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Seabird Protection Network: Guide for Establishing New Chapters

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Seabird Protection Network:
Guide to Establishing New Chapters

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Cover

From left to right: Common Murre with prey; Brandt's Cormorant in breeding plumage; Common Murre and chick at breeding colony. Photos by Ron LeValley.

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Abstract

In California, oil spill restoration funds have been used for long-term seabird protection. Healthy and thriving seabird populations are more capable of withstanding a catastrophic oil spill, and one of the best ways to support seabird populations is to protect breeding and roosting sites from human disturbance.

The overarching vision of the Seabird Protection Network (Network) is resilient seabird populations flourishing throughout the coastal and near-shore waters of California. The mission of the Network is to help seabirds thrive by informing management and coastal and ocean users how activities, like low-flying aircraft, close-approaching watercraft and coastal visitors can disturb seabirds, which can lead to a reduction in the long-term population size and survivability of affected populations of marine wildlife. These efforts are accomplished through an organized outreach program combined with management actions and enforcement of wildlife disturbance regulations.

The structure of the Network is modeled on the Audubon Society that uses Chapters to function in designated geographic areas. By establishing Network Chapters, different projects throughout the state participate in a framework that facilitates collaboration, sharing of information, lessons learned, and outreach materials. This framework provides leverage and builds greater support for the Network, and creates an identity that can be recognized state-wide, thus furthering the goal of minimizing disturbance to marine wildlife. Gulf of the Farallones National Marine Sanctuary, who manages the founding Chapter, facilitates program expansion and incorporates additional Chapters throughout the coastal and near-shore waters of California as they develop.

This document and subsequent Appendices provide a pathway to successfully develop a new Network Chapter. The principle components of this document are presented in *Developing a Seabird Protection Network Chapter*. Additionally, Appendices I – IV provide detailed information on establishing a new Chapter, including a summary of seabird-related laws and regulations that help protect seabirds and other marine wildlife.

Key Words

Seabird Protection Network, Network, water bird, protection, conservation, Gulf of the Farallones National Marine Sanctuary, Farallones Sanctuary, human impacts, seabird colonies, wildlife disturbance, outreach

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Introduction

The California Current[1] has some of the most diverse and abundant populations of seabirds in the world, and the Farallon Islands support the largest seabird colony in the contiguous United States (Ainley and Boekelheide 1990). Current threats to this unique assemblage of marine birds include: oil and other contaminant spills, fisheries, coastal development, habitat destruction, introduced species, climate change and human-related disturbances from recreational activities on the coast and ocean. These known stressors are varied in depth and breadth, for which mitigation can be challenging. Addressing anthropogenic pressures and protecting seabirds and other marine wildlife from human-caused disturbance can help build resilient[2] populations to endure the multitude of stressors marine animals face now and in the future.

More than 165 million people live within 125 miles of the United States' coastline. This is approximately, fifty-three percent of the United States' population living on seventeen percent of the nation's land area (excluding Alaska; Woods and Poole 2011). By 2020, a 9% increase in population of coastal counties[3] is expected (Woods and Poole 2011). In California, over half of the state's population lives in the fifteen counties bordering the coastline. The majority of this population lives within 10 to 15 miles of the coast. This concentration of individuals brings about numerous direct and indirect effects on the coastal environment and marine wildlife. Halpern et al. (2009) mapped the cumulative impacts of 25 human activities (from agricultural impacts such as nutrient input to fishing activities and ocean acidification) and found that central and southern California are some of the most heavily impacted areas within the California Current system.

With increasing human populations, and more individuals migrating to coastal areas, pressures on marine resources will intensify (Halpern et al. 2009), making it ever more critical to implement actions that protect and build more resilient wildlife populations. Healthy and thriving populations are more likely to survive a large mortality event or slowly changing environmental conditions.

[1] A Pacific Ocean current that moves south along the western coast of North America, beginning off southern British Columbia, and ending off southern Baja California.

[2] Resiliency is the extent to which a system can maintain its structure, function and identity when confronted with disturbance.

[3] Definition based on NOAA coastal watersheds and U.S. Geological Survey coastal cataloging units as delineated in the NOAA Coastal Assessment Framework. These counties encompass land areas where water flows into the ocean or Great Lakes.

Seabird Vulnerability to Human Disturbance

Nesting and migrant seabird species are significant biotic resources of the California coast. Seabirds are long-lived animals with low reproductive rates (Gaston 2004). Many species have strong site fidelity, returning each year to the same nest site or colony to lay eggs, annually, or in some cases, every other year.

Frequent interruptions of natural behavior or a single severe event, can impact wildlife (Anderson and Keith 1980). Disturbances can cause nesting seabirds to flee from and abandon their nests, leaving eggs or chicks exposed to predators, or cause eggs to fall from the nest. In some cases, disturbances can cause breeding failure of an entire colony, and or lead to colony abandonment. Disturbance events can reduce the long-term health and survival of affected species, and when coupled with changing oceanic conditions and other human related stressors, cumulative minor incidents can lead to significant wide-spread damage to populations and habitats (Carney and Sydeman 1999).

Species most sensitive to anthropogenic impacts include colonial nesting seabirds found on cliffs, offshore rocks and islands (Rodgers and Smith 1995). In central California focal species are surface-nesting seabirds. Efforts to address burrow or crevice-nesting seabird species may also be of concern; however limited data are available to make such an assessment.

In Table 1, we categorized breeding seabird species by the likelihood of exposure to human disturbance based on the species' preferred breeding habitat (Buckley and Buckley 1980). The categories include: 1) Highest exposure – diurnal surface-nesting species; 2) Moderate exposure – diurnal burrow/crevice-nesting species; 3) Low exposure – nocturnal burrow/crevice-nesting species; and 4) Low to moderate exposure – old-growth coniferous trees. Species marked with an asterisk (*) are focal species for disturbance reduction from most human activities.

These classifications – from highest to lowest exposure – are a result of potential human impacts based on current studies (BirdLife International 2012; Albores-Barajas and Soldatini 2011; Martinez-Abrain et al. 2008). Sources of human disturbance continually evolve due to increasing human populations, changing environmental conditions, changes in recreational activities and natural resource management decisions.

Table 1. Breeding seabirds of the outer California coast.

Common Name	Scientific Name	Breeding Habitat	Protection Status (Federal/Status)
HIGHEST EXPOSURE – DIURNAL SURFACE-NESTING SPECIES			
Western Gull*	*Larus occidentalis*	Surface	CBRL
Caspian Tern	*Hydroprogne caspia*	Surface (beaches, artificial habitats)	No Status
Brown Pelican*	*Pelecanus occidentalis*	Surface	Federal/State Delisted
Double-crested Cormorant*	*Phalacrocorax auritus*	Surface	No Status
Pelagic Cormorant*	*Phalacrocorax pelagicus*	Surface (cliffs)	No Status
Brandt's Cormorant*	*Phalacrocorax penicillatus*	Surface	No Status
California Least Tern	*Sternula antillarum browni*	Beaches, Artificial habitats	FE
Common Murre*	*Uria aalge*	Surface	No Status
MODERATE EXPOSURE – DIURNAL BURROW/CREVICE-NESTING SPECIES			
Pigeon Guillemot*	*Cepphus columba*	Rock crevices & artificial structures	No Status
Rhinoceros Auklet	*Cerorhinca monocerata*	Burrows, Rock crevices	BSSC
Tufted Puffin	*Fratercula cirrhata*	Burrows, Rock crevices	BSSC
LOW EXPOSURE – NOCTURNAL BURROW/CREVICE-NESTING SPECIES			
Fork-tailed Storm-Petrel	*Oceanodroma furcata*	Rock crevices, Burrows	BSSC
Leach's Storm-Petrel	*Oceanodroma leucorhoa*	Rock crevices, Burrows	No Status
Ashy Storm-Petrel	*Oceanodroma homochroa*	Rock crevices	FSC/BSSC
Black Storm-Petrel	*Oceanodroma melania*	Rock crevices	FSC/BSSC
Cassin's Auklet	*Ptychoramphus aleuticus*	Burrows, Rock crevices	BSSC
Scripps's Murrelet (previously Xantus's Murrelet)	*Synthliboramphus scrippsi*	Rock crevices, Under shrubs	FC/CT
Guadalupe Murrelet	*Synthliboramphus hypoleucus*	Rock crevices, Under shrubs	FC/CT
LOW TO MODERATE EXPOSURE – OLD-GROWTH CONIFEROUS TREES			
Marbled Murrelet	*Brachyramphus marmoratus*	Old-growth trees	FT/CE

