

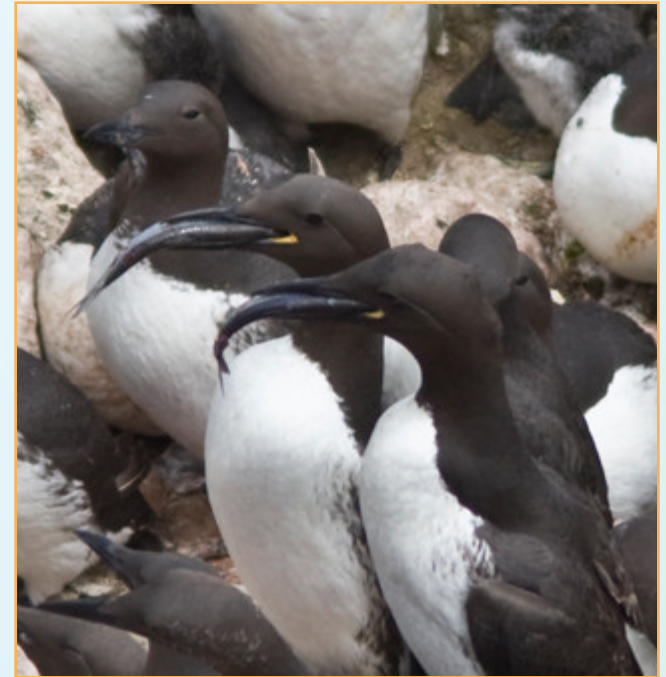


# SEABIRD PROTECTION NETWORK



# Central California

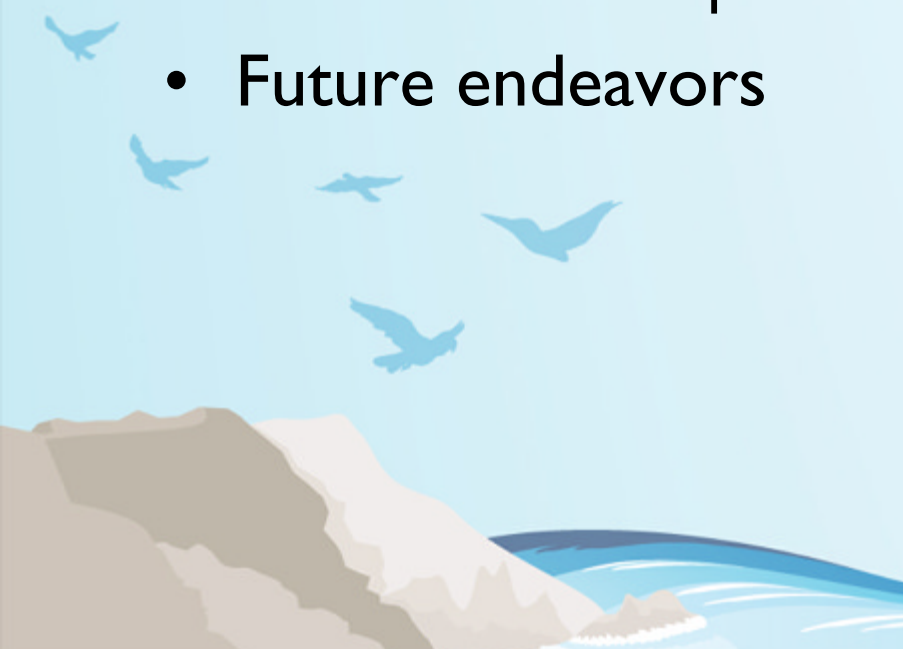
- 600,000 breeding seabirds
- +
- 8 million people (SF Bay Area)



- 
- Potential for disturbance is high!

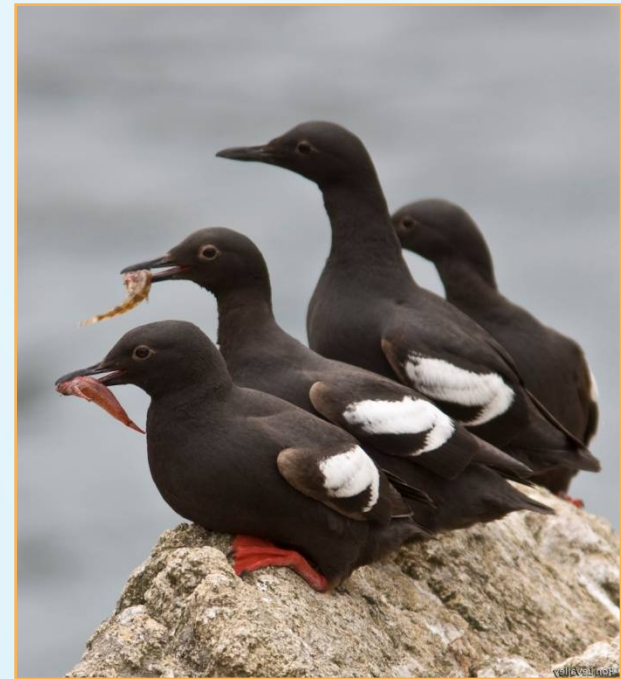
# Overview

- Seabird Protection Network
  - 2010 Accomplishments
- Expanding the Network
  - Additional Chapters
- Future endeavors



# Program Goal

- Improve the survival of central California's seabirds by reducing human disturbances at their breeding and roosting colonies on the central California coast.



# Focal Species

- Surface-nesting species
  - Common Murre
  - Western Gull
  - Pelagic Cormorant
  - Brandt's Cormorant
  - Brown Pelican
  - Double-crested Cormorant



# Project Scope

- Bodega Bay–Point Sur
- Multi-faceted approach
  - Monitoring
  - Education & Outreach
  - Enforcement & Coordinated Management



# Monitoring

- U.S. Fish & Wildlife Service
- Driving force
- Baseline > 9 years



# Target Audiences

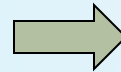
- 3 Main Sources

Low-flying aircraft



Fixed-wing; ultra-light;  
helicopters; blimps

Close approaching  
motorized/non-  
motorized boats

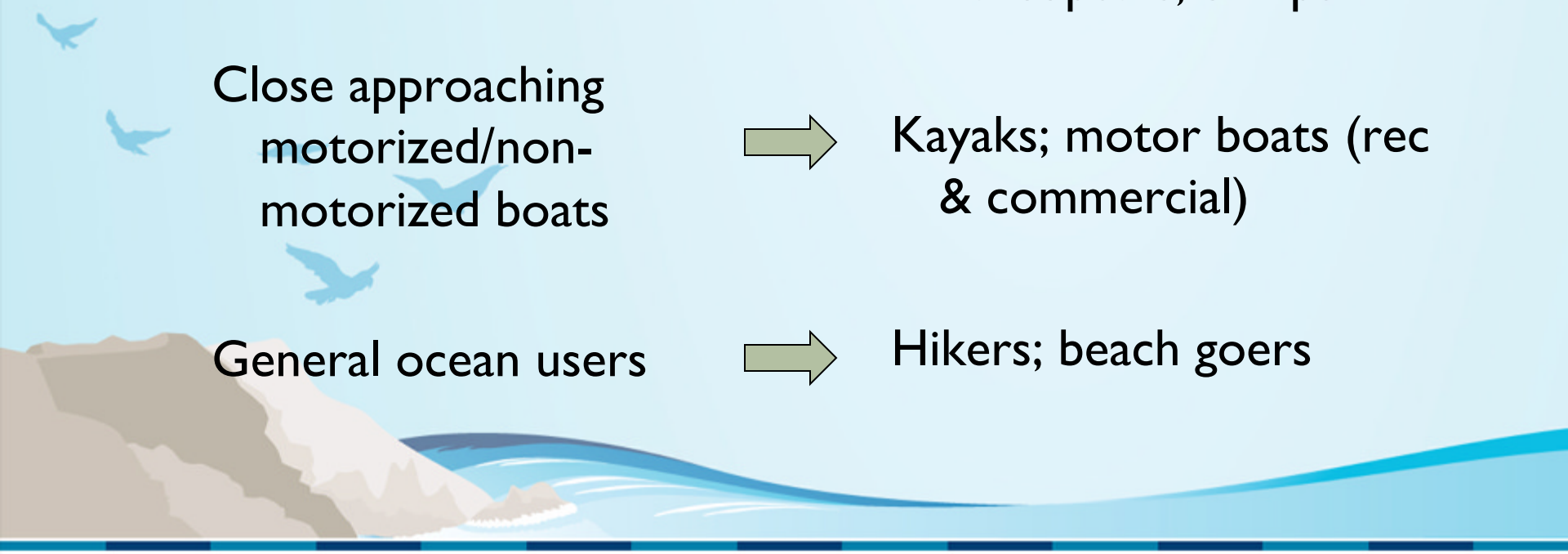


Kayaks; motor boats (rec  
& commercial)

