

## For the Birds... How National Marine Sanctuaries Benefit Seabirds

Common Murres



NOAA's Office of National Marine Sanctuaries serves as the trustee for a system of 14 marine protected areas encompassing more than 170,000 square miles of America's ocean and Great Lakes waters. Within the National Marine Sanctuary System's protected waters, seabirds, including shorebirds, play an important role in the ecosystem, and in many cases, serve as indicators of ocean health within the national marine sanctuaries.

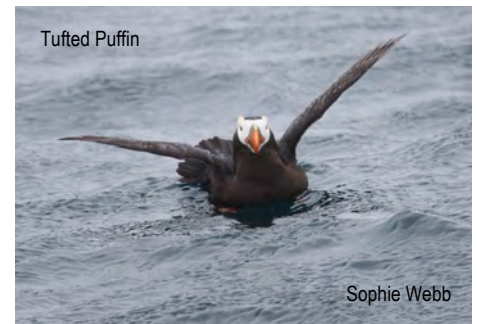
Sanctuaries invest hundreds of thousands of dollars annually in research, citizen science, education and protection for seabirds. Sanctuaries also receive thousands of dollars annually from oil spill damage assessment funds, restoration funds, and funding from foundations to protect and restore seabirds.

Western Gulls



# The West Coast

National marine sanctuaries on the West Coast protect the largest concentration of breeding seabirds in the contiguous United States, and provide feeding habitat for thousands of seabirds and wintering birds on the Pacific Flyway. All five national marine sanctuaries on the West Coast have numerous programs that result in the restoration and protection of seabirds.



## Protecting Nesting Sites and Rookeries

All five national marine sanctuaries on the West Coast have regulations that benefit seabirds, such as prohibitions on oil and gas development and dumping oil, trash or plastic in the sanctuary, which can harm seabirds. More specifically, the sanctuaries also include regulations that prohibit low-flying aircraft that can cause seabirds to flush off their nests, kicking eggs into the ocean or leaving young chicks vulnerable to predators. Working closely with state managers, sanctuary staff helped develop avoidance areas for vessels around seven key seabird rookeries in Gulf of the Farallones and Monterey Bay national marine sanctuaries.

## Changing Behaviors of Those Who Can Harm Birds

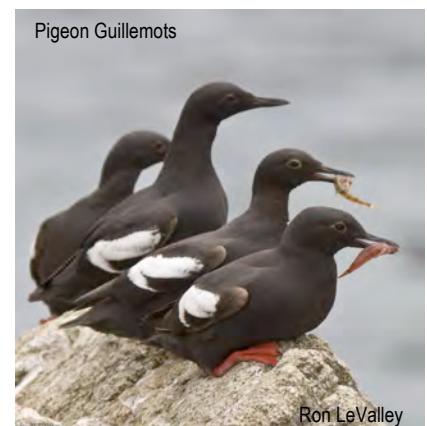
A long-term investment in seabirds, with funding from the Command and Luckenbach Trustee Councils that will exceed \$7 million over a 25-year period, has resulted in the creation of the California Seabird Protection Network, spearheaded by Gulf of the Farallones National Marine Sanctuary in cooperation with Monterey Bay National Marine Sanctuary and other state and federal agencies, and non-governmental organizations. The Network improves the survival and recruitment of seabird colonies by reducing human disturbance through three prongs – seabird monitoring, regulatory and enforcement initiatives, and education and outreach. Accomplishments to date include:

- 1) Increasing ocean-user awareness of the potential adverse impacts surrounding human-seabird interactions while offering safe methods of observing seabirds during recreational or commercial activities.
- 2) Fostering information exchange at key events and venues, such as association meetings, conferences, air and boat shows, and ecotourism vendors.
- 3) Raising awareness of decision makers (federal, state and local agencies and commissions) of the threats that human disturbance poses to breeding seabird colonies and the best methods to reduce and eliminate these disturbances.
- 4) Leading the effort to coordinate all agencies responsible for enforcing regulations that help to protect seabirds by reviewing regulatory approaches, developing an enforcement strategy, determining current and future enforcement needs and creating a patrol guide to ensure laws that protect seabirds are enforced.

## Conducting Research on Seabirds as Indicators of Ecosystem Health

The Applied California Current Ecosystem Studies (ACCESS) conducted by Gulf of the Farallones and Cordell Bank national marine sanctuaries, in partnership with PRBO Conservation Science, conduct at-sea monitoring for seabirds and marine mammals in the context of physical oceanographic processes. The data serves five purposes:

- 1) Wildlife – improve conservation of top predators and their food webs.
- 2) Ocean zoning – guide human uses to provide protection of the ecosystem.
- 3) Climate change – document effects of environmental change on the ecosystem.
- 4) Fish populations – contribute to ecosystem-based management approaches.
- 5) Water quality – assess ecosystem effects of freshwater outflow.



## Public Education through Exhibits and the Internet

Channel Islands, Monterey Bay and Gulf of the Farallones national marine sanctuaries all partner with other agencies and institutions to display exhibits that feature seabirds. These include:

- 1) A new exhibit featuring unique seabirds and the protections in place for these species at the Channel Islands Boating Center;
- 2) An interactive exhibit where public awareness is raised about seabirds as part of the land and sea connection at the Coastal Discovery Center in San Simeon; and
- 3) An exhibit featuring local seabirds at the Point Reyes Bear Valley Visitor Center.

