



Marine Conservation Alliance

promoting sustainable fisheries to feed the world

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Adak Community Development Corporation

Alaska Bering Sea Crabbers

Alaska Longline Co.

Alaska Whitefish Trawlers Association

Alaska Groundfish Data Bank
International Seafoods of Alaska, North Pacific Seafoods, Trident Seafoods, Western Alaska Fisheries

Alaska Scallop Association

Aleutian Pribilof Island Community Development Association

Akutan, Atka, False Pass, Nelson Lagoon, Nikolski, St. George

Arctic Storm Management Group

Bristol Bay Economic Development Corporation

Aleknagik, Clark's Point, Dillingham, Egegik, Ekwok, Ekwok, King Salmon, Levelock, Manokotak, Naknek, Pilot Point, Port Heiden, Portage Creek, South Naknek, Togiak, Twin Hills, Ugashik

Central Bering Sea Fishermen's Association

St. Paul

City of Unalaska

Glacier Fish Company

Groundfish Forum

Fishermen's Finest, Iqique US, Ocean Peace, O'Hara Corporation, United States Seafoods

High Seas Catchers

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Icicle Seafoods

Norton Sound Economic Development Corporation

Brevig Mission, Diomedes, Elm, Gambell, Golovin, Koyuk, Nome, Saint Michael, Savoonga, Shaktoolik, Stebbins, Teller, Unalakleet, Wales, White Mountain

Pacific Seafood

Pacific Seafood Processors Association

Alaska General Seafoods, Alyeska Seafoods, Golden Alaska Seafoods, North Pacific Seafoods, Peter Pan Seafoods, Phoenix Processor Limited Partnership, Trident Seafoods, UniSea, Westward Seafoods

United Catcher Boats

Akutan Catcher Vessel Association

Mothership Fleet Cooperative

Northern Victor Fleet

Peter Pan Fleet Cooperative

Unalaska Co-op

Unisea Fleet Cooperative

Westward Fleet Cooperative

December 2, 2014

Mr. Dan Hull, Chairman
North Pacific Fishery Management Council
605 West 4th, Suite 306
Anchorage, Alaska 99501-2252

RE: Agenda Item D.3 – Pribilof Canyon Corals

Dear Mr. Hull,

Thank you for the opportunity to comment on Agenda Item D.3, Pribilof Canyon Corals. The Marine Conservation Alliance (MCA) represents harvesters, processors, communities, and community development quota (CDQ) entities with interests in the Gulf of Alaska and Bering Sea. Our role is to pursue rational, science-based policies which support sustainable use of fisheries resources for current and future generations. We hope you find our comments helpful.

Summary

The council should utilize the “Discretionary Deep Sea Coral Authority” as described in the Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 303(b) (2) as the authority for taking action on this matter. The discretionary coral authority allows the council to take action to protect coral for a variety of reasons which extend beyond their potential role as Essential Fish Habitat (EFH).

We recommend the council establish a two-step process for considering coral conservation, including:

- 1) the identification of coral attributes, or thresholds, which must be considered before conservation actions could be taken¹
- 2) the establishment of a range of potential measures for conserving coral when and where appropriate

Available policy guidance and literature on deep sea coral provides sufficient rationale for identifying the types of attributes which need to be considered, for identifying appropriate attribute levels, and for identifying the appropriate types of measures that could be taken for coral conservation. For reading convenience we have outlined them in the table below. Further rationale follows in the subsequent sections of this document.

¹ It is important that any thresholds established be absolute numbers rather than relative numbers. Examining coral abundance relative to other nearby areas can be a highly subjective standard, it may not clearly link back to any ecological function of coral in an area, and it risks a never-ending policy spiral where the next most coral abundant area is closed to fishing simply because more coral are found there than in another nearby area.

Type of attributes/thresholds	Tools for coral conservation
<ul style="list-style-type: none"> • Coral abundance • Coral size • Fish associations with coral • Coral species diversity 	<ul style="list-style-type: none"> • Status quo • Area-based restrictions • Gear restrictions or modifications • Research and monitoring

Policy Guidance

Available policy guidance provides a significant amount of latitude to councils when engaging in deep sea coral conservation and management. This latitude allows the councils to fine-tune management measures to important regional differences, and rightly so. Regional conditions vary across social, economic, biological, and ecological factors and management measures should carefully consider such factors. As such, deep sea coral conservation should entail a complex set of considerations and strike a balance across important tradeoffs.

Relevant policy guidance on deep sea coral conservation and management can be found in the Magnuson-Stevens Act and the NOAA Strategic Plan for Deep-Sea Coral and Sponge Ecosystems. The MSA provisions on deep sea coral are discretionary; however the language is clear in continuing to stress sustainable fisheries as a priority for any management decision. Where conservation is necessary, several tools can be utilized to achieve conservation objectives. As shown in the text below, the MSA indicates that coral conservation measures can apply to certain areas, they can apply to certain gears, and they can apply to certain vessels. It also indicates that areas being considered for conservation actions need to be identified by the Deep Sea Coral Research and Technology Program, and that conservation actions should only take place after considering long-term sustainable fisheries in those areas.

