

Collaborations with ***Fishermen*** and West Coast National Marine Sanctuaries
(completed, ongoing and planned)

Olympic Coast National Marine Sanctuary (OCNMS)		
Activity	Description	Status
OCNMS derelict fishing gear project	<p>With NOAA funding in 2005, OCNMS identified and removed derelict fishing gear in collaboration with the Makah Tribe.</p> <ul style="list-style-type: none"> • Makah helped identify potential hot spots of derelict fishing gear, conducted outreach to their fishermen, and trained Makah divers in removal techniques. • Ten crab pots, three gill nets, and one purse seine net were removed. • Project was conducted over 29 days of field operations including side scan sonar surveys, diver surveys, gear removal, underwater camera work, and mobilization and demobilization. • The project is featured in a segment of ‘America's Underwater Treasures,’ Jean Michel Cousteau’s 2006 film on the national marine sanctuaries. 	Project completed 2007
Olympic Coast derelict fishing gear projects	<p>OCNMS supported collaborative projects carried out by partners to remove derelict fishing gear.</p> <ul style="list-style-type: none"> • OCNMS submitted a letter of support to NOAA’s Marine Debris Program to fund a joint project of Quinault Nation’s Natural Resources Department and The Nature Conservancy (TNC) to remove derelict crab gear. • The TNC/Quinault Nation project was funded for 2 years and initiated in fall 2014. The project targets crab gear on the water during a short fishery closure and supports capacity development within the Quinault Nation. • As Washington Department of Fish and Wildlife (WDFW) had an existing permit for same purpose, OCNMS facilitated TNC/Quinault coverage under WDFW’s permit, expansion on the survey area beyond Quinault fishing grounds, and data sharing with WDFW (who did not have funding to do their own aerial surveys). • OCNMS provided a letter of support for a similar proposal for partnership between TNC and Quileute Tribe Natural Resources Department starting in 2015. This project covers the Quileute’s usual and accustomed fishing grounds in OCNMS. 	Ongoing
Port of Neah Bay Improvements	<p>OCNMS supported efforts by the Makah Tribe to replace a commercial fishing pier in Port of Neah Bay.</p> <ul style="list-style-type: none"> • In 2013, OCNMS wrote a support letter focusing on the economic necessity of the pier to the tribe, other commercial fishing interests, and oil spill response community, and the need to replace it. • The project did not receive the requested funding, however reconstruction of the dock was completed with alternative funding. 	Dock completed
Buoy placement for Ocean Noise Reference Station Network	<p>In January-March 2014, OCNMS held extensive consultations with various tribal and non-tribal fishermen sectors to identify the location for a buoy installation for the Ocean Noise Reference Station Network.</p> <ul style="list-style-type: none"> • Meetings were held with tribal fishery managers, and tribal and non-tribal commercial gear sectors to identify, for a 2-year deployment period, the location for a buoy that will monitor ocean noise and minimize the risk of negative interactions with commercial fisheries.. • Discussions were supported by Oregon Fishermen’s Cable Committee and Oregon Sea Grant. • Science needs for siting of the ocean noise monitoring buoy were overlaid with fishing activity maps and industry guidance to select a potentially secure location for installation. 	Completed September 2014

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Olympic Coast National Marine Sanctuary (OCNMS) – continued		
Activity	Description	Status
OCNMS oceanographic monitoring program	<p>OCNMS seasonally deploys nearshore moorings to record oceanographic conditions important to commercial fishermen.</p> <ul style="list-style-type: none"> • The moorings record temperature profiles, dissolved oxygen (DO), and proxies for ocean acidification. • This information is summarized and made available via OCNMS and NANOOS web sites. • Mooring locations and info on their function is relayed to the fishing community every year. • When low DO levels are detected with the oceanographic sensors, OCNMS maps the extent of the hypoxic area and notifies resource agencies and fishermen. • OCNMS also established immediate protocols for boat-based monitoring of low DO if fish/shellfish die-offs are detected along beaches, and/or reported by fishermen at sea. 	Ongoing monitoring efforts from May to Sept.
Buoy placement for Orca Whale Critical Habitat Studies	<p>OCNMS coordinated consultations with tribal and non-tribal commercial fisheries representatives to determine locations for deployment of acoustic recording moorings to define critical habitat for orca whales.</p> <ul style="list-style-type: none"> • Optimal locations for mooring placement had minimal potential for interaction with commercial fishing gear, while meeting the science needs for this research. OCNMS provided the chief scientist (at NOAA Fisheries) with fishing intensity maps, and preliminary mooring locations were identified based on science needs. • OCNMS facilitated consultations with various fishing sectors, assisted with mooring site evaluations (e.g., seafloor stability), and brokered a mutually-agreeable set of mooring locations. • In fall 2014, 7 acoustic moorings were installed in OCNMS, helping to characterize orca whale distributions and inform critical habitat designations. 	Ongoing project through 2015, longer if funding extended
Collaborative Habitat Framework	<p>OCNMS provides data on sensitive habitats and proposed conservation measures for groundfish essential fish habitat .</p> <ul style="list-style-type: none"> • OCNMS staff participated as a technical member of the Pacific Fishery Management Council’s (PFMC’s) Essential Fish Habitat (EFH) Review Committee to identify needs for modifying groundfish EFH. • OCNMS worked with WDFW to develop a proposal to modify Olympic 2 Conservation Areas within the sanctuary. • OCNMS consulted with Makah Tribe, and after reviewing their concerns, elected to voluntarily withdraw the proposal and instead focus on working collaboratively with the four coastal treaty tribes to build a comprehensive assessment of all habitats within OCNMS. Progress has been made in constructing certain elements of the habitat framework. 	Under development
Advisory Council	<p>Fishermen have representation on OCNMS Advisory Council.</p> <ul style="list-style-type: none"> • Since the creation of OCNMS Advisory Council in 1999, OCNMS has had a commercial fishing seat which includes both a primary and alternate representative. The current fishing seat is also a member of the PFMC Habitat Committee, allowing interactions and early identification of issues of mutual concern to both councils. • In 2016, OCNMS amended the Advisory Council Charter to allow for seating of a recreational fishing seat, which is currently filled by a sport-fishing representative, in addition to a commercial fishing representative. 	Ongoing