General ocean users

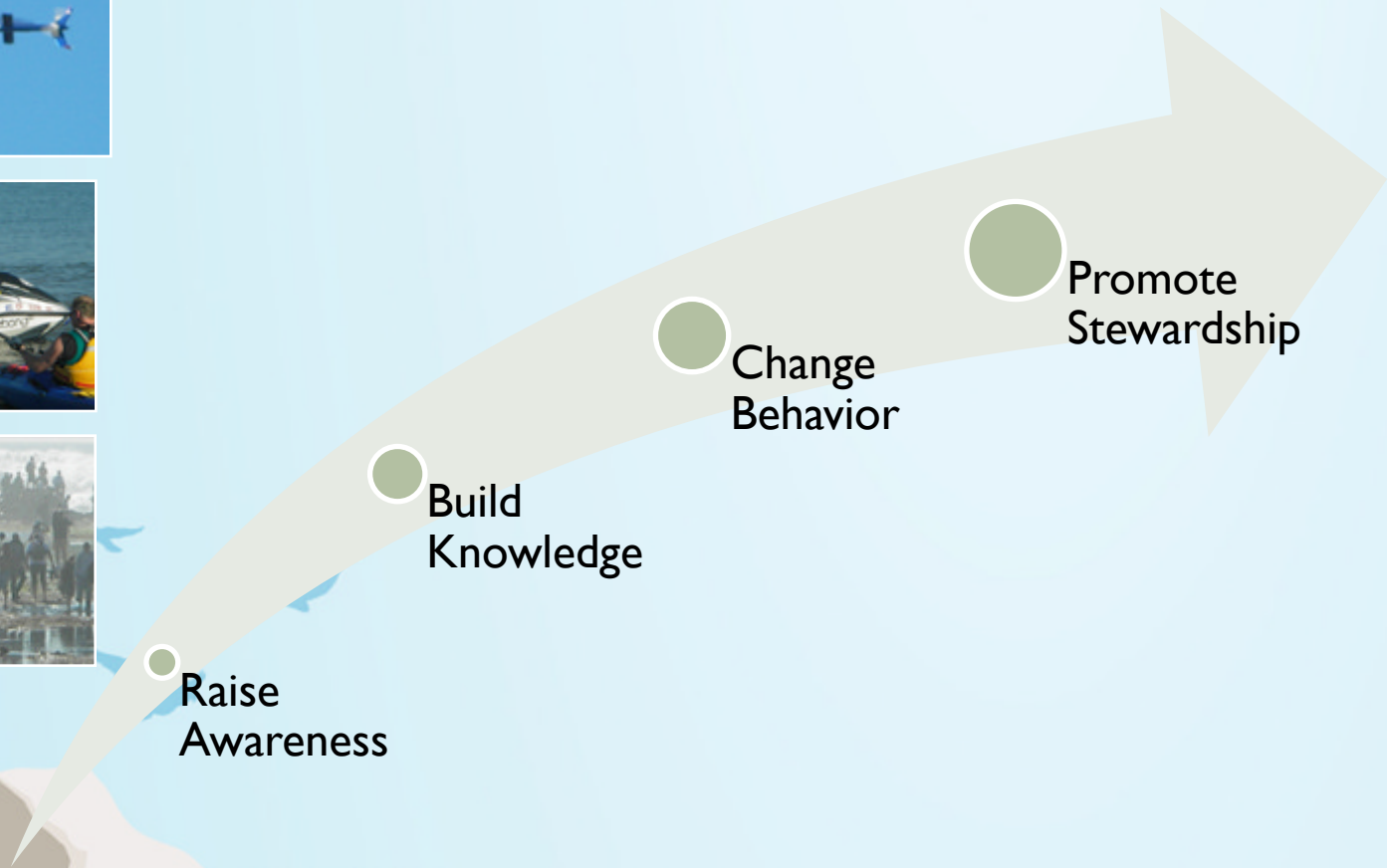


Hikers; beach goers





# Target Audiences



Raise  
Awareness

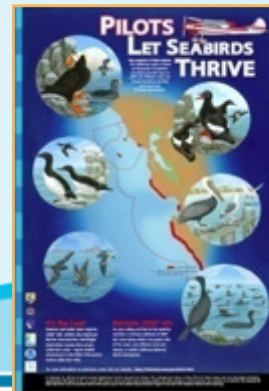
Build  
Knowledge

Change  
Behavior

Promote  
Stewardship

# Education & Outreach

- Accomplishments
  - Outreach efforts
    - April 2009 - 2025
    - Pilots – posters, pilot guides, mailing, displays
    - Boaters – posters, tide books (3362), signage, displays (REI/West Marine stores & harbors)



# Education & Outreach

- Accomplishments

- Established online network & engagement tool

- Google Oceans, E-Newsletter (3), Website Refresh, FaceBook



The screenshot shows the homepage of the Seabird Protection Network. At the top, there is a logo with a seagull and the text "SEABIRD PROTECTION NETWORK". Below the logo, there are two main columns of content. The left column is titled "In this issue" and contains a bulleted list of links: "Increased Marine Protection", "Seabird Season 2009", "Common Murres", and "Background". Below this list is a section titled "Increased Marine Protection" with a paragraph of text and a "Read More" link. The right column is titled "Welcome to the Seabird Protection Network!" and contains a paragraph of text and a "Read More" link. Below this is a section titled "What's happening to the birds?" with a close-up image of a bird's head and a "Seabird Season 2009" link.



The screenshot shows the homepage of the Gulf of the Farallones National Marine Sanctuary website. At the top, there is a logo with the text "GULF OF THE FARALLONES National Marine Sanctuary" and a search bar. Below the logo, there is a navigation menu with links for "HOME", "ABOUT US", "MANAGEMENT", "RESEARCH", "EDUCATION", and "PROTECTION". The main content area features a large image of two seabirds on a rock. Below the image, there is a "Welcome" section with a paragraph of text and a "Read More" link. To the left of the main content, there is a sidebar with a "SEABIRD PROTECTION NETWORK" logo and a list of links: "SEABIRD HOME", "PILGRIMS", "BOARDS", "ADVISORS", "OCEAN LEADS", "WORKING GROUPS", "ENFORCEMENT", and "NEWS".

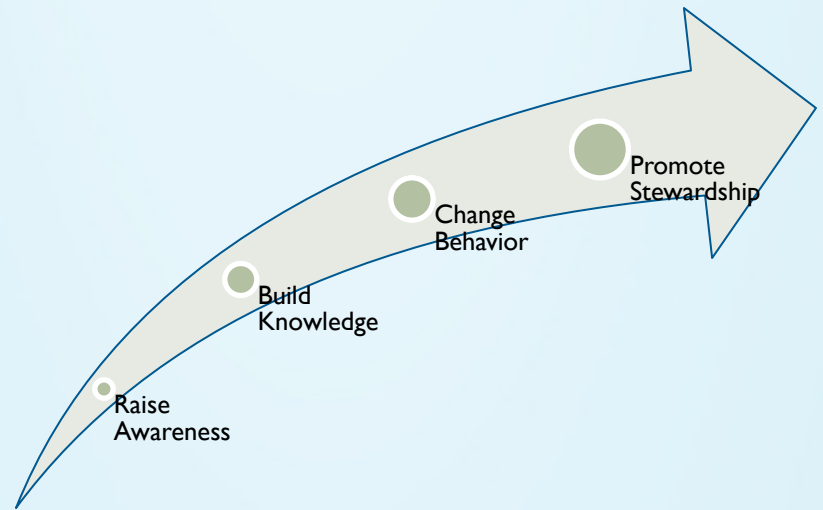
# Education & Outreach

- Accomplishments
  - Strengthened partnerships
    - California Dept. Fish & Game
      - Boater's Guide to MPA's
      - Boater mailing
      - Drake's Bay, PRNS Interpretive Sign
  - Collaborating with GFNMS Education Team
    - Evaluate effectiveness



# Education & Outreach

- Effectiveness
  - Largest challenge
  - Web-based info
  - Disturbance, yes but....

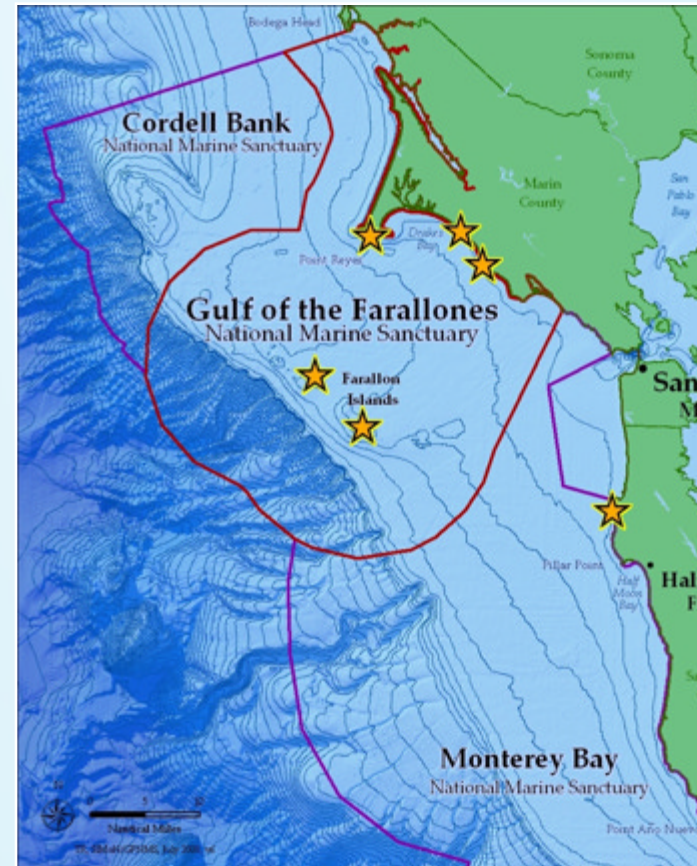


# Enforcement & Coordinated Management (by sea)

- **Accomplishments**
  - Adoption of 6 Special Closure areas (May 1, 2010)
    - Network staff were instrumental in establishing Special Closures areas, adopted by California Fish and Game Commission through the Marine Life Protection Act
    - Protection for breeding and roosting seabirds; rookeries and haul-out areas for marine mammals
    - Installing and maintaining year-round & seasonal buoys