Oil Spill Restoration Projects: Supporting Long-term Seabird Protection

One way that natural resource managers can protect seabird populations and make them more resilient to changes in the environment is to reduce anthropogenic stressors. Oil and other contaminant spills are among the most severe threats to the marine environment. Determining when and where an oil spill is going to occur is nearly impossible, and mitigating for such catastrophes is challenging. In California, oil spill restoration funds have been used for long-term seabird protection.

Until 1969, oil spills along the California coast were not well documented (Carter 2003). Between 1969 and 2002, forty-four oil spills in California have oiled seabirds (Carter 2003). Between 2002 and 2011, six additional oil spills have impacted the California coast (OSPR 2011). These spill events can devastate seabird populations. For example, the barge *Apex Houston* discharged approximately 25,000 gallons of San Joaquin Valley crude oil while in transit from San Francisco Bay to Long Beach Harbor. The oil coated beaches from Point Reyes to Monterey, killing at least 9,000 seabirds (Page et al. 1990), including at least 12 Marbled Murrelets, which are a Federal and California State-listed species. Another example is the M/T *Command*, which in September 1998 departed San Francisco Bay bound for Panama. Shortly after departing, the vessel began discharging an estimated 3,000 gallons of intermediate bunker fuel. The spilled oil was traced to the vessel, which was apprehended by the United States Coast Guard off the coast of Guatemala. The oil spill resulted in more than 1,500 seabird documented deaths, including 6-12 Marbled Murrelets. (Boyce and Hampton 2002). Additionally, miles of shoreline habitat were harmed by the oil, and affected beaches were closed to public use. These two examples illustrate the scope of devastation an oil spill can present to the marine ecosystem.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/Superfund; 42 U.S.C. § 9601) established in 1980, created a tax to be used to clean up spills when the responsible party was incapable or unwilling to do so. However, this only provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. In 1990, the Oil Pollution Act (OPA; 33 U.S.C. § 2701) established a liability regime for oil spills that injure or are likely to injure natural resources and or the services that those resources provide to the ecosystem or to humans. Combined, these Acts (CERCLA and OPA) provide two types of legal responsibility for releases of oil or hazardous substances: 1) responsibility for cleanup of the environment (overseen by the lead cleanup agency); and 2) responsibility for addressing injury to natural resources. OPA authorizes representatives from federal and state agencies, and individuals of Native American tribes to assess damages for injured natural resources. Each representative is a Trustee and is authorized to act on behalf of the public.

Following a spill, a thorough assessment of damaged resources is completed. This assessment is called a Natural Resource Damage Assessment. The assessment provides the foundation for restoring, replacing, rehabilitating and acquiring the equivalent of injured natural resources and services. After the damage assessment and final court ruling, the responsible party is held accountable and required to pay for the damages incurred from the spill. The development, implementation and financial oversight to restore, rehabilitate or acquire the equivalent of the natural resources injured are governed by the Trustees.

In California, Trustees have funded projects aimed at reducing human disturbance to seabirds in an effort to restore affected seabird colonies within a spill zone. Reducing human disturbance to nesting and roosting seabirds can be successfully achieved (Riemer and Brown 1997). Learning from the successful model established by the U.S. Fish and Wildlife Service in Oregon, the California Department of Fish and Wildlife, Office of Spill Prevention and Response (CDFW/OSPR) envisioned a state-wide program focused on reducing human disturbance to seabirds from aerial, ground and on-the-water sources. The proven success of minimizing boat disturbances to breeding seabirds within the Oregon Coast National Wildlife Refuge provided an excellent model for CDFW/OSPR (Riemer and Brown 1997).

Developing Seabird Protection Programs

Concerns about declining populations of central California's Common Murre *(Uria aalge)* were presented during the *Apex Houston* oil spill litigation process in 1989-1994 (Takekawa et al. 1990; Page et al. 1990; Carter et al. 2001, 2003). With funding from the Apex Houston Trustee Council, the U.S. Fish and Wildlife Service established the Common Murre Restoration Project in 1996 (Takekawa et al. 1990; Page et al. 1990; Carter et al. 2001, 2003). The Common Murre Restoration Project (hereafter CMRP) is a comprehensive seabird restoration effort aimed at enhancing depleted seabird populations in central California. Initially, the CMRP focused on reestablishing a colony of Common Murre at Devil's Slide Rock, located on the San Mateo coast near Pacifica. This breeding colony held close to 3,000 murres as recently as the early 1980s, but was wiped out as a result of various anthropogenic impacts and oceanographic events (i.e., El Niño–Southern Oscillation; Ainley et. al 1996; Boekelheide and Ainley 1989; Ainley and Boekelheide 1990). Since 1996, the CMRP has collected data from additional colonies in central California, and has addressed other conservation issues.

The State and Federal natural resource trustee agencies, involved in the *Torch/Platform Irene* case, estimated financial costs and the potential benefits of reducing human disturbance to breeding seabirds to improve succession and restore seabird-related injuries. Several groups provided information indicating that disturbance of coastal seabird breeding colonies between Point Reyes and Point Conception was increasing. A chief source of disturbance was identified as low flying aircraft and boats. From 1997-1999, the CMRP documented aerial and boat disturbances near Common Murre colonies (Rojek et al. 2007). Additionally, U.S. Fish and Wildlife Service (Brian Hatfield, personal communication) noted several seabird disturbances near Point Piedras Blancas in the 1980s and 1990s. Finally, Carter et al. (1998) identified possible disturbances at several seabird colonies from Monterey Bay to Point Conception in the 1990s.

In 2005, the Command Trustee Council allocated funds to develop a program to reduce disturbance from humans (between Point Reyes and Point Sur). Although the *Torch/Platform Irene* (1997) incident occurred prior to the *M/T Command* (1998) spill, the Torch/Platform Irene Restoration Plan was not completed until 2007. After finalizing the Restoration Plan, the Torch Trustee Council allocated funds to develop a similar disturbance reduction program (between Monterey Bay and Point Conception). While the Torch restoration plan stalled for several years, the Command Trustee Council proceeded to implement a seabird colony protection program in central California.

During summer 2005, Gulf of the Farallones National Marine Sanctuary (hereafter Farallones Sanctuary) was assigned restoration funds to begin a seabird colony protection program. National Oceanographic Atmospheric Administration's Farallones Sanctuary had successfully developed and implemented a program to reduce human disturbance to harbor seals (*Phoca vitulina*) in Tomales Bay and was poised to develop a comprehensive outreach program to reduce disturbance to nesting and roosting seabirds. The seabird protection program would extend from Bodega Head to Point Sur, and encompass two national marine sanctuaries – Farallones Sanctuary (15 CFR §922.80) and Monterey Bay (15 CFR §922.130). Additionally, the sanctuary has the legal authority to regulate human disturbance to wildlife from land, air and sea.

