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October 7, 2016

Agenda Item F.4.c
Public Comment
November 2016

Ms. Eileen Sobeck
Assistant Administrator
NOAA Fisheries
1315 East-West Highway
Silver Spring, MD 20910

RE: Pacific Coast Essential Fish Habitat Conservation

Dear Ms. Sobeck:

We write to express support for protecting marine habitat off the West Coast, including Essential Fish Habitat (EFH). Rocky reefs, seamounts, underwater canyons and other structures, as well as living seafloor habitat like corals and sponges, all play a vital role not only in the survival and recovery of recreationally and commercially important fish, but also in supporting healthy ocean ecosystems.

In 2006, NOAA Fisheries took action to protect groundfish EFH from bottom trawling based on a unanimous recommendation from the Pacific Fishery Management Council (PFMC). This landmark decision prevented the expansion of bottom trawling into certain previously untrawled areas and protected many known priority habitat, advancing precautionary habitat conservation and vibrant fisheries.

As required by law, the PFMC and NOAA Fisheries completed their review of these protections to ensure that they are adequate in light of new science and information and concluded that changes to existing management are warranted. As such, the PFMC has initiated Amendment 28 to the Pacific Coast Groundfish Fishery Management Plan and adopted a range of alternatives for analysis. We encourage the PFMC and NOAA Fisheries to build on their precautionary approach, and to take action to further protect habitat and to manage for sustainable fisheries.

The PFMC is now considering alternatives that include reopening some of the landmark EFH Conservation Areas and trawl Rockfish Conservation Areas (RCA) that have been closed to bottom trawling for nearly a decade or more to protect depleted species of rockfish. Combined with the reopening of the RCA, some alternatives would result in a net conservation loss in some regions off the West Coast, as measured by several metrics including indices of biogenic habitat (corals and sponges). EFH Conservation Areas and RCAs should not be reopened unless such action is well supported by science and would not adversely affect EFH. We urge your strong and public support for maintaining and expanding current protections by designating new EFH Conservation Areas for priority habitat and in places that have not yet been trawled.

Additionally, we support action to protect the deep-water ecosystem off California from all bottom contact fishing gear using MSA authority as identified by the PFMC in April 2016 as a preliminary preferred alternative.

The PFMC's upcoming action offers an opportunity to safeguard ocean resources by increasing, not decreasing, overall seafloor habitat protections across all regions of the West Coast EEZ. We look forward to being apprised of this effort to protect valuable seafloor habitat while maintaining fishing opportunities for U.S. West Coast communities. Thank you for your consideration and attention to this important issue.

Sincerely,

SAM FARR
Member of Congress

MIKE HONDA
Member of Congress

GRACE F. NAPOLITANO
Member of Congress

BARBARA LEE
Member of Congress

ANNA ESHOO
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ZOE LOFGREN
Member of Congress

TED LIEU
Member of Congress

cc: Mr. Herb Pollard, Pacific Fishery Management Council
Mr. William Stelle, National Marine Fisheries Service

SCIENTIST SIGN-ON LETTER ON U.S. WEST COAST ESSENTIAL FISH HABITAT CONSERVATION AND MANAGEMENT

October 18, 2016

Mr. Barry Thom, Administrator
National Marine Fisheries Service West Coast Region
7600 Sand Point Way NE, Bldg. 1
Seattle, WA 98115-0070

Mr. Herb Pollard, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

RE: U.S. West Coast Essential Fish Habitat Conservation and Management

Dear Mr. Thom, Mr. Pollard and Council members:

Seafloor habitats are important to the health and biodiversity of our oceans. In order to conserve seafloor habitats, we the undersigned 57 marine scientists and conservation biologists write in support of amending the Pacific Fishery Management Council's (PFMC) Groundfish Fishery Management Plan to designate new and expanded Essential Fish Habitat Conservation Areas off the U.S. West Coast that would be closed to bottom trawling. As you evaluate alternatives to modify existing Essential Fish Habitat (EFH) Conservation Areas closed to bottom trawling, and consider new EFH Conservation Areas, changes to Rockfish Conservation Areas, and the protection of deep-sea habitats, we recommend a comprehensive spatial habitat protection approach designed to protect and conserve ecologically important, sensitive and unique habitats. We caution against opening existing EFH Conservation Areas unless there is compelling scientific information which demonstrates that impacts to the habitats in those areas are minimal.

