

United States Voluntary National Cetacean Conservation Report, 2012

Submitted by the Government of the United States to the Conservation Committee
64th Annual Meeting of the International Whaling Commission
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1. Legal and other developments

1.1 *The Marine Mammal Protection Act*

All cetaceans in U.S. waters are protected under the *Marine Mammal Protection Act (MMPA)*. It is illegal for any person or vessel subject to U.S. jurisdiction to take any marine mammal, subject to certain exceptions. Take is defined as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture or kill any marine mammal.” The objectives of the MMPA are to maintain the health and stability of marine ecosystems and to obtain an optimum sustainable population level for all marine mammal stocks, taking into account the carrying capacity of the ecosystem.

Cetacean species or stocks that are below the optimum sustainable population level are considered “depleted” under the MMPA. Species listed under the Endangered Species Act (ESA) are also considered depleted under the MMPA. The cetacean species considered depleted under the MMPA that are not listed under the ESA (see section 1.2) are:

- Pantropical spotted dolphin, Northeastern offshore stock
- Spinner dolphin, Eastern stock
- Killer whale, AT1 transient stock
- Bottlenose dolphin, Western North Atlantic coastal stock

Permits or other authorizations are required under the MMPA to conduct activities that are likely to result in the "taking" of a marine mammal. When applicable requirements are met, the U.S. National Oceanic and Atmospheric Administration (NOAA) Fisheries Service can, *inter alia*, authorize the take or import of cetaceans for scientific research, enhancing the survival or recovery of a marine mammal species or stock, commercial and educational photography, public display, and incidental take during commercial fishing operations and non-fishery commercial activities.

The MMPA also established the Marine Mammal Commission (Commission) as an independent federal agency. The Commission advises and makes recommendations to both the executive and legislative branches of the U.S. government regarding measures needed to promote the policies and provisions of the Act, which are intended to conserve marine mammals and marine ecosystems. In addition, the Commission supports a research program to identify and guide marine mammal conservation measures at local, regional, national, and international levels.

1.2 *The Endangered Species Act*

In the United States, a cetacean species deemed to be “in danger of extinction throughout all or a significant portion of its range” is protected as “endangered” under the *Endangered Species Act (ESA)*. Cetacean species which are likely to become endangered

within the foreseeable future are protected as “threatened.” The ESA prohibits the taking of any endangered or threatened species, subject to certain exceptions. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Cetacean species found in U.S. waters, which are currently listed under the ESA include:

- Beluga whale, Cook Inlet Distinct Population Segment (endangered)
- Blue whale (endangered)
- Bowhead whale (endangered)
- Fin whale (endangered)
- Humpback whale (endangered)
- Killer whale, Southern Resident Distinct Population Segment (endangered)
- North Atlantic right whale (endangered)
- North Pacific right whale (endangered)
- Sei whale (endangered)
- Sperm whale (endangered)
- Western gray whale (endangered)

The ESA requires the federal government to scrutinize activities that may adversely affect threatened or endangered species and their critical habitats. Accordingly, all U.S. federal agencies must consult with NOAA Fisheries Service on activities they directly carry out, authorize, or fund that may affect a listed marine or anadromous species. These interagency, or section 7, consultations assist federal agencies to ensure that their actions do not jeopardize the continued existence of a species or destroy or adversely modify designated critical habitat. Biological opinions document NOAA Fisheries Service's opinion as to whether the federal action is likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. Biological opinions may authorize limited "take" of listed species while specifying the amount or extent of take anticipated and the measures necessary to minimize impacts from the federal action.

For threatened or endangered marine mammals that spend time outside U.S. waters, the United States works with other nations to promote the recovery of the shared stocks. In particular, NOAA Fisheries Service coordinates closely with the Canadian Department of Fisheries and Oceans on efforts to recover endangered North Atlantic right whales and Southern Resident killer whales.

1.3 The National Environmental Policy Act

Federal activities that may affect cetacean and other wildlife species, or their habitats, or other components of the human environment must undergo an environmental analysis under the *National Environmental Policy Act (NEPA)*. Key activities regularly assessed for impacts on cetaceans are coastal development (dredging, bridges, port expansions), seismic surveying, military exercises and scientific research activities.

1.4 The National Marine Sanctuaries Act

The United States also protects cetaceans and their habitat through the designation of national marine sanctuaries, authorized under the *National Marine Sanctuaries Act*.

National marine sanctuaries, as well as the Papahānaumokuākea and Rose Atoll Marine National Monuments, manage and protect designated areas of the nation's oceans and Great Lakes and provide habitat for multiple cetacean and other protected species. One of the 13 designated sanctuaries, the Hawaiian Islands Humpback Whale National Marine Sanctuary, was designated specifically to protect humpback whales present in Hawaiian waters each year from November to May. Other sanctuaries provide important habitat for other large and small cetaceans.

2. Current Government programs related to cetacean conservation

The United States conducts regular population abundance and distribution surveys throughout its waters, assessing the health of cetacean populations, and managing human-caused injury and mortality.

2.1 Cooperation with States and Alaska Native Organizations

Under the ESA, NOAA Fisheries Service enters into agreements with states that establish and maintain an "adequate and active" program for the conservation of endangered and threatened species. Once a state enters into such an agreement, NOAA Fisheries Service provides federal funding for implementation of the state's conservation program. States use federal funding to support management, outreach, research, and monitoring projects with direct conservation benefits for threatened and endangered species.