Seabird Protection Network

The Farallones Sanctuary initiated the program with a workshop in November 2005. Workshop guests included representatives from agencies and organizations that study, manage and protect ocean wildlife, including seabird researchers, enforcement officers and educators. The goals of the workshop were to identify:

1) The greatest impacts to seabirds from human disturbance;
2) Methods to increase public awareness about sensitive seabird colonies and roosts along the central California coast; and
3) Highlight opportunities for agencies and organizations to work collaboratively to decrease or eliminate human impacts to nesting and roosting seabirds.

Workshop participants reviewed data collected by the U.S. Fish and Wildlife Service from three central California seabird colonies. These data identified the greatest impacts to seabird colonies from human disturbance between Point Reyes and Point Sur. Two of the three colonies were identified as control sites for the CMRP at Devil's Slide Rock near Pacifica, California. Figure 1 shows the three monitoring areas observed during the seabird breeding season (April – August).

Workshop participants discussed ways to coordinate enforcement and brainstormed ideas to develop long-term strategies for reducing human-related disturbances along the California coast. Outcomes of the workshop became the foundation for a regional (Bodega Head – Pt. Sur) Action Plan for the Seabird Protection Network (hereafter Network). The regional Action Plan outlines three project components: 1) Monitoring; 2) Outreach; and 3) Coordinated Management and Enforcement. These components work in unison to create an effective seabird protection program.

With U.S. Fish and Wildlife Service (USFWS) already conducting monitoring for the CMRP (although approaching the end of funding from the Apex Houston Trustee Council), it was a natural fit for the USFWS to continue monitoring and managing this project component for the the Network. The USFWS added only minor modifications to existing protocols, strengthening the foundation of a long-term monitoring program. The Farallones Sanctuary would spearhead the Outreach, Coordinated Management and Enforcement project components.

Figure 1. Monitoring sites of the Bodega Head – Pt. Sur Chapter.

Sources of Human Disturbance

From Bodega Head to Point Sur, seabird conservation and restoration efforts have been underway since the early 1970s (Ainley and Boekelheide 1990; Takekawa et al. 1990; Parker et al. 2007; McChesney et al. 2009). While most breeding colonies have been protected, mortality in commercial fishing gill nets, oil spills and human disturbance incidents were factors that have caused decline and slowed recovery (Carter et al. 2001; Rojek et al. 2007; McChesney et al. 2009). Mortality from oil spills is difficult to reduce, while large-scale mortalities from commercial gillnet fisheries have been addressed and reduced in past efforts (Carter et al. 1995; Schultze et al. 2011). Human disturbance, though, continues to occur and impact seabird colonies in many coastal areas (Carter et al. 1998; Lafferty 2001; McChesney et al. 2009; Thibault et al. 2010). Studies found that the most frequent human-caused disturbances to seabirds in central California (Bodega Head – Point Sur) fall into three categories: low-flying aircraft; close approaches by watercraft; and humans on foot (McChesney et al. 2009).

Low-flying aircraft: fixed-wing planes (including "ultralight" aircraft); rotary-wing aircraft (helicopters); and blimps. At monitoring sites near airports, aircraft disturbance has been the most frequent source of human disturbance and is increasing in some areas. It has been identified as "a major factor impacting certain colonies of Common Murre and Brandt's Cormorant" (Rojek et al. 2007). Helicopters flush the most seabirds per incident, likely due to the loud noise and vibration of the aircraft. More recently, ultralight aircraft have been noted to disturb wildlife in coastal areas.

Watercraft: kayaks, private motorized boats, commercial fishing boats, recreational fishing and other charter boats, and motorized personal watercrafts (jet skis). Disturbance occurs when boats approach too close to colonies or roosts. Wildlife responses can differ between seabird species and habitats. Although boats travelling at high speeds can cause large numbers of birds to flush, boats that linger near colonies have the potential to result in more severe impacts, causing agitated seabirds to flush and discouraging flushed birds from returning to the colony (Rojek et al. 2007). Another source of boat disturbance is artificial light pollution. Certain commercial fishing activities (e.g., squid, crab) use bright lights while fishing or at anchor. These lights can illuminate breeding colonies or nocturnal feeding seabirds, attract predatory seabirds and or interrupt nocturnal activities. Birds that are attracted to the light can become disoriented and potentially crash into boats, causing death or leaving them weakened.

Humans on foot: hikers, surfers, beach goers, picnickers and people with leashed or unleashed pets. Disturbances occur when people approach too close to colonies. Wildlife responses can differ between seabird species and between habitats. Humans climbing on cliffs or landing on offshore rocks where seabirds breed, typically result in large-scale disturbances (Albores-Barajas and Soldatini 2011; Nisbet 2000; Beale 2007).

Other human disturbances that can impact seabird colonies include noise pollution from fireworks or other explosive sounds (Weigand and McChesney 2008; Stephensen et al. 2012, Thayer et al. 2012a; Thayer et al. 2012b). Artificial light pollution from coastal development near mainland seabird colonies can have similar effects as light pollution from boats.

Successes and Accomplishments

Since August 2005, Network staff has been addressing human disturbance to breeding seabird colonies from Bodega Head, Sonoma County to Point Sur, Monterey County. The goal of the Network is to reduce human disturbance to breeding seabird colonies in order to enhance the recovery of seabird populations damaged by oil or other contaminant spills. A secondary benefit of the Network is that it increases seabird awareness and appreciation. These efforts are accomplished through an organized outreach and education program combined with seabird management actions and enforcement of existing wildlife disturbance regulations. Appendix I provides several highlights from each programmatic year, detailing the successful outreach, management and enforcement efforts implemented since August 2005. Similar activities can be applied in other regions.

Expanding the Seabird Protection Network: Justification and Benefits

In June 2009, the Command and Torch Trustee Councils met to discuss ways the two Councils could collaborate. The Trustee Councils and the Bureau of Land Management, who received funding to carry out seabird protection efforts in southern California, formally requested to expand the Farallon Sanctuary's Seabird Protection Network. All parties agreed that the Farallones Sanctuary would create a framework for additional Chapter development with the intention that each new Chapter would be managed and implemented on a local level. The Farallones Sanctuary will continue to manage the founding Chapter, Bodega Head – Pt. Sur, and will facilitate program expansion, incorporating additional Chapters throughout California as they develop. Expansion of the Network has been subsequently supported by several agencies, organizations and private interest groups.

Set to expand, the Network moved closer to achieving the original vision of CDFW/OSPR – a state-wide program focused on reducing human disturbance to seabirds from aerial, ground and on-the-water sources.

Vision, Mission and Goals

The overarching vision of the Seabird Protection Network is resilient seabird populations flourishing throughout the coastal and near-shore waters of California.

The mission is to help seabirds thrive by informing management and coastal and ocean users how activities, like low-flying aircraft, close-approaching boats and coastal visitors can disturb seabirds, which can lead to a reduction in the long-term population size and survivability of affected populations of marine wildlife.

The primary goal of the Seabird Protection Network is to minimize levels of human disturbance (i.e., airplanes, boats, coastal visitors) at breeding and roosting seabird colonies throughout the California coast. A secondary goal of the Seabird Protection Network is to raise overall awareness and appreciation of seabirds. Each Chapter will determine their site specific objectives based on the issues apparent in that region.

Currently, the Network extends from Gualala Point to Point Mugu, and out to the Channel Islands. This geographic extent includes four Chapters: 1) Bodega Head – Pt. Sur, managed by the Farallones Sanctuary; 2) Pt. Sur – Pt. Mugu, managed by Bureau of Land Management; 3) the Channel Islands, managed by the Montrose Settlements Restoration Program; and 4) Gualala Pt. – Bodega Head, managed by the Stewards of the Coast and Redwoods. Additional parties have expressed interest in establishing new Chapters, including the Arcata and San Francisco field offices of the Bureau of Land Management, also with funds from oil spill settlements.

