

AMENDMENT 3 - TEXT TO AMEND THE FISHERY MANAGEMENT PLAN FOR THE SCALLOP FISHERY OFF ALASKA

1. The Fishery Management Plan for the Scallop Fishery off Alaska is amended as follows:
2. Section 2.2 Optimum Yield and Overfishing is redesignated as section 4.0
3. New sections 2.0 Procedures for FMP Implementation, 3.0 Management Goals and Objectives, 5.0 Management Measures are added.
4. Section 2.8 Limited Access Management is redesignated as section 5.2.
5. A new Appendix C is added to describe the State's regulatory process.
6. Section 2.6 Data assessment and collection, and section 2.7 Administrative and Enforcement Costs are redesignated as sections 6.0 and 7.0, respectively.

2.0 PROCEDURES FOR FMP IMPLEMENTATION

The Secretary (through the Council and NMFS) and the State of Alaska have established the following protocol which describes the roles of the Federal and State governments in managing the scallop fishery off Alaska.

1. The Council will maintain the FMP (and develop future amendments) to govern management of the scallop fisheries in Federal waters off Alaska. The FMP prescribes objectives and any management measures found by the Secretary to be necessary for effective management. The State will promulgate regulations applicable to all vessels fishing for scallops in Federal waters that are consistent with the FMP, Magnuson-Stevens Act, and other applicable Federal law. The FMP contains two categories of management measures: (1) General management measures delegated to the State for implementation that may be freely adopted or modified by the State, subject to other Federal law, and (2) Limited access management measures that are fixed in the FMP, implemented by Federal regulation, and require an FMP amendment to change.
2. If at any time the Secretary determines that a State law or regulation applicable to a vessel fishing for scallops in Federal waters is not consistent with the FMP, the Secretary shall promptly notify the State and the Council of such determination and provide an opportunity for the State to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the State does not correct the inconsistencies identified by the Secretary, the delegating of authority granted to the State under this FMP shall not apply until the Secretary and the Council find that the State has corrected the inconsistencies.
3. ADF&G will have responsibility for developing the information upon which to base State fishing regulations, with continued assistance from NMFS. In carrying out this responsibility, ADF&G will consult actively with the NMFS (Alaska Regional Office and Alaska Fisheries Science Center), NOAA General Counsel, the plan team, and other fishery management or research agencies in order to prevent duplication of effort and assure consistency with the Magnuson-Stevens Act, the FMP, and other applicable Federal law.
4. An annual area management report discussing current biological and economic status of the fisheries, GHL ranges, and support for different management decisions or changes in harvest strategies will be prepared by the State (ADF&G lead agency), with NMFS and scallop plan team input incorporated as appropriate. This report will be available for public review.
5. Federal enforcement agents (NOAA) and the U.S. Coast Guard (DOT) shall work in cooperation with the State to enforce scallop fishing regulations in the EEZ off Alaska.

3.0 MANAGEMENT GOALS AND OBJECTIVES

The Council, in cooperation with the State, is committed to developing a long-range plan for managing the scallop fishery that will promote a stable regulatory environment for the seafood industry and maintain the health of the resources and environment. The management system conforms to the Magnuson-Stevens Act's national standards as listed in Appendix B.

3.1 Management Goal

The management goal is to maximize the overall long-term benefit to the nation of scallop stocks by coordinated Federal and State management, consistent with responsible stewardship for conservation of the scallop resource and its habitats.

3.2 Management Objectives

Within the scope of the management goal, seven specific objectives have been identified. These relate to stock condition, economic and social objectives of the fishery, gear conflicts, habitat, weather and ocean conditions affecting safe access to the fishery, access of all interested parties to the process of revising this FMP and any implementing regulations, and necessary research and management. Each of these objectives requires relevant management measures. Several management measures may contribute to more than one objective, and several objectives may mesh in any given management decision on a case-by-case basis.

3.2.1 Biological Conservation Objective: Ensure the long-term reproductive viability of scallop populations.

To ensure the continued reproductive viability of each scallop population through protection of reproductive potential, management must prevent overfishing. Management measures also may be adopted to address other biological concerns such as restricting harvest of scallops during spawning periods and maintaining low bycatch of finfish and crab. The maintenance of adequate reproductive potential in each scallop stock will take precedence over economic and social considerations.

3.2.2 Economic and Social Objective: Maximize economic and social benefits to the nation over time.

Economic benefits are broadly defined to include, but are not limited to: profits, income, employment, benefits to consumers, and less tangible or less quantifiable social benefits such as the economic stability of coastal communities. To ensure that economic and social benefits derived for fisheries covered by this FMP are maximized over time, the following will be examined in the selection of management measures:

1. The value of scallops harvested during the season for which management measures are considered,
2. The future value of scallop stocks,
3. Economic impacts on coastal communities.

This examination will be accomplished by considering, to the extent that data allow, the impact of management alternatives on the size of the catch during the current and future seasons and their

associated prices, harvesting costs, processing costs, employment, the distribution of benefits among members of the harvesting, processing and consumer communities, management costs, and other factors affecting the ability to maximize the economic and social benefits as defined in this section.

Social benefits are tied to economic stability and impacts of commercial fishing associated with coastal communities. While social benefits can be difficult to quantify, economic indices may serve as proxy measures of the social benefits which accrue from commercial fishing. In 1984, 7 percent of total personal income or 27 percent of total personal income in the private sector in Alaska was derived from commercial fishing industries. On a statewide basis, shellfish accounted for 21 percent of the total exvessel value of commercial fish harvested in Alaska in 1984, however, the bulk of shellfish harvests were king and Tanner crab.

3.2.3 Gear Conflict Objective: Minimize gear conflict among fisheries.

Management measures developed for the scallop fisheries will take into account the interaction of those fisheries, and the people engaged in them, with other fisheries. To minimize gear conflict among fisheries, the compatibility of different types of fishing gear and activities on the same fishing grounds should be considered. Scallop fisheries are conducted with dredge gear. Many other fisheries in the fishery management unit are conducted with fixed gear (pot and hook-and-line). Fishing seasons, gear storage, and fishing areas may be arranged to eliminate, insofar as possible, conflicts between gear types and preemption of fishing grounds by one form of gear over another.

3.2.4 Habitat Objective: Preserve the quality and extent of suitable habitat.

The quality and availability of habitat supporting the scallop populations are important. Fishery managers should strive to ensure that optimal habitat is available for juvenile and breeding, as well as the exploitable, segments of the population. It also will be important to consider the potential impact of scallop fisheries on other fish and shellfish populations.