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Cordell Bank National Marine Sanctuary (CBNMS)		
Activity	Description	Status
Exempted Fisheries Permit for yellowtail rockfish	<p>CBNMS collaborated with the San Francisco Community Fishermen’s Association, and supported their proposal to the PFMC for testing hook and line fishing for rockfish under an Exempted Fisheries Permit (EFP).</p> <ul style="list-style-type: none"> • The 2012 proposal requested access to fishing grounds within the Rockfish Conservation Areas (RCAs) in GFNMS and CBNMS using vertical hook and line gear, targeting healthy populations of yellowtail in the midwater, while minimizing bycatch of overfished species in deeper water. • The EFP includes a monitoring program (using independent observers) to evaluate the success of the program in its ability to be species-selective. CBNMS wrote a letter supporting observer coverage on 30% of fishermen’s trips. This was a reduction from 100% coverage which was not sustainable for fishermen. • CBNMS science staff provided information (maps and coordinates) to fishermen on coral cover and bathymetry in the sanctuaries and advocated for areas to be avoided to protect shallow pinnacles while still promoting fishing in the sanctuary. • CBNMS worked with fishermen and NMFS to develop depth restrictions and gear modifications that would allow access to mid-water fish and not impact the coral/sponge community on the reef top. • CBNMS staff provided maps and coordinates to Vessel Management Service (VMS) and fishermen so that VMS could monitor traffic in the sanctuaries to ensure vessels are staying out of the areas to be avoided. • A year into implementation of the EFP, CBNMS collaborated with fishermen and VMS to modify boundaries to improve access to certain areas in the sanctuary while still protecting sensitive habitats. • The collaboration allows commercial fishermen access to historical fishing grounds and targets healthy rockfish populations while protecting overfished rockfish species and sensitive habitat in the sanctuaries. Sanctuaries also promote the mission of the San Francisco Fishermen’s Co-operative of selling sustainable, locally caught seafood. 	Ongoing
Bodega Bay Fishermen's Festival	<p>Since 2002, CBNMS and GFNMS staff participate in annual Bodega Bay Fishermen's Festival.</p> <ul style="list-style-type: none"> • National marine sanctuary’s staff set up a booth with sanctuary information, including distribution of tide books containing education messages about the sanctuaries, and talk with fishermen about current events and issues affecting the local fishing community. • Over 1000 people per year are contacted within the two-day event. • In 2014 and 2015 the Cordell Marine Sanctuary Foundation also assisted with this event. 	Ongoing (occurs every April)
Video panel at Oakland Museum of California	<p>CBNMS produced a short documentary film featuring local commercial fisherman that is shown at the Cordell Bank exhibit at the Oakland Museum of California.</p> <ul style="list-style-type: none"> • The Cordell Bank exhibit was opened on June 1, 2013. Sanctuary and museum staff worked with local fishermen to highlight their careers and stories about living on the ocean. Since the opening, more than 100,000 visitors have experienced the exhibit. 	Permanent exhibit
Consultation with fishermen	<p>Consultation with Pacific Coast Federation of Fishermen’s Association (PCFFA) on an oceanographic buoy.</p>	Completed