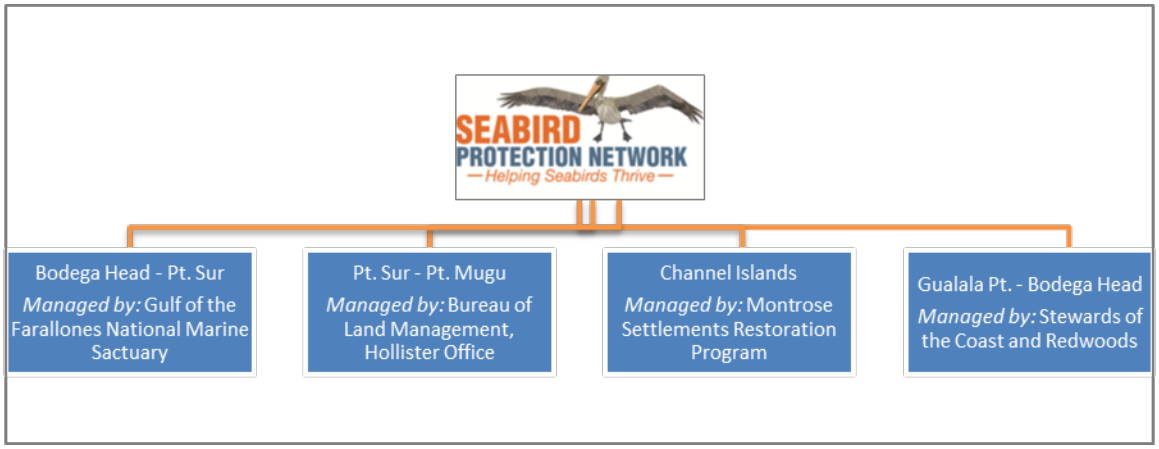

Figure 2. Current Chapters of the Seabird Protection Network.

The structure of the Network is modeled on the Audubon Society. The Audubon Society uses Chapters to function in designated geographic areas (National Audubon Society 2001). This organizational framework provides the structure to share templates, outreach products and strategies, as well as experiences – both challenges and accomplishments. Additionally, this structure enables the design and content of original outreach materials to be adapted to meet the needs of individual Chapters. To date, many organizations and agencies with jurisdiction in various regions of California have used outreach products and information produced by the Network to address human disturbance to seabirds.

Non-profit organizations and volunteer groups are encouraged to participate in the Network to foster informed governance and stewardship. It is important to ensure that the Network is implemented as a collaborative wildlife management partnership and not as an advocacy group. No Network materials (i.e., logo) may be used to support or promote a political process aiming to influence public-policy. Network materials can only be used for outreach and education.

Developing a Seabird Protection Network Chapter

Federal and state agencies within trustee councils are most likely to establish new Chapters that cover large or remote stretches of the California coast by using seabird restoration funds from oil spill settlements. However, new Chapters also can be established for smaller areas with local support. New Chapters are developed, branded and implemented with guidance from the founding Chapter (Bodega Head – Pt. Sur Chapter) or the Seabird Protection Network Central Hub (hereafter Network Hub). Details for developing a new Chapter are outlined below and in subsequent Appendices.

Initial Steps

Following initial conversations, submit a simple written proposal outlining the prospective Chapter. The proposal needs to address the following topics:

- Geographic extent of Chapter (there are no limitations or restrictions on geographic extent – it is important to identify capabilities and interests)
- Potential project partners
- Known locations and sources of disturbance (target audiences)
- Identify Chapter point of contact, as well as individuals who will be leading each project component

The Network Hub will work with each Chapter representative to facilitate potential partnerships between interested community members, nearby non-profit organizations and agency representatives. Once interest and discussions are solidified, a Letter of Intent (LOI) will be drawn up and signed by the lead agencies/organizations. For example, in the case of the Pt. Sur – Pt. Mugu Chapter, the LOI was developed by the Network Hub and signed by both the Bureau of Land Management and the Farallones Sanctuary. This letter solidifies an agreement between the emerging Chapter and the Network. Once the LOI is finalized, it is time to begin planning the Chapter.

Action Plan

Planning a new Chapter begins with the development of an Action Plan. Each Action Plan should follow the template found in Appendix II. The Action Plan is an agreement on a common plan of action. It is the responsibility of each Chapter's staff and partners to develop timelines that consider feasibility, available expertise and costs. The Farallones Sanctuary's Bodega Head – Pt. Sur Chapter Action Plan is available upon request, and can be used as an example when developing the Action Plan for new Chapters.

By gleaning information from this document, the majority of the *Introduction* is completed. The next and most important step is to develop specific objectives to ensure that the Chapter is working toward achieving the goal. Examples of objectives used in the Bodega Head – Pt. Sur Chapter are listed in Appendix II. The best objectives are designed using the **S**.**M**.**A**.**R**.**T** method – each objective is **S**pecific, **M**easureable, **A**chievable, **R**elevant and **T**ime-bound. The objectives are then used to measure the success of each Chapter (see Performance Measures).

Communication

Communication is vital to the success of the Network and to each new Chapter. The Network Hub is available for consultations and to assist with any questions that arise. Biannual conference calls will be scheduled and organized by the Network Hub. Each Chapter lead is asked to participate on these calls. The conference calls will occur in the winter, prior to peak seabird breeding season, and in the fall. These calls are an opportunity for each Chapter to highlight accomplishments and identify and share challenges or foreseen hurdles.

The Network Hub will organize annual or alternate year meetings. These meetings may be combined with other meetings and or a focused workshop. The annual meeting will provide a platform for Chapter representatives to report on activities and accomplishments as well as receive feedback on possible strategies. An agency representative from each Chapter will be invited to sit on the Technical Advisory Committee of the Bodega Head – Pt. Sur Chapter. This opportunity provides a forum for further collaboration among Chapters as well as an opportunity to gain further insight into activities, successes and challenges of each Chapter.

Chapters will identify themselves in print or on the Web as "Seabird Protection Network, <*Geographic Extent*> Chapter". Additionally, each Chapter title needs to be accompanied by the Seabird Protection Network's logo. In doing so, this distinguishes themselves from other birding and conservation groups that have not signed a Letter of Intent with the Network.

Tools

The Network Hub has set-up several tools to assist each Chapter. Table 2 identifies resources that are available. Sharing resources is vital to the success of the Network. For example, the Bodega Head – Pt. Sur Chapter has developed posters (Figure 4) for each target audience (boaters, kayakers and pilots). The messages on each poster are general and are not tied any a specific location, therefore they can be used throughout the entire state. With design costs absorbed by the Bodega Head – Pt. Sur Chapter, only printing costs will incur.

Table 2. Available resources to Chapters.

Resource	Access	Purpose	Management
Email	California.Seabirds@noaa.gov	Email address for stakeholders and target audiences	Network Hub
Website	www.SeabirdProtectionNetwork.org	Website connecting all Chapters	Network Hub
FaceBook	http://www.facebook.com/SeabirdProtectionNetwork	Provides unified approach and encourages collaboration between Chapters	Network Hub
Chapter Administrator's	Secure page on www.SeabirdProtectionNetwork.org	Storehouse for outreach materials	Network Hub
Webinars	Webinars	Share innovative ideas among Chapters	Network Hub
Listserve	TBD	Share ideas and learn about other Chapter activities	Network Hub

As each Chapter develops, a consistent look and feel should be maintained and tied to the overall Network branding. Appendix III describes outreach materials that are available. Most products described in Appendix III can be adapted to meet each Chapter's messaging needs.

As materials are developed, Network Hub staff are available to provide feedback and design advice. Staff of the Network Hub are also available for site visits, which can help shape the strategies used to establish new Chapters. Staff from the Network Hub will share knowledge and provide branding; including general messages; standard forms; and templates. The Network Hub can provide examples of various outreach products that can be used to initiate an increase in seabird awareness, and start Chapter development.