Those involved in both management and exploitation of scallop resources will actively review actions by other human users of the management area to ensure that their actions do not cause deterioration of habitat. Any action by a State or Federal agency potentially affecting scallop habitat in an adverse manner may be reviewed by the Council for possible action under the Magnuson-Stevens Act. The Council will also consider the effect on scallop habitat of its own management decisions in other fisheries.

3.2.5 Vessel Safety Objective: Provide public access to the regulatory process for vessel safety considerations.

Upon request, and when appropriate, the Council and the State shall consider, and may provide for, temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safety of vessels.

3.2.6 Due Process Objective: Ensure that access to the regulatory process and opportunity for redress are available to all interested parties.

In order to attain the maximum benefit to the nation, the interrelated biological, economic and social, habitat, and vessel safety objectives outlined above must be balanced against one another. A continuing

dialogue between fishery managers, fishery scientists, fishermen, processors, consumers, and other interested parties is necessary to keep this balance. Insofar as is practical, management meetings will be scheduled around fishing seasons and in places where they can be attended by fishermen, processors, or other interested parties.

Access to the FMP development and regulatory process is available through membership in a Council work group, testimony on the record before the Council's Advisory Panel or SSC, or before the Council itself, testimony before the Board, conversations with members of the plan team or officials of regulatory agencies, and by commenting on the FMP, any subsequent amendments and any regulations proposed for their implementation.

This FMP defers much of day-to-day scallop management to the State. Means of access to the regulatory process at the State level and of redress of perceived wrongs by the State are necessary. Appendix C describes the State management system and mechanisms for public input.

3.2.7 Research and Management Objective: Provide fisheries research, data collection, and analysis to ensure a sound information base for management decisions.

Necessary data must be collected and analyzed in order to measure progress relative to other objectives and to ensure that management actions are adjusted to reflect new knowledge. Achieving the objective will require new and ongoing research and analysis relative to stock conditions, dynamic feedback to market conditions, and adaptive management strategies.

An annual area management report discussing current biological and economic status of the fisheries, GHL ranges, and support for different management decisions or changes in harvest strategies will be prepared by the State (ADF&G lead agency), with NMFS and scallop plan team input when appropriate. Such information will be made available to the public.

4.0 OPTIMUM YIELD AND OVERFISHING

[This section is unchanged under Amendment 3 and will be amended as necessary under Amendment 4 which will revise the overfishing and essential fish habitat sections of the FMP]

A fishery management plan for scallops must specify an optimum yield (OY) for the scallop fishery. The OY for a fishery means the amount of fish which will provide the greatest overall benefit to the nation, with particular reference to food production and recreational activities. The OY is specified on the basis of the maximum sustainable yield from the fishery, as modified by any relevant economic, social, or ecological factors. The advisory guidelines established under 50 CFR part 602 for the national standards for fishery conservation and management state the most important limitation on the specification of OY is that the choice of OY, and the conservation and management measures proposed to achieve it, must prevent overfishing (§602.11(b)).

The determination of OY requires a specification of maximum sustainable yield (MSY). Biomass estimates for scallops are lacking, and the continuing exploratory nature of this fishery into new areas makes numerical estimation of MSY for weathervane and other scallop species not possible at this time. NOAA recognizes that there are cases where the specification of MSY may either be impossible or irrelevant. This may be due to lack of assessment data ... or because biological resiliency or high fecundity of some stocks or other fishery characteristic may allow OY to become a descriptive statement only, making a numerical calculation of MSY unnecessary. Nonetheless, the OY should still be based on the best scientific information available (§ 602.10(f)(4)(v)).

Overfishing is a level of fishing mortality that jeopardizes the long-term capacity of a stock or stock complex to produce MSY on a continuing basis. The definition of overfishing for a stock or stock complex may be expressed in terms of maximum level of fishing mortality or other measurable standard designed to ensure the maintenance of the stock's productive capacity. Overfishing must be defined in a way to enable the Council and the Secretary to monitor and evaluate the condition of the stock or stock complex relative to the definition. Overfishing definitions must be based on the best scientific information available and reflect appropriate consideration of risk. Risk assessments should take into account uncertainties in estimating harvest levels, stock conditions, or the effects of environmental factors.

4.1 Assessment of the available scientific data

The State of Alaska's draft fishery management plan for scallops (Kruse, 1994) presents a succinct summary of the best scientific data available on Alaska scallop life history traits and other biological parameters that should be considered in assessing an appropriate concept of MSY, OY, and overfishing for the scallop fishery. Pertinent portions of the State's management plan addressing current management concerns about recruitment overfishing and sustainable yield are incorporated in this FMP and are repeated below as follows:

Recruitment Overfishing

Definition. It is widely accepted that fishery harvest levels should be prescribed in ways to prevent "recruitment overfishing"--the condition that occurs when stocks are reduced to levels too low to produce adequate numbers of young scallops--the future recruits to the fishery (Gulland

1983). Recruitment is a prerequisite for maintenance of a viable population, and is needed for sustainable harvests that support long-term economic benefits from the fishery.

Worldwide History of Scallop Overfishing. Although there are a number of cases of scallop fisheries that have been sustainable over long time periods...overfishing has occurred in many, if not most, scallop fisheries worldwide...Stock recovery has been either slow or non-existent. Attempts to develop aquaculture in many countries ... are largely attributable to the collapse of natural populations [Kruse (1994) provides examples of numerous cases of scallop overfishing that are not repeated here]. . .

Implications of Stock Structure. Prevention of overfishing requires knowledge about a species stock structure and the biological productivity of each stock. For species with populations that are well-connected by extensive larval drift, risk of overfishing is relatively low at least on an area-specific level. In such cases, local depletions can be replenished by settlement of larvae carried by ocean currents from spawning stocks located elsewhere. However, as described in section [1.3.4], a growing body of evidence indicates that many benthic invertebrates, such as scallops, exist as a number of discrete, self-sustaining populations. To prevent overfishing for species with such a population structure, it is necessary to manage each stock separately (Caddy 1989; Fevolden 1989; Sinclair et al. 1985.)