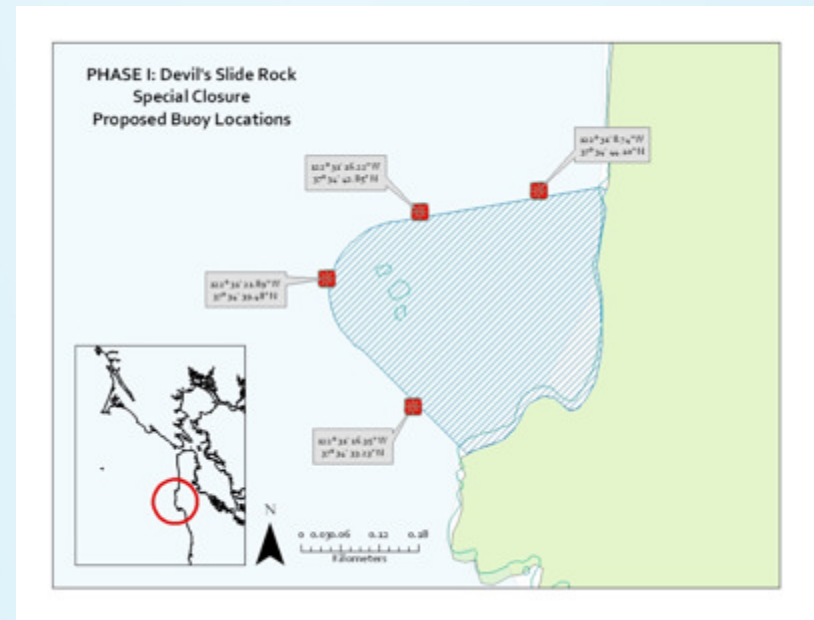
# Enforcement & Coordinated Management (by sea)

- Demarcation Buoys
  - Devil's Slide Rock (4)
  - Pt Resistance Rock (2)
  - Dbl Pt/Stormy Stack (3)
  - Southeast Farallon Is. (8)
  - Pt. Reyes (4)
  - North Farallon Is. (3)
- 24 demarcation buoys



# Enforcement & Coordinated Management (by sea)

- Phase I
  - Devil's Slide Rock
    - 4 buoys
    - Year-round
- Phase II
  - Pt Resistance Rock
  - Double Pt/Stormy Stack
  - Southeast Farallon Is.
  - North Farallon Is.
- Phase III
  - Pt. Reyes (if needed)





# Enforcement & Coordinated Management (by sea)

All Buoys  
**Year-round**

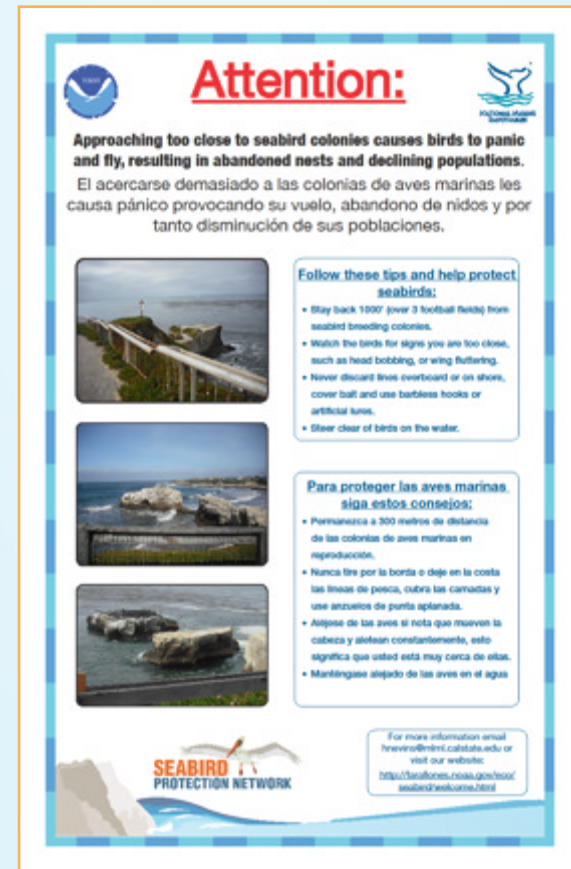


**Seasonal**



# Enforcement & Coordinated Management

- Accomplishments
  - Recognized as a resource for managers
    - Brown Pelican roosting
  - Strengthened partnerships
    - Bureau of Land Management



**Attention:**

Approaching too close to seabird colonies causes birds to panic and fly, resulting in abandoned nests and declining populations.  
El acercarse demasiado a las colonias de aves marinas les causa pánico provocando su vuelo, abandono de nidos y por tanto disminución de sus poblaciones.

**Follow these tips and help protect seabirds:**

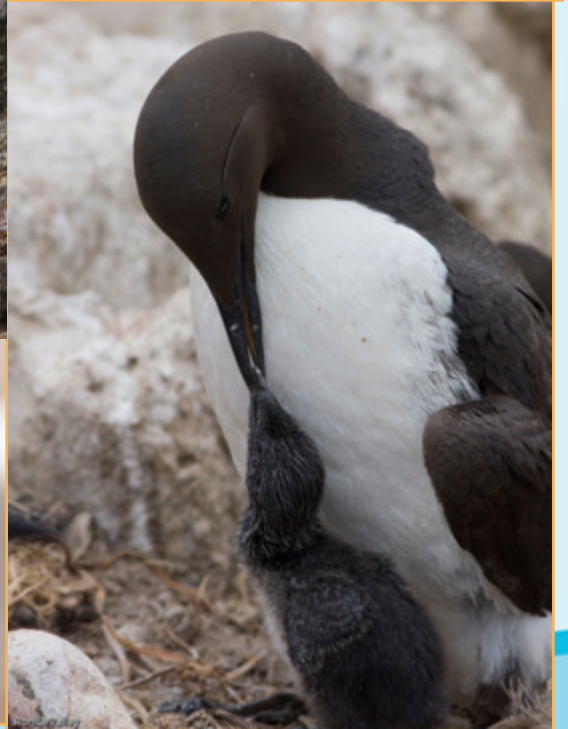
- Stay back 1000' (over 3 football fields) from seabird breeding colonies.
- Watch the birds for signs you are too close, such as head bobbing, or wing fluttering.
- Never discard lines overboard or on shore, cover bait and use barbless hooks or artificial lures.
- Steer clear of birds on the water.

**Para proteger las aves marinas, siga estos consejos:**

- Permanezca a 300 metros de distancia de las colonias de aves marinas en reproducción.
- Nunca tire por la borda o deje en la costa las líneas de pesca, cubra las carnadas y use anzuelos de punta aplanada.
- Alíjese de las aves si nota que mueven la cabeza y aletean constantemente, esto significa que usted está muy cerca de ellas.
- Manténgase alejado de las aves en el agua.

For more information email [hwevins@blm.gov](mailto:hwevins@blm.gov) or visit our website: <http://theblm.noaa.gov/soar/seabird/welcome.html>

**SEABIRD PROTECTION NETWORK**

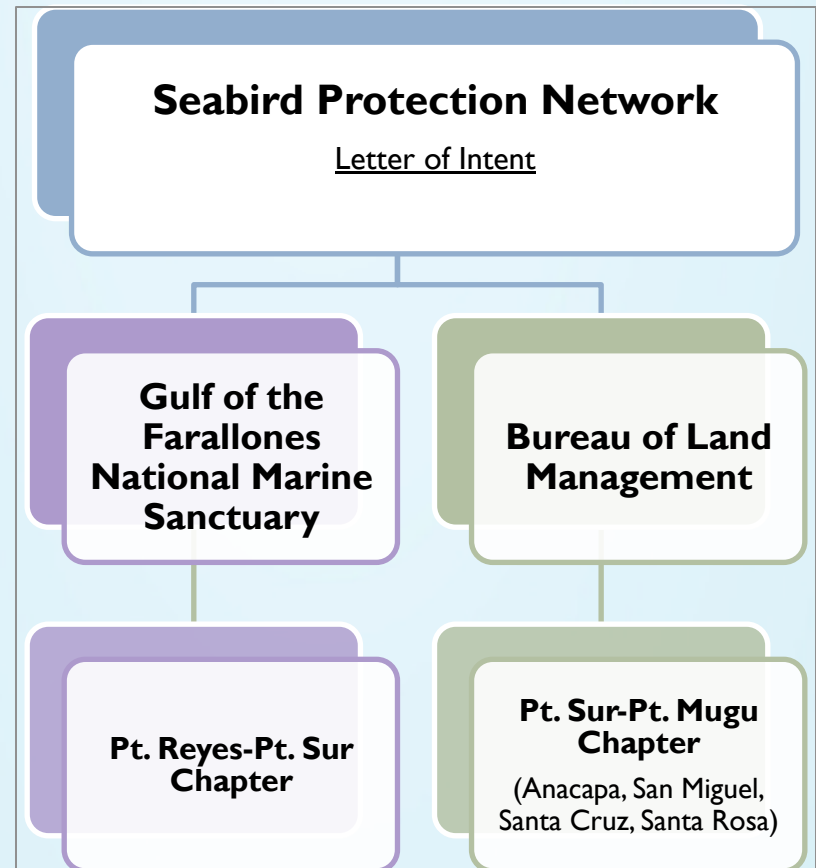


# Expanding the Network

- Seabird Protection Network
  - 5 years funding Command Trustee Council
  - 20 years funding Luckenbach Trustee Council
- BLM awarded similar seabird restoration project
  - 5 years funding from Torch/Platform Irene Trustee Council
- Meeting of the Trustee Councils (June 2009)
  - Agreed on Chapter development (Audubon)
  - Coordination meeting (Dec. 2010)
- Montrose
  - Channel Islands

# Expansion

- Seabird Protection Network
  - Bodega Bay to Point Sur Chapter
  - Point Sur to Point Mugu Chapter
  - Channel Islands Chapter



