

**A REPORT TO THE  
TORCH PLATFORM/IRENE OIL SPILL  
TRUSTEE COUNCIL  
SEABIRD PROTECTION NETWORK (SPN)  
POINT SUR TO POINT MUGU  
YEAR 1 (PHASE ONE) ACCOMPLISHMENTS**

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Prepared By:  
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Point Sur to Point Mugu Region  
Prepared November 26, 2012

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Prepared August 19, 2011**

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**Background/History**

On September 28, 1997, crude oil discharged from a rupture in a 20-inch pipeline owned and operated by Torch Operating Company, Nuevo Energy Company, and Black Hawk Oil & Gas Company (collectively, the Responsible Parties). The pipeline extends from Platform Irene, an offshore oil platform, to an onshore processing facility on Harris Grade Road, north of the City of Lompoc in Santa Barbara County. The pipeline transports an emulsion of crude oil and water from Platform Irene to the onshore facility.

At the time of the Torch/Platform Irene Spill, the pipeline contained crude oil, production water, approximately 900 gallons of diesel, and 800 gallons of anti-corrosion chemical compounds. The Spill released at least 163 barrels (6,846 gallons) of petroleum products into the Pacific Ocean. Subsequently, oil contaminated seventeen miles of northern Santa Barbara County coastline and damaged a variety of natural resources including mussels, abalone, seabirds, shorebirds, and shoreline and intertidal habitats. Severity of oiling varied along the affected coastline, with Surf Beach on Vandenberg Air Force Base (VAFB) the most heavily oiled site. Estuaries at San Antonio Creek, Honda Creek, and the Santa Ynez River were also impacted.



The Trustees determined that the Spill constituted an “incident” as defined in 15 C.F.R. § 990.30 and was not permitted under federal, state or local laws. Because natural resources under their trusteeship were degraded, the Trustees exercised jurisdiction to pursue restoration under the Oil Pollution Act of 1990 (OPA), 33 U.S.C. § 2701, et seq., and 15 C.F.R. § 990.41. The Trustees conducted a natural resource damage assessment (NRDA) and proposed restoration planning based on the following findings:

- The Spill damaged natural resources and, in particular, caused the mortality of seabirds, principally Common Murres (*Uria aalge*) and Brandt's Cormorants (*Phalacrocorax penicillatus*).
- Actions during the Spill response could not address the resource injuries resulting from the incident.
- Feasible primary and compensatory restoration actions could address the injuries.

The Trustees on the Torch/Platform Irene Trustee Council include: United States Fish and Wildlife Service; California Department of Fish and Game - Office of Spill Prevention and Response; United States Department of Air Force, Vandenberg Air Force Base; and California State Lands Commission. The Trustee Council prepared a Final Restoration Plan and Environmental Assessment (RP/EA, October 24, 2007) which included restoration programs to compensate for natural resource losses due to the Spill. One of the programs selected by the Trustee Council was the Seabird Colony Enhancement Program, to protect seabirds by reducing human disturbance of breeding colonies and roost sites.

There are numerous threats to seabirds and the need for protection continues to increase. People unwittingly disturb seabirds, particularly at seabird breeding colonies and roost sites. Disturbances and resulting harm to seabirds stem from various human pursuits: economic uses, national security and safety activities, and recreational pastimes in the coastal zone. Noise, excessive light, toxic chemicals, and human proximity all pose threats to seabird breeding success and induce physiological stress on seabirds at all seasons. Specific sources of disturbances include boating (including anchoring) and kayaking; commercial, military, and recreational aircraft flights; diving and surfing; and fishing close to breeding colonies.

Seabird breeding colonies are particularly vulnerable to human disturbances. When people disturb seabird breeding colonies, seabirds vacate their nests, leaving their eggs and chicks unprotected from predators and adverse weather conditions. In addition, eggs and chicks may be dislodged from the rocks and lost. Increased public awareness, coupled with coordinated management and strategic partnerships, is necessary to reduce the sources and frequencies of wildlife disturbance from people.

Management and conservation for seabirds are missing linkages between the biological and habitat needs of seabirds, their status as protected species, the need for consistent legal protection and law enforcement, and a shared environmental ethic for sustainable coexistence between people and seabirds.

The USDI Bureau of Land Management (BLM) has prepared this report to summarize accomplishments of the year 1 (or phase one) Statement of Work that was designed to implement the Seabird Colony Enhancement Program as outlined in the RP/EA and further refined by the Torch/Platform Irene Trustee Council.