Unfortunately, the stock structure of weathervane scallops in Alaska is not well understood. Studies of genetic structure and comparative population characteristics (e.g., growth rate, gonadal somatic index) are needed to resolve uncertainties. In the absence of such information, a reasonable and conservative approach is to assume that each major fishing area comprises a separate stock (Caddy 1989; Sinclair et al. 1985). However, even with this approach, the possibility exists that multiple self-sustaining populations exist within a fishing area. For example, the apparent existence of separate self-sustaining populations of sea scallops on the Northern Edge and Northeast Peak of Georges Bank (Tremblay and Sinclair 1992; McGarvey et al. 1993) is somewhat unexpected given ocean currents and proximity of these areas to other scallop fishing grounds on Georges Bank.

Importance of Spawning Stock Biomass. Even after scallop stocks have been defined, overfishing will occur unless fishing mortality is limited to a level commensurate with the productivity of each stock based on life history and other biological characteristics. Worldwide, scallop populations are characterized by recruitment variability...Often, scallop populations are dominated by a few strong year classes that are separated by long periods of poor recruitment... Potential stock-recruitment relationships have not been well studied for scallops. A recent study by McGarvey et al. (1993) provides a rare example with good evidence of a relationship between spawning stock (total egg production) and recruitment for sea scallops on Georges Bank. In that instance, higher egg production was directly related to higher recruitment.

[Conversely], it is commonly assumed that scallop recruitment is linked to environmental conditions (Hanock 1973)... However, even when recruitment of a marine species is primarily driven by environmental effects, it is commonly held that parental spawning biomass affects recruitment, at least at low population sizes...Recently, Peterson and Summerson (1992) showed that the bay scallop (*Argopecten irradians concentricus*) was recruitment limited due to reduced abundance of adults caused by a red tide (*Ptychodiscus brevis*) outbreak. In relating their findings to fishery management, the authors noted that a common assumption of shellfish

fisheries management was that fishing pressure on adults will not adversely affect subsequent recruitment. Peterson and Summerson (1992) concluded that this assumption was unjustified.

Sustainable Yield

Ideally, an appropriate harvest rate is developed from yield models based on a species' life history traits and other biological parameters. Then, annual catches are specified by applying these harvest rates to annual biomass estimates derived from stock assessment surveys. Unfortunately, limited information on biological productivity is available for weathervane scallops to promote the conservation of stocks and sustained yields of the fishery. Biomass estimates are unavailable and yield models have not been developed.

In Alaska, most available information was collected during the early years of the fishery (Haynes and Powell 1968; Hennick 1970b, 1973), although it has been summarized more recently by Kaiser (1986). In the early 1950's the Bureau of Commercial Fisheries began systematic surveys to determine whether commercial quantities were available. The only assessment survey since 1972 was conducted in 1984 in lower Cook Inlet (Hammarstrom and Merritt 1985). Likewise, until the implementation of [the State's] onboard observer program in 1993, there have been no routine biological or fishery sampling programs conducted on weathervane scallops in Alaska.

Implications of Natural Mortality Rate. Natural mortality is one of the biological reference points commonly used in fisheries management to establish appropriate exploitation rates (Clark 1991). As discussed in section [1.3.3], the longevity (28 years) of weathervane scallops in Alaska implies that this species experiences a very low natural mortality rate (M approximates 0.16 or 15 percent annual mortality). The biological reference point, obtained by setting instantaneous fishing mortality (F) equal to M, implies that scallop harvest rates should not exceed 15 percent annually on any given stock. Unfortunately, other potentially useful benchmarks that would bear on the choice of appropriate exploitation rates for weathervane scallops are not presently available. A study of alternatives in is progress [by the ADF&G].

The biological reference point, $F=M=0.16$, implies that weathervane scallop stocks are at greater risk of overfishing than red king crab (*Paralithodes camtschaticus*) and Tanner crab (*Chionoecetes bairdi*) for which an $M=0.3$ has been estimated (NPFMC 1990). Also, unlike many crab stocks [off Alaska], there are not stock assessments of weathervane scallop biomass. Given these two observations, maintenance of healthy weathervane scallop stocks poses a serious challenge to fishery managers.

Implications of Recruitment Variability. Large annual fluctuations in recruitment, typical of scallop populations, have management implications. Weathervane scallops spawn annually after reaching maturity at age 3 or 4. This feature of multiple spawning (termed *iteroparity*) is likely to be an evolutionary response to environmentally-induced recruitment variations (Murphy 1968). Iteroparous species, with highly variable recruitment, are particularly vulnerable to overfishing when high levels of harvest create a recruit-only fishery.

Murphy (1967) simulated the effects of fishing on Pacific sardine (*Sardinops sagax*) age structure so that the population approached a single reproducing age class. Compared to an unfished populations with a protracted age structure, abundance of the fished population was much lower

and more variable. The fished population recovered slowly even when fishing was terminated and it had a higher probability of extinction than the unfished population.

These results led Murphy (1967) to assert the need to maintain age structure in populations with long life spans that experience environmentally-driven recruitment. This same advice was advanced by Leaman (1991) for the long-lived rockfishes (*Sebastes*). By comparison of longevity with other scallop species (Orensanz et al. 1991), weathervane scallops, with a maximum age of 28 (Hennick 1973), may be the longest-lived scallop species in the world. That is, the advice of Murphy (1967, 1968) and Leaman (1991) is apropos.

Sustainability of Weathervane Scallop Harvests. Changes in the Alaskan scallop fishery through 1992 raised concerns that recent (through 1992) harvests may not be sustainable on a local or regional level for several reasons. First, recent landings were 2-3 times higher than the long-term average harvest taken over a 20-year period during the 1970s and 1980s. In fact, these harvests are at levels comparable to those taken in the late 1960s and early 1970s which proved not to be sustainable by the fishery. Reduced scallop abundance was at least partly responsible for the fishery collapse in the 1970s. Second, high harvests since 1990 were at least partly attributable to shifts in fishing effort to new scallop beds. Third, during 1992 limited inseason catch reports from some areas indicated that small scallops were constituting an increased portion of landings as had occurred prior to the fishery decline in the mid-1970s. Last, misreporting was suspected. If misreporting was widespread, it would seriously compromise the data base of historical catches upon which assessments of sustainable harvests are based.

4.2 Specification of OY and Overfishing

Instead of specifying OY as a fishing rate or constant catch level, the long-term OY specification for the scallop resource in Federal waters off Alaska (all species) is specified as a numerical range. In the absence of biomass estimates needed to implement an exploitation rate harvest strategy, the OY is specified as the long-term productivity. The OY range is zero to 1.8 million lbs (814 mt) of shucked scallop meats, and is derived from historical catches from State and Federal waters in the GOA and BSAI. The low end of the range is the lowest catch on record (zero pounds in 1978). The high end of the OY approximates the highest catch taken from the GOA and BSAI since the 'fishing up' period (1.8 million pounds in 1993).

