 1 opposed, to recommend shortening the crab season to the Fish and Wildlife Commission (see letter and survey results, attachment B). While the survey also polled permit holders on the gear-setting issue, it appears that the responses to that question (#5) may be invalid due to some confusion on what the current gear setting regulations are.

Recent actions by the Director of the Washington Department of Fish serve to illustrate some of the problems with attempts to curb high levels of fishing effort on softshell crabs. Washington has a longstanding regulation prohibiting the landing of softshell crabs but it has been difficult to enforce uniformly. After experiencing increased levels of softshell landings late in the 1996-97 season, crabbing more than 4 miles from shore was prohibited by emergency rule from July 1 to the season closure (September 15 in Washington). Despite this measure, a large influx of vessels and pots occurred in late August and the subsequent landings of large loads of softshells prompted the Washington director to close the season by emergency rule on September 3.

Staff Analysis of Issues and Options - Recommendations

Issue 1: Permit Regulations for Vessels Setting Crab Gear - ACTION

Until the recently completed crab season, there was no industry-wide dialogue on the issue of non-permitted vessels setting crab gear. The key elements of the crab limited entry program were debated and finalized by the 1995 Oregon Legislature and the Commission, but there were no public discussions on the gear-setting issue. The common practice of contracting vessels to set crab gear continued unabated after the limited entry program commenced. Traditionally, vessel owners who choose not to invest in larger crab vessels have been able to gain some competitive advantage and a greater safety margin on opening day by having a larger vessel haul and set many more pots than the smaller vessel can haul.

In response to industry inquiries in 1996, Fish Division staff considered the issue and determined that a non-permitted vessel setting or transporting the gear of a permitted vessel was not operating in the crab fishery. These vessels and their crew were in no way exempted from possessing valid commercial fishing vessel and personal licenses. These licenses are specifically required by statute (ORS 508.030) when fishing gear is operated or left in Oregon waters in a condition to take food fish (which includes crabs). Restricted vessel permits are not considered a license in the context of this statute.

Like many issues in the crab industry, there is a division in sentiment on the gear-setting issue. Most crabbers do not favor the current interpretation. The 64 hour pre-season gear set period is designed to give time for vessels of all sizes to deploy their pots, but bad weather and price disputes can delay the opening in any given port. These circumstances are not always predictable, thus the gear-hauling vessels are loaded with pots in anticipation of favorable conditions. When circumstances are not favorable, then vessels loaded with gear (regardless of permit status) have remained in port, sometimes for days after the legal opening of the season. Under the current interpretation, there will be circumstances when non-permitted vessels have to either unload the pots after November 30, or set gear before November 30 and either risk unsafe weather or set gear immediately regardless of price negotiations. All of the above scenarios under the status quo would be costly to many crabbers and could increase safety risks.

Staff recommends option 1.1 below, an exemption of the need for a crab permit for vessels setting gear. This option is favored by most of the smaller vessel owners and will best preserve traditional practices. The escalation in numbers of pots per vessel has been dependent, in part, on the ability of small vessels to rely on hired vessels to help them promptly set their gear and compete for a share of the "first lift" of crabs. It is impossible to match up with both of our neighboring states on this issue, but action is recommended now to establish the ground rules for the upcoming, 1998-99 season.

Many of the larger vessel owners argue that non-permitted vessels setting gear add to the compressed time frame of the early season crab catch and that this ability of small vessels to have an unlimited number of pots deployed has escalated the race to catch the most crabs in the least amount of time. Some maintain that large vessels hired to set gear in rough weather are not careful to avoid disruption to other strings of gear. These individuals prefer option 1.3, below, which would prevent gear-setting at any time without a vessel permit.

Option 1.1 (preferred): Exempt crab gear-setting vessels from crab permit requirement.

Option 1.2: Status quo - Crab pots may only be set by non-permitted vessels during the 64 hour pre-season gear-setting period.

Option 1.3: No gear-setting without a crab permit.

Issue 2: California Season Delay Regulations - ACTION

The highest level of participation in the crab fishery occurs the first month of the fishery, which magnifies the negative market impacts of harvesting unfilled crabs. California has adopted the necessary laws to create a wait period for Northern California vessels fishing earlier openers (not including the separate November opener south of Point Arena) when seasons are delayed for quality improvement. These rules cover both when the Northern California season is delayed, as well as when the Northern Oregon season is delayed. These changes were endorsed by all members of the Tri-State Crab Committee, who recognize that the entire industry benefits when a minimum level of quality is assured. This second test fishery process off Northern California addresses the last major area identified where periodic market disruption has occurred due to fullscale harvest of low quality crabs on December 1.

Oregon's problem here is the same as encountered when the North coast test fishery rules were adopted. While the neighbor state (Washington) is entirely closed, Oregon is required to draw a line and conduct two separate openers. No serious quality problems on December 1 have been identified by industry south of Cascade Head. In fact, the delays on the North coast have thus far been much further north, confined to north of Cape Falcon.

The Brookings crab fleet works primarily in California waters. Brookings crabbers have expressed concern with the proposed line at the California border. Most are not happy with the idea of a line only a few miles south of their town, and the associated fishing decision it will require. Public meetings in late September failed to produce a consensus on a dividing line that is north of Brookings or north of the next crab port, Port Orford, to be used only during California season delays. The key issue is to prevent disruption of the crab fleets whose grounds overlap to some extent.

The California test fishery includes stations in Pelican Bay, the crab grounds between Chetco Point in Brookings and Point St. George in California(Figure 2). Past market samples in December show that Brookings-landed crab are often very similar in quality to those landed in Crescent City, California, the next crab port to the south. It does not seem unreasonable for the Brookings crab fleet to delay fishing based on California test results. Existing rules for North coast delays instruct the Director to "take into account the existence of traditional fishing patterns" when adopting boundaries between crab fishing zones during season delays. A line at the state border will divide the primary local grounds of the Brookings crab fleet.

No consensus has been achieved to-date on an acceptable dividing line north of Brookings. This makes option 2.3 a poor choice at present. California statutes now include a 30 day wait for California-permitted vessels that fish earlier (December 1) openers, prior to entry into delayed opening areas. Option 2.2 and option 2.3 will both achieve the desired "one-vessel, one-opener" scenario but may change the fleet dynamics in Brookings. Option 2.2 include the creation of a 30 day wait period by

Oregon Administrative Rule. Enforcement of the wait period upon early fishers (December 1 openings) would then be possible under either state's laws.

Under the status quo, Option 2.3 below, enforcement of violations of the California 30 day will be the burden of California. Effective enforcement action against an Oregon vessel fishing off California and landing in Oregon will probably require a California enforcement boarding at-sea plus a request to our Department for vessel landings information. This level of cooperation is apparently not available in the reverse, particularly California landings information. Under the first two options, the process is no less complicated, but the violation becomes an offense under Oregon law, based partially on evidence produced by California authorities. While this type of enforcement is not unprecedented, it is not routine and each case of this type poses a significant workload to the Oregon agencies affected. Meanwhile, no real dialogue has been initiated with California industry or agency representatives on this issue.

Staff recommends remaining with status quo, option 2.3, below.

Option 2.1: Authorize the Director to delay the Southern Oregon crab season in unison with Northern California, establishing a line north of Brookings (to be determined by industry consensus). Implement a 30 day wait period for vessels fishing earlier seasons (December 1 opening), prior to crabbing in area with delayed opening.

Option 2.2: Acknowledges the softshell delay line at the California border. Implements a 30 day wait period rule, for vessels fishing earlier (December 1 opening) seasons, prior to crabbing in Northern California area with delayed opening.

Option 2.3: (preferred) Status quo. Softshell delay line, when needed, will be at the California border. Vessels based in Oregon can not fish opening day in Northern California when season is delayed, unless they do not fish in earlier (December 1 opening) seasons. Violations will be prosecuted by California.

Issue 3: New Crab Permit Applications - ACTION

An issue of potential permit application abuse has arisen. The crab permit statutes apparently do not preclude multiple applications for a single vessel for issuance of an "initial" permit. Thus the owner of a vessel with a crab permit ("vessel A") could transfer his permit to another vessel ("vessel B"), then apply for a new permit for vessel A. *Staff recommends a housekeeping rule change, Option 3.1, below, to define the term "initial eligibility" as it relates to application for a crab vessel permit.*

Option 3.1 (preferred): Amend OAR 635-006-1010 to define "initial eligibility" such that a vessel is eligible one time only to apply for and receive a crab permit under the "Eligibility for permit" statute (ORS 508.931).

Option 3.2: Status quo. Leave uncertainty in the permit application process.

Issue 4: Summer Crab Fishery - Discussion and Future Direction

Overview:

Various steps have been taken over the years to reduce the biological risk to newly-molted softshelled crabs. The primary method of protecting softshell crabs from harvest impacts has been the setting of the season closure date. The issue of restricting summer crabbing is allocative as well as biological in nature.