## **Chronology of Significant Events**

- ***On September 28, 1997***, crude oil discharged from a rupture in a 20-inch pipeline owned and operated by Torch Operating Company, Nuevo Energy Company, and Black Hawk Oil & Gas Company (collectively, the Responsible Parties).
- ***On October 24, 2007*** the Torch Trustee Council approved the Final Restoration Plan and Environmental Assessment for the Torch/Platform Irene Oil Spill.
- ***On June 16, 2008***, the Torch Trustee Council formally selected BLM, as managing agency of the California Coastal National Monument, to serve as the lead entity for Seabird Colony Enhancement Project for the Torch Oil Spill restoration effort. In this role, BLM would coordinate the implementation of the \$1.2 million multi-agency project.
- ***On December 7, 2009*** the Torch Trustee Council approved the BLM's Scope of Work for the Seabird Protection Network Project. The project area was initially referred to as the South Central California Coast Chapter.
- ***On February 24, 2010***, acting BLM California State Director, Jim Abbott, and U.S. Fish and Wildlife (USFWS) Pacific Southwest Regional Director, Ren Lohofener, signed an agreement that formally designated BLM as the lead agency for the \$1.2 million, five-year "Seabird Protection Network South Central California Coast Chapter" (SPN-SCCC) Project.
- ***On April 15, 2010***, at the direction of the Torch Trustee Council, \$379,022 is transferred to the BLM Central California District to implement the year one Scope of Work for the Seabird Protection Network Project. Note: The Trustee Council had approved a resolution to the NRDA Fund Manager authorizing the transfer of funds to BLM on March 11, 2010 (TCR #2010-1); however, the funds did not actually become available in a BLM account until April 15, 2010.

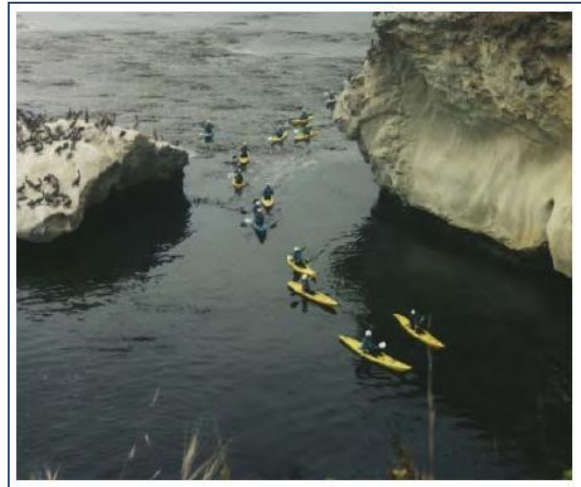
## **Seabird and Human Disturbances Monitoring - Deliverables in Year 1**

The BLM lead for this component of the project was initially Jim Weigand of the California State Office under the 2009 Statement of Work. These duties shifted to Dr. Michael Westphal of the BLM Hollister Field Office in January of 2011. Once the BLM awarded a cooperative agreement to PRBO Conservation Science to support this project (April 8, 2011), the field lead for this component became Dan Robinette of PRBO Conservation Science.

A listing of deliverables and the status of each item follows:

### ***Deliverable - An information assessment on seabirds in the Program Area.***

1. BLM and PRBO Conservation Science have been working together on this information assessment (i.e. literature review) that will be used to help guide the season 2-5 monitoring strategy. PRBO will complete the information assessment concurrently with the seabird/human disturbance monitoring results for the 2011 season which was completed November 20, 2012.



### ***Deliverable - A monitoring and surveillance plan to be approved by the Trustee Council.***

1. PRBO Conservation Science prepared a “Seabird and Human Disturbance Monitoring Plan” for the project area between Point Sur to Point Mugu. This plan was approved for implementation by the Trustee Council on April 5, 2011. Payment for preparation of the monitoring plan was via a BLM check for \$1,998 using BLM-Torch funds.

### ***Deliverable - One (or more) Working Group and TAC meetings in Year 1 with agencies, NGOs, and other interested parties for coordination of Plan development and implementation.***

1. The BLM Seabird Protection Network Team (Point Sur to Point Mugu), Torch Trustee Council, Seabird Protection Network (Gulf of Farallones and USFWS), PRBO and others held an initial coordination working group meeting December 15-16, 2010. This meeting facilitated the information exchange between the



network chapters, and provided a mechanism for seabird experts to provide feedback on the initial monitoring plan for the Point Sur to Point Mugu region. Coordination for the working group meeting was made possible by a fund disbursement (\$10,000) from the NRDA Fund Manager to National Oceanic and Atmospheric Administration (NOAA) under resolution 10-3.

