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UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment for Amendment 59 to the Fishery Management Plan for Groundfish of the Gulf of Alaska

LOCATION: Federal Waters of the Gulf of Alaska

SUMMARY: Amendment 59 will establish a 2.5 square nautical mile area of Federal ocean water above and surrounding the Pinnacles off Cape Edgecumbe in the Gulf of Alaska as the Sitka Pinnacles Marine Reserve. This area, which is an unusually productive and highly fragile marine habitat, would be closed to fishing for groundfish or anchoring by vessels holding a Federal fisheries permit. The area would also be closed to commercial or sport fishing for Pacific halibut, and to anchoring by sport or commercial halibut vessels. The intent of this action is to protect an area containing important fish habitat from degradation due to fishing and anchoring impacts, and to create a groundfish reserve.

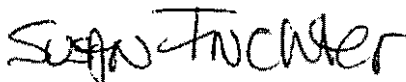
RESPONSIBLE OFFICIAL: James W. Balsiger
Regional Administrator
Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802
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The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact, including the environmental assessment, is enclosed for your information.



Also, please send one copy of your comment to me in Room 5805,
SP, U.S. Department of Commerce, Washington, D.C. 20230.

Sincerely,

Handwritten signature of Susan B. Fruchter in black ink.

Susan B. Fruchter
NEPA Coordinator

Enclosure

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW/
INITIAL REGULATORY FLEXIBILITY ANALYSIS
for

Amendment 59
to the
Fishery Management Plan for the
Groundfish Fishery of the Gulf of Alaska

to
Prohibit Anchoring and Fishing in the Sitka Pinnacles Marine Reserve

May, 2000



Prepared by staff of the
North Pacific Fishery Management Council
and the
National Marine Fisheries Service

TABLE OF CONTENTS

Executive Summary	1
1.0 INTRODUCTION	2
1.1 Purpose of and Need for the Action	2
1.2 Alternatives Considered	3
1.3 Management Background	4
1.4 Evaluation of the Options	5
1.5 Other Alternatives Considered	5
2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES	6
2.1 Environmental Impacts of the Alternatives	6
2.2 Impacts on Essential Fish Habitat	6
2.2.1 Effects of Fishing Gear on EFH	7
2.2.2 Other Impacts on EFH	8
2.2.3 Conclusion: Effects of the Alternatives on EFH	8
2.3 Impacts on Endangered or Threatened Species	8
2.4 Impacts of the Alternatives on Endangered or Threatened Species	13
2.5 Impacts on Marine Mammals	13
2.6 Coastal Zone Management Act	13
2.7 Conclusions or Finding of No Significant Impact	13
3.0 REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS OF THE ALTERNATIVES	14
3.1 Economic Review of Alternatives	14
3.2 Reporting and Compliance Costs	17
3.3 Summary Findings of Economic Impacts	17
4.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS	18
4.1 Requirement to Prepare an IRFA	18
4.2 What is a Small Entity?	19
4.3 Reason for considering the proposed action	20
4.4 Number and description of affected small entities	20
4.5 Expected impacts on small entities	21
4.6 Alternatives that would minimize impacts	22
4.7 Conclusion of Initial Regulatory Flexibility Analysis	22
5.0 REFERENCES	24
6.0 AGENCIES AND INDIVIDUALS CONSULTED	26
7.0 LIST OF PREPARERS	26
8.0 FIGURES	27

Executive Summary

This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Impact Review (EA/RIR/IRFA) addresses alternatives to implement a conservation and management measure to minimize adverse effects from fishing and anchoring on an important habitat for rockfish and lingcod.

The alternatives analyzed in the EA/RIR/IRFA were the following:

Alternative 1: No action. Do not implement additional conservation measures to minimize adverse effects from fishing at this time.

Alternative 2 (preferred): Prohibit fishing and boat anchoring on or near the Cape Edgecumbe, Sitka, pinnacles. In order to minimize adverse effects caused by fishing in this area, which has been identified as providing exceptionally good habitat for rockfish and lingcod, a no-anchoring and no-fishing zone would be established in a 2.5 square nautical mile area (8.5 sq. km) around the Cape Edgecumbe pinnacles, to be designated as the Sitka Pinnacles Marine Reserve.

Option 1: Close the pinnacles area to fishing for all Federally-managed species, and anchoring by all fishing vessels subject to Federal fisheries jurisdiction.

Option 2 (preferred): Close the pinnacles area to fishing and anchoring by commercial groundfish fishing vessels and commercial and sport halibut fishing vessels.

The pinnacles area is extremely productive, and provides a complex habitat which is used for spawning, breeding, feeding, growth, and growth to maturity for a variety of species. Closure of this area (Alternative 2) would protect the fragile structures in the pinnacles. It would prevent the harvest or bycatch of species using the pinnacles during critical portions of their life history, and would allow a vital ecosystem to maintain natural population levels in an area surrounded by heavy fishing pressure. Option 1 provides for better enforcement of the closure regulations. Option 2 would allow continued fishing for salmon. This area does not provide special habitat for salmon and trolling does not appear to adversely affect the pinnacles habitat.

The EA examines the potential effect of the proposed action on the environment. None of the alternatives is expected to have a significant impact on endangered, threatened, or candidate species, nor to affect takes of marine mammals. Actions taken will not alter the total harvest of groundfish, crab, scallops, salmon, or halibut. None of the alternatives is expected to have an adverse effect on essential fish habitat (EFH).

None of the alternatives is likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

The RIR portion of this document examines the potential economic and socioeconomic impacts of the alternatives. The IRFA complements the RIR by specifically examining the potential impacts on small entities attributable to the proposed action. The IRFA is required by law if it cannot be factually demonstrated that the proposed action will not have a significant effect on a substantial number of small entities. Although the proposed action examined here is not expected to have such an impact, an IRFA is included in this document because information is insufficient to support the requisite factual finding of "no significant impact."

1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) off Alaska are managed under the Fishery Management Plan for Groundfish of the Gulf of Alaska and the Fishery Management Plan for the Groundfish Fisheries of the Bering Sea and Aleutian Islands Area. Both fishery management plans (FMPs) were developed by the North Pacific Fishery Management Council (Council) under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The Gulf of Alaska Groundfish (GOA) FMP was approved by the Secretary of Commerce and took effect in 1978; and the Bering Sea and Aleutian Islands Area (BSAI) FMP took effect in 1982.

Actions taken to amend the FMPs or implement other regulations governing these fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson-Stevens Act, the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (E.O.) 12866, and the Regulatory Flexibility Act (RFA).

NEPA, E.O. 12866 and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. This information is included in Section 1 of this document. Section 2 contains information on the biological and environmental impacts of the alternatives. This is required by NEPA and by the Magnuson-Stevens Act mandate that agencies examine the effects of their actions on essential fish habitat. Impacts on endangered species and marine mammals are also addressed in Section 2. Section 3 contains an RIR, which addresses the requirements of E.O. 12866 that the economic impacts of the alternatives be considered, and an IRFA, which addresses the RFA requirement that the effects on small entities be taken into account.

This EA/RIR/IRFA addresses alternatives for protecting a unique and important habitat from potential impacts due to fishing and vessel anchoring. The habitat area, which encompasses 2.5 square nautical miles, occurs approximately four miles west of Cape Edgecumbe.

1.1 Purpose of and Need for the Action

The purpose of this proposal is to protect an area containing important fish habitat, totaling 2.5 square nautical miles, from degradation due to fishing and anchoring impacts, and to create a groundfish reserve. The area, shown in Figure 1, is defined by a rectangle, with lines connecting the following points in a counterclockwise manner:

56°55.5' N lat., 135°54.0' W long.;
56°57.0' N lat., 135°54.0' W long.;
56°57.0' N lat., 135°57.0' W long.;
56°55.5' N lat., 135°57.0' W long.

The Alaska Department of Fish and Game (ADF&G) has conducted in-situ assessments of groundfish in the GOA using a manned submersible, collecting information on habitat-specific density of demersal shelf rockfishes (O'Connell and Carlile 1993, O'Connell et al 1997). Over 300 dives have been conducted between Fairweather Ground and Dixon Entrance, and annual dives have been made on the pinnacles. It became obvious during the course of these surveys that the pinnacles area has a greater diversity and density of fishes than is typical of the Eastern GOA. The pinnacles rise abruptly from the seafloor, and include very complex habitat in a variety of depths, in a relatively compact area. The area has been thoroughly mapped, using sidescan sonar and swath bathymetry (O'Connell et al. 1998, Greene et al in press). In July of 1997, several permanent transect sites were marked for continuing monitoring.