The ten percent limit on summer landings was added in 1992 as a way to limit the scale of the summer fishery. This management measure requires the Director to close the season early if landings after May 31 exceed ten percent of the season total landed through May. Recognizing that molting is not synchronous along the Oregon coast, the harvest limit was set relatively high based on past fishery performance. The ten percent limit was intended to prevent large-scale impacts to the future resource while allowing summer deliveries to continue for small-scale, high unit value markets. Staff, as well as many in the industry, feel that further steps should be considered to further reduce handling effort (number of pot-lifts) and to discourage the development of low unit value softshell crab prices to fishermen. The allocative downside of restrictions to protect crabs in summer is that the dual benefits of increased crab survival and biological yield (meat content/total weight) will be accrued by a somewhat different and much larger segment of the crab fleet: those who fish the next winter opening when crabs are in prime condition.

Discussion

A majority of the crab fleet is opposed to high levels of fishing effort in the late-season fishery. Large drops in crab quality and price are associated with increased landings in July and August. While some vessels maintain a relatively high quality standard through the end of the season, others have obtained markets for inferior crabs which sell for low prices. Regardless of the quality of crabs marketed during this time period, there is a significant level of handling and sorting of the new class of recruits which are soft-shelled and of low meat content. A recent study of crab handling mortality in Alaska adds to a consensus among crab biologists: that capturing, handling and releasing softshells results in fewer harvestable crabs from each year-class of recruits. If all softshells captured in the summer fishery were sold, the lost yield would be substantial in both dollars and meat yield. The losses from handling mortality and pot confinement (cannibalism) are extremely difficult to observe, much less measure accurately. A brief review of the available literature on Dungeness crab handling mortality experiments is attached (Attachment C).

The timing of the crab molt cycle is not synchronous along the Oregon coast, usually occurring earlier off Southern Oregon and later off Northern Oregon. Both the timing of molting and the rate of quality (meat content) improvement vary between years and

areas. From a variety of sources including fishermen's reports, it appears that the period of peak molting activity is usually from mid-May through mid-August south of Heceta Head, and from mid-July through September north of Cascade Head. During and immediately after these peak periods, most of the stock of crabs slated for the next season's harvest are of legal size but softshelled. Each newly-molted recruit requires from eight to twelve or more weeks to approach the level of meat content (23 percent) chosen as minimally acceptable in the winter fishery. Well before the season ends in most areas off Oregon, this level of meat content would be unattainable in sea-run samples of legal male crabs. Meat pickouts as low as 16 percent have been reported from some summer deliveries of crab.

Discarded softshell crabs are susceptible to damage from handling in commercial fisheries. In addition, softshell crabs are not as marketable as hardshell crabs although some wholesale buyers will market them during periods of low hardshell crab abundance. A substantially lower price is typically paid to the fisherman for softshell crabs when compared to the prevailing price for hardshell crabs. For example, during the last month of the 1998 season, prices in the range of \$1.00 to \$1.25 were being accepted by some crab fishermen selling softshells. At the same time, other fishermen were receiving between \$2.50 to \$3.00, or more, for smaller deliveries of hardshell crabs. A market for live softshell crabs is developing, reportedly destined for ethnic markets in west coast population centers such as San Francisco and Vancouver B.C..

Several figures are presented to illustrate the current status of the late-season crab fishery. The summer season landings are presented in Figure 3. Annual landings this decade have averaged approximately 650,000 pounds in the June through August fishery. Figure 4 compares the percentage of the annual total landed after May 31 to the ten percent summer quota established in 1992. Table 1 summarizes the patterns of participation in the summer fishery. Over 100 vessels have delivered crabs at least once each summer since 1990. The summer fishery has been the most pronounced along the central Oregon coast. Figures 5 and 6 show the total summer landings by port and the proportion of the port's annual harvest landed after May 31, respectively. Finally, Table 2 presents the monthly and annual average ex-vessel prices paid for Dungeness crab. It should be noted that the price structure in major ports is very uniform through May or June, becoming highly variable in the last few months of the fishery due to variable quality.

It is unclear whether the softshell markets are growing, or whether the consumers really prefer these softshells over hardshells. Many in the industry suspect that some of the live softshell sales end up in the dockside tourist trade which is so popular on the west coast. They fear that sales of inferior crab may affect prices and the consumer base for prime crab. It would be convenient if a solution is found to provide a small fishery producing relatively hard crabs for local markets, but better quality Dungeness crabs are available from other regions (Puget Sound, British Columbia and Alaska) during the summer. Meanwhile, the economic prospects for all fishermen are currently very poor, including low shrimp abundance, low tuna prices and diminished salmon and groundfish prices and opportunities. With the current summer fishery regulations,

the threat of a large increase in effort is very real for next year. Even fishermen and processors who are strongly opposed to summer fishing may adopt the short term view due to economic distress, or because they see the summer fishery pre-empting the next winter's production. The ten percent harvest quota may prevent a wholesale destruction of the market structure, but probably not before significant damage to the Oregon crab resource occurs. While the stock would rebound, the short-term economic damage would be felt by almost everyone involved in the industry.

Over the years, a range of options to curb impacts on softshell crabs have been proposed by members of the crab industry and shellfish staff. They include earlier season closures, summertime trip limits, depth limits, or crab rings only. Summertime pot limits have also been proposed but pot limits for the summer season alone seem unworkable currently, although this could be part of a larger discussion on overall fishery effort control. Certainly, shortening the season is the simplest solution but the summer crab savings will be passed on to whoever crabs the following winter and spring. One common concern over shorter seasons is the that trawlers may perceive this as an opportunity to fish more heavily on the nearshore crab grounds where most of the summer fishery occurs. One benefit is a reduction in gear conflict with other fisheries such as salmon troll and squid gear. Very little data has been collected on nearshore trawl catch rates of crab or the mortality incurred by softshell crabs in trawl nets. Many crabbers have expressed a desire to have trawling prohibited within 3 miles of shore (state waters), which is the law in California.

Future Direction - Summer Crab Fishery

It is the sense of the staff that efforts should continue to identify options with the industry to reduce the handling of softshell crabs. We recommend the development of options for Commission consideration well before June of 1999.

While the problems in the summer crab fishery have been debated for years, there has been no satisfactory solution in Oregon or Washington. Recent actions in Washington state demonstrate the problems that arise when an influx of crab boats and pots re-enter the fishery late in the season. Only California has resolved this issue, with a July 15 closure coupled with a trawl closure inside of 3 miles. More public input will be available after the three meetings scheduled in late September, but it seems that a growing majority of crabbers wish to see changes in the summer fishery. The Dungeness Crab Commission has sent a strong recommendation that the Commission should shorten the season in the best interest of the fishery. Clearly, their survey results and public process indicate a majority in favor of change.

Public Involvement

A series of public meetings were held in Brookings Astoria, Newport and Charleston, on Sept. 21, 22, 23, and 24 respectively. Individual comments from those unable to attend the above meetings were also solicited (October 6 deadline). A summary of input received will be available by October 7, and will be attached to this document at that time Attachment D.

In addition, the Dungeness Crab Commission has conducted a series of four public meetings in four separate ports. The summer crab issue in particular has been on the agenda each time, and gear-setting issues have been discussed at three of the four meetings. The questionnaire responses are included in this report as Attachment B.

Proposed Administrative Rules

Note: [] within the rule means proposed to be deleted

Bold within the rule means proposed to be added

Option 1.1

635-006-1015

Requirement for Permit

(1) The following provide general requirements for permits:

(g) Ocean Dungeness crab: Except as provided under the reciprocity provisions of section 6 (3), it is unlawful for an individual to operate a vessel in the ocean Dungeness crab fishery without first obtaining a vessel permit issued pursuant to ORS 508.931 or 508.941. **A Dungeness crab vessel permit is not required for vessels which are engaged solely in setting gear for a permitted vessel and which do not retrieve, retain or possess Dungeness crab.** A single delivery license may not be substituted for an ocean Dungeness crab permit. Once a vessel has obtained an ocean Dungeness crab permit, Dungeness crab may be landed by the vessel using a combination of an ocean Dungeness crab permit and a single delivery permit in lieu of a commercial fishing and boat license. However, crab may not be landed more than twice in any one crab season using single delivery permits.

Option 2.1

635-005-0045

Closed Season in Pacific Ocean and Columbia River

(1) It is unlawful to take, land or possess Dungeness crab for commercial purposes from the Pacific Ocean and Columbia River from August 15 through November 30, or the date designated by the Director as provided in section (3) of this rule, whichever is later.

(2) It is unlawful prior to January 1 to land or to receive, or to buy, Dungeness crab from a vessel that has not been certified by officials of the State of Oregon, Washington, or California to have been free of Dungeness crab on November 30, except as provided in subsection (3)(c) of this rule.

(3) Upon a determination by the Department that preseason sampling indicates the consistent presence of more than 50 percent Grade II and III (softshell) crab in the samples, the Fish and Wildlife Director may adopt a temporary rule delaying the opening date of the commercial crab season in affected zones North of Cascade Head until additional sampling indicates meat recovery is 23 percent or is projected to be 23 percent by the opening date. In the event the season in the Northern Zone is delayed, the following applies:

(a) The Director shall adopt rules identifying the boundary between the northern and southern fishing zones. The boundary between the zones shall take into account the existence of traditional fishing patterns;

(b) Commercial fishermen may elect to fish in either, but not both, zones. A commercial fisherman electing to fish in the southern zone (opening on December 1) shall not fish in the northern zone until 30 days after the northern zone has opened;

(c) For the first 30 days of the northern zone season, vessels electing to fish the northern zone shall be certified by officials of the State of Oregon, Washington or California to have been free of Dungeness crab on the day immediately prior to the opening day of the northern fishing zone. At the time of vessel inspection the vessel operator shall certify the vessel has not been used to take crab in the southern fishing zone.

