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
- Close approaching motorized/non-motorized boats
- General ocean users

→ Fixed-wing; ultra-light; helicopters; blimps
→ Kayaks; motor boats (rec & commercial)
→ 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
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

DANGER
(415) 561-6622

NO ENTRANCE
ENTRY
(415) 561-6622
Enforcement & Coordinated Management

- **Accomplishments**
  - Recognized as a resource for managers
    - Brown Pelican roosting
  - Strengthened partnerships
    - Bureau of Land Management
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
Common Murre, breeding
Observation rates

*numbers observed per hour*

2001 - 2009

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

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Year</th>
<th>Target</th>
<th>All 3 Colonies</th>
<th>Point Reyes</th>
<th>Devil's Slide</th>
<th>Castle</th>
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<tr>
<td>baseline</td>
<td>2005</td>
<td>baseline</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>year 1/baseline</td>
<td>2006</td>
<td>baseline</td>
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<tr>
<td>year 2</td>
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<td>-20%</td>
<td>30%</td>
<td>-89%</td>
<td>95%</td>
<td>-66%</td>
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<tr>
<td>year 3</td>
<td>2008</td>
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<td>56%</td>
<td>-87%</td>
<td>76%</td>
<td>529%</td>
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<tr>
<td>year 4</td>
<td>2009</td>
<td>-60%</td>
<td>35%</td>
<td>-86%</td>
<td>91%</td>
<td>31%</td>
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Measuring effectiveness

number of disturbance events per hour

Compared to 2005 baseline
Special Closures: Vessel Activity

- U.S. Fish and Wildlife Service observations

<table>
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<tr>
<th>Location</th>
<th>Year Range</th>
<th>Observations</th>
<th>Disturbance</th>
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<tr>
<td>Devil’s Slide Rock</td>
<td>1991-2009</td>
<td>327</td>
<td>98</td>
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<tr>
<td>Pt. Reyes</td>
<td>1991-2009; no observations 2003 or 2004</td>
<td>194</td>
<td>17</td>
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<tr>
<td>Drakes Bay Complex</td>
<td>2005-2009</td>
<td>76</td>
<td>13</td>
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- 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
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