NOAA Fisheries Service also has cooperative agreements with Alaska Native organizations to conserve marine mammals and co-manage subsistence hunting of cetaceans and other marine mammals. Cooperative agreements may include federal grants to Alaska Native organizations for collecting and analyzing marine mammal population data, monitoring the harvest of cetaceans for subsistence use, participating in cetacean research, and developing marine mammal co-management structures with government agencies.

2.2 Cooperation with Non-Governmental Organizations

To respond to cetacean strandings, NOAA Fisheries Service supports volunteer stranding networks in all coastal states and is developing capacity in all U.S. territories. NOAA Fisheries Service coordinates, develops best practices, assists with diagnostics and research, provides training, and provides some financial support through the John H Prescott Marine Mammal Rescue Assistance Grant Program for the stranding network personnel to detect, respond to, and collect data and tissue samples from stranded cetaceans for analysis to determine the cause of death and the presence of toxins, chemical contaminants, infectious disease, and indications of human interactions.

2.3 National Initiatives

NOAA Fisheries Service develops Stock Assessment Reports (SAR) for each stock of cetacean that occurs in U.S. waters. Each stock assessment, as data availability allows, describes the stock's geographic range, abundance estimates (including a minimum population estimate), current population trends, current and maximum net productivity rates, status with respect to optimum sustainable population levels and allowable removal levels, and estimates of all annual human-caused mortality and serious injury. This

information is used, among other things, to evaluate the progress of U.S. commercial fisheries in reducing the incidental mortality and serious injury of marine mammals. Three regional scientific review groups advise NOAA Fisheries Service and the U.S. Fish and Wildlife Service on the status of marine mammal stocks, research needs for stocks, impacts to stocks, and methods to reduce incidental mortality of marine mammals incidental to fishing operations within Alaskan waters, along the Pacific Coast (including Hawaii), and the Atlantic Coast (including the Gulf of Mexico).

NOAA Fisheries Service also develops and implements recovery plans for cetaceans listed as “threatened” or “endangered” under the ESA. Recovery plans incorporate: 1) a description of site-specific management actions necessary to achieve recovery of the species; 2) objective, measurable criteria which, when met, would result in a determination that the species may be removed from the list; and 3) estimates of the time and costs required to achieve the plan's goal. Many recovery plans are written by recovery teams, comprised of representative stakeholders. NOAA Fisheries Service has published final recovery plans for endangered blue, humpback, North Atlantic right, fin, sperm, sei, and killer whales (southern resident distinct population segment). NOAA Fisheries Service is in the process of updating the recovery plan for endangered blue whales, and developing recovery plans for endangered Cook Inlet beluga whales and endangered North Pacific right whales. All recovery plans can be found at: <http://www.nmfs.noaa.gov/pr/recovery/plans.htm>.

2.4 Research

The U.S. Government conducts and sponsors a wide variety of cetacean conservation research. Research projects include, *inter alia*: surveys to assess population abundance and population dynamics; satellite tagging to ascertain cetacean movement patterns and habitat use; behavioral studies; biopsy collections to provide tissue samples for genetic research on population structure; fisheries bycatch mitigation efforts (including research on fishing gear modification and acoustic deterrent devices); field studies on the impacts of anthropogenic noise; analyzing cetacean presence following the 2010 *Deepwater Horizon* oil spill incident in the Gulf of Mexico; studies to assess the effectiveness of ship strike reduction strategies; toxicology and disease assessments; and behavior of spinner dolphins in Hawaii to assess the potential effects of ecotourism. In addition, NOAA Fisheries Service partners with scientists worldwide to conduct health assessment studies of wild marine mammal populations to develop baseline data, monitor trends, and investigate the impacts of disease, natural toxins, and pollution.

3. Current threats to cetacean conservation and management measures taken/proposed

3.1 Fisheries interactions

Interaction with fishing gear can incidentally injure and kill cetaceans and is a leading human-related cause of serious injury and mortality for multiple cetacean species (including North Atlantic right whales and harbor porpoise in the Atlantic Ocean, bottlenose dolphins in the Atlantic Ocean and Gulf of Mexico, humpback whales in the Eastern Pacific Ocean, and false killer whales around the Hawaiian Islands). NOAA Fisheries Service works with the fishing industry to develop or modify fishing gear and

practices to minimize bycatch. The MMPA requires NOAA Fisheries Service to reduce the incidental serious injury and mortality of marine mammals in commercial fishing operations to insignificant levels approaching a zero mortality and serious injury rate. NOAA Fisheries Service publishes an annual List of Fisheries classifying each commercial fishery based on whether it has frequent (Category I), occasional (Category II), or a remote likelihood of or no known (Category III) incidental mortality and serious injury of marine mammals. Fishermen operating in Category I or II fisheries must register with NOAA Fisheries Service, carry an observer if requested, and comply with any applicable take reduction plan regulations.