- (A) *Designate zones where, and periods when, fishing shall be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear;*
- (B) *Designate such zones in areas where deep sea corals are identified under section 408 (the Deep Sea Coral Research and Technology Program) to protect deep sea corals from physical damage from fishing gear or to prevent loss or damage to such fishing gear from interactions with deep sea corals, after considering long-term sustainable uses of fishery resources in such areas;*

Additional text from this section is helpful in that it identifies other steps that are appropriate for discretionary conservation measures. This additional text states that any closure:

- (i) *is based on the best scientific information available;*
- (ii) *includes criteria to assess the conservation benefit of the closed area;*
- (iii) *establishes a timetable for review of the closed area's performance that is consistent with the purposes of the closed area; and*
- (iv) *is based on an assessment of the benefits and impacts of the closure, including its size, in relation to other management measures, including the benefits and impacts of limiting access to: users of the area, overall fishing activity, fishery science, and fishery and marine conservation;*

NOAA's Strategic Plan for Deep-Sea Coral and Sponge Ecosystems attempts to pull together a variety of authorities for coral conservation and management and to outline a plan for furthering their conservation.

Unfortunately the Strategic Plan creates some confusion about what should be protected and when. For instance, the Strategic Plan calls for the conservation of coral, of coral communities, and of coral ecosystems, each of which has a different definition. In addition, some areas of the Strategic Plan appear to call for conservation of all coral in all areas, while other areas of the Strategic Plan call for the prioritization of high abundance coral areas and gives substantial deference to the councils. In spite of these confusing messages, page 33 outlines what is perhaps the clearest approach described in the Strategic Plan for conservation and management of coral. The steps described here include: identifying areas of high concentration and their interaction with fisheries; presenting such information to the councils; developing standards for identification of high abundance areas. Such steps mirror the approach called for in the MSA discretionary provisions.

Developing Standards for Coral Conservation

One of the most difficult aspects of developing conservation measures for coral is in understanding the ecological role that they play. It is often assumed that coral serve as essential habitat for fish species; however a review of available literature indicates this is not always the case, and certainly it is not the case to the same degree. For example, coral's role as fish habitat is often measured by the proximity of fish to coral. A review of available literature indicates that fish proximity to coral varies widely across different areas. In spite of these types of unknowns, there are coral characteristics which suggest certain ecological importance and these characteristics are identified and measured in available literature. It is upon these characteristics that coral conservation thresholds can be established. These include:

- Coral Abundance
 - Coral density (count per square mile/km)
 - Percent of area covered by coral
 - Patchiness (variability in abundance or coefficient of variation)
- Coral size (max and mean height)
- Fish associations with coral (in contact with, in close proximity with)
- Species diversity (number of species reported) or species rarity (number of unique species)

The table below draws upon several sources of literature and reports statistics on some of the attributes we recommend be used to develop coral conservation thresholds. Our purpose in showing these data is not to provide an exhaustive set of statistics on coral attributes. It is to show that these data exist and that coral attributes exhibit a wide range of measurements. These varying measurements imply that the council would be wise to establish a range of thresholds for initial consideration.

	Southern California	Heceta Bank	Olympic Coast	Aleutian Islands	Atlantic Canada	Nova Scotia	Pribilof Canyon	Zhemchug Canyon
Coral Attribute	Tissot et al., 2006	Tissot et al., 2004	Wrubel, 2013	Stone, 2006	Mortensen and Mortensen 2004	Mortensen and Mortensen 2005	Tissot et al 2013*	Tissot et al 2013*
Avg. Coral density (no./100m ²)	8.32	5.66	19	123	5.9	16.5	49.6	15.1
Coral size (max / mean in cm)	250 / 50	40 / 10	100/30	150/>100	--	--	23/9	30/11
Fish associations								
Percent contact	1.8	1.6	--	20.2	--	--	0	0
Percent near	--	2.3	--	84.7	--	<1	5.6	4.3

* derived from a subsample of Miller et al 2012 data using standard submersible analysis methods

Attribute levels used to justify conservation measures should be absolute metrics rather than relative metrics. Relative measures (i.e. coral density relative to nearby areas) are generally subjective and are not necessarily supported by any relevant ecological factors. Furthermore, the use of a relative metric as a standard risks a never-ending cycle of finding the next most coral abundant area and restricting fishing regardless of the area's ecological importance. The use of absolute thresholds sets a standard which any area must meet regardless of coral abundance nearby and can be more closely linked to ecological function.

Conclusion

We recommend the Council develop a structured framework for considering coral conservation in the Bering Sea. A structured framework should clearly specify conditions where coral conservation actions are appropriate and where they are not appropriate. In making these clear distinctions, the Council should use information that is readily available from existing literature.

We envision such a framework consisting of two steps. These steps are:

- 1) Identify attributes and attribute levels which must be considered before coral conservation takes place. These attributes should be supported by available literature. We suggest appropriate attributes are (in general):
 - Coral abundance
 - Coral size
 - Fish associations with coral
 - Coral species diversity
- 2) Upon meeting a minimum number of attribute levels which qualify an area for conservation measures, the Council should consider several different approaches to conserving coral in an area. We do not envision such approaches as being mutually exclusive. Social and economic considerations should play a part in the decision of which areas and gears are targeted for conservation restrictions. The appropriate suite of tools for coral conservation include:
 - Status quo
 - Area-based restrictions
 - Gear restrictions or modifications
 - Research and monitoring