The area is dominated by two large volcanic pinnacles, which rise abruptly from the seafloor at the mouth of Sitka Sound. Tidal and other ocean currents create massive water flows over the habitat (Figure 2). The most southerly and tallest pinnacle (19-m) is topped by a volcanic plug that extends to within 40 m of the ocean's surface. The plug has sheer vertical walls on one side that drop down to a rubble apron composed of large angular blocks of considerable size (up to 10 m). A fairly linear lobate feature extends northeastward to the base of the northern pinnacle, which is more gentle in morphology and deeper, with its crest lying at a depth of 70 m. The crest of this pinnacle is comprised of exposed volcanic rock that sits atop an almost smooth cone, and large angular boulders surround the base. The seafloor surrounding the pinnacles represents a variety of habitats including mud, sand, gravel, cobble, and lava pavement.

The boulder field at the base of the pinnacles provides important refuge for adult fishes including large numbers of yelloweye rockfish (*Sebastes ruberrimus*), tiger rockfish (*S. nigrocinctus*), prowfish (*Zaprora silenus*) and lingcod (*Ophiodon elongatus*) as well as octopus. Aggregations of small deepwater rockfishes occur here as well, including sharpchin (*S. zacentrus*), pygmy rockfish (*S. wilsoni*), and redstripe rockfish (*S. proriger*). Besides harboring adult fishes, the boulder field is also used as spawning habitat by lingcod. While it had been previously reported that lingcod spawn and nest-guard in shallow water, in-situ observations at the pinnacles have shown lingcods nest-guarding in the boulder field at depths to 140 m (O'Connell 1993). The female lays a large eggmass in a cave or crevice between boulders and the male fertilizes the eggs and guards the nest until hatching, at 7-11 weeks. During this time period the male is extremely territorial and aggressive. If the male is removed from the nest, other fishes and invertebrates quickly eat the eggs.

The sides and top of the pinnacles are comprised of columnar basalt, and *Primnoa* gorgonians provide ecologically important biogenic habitat for fishes on the steep walls of the pinnacles. Juvenile rockfishes occur in great abundance at the top, as do Puget Sound rockfish (*S. emphaeus*) a small rockfish that is important prey for other rockfish and lingcod. Dense assemblages of sessile invertebrates, including *Metridium* and other anemones, tunicates and hydrocorals, provide cover for these small fishes. Adult lingcod utilize the top of the pinnacles as a seasonal feeding platform after spawning, occurring in extremely dense aggregations during the late spring and early summer. The small size of the area and high density and feeding behavior of the lingcod make them extremely susceptible to fishing pressure. The water column above the pinnacles are used as well as the pinnacle structures themselves. Large schools of pelagic fishes congregate and feed on the plankton in the water column, including black (*S. melanops*), yellowtail (*S. flavidus*), dusky (*S. ciliatus*) and widow (*S. entomelas*) rockfishes.

The new mandate to identify, conserve, and enhance essential fish habitat (EFH) gives managers an important tool for developing sustainable fisheries and healthy ecosystems. The Magnuson-Stevens Act identifies EFH as the waters and substrate necessary to fish for spawning, breeding, feeding, growth, and growth to maturity. The pinnacles area provides habitat for all of these purposes for a variety of species and is extremely productive, in part due to its physical oceanography. Closure of this area would protect the fragile structures in the pinnacles. It would prevent the harvest or bycatch of species using the pinnacles during critical portions of their life history, and would allow a vital ecosystem to maintain natural population levels in an area surrounded by heavy fishing pressure. Because baseline information has already been collected on the habitat and the associated fish populations, it will be possible to monitor changes in diversity, distribution, and abundance of organisms.

1.2 Alternatives Considered

The alternatives proposed to be analyzed in the EA/RIR/IRFA for these amendments are the following:

Alternative 1: No action. Do not implement additional conservation measures to minimize adverse effects from fishing at this time.

Alternative 2 (preferred): Prohibit fishing in the Sitka Pinnacles Marine Reserve. To minimize adverse effects caused by fishing, to the extent practicable, a no-anchoring and no-fishing area would be implemented for a 2.5 square nautical mile area near Cape Edgecumbe, Sitka, which has been identified as an important habitat area for rockfish and lingcod.

Option 1: Close the pinnacles area to fishing for all Federally-managed species, and anchoring by all fishing vessels subject to Federal fisheries jurisdiction.

Option 2 (preferred): Close the pinnacles area to fishing and anchoring by commercial groundfish fishing vessels and commercial and sport halibut fishing vessels.

1.3 Management Background

A directed longline fishery for yelloweye rockfish and a directed fishery for lingcod (using dinglebar gear) have taken place in the proposed Sitka Pinnacles Marine Reserve (Gordon 1994). Given the behavior of lingcod on the pinnacles, in combination with the seasonally large abundance of fish there, catchability (q) is very close to 1. ADF&G felt that harvest was uncontrollable in this area and could result in localized depletion over a wider area, and closed the area to commercial lingcod and demersal shelf rockfish fishing under Emergency Order (EO) authority. In 1997 the charter fleet began actively targeting the pinnacles for lingcod and halibut, essentially creating a reallocation of fish from commercial users to charter users. In the summer of 1997 the Sport Fish Division of ADF&G closed the area to sport harvest of lingcod, after it determined that a harvest of over 0.5 mt of lingcod/nm² had occurred in this area.

In August of 1997, ADF&G submitted companion proposals to the Alaska Board of Fisheries (BOF) and the North Pacific Fishery Management Council requesting that the pinnacles area be closed permanently as a no-take groundfish marine refuge. The intent of the proposals was both to protect this unique habitat (both structural and living habitat) from degradation due to fishing and anchoring impacts, and to provide a refuge for all marine species in the pinnacles area. In February 1998 the BOF supported this request, implementing a permanent closure to the removal of all groundfish under their authority (currently lingcod, black rockfish, and demersal shelf rockfishes) in the Sitka Pinnacles Marine Reserve. However, the BOF does not have the authority to close this area to halibut and other groundfish species, and the current closure to lingcod and rockfish is not sufficient to protect the habitat in this area. Because the area is located in Federal waters, the Council provides the clearest avenue to ensure its protection.

In August 1997, the Council received a proposal from ADF&G to prohibit all fishing in the pinnacles area, as the State did not have authority over many of the fisheries that occur in the EEZ. In September, the Council reviewed the proposal and tasked staff to include this measure in the EA/RIR/IRFA analysis for the EFH amendments, for initial review at its April meeting. NMFS, through the Council, has the authority to prohibit fishing for all Federally managed fisheries within the pinnacles area. Federally managed fisheries in the Gulf of Alaska include scallop, groundfish, and salmon fisheries. The Council can also recommend to NMFS a prohibition on halibut fishing (sport and commercial) within the proposed area closure. The Northern Pacific Halibut Act grants the Council authority to develop and the Secretary to implement regulations that are "not in conflict with" IPHC regulations (U.S.C. § 773 c(c)).

The Council took action on the proposal at its June, 1998 meeting. The preferred alternative adopted by the Council provided as follows: "close the pinnacle area to anchoring and fishing for groundfish, scallops, and halibut, but allow trolling for salmon within the area, including recreational, charter and commercial." NMFS notes that the scallop and salmon fisheries are managed by the State of Alaska pursuant to Federal FMPs. Therefore, NMFS defers implementation of conservation and management measures related to these fisheries to the State, and has limited Option 2 to fishing and anchoring measures for those fisheries managed directly at the Federal level – i.e., groundfish and halibut.

1.4 Evaluation of the Options

Option 1 would prohibit all Federally-managed fishing and all anchoring by fishing vessels subject to Federal jurisdiction within the pinnacles area. In order to facilitate enforcement, the Coast Guard would prefer Option 1, under which the area would be closed to all fishing.¹ Violations could then be determined by aircraft, which could monitor the area from nearby Air Station Sitka during the normal course of operations. Option 1 is not NMFS's preferred option, however, for a number of reasons. First, as noted above, NMFS defers management of the scallop and salmon fisheries to the State of Alaska. The State has already taken action to close the Central Southeast Outside Area to scallop dredging, which area includes the proposed Sitka Pinnacles Marine Reserve. In addition, closing the pinnacles to salmon fishing appears to provide little benefit, since most salmon fishing is done with troll gear, which does not disturb bottom habitat. NMFS will continue to work with the State to address anchoring within the pinnacles area by State-regulated fishing vessels.

¹Pers. comm., Captain Vince O'Shea, 5/4/98

2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

An environmental assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will result in a significant impact on the human environment. If the action is determined not to be significant, based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) are the final environmental documents required by NEPA. An environmental impact statement (EIS) must be prepared for major Federal actions significantly affecting the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Section 1, and the list of preparers is in Section 6. This section contains the discussion of the environmental impacts of the alternatives, including impacts on EFH, on threatened and endangered species, and on marine mammals.