As discussed above in section 4.1, the lack of biological information on Alaskan scallops inhibits the numerical specification of overfishing. Although it is difficult to define precisely the level at which overfishing jeopardizes recovery of a stock, there are indicators of existing or impending overfishing that should be heeded. For the reasons discussed above, recent harvest levels of scallops off Alaska may not be sustainable. This concern, as well as other uncertainties about the scallop biomass and stock dynamics must be taken into account in developing an overfishing definition. Although overfishing could be defined as a fishing mortality rate for weathervane scallops, based on existing life history data, the lack of stock assessment information (surveys, population age or size structure) limit the use of an overfishing rate at this time. As in the case for other stocks where very little biological information is available (Rosenberg et al. 1993), overfishing can be defined as landings that exceed optimum yield. As data collected from the fisheries and/or assessment surveys of the scallop resource are analyzed, overfishing for scallops may be defined on a fishing mortality rate basis. Until better information becomes available, overfishing is defined as landings that exceed optimum yield.

Because scallops have only been harvested by U.S. vessels in the past, and effort remains high, it is likely that the OY can be fully harvested by U.S. vessels, and fully processed by U.S. processors in future years. In fact, current capacity of the U.S. scallop fleet in Alaska exceeds current guideline harvest levels for scallops. Hence, no considerations have been made to allow a foreign fishery on Alaskan scallops.

5.0 MANAGEMENT MEASURES

This chapter describes management measures that may be used to achieve the FMP's management objectives. Most of these management measures are currently used by the State to manage the scallop fishery. Some measures are appropriate for more than one management objective.

Two categories of management measures are described in the FMP (Table 5.1): Category 1 measures are general management measures delegated to the State for implementation. These measures may be freely adopted or modified by the State, subject to other Federal law. Category 2 measures are limited access management measures that are fixed in the FMP, implemented by Federal regulation and require an FMP amendment to change.

Table 5.1 Management measures used to manage the scallop fishery off Alaska by category.

CATEGORY 1 (Delegated to the State)	CATEGORY 2 (Fixed in FMP, Implemented by Federal Regulation)
Guideline Harvest Levels Registration Areas, Districts, Subdistricts and Sections Gear Limitations Crew and Efficiency Limits Fishing Seasons Observer Requirements Prohibited Species and Bycatch Limits Recordkeeping and Reporting Requirements In-season Adjustments Closed Areas Other	Vessel moratorium License limitation program

The following description of management measures is not intended to limit the State government to only these measures. However, implementation of other management measures not described in the FMP must be consistent with the FMP, the Magnuson-Stevens Act, and other applicable Federal law. Although specific strategies for attainment of objectives in the FMP are not described, management measures described in this chapter are all derived to attain one or more of those objectives.

5.1 Category 1: Management Measures Delegated to the State

5.1.2 Guideline Harvest Levels

The FMP authorizes the State to set preseason GHLS under State regulations. The term GHLS corresponds closely to the term total allowable catch (TAC) used in the groundfish FMPs for the Bering Sea and Aleutian Islands Management Area and the Gulf of Alaska, although GHLS is often expressed as a range and TAC is not. A range of harvest levels allows the State to make in-season management decisions based on current data obtained from the fishery. Seasons or areas may be closed when the GHLS is reached, or earlier or later based on current in-season information. GHLS is used in this FMP in lieu of TAC because the State has used this term and it corresponds with the State's current management program. The sum of all upper ranges of the GHLS for scallops crab must fall within the OY ranges established in this FMP.

The GHLS is the result of a process which includes the examination of the effects of different harvesting strategies on the seven objectives of management listed previously in this FMP. While harvest strategies will be evaluated relative to all seven of these objectives, GHLS will most frequently be used as a

management measure to achieve only the first two objectives. For this reason, the GHL is primarily composed of two interrelated components: a biological component and a socioeconomic component.

In overview, the biological component, acceptable biological catch (ABC), is set to achieve the biological conservation objective of preventing overfishing. Because the maintenance of adequate reproductive potential takes precedence over economic and social considerations, the ABC serves as an upper bound constraint on harvest. A target harvest level is then chosen within ABC to maximize the anticipated discounted benefits to the fishery over the long term. These benefits include: profits, personal income, employment, benefits to consumers, and less tangible or less quantifiable social benefits such as the economic stability of coastal communities. The GHL range represents a confidence interval around the proposed harvest level reflecting the uncertainty in stock status and the uncertainty in estimates of socioeconomic benefits. Ideally, bioeconomic analysis such as Matulich, et al. (1987a, b, c) should be used to determine the GHL. However, such modeling efforts are relatively new and complex; in the future they should be employed along with more conventional means of determining the GHL.

Regardless of the specific approach, the process of determining a GHL which prevents overfishing and maximizes socioeconomic benefits includes the routine collection and analysis of biological, economic, social, and other data. Scallop resources in various registration areas off Alaska vary in the level of scientific information available for management. Consequently, exact procedures for determining appropriate ABCs and GHLs vary due to differences in the quality and quantity of resource data bases.

As discussed within the Research and Management Objective, an annual area management report will be prepared which describes the determination of GHLs and ABCs for all types of stocks using the best available information. The GHLs contained in this report will be updated when new information is available. This information will be made available to the public.

5.1.2 Registration Areas, District, Subdistrict, and Section Boundaries

This FMP adopts existing State registration areas. The management unit historically has been divided by the State into nine scallop registration areas composed of the Federal waters and adjacent State waters described in each area (Figure 5.2). Registration areas may be further divided into fishing districts, subdistricts, and sections for purposes of management. For the purpose of scallop management, the State has divided the Yakutat, Cook Inlet, and Kodiak Registration Areas into districts..