NOAA Fisheries Service develops and implements take reduction plans (TRP) to reduce the serious injury and mortality of strategic marine mammal stocks that interact with Category I and II fisheries to a zero mortality and serious injury rate. A strategic stock is one which is listed as threatened or endangered under the ESA, is declining and likely to be listed under the ESA, is listed as depleted under the MMPA, or has direct human-caused mortality which exceeds the stock's "Potential Biological Removal (PBR) level" (defined as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population). NOAA Fisheries Service convenes Take Reduction Teams, which consist of a balance of representatives from the fishing industry, fishery management councils, State and Federal resource management agencies, the scientific community, and conservation organizations to prepare TRPs. Once a TRP becomes effective, the team meets periodically to monitor the implementation and effectiveness of the plan. There are currently seven active take reduction teams.

In 2004, NOAA Fisheries Service published a report titled, "Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs." The report describes a National Bycatch Strategy for monitoring bycatch in U.S. fisheries. The United States subsequently released a National Bycatch Report in September 2011 that provides a comprehensive quantification of regional and national bycatch estimates in U.S. commercial fisheries and may provide a basis for setting bycatch management goals in the future. This report discusses impacts of bycatch on protected species, including cetaceans, in U.S. federal and select state commercial fisheries where data and estimation procedures are available to support the development of bycatch estimates. The National Bycatch Report can be found at:
http://www.nmfs.noaa.gov/bycatch/bycatch_nationalreport.htm.

3.2 Marine Acoustics

Anthropogenic underwater sound has the potential to cause behavioral changes and other adverse effects on cetaceans, including population-level effects. To better assess these potential impacts, NOAA Fisheries Service is working to develop guidance for assessing acoustic effects of anthropogenic sound on marine mammals. In addition, NOAA Fisheries Service works with various industries and the U.S. Navy to establish plans to monitor and mitigate the use of underwater sound sources, works within the International Maritime Organization (IMO) to address the issue of commercial shipping noise and its contribution to the ambient acoustic environment, funds research to improve

understanding of the potential impact of sound on marine mammals and other marine protected species, and works with federal partners to address scientific issues relating to marine anthropogenic sound. Examples of recent efforts from NOAA Fisheries Service and partners include behavioral response studies (BRS) on beaked whales and other species in the Bahamas (2007/2008), Mediterranean Sea (2009), and off southern California (2010/2011) to better understand behavioral impacts of noise exposure.

Further, NOAA, the U.S. Navy, and the U.S. Bureau of Ocean Energy Management collaborated on a May 2012 symposium, “Mapping Cetacean and Sound: Modern Tools for Ocean Management.” This symposium brought together two data and product-driven working groups, the Underwater Sound-field Mapping Working Group (SFMG) and the Cetacean Density and Distribution Mapping Group (CetMap), to work towards improving the tools used to evaluate the impacts of human-induced noise on cetacean species. The specific objective of the SFMG is to create mapping methods to depict the temporal, spatial, and spectral characteristics of underwater noise; while the specific objective of the CetMap is to create regional cetacean density and distribution maps that are time- and species-specific, using survey data and models that estimate density using predictive environmental factors. At the May 2012 symposium, the products of these working groups were presented, integrated, and interpreted in the context of management applications by members of each working group and a larger audience of scientists, environmental non-government organizations, industries, federal agencies, and conservation managers. The final products and analyses will provide a more robust, comprehensive, and context-specific biological and acoustic basis by which to inform subsequent management decisions related to: 1) cumulative noise impacts; 2) anthropogenic impacts to marine mammals, and, specifically; 3) the potential effects of man-made noise on cetaceans. Please go to the following link for additional information: <http://www.st.nmfs.noaa.gov/cetsound/>.

3.3 Ship Strike Reduction

Ship strikes are a significant threat to large whales. In the United States, collision with vessels is a leading human-caused source of mortality for the endangered North Atlantic right whale. To address this threat, NOAA has developed regulatory and non-regulatory measures to reduce ship strikes, including modification of vessel operations, education and outreach programs, and research and monitoring activities. In 1999, NOAA Fisheries Service and the U.S. Coast Guard implemented two Mandatory Ship Reporting systems, endorsed by the International Maritime Organization (IMO), for ships 300 gross tons or greater in two key right whale habitats—one off the northeast United States and one off the southeast United States. NOAA Fisheries Service and other state and federal agencies conduct extensive aircraft surveys for right whales. From these, right whale “alerts” and ship speed advisories are issued through multiple media outlets, in areas and at times where right whales occur. In November 2006 the United States established a set of recommended vessel routes in four locations off the U.S. East Coast to reduce the likelihood of ship collisions in key North Atlantic right whale habitats. The United States submitted a proposal to the IMO to reconfigure the East-West leg of the Traffic Separation Scheme (TSS) that services Boston, Massachusetts, which was approved in December 2006 and implemented in July 2007. The U.S. subsequently submitted a

proposal to the IMO to reconfigure the North-South leg of the TSS, which was subsequently approved and went into effect in June 2009. Also proposed to, and approved by, the IMO in 2008 was a U.S. proposal to establish an area to be avoided (ATBA) in the Great South Channel off Massachusetts. This seasonal, voluntary ATBA was implemented in June 2009. These modifications are expected to significantly reduce the risk of ship strikes to baleen whales in this area.