***Deliverable - Annual reports including the year-round monitoring data on seabird populations, seabird breeding success, and human disturbance of seabirds.***

1. USFWS prepared a Final Report – “*Aerial Photographic Surveys of Surface-Nesting Seabirds in South Central California in June 2010*”. This report helped guide the development of the Seabird and Human Disturbance Monitoring Plan. The report was completed on August 26, 2011. Funding for this project was provided by the BLM-Torch funds through a BLM/USFWS Intergovernmental Order (\$25,860).



2. USFWS completed a report titled – “*Analyses of Aerial Photographic Surveys of Brandt’s and Double-Crested Cormorant Colonies, Point Sur to Point Conception, California, 1996-2009*”. This project was the second deliverable of the BLM Intergovernmental Order (\$115,702) and was completed by November 9, 2012.

3. USFWS in process of preparing a report to be titled – “*Aerial Photographic Surveys of Surface-Nesting Seabirds in South Central California in June 2011*”. Funding (\$22,176 USFWS and \$14,000 CDF&G) for this project was provided directly by the NRDA Fund Manager via Trustee Resolution 11-1. This project was scheduled to be completed by August 26, 2012.



4. PRBO Conservation Science completed the field work for monitoring under the Seabird and Human Disturbance Monitoring Plan. This project was funded (\$122,000) through a BLM cooperative agreement for one field season. The final report summarizing the

field study  
was  
completed  
on  
November  
20, 2012.



## **Coordinated Enforcement and Management - Deliverables in Year 1**

The BLM lead for this component of the project was initially Chief Ranger Kelly Cole of the Bakersfield Field Office under the 2009 Statement of Work. Since January of 2011, these duties are now shared with Chief Ranger Brian Martin of the Hollister Field Office.

A listing of deliverables and the status of each item follows:

***Deliverable - One (or more) Working Group and TAC meetings in Year 1 with regulators, LE agencies, and other experts to coordinate law enforcement and management for seabird protection in the Program Area.***

1. The BLM Seabird Protection Network Team (Point Sur to Point Mugu), Torch Trustee Council, Seabird Protection Network (Gulf of Farallones and USFWS), PRBO and others held an initial coordination working group meeting December



15-16, 2010. This meeting facilitated the information exchange between the network chapters, and provided a mechanism for seabird experts to provide feedback on the initial monitoring plan for the Point Sur to

Point Mugu region. Coordination for the working group meeting was made possible by a fund disbursement (\$10,000) from the NRDA Fund Manager to National Oceanic and Atmospheric Administration (NOAA) under resolution 10-3.

2. On March 28, 2011 the SPN Law Enforcement Group conducted an initial working group meeting with enforcement officials in San Luis Obispo.
3. On May 12, 2011 the SPN project was introduced to the Monterey Bay National Marine Sanctuary, Law Enforcement Technical Advisory Committee which will serve, in part, as the SPN working group.



4. On February 24, 2011 the BLM and San Luis Obispo County Sheriff approved a memorandum of understanding that will provide (among other things) additional opportunities for BLM Rangers to support state and local protection efforts along the San Luis Obispo County coast.



5. On April 1, 2011 the BLM and Santa Barbara County Sheriff approved a memorandum of understanding that will provide (among other things) additional opportunities for BLM

Rangers to support state and local protection efforts along the Santa Barbara County coast.

***Deliverable - Proposals from Network partners for seabird protection areas and additional regulations for seabird protection for designation by the Department of Fish and Game or another LE agency, based on disturbance monitoring collected by the Seabird and Disturbance Monitoring program and Network partners.***

1. Seabird and human disturbance monitoring is continuing within the project area under the approved Monitoring Plan. Based upon this monitoring, there has been some investigation/coordination of human disturbances by BLM Law Enforcement Rangers and California Department of Fish and Game wardens. Furthermore, transect studies conducted by monitoring crews is helping to delineate sections of coastline that are sensitive to human disturbance, or are currently being disturbed.

## Information and Outreach - Deliverables in Year 1

The BLM lead for this component of the project was initially Marcia deChadenedes of the California Coastal National Monument Office under the 2009 Statement of Work. These duties shifted to Cara O'Brien of California State Parks and Recreation once the BLM awarded a \$15,600 cooperative agreement to State Parks (September 2, 2010).