Cordell Bank National Marine Sanctuary hosts an online interactive seabird poster that educates about seabirds that live and feed on Cordell Bank.

## Educating America's Youth



- Grades K-12: Ocean Science and NOW (North Olympic Watershed) Science Program – Olympic Coast National Marine Sanctuary educates students about marine debris, ocean currents and black-footed albatross.
- Grades 3-5: The Seabird Shuttle – Gulf of the Farallones National Marine Sanctuary has both in-school and after school programs that teach students about local seabirds, adaptations of marine birds, and ways that students can have a positive effect on the ocean and its ecosystems.
- Grades 6-12: Winged Ambassadors – Cordell Bank National Marine Sanctuary and Papahānaumokuākea Marine National Monument both offer a student ocean literacy program through the eyes of albatross, in which students learn about how seabirds are affected by ocean plastic pollution and fisheries bycatch.

## Conducting Citizen Science, Improving Oil Spill Response and Restoration

The three West Coast sanctuaries that are adjacent to the mainland provide baseline data on dead birds on beaches through a network of volunteer expert surveyors. These programs assist sanctuary management in the early detection of natural and human-caused environmental events, and train volunteers who can respond during an oil spill.



- 1) Beach Watch, established 1993, in Gulf of the Farallones National Marine Sanctuary: 120 volunteers contribute more than 5000 hours of survey time annually. Data from Beach Watch have supported natural resources damage assessment and provided scaling for restoration projects resulting in more than \$50,000,000 in settlement funds used for greater protection of seabirds, marsh lands and lost recreational-uses from five oil spills.
- 2) Beach COMBERS (Coastal Ocean Mammal / Bird Education and Research Surveys), established 1997, in Monterey Bay National Marine Sanctuary: Volunteers sample selected sections of beach during the first week of each month at low tide for dead marine birds and mammals. Data from Beach COMBERS have been used by fishery managers to adjust set gill net fisheries to eliminate bycatch of seabirds.
- 3) COASST (Coastal Observation and Seabird Study Team), established 1998, in Olympic Coast National Marine Sanctuary in partnership with the University of Washington: Volunteers monitor local beaches and record beached seabirds.

# The Southeast/Gulf of Mexico

The Florida Keys are a haven for more than 250 species of birds. Great white herons, brown pelicans, magnificent frigate birds, white-crowned pigeons and many other birds commonly roost or nest on low-lying mangrove islands found in the backcountry of Florida Keys National Marine Sanctuary. Roseate spoonbills and other waders also feed in the shallow waters surrounding the mangrove islands.

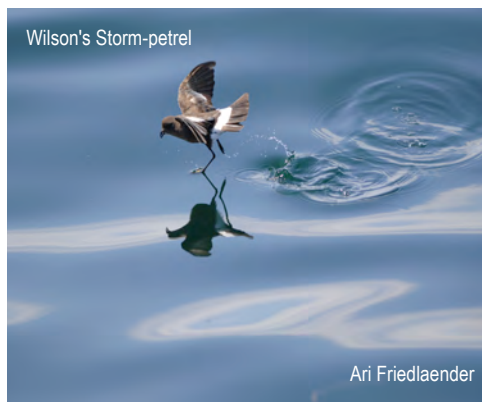
The zoning plan for the Florida Keys sanctuary includes 27 Wildlife Management Areas (WMAs) which minimize disturbance to sensitive or endangered wildlife and their habitats, such as bird nesting, resting and feeding areas. WMAs provide opportunities in the shallow mangrove areas for public use while protecting wildlife. These areas include no-motor zones, idle speed only/no wake zones, and buffer and closed zones, which directly benefit breeding or roosting birds. The sanctuary spends about \$150,000 per year on enforcement, education, marine debris removal and buoy maintenance in the WMAs.



# The Northeast

Stellwagen Bank National Marine Sanctuary, in collaboration with Mass Audubon, is in the midst of the first full year of a pioneering study of seabirds in the sanctuary. Named the Stellwagen Sanctuary Seabird Stewards Program (S4), the project Goal is to: 1) systematically collect baseline data on seabirds to compare occurrence and abundance over time; 2) train a group of volunteer observers to join scientists; and 3) educate the public about seabirds and connect residents with their sanctuary.

The resulting data will further understanding of seabird populations within the sanctuary, detect impacts on local ecosystems, and be used as a barometer for other changes in the environment. The sanctuary managers are collaborating with other agencies to share data and evaluate activities that may threaten seabirds in the sanctuary and along the entire East Coast. This program is being developed as a long-term monitoring program similar to West Coast citizen science programs, and currently partners are raising funds to achieve this goal.



<http://sanctuaries.noaa.gov>



*The mission of NOAA's national marine sanctuaries is to conserve, protect and enhance the biodiversity, ecological integrity and cultural legacy of these special underwater places. The protection of seabirds is a critical element of the National Marine Sanctuary System.*