In December 2008, the United States implemented speed restrictions to reduce the threat of ship collisions with North Atlantic right whales and the risk of serious injury or death should a collision occur. These regulations require ships 65 feet or longer to travel 10 knots or less in certain areas at certain times of the year. NOAA Fisheries Service also calls for temporary voluntary speed limits in other areas or times when the presence of a group of three or more right whales is confirmed. Mariners are expected, but not required, to either avoid these areas or travel through them at 10 knots or less. NOAA has developed and distributed a Compliance Guide for Mariners for this rule. NOAA Fisheries Service is continually monitoring vessel behavior in these management areas for the purposes of enforcing and evaluating the effectiveness of the regulations. A report of analysis of the first three years of the vessel speed restriction regulations, completed in 2012, is available at:

http://www.nmfs.noaa.gov/pr/pdfs/shipstrike/assessment_nmfsopr48.pdf.

In early 2012, the United States submitted proposals to the IMO to amend the existing TSS in the Santa Barbara Channel and for the approach to San Francisco to reduce the likelihood of ship strike deaths and serious injury to blue and other whales. The Santa Barbara Channel proposal would reduce the width of the separation zone from four nautical miles to three nautical miles in the Santa Barbara TSS. This would move the inbound lane further from the Channel Islands and decrease the co-occurrence of vessels and blue and fin whales. Technological advances in navigation systems since the TSS was originally established in 1980 alleviate any concern for an increased risk of vessel collision. In 2011, the USCG conducted a Port Access Route Study (PARS) and concluded that the burden imposed on shipping by the proposed amendment is minimal while the potential benefits to large whales, particularly blue whales, may be significant. The TSS proposal for approach to San Francisco will serve to reduce the risk of marine casualties, reduce the likelihood of ship strikes with cetaceans, and avoid interaction between fishing and commercial vessels. Both of these proposals will be reviewed by the IMO's Subcommittee on Safety of Navigation for review and consideration at its upcoming July 2012 meeting.

In Glacier Bay National Park, Alaska, the National Park Service limits the speed of cruise ships to 13 knots and the number of ships entering the park to protect humpback whales. In spring 2007, Stellwagon Bank National Marine Sanctuary and its partners implemented a new program to reduce the threat of ship strikes to endangered large whales that could result from transport of Liquefied Natural Gas (LNG) in waters off New England. Licenses granted to develop two LNG sites were conditioned upon the use of three passive acoustic monitoring arrays to reduce the threat of ship strikes. Use of these arrays was initially recommended by the NOAA's National Marine Sanctuary

Program (NMSP) as part of formal consultations for these projects under the *National Marine Sanctuaries Act* (NMSA). Permitting was coordinated through NOAA Fisheries and the NMSP, and was the subject of a biological opinion rendered by the Fisheries Service under the Endangered Species Act via consultations with the U.S. Maritime Administration and the U.S. Coast Guard, acting jointly. The program establishes three passive acoustic arrays for detecting calling whales. Two of the arrays include real-time auto detection buoys, first at the site of port and pipeline construction, and later within the Boston shipping lanes or TSS. The buoys automatically detect northern right whale contact calls and transmit alerts in real-time via satellite connections.

4. Whalewatching Management and Relevant Actions Under the 5-Year Strategic Plan for Whalewatching (IWC/63/CC 3)

4.1 Research

The United States regularly conducts research on the impacts of vessels on marine mammals directly with government scientists, in collaboration with University scientists, and by providing funding, through grants, to support research of independent scientists and graduate students. This research occurs through regular assessments of marine mammal population abundance and trends, studies on the impacts of human activities on marine mammals, and directed research on the impacts of whalewatching activities. For example, NOAA Fisheries Service is currently collaborating with scientists and students from Duke University and Murdoch University to obtain baseline information on abundance, distribution, and behavior of Hawaiian spinner dolphins. This information will be used to assess the potential effects of ecotourism activities, including whalewatching, on those populations. The United States uses existing and ongoing research efforts to inform management of whalewatching activities, including regional voluntary viewing guidelines and regulations (described in section 4.5).

4.2 Assessment (Monitoring)

The United States conducts regular population abundance and distribution surveys throughout its waters, assessing the health of cetacean populations, and managing human-caused injury and mortality. As described in section 2.3, NOAA Fisheries Service develops annual Stock Assessment Reports (SAR) for cetaceans that occur in U.S. waters. These annual reports maximize the chance of detecting adverse impacts on populations from human activities. Further, as described in section 4.1, the U.S. regularly collaborates with independent scientists, increasing the chance that the U.S. is able to detect adverse impacts on populations through current and ongoing research studies. This information is used, among other things, to evaluate the progress of U.S. management of human interactions with marine mammals, including vessel interactions (through viewing guidelines and/or regulations).

NOAA Fisheries Service makes the SARs all information from research and monitoring programs and SARs easily accessible to the public through the internet (<http://www.nmfs.noaa.gov/pr/sars/>). NOAA Fisheries and each Regional Office maintains websites dedicated to providing information on whalewatching in the region, the status of species most popular to the whalewatching industry, and information on viewing guidelines and regulations.

4.3 Capacity Building

The U.S. works with the whalewatching operators and interests domestically and internationally to support the development of responsible whalewatching practices and the provision of benefits to local communities. For example, NOAA Fisheries Service has a “Wildlife Viewing Working Group” that includes representatives from each Regional Office. This group meets regularly to exchange information on challenges, successful management methods, outreach methods, and management challenges. Wildlife viewing experts from each NOAA Fisheries Service Regional Office also regularly visit other Regions to provide advice on developing whalewatching research and management programs.