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	<ul style="list-style-type: none"> Prior to placing an oceanographic buoy offshore in 2007, CBNMS consulted with salmon and crab fishermen from different ports to ensure that buoy placement did not interfere with fishing activities. Also consulted with fishermen prior to deploying 2 moorings to measure oxygen at depth on Cordell Bank. 	
Cordell Bank National Marine Sanctuary (CBNMS) - continued		
Activity	Description	Status
Recreational anglers survey in RCAs	<p>CBNMS partnered with CA Sea Grant, NMFS, and CDFW to sample within the recreational RCAs in CBNMS, GFNMS, and MBNMS in locations that had been closed to all bottom fishing for 10 years.</p> <ul style="list-style-type: none"> Since 2002, fishing for rockfish using bottom contact gear in the RCAs has been prohibited to reduce bycatch of overfished stocks such as yelloweye, canary, cowcod, and dark-blotched rockfish. Research objectives for the two-year study were to evaluate the impacts of the RCA by 1) comparing for two sampling periods (before and after RCA implementation) the catch rates, species composition, and size of fish caught in recreational RCAs; and 2) sample females to better understand reproduction in rockfish. CBNMS co-authored the proposal for the research, which was funded by the Collaborative Fisheries Research West, the Ocean Protection Council, and CA Sea Grant. CBNMS collaborated with charter boat captains from Half Moon Bay, San Francisco Bay and Bodega Bay, and volunteer anglers to sample rockfish using hook-and-line fishing gear to re-sample sites fished in 1987 to 1998. Sampling data have been analyzed and the final report is available (Marks et al., <i>Changes in size and abundance of fishes in Central California after a decade of fishing closures</i>. CalCOFI Rep., Vol. 56, 2015). 	Completed
Lost fishing gear/marine debris recovery	<p>In 2008, CBNMS staff removed derelict fishing gear from Cordell Bank using a Remotely Operated Vehicle (ROV).</p> <ul style="list-style-type: none"> The project began in 2002, when derelict fishing gear was observed on 90% of the research transects conducted across the rocky habitats on Cordell Bank. Abandoned long lines, gill nets, crab traps and trawl gear were entangled on the Bank with some extending into the water column. In 2006 CBNMS staff dedicated a research cruise to test methods of removing derelict fishing gear from the seafloor using the sanctuaries' ROV. Methods developed by CBNMS were later applied to other locations on the California coast with the help of CBNMS staff and commercial fisherman. 	Completed
Crab Pot Removal	<p>Cordell Bank Staff as liaison between NOAA Marine Debris Program and fishermen</p> <ul style="list-style-type: none"> In 2015, CBNMS staff worked with fishermen in Bodega Bay to coordinate a program for removing crab pots that were still deployed after crab season ended. Sanctuary staff introduced fishermen to staff working for the SeaDoc Society, which was the non-profit managing the crab pot removal program. In the first year, over 200 old crab pots were removed from the ocean by fishermen. A significant number of whales were entangled in crab gear in 2015. Sanctuary staff provided locations of derelict crab pots that were observed during Applied California Current Ecosystem Studies (ACCESS) offshore surveys, enabling fishermen to target those pots for removal. 	ongoing

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Dissolved Oxygen monitoring	<p>CBNMS has deployed mooring seasonally since 2014 to record oceanographic conditions important to fishermen.</p> <ul style="list-style-type: none"> • Instruments on mooring record temperature and dissolved oxygen (DO) within CBNMS. • The information is made available via UC California Davis Bodega Marine Laboratory (BML) website. • Hypoxic DO levels were detected during two events in the summer of 2014. 	Ongoing monitoring efforts from May to Oct.
Cordell Bank National Marine Sanctuary (CBNMS) - continued		
Activity	Description	Status
Measuring Ocean Acidification	<p>Sanctuary Partners with UC Davis Bodega Marine Laboratory to Measure Ocean Acidification</p> <ul style="list-style-type: none"> • CBNMS and GFNMS have been working closely with Dr. Tessa Hill and her graduate students at the Bodega Marine Laboratory to measure ocean acidification in the sanctuaries. • Graduate students are collecting water samples during ACCESS cruises and completing analysis for ocean acidification at the laboratory. • In addition to samples collected in the field, graduate students are conducting lab work to understand impacts of ocean acidification on zooplankton and other selected invertebrates. 	
Advisory Council	<p>Fishermen have representation on the CBNMS Advisory Council.</p> <ul style="list-style-type: none"> • The CBNMS Advisory Council has had a fisherman representing the commercial and recreational fishing interests since its creation in 2001. 	Ongoing

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Greater Farallones National Marine Sanctuary (GFNMS)		
Activity	Description	Status
Fishermen in the Classroom	<p>Local fishermen visit classrooms to interpret life at sea, the history of fishing in our local communities, and current fishing activities in the sanctuary.</p> <ul style="list-style-type: none"> Fishermen present their maritime history and culture to classrooms so that students can learn about the marine environment as well as the human dimensions of marine resource use and its management. GFNMS has employed two fishermen with a stipend of \$150 each for the first class and \$100 for each additional class. In 2016 Fisherman in the Classroom teamed up with local fishermen to deliver programs to 413 students and their teachers in grades 6-12. The teaching team presented fishing gear, video, stories, recipes and activities to highlight the rich maritime fishing culture of the central California coast. 	Ongoing since 2008
Fishermen signage program at Pillar Point Harbor	<p>GFNMS partners with Pillar Point Harbor to create a series of signs displayed at the harbor.</p> <ul style="list-style-type: none"> The series of signs includes profiles of the fisheries that originate from the harbor and profiles of the fishermen who catch the fish. A local fisherman was a member of the planning and design team. Fishermen contributed funds towards the fabrication of the signs. Seven signs have been installed on the main promenade at Pillar Point Harbor. 	Ongoing; ~15 year project
‘Fisheries in the Sanctuary’ Exhibit	<p>San Francisco Visitor Center hosts a permanent exhibit featuring local fisheries and fishermen working in GFNMS.</p> <ul style="list-style-type: none"> Exhibit includes a display on the locally caught species and gear used to catch them as well as a profile of a local fisherman. 	Permanent exhibit in place
Pacific Coast Federation of Fishermen’s (PCFFA) board meetings	<p>Starting in 1998 GFNMS Superintendent attends periodic Pacific Coast Federation of Fishermen’s Associations (PCFFA) Board meetings to provide briefings on current GFNMS activities</p> <ul style="list-style-type: none"> Attending these board meetings on PCFFA’s schedule has created a positive dialogue with, and built credibility and trust for GFNMS staff among local fishermen. Activities presented to PCFFA include marine debris removal, etc. 	Ongoing; attendance is subject dependent
Awards	<p>Lifetime Achievement Award</p> <ul style="list-style-type: none"> Zeke Grader, Executive Director of the Pacific Coast Federation of Fishermen’s Association and Institute for Fisheries Resources received the GFNMS 2015 Lifetime Achievement Award for his lifetime of work to protect water quality, promote sustainable fishing practices, and protect fish habitat. 	Completed
Bodega Bay Fishermen’s Festival	<p>Since 2002, CBNMS and GFNMS education staff participate in annual Bodega Bay Fishermen's festival.</p> <ul style="list-style-type: none"> National marine sanctuary’s staff set up a booth with sanctuary information, including distribution of tide books containing education messages about the sanctuaries and talk with fishermen about current events and issues affecting the local fishing community. Over 1000 people per year are contacted within the two-day event. 	Ongoing (occurs every April)