2.1 Environmental Impacts of the Alternatives

The environmental impacts generally associated with fishery management actions result primarily from (1) the harvest of fish stocks itself, which can change the population structure of the target species, the amount of food available to predators and scavengers, and the species mix within the ecosystem; and (2) methods of harvesting or discarding that harvest. Different kinds of fishing gear have various effects on benthic habitat and varying capacity to capture or entangle non-target organisms. The discard of waste products from fish processing is another fishing practice which affects the ecosystem.

2.2 Impacts on Essential Fish Habitat

The new mandate in the Magnuson-Stevens Act to identify, conserve, and enhance EFH grew out of the recognition that managing fisheries by dealing with individual species in isolation is not sufficient to maintain sustainable fisheries. It is also necessary to study the interactions of species and their habitat needs, and to manage the fisheries in such a way as to maintain a healthy ecosystem.

The Magnuson-Stevens Act requires that Federal agencies consult with the Secretary of Commerce with respect to any action "authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act" (Section 305(b)(2)). EFH is defined under the Act as the waters and substrate necessary to fish for spawning, breeding, feeding, growth, and growth to maturity. For species managed under the three FMPs pertaining to the Gulf of Alaska, EFH is described and identified in three amendments approved January 20, 1999. These are: Amendment 55 to the FMP for Groundfish of the Gulf of Alaska, Amendment 5 to the FMP for Scallop Fisheries off Alaska, and Amendment 5 to the FMP for the Salmon Fisheries in the EEZ off the Coast of Alaska.

According to the habitat descriptions in these amendments, a number of species at different life stages use the pinnacles area for breeding, feeding, and growth to maturity. See Table 1 for a list of managed species at different life stages which were identified as having EFH in the area proposed for closure. This list only includes species' life stages for which there was enough information to map EFH for the FMP amendments. The exclusion of a species or life stage of a species does not necessarily mean that the species at that life stage does not occur in the pinnacles area. In addition to the federally managed species listed, which were included in the EFH amendments, the area is used by Pacific halibut and significant concentrations of golden king crab, as well as state-managed species including black rockfish, other demersal shelf rockfish species, and lingcod, which as previously mentioned use the bottom habitat for spawning and are also present in great numbers as adults.

Table 1. EFH for federally managed species within rectangle defined as Sitka Pinnacles Marine Reserve.²

<i>Species</i>	<i>General Distribution</i>	<i>Known Concentration</i>	<i>Eggs</i>	<i>Larvae</i>	<i>Juveniles</i>	<i>Late Juveniles</i>	<i>Adults</i>
Yelloweye Rockfish	X					X	X
Walleye Pollock	X		X	X	X	X	X
Skates spp.	X					X	X
Sculpin spp.	X					X	X
Sablefish	X					X	X
Shortraker & Rougheye Rockfish	X					X	X
Rock Sole	X					X	X
Pacific Ocean Perch	X					X	X
Pacific Cod	X					X	X
Northern Rockfish	X					X	X
Flathead Sole	X					X	X
Dusky Rockfish	X					X	X
Dover Sole	X					X	X
Arrowtooth Flounder	X					X	X
Chinook, Chum, Coho, Pink and Sockeye Salmon	X					X	X

Commercial fishing has various direct and indirect effects on fish habitat. It removes large amounts of biomass, thus changing the size and sex structure of the target species as well as changing species composition and therefore predator-prey ratios. Changes in the ecosystem due to cyclical changes in oceanic temperature can have strong effects on the ecosystem, which may need to be counterbalanced by a cautionary approach to the fishery (NPFMC 1998). A discussion of the effects of longline gear is contained below in section 2.2.1.

²EFH information from Amd. 55 to FMP for Groundfish of the Gulf of Alaska, pers. comm., Marshal Kendziorek, Resource Data, Inc. August 3, 1999 and pers. comm. Tory O'Connell, March 29, 2000.

2.2.1 Effects of Fishing Gear on EFH

The gear type relevant to this analysis is longline gear. Dinglebar gear has also been used in the area to fish for lingcod, but lingcod fishing is regulated by ADF&G, which has closed all fishing under its authority in the pinnacles area since 1995. Trawling was prohibited in the GOA east of 140 deg. W long. as of March 23, 1998 under Amendment 41 to the GOA FMP (63 FR 8356).

Little research has been done on the effects of longlining on the benthic habitats of the North Pacific. However, NMFS scientists did observe halibut longline gear during submersible dives off southeast Alaska (High 1992). They noted that during the retrieval process, the line sweeps the bottom for considerable distances before lifting off the bottom, snagging whatever objects are in its path. Soft corals appeared unaffected, but hard corals were broken, smaller rocks were upended, and invertebrates and other light objects were often dislodged.

The mortality of discards caught by longline gear is another pertinent question. Some species, such as rockfish, may not survive the change in pressure if they are hauled up quickly from the bottom. Studies of Pacific halibut have shown that unless they are released carefully from hooks, mortality may be high. See Williams (1997) for information on halibut mortality rates. For more information on the effects of fishing gear on EFH, see the 1998 Supplementary Environmental Impact Statement for groundfish total catch specifications in the BSAI and GOA (SEIS) (NMFS 1998a), the EA for the EFH Amendments (NPFMC 1998), the "Ecosystem Considerations" chapter of the 1999 SAFE (Livingston 1999), and the EFH Assessment for the 2000 Groundfish Specifications analysis (NMFS 2000, Appendix E).

2.2.2 Other Impacts on EFH

Anchoring on the pinnacles can damage the fragile structures growing on them. EFH can also be impacted by plastic debris, which is introduced into the marine environment from offshore vessels and from general shore activities. This debris can include synthetic netting, pots, longline gear, packing bands, and rope. Discharges from vessels can also affect EFH. These effects have not been quantified in the area proposed for closure.

2.2.3 Conclusion: Effects of the Alternatives on EFH

Adopting Alternative 2 to close the pinnacles area to fishing and anchoring would protect several species during critical portions of their life history and would allow a vital ecosystem to maintain itself at natural levels in an area surrounded by heavy fishing pressure. The fragile structures which are part of the physical and living habitat would be protected as well. Because baseline information has already been collected on the habitat and its associated fish populations, changes in diversity, distribution and abundance of organisms can be accurately monitored. Adopting Alternative 2 would not have an adverse impact on EFH and is intended to have a beneficial effect.

The consequence of adopting the No Action Alternative would be that a habitat area identified as vulnerable and important for rockfish and lingcod would not be protected from potential adverse effects due to fishing and anchoring. Fish populations could become threatened by habitat loss. Commercial and recreational fishermen dependent on declining fisheries would not benefit from the increased protection that fish stocks could receive from establishing a no-fishing zone in this relatively small but highly productive area.

2.3 Impacts on Endangered or Threatened Species

The ESA provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The program is administered jointly by the Department of Commerce, represented by NMFS, for most marine

mammals, marine and anadromous fish, and marine plants; and the Department of Interior, represented by the U. S. Fish and Wildlife Service, for all birds, terrestrial and freshwater wildlife, and plants.

Federal agencies have an affirmative mandate to conserve listed species. (Rohlf 1989). One aspect of this mandate is that Federal actions themselves must be in compliance with the ESA's provisions. In cases where the action is not expected to have an adverse affect on listed species, the agency taking action consults informally with the expert agency (NMFS or the U. S. Fish and Wildlife Service), which in turn issues a letter of concurrence. In cases where the action is expected to have an adverse impact on listed species, the action agency consults formally with the expert agency, which in turn develops a biological opinion. That opinion is then used to determine whether or not the proposed action is "likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of critical habitat for the species.³ If the determination is affirmative, the expert agency suggests reasonable and prudent alternatives to modify the action so that it will no longer pose the jeopardy of extinction of listed species and will not adversely modify their critical habitat. These reasonable and prudent alternatives must be incorporated into the Federal action if it is to proceed. If the biological opinion concludes that there is no such jeopardy, the expert agency may nonetheless suggest management measures intended to reduce the negative impacts to the listed species. These suggestions are of an advisory nature. If a likelihood exists of any taking⁴ occurring during promulgation of the action, an incidental take statement may be appended to a biological opinion to provide for the amount of take that is expected to occur. An incidental take statement is not the equivalent of a permit to take.

Fisheries conducted under FMPs are federally regulated actions and therefore subject to ESA Section 7 consultations. For fishery actions, NMFS initiates the consultation with the expert agency (NMFS itself or the U.S. Fish and Wildlife Service), and receives the resulting biological opinion. The Council may be invited to participate in the compilation, review, and analysis of data used in the consultations. The determination of jeopardy or no jeopardy, however, is the responsibility of the appropriate expert agency.