1. Effects of bottom trawling on seafloor habitats

The substantial harmful effects of bottom trawling on seafloor communities have been well documented in many scientific reviews and empirical studies worldwide (e.g. Auster and Langton 1999, Collie et al. 2000, NRC 2002, Kaiser et al. 2006; Hixon and Tissot, 2007). Specific to the West Coast region, bottom trawls have the greatest impact to seafloor habitats of all gear types used (Morgan and Chuendpagdee 2003 and Whitmire and Clarke 2007). While gear configuration depends on the target species and depth, the distance between trawl doors, which are designed to contact the seafloor and spread the net open, spans anywhere between 34 and 50 meters (112 to 164 feet) for trawls fishing on the continental shelf to 50 to 200 meters (164 to 656 feet) for slope trawls (PFMC 2005). All trawl gear components that contact the seafloor have the potential to ensnare, undercut or topple seafloor habitat structures.

Bottom trawling can cause long-term, adverse impacts to fish habitat. According to findings of the National Academy of Sciences, bottom trawling has direct effects on species and habitat

structure and indirect effects on community structure and ecosystem processes (NRC 2002). The effects of bottom trawling include:

- Changes in physical habitat and biological structure of ecosystems
- Reduced benthic habitat complexity and productivity
- Changes in availability of organic matter for microbial food webs
- Changes in species composition
- Reduced biodiversity
- Increased susceptibility to other stressors.

Even with existing conservation areas, bottom trawling damages other sensitive seafloor habitats. For example, U.S. West Coast groundfish observers on commercial bottom trawl vessels documented nearly 997 kg (2,198 pounds) of coral bycatch and 20,585 kg (45,382 pounds) of sponge bycatch between June 2006 and December 2010, after EFH Conservation Areas were implemented (Clarke et al. 2015). Impacts to sponges have become twice as frequent, with nearly five times the magnitude as before. Bycatch and *in situ* observations of damaged coral and sponges are direct evidence of adverse fishing impacts. These losses are not inconsequential.

2. Ecological importance of seafloor habitats

Marine habitats are fundamental to the health and diversity of marine species. The marine habitats of the West Coast support fish and wildlife at the most basic level by providing the conditions necessary for populations to sustain themselves. Biologically diverse, sensitive and unique habitats off the West Coast include nearshore and offshore reefs, submarine canyons, biogenic habitats (e.g. kelp, corals and sponges), hydrothermal vents, methane seeps and more.

Living habitat-forming invertebrates such as corals and sponges increase habitat complexity and sustain patterns of biodiversity in ocean ecosystems. By providing structure, corals and sponges increase the areas necessary for fish spawning, feeding, and growth and thus meet the definition of EFH. What is more, coldwater corals can be extremely long-lived and recovery from disturbance may take decades to centuries. Bamboo corals from Davidson Seamount off California, for example, were aged to be greater than 145 years old with growth rates of no more than 0.28 cm/ year (Andrews et al. 2009). Deep-sea corals in other Pacific regions have been aged to over 4,000 years (Roark et al. 2009). While corals and sponges are relatively conspicuous biogenic structures, they generally occur in diverse biological communities with other invertebrates such as crinoids, basket stars, ascidians, annelids, and bryozoans.

