

HABITAT AREAS OF PARTICULAR CONCERN (HAPC) PROPOSAL

Date: January 9, 2004

Name of Proposer: NOAA Fisheries
P.O. Box 21668
Juneau, Alaska 99802

Please check applicable box (es):	
<input checked="" type="checkbox"/>	GOA Groundfish FMP
<input checked="" type="checkbox"/>	BSAI Groundfish FMP
<input type="checkbox"/>	Scallop FMP
<input checked="" type="checkbox"/>	BSAI Crab FMP
<input checked="" type="checkbox"/>	Salmon FMP

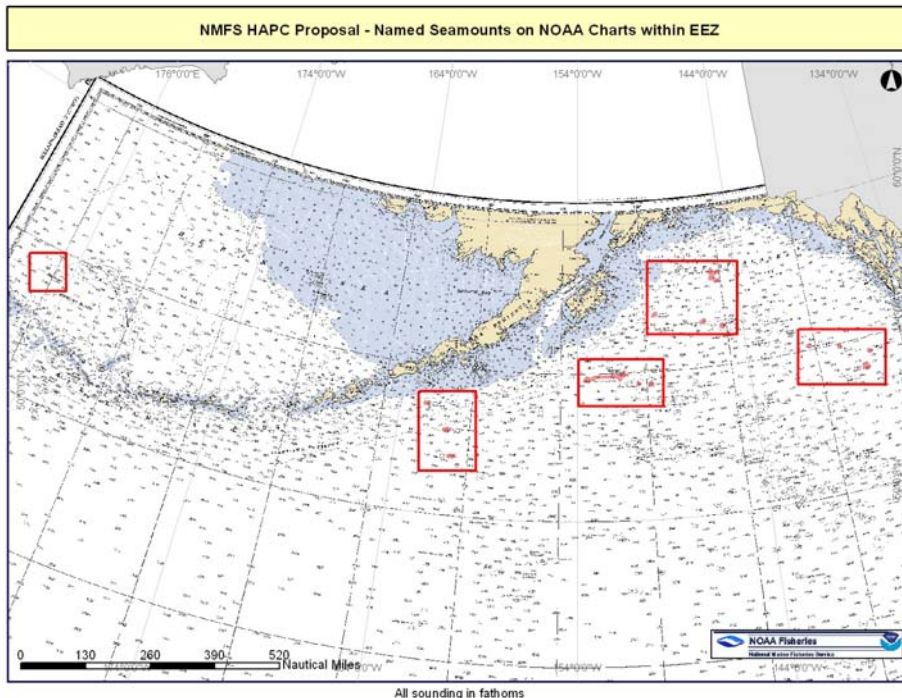
Title of Proposal. Named Seamounts on NOAA Charts.

Summary Statement of the Proposal.
(Provide a brief paragraph concisely describing the HAPC.)

The HAPC proposal identifies named seamounts on the NOAA Charts where FMP species have been documented and proposes specific management measures to conserve these rare undersea features. The proposal is limited to only those named seamounts on NOAA Charts within the Economic Exclusive Zone (EEZ) of the Alaska Region and within the documented range of an FMP species. The HAPC proposal recommends 16 named seamounts for consideration. The proposal suggests management measures to lessen impacts to named seamounts as features within the HAPC area.

Of the approximately 140 named seamounts in waters of the North Pacific and Bering Sea, only 24 named seamounts are within EEZ waters managed and regulated by the NPFMC and NMFS Alaska Region. Further, of the 24 named seamounts in the EEZ, only 16 are within the deepest recorded depth range for an FMP species. This depth limit is established at 3,000m. Records indicate sablefish and deep sea sole range to depths of 2,750m and 2,950m, respectively. Other FMP species documented on or above seamounts include rockfish, salmon, crab, sculpin, and squid.

HAPC Site Locations.
(Specific latitude/longitude or geographic reference. Include NOAA Chart number, if known.)
Locator Map for 16 Named Seamounts. Note: Individual named seamount chartlets are attached to the end of the proposal.