Twenty-one species occurring in the GOA management area are currently listed as endangered or threatened under the ESA. These are listed in Table 2. They include six great whale species, one pinniped, eleven Pacific salmon, and two seabird species. Section 7 consultations have been done for all the above listed species, some individually and some as groups. Summaries of the results of these consultations are contained below. Further information may be found in the SEIS (NMFS 1998a).

Endangered Cetaceans. NMFS concluded a formal section 7 consultation on the effects of the BSAI and GOA groundfish fisheries on endangered cetaceans within the GOA on April 19, 1991 (NMFS 1991). This opinion concluded that the fisheries are unlikely to jeopardize the continued existence or recovery of endangered whales. No new information exists that would cause NMFS to alter the conclusion of the 1991 opinion:

³When species are listed as threatened or endangered under the ESA, critical habitat for the newly listed species must be designated concurrent with the new listing, to the "maximum extent prudent and determinable" (16 U.S.C. § 1533(b)(1)(A)).

⁴The term "take" under the ESA means, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct" (16 U.S.C. § 1538(1)(B)).

Table 2. Species currently listed as endangered or threatened under the ESA and occurring in the GOA groundfish management areas.

Common Name	Scientific Name	ESA Status
Northern Right Whale	<i>Balaena glacialis</i>	Endangered
Sei Whale	<i>Balaenoptera borealis</i>	Endangered
Blue Whale	<i>Balaenoptera musculus</i>	Endangered
Fin Whale	<i>Balaenoptera physalus</i>	Endangered
Humpback Whale	<i>Megaptera novaeangliae</i>	Endangered
Sperm Whale	<i>Physeter macrocephalus</i>	Endangered
Snake River Sockeye Salmon	<i>Onchorynchus nerka</i>	Endangered
Short-tailed Albatross	<i>Diomedea albatrus</i>	Endangered
Steller Sea Lion	<i>Eumetopias jubatus</i>	Endangered and Threatened ²
Snake River Fall Chinook Salmon	<i>Onchorynchus tshawytscha</i>	Threatened
Snake River Spring/Summer Chinook Salmon	<i>Onchorynchus tshawytscha</i>	Threatened
Puget Sound Chinook Salmon	<i>Onchorynchus tshawytscha</i>	Threatened
Lower Columbia River Chinook Salmon	<i>Onchorynchus tshawytscha</i>	Threatened
Upper Willamette River Chinook Salmon	<i>Onchorynchus tshawytscha</i>	Threatened
Upper Columbia River Spring Chinook Salmon	<i>Onchorynchus tshawytscha</i>	Endangered
Upper Columbia River Steelhead	<i>Onchorynchus mykiss</i>	Endangered
Snake River Basin Steelhead	<i>Onchorynchus mykiss</i>	Threatened
Lower Columbia River Steelhead	<i>Onchorynchus mykiss</i>	Threatened
Upper Willamette River Steelhead	<i>Onchorynchus mykiss</i>	Threatened
Middle Columbia River Steelhead	<i>Onchorynchus mykiss</i>	Threatened
Steller's Eider	<i>Polysticta stelleri</i>	Threatened

¹ Steller sea lions are listed as endangered west of Cape Suckling and threatened east of Cape Suckling.

Steller sea lion. The Steller sea lion range extends from California and associated waters to Alaska, including the Gulf of Alaska and Aleutian Islands, into the Bering Sea and North Pacific and into Russian waters and territory. In 1990, the species was listed as threatened under the Endangered Species Act (60 FR 51968). In 1997, NMFS reclassified Steller sea lions as two distinct populations (62 FR 24345). The population west of 144E.W. longitude (a line near Cape Suckling, Alaska) was changed to endangered status; the remainder of the U.S. Steller sea lion population is still listed as threatened.

In 1993, NMFS designated critical habitat for the Steller sea lion (58 FR 45278). The designation was based on the Recovery Team's determination of habitat sites essential to reproduction, rest, refuge, and feeding. Listed critical habitats in Alaska include all rookeries, major haul-outs, and specific aquatic foraging habitats of the BSAI and GOA. No changes in critical habitat designation were made as result of the 1997 re-listing.

Beginning in 1990 when Steller sea lions were first listed under the ESA, NMFS determined that both groundfish fisheries may adversely affect Steller sea lions, and therefore conducted Section 7 consultations on the overall fisheries and subsequent changes in the fisheries. These and succeeding consultations and recommendations, and actions resulting from them, are listed in section 3.8.3 of the 1998 SEIS (NMFS 1998a).

Since publication of the 1998 SEIS, NMFS has conducted further consultations pursuant to Section 7 of the ESA. NMFS completed a biological opinion on December 3, 1998, as revised December 16, 1998, that evaluated the effects of the Atka mackerel fisheries of the BSAI and the pollock fisheries of the BSAI and the GOA on candidate and listed species, including the Steller sea lion, and on designated critical habitat. NMFS concluded that the Atka mackerel fisheries were not likely to jeopardize candidate or listed species, nor to adversely modify any designated critical habitat. However, NMFS concluded that the pollock fisheries were likely to jeopardize the endangered western population of Steller sea lions and to adversely modify their critical habitat. On October 15, 1999, NMFS issued revised final reasonable and prudent alternatives (RFRPAs) to avoid the likelihood of the pollock fisheries jeopardizing the endangered western population of Steller sea lions and adversely modifying their critical habitat. The RFRPAs were implemented by emergency rule at the commencement of the 2000 pollock fisheries. 65 Fed. Reg. 3892 (January 25, 2000).

Pursuant to section 7 of the ESA, NMFS initiated consultation on the effects of the 2000 BSAI and GOA groundfish fisheries on candidate and listed species, including the Steller sea lion, and on designated critical habitat. The biological opinion prepared for this consultation, dated December 23, 1999, concluded that the 2000 BSAI and GOA groundfish fisheries authorized under the 2000 TAC specifications were not likely to jeopardize candidate or listed species, nor to adversely modify designated critical habitat. However, in an order dated January 25, 2000, the District Court for the Western District of Washington concluded that, pursuant to section 7 of the ESA, NMFS must consult on the fishery management plans for the groundfish fisheries of the BSAI and GOA. Greenpeace v. NMFS, Civ. No. 98-492Z (W. D. Wash). Prior to the issuance of the court's order, NMFS already had initiated consultation to evaluate the cumulative effects of the BSAI and GOA groundfish fisheries, over a multi-year period, on candidate and listed species and critical habitat. NMFS is currently reviewing this ongoing consultation for compliance with the court's January 25, 2000 order.

There are no Steller sea lion rookeries or areas listed as Steller sea lion critical habitat in or near the Sitka Pinnacles Marine Reserve.

Pacific Salmon. No species of Pacific salmon originating in freshwater habitat in Alaska are listed under the ESA. The listed species originate in freshwater habitat in the headwaters of the Columbia (Snake) River. During ocean migration to the Pacific marine waters a small (undetermined) portion of the stock goes into the Gulf of Alaska as far east as the Aleutian Islands. In that habitat they mix with hundreds to thousands of other stocks originating from the Columbia River, British Columbia, Alaska, and Asia. The listed fish are not visually distinguishable from the other, unlisted, stocks. Mortal take of them in the chinook salmon bycatch portion of the fisheries is assumed based on sketchy abundance, timing, and migration pattern information.

NMFS designated critical habitat in 1992 (57 FR 57051) for the Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook salmon. The designations did not include any marine waters.

NMFS issued biological opinions and no-jeopardy determinations for listed Pacific salmon in the Alaska groundfish fisheries in 1994 and 1995 (NMFS 1994; NMFS 1995). Conservation measures were recommended to reduce salmon bycatch and improve the level of information about the salmon bycatch. The no-jeopardy determination was based on the assumption that if total salmon bycatch is controlled, the impacts to listed salmon are also controlled. The incidental take statement appended to the 1995 biological opinion allowed for take of one Snake River fall chinook and zero take of either Snake River spring/summer chinook or Snake River sockeye, per year. As explained above, it is not technically possible to know if any have been taken. Compliance with the biological opinion is stated in terms of limiting salmon bycatch per year to under 55,000 and 40,000 for chinook salmon, and 200 and 100

sockeye salmon in the BSAI and GOA fisheries, respectively. A new biological opinion is currently being prepared by NMFS.

Short-tailed albatross. The entire world population is estimated at 1200, 600 of them breeding birds. The population is growing but is still critically endangered because of its small size and restricted breeding range. Past U. S. Fish and Wildlife (USFWS) observations indicate that older short-tailed albatrosses are present in Alaska primarily during the summer and fall months along the shelf break from the Alaska Peninsula to the Gulf of Alaska, although 1- and 2-year old juveniles may be present at other times of the year (USFWS 1993). Consequently, these albatrosses generally would be exposed to fishery interactions most often during the summer and fall—during the latter part of the second and the whole of the third fishing quarters.