# Future endeavors

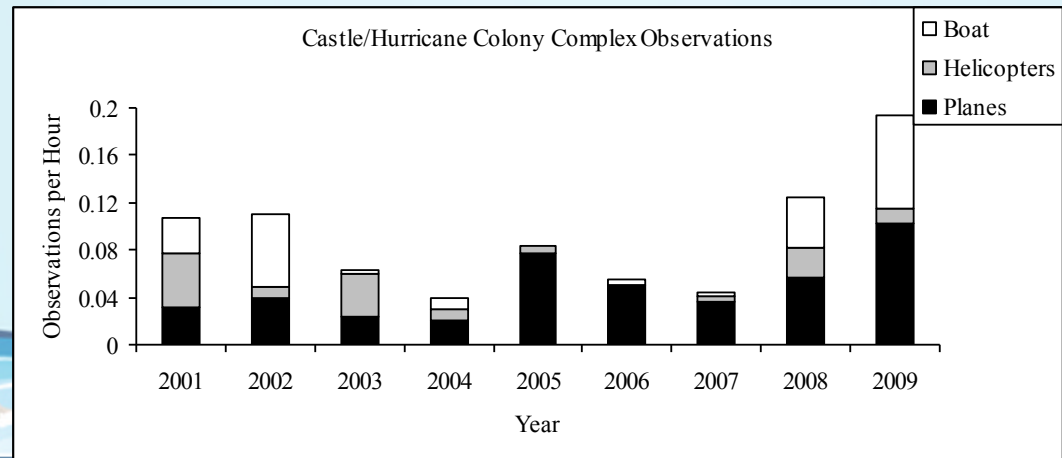
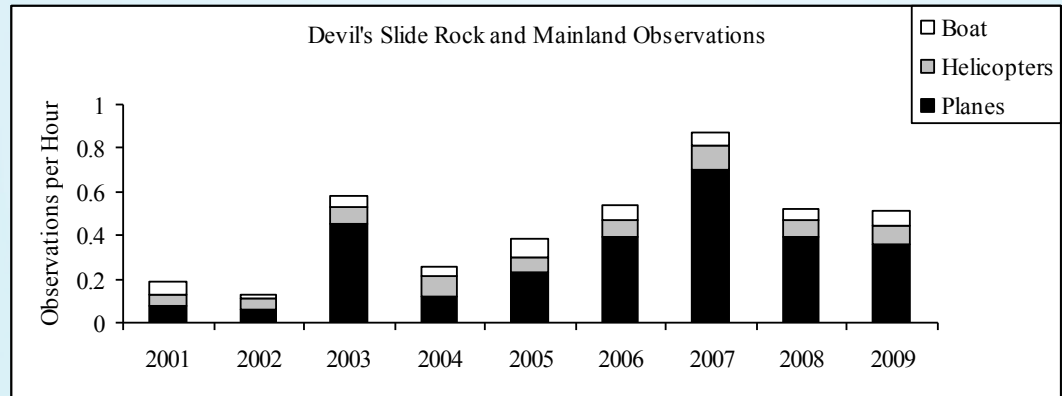
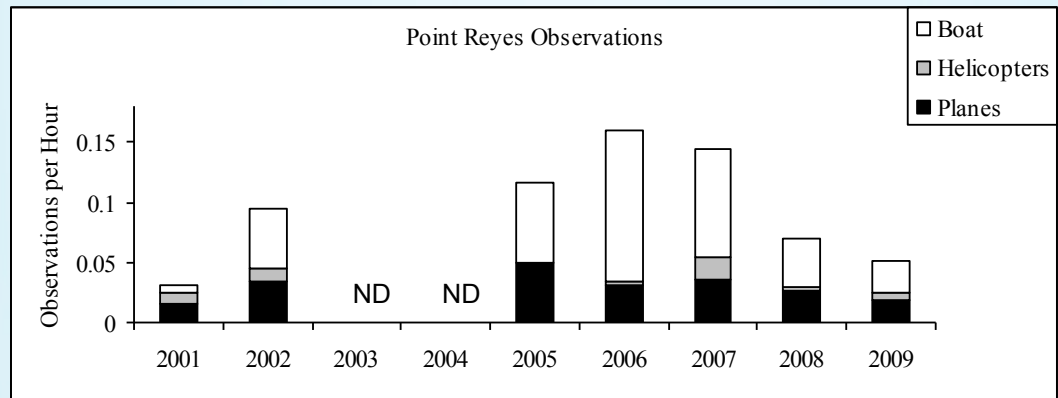
- Boater's Guide to MPA's
- Strategic Planning
  - Achievements; Goals for seabird conservation (linked)
- Wildlife Disturbance Symposium
- Presenting at IMCC in May
  - From Chasing our Tail Feathers to Discovering Nesting Grounds: Understanding Human-use Patterns to Conduct Targeted Outreach for Seabird Protection
- Monterey presence



# Observation rates

*numbers observed per hour*

2001 - 2009



- Aircraft that flew  $\leq 1000$  ft
- Vessels that approached within 1500 ft





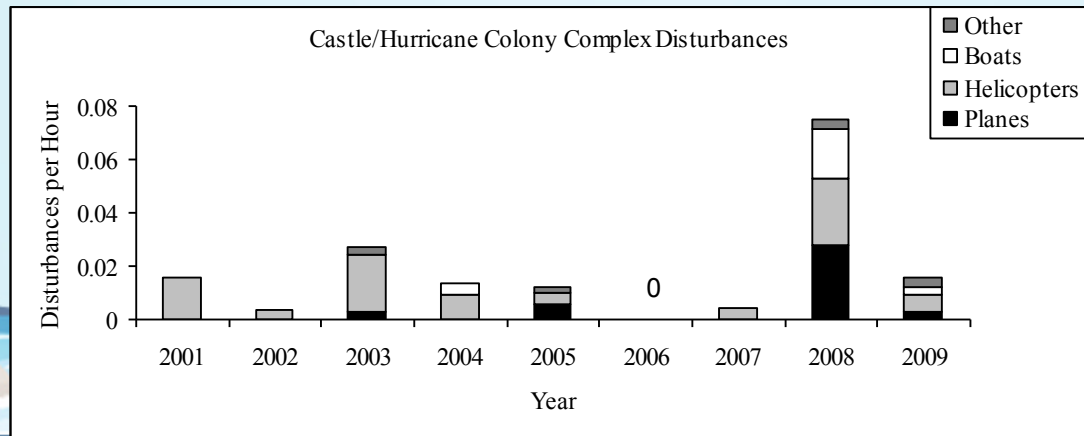
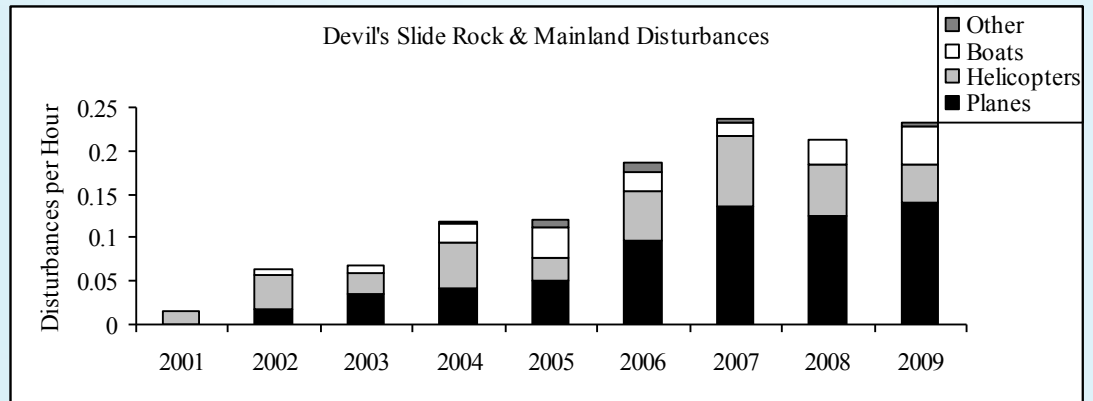
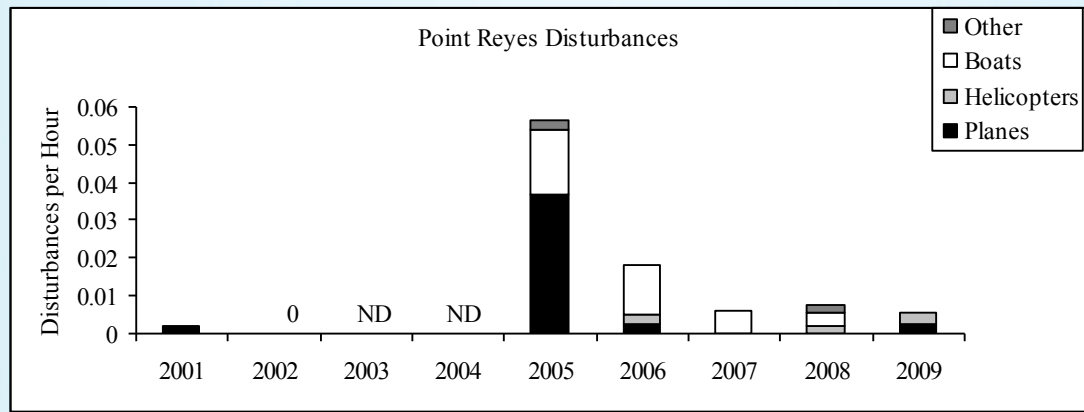
## Disturbance rates