This NOAA Fisheries Service Wildlife Viewing Working Group also works to transfer information to independent researchers, whalewatching operators, and conservation organizations. For example, in November 2011 the Working Group hosted a workshop at the Biennial Meeting of the Society for Marine Mammalogy, at which researchers, operators, and managers from around the globe presented information on current whalewatching research and management efforts. This workshop included a presentation on the IWC’s Large-Scale Whalewatching Experiment Initiative.

Further, the U.S. regularly participates in international workshops on whalewatching. Most recently the U.S. participated in the November 2010 IWC Workshop on Whalewatching held in Argentina, and the October 2011 Specially Protected Areas and Wildlife Protocol Whalewatching Workshop held in Panama.

4.4 Development

The U.S. works regularly with the whalewatching industry to assist in the development of a sustainable industry that operates in a manner that is not detrimental to marine mammals. Most notably, the NOAA Fisheries Service collaborated with partners in the U.S. Office of National Marine Sanctuaries, Whale and Dolphin Conservation Society, Dolphin Ecology Project, and commercial tour operators to launch the “Dolphin SMART” program in 2007. This program is a voluntary recognition and education programs encouraging responsible viewing by commercial businesses operating in the Florida Keys National Marine Sanctuary and portions of the Gulf of Mexico. By becoming a “Dolphin SMART” operator and maintaining participation, businesses have a competitive edge by offering customers an enhanced tour, while demonstrating their commitment to dolphin conservation. Another important element of the program is *Proud Supporters* that support the program’s mission by raising public awareness for the program, while promoting responsible viewing and advertising of wild dolphins. Increased awareness of the program serves to further educate the public about the importance of booking “Dolphin SMART” and responsibly viewing wild dolphins to aid in conservation. The “Dolphin SMART” program was so successful in Florida, members of the dolphin viewing industry in Hawaii requested NOAA Fisheries Service start a “Dolphin SMART” program in Hawaii. As a result, NOAA Fisheries Service launched “Dolphin SMART-Hawaii” in 2011.

NOAA Fisheries Services also partnered with the Whale and Dolphin Conservation Society and NOAA Stellwagen Bank National Marine Sanctuary to develop a similar program to Dolphin SMART, “Whale SENSE”, to engage the whalewatching industry for humpback, fin, minke, and sei whales in the U.S. Mid-Atlantic and New England, and to foster guideline compliance. Since its launch in 2009, the Whale SENSE program has gained momentum and credibility within the whale watching industry, expanding in the U.S. and gaining international recognition.

Businesses participating in the “Dolphin SMART” and “Whale SENSE” programs are provided with outreach materials for their customers, including educational brochures, posters, and a flag and/or sticker decal to advertise on their vessel.

4.5 Management

NOAA Fisheries Service prohibits viewing of marine mammals in a manner that can cause “harassment” of the animal, including feeding or attempting to feed an animal. Whalewatching in the United States is managed mainly through viewing guidelines that include region-specific information for local species and habitats. These guidelines can be found at: <http://www.nmfs.noaa.gov/pr/education/viewing.htm>. NOAA Fisheries Service develops and provides multiple training and education tools for industry practitioners and the public, include brochures, posters, and websites. These viewing guidelines, which vary by region and species, promote a “Code of Conduct” that recommends approach distances for vessels and aircraft, methods for vessel and aircraft approach, speed limits for vessels in areas with high numbers of cetaceans, not swimming with marine mammals in the wild, and maximum viewing time limits. In addition, NOAA Fisheries Service and the NOAA's National Marine Sanctuary Program have developed a broad-based “Ocean Etiquette” program to promote ocean stewardship by providing the public with guidance on minimizing impacts to marine life and habitats, including the “Dolphin SMART” and “Whale SENSE” programs discussed in section 4.4.

While the majority of whalewatching in the United States is managed through voluntary guidelines, whalewatching is managed under regulations for endangered humpback whales in Alaska and Hawaii, endangered North Atlantic right whales, and endangered Southern Resident killer whales. Regulations specific to humpback whales in Hawaii and Alaska prohibit vessels from approaching within 100 yards (91.4 m) of any humpback whale, including placing a vessel in the path of an oncoming humpback whale so that the whale surfaces within 100 yards (91.4 m) of the vessel. In Hawaii, aircraft are also prohibited within 1,000 feet (300 m) of any humpback whale. In Alaska, the U.S. National Park Service has additional regulations that prohibit the operation of a vessel within one-quarter nautical mile of a humpback whale and limits the speed of cruise ships to 13 knots in Glacier Bay National Park. Glacier Bay National Park also limits the number of cruise ships allowed in parts of the park when humpback whales are present.

The critically endangered status of North Atlantic right whales has prompted regulations that prohibit vessels conducting whalewatching activities from approaching (including by

interception) within 500 yards (460 m) of a right whale by vessel, aircraft, or any other means. When within 500 yards (460 m) of a right whale, a vessel must steer a course away from the right whale and immediately leave the area at a slow safe speed and any aircraft must take a course away from the right whale and immediately leave the area at a constant airspeed.