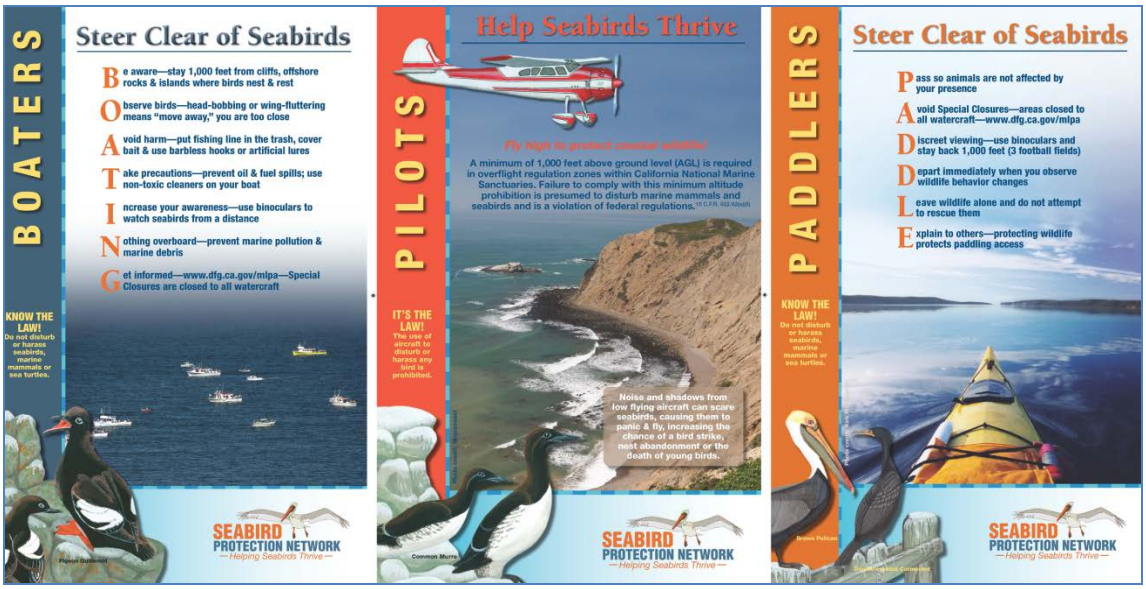

Figure 3. Example of posters for each target audience.

Funding

Each Chapter will have various sources for financial support. For example, one Chapter may have funding secured over several years, whereas another Chapter may have only the long-lasting support of the local community. Obtaining adequate funding for a Chapter is the responsibility of the Chapter lead. Fundraising for a new Chapter is a viable option for obtaining financial support. Contact the Network Hub for an up-to-date list of potential avenues for receiving funding.

Stakeholder Input

The level and process by which stakeholder input is provided depends on the location and extent of each Chapter. For example, input can range from seeking advice from individuals of target audiences (e.g., pilots and boaters) to formal working groups and advisory councils. However, for the purpose of this section, a stakeholder is defined as a representative from a resource management agency or an individual from a non-governmental organization with management oversight for specific areas, human activities or species within a region. Each Chapter will have varying levels of stakeholder input based on their unique objectives and specific needs.

Throughout California, local, state, and federal agencies have various forms of jurisdiction over the coast and adjacent waters. Native American Tribes, private industry, non-profit organizations, and numerous private land-owners also manage many coastal land properties. Depending on the Chapter extent, the composition of stakeholders will vary. For example, Gulf of the Farallones and Monterey Bay National Marine Sanctuaries are primary stakeholders in the Bodega Head – Pt. Sur Chapter because the sanctuaries manage coastal waters through the Chapter's entire region. The National Park Service (Point Reyes National Seashore and Golden Gate National Recreation Area), U.S. Fish and Wildlife Service (e.g., Farallon Islands National Wildlife Refuge), California Department of Fish and Wildlife and California Department of

Parks and Recreation (many state beaches, state parks and reserves) are important land and water managers and stakeholders in this Chapter.

The conduit for receiving stakeholder input depends on the lead organization or agency. Federal agencies must follow the Federal Advisory Committee Act (FACA) when establishing an advisory committee, council, panel, task force, or other similar groups; unless a federal statute specifically authorizes an exemption. However, the FACA does not apply to local civic groups whose primary function renders a public service with respect to a Federal program, or to any State or local committee, council, board, commission, or similar group established to advise or make recommendations to Federal, State or local officials or agencies. However, state and local governments must follow the Brown Act. The following link provides information on FACA: http://www.gsa.gov/portal/content/100916.

The Bodega Head – Pt. Sur Chapter uses input from a range of stakeholders. As lead agency, the Farallones Sanctuary, within the Office of National Marine Sanctuaries, established under the National Marine Sanctuaries Act, is exempt from FACA, and is authorized to establish a Sanctuary Advisory Council (SAC). The Advisory Council can subsequently establish working groups to advise the SAC on specific topics.

The Seabird Protection Network Technical Advisory Committee (TAC), established by the Farallones Sanctuary Superintendent, provides input and advice on the implementation of the regional action plan. The TAC is distinct from the SAC, and is comprised of federal, state and local agencies, representing all program areas, including expertise from scientists, natural resource managers, enforcement officers and ocean educators. All TAC members are agency representatives that can directly advise the Farallones Sanctuary. The TAC provides an opportunity for those who study and manage ocean wildlife to interact with each other and set priorities for the Network, Bodega Head – Pt. Sur Chapter. Members of the respective Trustee Councils participate and are involved in the TAC.

Another avenue for receiving advice and recommendations is through individual members of target audiences and specific workshops. Both stakeholder meetings and workshops help provide additional information and collaboration within a Chapter. The Bodega Head – Pt. Sur Chapter has held workshops on various issues related to the implementation of the regional action plan.

Enforcement Challenges and Opportunities

Laws and regulations regarding seabird “disturbance” fall under the authority of federal, state and in some cases, local government agencies. Currently, no act or mandate addresses all concerns for seabird disturbance.

Seabird nesting and roosting habitats in California are managed by the U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, National Park Service, U.S. Navy, California State Parks, Bureau of Ocean Energy Management, private landowners, and others. Seabird foraging habitats in California are managed, for the most part, by the California Department of Fish and Wildlife and the National Oceanic and Atmospheric Administration, which includes the National Marine Fisheries Service and the Office of National Marine Sanctuaries.

Enforcement of the laws and regulations remain a challenge for agencies charged with protection of seabird colonies and roosting sites. Seabird disturbances can arise from multiple sources, which can originate from land, air or sea, making it difficult for enforcement officers to patrol. Furthermore, law enforcement may not be authorized or cross-deputized to enforce laws and regulations from other agencies.

In many instances disturbances are witnessed by individuals monitoring seabird colonies or by ocean and coastal users. Although these incidents may violate one or more of the existing laws and regulations, proper documentation is not always collected. California is lacking a state-wide, comprehensive system that instructs individuals on proper incident reporting. Proper documentation of an incident is essential for successful prosecution.

In 2005, the National Oceanic Atmospheric Administration, which includes the National Marine Fisheries Service and the Office of National Marine Sanctuaries; the National Park Service and the U.S. Fish and Wildlife Service signed a Memorandum of Understanding (MOU) requiring the aforementioned agencies to work together on enforcement issues. However, the infrastructure has not been completely implemented or integrated in California and a review of all relevant enforcement MOU's is needed. The Network is a mechanism for better state-wide coordination and cooperation among federal agencies, ensuring successful enforcement of all laws and regulations related to human-seabird interactions.

Performance Measures

Establishing performance measures are critical to evaluating the success of a Chapter. After specific objectives have been developed, performance measures are used to evaluate the success of each Chapter.