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Greater Farallones National Marine Sanctuary (GFNMS) - continued		
Activity	Description	Status
Meet the Fishermen program	<p>GFNMS led a kayak excursion around Pillar Point Harbor to visit fishing boats.</p> <ul style="list-style-type: none"> • In 2007 GFNMS staff and members of the public paddled from fishing boat to fishing boat to meet their local fishermen as part of the sanctuary’s annual lecture series and field adventure program. • Thirty members of the public participated in the program. • Funding allowed, GFNMS would like to resume this program as part of the Half Moon Bay Visitor Center program offerings. 	Completed
Maritime Heritage lecture series: Local Seafood lecture	<p>GFNMS presented a lecture series on three eras of fishing and fisheries in the GFNMS region reaching audiences of over 100 attendees.</p> <ul style="list-style-type: none"> • In 2008 GFNMS staff developed a lecture series using stories shared by fishermen from Half Moon Bay. 	Completed in 2010
Maritime Heritage Abalone Soirée	<p>GFNMS presented an Abalone Soirée with a Maritime Historian, Abalone ‘Farmers’, Artists, Scientists and Chefs reaching an audience of over 150 attendees.</p> <ul style="list-style-type: none"> • In 2013 GFNMS staff developed the Abalone Soirée, which included Abalone ‘Farmers’ from Pillar Point Harbor, local maritime historians, chefs, artists and scientists. 	Completed 2013
Improving coordination	<p>Fishermen request GFNMS office and Visitor Center to be located at Pillar Point Harbor to increase access of fishermen to GFNMS staff.</p> <ul style="list-style-type: none"> • GFNMS staff evaluated relocation of the Half Moon Bay office to Pillar Point Harbor to, among many benefits, improve interaction with the fishing community. • The fishing community sought to work with GFNMS to design programs for the Visitor Center including a lecture series on the history of the local fishing community, what’s local and sustainable, and how to prepare local and sustainably caught fish. • GFNMS facilitated a working group to develop recommendations for a Half Moon Bay Visitor Center. The working group, of which commercial fishermen were members, recommended ‘coastal sustainability and communities’ as one of the themes for the Half Moon Bay Visitor Center. Fishing is an integral part of that theme. Staff presented the Pillar Point Office and Visitor Center concept to the Pillar Point Harbor Commission on November 4, 2009 and the concept was well received. • The Commercial Fisheries representative on the advisory council introduced a resolution, which was unanimously supported, to include fisheries in maritime heritage exhibits and education programs of the proposed Visitor Center. • No action has been taken due to a lack of funds within ONMS budget, and GFNMS has had to close its Halfmoon Bay Office. 	WG completed; coordination is ongoing; new exhibits will be developed as budget allows

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Greater Farallones National Marine Sanctuary (GFNMS) – continued		
Activity	Description	Status
San Francisco Fishermen’s swap meet	<p>In 2005, staff hosted a booth at the annual Fishermen’s Swap Meet, a Bay Area gear exchange for commercial fishermen.</p> <ul style="list-style-type: none"> An effective event to meet and speak with fishermen regarding national marine sanctuaries. 	Completed
Reducing Marine Debris	<p>Support and Partnership with SeaDoc Society on Crab Pot removal</p> <ul style="list-style-type: none"> This project aims to collaboratively work with Dungeness crab fishermen in California to recover lost and abandoned crab pots specifically in the sanctuary. GFNMS requested that SeaDoc attend a GFNMS Advisory Council meeting to discuss how commercial fishermen can lead lost gear recovery work on the water. GFNMS assisted SeaDoc Society with connecting with local fishermen and fisheries enforcement officers to ensure a coordinated roll-out of this project in 2015. 	2015 – through August 2016
Advisory Council	<p>Fishermen have representation on the GFNMS Advisory Council.</p> <ul style="list-style-type: none"> During the creation of the Gulf of the Farallones Advisory Council in 2002, a seat for maritime activities/commercial was created to represent commercial fishing interests. 	Ongoing