The identification of the effects of vessels, including physical interference and sound, as a potential contributing factor in the decline of the endangered Southern Resident killer whales promoted NOAA Fisheries Service to issue regulations to protect the whales. These regulations prohibit vessels from approaching any Southern Resident killer whale closer than 200 yards and forbid vessels from intercepting a Southern Resident killer whale or positioning the vessel in its path. The regulations apply to all types of boats, including motor boats, sail boats, and kayaks.

NOAA Fisheries Service's Pacific Islands Region is currently considering regulations for viewing activities that may result in harassment of Hawaiian spinner dolphins. In the meantime, NOAA Fisheries Service continues to promote the recommended regional viewing guidelines for the species.

5. Reporting systems for cetacean injuries/mortality/strandings

5.1 Fisheries bycatch reporting

All U.S. fishing vessel owners or operators must report all incidental injuries and mortalities of marine mammals that occur during commercial fishing operations under the Marine Mammal Authorization Program. Fisheries that result in frequent or occasional incidental mortality and serious injury of marine mammals are subject to observer and registration requirements under these programs. In addition, NOAA Fisheries Service's Regional Fishery Observer Programs, Marine Mammal Health and Stranding Response Program, and large whale entanglement response programs document and report marine mammal bycatch incidental to commercial fishing operations. Information on marine mammal interactions with commercial fisheries collected under these programs provides the basis for determining whether the incidental serious injury and mortality of marine mammals in commercial fishing operations has been reduced to insignificant levels approaching a zero mortality and serious injury rate.

5.2 Marine Mammal Health and Stranding Response Program

In 2012, the Marine Mammal Health and Stranding Response Program (MMHSRP) is celebrating its 20 year anniversary. The MMPA was amended in 1992 to establish the MMHSRP to: 1) facilitate collection and dissemination of reference data on the health of marine mammals and to assess health trends of marine mammal populations in the wild; 2) correlate marine mammal health with available data on physical, chemical, and biological environmental parameters; and 3) coordinate effective responses to unusual mortality events. The MMHSRP has several components including:

- National Marine Mammal Stranding Network;
- Marine Mammal Unusual Mortality Event Response and Investigation Program;
- John H. Prescott Marine Mammal Rescue Assistant Grant Program;
- National Marine Mammal Archiving Program;

- National Marine Mammal Entanglement Response Program;
- Marine Mammal Biomonitoring, Surveillance, and Investigation Program;
- Marine Mammal Analytical Quality Assurance Program; and
- Information Management Program.

The MMHSRP involves numerous partners including federal agencies and state, academic, tribal, zoos and aquaria, and non-profit organizations that collaborate on retrospective and prospective health studies and national response programs. The National Marine Mammal Stranding Network consists of over 120 organizations, including other federal agencies, nonprofit organizations, aquaria, universities, and state and local governments, partnered with NOAA Fisheries Service to investigate marine mammal strandings. In addition to the collection of health and disease information from stranding response activities, NOAA Fisheries Service works with partners to evaluate the health and disease status of marine mammals in the wild through live capture release programs, by-catch monitoring programs working with fisheries observers, subsistence monitoring programs and free swimming remote assessments such as remote biopsies. The MMHSRP oversees the activities of the national stranding and entanglement response networks through a national coordinator and six regional coordinators. Every rescue and detailed study of stranded marine mammals yields information on species, sex, length, location, and any evidence of human interaction, as well as tissues and specimens for use in scientific research, for determination of the causes of stranding and death, for educational purposes, for life history investigations and for biological or health research needs. With these data, along with data from other sources, NOAA Fisheries Service and its partners gain insight into the causes of strandings, the health and health trends of cetacean populations, and the identification of factors that may impact the health of wild marine mammal populations. Efforts in 2011 focused on increasing standardization of interpretation of human interaction injuries including vessel strikes, fishery and gear entanglement/ingestion, and gunshots. A workshop was held by Woods Hole Oceanographic Institute in winter 2012 bringing together international experts to review cases and establish criteria of injuries. This builds on the Human Interaction documentation standardization that was developed by stranding network partners.

The National Marine Mammal Tissue Bank was established in collaboration with the National Institute of Standards and Technology (NIST) and provides protocols and techniques for the long-term storage of tissues from marine mammals for retrospective contaminant analyses. Since 1987, tissue samples have been contributed from several sources, including the Stranding Network, fisheries bycatch, health assessment studies and legal subsistence hunts. The Tissue Bank uses the network of partners including other trained personnel to collect tissues from specific indicator species (including, but not limited to, pilot whales, harbor porpoises, Atlantic white-sided dolphins, pygmy sperm whales, bottlenose dolphins, rough-toothed dolphins, common dolphins, beluga whales, and bowhead whales), animals from mass-stranding events, and from mortality events. In the upcoming year, the Tissue Bank will be expanding to include banking of samples for other purposes such as infectious disease and biotoxin detection or studies. In the last two years, the NIST environmental Specimen Bank has established an environmental specimen bank in the main Hawaiian Islands which is collecting samples

from a variety of biota including marine mammals of the Pacific, fish, corals and sea birds. Development of performance based interlaboratory activities and control or reference materials in biological matrices such as marine mammal tissues or blood continues to be a focus of the program.