(4) Upon a determination by the Department that catch in the Pacific Ocean of Dungeness crab after May 31 is greater than ten percent of the catch in the previous December 1 through May 31 period, the Fish and Wildlife Director shall adopt a temporary rule closing the commercial season until the following December 1.

(5) In the event of a delay in the starting date (after December 1) of the California Dungeness crab season in the waters north of Point Arena, the Director shall delay the Oregon Dungeness crab season opening south of {to be determined}. The operator of a vessel shall not take, land or possess Dungeness crab from the California waters north of Point Arena and south of {to be determined } for thirty days after the season opening in the California waters north of Point Arena, if that vessel has fished for Dungeness crab in an earlier-opening Dungeness crab season on or after December 1 of that year in Oregon or Washington waters.

Option 2.2

635-005-0045

Closed Season in Pacific Ocean and Columbia River

(1) It is unlawful to take, land or possess Dungeness crab for commercial purposes from the Pacific Ocean and Columbia River from August 15 through November 30, or the date designated by the Director as provided in section (3) of this rule, whichever is later.

(2) It is unlawful prior to January 1 to land or to receive, or to buy, Dungeness crab from a vessel that has not been certified by officials of the State of Oregon, Washington, or California to have been free of Dungeness crab on November 30, except as provided in subsection (3)(c) of this rule.

(3) Upon a determination by the Department that preseason sampling indicates the consistent presence of more than 50 percent Grade II and III (softshell) crab in the samples, the Fish and Wildlife Director may adopt a temporary rule delaying the opening date of the commercial crab season in affected zones North of Cascade Head until additional sampling indicates meat recovery is 23 percent or is projected to be 23

percent by the opening date. In the event the season in the Northern Zone is delayed, the following applies:

(a) The Director shall adopt rules identifying the boundary between the northern and southern fishing zones. The boundary between the zones shall take into account the existence of traditional fishing patterns;

(b) Commercial fishermen may elect to fish in either, but not both, zones. A commercial fisherman electing to fish in the southern zone (opening on December 1) shall not fish in the northern zone until 30 days after the northern zone has opened;

(c) For the first 30 days of the northern zone season, vessels electing to fish the northern zone shall be certified by officials of the State of Oregon, Washington or California to have been free of Dungeness crab on the day immediately prior to the opening day of the northern fishing zone. At the time of vessel inspection the vessel operator shall certify the vessel has not been used to take crab in the southern fishing zone.

(4) Upon a determination by the Department that catch in the Pacific Ocean of Dungeness crab after May 31 is greater than ten percent of the catch in the previous December 1 through May 31 period, the Fish and Wildlife Director shall adopt a temporary rule closing the commercial season until the following December 1.

(5) In the event of a delay in the starting date (after December 1) of the California Dungeness crab season in the waters north of Point Arena, the operator of a vessel shall not take, land or possess Dungeness crab from the California waters north of Point Arena for thirty days after the season opening in the California waters north of Point Arena, if that vessel has fished for Dungeness crab in an earlier-opening Dungeness crab season on or after December 1 of that year in Oregon or Washington waters.

Option 3.1

635-006-1010

Definitions

For the purpose of OAR 635-006-1015 through 635-006-1210:

(10) "initial eligibility for vessels to participate" for the purposes of application for an Ocean Dungeness crab permit pursuant to ORS 508.931 means eligibility of a vessel on which to make permit application is confined to vessels which have never obtained an initial permit.