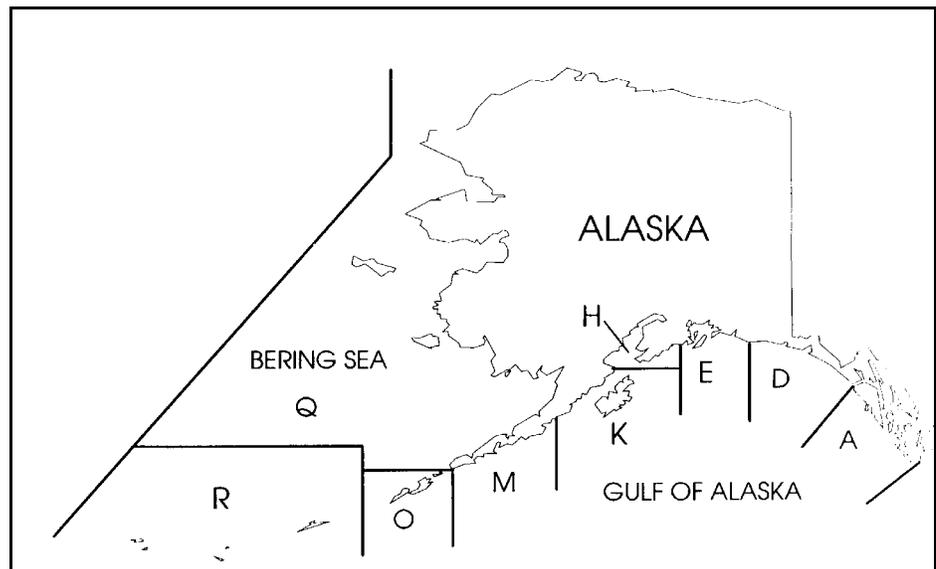


Figure 5.2 Scallop Registration Areas

Registration areas are characterized by relatively homogeneous established fisheries on scallop stocks. State regulations require vessels to register for fishing in these areas, and may require vessels to register for specific fishing districts within a registration area. Registration requirements allow estimation of fishing effort and the rate at which the resource will be harvested. Existing Registration Areas and districts are defined in Appendix D.

5.1.3 Gear Limitations

Gear limitations may include restrictions on the number and width of dredges that may be deployed by vessels fishing in a particular area, and minimum ring sizes for dredges to prevent the taking of undersize scallops. Gear restrictions will be specified in State regulations.

5.1.4 Crew and Efficiency limits

Efficiency limits may be necessary to prevent overcapitalization in the Scallop fishery off Alaska. Efficiency limits may include prohibitions on automatic shucking machines and restrictions on the number of crew that may be on board a vessel when engaged in fishing for scallops. Efficiency limits will be specified in State regulations.

5.1.5 Fishing Seasons

Fishing seasons will be specified in State regulation to achieve various management objectives including (1) limiting fishing during spawning periods, (2) timing fishing seasons during periods when product quality is highest, (3) limiting gear conflicts with other fisheries, (4) and increasing vessel safety.

5.1.6 Observer Requirements

Observer coverage requirements may be specified in State regulations. The State may place observers aboard scallop fishing and/or processing vessels to obtain, for example, catch and effort data; species, and size composition data. Observers provide better scientific and enforcement information than is otherwise available. The State currently has a mandatory observer requirement on all vessels fishing for scallops outside the Cook Inlet Registration Area as a condition to obtaining a processing permit. It is important that the State observer program and any future Federal observer program be coordinated to prevent duplication of effort and reduce costs to industry. No one shall forcibly assault, resist, impede, intimidate, or interfere with an observer placed aboard a fishing vessel under this FMP.

5.1.7 Prohibited Species and Bycatch Limits

State regulations may prohibit vessels fishing under this FMP from retaining certain species identified as prohibited including salmon, halibut, king crab, Tanner crab, and herring. Species identified as prohibited must be avoided while fishing and must be immediately returned to the sea with a minimum of injury when caught and brought aboard. Prohibited species bycatch limits may be established for specified areas or subareas to limit bycatch of prohibited species in the scallop fishery.

5.1.8 Recordkeeping and Reporting Requirements

The State may implement recordkeeping and reporting requirements as necessary to meet the management objectives of the FMP. As the commercial scallop fisheries have grown over recent years, so has our knowledge of this species. Information gained through scientific surveys, research, and

fishermen's observations have all led to a better understanding of the biology, environmental requirements, and behavior of the scallop stocks. Since fishery managers monitor harvest rates in-season to determine areas of greatest fishing effort, thereby preventing overharvest of individual scallop stocks, State catch and processing reporting requirements are an important component in achieving the biological conservation, economic, social, research and management objectives of this FMP.

5.1.9 In-season Adjustments

The State may make in-season adjustments to GHGs, fishing seasons, bycatch limits, and to close areas under State regulations. In making such in-season adjustments, the State may consider appropriate factors to the extent in-season data are available on: (1) overall fishing effort, (2) catch per unit of effort and rate of harvest, (3) relative scallop abundance, (4) achievement of GHGs and bycatch limits, (5) general information on stock condition, (6) timeliness and accuracy of catch reporting, and (7) other factors that affect ability to meet objectives of the FMP.

All in-season adjustments must be recorded and justified in writing. These justifications are attached to the emergency order and will be made available for review to the public, the State, NMFS, and other regulatory agencies.

5.1.10 Closed areas

State regulations implementing the FMP may include time and area closures designed to minimize bycatch and protect habitat. Existing State regulations close most areas to that are also closed to bottom trawling to protect crab and other sensitive habitat.

5.1.11 Other

As previously noted, the State government is not limited to only the management measures described in this FMP. However, implementation of other management measures not described in the FMP must be consistent with the FMP, the Magnuson-Stevens Act, and other applicable Federal law.

5.2 Category 2 Measures: Limited Access Management

[Note: This section is unchanged under Amendment 3]

A system for limiting access, which is an optional measure under section 303(b) of the Magnuson-Stevens Act, is a type of allocation of fishing privileges that may be used to promote economic efficiency or conservation. For example, "*limited access may be used to combat overfishing, overcrowding, or overcapitalization in a fishery to achieve OY*" (50 CFR 600.330(c)). The Magnuson-Stevens Act (Section 3(28)) further defines "... The "optimum" with respect to the yield from a fishery, means the amount of fish which -- (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems; (B) is prescribed on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant social, economic, or ecological factor; and (C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery.

The existence of an overcapitalized fleet increases the potential of overfishing the resource in an unrestricted fishery. At its January 1993 meeting, the Council determined that unrestricted access to this fishery may be harmful to the resource and result in a net loss to the Nation. The need to limit access was

the primary motivation for the Council to prepare the FMP in lieu of State management of the scallop fishery. A control date of January 20, 1993, was set to place the industry on notice that a moratorium for this fishery may be implemented. This control date was again reaffirmed at the Council's June 1993 and June 1995 meetings. As anticipated, effort in this fishery increased in 1993; 32 permits, representing 21 vessels were issued to fish scallops in 1993. Eleven of these vessels had made landings as of July 31, 1993, and a total of 15 vessels had made landings by the end of 1993.