Formal consultation by the USFWS on the effects of the groundfish fisheries on the short-tailed albatross concluded that the BSAI and GOA groundfish fisheries would adversely affect the short-tailed albatross but would not jeopardize the continued existence of that species. An incidental take of two birds per year was authorized (USFWS 1989). Subsequent consultations in 1995, 1997 and 1999 on changes to the fishery that might affect the short-tailed albatross also concluded no jeopardy. The 1997 biological opinion (USFWS 1997) determined that the trawl and pot fishing activities in the GOA and BSAI are not likely to adversely affect short-tailed albatrosses. Since 1997, therefore, the biological opinions have examined the hook-and-line fisheries only. The most recent opinion, issued March 19, 1999 (USFWS 1999) concluded: “. . . it is the Service's Biological Opinion that the GOA and BSAI hook-and-line fisheries, as proposed, are not likely to jeopardize the continued existence of the short-tailed albatross. No critical habitat has been designated for this species, therefore, none will be affected.” The Incidental Take Statement issued at the same time stated: “The USFWS anticipates up to four short-tailed albatrosses could be taken during the 2-year period of 1999 and 2000 as a result of the hook-and-line groundfish fishing activities in the GOA/BSAI areas . . .”

A separate formal section 7 consultation was conducted on the halibut fishery in 1998. The USFWS determined that commercial halibut longline fishing off Alaska within the International Pacific Halibut Commission regulatory zones 2B, 2C (where the proposed reserve is located), 3A, 3B, 4A, 4B, 4C, 4D, and 4E is likely to adversely affect, but not likely to jeopardize, short-tailed albatrosses. The incidental take statement accompanying the 1998 biological opinion set the expected level of incidental take of short-tailed albatrosses at 2 birds every 2 years (USFWS 1998).

Two fishery-related takes of short-tailed albatrosses were reported in the 1980s: one bird was found dead in a fish net north of St. Matthew island in July 1983, and the second was taken by a vessel fishing for halibut in the Gulf of Alaska near Middleton Island in October, 1987. In 1995, two birds were taken by the IFQ sablefish fishery: one, in August, in the western Gulf of Alaska south of the Krenitzin Islands; the other, in October, in the Bering Sea. From 1996 to 1998, three birds were taken, all in the BSAI longline fisheries, all in the month of September (USFWS 1999). No birds have been reported taken in the vicinity of the Sitka Pinnacles or more generally in the eastern GOA.

Conditions for Reinitiating Consultation. For all ESA listed species, consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, new information reveals effects of the action that may affect listed species in a way not previously considered, the action is subsequently modified in a manner that causes an effect to listed species that was not considered in the biological opinion, or a new species is listed or critical habitat is designated that may be affected by the action.

2.4 Impacts of the Alternatives on Endangered or Threatened Species.

The proposed action to establish a no-fishing zone off Sitka is designed to protect vulnerable and sensitive fish habitat from the potential effects of fisheries. None of the alternatives or alternative options considered in this EA is expected to have an adverse impact on endangered, threatened, or candidate species. Neither of the options considered under Alternative 2 would affect Total Allowable Catch (TAC) amounts, Prohibited Species Catch (PSC) limits, or takes of listed species, or otherwise affect listed species in ways not previously considered in the consultations on the groundfish fisheries of the GOA discussed above.

2.5 Impacts on Marine Mammals

Marine mammals not listed under the ESA that may be present in the GOA include cetaceans, [minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and the beaked whales (Baird's, *Berardius bairdii*; Cuvier's, *Ziphius cavirostris*; and Stejneger's, *Mesoplodon stejnegeri*)] as well as pinnipeds [northern fur seals (*Callorhinus ursinus*), and Pacific harbor seals (*Phoca vitulina*)], and the sea otter (*Enhydra lutris*).

None of the alternatives would affect takes of marine mammals. None of the alternatives would alter the harvest of groundfish, crab, scallops, or salmon in such a way as to adversely affect marine mammals.

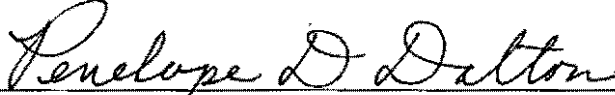
2.6 Coastal Zone Management Act

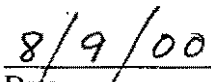
Implementation of each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

2.7 Conclusions or Finding of No Significant Impact

None of the FMP amendment alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations. Furthermore, closure of the Sitka Pinnacles Marine Reserve to commercial fishing for groundfish, commercial and recreational fishing for Pacific halibut, and anchoring by commercial groundfish and halibut fishing vessels, is not expected to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

This Environmental Assessment tiers off the SEIS (NMFS 1998a) and the EA for the 1999 Groundfish Total Allowable Catch Specifications (NMFS 1998b).


Assistant Administrator for Fisheries, NOAA


Date

3.0 REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS OF THE ALTERNATIVES

This section provides information about the economic and socioeconomic impacts of the alternatives including identification of the individuals or groups that may be affected by the action, the nature of these impacts, quantification of the economic impacts if possible, and discussion of the trade-offs between qualitative and quantitative benefits and costs.

The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement from the order:

In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.

This section also addresses the requirements of E.O. 12866 to provide adequate information to determine whether an action is "significant" under E.O. 12866.

E. O. 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant." A "significant regulatory action" is one that is likely to have the following consequences:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A regulatory program is "significant" if it is likely to result in the effects described above.

3.1 Economic Review of Alternatives

E. O. 12866 requires a quantitative estimate of the expected change in net benefits expected from an action, or, if data needed to make such an estimate are lacking, a qualitative estimate of the probable direction and magnitude of net benefits. A quantitative estimate has not been attempted in this amendment package. Cost information, including fixed and variable operating cost statistics, is a crucial element of an effective net benefit analysis, and cost information for the BSAI groundfish, salmon, scallop and halibut fisheries is not currently available to the analysts.

In qualitative terms, however, closing this area to all fishing, even if salmon trolling were included, is expected to result in very small if any economic impacts to fishermen. The area constitutes a tiny fraction, less than 0.0001%, of the total available fishing area in the eastern GOA (about 340,000 sq. nm). Many fisheries have already been excluded from the area, and therefore the proposed action could impose no incremental cost or burden on these operators. Trawling was prohibited in the eastern Gulf of Alaska under regulations implementing GOA Groundfish FMP Amendment 41 (63 FR 8356, February 19, 1998). The Alaska Board of Fisheries has closed this area under emergency order since June 1997 to all commercial, sport, and subsistence fishing for groundfish under its jurisdiction. Commercial longline fishermen have tended to move to other areas to fish, because the area is already closed to fishing for some species and there is local support for protecting the pinnacles habitat.

One of the goals in creating a marine reserve is to allow natural production in an area to proceed unimpeded. The stocks of fish may then to some extent replenish surrounding areas. Although there is no proof this will occur if the proposed reserve is closed to fishing, it is likely that it will and that fishing opportunity will increase in adjacent areas, with long-term attributable economic benefits to local and regional fisheries and communities.

Other fisheries may be slightly impacted at a local level. Salmon trollers have used the location of the more prominent of the two pinnacles as a major turnaround for the Kruzof troll drag. If the option to close the reserve to salmon fishing were adopted, it might be difficult for trollers to determine whether their gear has strayed into the closed area. Furthermore, many charter operators have utilized the proposed reserve. However, the area takes up only a small portion of the fishable grounds in the Sitka Sound region, and its closure would not preempt their activities nor constitute a significant economic or operational hardship to these operators. The local Sitka Fish and Game Advisory Committee (which reports to the BOF and includes representatives from all user groups) unanimously approved the proposal to close the area to all groundfish fishing. In its 1998 proposal to the BOF to create the reserve, ADF&G determined that the proposal would not result in additional direct costs for private persons from any sectors of the commercial or recreational fleet, primarily because of the small size of the closure relative to available fishing grounds.

Table 3 presents data summarizing the number of vessels by gear and area that harvested Alaska groundfish in the GOA in 1998. It is based on information in the Economic SAFE, tables 27 and 28 (Hiatt and Terry 1999) and on the NMFS 1998 Blend Database.

Table 3. Number of vessels that caught groundfish in the GOA area in 1998, by vessel length class (measured by length overall (LOA) in feet), catcher type, and gear.