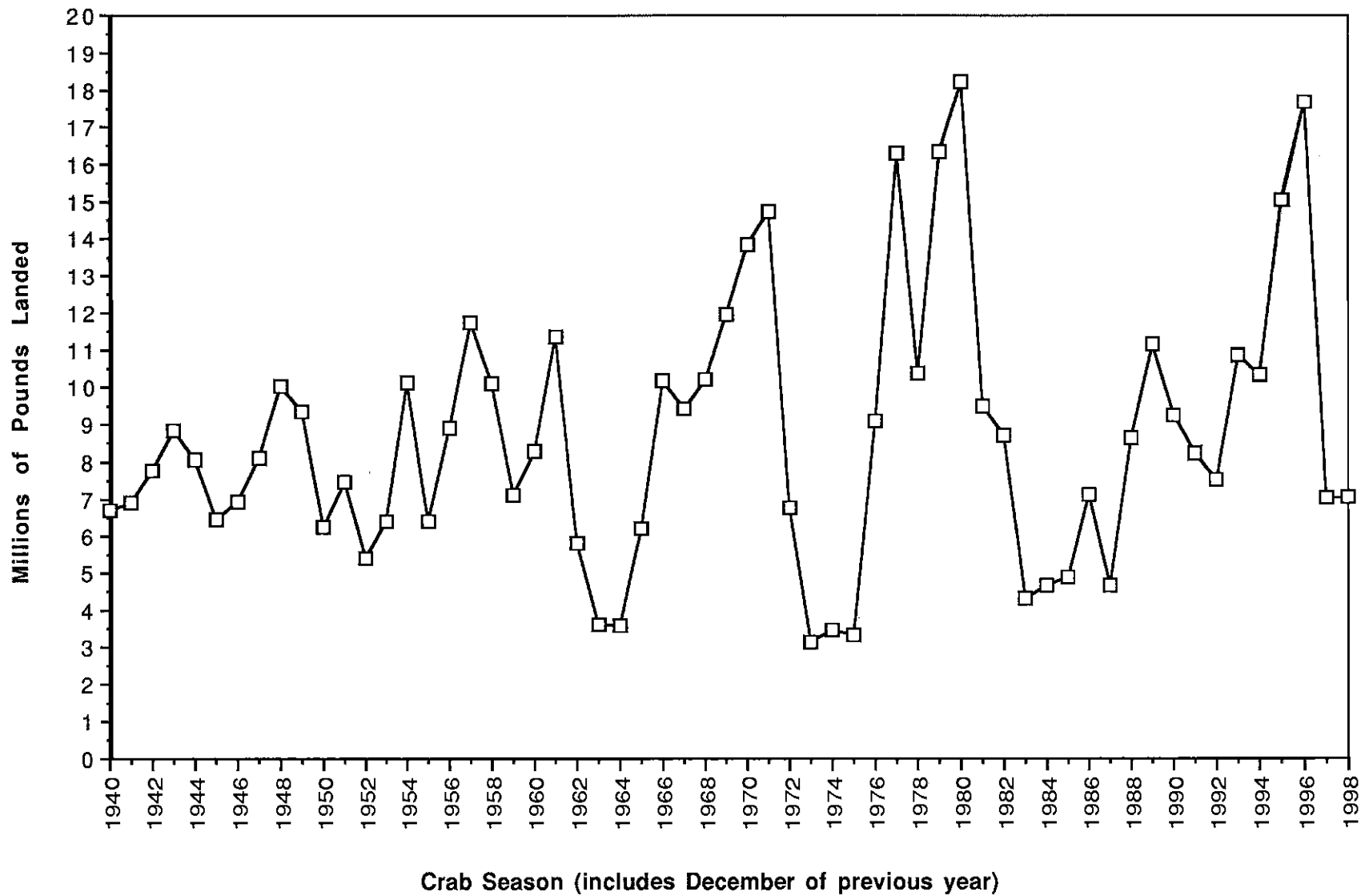


Figure 1. Oregon Dungeness Crab Landings by Season

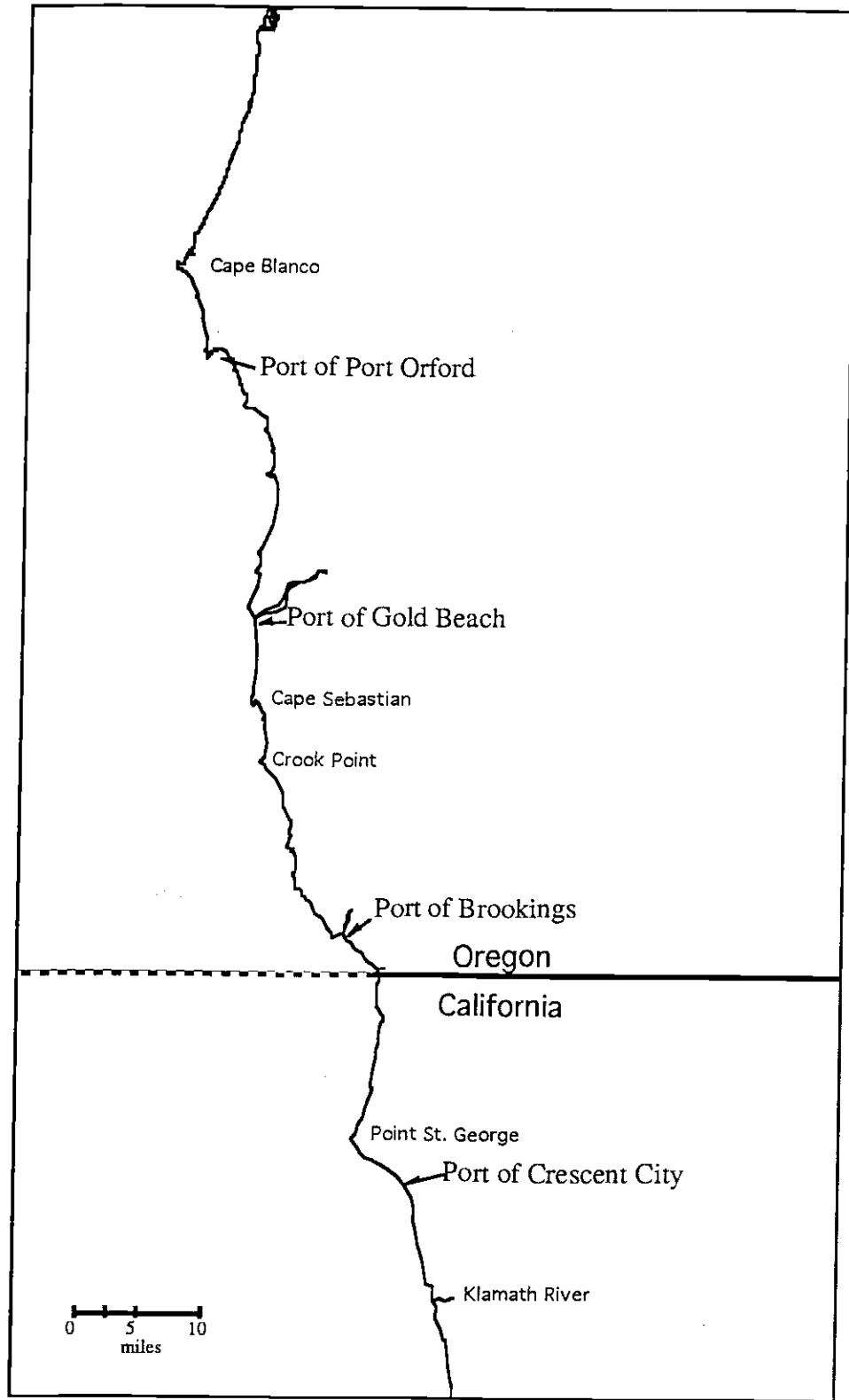


Figure 2. Map of Southern Oregon and Northern California

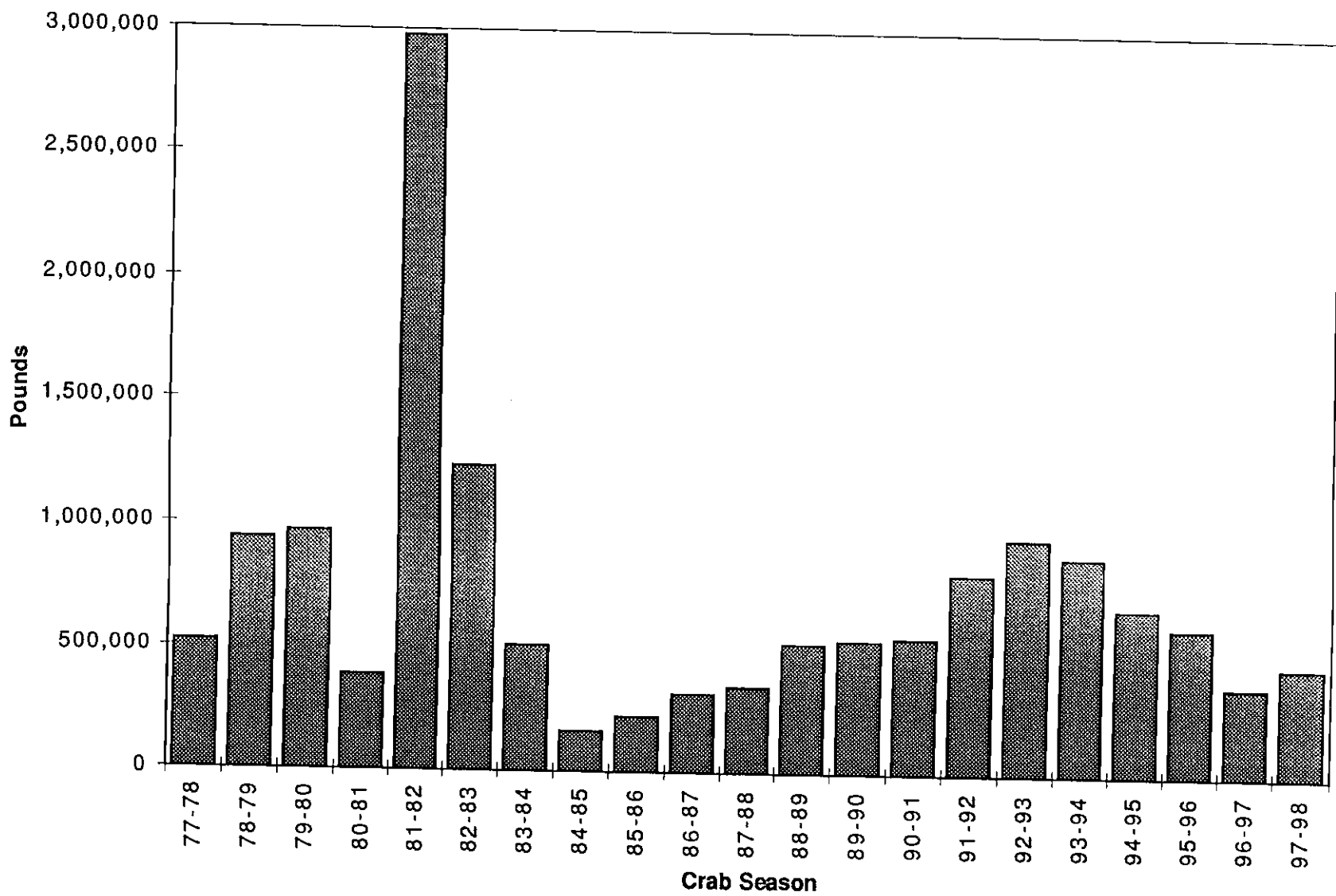


Figure 3. Oregon Summer Crab Fishery Landings, June 1 to Season's End

Table 1. Patterns of Participation in the Oregon Summer Crab Fishery.

Season	Season total no. of vessels	% of fleet in summer fishery	Pounds landed in summer fishery (6/1-8/14)	Number of summer deliveries	Average number of summer deliveries per vessel	Number of summer vessels landing > 20K lbs.
84-85	318	36%	162,293	716	6	0
85-86	339	24%	224,076	615	8	1
86-87	330	26%	319,025	786	9	5
87-88	330	28%	351,707	643	7	6
88-89	345	26%	528,175	832	9	11
89-90	454	30%	542,162	1,389	10	10
90-91	367	37%	555,781	1,435	11	9
91-92	374	37%	809,322	1,540	11	15
92-93	354	34%	960,839	1,559	13	20
93-94	386	37%	885,060	1,685	12	11
94-95	424	41%	681,977	1,652	10	7
95-96	346	42%	604,756	1,505	10	4
96-97	331	34%	364,571	1,044	9	4
97-98	312	35%	451,075	832	13	6

Season	No. of summer vessels (6/1-8/14)	No. of Vessels landing in June	June landings in pounds	No. of Vessels landing in July	July landings in pounds	No. of Vessels landing in August	August landings in pounds
84-85	113	102	66,930	74	49,072	50	46,291
85-86	81	71	108,697	52	72,523	30	42,856
86-87	85	70	89,247	60	147,485	52	82,293
87-88	92	72	143,986	47	137,713	45	70,008
88-89	90	69	187,504	58	239,226	45	101,445
89-90	135	102	177,542	87	221,934	78	142,686
90-91	135	108	184,387	102	234,626	94	136,768
91-92	138	103	206,182	114	346,772	93	256,368
92-93	122	84	224,876	103	379,469	91	356,494
93-94	142	127	202,537	107	372,064	96	310,459
94-95	173	127	185,773	131	283,825	101	212,379
95-96	147	120	258,553	116	210,026	100	136,177
96-97	113	88	68,422	80	154,641	71	141,508
97-98	109	84	48,065	72	220,044	52	182,966