Many marine species utilize the vertical and three-dimensional structure provided by corals, sponges and other living seafloor habitats. Managed fish species off the U.S. West Coast have been documented in association with structure-forming invertebrates with some studies finding significantly higher densities of fish in these habitats than in surrounding areas (e.g., PFMC 2005 at 3-6, Tissot et al. 2006, Marliave et al. 2009, Rooper et al. 2007, Rooper and Martin 2012). Based on the levels of information currently available (i.e., presence, density), corals, sponges and other biogenic habitat types should be considered to be components of EFH for multiple fish species managed in the U.S. Pacific Coast groundfish fishery management plan.

Since 2006 much new information has been gathered on the location and extent of seafloor habitats off the West Coast. The NOAA Deep Sea Coral Research and Technology Program released a geo-database of almost 140,000 coral and sponge records identified from trawl surveys and *in situ* observations. NOAA has generated new maps showing the extent and intensity of commercial bottom trawl fishing effort, as well as the bycatch of corals and sponges (NOAA 2014). There is a new predictive deep sea coral habitat suitability model (Guinotte and Davies 2014) as well as new high resolution maps of various reefs, banks and escarpments off Washington, Oregon and California. All combined these new data and maps illustrate areas of interaction between bottom trawls and sensitive seafloor habitats.

3. Precautionary and adaptive management approaches are warranted

Ocean ecosystems face major stressors including fishing impacts, offshore development, marine pollution and the growing changes brought by climate change, in particular ocean acidification. Ocean acidification poses a significant and long-term concern for some coral species. While reducing carbon dioxide emissions is urgently needed, fishery managers can take actions that address direct impacts to ocean habitats. Protecting seafloor habitats from bottom trawling will help these habitats and associated communities remain intact and thus will be more resilient to other stressors and help maintain the ecological functions they provide (Levin and Le Bris 2015).

As you evaluate and consider the range of alternatives before you to modify EFH and Rockfish Conservation Areas and to protect deep-water habitats, we urge a precautionary approach that maximizes habitat protection across a range of habitat types, biogeographic regions and depth zones. Best practices include approaches to freeze the bottom trawl footprint thus limiting future bottom trawling to previously trawled areas, area closures for sensitive and representative habitat features, gear modification and effort reduction (Hourigan 2009, NRC 2002). A precautionary approach is paramount, especially where the data are poor and unclear, where recovery times are long (e.g. corals and sponges) and where habitat impacts are high even when the abundance of managed fish species is above overfished levels.

Protecting seafloor habitats from bottom trawling will help limit and prevent direct disturbance, reduce cumulative stresses, and help ecological communities be more resilient to change. While comprehensive information may not be available on the location of all habitat types and species-habitat associations, there is much new and existing data that can be used in combination with a precautionary approach to continue to protect diverse seafloor habitats from bottom trawl impacts.

Sincerely,

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Ms. Eileen Sobeck
Assistant Administrator
NOAA Fisheries
1315 East-West Highway
Silver Spring, MD 20910

10 October, 2016

Dear Mr. Pollard and Ms. Sobeck:

We are an ocean conservation club at Los Osos High School in southern California. When we learned about the possibility of the Pacific Fishery Management Council voting to secure key zones that prohibit bottom trawl fishing off the United States Pacific Coast, we were thrilled. Bottom trawling is an extremely destructive process that leads to complete devastation of deep sea habitats. The annihilation bottom trawling brings has disruptive effects on countless species, including rockfish, corals, sponges, etc. The disappearance of deep sea habitats could lead to devastating effects for the entire ocean ecosystem off California, Oregon, and Washington. The structure of an ecosystem needs a foundation, and without foundation habitats such as the deep seafloor habitat that is in question, the entire ecosystem becomes endangered, as it lacks the fundamental base that the ecosystem can build off of. The result: a destabilized, unhealthy ecosystem. This has tremendous ramifications for the fishing industry, as a destabilized ecosystem is an invitation to dwindling fish populations, thus, putting the fishing industry in tremendous economic danger.