	<60'	60-124'	>125'	Total
<u>Catcher vessels</u>				
Hook and line	728	122	3	853
Pot	124	47	5	176
Trawl	59	90	23	172
<u>Catcher/processors</u>				
Hook and line	2	8	8	18
Pot	0	0	1	1
Trawl	0	7	17	24
Total all vessels				1244
Total excluding trawl vessels				1048

The closure would apply to GOA groundfish, scallop and halibut fisheries under Preferred Option 2; under Option 1, salmon would be included.⁵ Scallop dredging is currently closed in the "Central Southeast Outside" area, which includes the proposed closure area, which in any event includes no scallop beds. The closure area is also included in the no-trawl zone that was established to implement Amendment 41 to the FMP for the GOA (63 FR 8356, February 19, 1999). Therefore, the universe of potential entities affected, at the limit, is all of the participants in the groundfish, halibut and salmon fisheries. The estimated total number of entities (participants) in the GOA groundfish fisheries,

⁵ See Footnote 3, page 4.

excluding the trawlers, is 1,048, according to Table 3. There were 1,570 longline halibut vessels which fished in the GOA in 1998. An additional 2,462 commercial fishing permits were issued for the 1998 salmon fishery in southeast Alaska, of which 1,408 were for hand trolling and 966 for power trolling (drift gillnets, set gillnets and purse seiners are not legal in the EEZ). At the limit, therefore, 4,992 entities could be affected, potentially, if Alternative 2, Option 1 were selected, and 2,618 if Alternative 2, Option 2 were selected. This excludes charter fishing operators discussed below. ✓

Realistically, however, including all vessels that fished in the GOA greatly inflates the number of vessels whose opportunity to fish might be affected by this rule. The proposed closure is in Statistical Area (S. A.) 355631. Information from State of Alaska Commercial Fisheries Entry Commission fish ticket data shows that in 1998, 224 vessels fished for groundfish in S. A. 355631. The NMFS IFQ landings database shows that 67 vessels landed IFQ halibut in S. A. 355631. Therefore, 300 is a more realistic estimate of the universe of commercial groundfish and halibut vessels which fish in the vicinity and whose opportunity to fish could potentially be affected by the rule.

The actual number of vessels affected by the rule will likely be even smaller. Few fishing vessels currently use the pinnacles area. Most if not all groundfish longliners, and halibut fishermen as well, have voluntarily avoided the area since the summer of 1998, when ADF&G regulations prohibiting the take of groundfish species under their jurisdiction took effect. Local fishermen have been supportive of protecting the pinnacles habitat.

Even if a few vessels were still fishing in the proposed reserve, it is unlikely that any of them would be adversely affected by the closure to any significant extent; as mentioned in Section 3.1, the area constitutes an extremely small percentage of the available fishing grounds.

In terms of salmon fishing, which would be prohibited under Option 1, the vast majority of trolling permits are never fished.⁶ Sitka ADF&G aerial surveys have counted fewer than 100 trollers for the past several years on the grounds in question, and these generally don't fish the area itself, but may skirt the edge when making their turn to return to their targeted area.⁷

In addition to the commercial fishing vessels, charter fishing vessels and private recreational vessels fish for Pacific halibut in Area 2C – the 16,129 square nautical mile IPHC regulatory area in which the reserve is located. Although the sport fishermen's opportunity to fish could be affected by adoption of Alternative 2, the reserve is outside the usual range of fishing trips from Sitka, as explained in Section 4.5. Table 4 summarizes ADF&G 1999 sportfishing logbook data for IPHC area 2C.

Table 4. Charter Vessels in IPHC area 2C		
	1998	1999
Number of unique active businesses	397	386
Number of unique active vessels	581	588

⁶Pers. comm, Herman Saviko, ADF&G biologist, Juneau, speaking to Lew Quierolo, NMFS regional economist, February, 2000.

⁷Pers. comm, Tori O'Connell, speaking to Lew Quierolo, February, 2000.

Of the 581 vessels active in Area 2C in 1998, 364 were homeported in Sitka and registered with the Commercial Fisheries Entry Commission. Of these, 191 targeted bottomfish, including Pacific halibut. Table 5 summarizes the number of resident and non-resident anglers who fished from Sitka and more generally from IPHC Area 2C in 1998, according to Statewide Survey data. This information includes salmon and halibut fishing effort together; as the target fishery for a given fishing trip is not identified in the survey. The charter client data includes salmon fishing as well as halibut fishing.

	Charter					Noncharter				
	Resident	%	Nonres	%	Total	Resident	%	Nonres	%	Total
Sitka	649	5%	12,498	95%	13,147	4,765	41%	6,760	59%	11,525
Total for Area 2C	2,424	6%	37,976	94%	40,400	24,555	52%	22,450	48%	47,005

3.2 Reporting and Compliance Costs

Only minimal additional administration costs are expected from implementing the preferred alternative closing the GOA to fishing and anchoring. The area is near Coast Guard Air Station Sitka and could be monitored during the normal course of operations. Some costs could be incurred for prosecuting cases for violations of the regulations. The Coast Guard has stated a preference for option 1, which would close the area to all fishing, as it would be easier to monitor than preferred option 2, which excludes salmon fishing.⁹ The Coast Guard also stated that the level of public support is "important in evaluating potential compliance with a regulation." At the April 1998 Council meeting, ADF&G staff indicated that the proposal had strong support from all segments of the commercial and recreational fishing community.

3.3 Summary Findings of Economic Impacts

The action proposed in this plan amendment is to establish a small marine reserve off Sitka to prevent adverse effects from fishing and anchoring. Although the area is productive, it represents a tiny proportion of fishable grounds, it is already closed to trawling and to fishing for state-managed species, and is currently used very little by fishermen. There is local support for protecting the reserve. Closure would not be expected to result in measurable adverse impacts to any of the identified user groups or individuals. On the other hand, long-term economic benefits are likely to result from establishment of the reserve because of the increased production anticipated, which could overflow into adjacent fishing grounds. As discussed in the previous section, closing this area to fishing, either under Option 1 or Option 2, is not expected to cause significant economic impacts to fishermen, affiliated businesses, or local communities. On a qualitative basis, net national benefits are expected to increase long-term through enhanced conservation benefits and possible increased production in adjacent areas.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866.

⁹Letter to David Witherell from J. V. O'Shea, Captain, U.S. Coast Guard, 17th Coast Guard District, May 4, 1998.

4.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The Regulatory Flexibility Act (RFA), first enacted in 1980, was designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a federal regulation. The RFA has three major goals: (1) to increase agencies' awareness and understanding of the impact of their regulations on small business; (2) to require that agencies communicate and explain their findings to the public, and (3) to encourage agencies to use flexibility and to provide regulatory relief to small entities. The RFA emphasizes predicting impacts on small entities as a group distinct from other entities and on the consideration of alternatives that may minimize the impacts while still achieving the stated objective of the action.

On March 29, 1996, President Clinton signed the Small Business Regulatory Enforcement Fairness Act. Among other things, the new law amended the RFA to allow judicial review of an agency's compliance with the RFA. The 1996 amendments also updated the requirements for a final regulatory flexibility analysis, including a description of the steps an agency must take to minimize the significant economic impact on small entities. Finally, the 1996 amendments expanded the authority of the Chief Counsel of Advocacy of the Small Business Administration (SBA) to file amicus briefs in court proceedings involving an agency's violation of the RFA.

4.1 Requirement to Prepare an IRFA

For each proposed rule, NMFS must prepare an initial regulatory flexibility analysis unless we certify that the action is not expected to have a significant economic impact on a substantial number of small entities. The central focus of the IRFA should be on the economic impacts of a regulation on small entities and on the alternatives that might minimize the impacts and still accomplish the statutory objectives. Under 5 U.S.C., Section 603(b) of the RFA, each IRFA is required to address:

- A description of the reasons why action by the agency is being considered;
- A succinct statement of the objectives of, and the legal basis for, the proposed rule;
- A description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply (including a profile of the industry divided into industry segments, if appropriate);
- A description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
- An identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap or conflict with the proposed rule;
- A description of any significant alternatives to the proposed rule that accomplish the stated objectives of the Magnuson-Stevens Act and any other applicable statutes and that would minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as:

1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
3. The use of performance rather than design standards;
4. An exemption from coverage of the rule, or any part thereof, for such small entities.

4.2 What is a Small Entity?

The RFA recognizes and defines three kinds of small entities: (1) small businesses, (2) small non-profit organizations, and (3) and small government jurisdictions.

Small businesses. Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern' which is defined under Section 3 of the Small Business Act. 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominant in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor. . . A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the form is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the United States, including fish harvesting and fish processing businesses. A business involved in fish harvesting is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual receipts not in excess of \$ 3 million for all its affiliated operations worldwide. A seafood processor is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 500 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business involved in both the harvesting and processing of seafood products is a small business if it meets the \$3 million criterion for fish harvesting operations. Finally, a wholesale business servicing the fishing industry is a small business if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

The SBA has established "principles of affiliation" to determine whether a business concern is "independently owned and operated." In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community

Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities, solely because of their common ownership.