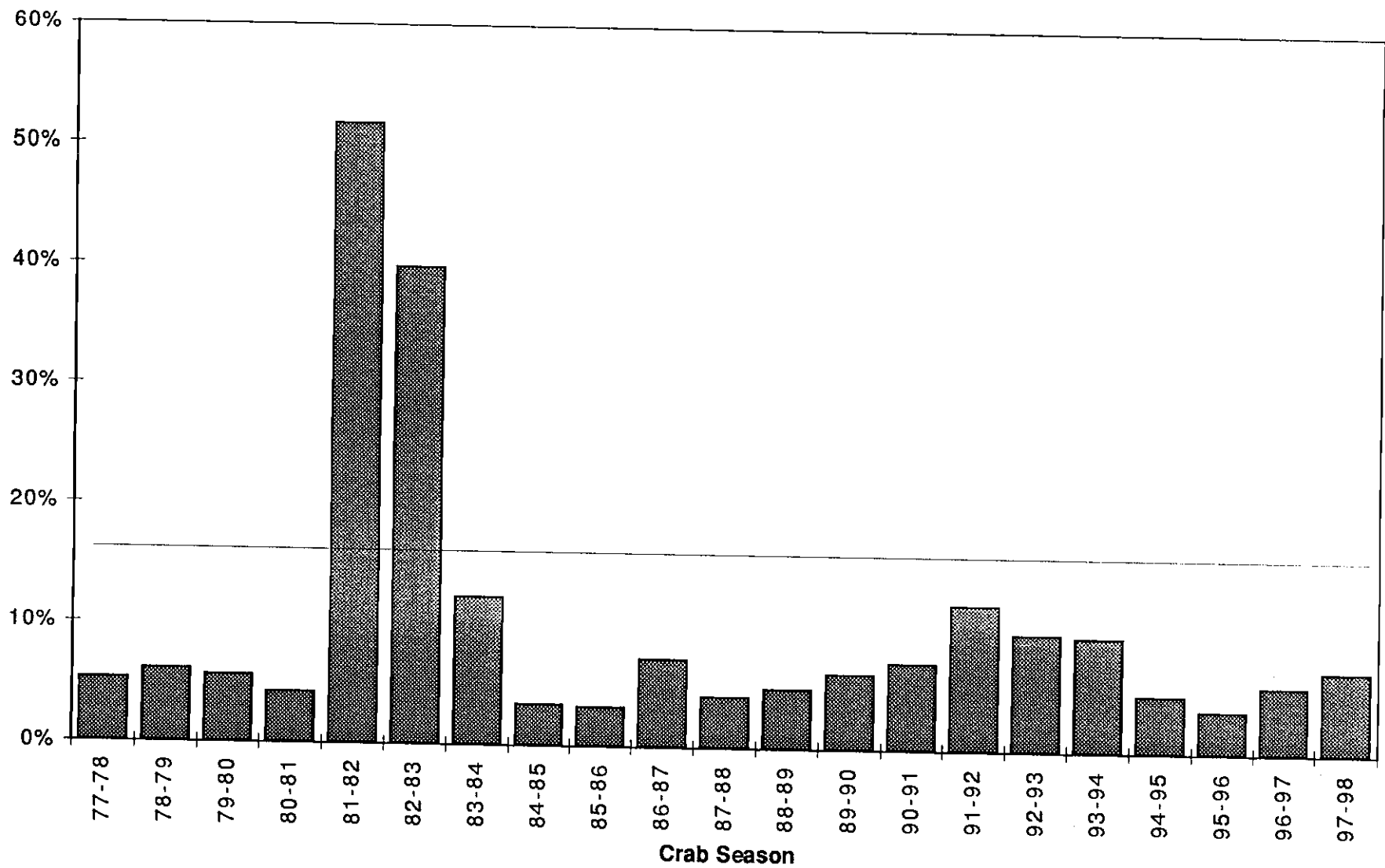


Figure 4. Oregon Summer Crab Landings as a Percentage of December - May Total

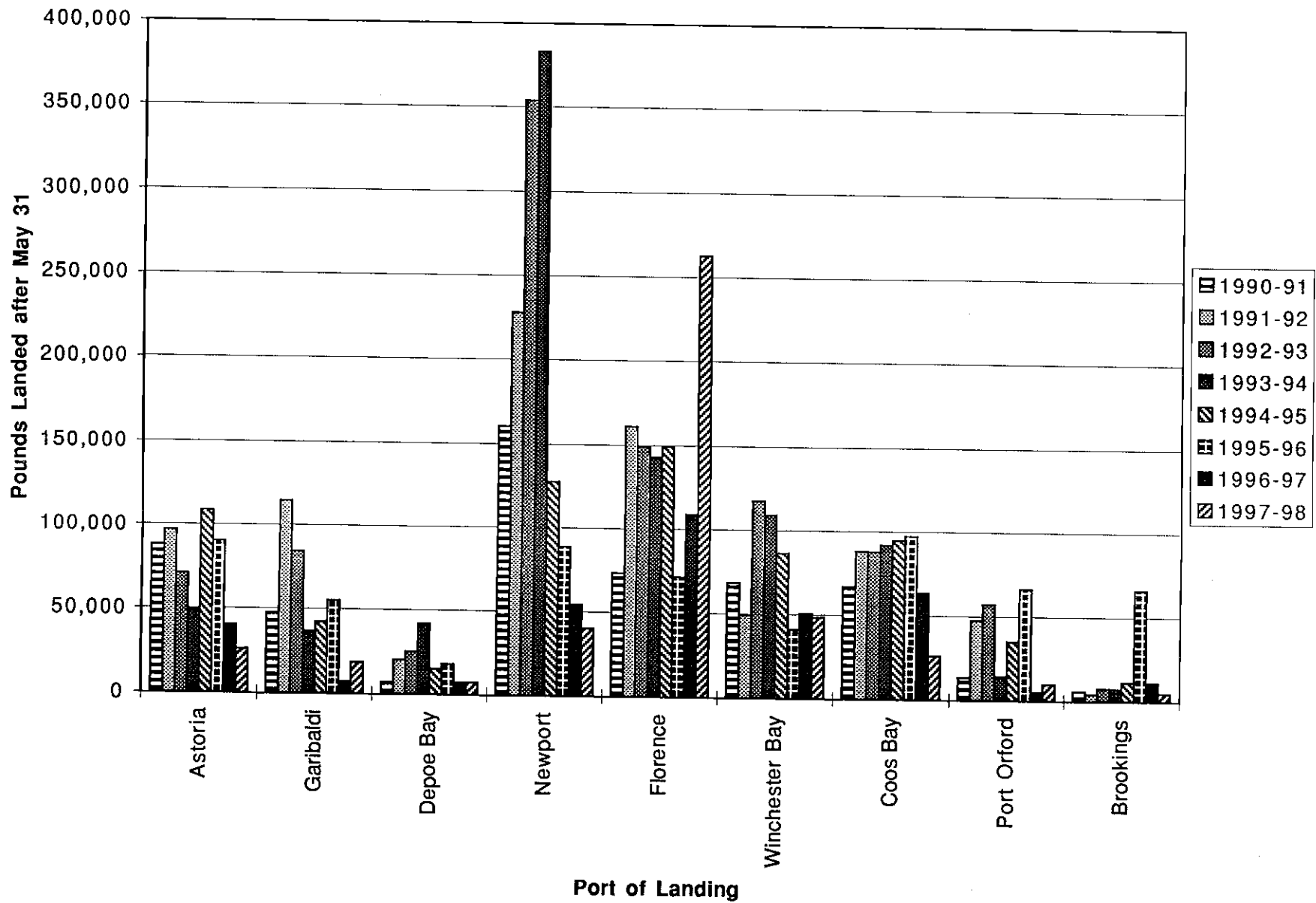


Figure 5. Annual Summer Crab Landings by Port

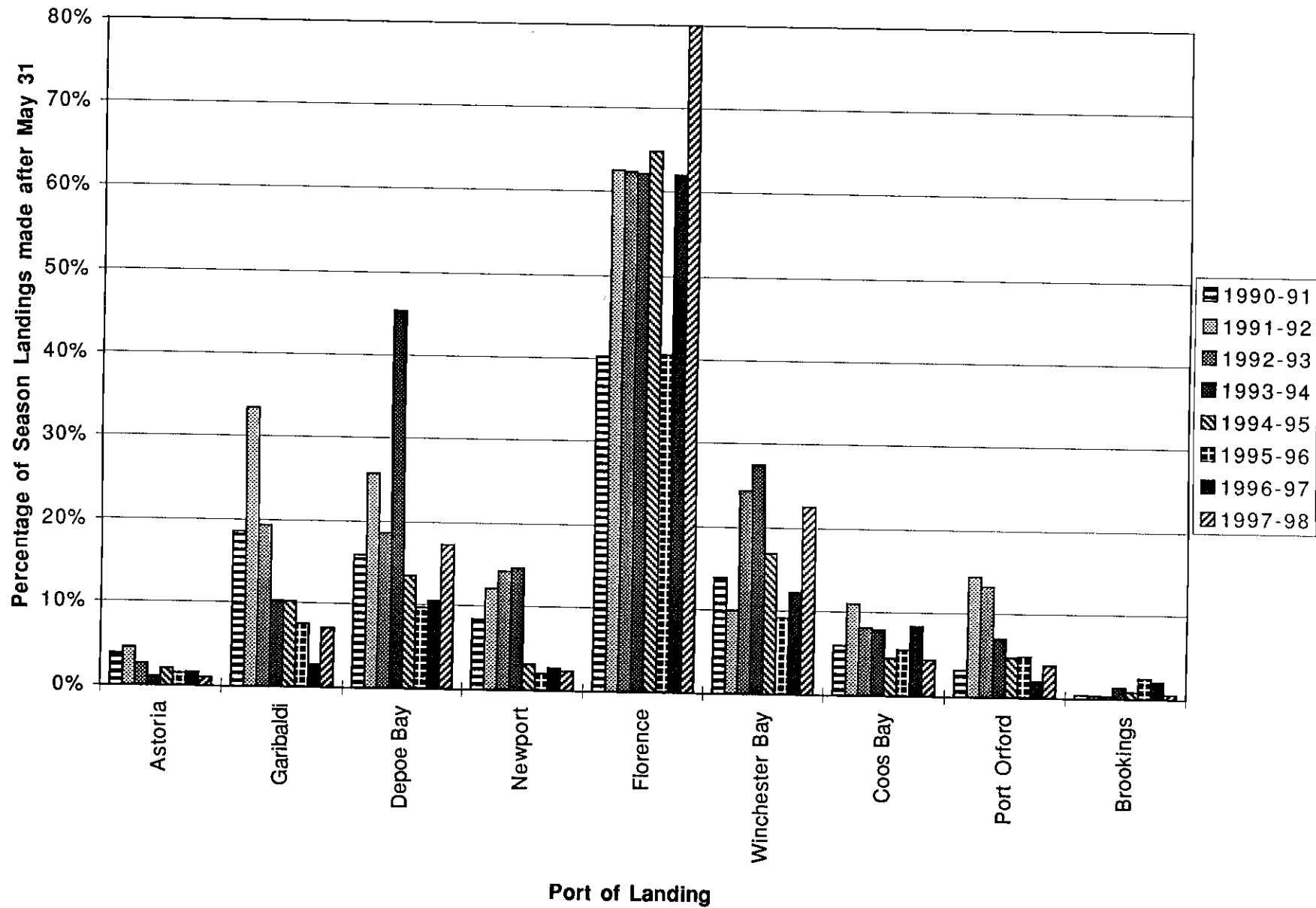
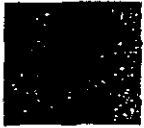