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Monterey Bay National Marine Sanctuary (MBNMS)		
Activity	Description	Status
Collaborative EFH proposal with fishermen & NGOs	<p>MBNMS submits a collaborative proposal to PFMC with trawl fishermen and conservation NGOs to modify groundfish EFH.</p> <ul style="list-style-type: none"> • In 2012 MBNMS led creation of the collaborative proposal, which requests additional protections to sensitive habitat, and re-opens fishing in historically trawled fishing grounds in EFH Conservation Areas within the sanctuary. • MBNMS brought all interests to the table and provided technical services by sharing newly acquired habitat data, analyses, maps with multiple data layers and negotiation skills that were essential for finding common agreement and support for the proposal. • As part of the project, voluntary management closures, where bottom trawling would be prohibited, were proposed by the fishermen as a pilot program. These voluntary measures would be evaluated and monitored by MBNMS in collaboration with the fishermen. • Due to the productive and trusted working relationship created during the proposal development, modifications to Rockfish Closure Areas were developed collaboratively and submitted to the PFMC. • MBNMS has received extensive kudos from the PFMC and fishermen for the design of the EFH changes and the collaborative process they employed. • For more information see: http://montereybay.noaa.gov/resourcepro/ebmi/welcome.html. 	Under review by PFMC and slated for decision in 2017
Whale Entanglement Working Group	<p>MBNMS staff participates on the California working group to provide support on reducing whale entanglement.</p> <ul style="list-style-type: none"> • The California Department of Fish and Wildlife convened a working group in partnership with the California Ocean Protection Council and NMFS to address an increase in large whale entanglements in Dungeness crab fishing gear. Established in September 2015, the working group is comprised of commercial and recreational fishermen, environmental organization representatives, members of the disentanglement network, and state and federal agencies. • ONMS has provided staff and the R/V FULMAR to assist in whale disentanglements since 2014. Nearly two dozen disentanglements have been conducted, most involving commercial fishing gear. • As part of this effort, ONMS is providing the R/V FULMAR for vessel surveys in 2017 to collect data on areas of overlap between fishery effort and whale densities. • For more information see: http://www.opc.ca.gov/whale-entanglement-working-group/ 	Ongoing in 2017
Fishermen in the Classroom	<p>Local fishermen visited classrooms to interpret life at sea, the history of fishing in our local communities, and current fishing activities in the sanctuary.</p> <ul style="list-style-type: none"> • Fishermen presented their maritime history and culture to classrooms so that students could learn about the marine environment as well as the human dimensions of marine resource use and its management. • 12 commercial fishermen (paid \$300/school) were recruited and trained to present to in K-12 grade classrooms. • From 2008 - 2013, 200 presentations were given reaching over 6,000 students. 	Project completed in 2013

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Monterey Bay National Marine Sanctuary (MBNMS)		
Activity	Description	Status
ACSF board meetings	<p>Alliance of Communities for Sustainable Fisheries (ACSF) invites MBNMS to their board meetings.</p> <ul style="list-style-type: none"> In order to improve communication and coordination among ACSF, MBNMS, and the advisory council, MBNMS leadership attends ACSF board meetings. MBNMS works with ACSF to address fishing concerns, when they arise. 	Started in 2014
Collaborative fishery project	<p>MBNMS collaborated with fishermen to understand more about impacts from the halibut hook and line fishery.</p> <ul style="list-style-type: none"> The study provides a preliminary snapshot characterization of the California halibut fishery currently taking place in northern Monterey Bay with hook and line gear, focusing on costs and revenues to participating fishermen, spatial patterns in fishing effort, and incidental catch (i.e. bycatch). The report, ‘A profile of the hook and line fishery for California halibut in Monterey Bay, California: learning from fishermen through collaborative research’ is at http://montereybay.noaa.gov/research/techreports/trfrey2014.html 	Study completed in 2011, and report published in 2014
Voices of the Bay	<p>‘Voices of the Bay’ brought innovative curriculum on fisheries and fishermen’s lives to the classroom.</p> <ul style="list-style-type: none"> Fishermen provided key information during curriculum development at teacher workshops, on R/V FULMAR cruises, and field trips to local harbors. The curriculum has three modules: Balance in the Bay; From Ocean to Tables; and Capturing the Voices of the Bay. The curriculum was piloted in five area high schools adjacent to the sanctuary and since 2009, was implemented by over 50 teachers in California high schools reaching over 1,700 students. 	Project completed in 2013
Community supported Fishery	<p>CA Sea Grant Fellow hosted by MBNMS developed and implemented a community supported fishery (CSF) for the Monterey Bay area.</p> <ul style="list-style-type: none"> The CSF, created in 2012 and named Local Catch Monterey Bay (now known as ‘Real Good Fish’) provides weekly shares of high quality, local seafood directly from local fishermen to regional residents. The web site (http://www.realgoodfish.com) includes seafood recipes, profiles of local fishermen, a member forum and more to connect consumers with high quality local food, healthy ecosystems, and local fishermen. 	The CSF is now running as an independent business
Sanctuary Classic	<p>MBNMS is a strong supporter and an active partner of the annual ‘Sanctuary Classic’ (www.sanctuaryclassic.org).</p> <ul style="list-style-type: none"> The Sanctuary Classic is a recreational fishing and photography tournament that began in 2012. Thousands of recreational fishermen participate in this event from across the country, including the central coast of California. MBNMS supports the tournament by encouraging local recreational fishermen to participate and by helping the Sportfishing Conservancy to build local support. Advisory council members, including the Recreational Fishing seats, are helping to get the word out with banners and posters to all the fishing harbors and fishermen in MBNMS. Promotion of the Sanctuary Classic creates a positive awareness of MBNMS within the recreational fishing community that the sanctuary is a place to enjoy fantastic fishing opportunities within healthy waters. Promotion of the Sanctuary Classic event creates positive results for on-the-water business communities through increases in trips aboard sportfishing charter vessels and consumer shopping at local bait-and-tackle shops. 	Ongoing