Affiliation may be based on stock ownership under the following conditions: (1) If a person owns or controls, or has the power to control, 50% or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, that person is considered an affiliate of the firm; (2) If two or more persons each owns, controls or has the power to control less than 50% of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors or general partners controls the board of directors and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor and subcontractor are treated as joint venturers if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such relationship, including contract management, technical responsibilities, and the percentage of subcontracted work.

Small organizations. The RFA defines a "small organization" as any nonprofit enterprise that is independently owned and operated and not dominant in its field.

Small governmental jurisdictions. The RFA defines a "small governmental jurisdictions" as a city, county, town, township, village, school district, or special district with a population of fewer than 50,000.

4.3 Reason for considering the proposed action

A description of the problem underlying the proposed action, and the objectives of the action, is contained in Section 1.1 of this combined EA/RIR/IRFA document.

4.4 Number and description of affected small entities

In order to identify the number and type of business concerns participating which would be affected by the proposed action and which meet the definition of "small entities," each must be measured against the size and affiliation standards outlined in Section 4.2.

In Section 3.1, Table 3, the total number of entities in the GOA groundfish fisheries was estimated at 1,048 (excluding trawl vessels which are already prohibited from the area). In addition, 1,570 longline halibut vessels fished in the GOA in 1998, and 2,374 permits for salmon trolling were issued in 1998. Of the groundfish vessels, 19 are catcher/processors which are estimated to have gross receipts higher than \$3 million and would not qualify as small entities. Of the groundfish catcher boats, some may have ownership affiliations with large inshore or offshore processors. Some may be affiliated with other vessels or operations that taken together with their affiliated entities exceed the \$3 million gross receipts criterion for small entities when their fishery earnings are taken as a whole. However, the preponderance of vessels operating in the GOA take in annual revenues below this threshold. Detailed ownership and affiliation information is very limited, but it appears that most of the catcher vessels operating in the GOA meet the "small entity" definition: that is, they are independently owned and operated, not dominant in their field of operation, with annual receipts not in excess of \$3 million. By making the simplifying assumption that all catcher vessels are small entities, the IRFA avoids the risk of understating the potential impact on small entities.

As stated in Section 3.1, however, a more realistic estimate of the number of entities whose opportunity to fish could potentially be adversely affected by the proposed rule would include only those vessels which fish in S. A. 35561. Figure 3 shows the statistical reporting areas for vessels fishing in the Gulf of Alaska. The rectangular area represents the proposed closure. Information from State of Alaska Commercial Fisheries Entry Commission fish ticket data shows that 224 vessels (21% of vessels fishing in the GOA) fished for groundfish in Statistical Area 355631 in 1998. The NMFS IFQ landings database shows that 67 vessels (4.2% of halibut vessels) landed IFQ halibut in S. A. 355631. The total poundage of halibut landed in S. A. 355631 was 409,000, or 0.9% of the total poundage landed in the GOA, a percentage which remained consistent from 1995 to 1998.⁹ As can be seen in Figure 3, the proposed closure area is itself less than 1% of S. A. 355631 (2.5 sq nm out of a total of 466 sq nm). The historical poundage of groundfish and halibut landed in the proposed closure area cannot be ascertained with any further accuracy however, since the databases built from fish tickets give only statistical areas and not exact locations of landings.

Charter businesses operating in IPHC Area 2C could also be affected by the action. In 1998, there were 581 vessels owned by 397 unique active businesses operating in Area 2C, as shown in Table 4, which could potentially be affected by the action. These are all assumed to be small entities.

4.5 Expected Impacts on small entities

For each category of small entities, NMFS evaluated the criteria listed in the previous section of this IRFA in order to determine whether the proposed closure would impact them significantly. As explained above, the proposed reserve takes up less than 1% of the statistical area in which it is located and less than 0.0001% relative to the total available fishing area in the eastern GOA (about 340,000 sq. nm). As mentioned in Section 3.1, few if any groundfish vessels have been fishing these grounds recently, and for several years ADF&G annual surveys have observed fewer than 100 salmon trollers using the grounds. These vessels use a corner of the area to turn around. Although commercial halibut fishing occurs in the area, halibut are not found there in unusually high concentrations, so the cost to halibut fishermen of implementing the proposed closure would simply be the cost of avoiding a very small percentage of their fishing grounds. Local halibut fishermen, like local groundfish fishermen, are aware of the proposal to protect the reserve and have generally been avoiding the area.¹⁰ In fact, with the exception of some salmon vessels, no commercial or sport fishing vessels have been reported (by Coast Guard or other observers) fishing in the proposed reserve since the ADF&G regulations prohibiting the take of groundfish species under its jurisdiction (lingcod and black rockfish) took effect in 1998.⁹ There may also be a long-term advantage in terms of fishing opportunity, because leaving an area of notably high biological importance and productivity (e.g., unique breeding, spawning, rearing habitat) undisturbed has the potential of increasing its production, through a spillover effect in adjacent areas that remain open to fishing.

In terms of sport fishing, Table 4 indicates that 373 unique active businesses operated 581 sport fishing vessels in Area 2C in 1998. As mentioned in Section 3.1, 364 of these vessels were homeported in Sitka and 191 of these targeted bottomfish. Very few if any of these charter vessels would be affected by the proposed rule. Aerial survey observations and general field observations show that most charter trips originating in Sitka range from Biorka Island, at the southern edge of Sitka to Salisbury Sound north of Kruzof Island, and around the outer coast of Kruzof Island. The proposed reserve is outside that area. Before the State closed the pinnacles to sport fishing for lingcod in the summer of 1997, halibut were targeted in the pinnacles area by charter fishing boats whose incentive to travel so far offshore was

⁹ Provided by Don Huntsman, ADF&G, Nov. 29, 1999.

¹⁰ Pers. comm.(phone), Tori O'Connell, ADF&G biologist, Sitka, May 26, 2000

provided by the concentrated numbers of lingcod. However, although halibut occur in the proposed reserve, they do not occur in special aggregations there. Since lingcod and other State-managed species were closed to fishing, the incentive to make that trip has been removed, and little if any sport fishing for halibut now occurs in the proposed reserve.¹¹

Under Option 1 of Alternative 2, sport and recreational salmon fishing would be closed. Commercial salmon fishermen who use the corner of the proposed marine reserve as a turnaround and some charter businesses catering to sport salmon fishermen could be affected by closing the area to salmon fishing. Salmon are present in the reserve but are not found there in special concentrations and the Council chose Option 2 of Alternative 2, under which salmon fishing would continue to be allowed, in order to reduce the potential impact of the rule on these small entities. The State Board of Fish also considered closing the area to salmon fishing at its February 2000 meeting, but rejected the proposal.

4.6 Alternatives that would minimize impacts

Maintaining the status quo could minimize economic impacts on small entities. This alternative would not affect small entities except that some fishermen who have been avoiding the area because of local support for the marine reserve might start fishing on the pinnacles again. Some small economic advantage might be gained by small entities, on the theory that increasing the options for business entities always increases the potential for making profit-maximizing decisions. Again, however, the proposed reserve is small and other productive fishing grounds are available and equally accessible. In the longer term, allowing fishing in this fragile habitat runs the risk of depleting local stocks on the pinnacles, with a resultant negative impact on fishing opportunity. Enforcement would also be more difficult as it would be necessary to distinguish between vessels fishing illegally for State-managed groundfish species and legal for federally-managed groundfish species.

The proposed action would not impose direct regulations on any small not-for-profit organizations or small governmental jurisdictions as defined under the RFA.

4.7 Conclusion of Initial Regulatory Flexibility Analysis

The requirements of Section 603(b) of the RFA as set forth in Section 4.1 have been addressed by this analysis, together with earlier sections of the EA/RIR, as follows: (1) The Council and NMFS have proposed this action in order to minimize adverse effects from fishing and anchoring on an important habitat for rockfish and lingcod. (2) The small entities which would be affected by the rule are described in Section 4.3. (3) No Federal rules conflict with the proposed rule. One federal rule overlaps: trawling was prohibited in the GOA east of 140 deg. W long. as of March 23, 1998 under Amendment 41 to the GOA FMP (63 FR 8356). (4) A description of the reporting and compliance costs of the action is in Section 3.2. (5) The RFA requires a description of alternatives that would minimize the impact of the proposed rule on small entities. A description of alternatives is in Section 1.2 and an economic analysis of the alternatives is in Section 3.1. The analysis concludes that Alternative 1, maintaining the status quo, would not accomplish the objectives of the action. In choosing between the two options for Alternative 2, the Council adopted option 2, which excludes salmon from the fishing prohibition, in order to minimize adverse impacts on the numerous salmon vessels which fish in the GOA, even though the Coast Guard and the NMFS enforcement division preferred adopting option 1 (which would include salmon vessels in the prohibition), because it would be easier to enforce.