The Bodega Head – Pt. Sur Chapter continually explores new options for measuring success. Without extensive funding, evaluating changes in human behavior is challenging; however with some creativity, options do exist. One method is to use information from surveys and or focus groups to assess the knowledge of the target audience on seabird colony disturbance. This information can then be used to prioritize outreach materials for target audiences, and aid in determining appropriate messages, venues for disseminating information and the effectiveness of the messages.

Monitoring for human disturbance at key colonies is the primary means to measure program effectiveness. The overall measure of performance is a decrease of human disturbance at seabird breeding and roosting colonies, and an increase in the number of breeding seabirds within the geographic extent of the Chapter. However, many factors can affect the number of human disturbance incidents recorded. These factors can be categorized as biotic and abiotic factors. Abiotic factors include: changes in human activities, such as fishery openings, weather (low-lying fog), gas prices, launch fees, annual income and event attendance. Biotic factors include: changes in seabird abundance, distribution and timing of breeding, all of which can be highly affected by prey availability during El Nino/La Nina conditions and during shifts in Pacific Decadal Oscillation. Measuring changes in human activities is one of the greatest challenges facing conservation practitioners; however it is one of the most critical elements to understanding the effectiveness of conservation efforts.

The Bodega Head – Pt. Sur Chapter annually reviews seabird disturbance data from the U.S. Fish and Wildlife Service. With the establishment of Special Closures (hereafter no-go zones) around key seabird breeding colonies, the Bodega Head – Pt. Sur Chapter has seen a decrease in the number of boats observed near these areas. No-go zones are closed to all watercraft, and provide added protection to breeding and roosting seabirds. The no-go zones were introduced in May 2010, and established through the California State Marine Life Protection Act. These areas, and the collaborations orchestrated by the Network, are an example of how management actions can successfully protect seabird populations. In 2008, 14 boats were observed within the zones that would become no-go zones. In 2012, one boat was observed within a no-go zone. The Bodega Head – Pt. Sur Chapter has also seen a decrease in the number of disturbances to seabirds from low flying planes, at all monitoring sites with the exception of Devil's Slide Rock. Near Devil's Slide Rock, observations of helicopters, in particular military helicopters, continue to cause disturbance. By monitoring seabird colony disturbance, the Bodega Head – Pt. Sur Chapter is able to determine where outreach strategies should be focused (Rojek et al. 2007; McChesney et al. 2005, 2006, 2007, 2008, 2009; Eigner et al. 2010, 2011, 2012).

Measuring the success and short falls of a Chapter can be challenging. It is important to make programmatic decisions based on the needs of the resources at risk and adaptively manage. Equally important to the success of a Chapter is the process of continually seeking guidance from stakeholders. Furthermore, incorporating an iterative process is essential and will allow better implementation of conservation strategies and monitoring of the outcomes. Implementing actions that protect and build resilient wildlife populations is imperative as human populations increase and more individuals live, work and recreate in coastal areas. The Seabird Protection Network is poised to be a long-term program that addresses anthropogenic pressures and protects seabirds and other marine wildlife from human-caused disturbance.

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Appendix I: Bodega Head – Pt. Sur: Successes and Accomplishments

Appendix I provides highlights from each programmatic year, detailing the successful outreach, management and enforcement efforts implemented since August 2005. The accomplishments are presented by Fiscal year of the Federal Government (October 1 – September 30).

YEAR 1 (2005-2006)**: Accomplishments**

- Funds are given for a four-year program to reduce human-caused disturbances to seabird colonies along the central California coast (August 2005).
- Seabird Colony Protection Program hosts a workshop (November 2005).
- Action Plan is developed from workshop outcomes (February 2006).
- Presented poster about program to the seabird science community and solicited feedback on the Draft Action Plan during Pacific Seabird Group; Anchorage, AK (February 2006).
- Introduced program to the policy and management community of California during oral and poster presentations at the California and the World Ocean Conference; Long Beach, CA (September 2006).
- An article about the Seabird Colony Protection Program is featured in Sanctuary Watch (Fall 2006).

YEAR 2 (2006-2007)**: Accomplishments**

- Distributed Final Action Plan to workshop participants, interested stakeholders and ocean and coastal educators, scientists and managers (November 2006).
- Farallones Sanctuary establishes Outreach and Enforcement Working Groups. Working Groups make recommendations to the Sanctuary Advisory Council on issues related to the Seabird Protection Network. The Advisory Council makes final recommendations to the Sanctuary Superintendent (December 2006).
- Sanctuary Superintendent establishes the Technical Advisory Committee (TAC; *see Stakeholder Section for more details*). The TAC advises the Sanctuary Superintendent on the goals of the Seabird Protection Network and makes recommendations to protect seabird hotspots (January 2007).
- Seabird Colony Protection Program featured in Changing Tides newsletter (Spring 2007).
- Developed a database of pilots, airports, boaters and marine outfitters for annual correspondence (July 2007).
- Farallones Sanctuary staff participates as members of the California Marine Life Protection Act Initiative Regional Stakeholder Group. Sanctuary staff provides regional stakeholders with Seabird TAC recommendations to protect seabird hotspots (January 2007 – April 2008).
- Cruise on the *R/V Fulmar* (sponsored by Seabird Protection Network). Provided an on-the-water opportunity for Marine Life Protection Act staff, Fish and Game Enforcement and Commissioners (June 2007).

YEAR 3 (2007-2008)**: Accomplishments**

- Developed map illustrating impacts from low over flights. NOAA staff reengages the FAA to request a change in the aeronautical charts (February 2008).
- Hired consultants to develop marketing, media and communications plans (April – August 2008).
- Updated Action Plan (August 2008).
- As a result of the marketing, media and communications plans, the Seabird Colony Protection Program officially became the Seabird Protection Network and adopted a new icon for brand identity (October 2008).
- Hosted messaging workshop with Carolyn Ward. Learned how to effectively communicate the goal of the Seabird Protection Network to promote compliance from target audiences (October 2008).

YEAR 4 (2008-2009)**: Accomplishments**

- Developed a wildlife disturbance reporting system in conjunction with seabird biologists (February 2009).
- Worked with Pacific Coast Dream Machines planners to promote a "No Disturbance" air show (April 2009).
- Demonstrated successes of the Network to the international marine community during a poster presentation at the International Marine Conservation Congress; Washington D.C. (May 2009).
- Official request to expand the Seabird Protection Network, developing additional Chapters (June 2009).
- Coordinated efforts that led to the establishment of zones to protect seabird colonies from close-approaching watercraft. Six Special Closures adopted by California Fish and Game Commission (August 2009).

YEAR 5 (2009-2010)**: Accomplishments**

- Partnered with California Department of Fish & Game to conduct targeted outreach to boaters and kayakers (January 2010).
- Launched Facebook page to provide frequent updates and promote program recognition (January 2010).
- Developed a draft document on implementing new Chapters of the Network (February 2010).
- Released first E-Newsletter. Included welcome letter, new marine protected areas and special closures, colony history and restoration at Devil's Slide Rock and 2009 breeding season update (March 2010).
- Six Special Closures were established to protect seabird colonies from close-approaching watercraft (May 2010).
- Recognized as a resource for resource managers. Developed outreach flyers for a high traffic area near Brown Pelican roosting sites – English and Spanish versions (June 2010).

- Developing partnership with West Marine stores throughout the Bay Area. Stores are displaying information about seabirds and disturbance – locations include Alameda, Sausalito and Oakland (October 2010).