Figure 6. Contribution of Summer Crab Landings to Each Ports Annual Total

Table 2. Monthly Average Ex-vessel Price of Oregon Dungeness Crab, 1992-1998

MONTH	AVERAGE PRICE						
	1992	1993	1994	1995	1996	1997	1998
December*	\$1.23	\$1.00	\$1.14	\$1.40	\$1.26	\$1.63	\$1.65
January	\$1.20	\$1.01	\$1.15	\$1.65	\$1.16	\$2.12	\$2.17
February	\$1.24	\$1.05	\$1.28	\$1.99	\$1.31	\$2.56	\$2.53
March	\$1.33	\$1.15	\$1.45	\$2.00	\$1.44	\$3.04	\$2.30
April	\$1.56	\$1.32	\$1.54	\$2.01	\$1.60	\$3.21	\$2.26
May	\$1.55	\$1.37	\$1.57	\$2.00	\$1.66	\$3.13	\$2.35
June	\$1.44	\$1.31	\$1.52	\$1.97	\$1.75	\$2.96	\$2.33
July	\$1.34	\$1.31	\$1.45	\$1.79	\$1.74	\$2.36	\$1.50
August	\$1.25	\$1.22	\$1.46	\$1.61	\$1.71	\$2.00	\$1.47
* December of previous year							



OREGON
DUNGENESS CRAB
COMMISSION

August 25, 1998

Mr. Jim Greer, Director
Oregon Department Fish & Wildlife
2501 SW First Ave.
Portland, OR 97207

Dear Jim:

Back in January of this year, I wrote to you on behalf of the Dungeness Crab Commission, outlining efforts within the fleet to come to terms with the issues associated with the "summer" crab fishery. Specifically, I pointed out the growing concern over the prospect of significant handling mortality occurring in post-molt populations of crab prior to the season closure in mid-August. Since then, the Commission has presided over lengthy debates within the industry, and has gone so far as to conduct a survey of Oregon crab-permit holders (see enclosed results), to determine if a consensus could be reached on possible solutions.

Based on available handling mortality data and the survey responses, a motion was made at the June 3, 1998 Commission meeting held in Charleston, to request that the Fish & Wildlife Commission *shorten* the commercial ocean Dungeness crab season as a means of minimizing the impacts of repeated handling on soft crab. The motion passed, 5 to 1 in favor. Those who voted for the motion are confident that the majority of the crab fleet supports their position and feels that such a measure is needed to insure that post-molt crabs have a chance to complete the process relatively undisturbed.

The Commissioners realize that their recommendation will be viewed by some as an over-reaction, and do not offer it lightly. In the absence of any alternative proposals for dealing with the soft-crab issue, they feel that an earlier closure is needed to accomplish the desired objective. They have intentionally refrained from offering a specific date, as they feel that the industry should have an opportunity to thoroughly examine the options and propose a date that can be agreed upon by a majority of those involved. The upcoming "town hall" meeting process to be conducted by the Department should provide adequate input for use in that decision.

Sincerely,

Redacted for privacy

—
Nick Furman
ODCC

cc. Susan Foster
Jeff Feldner
Neil Coener
Jim Golden
Neil Richmond

SURVEY RESULTS . . .

The results of the recent "summer crab fishery" survey have been tabulated and are listed below. A clarification of the "gear setting" issue is still pending while ODFW waits on an opinion from the AG's office regarding the rule.

Total # of surveys sent out -- 413

Surveys returned -- 178

1. Do you think changes should be made to the summer fishery?

No -- 73

Yes -- 107

2. If "yes", choose one of the following recommendations:

Shorten season -- 57

Implement "soft crab" regulation -- 48

Other ideas -- 30

3. Do you usually crab during the "summer period"?

Yes -- 88

No -- 87

Sometimes -- 3

4. Do you intend to crab this summer?

Yes -- 93

No -- 72

Maybe -- 9

5. Are current gear setting regulations adequate?

Yes -- 105

No -- 65

6. If "no", how should they be changed?

Should be a pot limit -- 9

Should haul/set own gear -- 12

Only vessels with crab permits should haul gear -- 31

Non-permitted vessels should be able to haul gear -- 8

Eliminate pre-soak/dump period -- 4

Extend pre-soak/dump period -- 12

note: A summary of the "other ideas" will be completed and made available to anyone who is interested.

SUMMARY OF SURVEY COMMENTS

1. SUMMER FISHERY ISSUE

Makes no sense to close season early if draggers are going to move in and damage soft crab. Pots help keep drag boats out.

Close season at the end of June.

Current reg's working well. Changes could bring more problems than they would solve.

Draggers and shrimpers are killing thousands of crab with roller gear and tickle chains.

Don't allow hydraulic clam dredging on the coast. It will destroy the crab fishery.

Closing the summer season is not fair to the smaller boats, which can not fish in the bad winter weather.

Please allow summer crabbing to continue. To shorten or stop the season would wipe me out.

Shortening the season seems to be the simplest solution to the handling mortality problem.

Keep the draggers off the beach and outside of 3 miles from July 1 to Sept. 15.

WDFG is run by "special interest groups" - mortality is terrible in Aug. and Sept.

Too many pots are cut off when salmon season starts and the pots keep fishing. Impose a 300 pot limit like SE Alaska.

If season is shortened, beach draggers will move in. Keep them out of shallow waters.

Impose 500-600 pot limit.

No one complains when winter crabbing is good. Don't blame it all on summer crabbers. Maybe lower the 10% "cap" to 8 or 9%.

Shorten the season to July 15. Summer crab are not filled out and the consumer is getting ripped off.

The larger boat owners want the crabs to be saved until December when they catch most of the crab -- smaller boats need the whole season until August. What is worrisome is the handling mortality associated with handling soft crabs. Live buyers report dead loss from roughly handled hard crab. The high value per pound for summer crab may be offset by the handling mortality involved. Drag vessel

Attachment B - ODCC Survey Results Page 3

mortality is also a concern.

Should close the season when California does.

When do we take the next step after limited entry and consider pot limits? Would like to see a survey on that subject. Limiting participation does nothing without a pot limit.

It is not fair to punish the people who try hard to deliver quality crabs. Punish those who target the soft crabs and sell at a reduced price.

Vessels should not be allowed to sort through soft crab to bring in quality crabs because of handling/ discard mortality.

When the crabs are soft, no one should fish them. Sorting to find hard crabs can't be good for the soft ones.

Hate to see another fishery's season shortened, but think that containment and handling mortality are high in the summer.

A pot limit would help. There would be plenty of crabs for the rest if the guys with 1000 to 1500 pots weren't so greedy.

The 10% cap was designed to help. What about tank mortality? There is a tourist market for high-priced crab. Summertime deliveries of 4000 to 5000 lbs aren't good whereas 400 to 800 lbs of fair product can usually be caught. Need a minimum of 2 pre-season meat-pickout tests to determine crab quality. A 400 pot limit would be adequate (currently fishes 1000). Eliminate night fishing. Lengthen the harvest out. Divide each state into 3 zones and institute area licensing.

Lengthen the season by a month so that dories can fish crabs as well. They can't fish in the winter.

Maintain a better price for fresh product so that the industry will get a better price.

Stop creating more regulations. Deal with the problem (those boats that target soft crabs).

Leave season dates alone. Enforce existing landing laws; no sorting except at sea; buyer buys everything that is landed and completes a fish ticket showing price and poundage at the time of landing. Need to conduct more research on handling mortality and beach dragging before eliminating the summer fishery. If season is shortened, draggers should be kept outside of 3 miles.

Impose a 500 pot limit.

Leave it as it is. There's more money made and less gear loss.

Close the season on May 30. 200 soft crabs are killed for every hard crab landed.