NOAA Fisheries Service leads the investigations of Unusual Mortality Events (UMEs), which are declared when a stranding event or disease outbreak is unexpected, involves a significant die-off of any marine mammal species, and demands an immediate response. A Working Group on Marine Mammal Unusual Mortality Events, comprised of experts in marine mammal health, conservation medicine, biology, toxicology, and marine science, aids NOAA Fisheries Service and the Stranding Network in conducting more thorough investigations of such unusual stranding events. As of May 2012, the program has investigated 56 unusual mortality events in marine mammals in the U.S. with four events under investigation in 2011-2012. Currently the program has four active investigations as shown in the following table and at

<http://www.nmfs.noaa.gov/pr/health/mmume/>.

UME	Species	Dates	Numbers	Notes
Northern Gulf of Mexico	cetaceans- primarily bottlenose dolphins	Feb 2010 and still open	>738 cetaceans	Northern Gulf states, overlap with DWH oil spill Natural Resource Damage Assessment
Northeast Pinniped	harbor seals	September 2011 and still open	>162 harbor seals	Maine to Massachusetts, new Influenza A virus
Alaska Pinniped	walrus, ice seals	July 2011 and still open	>100 ice seals	Collaboration with subsistence community
Texas Cetacean	bottlenose dolphin	November 2011 until March 2012	123 bottlenose dolphins	Analyses of samples underway

Since 1998, the program has documented an increase in Harmful Algal Bloom (HAB) related biotoxins in marine mammals (in new species and new geographic areas),¹ areas with very high levels of anthropogenic chemicals, and an increase in detection or geographic expansion of infectious diseases of concern for population and human health.²

¹ http://ocean.ceq.gov/about/sup_jsost_iwgs.html

² Gulland, F.M.D. 2006. Review of the Marine Mammal Unusual Mortality Event Response Program of the National Marine Fisheries Service. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-OPR-33, 37 p.; Rotstein DS, Burdett LG, McLellan W, Schwacke L, Rowles T, Terio KA, et al. Lobomycosis in 2 offshore bottlenose dolphins (*Tursiops truncatus*), North Carolina. Emerg Infect Dis [serial on the Internet]. 2009 Apr [date cited]. Available from <http://www.cdc.gov/EID/content/15/4/zzz.htm>

Over the last several years, NOAA Fisheries Service's collaborations with partners have documented new viruses, new bacterial diseases, and new fungal diseases in cetaceans in the wild. Of particular importance for 2011 – 2012, the program investigated the role of emerging infectious diseases on marine mammal health, the transport of terrestrial pathogens to marine mammals, and the risk of animal to human and human to animal transmission of shared pathogens or emergence of pathogens in marine foodwebs. NOAA signed a Memorandum of Agreement with the Centers for Disease Control and Prevention to enhance collaboration. For instance, studies are underway on several emerging infectious diseases such as *brucella*, *coxiella*, *influenza*, *leptospira*, and protozoal diseases. Of note, bottlenose dolphins in the northern Gulf experienced an unprecedented level of perinatal mortality in February – March 2011. *In utero* infection with *brucella* was determined to be the cause of death in some of these fetal dolphins. Research is underway to determine if the *brucella* organism is a new more virulent strain or the animals were more susceptible to disease. In addition, a novel influenza virus was discovered as a cause of death in some harbor seal strandings in 2011 in New England. Detection and response to emerging infectious diseases continues along all coasts of the U.S.

As part of efforts to monitor and mitigate the impacts of naval training activities on marine mammals, the NOAA and US Navy signed a Memorandum of Understanding (MOU) in 2011 that outlines communication and assistance between the agencies relative to stranding response and investigations associated with Major Training Exercises in specific Navy training ranges. The MOU establishes regional agreements between Navy and NMFS outlining specific types of assistance that might be available to stranding networks for responses along the coasts. With collaboration of the U.S. Navy, the NMFS and stranding network partners investigated the deaths of three common dolphins during an time delayed underwater detonation training exercise in a Navy training range in 2011 and determined the types of injuries resulting in the immediate deaths of these animals.

Finally over the last two years, the MMHSRP has continued to work with numerous partners to respond to and investigate the impacts of the *Deepwater Horizon* Oil Spill on cetacean populations in the Gulf of Mexico. A Natural Resource Damage Assessment (NRDA) and restoration planning are underway. The UME and NRDA investigations include stranding response and necropsies and coastal bottlenose dolphin studies using photo-ID, remote biopsies, and dolphin live capture release health assessments. All of these studies contribute to a growing, worldwide effort of marine mammal biomonitoring not only to assess the health and contaminant loads of marine mammals, but also to assist in determining anthropogenic impacts on marine mammals, marine food chains and marine ecosystem health. In addition these efforts are collaborative with the growing international effort on One Health. NOAA Fisheries Service provides participants in the program with training and some financial support through a grant program. Finally the MMHSRP continues to support training, capacity building, and response assistance for marine mammal health issues in other countries.

6. International cooperation activities

6.1 International Research and the U.S. International Marine Mammal Action Plan

The U.S. Government, through the NOAA Fisheries Service, the Marine Mammal Commission, and other Federal agencies, undertakes a number of research projects on cetaceans in U.S. waters and overseas. NOAA Fisheries Service also collaborates with non-U.S. scientists on a wide variety of cetacean research activities. Generally, these efforts include collaboration on assessments of stock status and genetic structure, bycatch assessments and mitigation efforts, evaluations of the impacts of human-made sound, assessments of contaminant loads in tissues, and capacity building and training efforts on a variety of topics – most notably training and development of observer and stranding response networks. NOAA Fisheries Service is preparing to publish an International Marine Mammal Action Plan to guide the United States' efforts to protect and conserve marine mammals outside U.S. waters.