*number of disturbance events  
per hour*

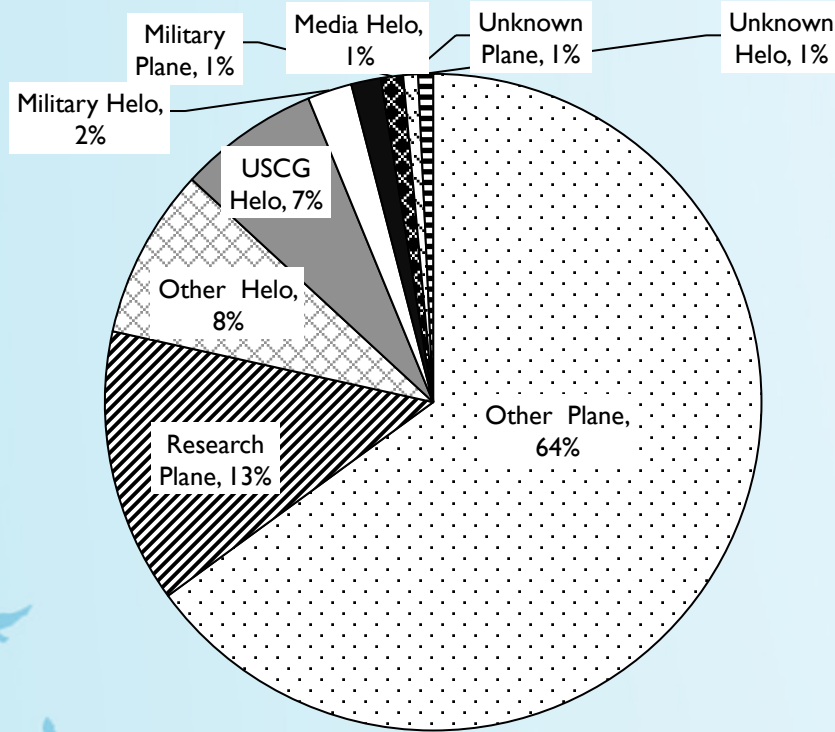
2001 - 2009

Events where adult birds were :

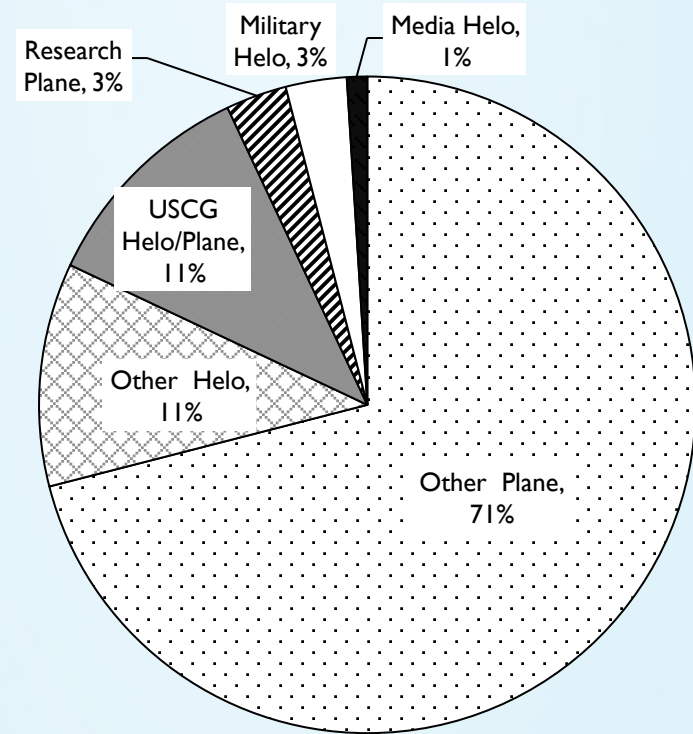
- Alarmed or agitated
- Flushed
- Displaced



# Observations by Aircraft Type

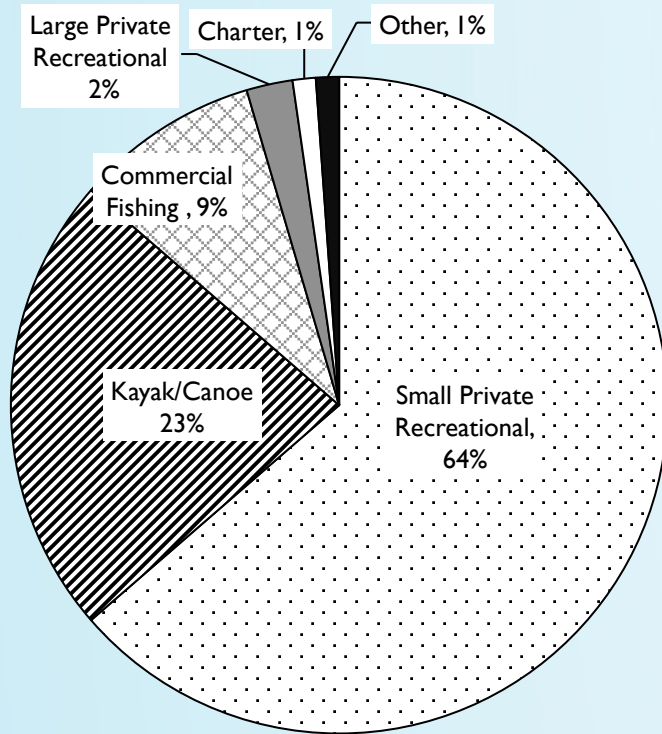


# Disturbances by Aircraft Type

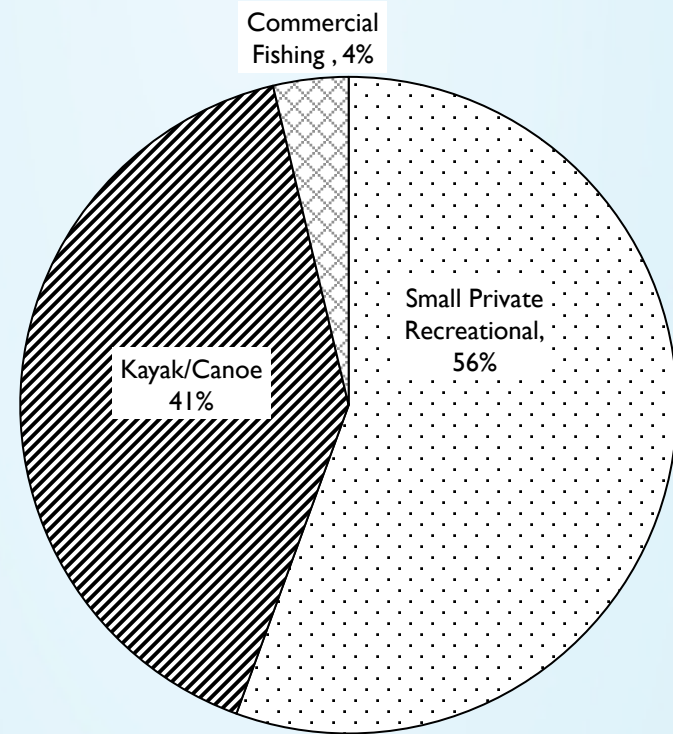


- 36% of aircraft overflights caused some form of disturbance
- “Other” (unmarked private or charter) planes and helicopters caused the most disturbance events

# Observations by Vessel Type



# Disturbances by Vessel Type



- 31% of watercraft caused some form of disturbance
- Recreational small private boats and kayaks were responsible for nearly all disturbances

## Measuring effectiveness –

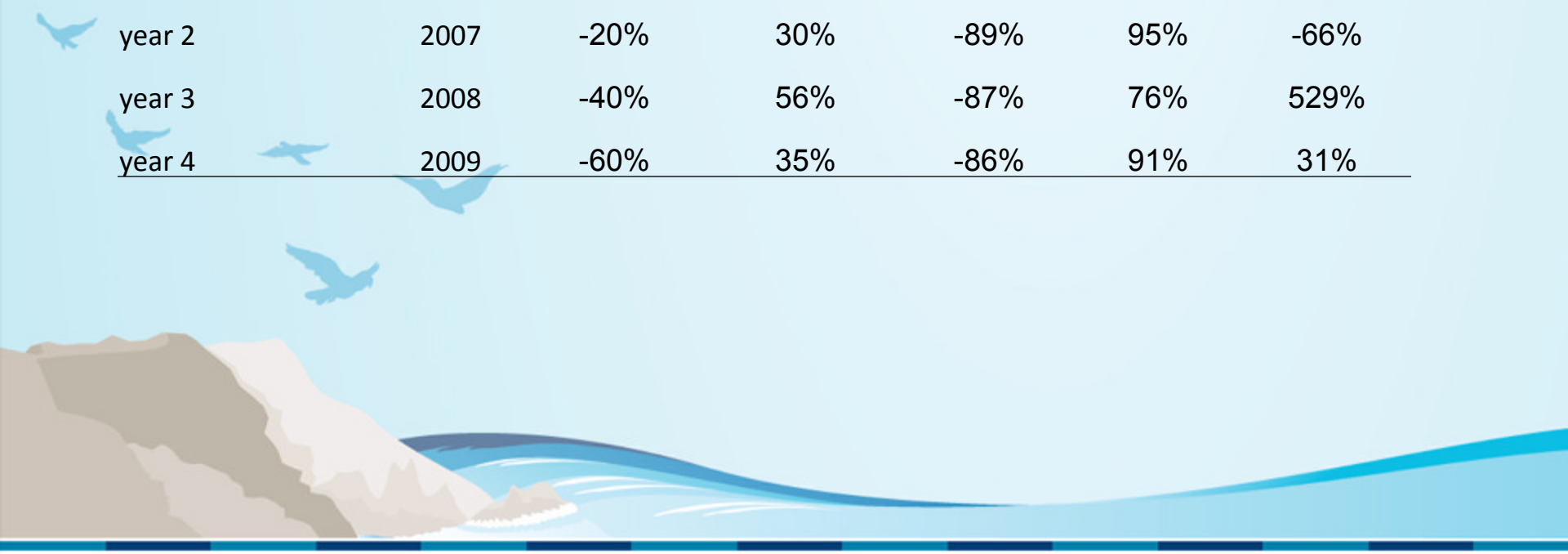
Percent change in disturbance rates at 3 colonies.