Geographic Coordinates and Depth for Sixteen Named Seamounts on NOAA Charts

#	Named Seamount	Latitude	Longitude	Depth (m)	Depth (fm)	NOAA Chart	#	Named Seamount	Latitude	Longitude	Depth (m)	Depth (fm)	NOAA Chart
1	Bowers Seamount	54.1500 N	174.7000 E	2268	1230	531	10	Kodiak Seamount	57.0000 N	149.5000 W	2176	1190	531
		54.0700 N	174.7000 E						57.0000 N	149.1000 W			
		54.0700 N	174.8700 E						56.8000 N	149.5000 W			
		54.1500 N	174.8700 E						56.8000 N	149.1000 W			
2	Brown Seamount	55.0000 N	138.8000 W	1390	760	531	11	Odyssey Seamount	54.7000 N	150.0000 W	1657	906	531
		55.0000 N	138.4000 W						54.7000 N	149.5000 W			
		54.8000 N	138.8000 W						54.5000 N	150.0000 W			
		54.8000 N	138.4000 W						54.5000 N	149.5000 W			
3	Chirikof & Marchand Seamounts	55.1000 N	153.7000 W	2560	1400	531	12	Patton Seamount	54.7200 N	150.6000 W	168	92	531
55.1000 N		151.0000 W	2524	1380	531	54.7200 N			150.3000 W				
54.7000 N		153.7000 W				54.5700 N			150.6000 W				
54.7000 N		151.0000 W				54.5700 N			150.3000 W				
5	Dall Seamount	58.3000 N	145.8000 W	2507	1410	531	13	Quinn Seamount	56.4500 N	145.4000 W	658	360	531
		58.3000 N	144.9000 W						56.4500 N	145.0000 W			
		57.7500 N	145.8000 W						56.2000 N	145.4000 W			
		57.7500 N	144.9000 W						56.2000 N	145.0000 W			
6	Denson Seamount	54.2200 N	137.6000 W	927	504	531	14	Sirius Seamount	52.1000 N	161.1000 W	1929	1055	531
		54.2200 N	137.1000 W						52.1000 N	160.6000 W			
		53.9500 N	137.6000 W						51.9500 N	161.1000 W			
		53.9500 N	137.1000 W						51.9500 N	160.6000 W			
7	Derickson Seamount	53.0000 N	161.5000 W	2890	1580	531	15	Unimak Seamount	53.8000 N	162.7000 W	1308	715	531
		53.0000 N	161.0000 W						53.8000 N	162.3000 W			
		52.8000 N	161.5000 W						53.6500 N	162.7000 W			
		52.8000 N	161.0000 W						53.6500 N	162.3000 W			
8	Dickins Seamount	54.6500 N	137.1500 W	427	234	531	16	Welker Seamount	55.2300 N	140.5500 W	618	388	531
		54.6500 N	136.8000 W						55.2300 N	140.1600 W			
		54.4500 N	137.1500 W						55.0300 N	140.5500 W			
		54.4500 N	136.8000 W						55.0300 N	140.1600 W			
9	Giacomini Seamount	56.6200 N	146.5300 W	618	338	531							
		56.6200 N	146.1200 W										
		56.4200 N	146.5300 W										
		56.4200 N	146.1200 W										

Habitat Type and Species Information.

(Identify of any habitat type(s) and FMP species of the HAPC.)

Seamounts are undersea features that rise 1000 meters above the surrounding seafloor. Seamount features consist of a summit, which may be smooth or rough, consist of hard and soft substrates ranging from bedrock to mud, and create a slack water condition over the seamount, as compared to its flanks. The flanks are steep, usually consist of harder substrates such as bedrock, and experience higher currents. These features provide habitats for many FMP groundfish species. Seamounts can be grouped in a chain or isolated.

Due to the drastic change in surrounding depths and their distance from shore, seamounts may serve as stepping-stones for migratory fish species and also stand alone as unique ecosystems. Currents transport and deposit egg and juvenile life stages on seamounts, which may serve as rearing habitats for these species. Migratory species take advantage of these features and feeding opportunities.

Scientists, using various methods of research, have investigated 5 of the 16 seamounts included in this proposal. These methods include using bottom sampling grabs, submersibles, remote cameras, traps, longlines, trawls, and pots. These surveys identified basic features and species of each seamount.

Geographic features of the 5 studied seamounts are summarized below:

Named Seamount	General Features
Dickins	Area consists of soft and hard substrates, which are distributed patchily across the feature. The seamount is scattered with rock pinnacles.
Giacomini	Area is relatively flat and consists of soft substrates with few scattered, less prominent rock pinnacles.
Patton	Area is rough in feature. Harder substrates of rock create a series of pinnacles across the summit.
Quinn	Area consists of soft substrates with a notable absence of pinnacles. The flanks are shallow sloped.
Welker	Area consists of hard and soft substrates, with softer substrates between numerous, scattered rock pinnacles.