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Monterey Bay National Marine Sanctuary (MBNMS) - continued		
Activity	Description	Status
Groundfish habitat recovery	<p>MBNMS collaborated with The Nature Conservancy to investigate trawling impacts to soft bottom habitats.</p> <ul style="list-style-type: none"> • MBNMS staff participated with TNC's study off of Morro Bay, by developing outreach materials, reviewing the research plan, and providing ship time on the R/V FULMAR. • The 2009-2012 research studied the impacts of modified groundfish trawling practices on soft sea-floor habitat using fishing vessels and the time it takes for seafloor habitats to recover from trawling using the R/V FULMAR. • The completed report can be found at: http://montereybay.noaa.gov/research/techreports/trlindhholm2013.html 	Project completed in 2012
Collaborative research to remove fishing gear	<p>MBNMS conducted the 'Lost Fishing Gear Removal' project to remove marine hazards that entangle marine life.</p> <ul style="list-style-type: none"> • The 2009 – 2011 project aimed to 1) reduce benthic and pelagic hazards to marine organisms posed by lost gear, and 2) provide outreach tools to assist in the location of lost gear via reports from divers, researchers, and fishermen. • Partners included UC Davis' SeaDoc Society, CDFW, MARE, CSU Monterey Bay, and CBNMS. • Based on information from NMFS and fishermen, gear was removed using a remotely operated vehicle (ROV) from several high priority sites, such as at Portuguese Ledge State Marine Conservation Area. • MBNMS chartered a local fishing vessel F/V DONNA KATHLEEN in 2009 – 2010 to conduct operations. • Local fishermen heard about the removal efforts through local media, and contacted the F/V DONNA KATHLEEN to request assistance in finding recently lost fish traps. • Approximately 1,000 lbs. of lost fishing gear was removed from the sanctuary. 	Project completed in 2011
Promotion of Sicilian fishing heritage	<p>The film 'Il Mar di Joe/Sea of Joe' celebrates Italian fishermen in Monterey.</p> <ul style="list-style-type: none"> • In 2009, MBNMS provided logistical support, including vessel time, interviews and footage for an Italian film director to create the film, 'Il Mar di Joe/Sea of Joe,' about the emigration of Italian fishermen to Monterey, CA. • The film was funded and produced by Italian cultural organizations and agencies. • In 2009, MBNMS hosted the premiere screening of the film for 400 people of the fishing and similar communities in Monterey. • This film won the 2010 BLUE OCEAN Film Festival award for Best Feature Monterey Bay. 	Film celebrated in 2010
Conservation of Krill	<p>MBNMS leadership to conserve krill, a key prey for many species, including fished species, in the ecosystem.</p> <ul style="list-style-type: none"> • MBNMS initiated in 2002, and ONMS West Coast Region completed, a west coast wide process to consider the critical need to develop regulatory actions that prevent harvest of krill. • Commercially targeted species from salmon to rockfish depend on healthy krill stocks. • At the time, in 2002, no krill fishery existed on the west coast, but krill fisheries had begun in other regions. • Discussions with fishermen, scientists, and state and federal fishery managers led to quick agreement a preventative ban on krill harvest on the west coast was essential. • The state of California and PFMC took the action to ensure krill would be conserved without harvest to benefit the many fisheries that depend on it. 	Completed in 2009

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Monterey Bay National Marine Sanctuary (MBNMS) - continued		
Activity	Description	Status
Fishermen's Festivals	<p>MBNMS co-hosts the Fishermen's Festival with Monterey Harbor.</p> <ul style="list-style-type: none"> • MBNMS helped coordinate and plan with the Monterey Harbor two fishermen's festivals. • Festivities included fishing boat tours and open house with local fishermen; fishing and ocean exhibits; fresh Monterey Bay seafood with celebrity chefs; special hands-on children's activities (arts and crafts, treasure hunt, fishing demonstrations); abalone farm tours; and history of fishing tours and activities at the Maritime Museum. 	Conducted in 2004/05
Supporting local sustainable fishing initiatives	<p>MBNMS sends letters of support for proposals to improve and maintain an economically and ecologically sustainable fishing industry.</p> <ul style="list-style-type: none"> • MBNMS sent letters of support to the California Ocean Protection Council's Fisheries Challenge, endorsing a package of proposals submitted by the City of Monterey (Harbors) and ACSF. • The package focused on four proposals: 1) A 'Buy Fresh, Buy Local' seafood campaign; 2) Development of a scientifically credible 'local sustainable fishery' certification; 3) A shared community assessment of the current and historical condition of commercial fishing in the region; and 4) Assistance for funding Exempted Fishing Permits that collect information on potentially less impactful fishing gear. 	The proposals were not funded
Poster on Salmonid Habitat	<p>MBNMS collaboratively develops and prints a poster on Salmonid life-history</p> <ul style="list-style-type: none"> • In 2001 MBNMS led this creative outreach effort to raise public and government agencies' awareness of the critical need to better preserve and protect salmonid habitat in central California. • The team developed a classroom curriculum and colorful poster on salmonid habitat and how to protect it. • Partners for this effort included NMFS, local NGOs, the Santa Cruz Resource Conservation District and Monterey Bay Sanctuary Foundation. 	Completed; a few posters are still available
R/V FULMAR Christening	<p>The sanctuary RESEARCH VESSEL FULMAR is christened by local Sicilian matriarch.</p> <ul style="list-style-type: none"> • Mrs. Anita Ferrante served as the matriarch for the R/V FULMAR during the vessel's official christening in 2006. • Mrs. Ferrante as a member of one of the most prominent Sicilian fishing families in Monterey participated and brought her long-standing connections to the fishing community to the christening event. 	Completed
Advisory Council	<p>Commercial and recreational fishermen have representation on the MBNMS Advisory Council.</p> <ul style="list-style-type: none"> • Since its establishment in 1994, the MBNMS Advisory Council has had a commercial fishing seat. In approximately 2001, a separate recreational fishing seat was added to the advisory council. 	Ongoing