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### Percent change from baseline - 2005

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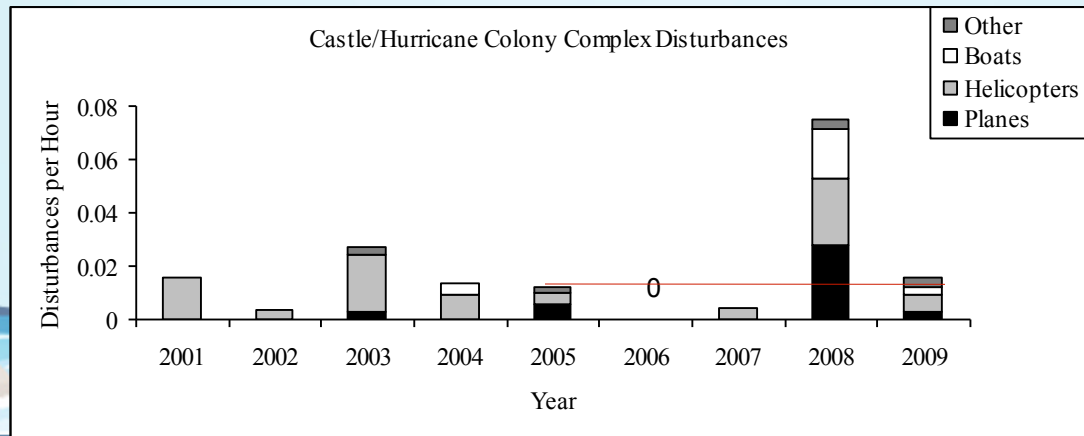
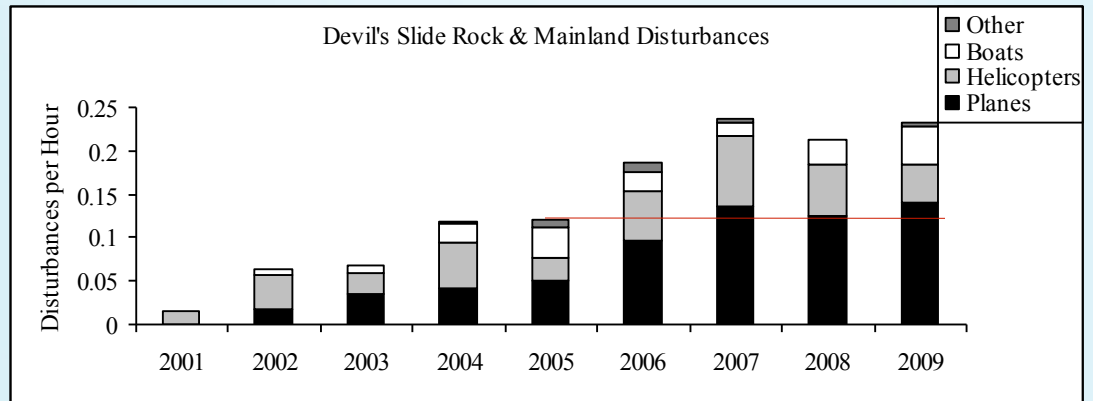
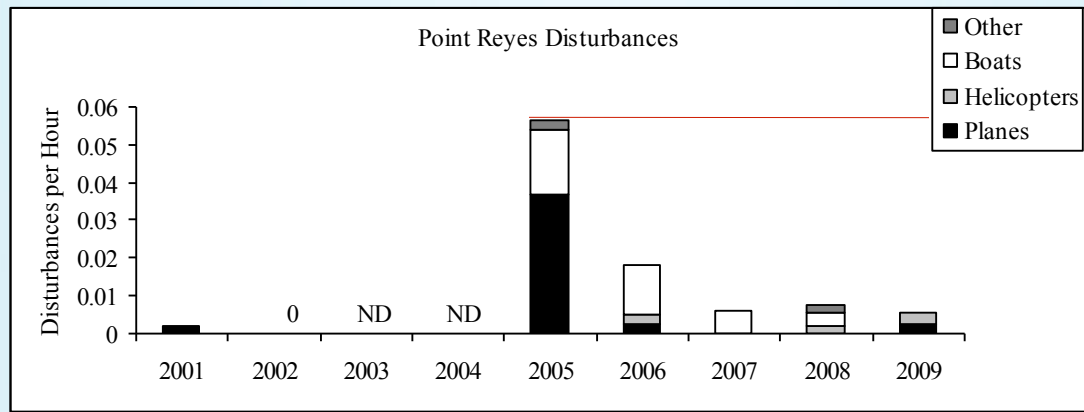
Timeframe	Year	Target	All 3 Colonies	Point Reyes	Devil's Slide	Castle
baseline	2005	baseline				
year 1/baseline	2006	baseline				
year 2	2007	-20%	30%	-89%	95%	-66%
year 3	2008	-40%	56%	-87%	76%	529%
year 4	2009	-60%	35%	-86%	91%	31%



## Measuring effectiveness

*number of disturbance events  
per hour*

Compared to 2005 baseline



# Special Closures: Vessel Activity

- U.S. Fish and Wildlife Service observations

	Observations		Disturbance	
	Sum	Average	Sum	Average
<b>Devil's Slide Rock</b> (1991-2009)	327	25	98	11
<b>Pt. Reyes</b> (1991-2009; no observations 2003 or 2004)	194	18	17	3.4
<b>Drakes Bay Complex</b> (2005-2009)	76	15.2	13	3

## – Pt. Reyes Headlands

- Mostly recreational fishing boats, approaching ~1500 ft. from headlands – **outside Special Closure Area**
- 1– 2 kayaks observed

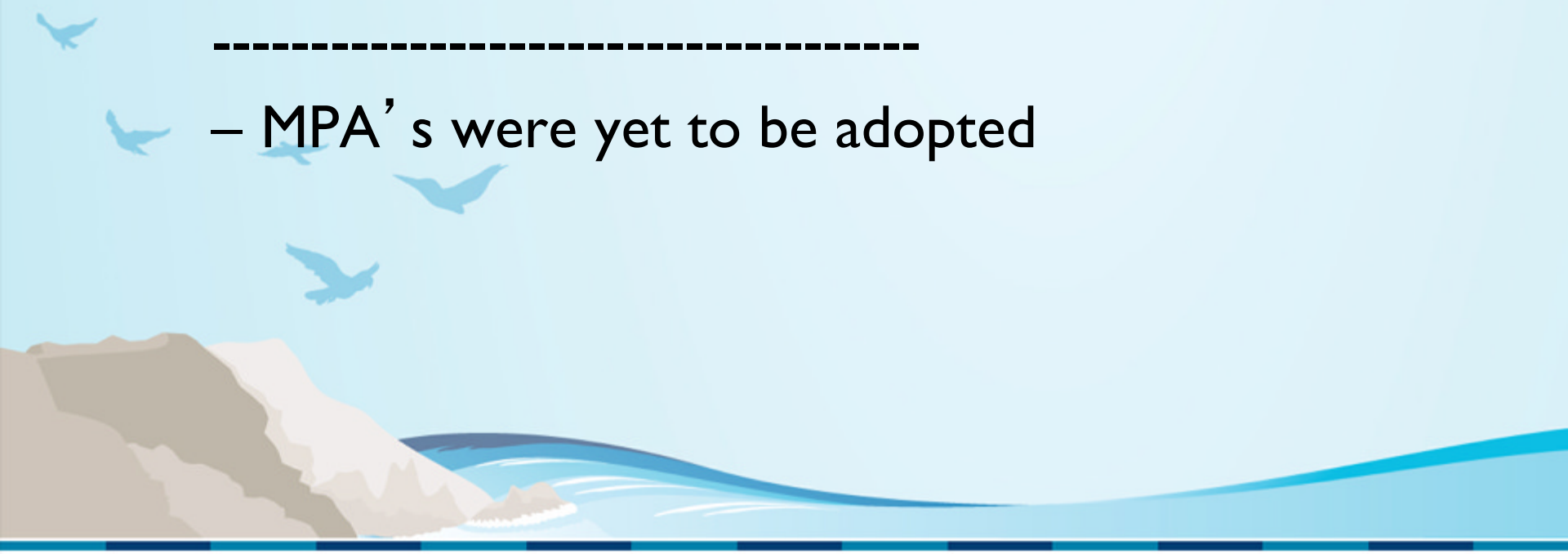
# Technical Advisory Committee

- Annual meetings  
(August 2011)
- Bureau of Land Management
- US Fish and Wildlife Service
- National Park Service
- CA Dept. of Fish and Game
- CA Coastal Commission
- CA Boating and Waterways
- CA State Lands Commission
- CA State Parks
- US Coast Guard
- NOAA



# Timeline: Activities to Date

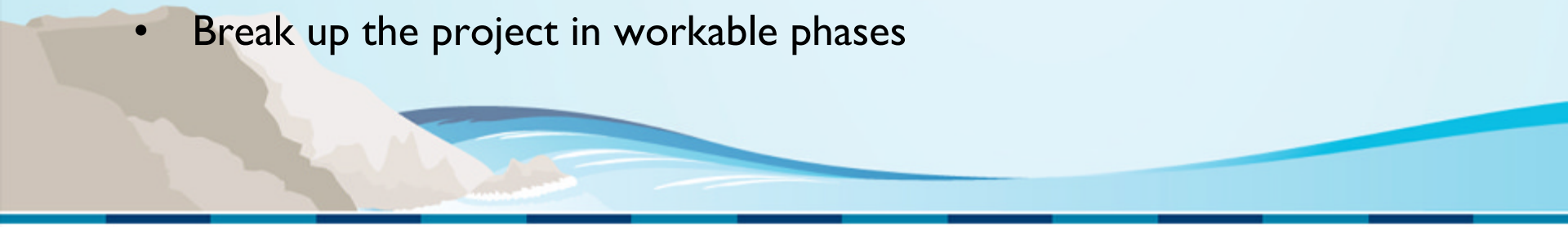
- August, 2009
  - Contract submitted to WASC for Devil's Slide
  - 1 bidder – over budget
  - 
  - MPA's were yet to be adopted