The FMP species identified below have been documented on the 5 surveyed seamounts (listed above) and represent the current knowledge of species that associate with seamounts in Alaska waters. Site-specific information for the remaining seamounts included in this proposal does not exist. Therefore, the following species list is presumably representative of all seamounts included in this proposal.

FMP Species		FMP Species	
Sablefish adults, including gravid females and larger males	<i>Anaplopoma fimbria</i>	Shortraker rockfish adults	<i>Sebastes borealis</i>
Deep sea sole	<i>Embassichthys bathybius</i>	Aurora rockfish adults	<i>Sebastes aurora</i>
Sockeye salmon adults	<i>Oncorhynchus nerka</i>	Golden king crab	<i>Lithodes aequispina</i>
Pink salmon adults	<i>Oncorhynchus gorbuscha</i>	Scarlet red king crab	<i>Lithodes couesi</i>
Chum salmon adults	<i>Oncorhynchus keta</i>	Grooved tanner crab	<i>Chionoecetes tanneri</i>
Longspine thoryhead rockfish, adults	<i>Sebastolobus altivelis</i>	Squid	(Unidentified)
Shortspine thoryhead rockfish, adults	<i>Sebastolobus alascanus</i>	Sculpins	<i>Cottidae</i>
Rougheye rockfish adults	<i>Sebastes aleutianus</i>		

Describe How the Proposal Addresses the each of the 4 HAPC Considerations (50CFR 600.815):

√ **The IMPORTANCE of the ecological function provided by the habitat.**

Seamounts are ecologically significant features. Offshore currents transport egg and juvenile life stages of fish species. Some of these are deposited on seamounts, where depth and substrate may be preferred by the particular species. Less migratory species may take residence. Slack water above the seamount summit (as compared to the higher current flank areas) concentrates diurnal migrations of plankton, which then begin to settle and may concentrate fish above and on summit of the seamount.

Seamounts may attract migratory species, such as sablefish, if preferred habitats are present and feeding opportunities exist. Spawning may also occur. Directed fishery research has documented large adult male and gravid female sablefish on Alaska seamounts, while noting the absence of any juvenile sablefish. (This absence is not attributed to selectivity of the research gear, since the same gear has recruited juvenile life stages in similar research efforts.) These seamounts may serve as a stepping-stone for a migratory species or a species may establish a resident reproductive stock on the seamount.

The extent to which the habitat is SENSITIVE to human-induced degradation.

Alaska seamount habitats are sensitive to disturbances from certain human-induced activities, such as those used in bottom contact gear fisheries. Alaska fishermen have shown limited interest in these seamounts for several reasons including distance from port and depth. However, the 16 seamounts in this proposal are within the range of current fishing techniques that use bottom contact gear.

Whether, and to what extent, the activity STRESSES the habitat type.

Very little fishing activity has occurred on these seamounts.

The RARITY of the habitat type. (*Mandatory requirement*).

Seamounts are rare features that rise at least 1000 meters in depth from surrounding depths. This limits the feature to deeper waters off the slope. Given the expanse of the North Pacific and Bering Sea and the limited number of named seamounts within the EEZ of this expanse, the 16 seamounts included in this proposal are rare features consisting of isolated habitats far from contiguous shelf and slope habitat features.

Statement of Purpose and Need.

(Provide a specific purpose as why the HAPC needs to be identified.)

The proposed HAPC's are rare features that serve as unique ecosystems; are vulnerable to stress caused by human induced activities, such as fishing with bottom contact gear; and addresses one of the NPFMC priorities for HAPC's. The purpose of this proposal is to protect the seamounts from potential disturbance from fishing activities, and therefore to ensure the continued productivity of these habitats for managed species.

Objectives of the Proposal.

(List objectives specific to the identification of the HAPC.)

Management measures should conserve the unique features of the seamount and a portion or zone of the water column above each seamount summit. An objective of the management measure is to allow protection of the summit and the areas above the summit. This provides protection of high relief habitat and structure attached to the seamount and concentrations of fish within these features.

Describe any Proposed Solutions to Achieve Objectives.