For us, preserving the seafloor is also important due to the abundance and diversity of life it is home to. The ocean is a mysterious place, a different world altogether. The organization Oceana recently led an expedition that explored the species that inhabit the Pacific sea floor, and found a vibrant world bustling with life. These areas are not found everywhere, and Oceana wants a plan put forth that safeguards these key areas. For the sake of preserving biodiversity, and the sake of preserving life itself, this club strongly stands in favor of safeguarding these key zones off the Pacific Coast.

It is important to understand that the majority of the area Oceana's proposal aims to secure is far offshore from the California coast, which is an area where bottom trawling is rare, or even nonexistent. Oceana's goal is to preserve this area off the coast of California for the future, and

to explore the region and provide research. The fishing industry can continue bottom trawling in other areas highlighted by the proposal that are not home to an abundance of fragile life. Furthermore, less destructive methods such as buoy gear fishing can be adopted in newly safeguarded areas. The proposal ultimately provides a balance between maintaining the fishing industry's interest and success, while preserving the underwater metropolises off the Pacific coast.

As the future protectors and enthusiasts of our oceans, we want to see our ocean become healthier than ever, and want our fish populations to become abundant. This can only happen with a strong foundation in the ecosystem, which is why preserving these deep sea habitats is so important to us. We also believe it is wrong to destroy habitats that are teeming with diverse life, and continued destruction will only bring an unhealthy ecosystem and problems for the fishing industry. Furthermore, it is important to recognize that the major area Oceana is proposing for the prohibition of bottom trawling is largely untouched by the fishing industry. While there may seem to be obvious economic drawbacks for the fishing industry, the preservation of deep sea life is crucial in ensuring healthy and abundant fish populations. Because of all these reasons, we strongly urge the Pacific Fishery Management Council to support Oceana's proposal to safeguard crucial areas off the Pacific coast from destructive bottom trawl fishing.

Sincerely,

Los Osos High School Chapter of Oceana

Written by: Karran Thaker (President)

Club Members/ Leaders in support:

Karran Thaker (President), Trevor Morris (Club Adviser / Biology Teacher), Saman Andalib (Vice President), Sapna Thaker (Treasurer), Reese Barrett (Secretary), Lexi Valtier (Officer at Large), Ashley Velasco, Emily Davalos, Pranav Ugavekar, Edward Chang, Amber Cummings, Nikita Rao, Anouk Mangelschots, Andrea Garnica, Valerie Gylfie, Isabella Chen, Zainab Zaidi, Karen Tan, Megan Maghiran, Jocelyn Peralta, William Chen, Andrew Zarour, Marina Vining, Janelle Danial, Daniella Campos, Larissa Andrade, Sebastian Mora, Brian Tran, Todd Johnson, Sydney Beck, Navila Fatin, Grace Adeyemo, Vaishnavi Puppali, Eric Bishara, Nima Emami, Karim Salib, Steven Ibrahim, Darian Jones, Nicole Reynoso, Rania Mirza, Elbony Rodriguez

Dear Pacific Fishery Management Council and NOAA Fisheries:

I am writing to express my concern for the future of the ocean's living seafloor. Corals, sponges, rocky reefs and underwater canyons provide essential habitat for the reproduction, feeding, growth and shelter of many species of ocean life, including commercially and recreationally important fish as well as other species like sea stars and octopus. Bottom trawling poses the single greatest threat to seafloor habitat and, in turn, jeopardizes the greater health of the ocean ecosystem.

As you review Essential Fish Habitat protections, you have the opportunity and responsibility to protect these resources, both for their intrinsic value and for the important benefit that these public resources provide us in return. Any changes to existing protection measures, including Rockfish Conservation Areas and Essential Fish Habitat Conservation Areas, should result in a net increase in protections for all habitat types, regionally and coast-wide. Furthermore, it would be irresponsible to reopen to bottom trawling any areas containing known sensitive habitat types. I urge you to adopt the conservation alternative based on the proposal submitted by Oceana and others that will increase the protection of seafloor habitats off the U.S. West Coast for the benefit of the oceans and future generations while maintaining vibrant fisheries.

Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.

Sincerely,
Christopher Lish
San Rafael, CA