# Evaluation: Overall Project

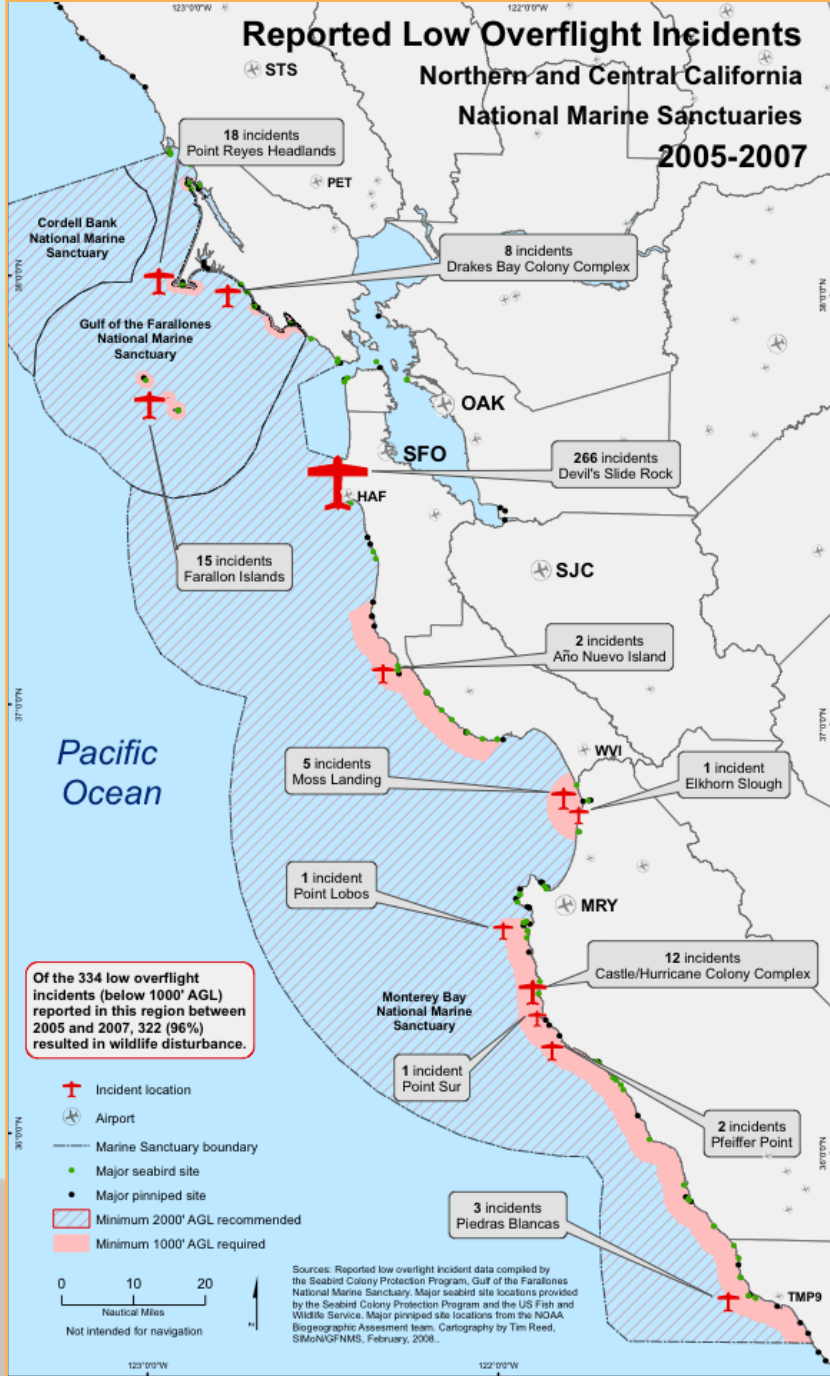
- Installing and maintaining 24 demarcation buoys at once holds several challenges
  - Personnel, Vehicles, Vessels, Storage Facilities
- Installing equipment that can handle extreme oceanic conditions (100-year storms) is costly and requires diligent maintenance
  - Need to balance the need to prevent marine debris with the need to prevent disturbance. Without tracking devices, there is no guarantee the buoys will be retrieved. If the buoys are not retrieved, it can be assumed they become marine debris!
- Break up the project in workable phases



# FAA Sectional Charts



**NOTICE TO PILOTS**  
Pilots are requested to maintain a minimum altitude of  
2000' AGL over the  
**CHANNEL ISLANDS NATIONAL MARINE SANCTUARY**



**Of 334 low overflights, flights below 1000', 96% resulted in wildlife disturbance**



**There is also an increased chance of bird strikes!**

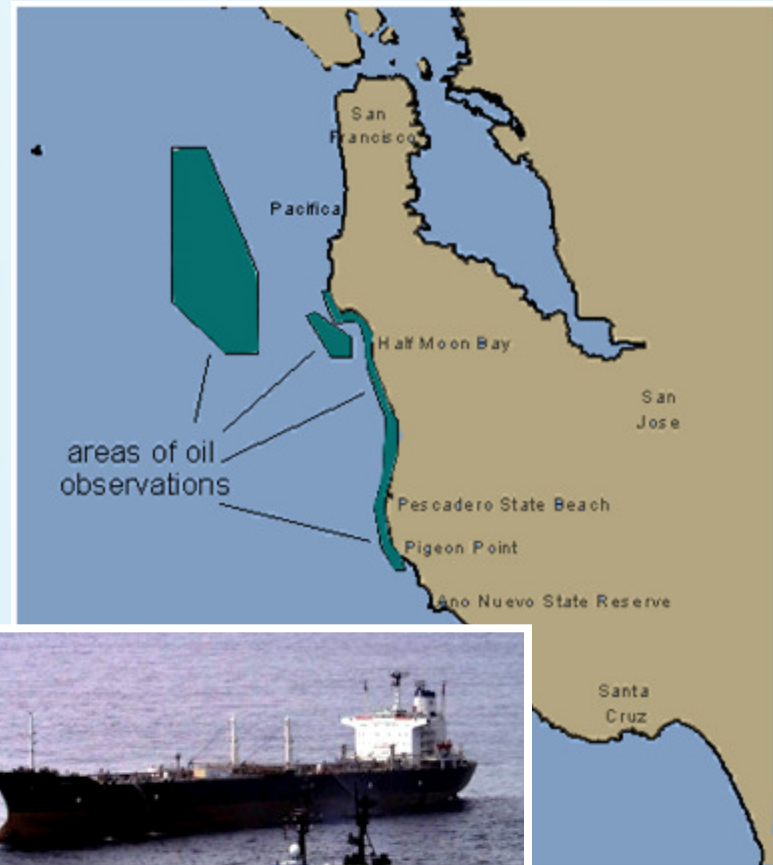
# T/V *Command*

- Sept. 26, 1998 – Vessel left SF Bay
- Southbound ~15 miles off the San Mateo County coast – released 3,000 gallons of IBF
- Sept. 30, 1998 – Oil
- Military aircraft followed oil trail to Guatemala – intercepted by USCG
- Oil samples from *Command* matched mystery spill off San Mateo County coast



# T/V *Command*

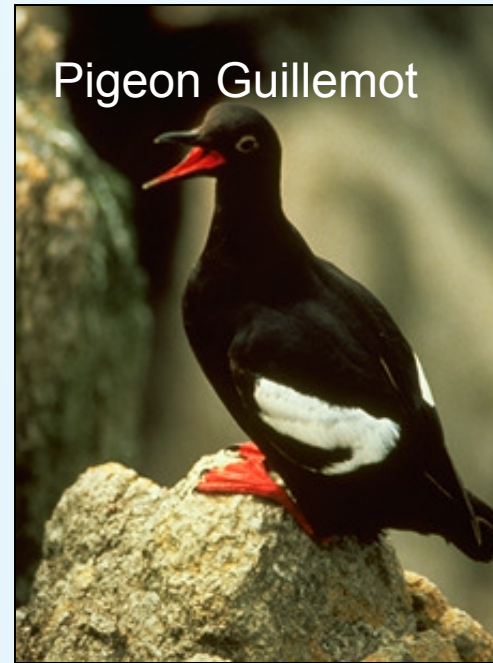
- \$4,000,000 in Natural Resource Damages
- Estimated > 1,500 birds killed (Common Murre & other seabirds)
- Miles of beaches lightly oiled
- Estimated \$113,386 in lost beach use
- Trustee agencies responsible for developing a restoration plan
  - Seabird Protection Network was a preferred project