YEAR 6 (2010-2011)**: Accomplishments**

- Released 2nd and 3rd E-Newsletters. Issues were sent to 936 individuals (November 2010 & April 2011).
- Seabird Protection Network coordination meeting to get the Torch/BLM group established (December 2010).
- Staff worked collaboratively with the Office of National Marine Sanctuaries to respond to inquiries regarding amending overflight regulations within west coast sanctuaries (January 2011).
- Strengthen partnerships between NOAA and the Coast Guard. Delivered 6th consecutive presentation to United States Coast Guard, Air Station San Francisco (January 2011).
- Seabird Protection Network featured in California Kayaker (April 2011).
- Buoys are installed near Devil's Slide Rock, a major seabird breeding colony, to help delineate the boundaries of one of six Special Closures closed to all human activity (April 2011).
- 1st annual boater mailing is sent to 400 recipients in the San Francisco and Monterey Bay Areas (June 2011).
- Seabird Protection Network hires a Boater Outreach Specialist (September 2011).

YEAR 7 (2011-2012)**: Accomplishments**

- Released 4th & 5th editions of the E-Newsletter (November 2011 & May 2012).
- Seabird Protection Network information was included in the 2012-2013 California's Ocean Fishing Regulations Booklet. The booklet has a readership of over 2 million individuals (December 2011).
- *Boater and Kayaker Guide to Special Closures in California's MPAs* are ready for distribution (January 2011).
- Staff presented an oral and poster presentation at the Pacific Seabird Group; Hawaii (February 2012).
- Released the re-design of 3 posters for each of the target audiences (January 2012).
- Staff gave a 10 minute presentation to 180 kayakers during the evening program of the Golden Gate Sea Kayaker Symposium (February 2012).
- Staff sent the 2nd annual boater mailing, which included a letter, tidebook, map of MPAs and MPA regulations. Mailing was sent to 600 boaters, kayakers, marinas, harbors, shops and clubs (April 2012).
- NOAA's over flight regulations zones are recognized by the FAA and depicted on the aeronautical charts.

Appendix II: Action Plan Template

Action Plan
Seabird Protection Network
<Geographic Extent> Chapter

I. Introduction
- *A. Overview*
- *B. Regional Setting*
- *C. Project Extent*

II. Goals and Objectives
- *A. Examples of Outreach Objectives*
  - i) Model a no disturbance airshow – Half Moon Bay Pacific Dream Machines.
  - ii) Engage pilots, boaters, kayakers and their associations and clubs through the distribution of at least 2 E-newsletters, 500 hits to SPN web pages and the addition of 200 friends on social networking sites.
  - iii) Collaborate with the Education Department of GFNMS to develop way-side signs for Pt. Reyes – Drakes Bay regarding Marine Protected Areas, including Special Closures.
  - iv) Develop Seabird Protection Network materials in Spanish.
  - v) Increase the number of locations (targeted venues, events, clubs and associations) in which products are disseminated, over a 3-year period, to total 1000 different locations.

- *B. Examples of Coordinated Management and Enforcement Objectives*
  - i) Model a no disturbance airshow – Half Moon Bay Pacific Dream Machines.
  - ii) Increase stewardship of marine wildlife by hosting a Wildlife Disturbance Symposium that involves the participation of 2 new stakeholders, in 2012.
  - iii) Increase the use of the Wildlife Reporting Form and encourage 5 new agencies, non-governmental organizations or interested public to report incidents of seabird disturbance, each year, until 2014.
  - iv) Raise awareness of decision makers (federal, state and local agencies and commissions) of the threats that human disturbance poses near breeding and roosting seabird colonies and provide solutions to reduce and eliminate these disturbances.
- *C. Measuring Effectiveness*

III. Strategies for Meeting your Objectives
- *A. Outreach & Education*
- *B. Enforcement and Coordinated Management*
- *C. Monitoring*

IV. Stakeholder Input

V. Summary

VI. Literature Cited

Appendix III: Outreach Materials and Style Guide

As new Chapters develop, a consistent look and feel should be maintained. The following matrix highlights outreach materials and documents that have been developed and used by the Seabird Protection Network, Bodega Head – Pt. Sur Chapter. Electronic versions of these materials are available upon request. Contact the Network Hub for more information.

The Style Guide is a result of a marketing, media and communications effort initiated by the Network. Clear and succinct messages have been developed and tailored to different audiences and include: explanations of normal bird behaviors; signs of disturbance; why seabirds are important; and tips to view seabirds without causing a disturbance.

Chapters can adapt most products described below in order to meet their messaging needs. Outreach products are available in various forms, from amendable Word and InDesign documents to unalterable PDFs.

The Wildlife Disturbance Packet contains an incident reporting form that has been vetted through multiple agencies, streamlining the reporting of potential wildlife disturbance incidents. Lastly, outreach products from various collaborators are included to help jumpstart each Chapter's creativity!

Item Description	Document Name	File Type
Style Guide (fonts, logos, colors)	Style Guide	InDesign
	Supportive images	InDesign
	SPN banner (72 in. x27 in.)	InDesign
	SPN Icon	eps/tiff
	Header/Footer for email	--
	Helvetica Fonts	Zip
Boater Display for Events	Display panel #1	InDesign
	Display panel #2	InDesign
	Central California map for display panel	InDesign
	"Steer Clear" sign	InDesign
	"Wave" sign	InDesign
Boater Guide	Complete booklet (includes maps)	InDesign/PDF
Public Service Announcement	Boater	Mpeg
	Pilot	Mpeg
Pilot Display for Events	Display panel #1	InDesign
	Display panel #2	InDesign
	Central California map for display panel	InDesign
	"Low overflights" sign	InDesign
Power Point	Template (title slide)	PowerPoint
	Boater presentation	PowerPoint
	Kayak presentation	PowerPoint
	General presentation	PowerPoint
	Pilot presentation	PowerPoint
	Script for pilot presentation	Word

Item Description	Document Name	File Type
Posters	Temporary flyer for marinas and harbors	InDesign
	Kayak poster	InDesign/PDF
	Boater poster	InDesign/PDF
	Pilot poster	InDesign/PDF
Half Moon Bay Postcard	Front-side	InDesign/PDF
	Back-side	InDesign/PDF
Pilot Mailing	Letter	InDesign/PDF
	FAQs	InDesign/PDF
	Agency regulations	Word
	Map	PDF
Boater Mailing	Letter	InDesign/PDF
	Regulations	InDesign/PDF
	Map	PDF
Tide book	Front cover	InDesign/PDF
	Inside panel	InDesign/PDF
	Inside content information	InDesign/PDF
	Back cover (map)	InDesign/PDF
Wildlife Disturbance Packet	Protocol for Reporting	PDF
	Overview of Disturbance Form	PDF
	Disturbance Form	PDF
	Disturbance Form – Field Version	PDF
Outreach Materials of Partner	Channel Island bird sign	PDF
	Oregon Coast National Wildlife Refuge Complex	PDF
	Seabird Aware Brochure (PRBO Conservation Science)	PDF
	Torch Seabird Aware Brochure	
	Torch Seabird Protection Network Brochure	
Stickers	Logo with tag line	InDesign/PDF
	Round Seabird Protection Network	InDesign/PDF
	Waterproof for Kayaks	InDesign/PDF

Appendix IV: Laws and Regulations Protecting Seabirds

Laws and regulations regarding seabird "disturbance" fall under the authority of federal, state and in some cases, local government agencies. Currently, no act or mandate addresses all concerns for seabird disturbance.

Seabird nesting and roosting habitats in California are managed by the U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, National Park Service, U.S. Navy, California State Parks, Bureau of Ocean Energy Management, private landowners, and others. Seabird foraging habitats in California are managed, for the most part, by the California Department of Fish and Wildlife and the National Oceanic and Atmospheric Administration, which includes the National Marine Fisheries Service and the Office of National Marine Sanctuaries.

The citation category is shorthand for the respective laws and regulations. A citation is a listing for a law or regulation which includes the title or chapter number, the name of the collection, and the sections and paragraph numbers. Many new laws are assigned a number in the United States Code (U.S.C.) which reflects their relationship to similar laws or laws that govern similar programs. The Code of Federal Regulations (CFR) is written to explain in detail how the laws are to be carried out. When a law is written, it usually does not explain in detail what procedures are to be followed, nor does it include descriptions of the special situations which can arise. This is the job of the regulations, which govern the day-to-day business of the Federal government.