Collaborations with ***Fishermen*** and West Coast National Marine Sanctuaries
(completed, ongoing and planned)

Channel Islands National Marine Sanctuary (CINMS)		
Activity	Description	Status
Sanctuary Classic	<p>CINMS has been a strong supporter and active partner of the ‘Sanctuary Classic’(www.sanctuaryclassic.org).</p> <ul style="list-style-type: none"> • The Sanctuary Classic is a recreational fishing and photography tournament that began in 2012. Thousands of recreational fishermen participate in this event from across the country, including the southern coast of California. • CINMS has supported the tournament by encouraging local recreational fishermen to participate and by helping the Sportfishing Conservancy to build local support. • The CINMS Advisory Council wrote letters of support and provided helpful feedback to improve the tournament. • Advisory council feedback also led to a successful 2013 workshop that focused on state-of-the-art gear and procedures for catch-and-release fishing. • Outreach on the tournament helped CINMS come out on top in 2012 and 2013 as the sanctuary site that received the highest number of photo entries. • These efforts have helped show the local fishing community, the general public, and the media that CINMS is a place that is open to, supportive, and encouraging of fishing within the sanctuary. • CINMS expects to participate again if/when the tournament runs again in 2017. 	Ongoing; awaiting confirmation of tournament for 2017.
Santa Barbara Seafood Festival	<p>CINMS staff, volunteers, and advisory council members participate at the Santa Barbara Seafood Festival.</p> <ul style="list-style-type: none"> • Each year since 2002, the CINMS ‘family’ helps local fishermen with this Festival by working alongside local commercial fishermen to help prepare and serve their locally caught lobster, crab and fish. 	Ongoing
Weather/ Informational Kiosks	<p>Touch screen kiosks installed at harbors providing weather data to boaters and fishermen.</p> <ul style="list-style-type: none"> • The first generation of CINMS/ONMS touch screen kiosks are installed at the fuel docks in Santa Barbara and Channel Islands Harbors, and still provide up to date online weather information for boaters and fishermen to check conditions before they head out to the Channel Islands. • These kiosks were developed with input and appreciation from the fishing community. • The weather kiosks have become part of the ONMS kiosk program, with eight now installed at different locations within Santa Barbara and Ventura counties. • Weather kiosks are now also at the Channel Islands Boating Center at Channel Islands Harbor in Oxnard. 	Permanent installation
Lobster Fishing	<p>CINMS supports an ecologically and economically sustainable lobster fishery.</p> <ul style="list-style-type: none"> • CINMS represented federal interests on the California Dept. of Fish and Wildlife (CDFW) Lobster Advisory Committee (LAC). CDFW will package the LAC advice and drafted a Fishery Management Plan (FMP) for review and adoption by the California Fish and Game Commission in 2015 - 2016. • CINMS participation with the LAC was aligned with fishing interests, demonstrating that CINMS is not anti-fishing and that CINMS supports sound fishery management and science-based decision-making. • Through a 2016 grant from the NOAA Marine Debris Program that CINMS obtained, sanctuary staff are working closely with experienced lobster fishermen to learn and share their best practices for managing lobster gear in a manner that minimizes trap loss. A video product is expected in 2017, as well as trap cleanup event(s). 	Advisory Committee phase concluded; Lobster fishery project in progress

Collaborations with ***Fishermen*** and West Coast National Marine Sanctuaries
(completed, ongoing and planned)