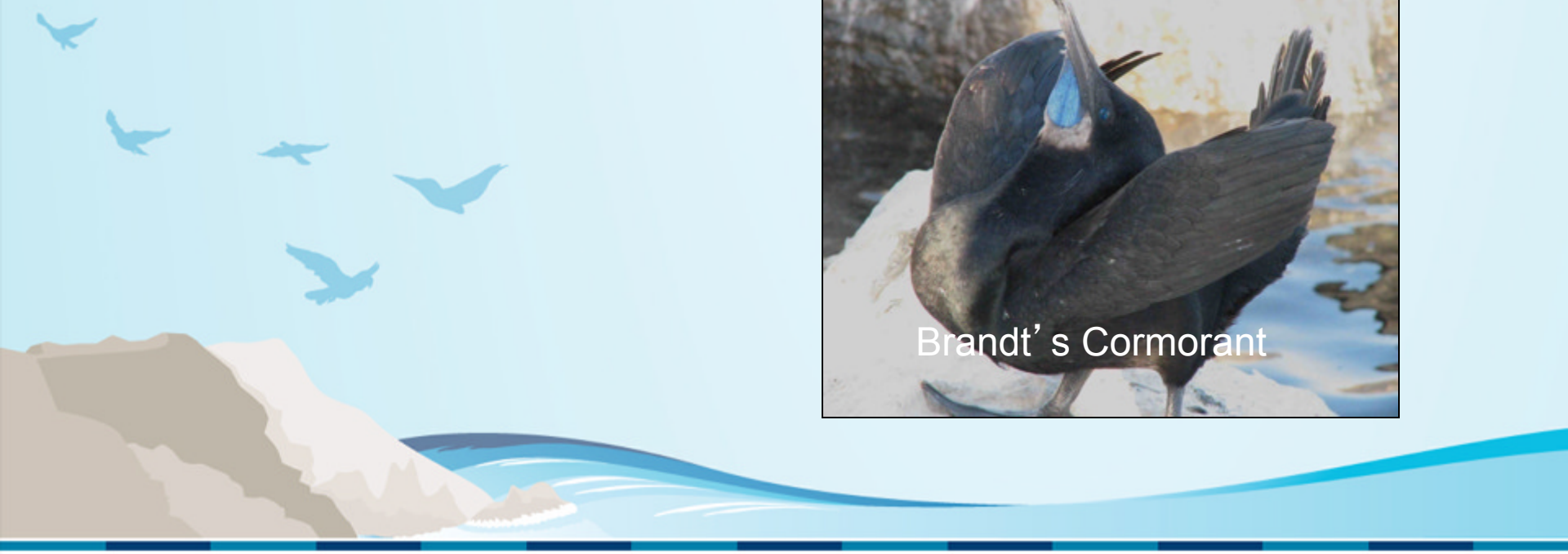
Common Murre



Pigeon Guillemot



Brandt's Cormorant



**Low overflights cause seabirds to panic and fly, disrupting breeding activities causing the deaths of seabirds for generations to come!**

**What happens when aircraft fly too close to seabird colonies?**

- Aircraft cause disruption breeding activities, causing adults off their nests, which allows predators access to eggs and chicks.
- A single aircraft disturbance on high levels of repeat disturbance can cause colony abandonment.
- In an ongoing U.S. Fish and Wildlife study of the California coast more than 7 out of 10 flights below 1,000 feet AGL caused disturbance to seabird colonies including deaths of young birds.

**What can you do to prevent seabird disturbance?**

- Minimum 3000 feet AGL when flying within National Marine Sanctuaries
- Avoid sudden changes in direction, altitude, and operations seabird colonies and sensitive wildlife areas

**It's YOURS!**

- Disturbance of wildlife by aircraft can be a violation of 50 CFR 21.17, punishable by a \$1,000 citation or a mandatory court appearance that could result as a fine up to \$10,000, one year in jail, or both.
- The following can be a violation under the National Marine Sanctuaries Act: 1) Disturbing seabirds or marine mammals by flying low-level aircraft at less than 3000 feet over designated areas within the Gulf of the Farallones Sanctuary; 2) Flying low-level aircraft at less than 3000 feet over designated areas within the Monterey Bay Sanctuary or 3) Taking any marine mammal, sea turtle, or seabird in or above the Monterey Bay Sanctuary (11 CFR, Part 162, Subpart H, and Subpart M, and section C, for aircraft "White Glider Buses" for private sales and registration).

**THANK YOU FOR HELPING TO PROTECT OUR WILDLIFE!**

PLEASE POST THESE TIPS TO YOUR BULLETIN BOARD AND DISTRIBUTE TO OTHER FLIGHTS. For more information, or to request additional signs, flight book, inserts, or to schedule presentations for your event, contact: [Rosenberger@1671.net](mailto:Rosenberger@1671.net) 415.622.2500 or 800.855.seabirds@noaa.gov

**Seabirds:**

**Marine Mammals:**

**Project Leader:** San Francisco Bay National Wildlife Refuge

**Supervisor:** Chief of the Farallones National Marine Sanctuary



**Welcome to the Seabird Protection Network!**

It's seabird breeding season and we need your help to protect California's seabirds! Low overflights can be very hazardous to pilots. The noise and shadow of a low flying aircraft can cause seabirds to panic and fly, increasing the likelihood of a birdstrike. Please post and read these signs. **Maintain 3000 AGL, while flying along the coast!**

Seabirds nest and rear in colonies or large groups on offshore rocks and cliffs. One low overflight or repeated disturbances during the breeding season can:

- Scare birds off their nests.
- Dislodge eggs or chicks from nest sites.
- Allow predators access to eggs and chicks.
- Lead to deaths when eggs and chicks are abandoned or exposed to predators.

Seabird restoration efforts have been underway for several years, however low overflights have been a major impediment to recovery in some colonies. The Seabird Protection Network (SPN) needs to provide information to the flying community about the impacts that low overflights have on breeding seabirds along the California coast. The Seabird Protection Network consists of state, federal, and non-profit agencies united in protecting seabirds along our coast.

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Exposure to a later studying the impacts of low overflights to seabirds and highlighting ways you can reduce their impacts. Also included are some outreach products available for loan: 1) the seabird sign guide for your California Guide to Reports and 2) Our poster on Seabirds Threats.

We would like to give you a special opportunity to become "Seabird Safe Certified." Visit our website and sign the SPN pledge. The certification includes: 1) Free publicity of your airport or business on the SPN website. 2) An invitation to our end-of-the-season Seabird Celebration and 3) Recognition of your environmental awareness. With your help we can improve the survival of California's seabird species.

Thank you,  
Susan Rosenberger, Sage Teasak, and Karen Payne.

For more information on the Seabird Protection Network please email [California.Seabirds@noaa.gov](mailto:California.Seabirds@noaa.gov) or visit our website <http://seabirds.noaa.gov/>



San Francisco Bay

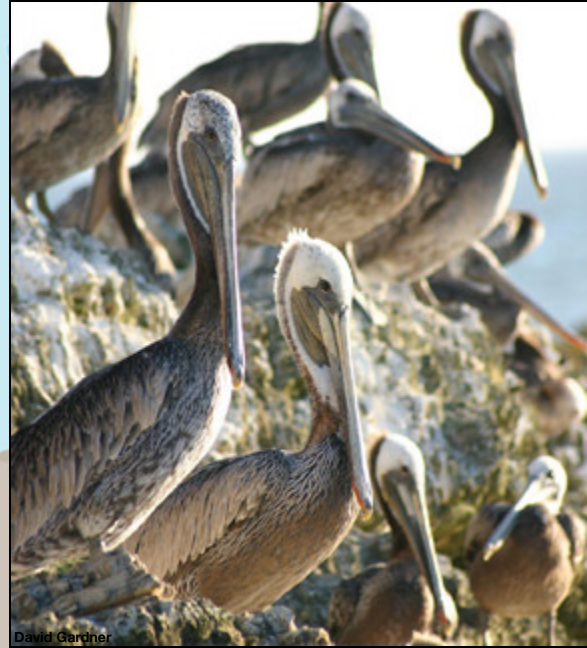


**Help Protect California Seabirds!**

For questions and outreach materials contact

California.Seabirds@noaa.gov  
(415) 561.6622 x333

[www.farallones.noaa.gov/seabirds.html](http://www.farallones.noaa.gov/seabirds.html)



**SEABIRD REACTIONS TO LOW FLYING AIRCRAFT**

Seabirds nest and rear in colonies or large groups on offshore rocks and cliffs. Numerous disturbances can lead to colony abandonment.

**DID YOU KNOW?**

One low overflight or repeated disturbances during the breeding season can:

- Scare birds off their nests
- Dislodge eggs or chicks from nest sites
- Allow predators access to eggs and chicks
- Lead to deaths when eggs and chicks are abandoned or exposed to predators, or chicks have the nest too soon and drown.

**MARINE MAMMALS ARE SENSITIVE TO LOW OVERFLIGHTS TOO!**

Seals and sea lions need to haul out on land to rest and raise their young. Disturbances frighten animals, separate mothers and pups, and can lead to trampling and death.

Drifting planes can disturb whales and dolphins as they rest and feed at the surface.

**FLY SEABIRD SAFE**

Low overflights can be very hazardous to pilots!

Birdstrikes cause serious plane damage and have taken over 200 human lives world-wide!


Protect yourself and seabirds... maintain 3000 feet while flying along the coast!

**DID YOU KNOW?**

Low overflights increase birdstrikes! The noise and shadow of a low flying aircraft can cause seabirds to panic and fly, increasing the likelihood of a birdstrike. NO aircraft engine is certified to operate at 1000 feet over four pounds without shutting down!

**AVOID A BIRDSTRIKE**

Avoid areas with known risks, such as marsh lands, seabird nesting areas, bays, and migration routes. The Pacific Flyway migration route extends along the entire west coast. Don't fly at low altitudes during seabird breeding season (February - August). The most dangerous altitudes for birdstrikes are 800 to 850 feet, and 1000 to 2000 feet. (R. Colwell, USDA Wildlife Services)



“The goal of the network is to reduce human disturbance to wildlife.”

**EMAIL US**  
[california.seabird@noaa.gov](mailto:california.seabird@noaa.gov)

**VISIT OUR WEBSITE**  
[www.farallones.noaa.gov/seabirds.html](http://www.farallones.noaa.gov/seabirds.html)

- Free posters and sign guides.
- Information on special presentations for flight clubs, certified flight instructors, or flight schools.
- Maps and information on laws and regulations.
- Join the network and become Seabird Safe Certified!