Attachment B - ODCC Survey Results Page 4

The majority of the summer crabbers fish for and deliver a quality product. If the concern is really handling mortality, then keep the beach draggers off the beach and impose a pot limit for the entire season. The coastal crab stands need fresh Oregon crab and not Canadian product.

Close the season at the end of July.

A 200 pot limit will reduce the fishing pressure and the number of lifts involved.

Impose a pot limit.

Close season at the end of May.

Close the season when the crabs get soft and reopen when they are hard.

The season is closed just when the crabs are getting hard. It doesn't make sense. Each boat should have a pot limit.

Make the summer season longer. Let any boat set gear at any time. Impose a 300 pot limit for the summer fishery and a 500 pot limit for the winter fishery.

Eliminate the 10% cap. Sometimes the crab are good in July, and the cap eliminates the chance for a small boat to have a good summer season.

Close the season on July 15 south of Cascade Head.

Close the season on April 1. California doesn't have a soft crab fishery problem.

Stop the high volume fishery in the summer by limiting the number of pots or the amount/poundage that can be landed on a daily basis. Make fresh crab available in coastal communities in the summer.

Impose a 100 pot limit during the summer fishery.

Impose a 200 pot limit during the summer fishery, and maybe a quota.

Beach draggers and shrimpers are the problem and want the fishery shortened for their own benefit. The summer price far exceeds the winter fishery. Outlaw recovery fishing and weigh backs. A pot limit would help.

Have a year-round season. Implement a 3 mile limit on beach draggers and an enforceable soft shell regulation.

2. GEAR SETTING ISSUE

Curtailling non-permitted gear setting tilts the scale even further in favor of the large licensed boats.

Haul boats are needed for safety reasons. A 10am set time would give enforcement time fly the coast and look for violations.

Only permitted vessels should haul gear. The pre-season set/soak was designed to allow vessels, especially smaller ones, to get the gear out. Using large non-permitted vessels to set gears contributes to the excessive number of pots deployed in the fishery. Many hired vessels are also careless about the way they set gear.

Only vessels with crab permits should be allowed to set gear.

Gear issue isn't a problem as long as the non-permitted vessel doesn't land crabs. Clear up reg's so that small boats aren't hurt by a technicality.

Only permitted vessels should set pots.

People should haul their own gear. Acts as a pot limiter as people tend to fish what they can haul in two or three trips.

Set and haul own gear.

Everyone should haul their own gear.

Gear setting period should be expanded to 10 days.

Small boats will need more time to set their gear if non-permitted vessels can't set it for them.

Clarify the setting rule.

Shrimpers setting gear with stabilizers out creates problems (cut offs, tangled gear). Only permitted crab boats should set gear.

Current interpretation favors larger vessels.

No permit, no gear... Need more time to set gear so smaller boats don't have to use 'dump boats'.

No unpermitted vessel should be allowed to set crab gear.

The pre-soak period was designed so all vessels could get their gear set.

Don't let big boats without crab licenses set gear.

Draggers and charter boats take 50% of the crab gear to the ocean. It should not be.

Attachment C: Summary of Dungeness Crab Handling Mortality Studies.
Page 1.

There have been two approaches used to evaluate the impacts of handling Dungeness crab and returning them to the ocean. In all studies, crabs were caught in commercial crab gear and handled in a manner similar to commercial fishing practices. Test crabs are graded by shell hardness according to a long-standing three-stage method: Grade I crabs are those with hard shells and little or no flexibility. Grade III crabs are recently molted crabs with soft shells and flexible leg segments, whose shells are easily cracked with finger pressure. Grade II crabs are intermediate between I and III, having somewhat flexible shells and legs. None of the experiments to date are entirely conclusive, yet all experimenters have concluded that there is a significant mortality rate on softshell crabs which are commercially caught and discarded. The preponderance of evidence is great enough that we cannot dismiss the possibility of lost biological and economic yield during the summer crab fishery.

The first type of study involves catching, handling and holding crabs of various shell hardness categories in "holding pots", which have the escapes and tunnels wired shut. These types of short-term mortality studies all share the problems associated with attempting to duplicate commercial fishing conditions and with holding crabs, including cannibalism and lack of natural behaviors after release such as feeding and sheltering. Results from several of these studies are summarized below.

Magoon and Tegelberg (1970), and Tegelberg (1972) conducted a series of experiments in Willapa Bay. After testing different holding densities and observing no differences in mortality, they held triplicate groups of 25 crabs per pot, sorted by shell condition. **After 4 days, grade I and II crabs experienced 4% mortality while grade III crabs experienced 16% mortality.** The chartered fishermen observed that handling was less severe in these experiments than during normal commercial fishing operations. In another experiment, they found that applying a Petersen disc tag through the carapace added 6 to 12% additional mortality. Grade III crabs tagged with a Floy dart tag inserted at the epimeral suture (splitting line) experienced the same short-term mortality (16%) as untagged grade III crabs.

Tegelberg also conducted, other, more limited handling experiments. Four groups of grade III crabs suffered 57% mortality after being individually dropped on the deck of the boat and held for 2 days. In another experiment, 15 softshells (mostly grade II) were held with 15 hardshells in a holding pot. The mortality was 6.8% on the softshells and 0% on hardshells, presumably caused by cannibalism. When one claw or one first walking leg was broken off a softshell crab, mortality was 42%, yet crushing the carapace edge with a needlenose pliers only caused a 7% mortality.

Northup and Barry of WDFW conducted several holding experiments from 1979 to 1982. **They used mostly grade II crabs, held them for 3 days, and observed a range of mortality of 13% to 18%.** Hardshells experienced a mortality range of 0 to 5 percent.

**Attachment C: Summary of Dungeness Crab Handling Mortality Studies.
Page 2.**

In all of the above studies the biologists experimented with multiple handlings over longer holding periods, resulting in mortality estimates as high as 30 to 35 percent for grade III crabs handled 3 times in 6 days(Tegelberg); Barry handled softshells twice in six days and estimated mortality of 26 percent. The difficulty of gaining exact counts during multiple handling studies required excessive handling at times, probably causing inflated mortality rates in these latter studies. **However, all of the above biologists concluded that short-term mortality rates on once-captured softshells (grade III) will be in the range of 15 to 20 percent.** Worst-case combinations of high softshell abundance, repeated handling, and cannibalism in the pots will cause even higher mortality rates.

In the second type of study, crabs of various shell hardness are caught, tagged, and released. The recapture rates by shell condition of tagged crabs sheds light on differences in long-term (months, not days) survival related to shell condition. The biases inherent in holding studies are eliminated. The hypothesis to test then, is: Tag return rates by shell condition should not differ statistically, if there is no difference in mortality by shell condition. In each of the two studies summarized below, this hypothesis was clearly disproved.

Waldron(1958) conducted a tagging study off five areas of the Oregon coast, from 1947 to 1950. The primary purpose was to record stock movements, so no attempt was made to simulate commercial practices. Crabs were tagged through the carapace with Petersen disc tags. None of the tagging was done in the summer or early fall, so grade III crabs were not available. **The overall recovery rate of 40.2% for grade I crabs was significantly greater than the 20.4% recovery rate of grade II crabs.** Put another way, the tagged hardshell crabs had 1.97 times the recovery rate (survival) of the softshell crabs. The return of tagged softshells in this study was 161 less crabs than expected, if return rate had been the same as for hardshells. In addition, the Petersen tag is lost at molting which means a tagged hardshell crab is vulnerable to recapture for less time than a softshell. **This loss of 161 crabs, out of a total of 817 grade II crabs tagged, indicates an additional mortality rate of 19.8% on grade II crabs during the course of the study.** One possible weakness in this study is that there was no test of the effect of the tagging method (in the laboratory) on survival between shell condition types. Tegelberg's later work showed that the Petersen tag will cause additional mortalities of 6 to 12 percent, but it was not determined whether mortality due to the tagging procedure varied by shell condition.

**Attachment C: Summary of Dungeness Crab Handling Mortality Studies.
Page 3.**

A relatively recent tagging study was conducted in Alaska by Hicks and Murphy(1989). In addition to shell condition effects, the study's purpose was to determine effect of various cold air exposure times on survival. The crabs were handled very carefully to minimize handling effects. Several improvements were made compared to earlier studies, including using a suture tag which persists through the molt. These tags are not known to be lost easily or to possibly cause differential mortality by shell condition like the Petersen disc tag. They also classified crabs by shell condition using a durometer, a device which gauges relative shell hardness on a scale of 1 to 100. All crabs under 70 durometer units were considered softshell. (ODFW used this gauge at-sea in the summer of 1992, with grade I, II and III crabs averaging 83, 68, and 52 durometer units, respectively). Not enough softshell crabs were tagged to evaluate air-exposure effects, but Kruse, Hicks and Murphy(1994) were able to use the data to analyze tag returns by shell condition. The tag recovery rate was 20 % for hardshell crabs and 11.4% for softshells. This represents a hardshell recovery rate of 1.75 times that of softshells. **The return rate of softshells was 43 percent less than would be expected if shell condition did not influence survival of handled and released crabs.** The researchers concluded that the difference in tag returns was due to the greater effect of handling (mortality) on soft crabs.