Channel Islands National Marine Sanctuary (CINMS) - continued		
Activity	Description	Status
Harbor signs	<p>Harbor signs designed and implemented by CINMS.</p> <ul style="list-style-type: none"> In 2012 CINMS designed and led the implementation of commercial fishing signs that have been installed at Channel Islands Harbor next to the Commercial Fishing Loading Pier at the Marine Emporium Landing. The signs promote awareness of the importance of commercial fishing to our local economy. 	Permanent installation
Channel Islands Boating Center exhibit panels	<p>Panels about recreational and commercial fishing exhibited at the Channel Island Boating Center.</p> <ul style="list-style-type: none"> In 2013 CINMS and ONMS staff designed and oversaw fabrication and installation of the exhibit panels, which are placed within the upstairs classroom areas at the new Channel Islands Boating Center. The panels highlight fishing as a time-honored tradition and the role fishermen have in marine conservation. 	Permanent installation
Marine debris removal	<p>CINMS removes marine debris through several projects.</p> <ul style="list-style-type: none"> Through a 2016 grant from the NOAA Marine Debris Program that CINMS obtained, sanctuary staff are working closely with experienced lobster fishermen to learn and share their best practices for managing lobster gear in a manner that minimizes trap loss. A video product is expected in 2017, as well as trap cleanup event(s). Over the past several years, CINMS has worked on marine debris removal projects with the City of Santa Barbara (for periodic harbor clean-ups), the UC Davis' SeaDoc Society, and the Ocean Defenders Alliance (ODA). Through the California Lost Fishing Gear Recovery Project, SeaDoc employs local fishermen to carry out the marine debris location and recovery operations. As of 2015, they had removed approximately 20,000 pounds of gear including: 2 seine nets; 2 drag nets; 166 lobster traps; 3 hoop nets; 1 fish stick; 17 crab traps; 1 squid net; 4,203 feet of line; and 3,610 pounds of miscellaneous gear. Recovered, functional gear is returned to the owners; the program is generally perceived as a win-win by the fishermen. CINMS has provided salvage and recovery permits and support letters for the SeaDoc Society, who has received annual funding for marine debris removal. The success of the California Lost Fishing Gear Recovery Project, particularly with regard to positive involvement by the commercial fishing community, has helped CINMS influence the manner in which the ODA is approaching this same type of work within the sanctuary. 	Ongoing; CINMS continues to help with harbor seafloor cleanups, and supports requests for external funding; Lobster gear project in progress.
Ocean Acidification	<p>CINMS Advisory Council developed a comprehensive report on ocean acidification.</p> <ul style="list-style-type: none"> Starting in 2008 the CINMS Advisory Council heeded warnings by commercial fisherman Bruce Steele (advisory council member) about the dangers of ocean acidification (OA) as something that could harm marine life and fisheries on large scales. With Steele's close involvement the advisory council went on to develop and endorse a comprehensive report on OA and become a leading community group voice on this topic. Bruce Steele has also worked directly with CINMS education staff on OA outreach, participating in volunteer trainings in 2010, and with the Oceans for Life program in 2011 and 2013. 	Ongoing since 2008.
Socioeconomic monitoring	<p>CINMS supports socioeconomic monitoring and study of MPAs within the sanctuary.</p>	Ongoing

Collaborations with ***Fishermen*** and West Coast National Marine Sanctuaries
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	<ul style="list-style-type: none"> The Chief Economist for ONMS periodically analyses socioeconomic data related to commercial and recreational fishing within and around CINMS and adjacent ports, generating reports, which are available online at: http://sanctuaries.noaa.gov/science/socioeconomic/channelislands/. 	
Channel Islands National Marine Sanctuary (CINMS) - continued		
Activity	Description	Status
State Red Abalone Advisory Group (RAAG)	<p>CINMS superintendent participated on a red abalone interagency and stakeholder workgroup.</p> <ul style="list-style-type: none"> The workgroup developed advice and recommendations for the California Fish and Game Commission (FGC) regarding 1) TAC (total allowable catch) available off San Miguel Island; 2) How to best monitor red abalone population and density/abundance data for viable TAC; and 3) If a fishery were to proceed, how should it be managed (limited entry permit system, tagging system, enforcement). CINMS participation in the RAAG benefited fishermen by helping to ensure a scientific basis for decisions; CINMS also worked directly with affected fishermen prior to recommendations being presented 	Completed; however, FGC may hold additional discussions in the future.
Collaborative Marine Research Project	<p>The Collaborative Marine Research Project fostered research collaboration among fishermen, scientists, and various agencies to obtain scientific data on issues of interest to fishermen and resource managers.</p> <ul style="list-style-type: none"> From 2001 to 2005, fishermen joined CINMS, NMFS and others on a planning committee to help guide the program and select projects for funding. The program was envisioned to be funded by both ONMS and NMFS. CINMS contributed funds in 2001 to help get the initiative off the ground and fund pilot projects conducted in 2001, 2002, 2004, and 2005 to support these additional collaborative research projects: <ul style="list-style-type: none"> Marine Protected Area Benefits for Recreational Fishermen of Calico Bass (Fishing Partners: Joel Greenburg, Dan Fink, Ramona Lisa McFadyen, Tiffany Vague) Variation in Larval Supply Inside and Outside Marine Protected Areas within the Channel Islands National Marine Sanctuary (Fishing Partners: Bruce Steele, Rick Gutierrez and Harry Liquornik) Goleta Pier, a Platform for Education and Conservation. Despite a lack of funding to continue this program, CINMS has assisted with other collaborative projects arranged at UCSB. For instance, CINMS joined in a collaborative monitoring study of spiny lobster within and outside Channel Islands marine protected areas. 	Halted past Program. May resume when funding allows
Advisory Council membership	<p>Commercial and recreational fishermen have representation on the CINMS Advisory Council.</p> <ul style="list-style-type: none"> Since its establishment in 1998, the CINMS Advisory Council has had commercial and recreational fishermen to represent the fishing interests (a commercial and recreational seat) of the sanctuary. 	Ongoing; currently the activity level is low