(How might the problem be solved? Include concepts of methods of measuring progress towards those objectives.)

Management measures are proposed to protect each seamount, associated habitat features, and the area directly above the seamount summit.

Describe any Proposed Management Measures for the HAPC.

(Include specific objectives, if appropriate.)

All Council-managed fishing would be prohibited within the proposed HAPC's (see table below). Bottom contact fishing (trawls, pots, long lines) has the greatest potential to affect the identified habitat features, but little if any mid-water trawling or trolling occurs in these areas, and the NOAA Fisheries Office of Law Enforcement notes that management measures will be much easier to enforce if all fishing is prohibited in the proposed HAPC's. Other potential management options might include requiring VMS on all vessels, or prohibiting vessels from carrying bottom contact gear in these areas.

Named Seamounts HAPC Geographic Coordinates and Area.

#	Named Seamount	Latitude	Longitude	Depth (m)	Area (nm ²)	#	Named Seamount	Latitude	Longitude	Depth (m)	Area (nm ²)
1	Bowers Seamount	54.1500 N	174.7000 E	2268	28.9	10	Kodiak Seamount	57.0000 N	149.5000 W	2176	158.3
		54.0700 N	174.7000 E					57.0000 N	149.1000 W		
		54.0700 N	174.8700 E					56.8000 N	149.5000 W		
		54.1500 N	174.8700 E					56.8000 N	149.1000 W		
2	Brown Seamount	55.0000 N	138.8000 W	1390	166.6	11	Odessey Seamount	54.7000 N	150.0000 W	1657	209.8
		55.0000 N	138.4000 W					54.7000 N	149.5000 W		
		54.8000 N	138.8000 W					54.5000 N	150.0000 W		
		54.8000 N	138.4000 W					54.5000 N	149.5000 W		
3 4	Chirikof & Marchand Seamounts	55.1000 N	153.7000 W	2560	2248.4	12	Patton Seamount	54.7200 N	150.6000 W	168	94.3
		55.1000 N	151.0000 W	2524				54.7200 N	150.3000 W		
		54.7000 N	153.7000 W	54.5700 N				150.6000 W			
		54.7000 N	151.0000 W	54.5700 N				150.3000 W			
5	Dall Seamount	58.3000 N	145.8000 W	2507	949.9	13	Quinn Seamount	56.4500 N	145.4000 W	658	200.9
		58.3000 N	144.9000 W					56.4500 N	145.0000 W		
		57.7500 N	145.8000 W					56.2000 N	145.4000 W		
		57.7500 N	144.9000 W					56.2000 N	145.0000 W		
6	Denson Seamount	54.2200 N	137.6000 W	927	286.7	14	Sirius Seamount	52.1000 N	161.1000 W	1929	167.0
		54.2200 N	137.1000 W					52.1000 N	160.6000 W		
		53.9500 N	137.6000 W					51.9500 N	161.1000 W		
		53.9500 N	137.1000 W					51.9500 N	160.6000 W		
7	Derickson Seamount	53.0000 N	161.5000 W	2890	218.4	15	Unimak Seamount	53.8000 N	162.7000 W	1308	128.5
		53.0000 N	161.0000 W					53.8000 N	162.3000 W		
		52.8000 N	161.5000 W					53.6500 N	162.7000 W		
		52.8000 N	161.0000 W					53.6500 N	162.3000 W		
8	Dickins Seamount	54.6500 N	137.1500 W	427	147.0	16	Welker Seamount	55.2300 N	140.5500 W	618	161.5
		54.6500 N	136.8000 W					55.2300 N	140.1600 W		
		54.4500 N	137.1500 W					55.0300 N	140.5500 W		
		54.4500 N	136.8000 W					55.0300 N	140.1600 W		
9	Giacomini Seamount	56.6200 N	146.5300 W	618	163.9						
		56.6200 N	146.1200 W								
		56.4200 N	146.5300 W								
		56.4200 N	146.1200 W								

The proposal identifies the HAPCs as rectangular areas to facilitate management and enforcement. Circles or other shapes are possible for the buffer areas around the identified habitat features, but NOAA Fisheries Office of Law Enforcement recommended using rectilinear areas to facilitate enforcement.

Identify any Expected Benefits to Habitat or FMP species.

(Include specific information regarding a species life history stage, if known.)