**Attachment D: Summary of Public Input on Crab Management Issues.
Page 1.**

1. Summary of Public meetings held September 21-24, 1998:

A total of ninety-four members of the public attended the four meetings. In addition to crabbers from the port hosting each meeting, there were representatives from Garibaldi, Nehalem, Depoe Bay, Florence, Winchester Bay and Port Orford. Presented below are attendance totals and the results of the preference poll taken at each meeting on the gear-setting issue (issue 1).

<u>Port</u>	<u>Public Attendance</u>	<u>Results of Vote on gear-setting issue</u>		
		<u>Option 1.1</u> No permit to set gear	<u>Option 1.2 (current)</u> No permit during 64 hr. preseason	<u>Option 1.3</u> Require permit to set gear at any time
<u>Brookings</u>	22	0	2	15
<u>Astoria</u>	20	14	1	2
<u>Newport</u>	32	18	1	4
<u>Charleston</u>	20	13	0	6

2. Discussion: Issue 1 - Gear-Setting and Crab Permit Requirements.

Only at the Brookings meeting was the sentiment clearly in favor of requiring crab permits for any vessel setting crab gear at any time (option 1.3). The other three ports clearly favored a return to past practices, or option 1.1. The option of setting gear only during the 64 hour period with non-permitted vessels (option 1.2) was seen as creating problems in years when weather or price negotiations delay the practical start of the season. The concern is that the non-permitted vessels might put pressure on the entire crab fleet to settle for a lower price or on smaller vessels to risk unsafe conditions to set gear in order to compete for the lucrative "first lift". Under the current regulations, non-permitted boats loaded with crab pots need to set their loads out within the 64 hour window, or unload the gear at the dock if the gear is not set by December 1.

While it is not the majority opinion, there is significant interest in option 1.3, requiring vessels to hold permits to set gear at any time. Several supporters reasoned that there would be less gear fished during the openers, thus reducing the rate at which crab is landed. This notion was hotly debated, but if it were true it would be a step towards spreading the catch out to improve marketing prospects and reversing the increasing trend in numbers of pots fished per boat. While many crabbers are

**Attachment D: Summary of Public Input on Crab Management Issues.
Page 2.**

interested in addressing the fishery compression problem, the majority do not feel that the gear-setting rules are the place to start.

At the Astoria meeting, it was pointed out that Washington had just notified it's crab permit holders of an emergency rule to allow gear-setting by vessels without a permit (letter dated September 24). Most of the crabbers present felt Oregon boats would be at a disadvantage in the two states' overlapping fishery zone unless option 1.1 was selected.

3. Discussion: Issue 2 - California Season Delay

This issue affects the Brookings fleet primarily, and has the potential to disrupt their fishing patterns. The majority of the crabbing effort out of Brookings is in California waters, but boats commonly fish gear in both states' waters. Most of the Brookings crabbers do not like the idea of having to choose which portion of their traditional grounds to fish, even if it is only an occasional problem. Representatives from Port Orford and Charleston were unwilling to see their traditional patterns influenced by moving the softshell line somewhere north of Brookings, when California delays their season. Others were concerned about the concept of basing a Southern Oregon delay on California test results. There was some concern that ODFW will not be testing crab quality north of the border. Several suggested a coordinated testing program in Southern Oregon, to be linked with California. One crabber suggested taking no action, and that those that choose to fish the open zone north of the border would just have to find hard crabs to fish on if there was buyer resistance. One crabber thought the Brookings fleet would overlap more with Port Orford when/if the softshell line drawn at the border; the assumption being that there would be an increase in the portion of the Brookings crab fleet choosing to set crab gear to the north in those years.

Brookings crabbers voted 7 to 0 in favor of adopting a softshell line north of their port, when California tests dictate a delayed season off Northern California. Presumably the non-voters in the room were undecided; there certainly has not been a broad or interstate level of discussion on this issue to-date. The majority in Brookings would prefer to have the entire area closed up to at least Gold Beach during Northern California season delays. Several crabbers in Port Orford did not favor this idea, stating that this would limit their usual and accustomed crabbing practices. Most felt that the crab north of the border near Brookings are usually similar in quality to Northern California crabs. One buyer mentioned a year when the Port Orford crab was lower quality than the crab coming into Brookings in December. A brief discussion ensued on the concept of tying-in the entire zone south of Cape Blanco when the Northern California season is delayed, to include Oregon's southernmost two ports. At the Charleston meeting, there was little discussion on the concept of a line in the Cape

**Attachment D: Summary of Public Input on Crab Management Issues.
Page 3.**

Blanco-to-Bandon zone. Most early-season crabbing effort out of Charleston occurs to the north, but a few crabbers could be affected.

4. Discussion: Issue 4 - Summer Crab Fishery

The sentiment on this issue is so wide-ranging that it is hard to know where to start and stop. Because of the Crab Commission's recent emphasis on addressing changes in the summer fishery, the issue is in sharper focus for many crabbers. At the public meetings it was emphasized that this will be an advisory issue on October 23, with additional public process required prior to any proposed changes. First, we present general observations expressed at all meetings, followed by a bullet summary of other comments heard at individual meetings.

General observations

There is no consensus on this issue, and probably never will be. The comments heard generally come from a mix of one of three viewpoints: Handling mortality is the key regardless of market form; Softshell landings need to be discouraged; or there is no problem, let those who gain income from summer crab continue.

One common theme heard at all meetings is this: if crabs are to be protected during the molting or softshell periods, then all fisheries bycatch impacts should be considered. To the crab fleet, this should include a consideration of at least nearshore trawl fishery impacts along with the crab fishery's impacts. There is little useful information on Dungeness crab encounter and mortality rates in shallow water trawl tows during the summer months. At all four meetings, there was a concern expressed that if the summer crab fishery is curtailed, then trawl effort (and impacts on crabs) may increase in areas formerly occupied by the fixed crab gear. Many feel that the presence of crab gear has preempted some shallow-water areas from trawling, except during the Aug 15 to November 30 crab season closure period. Most crabbers would prefer restrictions on shallow water trawling. At every meeting the idea of at least a prohibition in state waters (3 miles from shore) was suggested, with some suggesting much greater distances from shore.

Most crabbers acknowledge that discarded softshelled crabs are more vulnerable to handling than hardshells, but the degree to which they are harmed stimulates a potentially endless debate. Cannibalism in pots is also considered to be greater when legal-size softshell crabs are on the grounds. It was noted that in the winter fishery, there are also occasional episodes of crab mortality when storm surge causes pots to "sand-in", smothering crabs in the pot. Crabbers fishing in extremely shallow waters (6 fathoms or less) in the summer consistently claim that the crabs tend to be harder there. They point out that the combination of harder crabs there plus the short and

Attachment D: Summary of Public Input on Crab Management Issues.
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relatively slow ride to the surface minimizes handling effects, so a depth restriction on summer crabbing could be effective.

Most crabbers agree that softshell crab markets are undesirable and hurt the industry, unless the price is similar to the hardshell price at the same time (which it has not been). Those who fish for or buy softshells in higher volumes and lower prices than the hardshell markets defend the live softshell market as an important, new development. They point out that past problems with softshell crab fisheries occurred because they were based on meat packing operations, whereas recent markets are for live softshells. The majority of crabbers, however, feel that there is lost yield in both dollars and biomass when softshell crabs are sold at low prices. Many feel that summertime consumers who buy a crab along the Oregon coast will be discouraged after one purchase of softshelled crab. Many others defend the need for fresh crab in coastal seafood markets and for live crab sellers who primarily sell to tourists. While many crabbers are concerned about summertime handling mortality regardless of market form, many others who fish in the summer vigorously attack estimates of high softshell crab handling mortality rates.

Concerns over increased summer crabbing effort in the future were common. Economic hardship was seen as the driver, due to reduced opportunities to market or catch tuna, shrimp, groundfish and salmon. Some favored a summertime pot limit to reduce effort, while a few thought the number of pot lifts would continue to be high due to shorter soak times per pot. The discussion in every port naturally shifted to the topic of catch sharing. Some suggested that a shorter summer season only favors larger winter fishing operations, unless there is a parallel effort to slow the catch rate in the winter fishery. Others feel that only shortening the season will be effective to protect crabs and crab quality at the dock.

At every meeting, suggestions were made to regulate the closure of the fishery based on meat recovery testing, similar to the procedures employed when setting the opening of the season in Northern Oregon and Washington. Some favored testing at-sea (a stricter measure of crab quality) while others felt it would be sufficient to test deliveries at the dock. Another common suggestion was to define a softshell crab and adopt regulations prohibiting the landing of softshell crabs.

**Attachment D: Summary of Public Input on Crab Management Issues.
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Other Comments

- Molting period varies, can't micro-manage the summer fishery.
- Apply the 10 percent summer catch limit on a per-boat basis.
- Apply the 10 percent summer catch limit on a per-port basis.
- Charter boats are competing with commercial boats for crab customers in summer, yet they enjoy a smaller size limit and different gear rules.
- Adopt an earlier summer crab closure somewhere south of Newport, north of Florence.
- Create a separate summer crab license.
- Adopt a summertime trip limit on landings.
- Adopt a combined trip limit and pot limit for summer period.
- Close season May through August, then reopen.