Even without additional vessels entering the fishery, the 1993 fishery was overcapitalized. In 1992, seven vessels harvested 1.8 million lb (816 mt), for an average of 257,143 lb (116.6 mt) harvested per vessel. The 1993 quota was set at 890,000 lb (403.7 mt) for areas with specified guideline harvest levels, or about one-half of the 1992 landings. Harvesting of this quota could be done by only three to four vessels. Preliminary estimates of 1993 landings from areas without guideline harvest levels total 524,000 lb (237.7 mt), that potentially could have been taken by an additional two vessels. Yet, 11 vessels participated in the 1993 fishery by July 31. Hence, the 1993 fishery was overcapitalized, meaning that too much capital was invested relative to the fleet size necessary to conduct the fishery. In 1994 the fishery continued the trend; 16 vessels harvested 1,235,269 lb (560.3 mt) of scallops.

In June 1995, the Council included a vessel moratorium with Amendment 1 to the FMP which was the suite of management measures needed to reopen the fishery. In April 1996, the Council chose to recommend the vessel moratorium as Amendment 2 in order to prevent moratorium issues from delaying the reopening of the scallop fishery. The following moratorium criteria were adopted by the Council in June 1995 and reaffirmed in April 1996.

5.2.1 Moratorium period

The vessel moratorium will remain in effect until 3 years after date of implementation or until repealed by the Council or replaced by a permanent limited access program. The Council may recommend that the moratorium be extended for 2 years through regulation if a permanent limited access program is imminent.

5.2.2 Qualification Criteria

A vessel would qualify for inclusion in the moratorium if it made a legal landing of scallops during 1991, 1992 or 1993; or during at least 4 separate years from 1980 through 1990.

5.2.3 Area Endorsements

Moratorium permits would include area endorsements for fishing in waters inside Registration Area H (Cook Inlet) and/or waters outside Registration Area H.

Waters Outside Registration Area H. A vessel is moratorium qualified to fish for scallops in waters outside Scallop Registration Area H if it made at least one legal landing of scallops in waters outside Scallop Registration H Area during the qualification period in paragraph 2.8.2

Registration Area H. A vessel is moratorium qualified to fish for scallops in waters inside Registration Area H if it made at least one legal landing of scallops in waters inside Scallop Registration Area H during the qualification period in paragraph 2.8.2

5.2.4 Ownership

Scallop moratorium permits would be issued to the person (or successor in interest) who owned the qualifying vessel when it most recently made qualifying landings. If a vessel was sold during or after the moratorium qualification period, the moratorium rights attach to the owner of the vessel when it most recently made qualifying landings under paragraph 2.8.2 such that each vessel generates only one moratorium permit.

5.2.5 Vessel Reconstruction

Vessels may be reconstructed during the moratorium. If physical reconstruction started on or after January 20, 1993, the new size may not exceed 1.2 times the original qualifying vessel length overall (LOA) at time of qualification. For vessels under reconstruction on January 20, 1993, the maximum LOA would be the LOA on the date reconstruction was completed with no additional increases allowed.

5.2.6 Vessel Replacement

Qualifying vessels can be replaced with non-qualifying vessels as often as desired so long as the replaced vessel leaves the fishery or bumps another qualifying vessel out in the case of multiple transactions. Vessel size can be increased as many times as desired, but is restricted to 1.2 times the original qualifying vessel length (LOA). For vessels lost or destroyed before or during the moratorium, qualifying vessels can be replaced with non-qualifying vessels no longer than 1.2 times the original qualifying vessel length (LOA). Replaced vessels cannot be salvaged and come back into the fishery.

5.2.7 Exemptions

Vessels 26 ft (7.9 m) or less in the GOA and vessels 32 ft (9.8 m) or less in LOA in the BSAI are exempted from the moratorium when fishing for scallops only if they use gear other than dredges or trawls.

5.2.8 Appeals

An appeals process will be established in the implementing regulations consistent with the process established for the groundfish and crab vessel moratorium.

6.0 DATA ASSESSMENT AND COLLECTION

[Note: This section is unchanged under Amendment 3]

NMFS, in coordination with other management agencies, should initiate efforts to identify and gather the data needed to improve management agency understanding of the dynamics of the scallop resource and the effect of exploitation on the stocks capacity to produce MSY on a continuing basis. The type of information that should be pursued Alaska include (1) stock abundance and size/age structure, (2) scallop biology, life history, and stock production parameters, (3) analyses of population thresholds and recruitment overfishing; (4) estimation of optimum dredge ring size or minimum shell height based on studies of rates of growth and mortality; (5) investigations of exploitation rates and alternative management strategies; (6) genetic stock structure; and (7) new gear designs to reduce bycatch and to minimize adverse effects on bottom habitat. This objective may be attained, in part, with data collected by the Alaska State observer program. However, assessments of the scallop resource off Alaska, as well as the conduct of other scallop research will be dependent on Federal funding, State of Alaska general fund appropriations, or future amendments to the FMP that would authorize experimental fishing under Federal permit conditions.

7.0 ADMINISTRATIVE AND ENFORCEMENT COSTS

[Note: This section is unchanged under Amendment 3]

Administrative costs will increase as staff resources are required to develop future management measures. Significant costs would result from a meaningful data collection program that, ideally would include a resource assessment of the Alaska scallop stocks. A comprehensive survey of the sea scallop grounds in the Gulf of Alaska and the Bering sea would require a 90-day cruise. Such a cruise probably cannot be part of ongoing groundfish research cruises because a different type of sampling gear, such as a specialized scallop dredge, likely would be required. The estimated cost of such a survey would be about \$540,000 (assume a vessel charter with scientific personnel cost at \$6,000 per day for a 90-day cruise). There would also be a need for data entry, data workup, and general staffing functions to make the information useable, estimated to be one staff -year. A desirable part of the data collection program would involve collection of fisheries statistics and biological specimens from the fisheries for status of stocks analyses.