Management measures that prohibit the use of bottom contact gear would conserve those species and habitats within the seamount management area. Specifically, benthic substrates would remain relatively undisturbed from bottom fishing activities. Also, any removal of mature adults by bottom gear, would be eliminated, potentially enhancing recruitment in surrounding areas and those areas where eggs and larvae may be transported by currents.

Identify Fishery, Stakeholders, and/or Communities, which may Benefit from the Proposed HAPC.
(Who may or may not benefit from the proposal? Include any known or indirect socioeconomic costs.)

Fishers, communities, and the public may benefit from any enhanced productivity resulting from the protection of the 16 seamounts. No fisheries currently target these areas due to the location and depths of the 16 seamounts. Fishermen presently using these gear types within the proposed HAPC will be displaced from these small areas, but presumably they would benefit in future years by enhanced recruitment of targeted species within the HAPC's.

Support Data or Information Sources

(List data sources, information resource, literature, and any traditional knowledge for the proposal.)

Alton, S.M. 1986. Fish and crab populations of the Gulf of Alaska seamounts. In Richard N. Uchida, Sigeiti Hayasi, and George W. Boehlet (eds.), Environment and resources of seamounts in the North Pacific, p. 45-51. U.S. Dep. Commer., NOAA Tech. Rep. NMFS 43.

Gubbay, S. Seamounts of the North East Atlantic. 38 pgs. World Wildlife Foundation. OASIS, Hamburg & WWF Germany, Frankfurt am Main, November 2003.

Hughes, S.E. 1981. Initial U.S. exploration of nine Gulf of Alaska seamounts and their associated fish and shellfish resources. Mar. Fish. Rev. 42(1):26-33.