The cost to small entities of implementing the preferred alternative (as opposed to maintaining the status quo) will be very low, as the area being proposed for closure constitutes an extremely small percentage of

¹¹Pers. comm.(phone), Tom Brookover, ADF&G biologist, Sitka, Feb. 3, 2000.

the area since ADF&G promulgated regulations prohibiting fishing for groundfish species under their jurisdiction in 1998. The incentive for charter vessels to fish in this area was provided by lingcod, which congregate on the pinnacles and were being overfished, to the long-term detriment of that fishery. For species which may be found in the area but not in special concentrations, such as halibut and some groundfish, there is little if any cost to fishing vessels for avoiding this area. There are ample fishing grounds nearby that require no additional fuel or other costs.

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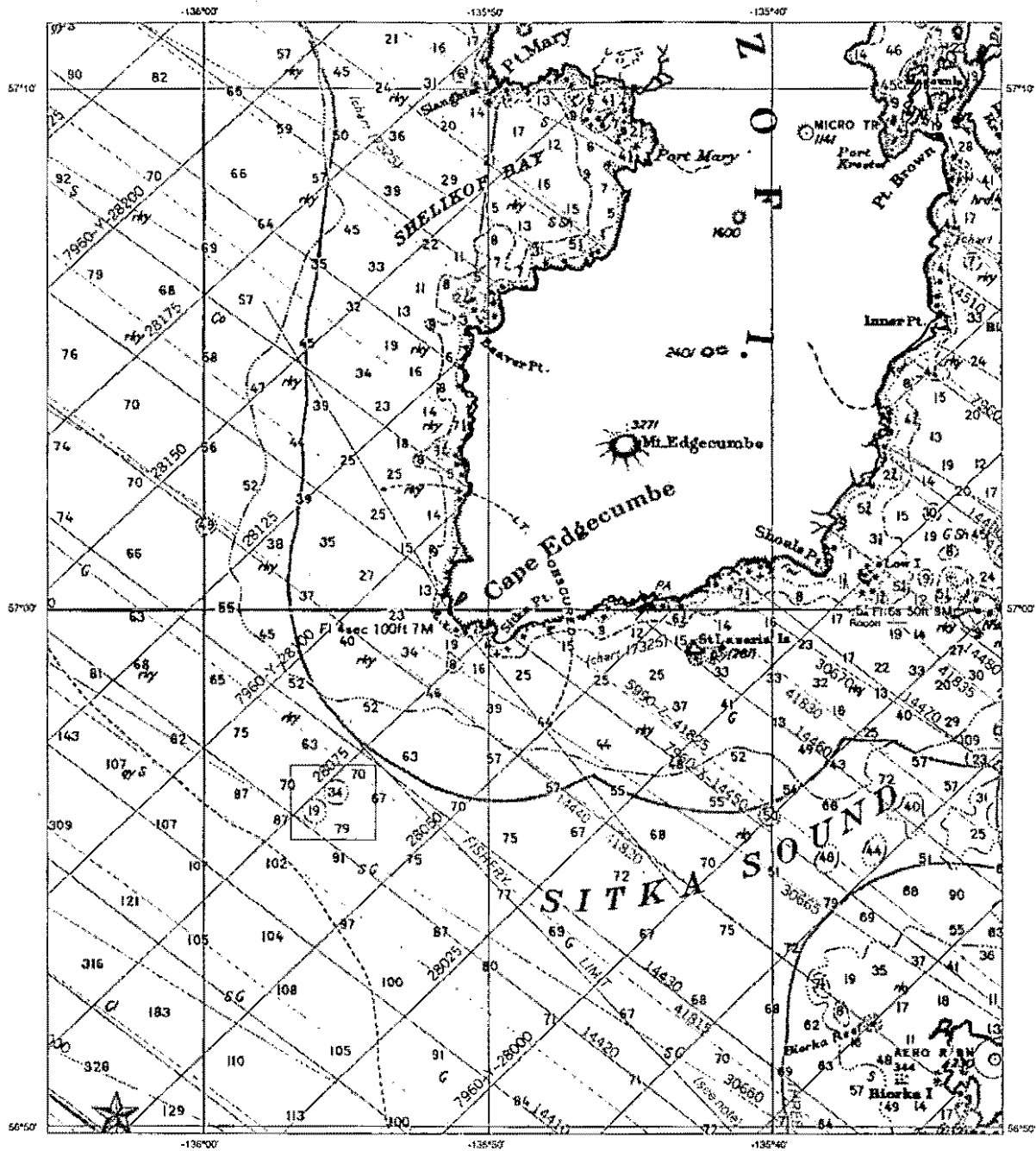


Figure 1. Sitka Pinnacles Marine Reserve. Proposed closure area is enclosed within rectangle (O'Connell et al. 1998).

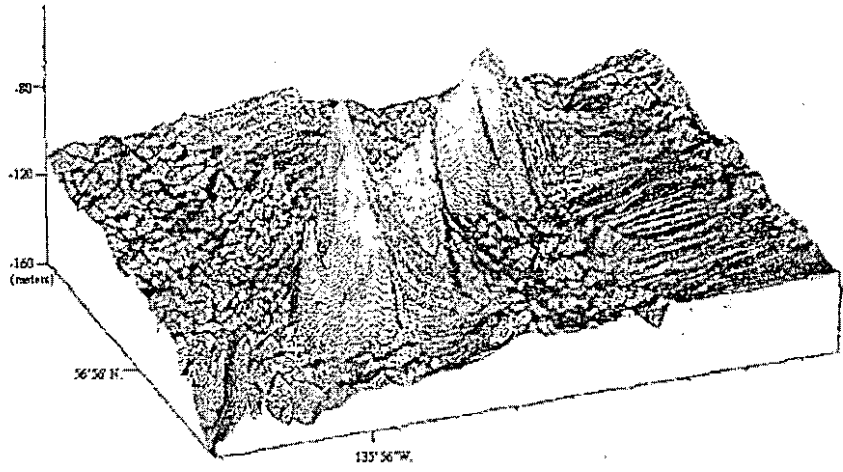


Figure 2. Map showing bathymetry of pinnacles area (10x vertical exaggeration) (O'Connell et al. 1998).

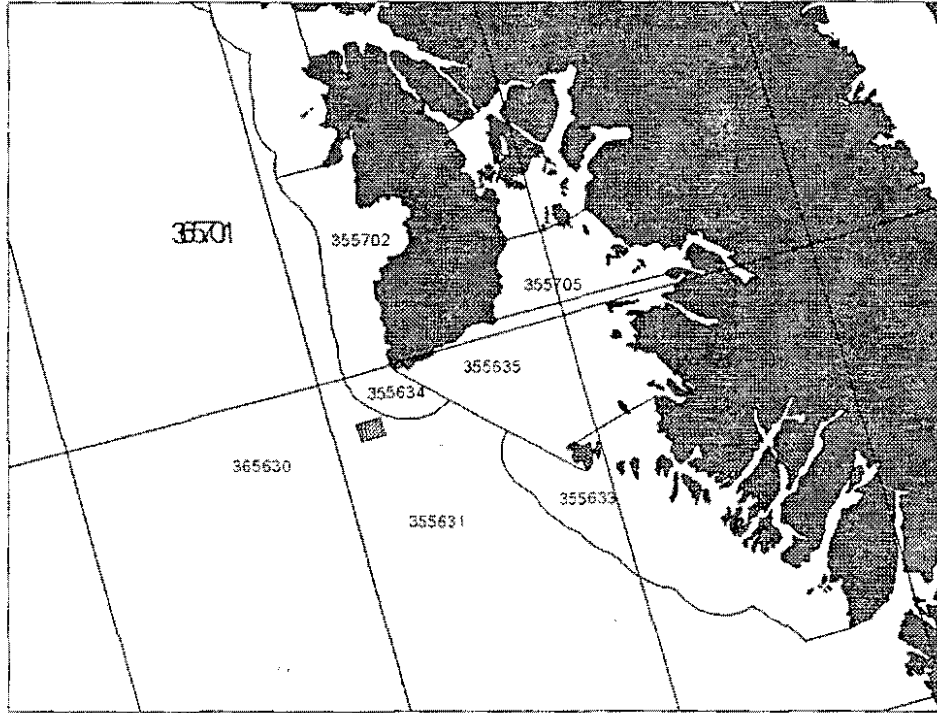


Figure 3. Proposed Sitka Pinnacles Marine Reserve, shown as rectangle within state statistical reporting areas (map drafted by David Ackley, NMFS Juneau Region).