Appendix C State of Alaska Management Structure

Institutions: The State Organizational Act of 1959 provided for Alaska Statutes, Title 16, which deals with Alaska Fish and Game Resources. Article 1 provides for a Department of Fish and Game whose principal executive officer is the Commissioner of Fish and Game. The Commissioner is appointed by the Governor for 5 years. The Commercial Fisheries Division was established to manage all commercially harvested fish species in Alaska. The Division is headed by a director who supervises four regional supervisors. The regions are further separated into management areas. Area management biologists are responsible for collecting catch data and monitoring fisheries in their areas. A Subsistence Section within the Commissioner's Office was recently established to document subsistence needs and utilization and to make recommendations for developing regulations and management plans to ensure subsistence use preference.

The enforcement of fish and game laws and regulations is provided by ADF&G and the Alaska Department of Public Safety (ADPS). The fish and wildlife protection officers of the ADPS operate independently of the ADF&G, although communication between the two departments is maintained and activities are coordinated.

Jurisdiction: ADF&G asserts management authority over all migratory fish and shellfish species which enter and leave territorial waters of the State, including the migratory fish and shellfish taken from State waters which are indistinguishable, in most instances, from those taken from adjacent high seas areas. Regulations governing migratory fish and shellfish cover both areas and are enforced by the State's landing laws. These landing laws prohibit the sale or transportation within State waters of migratory fish and shellfish taken on the high seas unless they were taken in accordance with State regulations.

The Fisheries Regulatory Process: The Alaskan system has a seven-member Board, composed of fishermen and other businessmen appointed by the Governor, which considers both public and staff regulatory proposals in deciding on regulatory changes. The Board is required by law to meet or hold a hearing at least once a year in each of the following areas of the State in order to assure all people of the State ready access to the Board: (a) Upper Yukon-Kuskokwim-Arctic, (b) Western Alaska (including Kodiak), (c) South Central, (d) Prince William Sound (including Yakutat), and (e) Southeast. Since the late 1960s, the Board, and before it, the Board of Fish and Game, has usually held a minimum of two meetings annually to adopt changes in the fisheries regulations. The fall Board meeting, usually held in early December, considers proposals for changes in sport fishing regulations and in commercial and subsistence finfish regulations. A spring Board meeting, usually held in late March or early April, considers commercial and subsistence shellfish regulatory proposals (see Chapter 2). Regulations which may be adopted by the Board cover seasons and areas, methods and means of harvesting, quotas, and times and dates for issuing or transferring licenses and registrations.

Advisory committees, composed of people concerned about the fish and game resources of their locality, serve as local clearinghouses and sources of proposals for Board consideration. Following submission of advisory committees and public proposals, ADF&G staff members review the proposals and redraft the wording, when necessary, to conform to the style required. ADF&G also submits proposals for the Board's consideration.

In adopting new regulations, the Board follows Alaska's Administrative Procedure Act. This act has several requirements: At least 30 days prior to the adoption of new regulations, a notice giving the time and place of the adoption proceedings, reference to the authority under which the regulations are proposed, and a summary of the proposed action, must be published in a newspaper of general circulation

and sent to all interested people who have asked to be informed of the proposals. During the proceedings, the public must be given an opportunity to testify on the proposed changes. If a new regulation is adopted, it must be submitted to the Lieutenant Governor through the Attorney General's office. Thirty days after being filed with the Lieutenant Governor, the new regulation becomes effective. Because of these requirements, new regulations usually do not become effective until about 2 months after being adopted by the Board. Regulatory flexibility is given to the Commissioner of Fish and Game and to his authorized designees to adjust seasons, areas, and weekly fishing periods by emergency order.

The requirements outlined in the preceding paragraph do not apply in the case of emergency regulations, which may be adopted if needed for the immediate preservation of public peace, health, safety, or general welfare. An emergency regulation remains in effect 120 days unless it is adopted as a permanent regulation through the procedure described above. Emergency regulations have the same force and effect as permanent regulations. The Board has delegated authority to the Commissioner to adopt emergency regulations where an emergency exists as described in AS 44.62.250.

Appeals to the Board of Fisheries

Reconsideration of issues during a meeting: During a Board meeting, any Board member may move to reconsider an issue regardless of how the member voted on the original issue. Board Policy #80-78-FB requires that the motion be made prior to the adjournment of the meeting, that the motion be supported with new evidence, unavailable at the time of the original vote, and that public notice be given as to when reconsideration will occur.

Petitions to the Board: Under Section AS 44.62.220, an interested person may petition the Board for the adoption or repeal of a regulation. Upon receipt of a petition requesting the adoption, amendment or repeal of a regulation, the Board shall, within 30 days, deny the petition in writing or schedule the matter for public hearing. The Board and the Board of Game adopted a Joint Board Petition Policy which limits the scope of petitions they are willing to act upon outside of the normal regulatory cycle. The Joint Board recognized that in rare instances extraordinary circumstances may require regulatory changes outside this process. Therefore, it is the policy of the Board and the Board of Game that petitions will only be accepted if the problem outlined in the petition results in a finding of emergency. In accordance with State policy (AS 44.62.270), emergencies will be held to a minimum and rarely found to exist. Alaska Statute 44.62.250 specifies that in order to adopt emergency regulations, the agency must find that it is necessary for the immediate preservation of the public peace, health, safety, or general welfare. If such a finding is made, the agency adopting the emergency regulation shall submit a copy to the Lieutenant Governor for filing and for publication in the "Alaska Administrative Register". Notice of adoption shall be given within five days of the adoption. Failure to give notice within ten days automatically repeals the regulation. For fish and game regulations, the Boards determined that an emergency is an unforeseen, unexpected event that either threatens a fish or game resource, or an unforeseen, unexpected resource situation where a biologically allowable resource harvest would be precluded by delayed regulatory action and such delay would be significantly burdensome to the petitioners since the resource would be unavailable in the future.

In 1995, the Board of Fisheries modified its petition policy for category 2 measures in the BSAI king and Tanner crab FMP (see State Regulation 5 AAC 39.998). The Board of Fisheries recognizes that in rare instances, circumstances may require regulatory changes outside the process described in 5 AAC 96.625(b) - (d). Notwithstanding 5 AAC 96.625(f), a petition for a regulatory change may be submitted under this section and 5 AAC 96.625(a) for a Category 2 management measure in a Bering Sea/Aleutian

Islands king or Tanner crab fishery described in the federal Fishery Management Plan (FMP) for the Commercial King and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands. It is the policy of the Board of Fisheries that a petition submitted under this section will be denied and not scheduled for hearing unless the petition:

- (1) addresses a Category 2 management measure and is filed within 30 days from the date that the board adopted that Category 2 management measure;
- (2) presents an issue that is not solely allocative; and
- (3) presents new legal, biological, or management information that indicates the regulation may not be consistent with the federal FMP."