6.2 U.S.-Russia Agreement on Cooperation in the Field of Environmental Protection

Since 1995, the United States has conducted joint research on the western gray whale with the Russian Federation on a project within the Marine Mammal Project under Area V: Protection of Nature and the Organization of Reserves within the U.S.-Russia Agreement on Cooperation in the Field of Environmental Protection. This project was initiated to examine the conservation status, occurrence, distribution, behavior, and potential human-related disturbance of gray whales off the northeastern coast of Sakhalin Island. Recent findings show that eastern and western gray whales can be genetically differentiated at the population level, and should be recognized as geographically and genetically isolated population units. Although 180 whales have been identified off northeastern Sakhalin Island between 1994 and 2009, not all of these individuals can be assumed to be alive today. However, the actual population size of western gray whales, based on mark-recapture estimates from photo-identification and genetic data, is estimated to be 150 animals.

6.3 Multilateral Agreements

In 1992, the United States joined various Latin and South American countries to form the *La Jolla Agreement and the International Dolphin Conservation Program*, which established conservative species/stock specific annual dolphin mortality limits and represented an important multilateral step toward reducing bycatch of dolphins in commercial Eastern Tropical Pacific (ETP) tuna purse seine fisheries. In 1995, the United States and the Governments of Belize, Colombia, Costa Rica, Ecuador, France, Honduras, Mexico, Panama, Spain, Vanuatu and Venezuela came together and negotiated the Panama Declaration, which in turn led to the negotiation of the Agreement on the International Dolphin Conservation Program (AIDCP). This treaty aims to reduce incidental dolphin mortalities in the tuna purse-seine fishery through the setting of annual limits, seeks alternative means of capturing large yellowfin tunas not in association with dolphins, and ensures the long-term sustainability of tuna stocks and marine resources in the ETP.

In addition to its commitments through the IWC and AIDCP, the United States is a party to a number of multi-lateral agreements related to cetaceans and their marine environments, including:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- South Pacific Regional Environmental Program and United Nations (UN) Environmental Program's Specially Protected Areas and Wildlife Protocol for the Wider Caribbean;
- Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); and
- Several other regional fishery management organizations (RFMOs).

In July 2011, the Joint Tuna RFMO Technical Working Group on Bycatch met for the first time. This working group was established as a result of the June 2012 meeting of the five tuna RFMOs in Brisbane, Australia. The objective of the working group is to investigate methods to harmonize data collection protocols, identify species of concern, review the efficacy of existing bycatch measures, and compile information on bycatch research. The working group identified the need to develop and standardize marine mammal identification guides for observers in tuna fisheries. The report of the first meeting can be found at: <http://www.tuna-org.org/Kobe3.htm>.

In the UN General Assembly resolution on Sustainable Fisheries and the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, adopted on December 6, 2011, the United States was successful in adding language expressing concern about the bycatch of marine mammals. In addition language was also added urging States and regional fisheries management organizations to strengthen or establish data-collection programs to obtain reliable estimates of shark, marine turtle, fin fish, marine mammal and sea bird by-catch, to promote research on selective fishing gear and practices and research on bycatch mitigation measures. The inclusion of marine mammals in this resolution is a significant step toward the UN recognizing marine mammal bycatch as a global threat.

At the 2011 annual meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT) a US-initiated measure was adopted by ICCAT to harmonize requirements for parties to collect data on by-catch and discards in their waters and report this information to ICCAT, including means for artisanal fisheries in developing coastal States to develop alternative methods for data collection. This measure will improve data collection on the bycatch of marine mammals.

6.4 Capacity-Building Activities

In 2011, NOAA Fisheries worked with international partners to reduce bycatch of marine mammals through gear modification and to support capacity-building activities to better understand and mitigate marine mammal bycatch. Such projects included:

- NOAA Fisheries' Southwest Fisheries Science Center assisted Mexico in efforts to implement a recovery plan for the critically depleted vaquita, including estimating vaquita abundance, evaluating the potential success of proposed vaquita protected areas in the northern Gulf of California, and providing expert advice on the

development of vaquita acoustic monitoring programs.

- In October 2011, NOAA Fisheries Service sponsored an International Gillnet-Marine Mammal Bycatch Mitigation Workshop. At the workshop participants reviewed case studies and assessed the effectiveness of four strategies for mitigating bycatch of marine mammals in gillnet fisheries—pingers (acoustic devices), gear modification, gear switching, and protected areas (time area closures). Participants evaluated under what circumstances a particular mitigation strategy would be effective and identified areas where additional research is needed to improve each mitigation strategy. A report summarizing the findings of the workshop and the papers presented will soon be published in a special journal issue.
- In November 2011, NOAA Fisheries Services hosted a coastal/artisanal gillnet workshop coincident with the Society for Marine Mammalogy. More than 20 experts from Latin America, East and West Africa, Indian Ocean, and Asia participated, all of whom have been working actively in assessing or addressing coastal gillnet bycatch issues for years/decades. The experts provided brief summaries of their situation and identified the top priorities for "next steps" to mitigate marine mammal bycatch in coastal/artisanal gillnet fisheries.