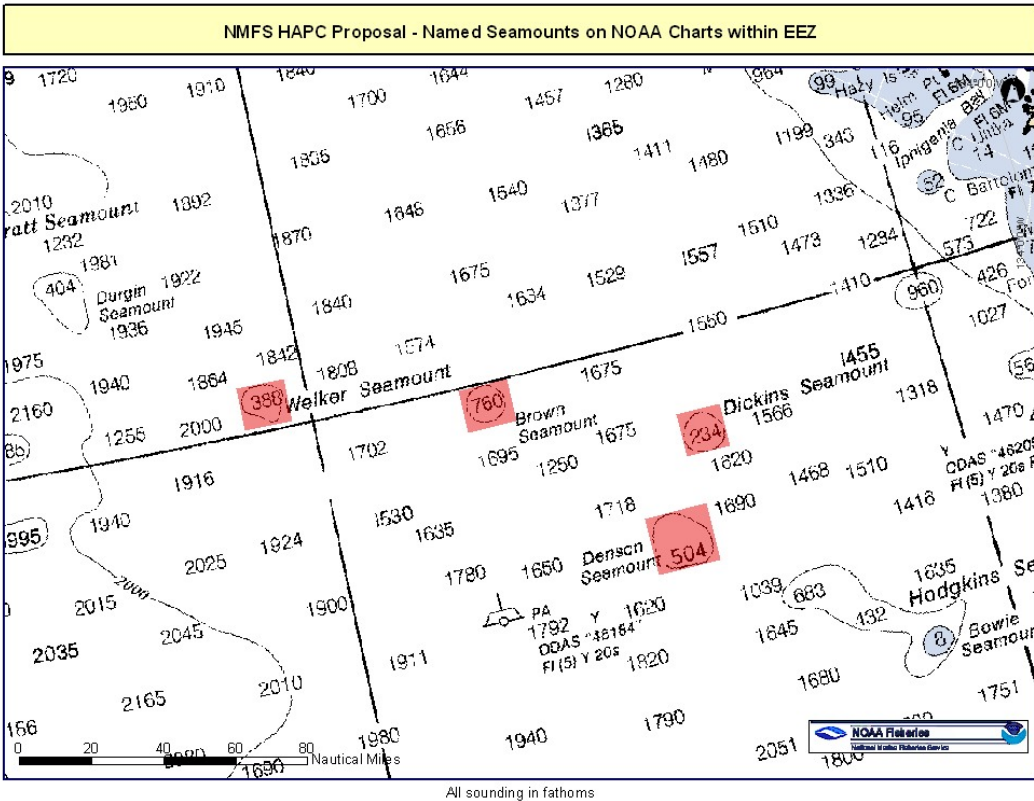
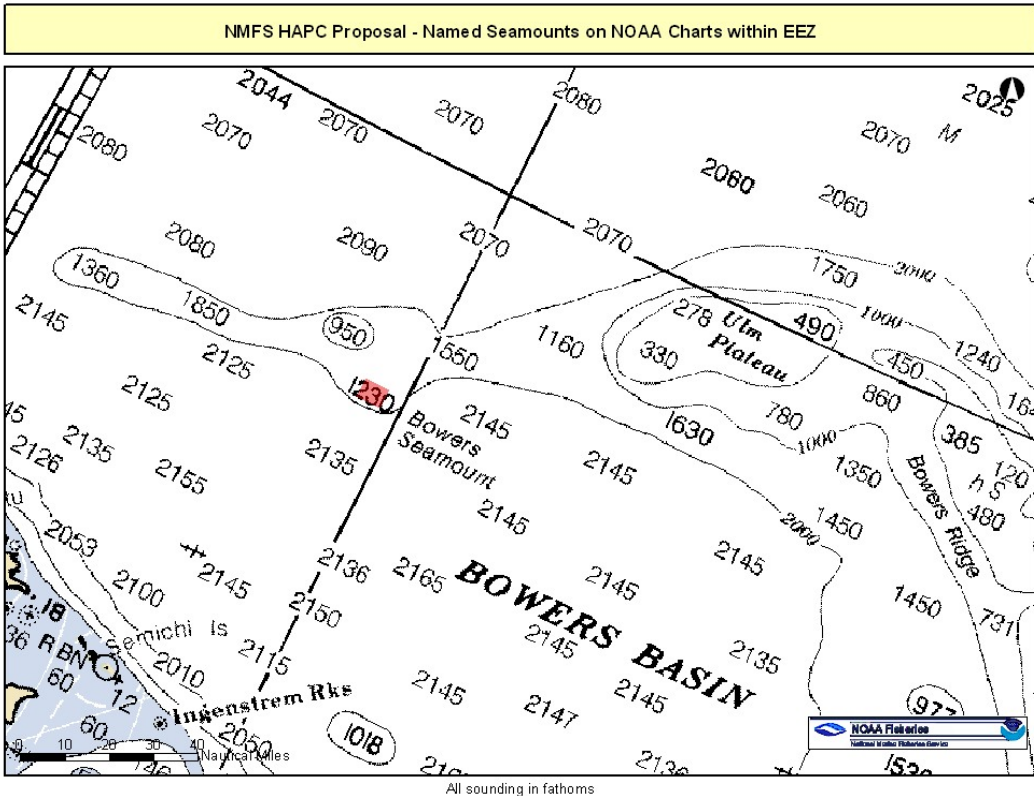
Maloney, N. December 10, 2003. (Personal comm.) Fish species from unpublished records collected during 1999-2002 long line surveys targeting Gulf of Seamounts aboard NOAA contract vessel. Alaska Fisheries Science Center, Auke Bay Laboratory, Juneau, Alaska. (907) 789-6060.

Matthew Eagleton and John Olson, NOAA Fisheries, Alaska Region, Habitat Conservation Division, Anchorage, Alaska.