Federal

The following is a list of Federal laws that aid in the protection of seabirds. A detailed version can be accessed at www.SeabirdProtectionNetwork.org – *Seabird-Related Laws, Regulations and Authorities*. The document will provide additional information about specific laws and regulations, including the responsible authority.

Airborne Hunting Act (1972)

Citation:	16 U.S.C. § 742j-1; 50 CFR 19
Responsible agency:	U.S. Fish and Wildlife Service
Area of jurisdiction:	United States
Prohibited activities:	Any person who— (1) while airborne in an aircraft shoots or attempts to shoot for the purpose of capturing or killing any bird, fish, or other animal; or (2) uses an aircraft to harass any bird, fish, or other animal; or (3) knowingly participates in using an aircraft for any purpose referred to in paragraph (1) or (2).

Endangered Species Act (1973)

Citation:	16 U.S.C. §1531 et seq.; 15 CFR 904
Responsible agency:	U.S. Fish and Wildlife Service and National Oceanic Atmospheric Administration
Area of jurisdiction:	United States
Prohibited activities:	"…it is unlawful for any person subject to the jurisdiction of the United States to— import any such species into, or export any such species from the United States; take any such species within the United States or the territorial sea of the United States; take any such species

upon the high seas; possess, sell, deliver, carry, transport, or ship, by any means whatsoever, any such species taken in violation of subparagraphs (B) and (C); deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of commercial activity, any such species; sell or offer for sale in interstate or foreign commerce any such species; or violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed pursuant to section 1533 of this title and promulgated by the Secretary pursuant to authority provided by this chapter." Prohibition against "take" extends to eggs. "…Assessment of civil and criminal penalties for violating the Act or regulations; and authorizes the payment of rewards to anyone furnishing information leading to arrest and conviction for any violation of the Act or any regulation issued there under."

Migratory Bird Treaty Act (1918)

Citations: 16 U.S.C. § 703; 50 CFR 20

Responsible agency: U.S. Fish and Wildlife Service & National Oceanic Atmospheric Administration

Area of jurisdiction: United States

Prohibited activities: "...Federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird whether threatened or endangered or not, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird."

National Marine Sanctuaries Act (2000)

Citation: 16 U.S.C. § 1433; 15 CFR §922 (see citations below for individual sanctuaries)

Responsible agency: National Oceanic Atmospheric Administration; Office of National Marine Sanctuaries

Area of jurisdiction: Area within sanctuary boundaries – Cordell Bank (15 CFR §922.112); Gulf of the Farallones (15 CFR §922.82); Monterey Bay (15 CFR §922.132); and Channel Islands National Marine Sanctuaries (15 CFR §922.73).

Prohibited activities: It is unlawful for any person to destroy, cause the loss of, or injure any Sanctuary resource managed under law or regulations for that sanctuary. "Sanctuary resource" means any living or nonliving resource of a national marine sanctuary that contributes to the conservation, recreational, ecological, historical, educational, cultural, archeological, scientific, or aesthetic value of the sanctuary. "Take" or "taking" means: (1) For any marine mammal, sea turtle, or bird listed as either endangered or threatened pursuant to the Endangered Species Act, to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect or injure, or to

attempt to engage in any such conduct; (2) For any other marine mammal, sea turtle, or bird, to harass, hunt, capture, kill, collect or injure, or to attempt to engage in any such conduct. For the purposes of both (1) and (2) of this definition, this includes but is not limited to… operate a vessel or aircraft or to do any other act that results in the disturbance or molestation of any marine mammal, sea turtle or seabird. "Take" or "taking" means is defined to include "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Failure to comply with 1,000 feet over flight regulations zones within California National Marine Sanctuaries is presumed to disturb marine mammals and seabirds and is a violation of federal regulations.

Regulations of General Applicability

Citation: 43 U.S.C. § 1733; 43 CFR 9268.3
Responsible agency: Bureau of Land Management
Area of jurisdiction: Public lands under the management of Bureau of Land Management Area
Prohibited activities: Operating an off-road vehicle in a manner causing, or likely to cause significant, undue damage to or disturbance of the soil, wildlife, wildlife habitat, improvements, cultural, or vegetative resources or other authorized uses of the public lands. Drive or operate a motorized vehicle or otherwise conduct oneself in a manner that may result in unnecessary frightening or chasing of people or domestic livestock and wildlife in undeveloped areas used for recreational purposes.

National Wildlife Refuge System

Citation: 16 U.S.C. § 668dd; 50 CFR 27
Responsible agency: U.S. Fish and Wildlife Service
Area of jurisdiction: Areas within California National Wildlife Refuges
Prohibited activities: Taking any member of the animal kingdom in a wild, unconfined state, whether alive or dead, including a part, product, egg, or offspring of the member. Disturbing, injuring, spearing, poisoning, destroying, collecting or attempting to disturb, injure, spear, poison, destroy or collect any plant or animal on any national wildlife refuge is prohibited except by special permit.

Regulations of the National Park Service

Citation: 16 U.S.C. § 3; 36 CFR 1
Responsible agency: National Park Service
Area of jurisdiction: The boundaries of federally-owned lands and waters administered by the National Park Service. See specific National Parks for regulations.
Prohibited activities: The taking of wildlife, except by authorized hunting and trapping activities. Intentional disturbing of wildlife nesting, breeding or other activities.

State of California

California Endangered Species Act

Citation: Title 14, CCR § 783
Responsible agency: California Department of Fish and Game
Area of jurisdiction: State of California
Prohibited activities: Species designated by the State of California as threatened or endangered, and located within the State. Taking any species designated by the state as threatened or endangered without a permit. "Take" is defined as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, capture, or kill.

California State Parks Regulations

Citation: Title 14, CCR § 4305
Responsible agency: California Department of Parks and Recreation
Area of jurisdiction: State of California Parks, including, but not limited to: Año Nuevo State Reserve, Asilomar State Beach, Bean Hollow State Beach, Carmel, River State Beach, Carpinteria State Beach, Cayucos State Beach
Prohibited activities: Molesting, hunting, disturbing, harming, feeding, touching, teasing, or spotlighting any kind of animal or fish or attempting to do so unless specifically authorized by individual park regulations.

California Fish and Game Code, Marine Protected Areas and Special Closures

Citations: Title 14, CCR § 632
Responsible agency: California Department of Fish and Game
Area of jurisdiction: State of California Game Refuges
Prohibited activities: Visit http://www.dfg.ca.gov/mlpa/ for more information regarding California's Marine Protected Areas. All boats shall observe a five (5) nautical mile per hour speed limit within 1,000 feet of any shoreline in the reserve.

Miscellaneous California Statutes and Regulations

Citation: Title 14 CCR § 670
Responsible agency: State of California
Area of jurisdiction: State of California
Prohibited activities: Taking, possessing, or needlessly destroying the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code (e.g., licensed hunting, etc.). Taking or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.

Appendix V: List of Acronyms

BSSC	Bird Species of Special Concern
CBRL	California Bird Responsibility List
CDFW	California Department of Fish and Wildlife
CE	California Endangered Species
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMRP	Common Murre Restoration Project
CT	California Threatened Species
FACA	Federal Advisory Committee Act
FC	Federal Candidate Species
FE	Federally Endangered Species
FSC	Federal Species of Concern
FT	Federally Threatened Species
LOI	Letter of Intent
MOU	Memorandum of Understanding
OPA	Oil Pollution Act
OSPR	Office of Spill Prevention and Response
SAC	Sanctuary Advisory Council
TAC	Seabird Protection Network Technical Advisory Committee
USFWS	United States Fish and Wildlife Service