Appeals to the Commissioner of Fish and Game

Petitions: Board Policy #79-53-FB delegates authority to the Commissioner to adopt emergency regulations, during times of the year when the Board is not in session. The Commissioner may adopt, in accordance with the Administrative Procedure Act (AS 44.62), an emergency regulation where an emergency exists as described in AS 44.62.250. All emergency actions shall, to the full extent practicable, be consistent with Board intent. The Commissioner is further required to consult, if possible, with members of the Board to obtain their views.

In-season Management Actions: Within 5 days after the closure of any registration area, an individual holding a king or Tanner crab permit issued by the Commercial Fisheries Entry Commission or the owner of any vessel registered to that area may formally request the commissioner to reopen the area. The commissioner shall personally review pertinent information on the condition of crab within the area, and shall formally announce his decision within 14 days of the request. 5AAC 34.035(d), 35.035(d).

Judicial Review: The APA in Section 44.62.300 provides for court review of regulatory actions of the Board or commissioner. An interested person may get a judicial declaration on the validity of a regulation by bringing an action for declaratory relief. All actions are to be brought in the Superior Court. The court may declare the regulation invalid for a substantial failure to comply with required administrative procedures (AS 44.62.010-44.62.320) or, in the case of an emergency regulation or order of repeal, upon the grounds that the facts recited in the statement do not constitute an emergency under AS 44.62.250.

Appendix D: Scallop Registration Areas

Registration Area A (Southeastern Alaska) has as its southern boundary the international boundary at Dixon Entrance, and as its northern boundary Loran-C line 7960-Y-29590, which intersects the western tip of Cape Fairweather at 58° 47' 58" N. lat., 137° 56' 30" W. long., except for ADF&G District 16 defined as all waters north of a line projecting west from the southernmost tip of Cape Spencer and south of a line projecting southwest from the westernmost tip of Cape Fairweather.

Registration Area D (Yakutat) has as its western boundary the longitude of Cape Suckling (143° 53' W. long.), and as its southern boundary Loran-C line 7960-Y-29590, which intersects the western tip of Cape Fairweather at 58° 47' 58" N. lat., 137° 56' 30" W. long., and ADF&G District 16 defined as all waters all waters north of a line projecting west from the southernmost tip of Cape Spencer and south of a line projecting southwest from the westernmost tip of Cape Fairweather.

Registration Area E (Prince William Sound) has as its western boundary the longitude of Cape Fairfield (148° 50' W. long.), and its eastern boundary the longitude of Cape Suckling (143° 53' W. long.).

Registration Area H (Cook Inlet) has as its eastern boundary the longitude of Cape Fairfield (148° 50' W. long.) and its southern boundary the latitude of Cape Douglas (58° 52' N. lat.).

Kamishak Bay District: all waters enclosed by a line from 59° 46' 12" N. lat., 153° 00' 30" W. long., then east to 59° 46' 12" N. lat., 152° 20' W. long., then south to 59° 03' 25" N. lat., 152° 20' W. long., then southwesterly to Cape Douglas (58° 52' N. lat.). The seaward boundary of the Kamishak Bay District is three nautical miles seaward from the shoreline between a point on the west shore of Cook Inlet at 59° 46' 12" N. lat., 153° 00' 30" W. long., and Cape Douglas at 58° 52' N. lat., 153° 15' W. long., including a line three nautical miles seaward from the shorelines of Augustine Island and Shaw Island, and including the line demarking all state waters shown on NOAA chart 16640, 21st Ed., May 5, 1990.

Outer District: all waters enclosed by a line from the tip of Point Adam to the tip of Cape Elizabeth, then south to 58° 52' N. lat., 151° 53' W. long., then east to the longitude of Aligo Point (149° 44' 33" W. long.), then north to the tip of Aligo Point.

Eastern District: all waters east of the longitude of Aligo Point (149° 44' 33" W. long.), west of the longitude of Cape Fairfield (148° 50' W. long.), and north of 58° 52' N. lat.

Registration Area K (Kodiak) has as its northern boundary the latitude of Cape Douglas (58° 52' N. lat.), and as its western boundary the longitude of Cape Kumlik (157° 27' W. long.).

Northeast District: all waters east of a line extending 180° from the easternmost tip of Cape Barnabas, east of a line from the northernmost tip of Inner Point to the southernmost tip of Afognak Point, east of 152° 30' W. long. in Shuyak Strait, and east of the longitude of the northernmost tip of Shuyak Island (152° 20' W. long.).

Semidi Island District: all waters west of the longitude of Cape Kilokak at 156° 19' W. long and east of the longitude of Cape Kumlik at 157° 27' W. long.

Shelikof District: all waters north of a line from the westernmost tip of Cape Ikolik to the southernmost tip of Cape Kilokak, west of a line from the northernmost tip of Inner Point to the

southernmost tip of Afognak Point, west of 152° 30' W. long., in Shuyak Strait, and west of the longitude of the northernmost tip of Shuyak Island (152° 20' W. long.).

Registration Area M (Alaska Peninsula) has as its eastern boundary the longitude of Cape Kumlik (157° 27' W. long.), and its western boundary the longitude of Scotch Cap Light. The registration area also includes all waters of Bechevin Bay and Isanotski Strait south of a line from the easternmost tip of Chunak Point to the westernmost tip of Cape Krenitzen.

Registration Area O (Dutch Harbor) has as its eastern boundary the longitude of Scotch Cap Light, (164° 44' W long.), its western boundary 171° W. long, and as its northern boundary the latitude of Cape Sarichef (54° 36' N. lat.).

Registration Area Q (Bristol Bay-Bering Sea) all waters north of a line from Cape Sarichef (54° 36' N. lat.), to 54° 36' N. lat., 171° W. long., to 55° 30' N. lat., 171° W. long., to 55° 30' N. lat., 173° 30' E. long., and west of the U.S.-Russian Convention line of 1867 as depicted on NOAA Chart #513 (5th Ed., November 6, 1982).

Registration Area R (Adak) has as its eastern boundary 171° W. long., as its northern boundary 55° 30' N. lat., and as its western boundary the U.S.-Russian Convention line of 1867 as depicted on NOAA Chart #513 (5th Ed., November 6, 1982).

KLind: 03-23-98
g:\fmgroup\scallop3\scallop3.fmp
r:\region\1998\fm\jun\scallop3.fmp