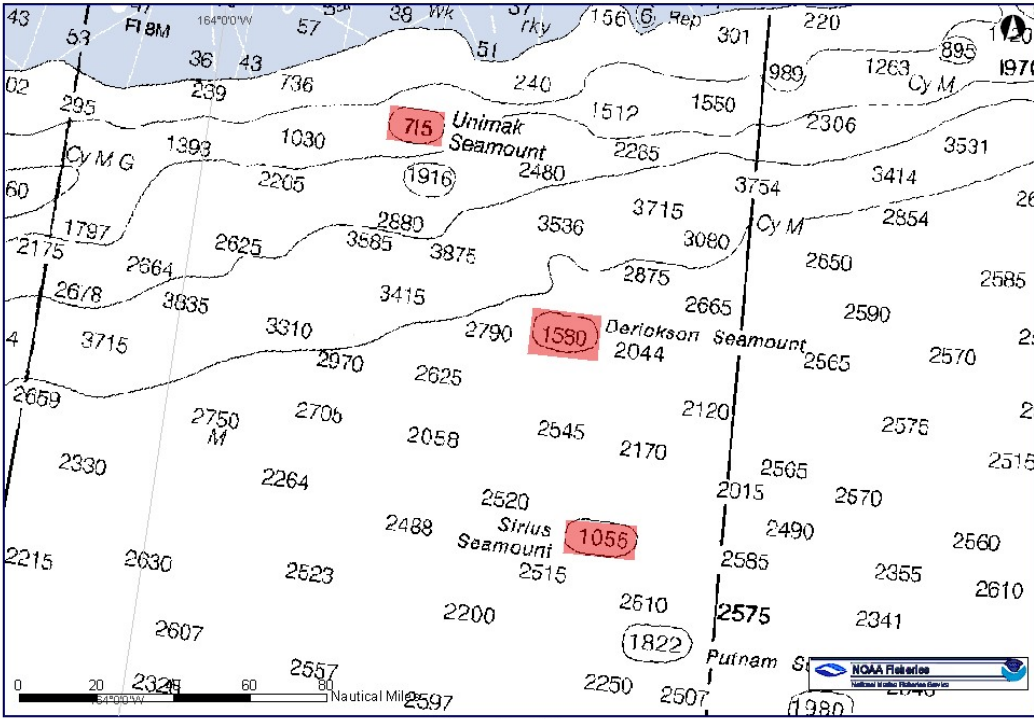
Sent Completed Proposals to or Request Further Information from:

North Pacific Fishery Management Council (<http://www.fakr.noaa.gov/npfmc/default.htm>)
Attn: Cathy Coon
605 W 4th Ave Suite306
Anchorage AK 99501-2282 (907) 271-2809

Named Seamounts on NOAA Charts

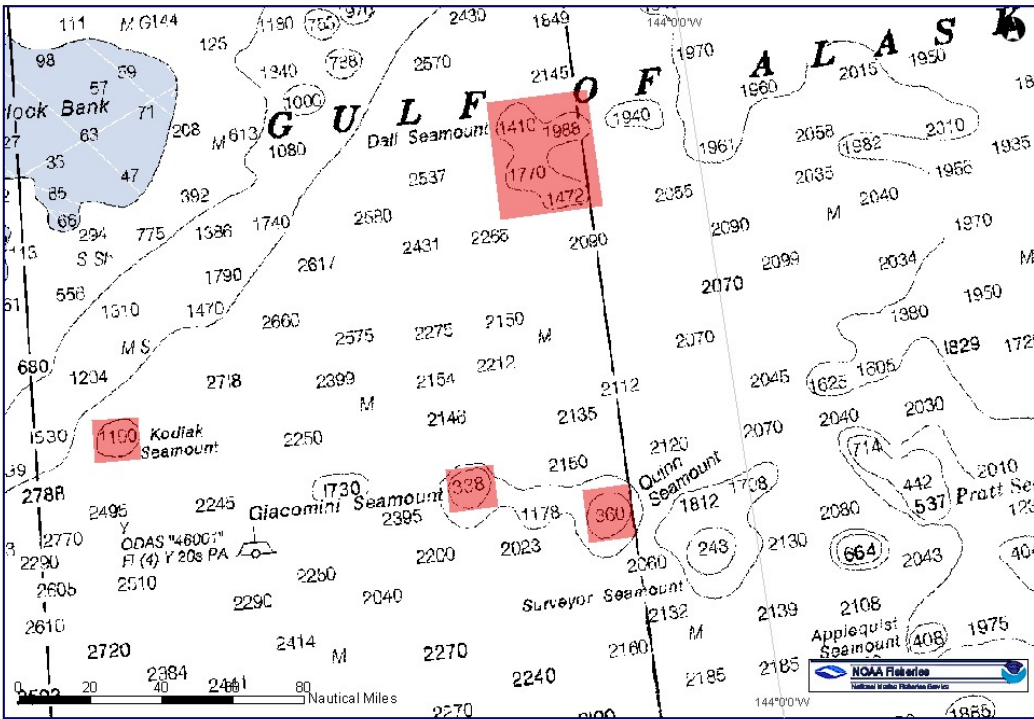


NMFS HAPC Proposal - Named Seamounts on NOAA Charts within EEZ



All soundings in fathoms

NMFS HAPC Proposal - Named Seamounts on NOAA Charts within EEZ



All soundings in fathoms

NMFS HAPC Proposal - Named Seamounts on NOAA Charts within EEZ