A listing of deliverables and the status of each item follows:

*Deliverable - Some limited interpretive materials and distribute them locally (e.g., at Santa Barbara County Ocean Beach for the Boardwalk Program) depending on timing. As appropriate, the Bureau will utilize information and outreach materials previously developed by other programs, such as the Network to produce.*

1. In April of 2011 the new website for the Seabird Protection Network from Point Sur to Point Mugu was launched - [www.blm.gov/ca/ccnm/spn](http://www.blm.gov/ca/ccnm/spn).
2. The Outreach/Education Team created the SPN brochure in June of 2011, and an interpretive panel and display panel for outreach. The interpretive panel will be installed in Hearst San Simeon State Park. Posters of the panel will be installed in display kiosks of partner agencies from Point Sur to Point Mugu over the next few months.
3. On June 30, 2011 the Outreach/Education Team led by Cara O'Brien interpreted the Seabird Protection Network in an interactive Seabird Olympics for 200 Girl Scouts from age 5 to 18 from San Luis Obispo County. Each Girl Scout received a "Seabird Protection Network Seabird Identification Guide" with tips for being seabird safe.



4. The Outreach/Education Team led by Cara O'Brien, attended the Coastal Discovery Fair on July 16, 2011 and educated hundreds of visitors (including numerous school-children) about seabird protection and the SPN program in the San Luis Obispo County area.

5. On June 6, 2011, the Outreach/Education Coordinator sent out the first E-Newsletter, entitled “From Point to Point” An Update of the Seabird Protection Network for Point Sur to Point Mugu giving updates on the networks progress to date.

***Deliverable - One or more Information and Outreach Working Group and TAC meetings in Year 1 to evaluate current efforts and brainstorm refinements and new efforts, adapting public feedback, and responding to data on performance measures.***

1. The BLM Seabird Protection Network Team (Point Sur to Point Mugu), Torch Trustee Council, Seabird Protection Network (Gulf of Farallones and USFWS), PRBO and others held an initial coordination working group meeting December 15-16, 2010. This meeting facilitated the information exchange between the network chapters, and provided a mechanism for seabird experts to provide feedback on the initial monitoring plan for the Point Sur to Point Mugu region. Coordination for the working group meeting was made possible by a fund disbursement (\$10,000) from the NRDA Fund Manager to National Oceanic and Atmospheric Administration (NOAA) under resolution 10-3.



2. On April 15, 2011 the Outreach Working Group held a technical advisory committee (TAC) meeting in Monterey led by Cara O'Brien. The TAC brainstormed outreach ideas, and worked on the SPN brochure. The Outreach Working Group has been communicating by email to review all print materials and to provide feedback and suggestions to the Outreach/Education Team.

## **APPENDIX A**

### **WORKING GROUP MEMBERS**

#### ***Biological and Human Disturbance Monitoring Working Group***

**Co-Lead** - Mike Westphal PhD, BLM Hollister Field Office, Wildlife Biologist

**Co-Lead** - Dan Robinette, MSc, Senior Biologist / Coastal Program Leader PRBO  
Conservation Science Vandenberg Field Station

Gerry McChesney - Manager, Farallon National Wildlife Refuge and Common Murre  
Restoration Project

Phil Capitolo – Seabird Biologist, U.C. Santa Cruz

Laird Henkle – Seabird Biologist, California Department of Fish and Game, OSPR

Julie Howard – GIS Specialist, PRBO Conservation Science Vandenberg Field Station

Sara Acosta - Biologist, PRBO Conservation Science Vandenberg Field Station

#### ***Outreach and Education Working Group***

**Lead** - Cara O'Brien, State Park Interpreter II, California State Parks, Seabird Protection  
Network – Pt. Sur to Pt. Mugu Outreach/Education Coordinator

Marcia deChadenèdes, Outreach & Partnership Coordinator, California Coastal National  
Monument

Carolyn Skinder, Outreach/Education Specialist, Monterey Bay National Marine  
Sanctuary

Sara Skinner, Interpretive Training Specialist, William Penn Mott Jr. Training Center,  
California State Parks

Sage Tezak, Gulf of Farallones National Marine Sanctuary, Pt. Reyes to Pt. Sur Seabird  
Protection Network Outreach Specialist



Mai Maheigan, Gulf of Farallones National Marine Sanctuary, Pt. Reyes to Pt. Sur  
Seabird Protection Network Outreach Specialist

Melissa Pitkin, PRBO Conservation Science, Education and Outreach Director

Julie Bursek, Channel Islands National Marine Sanctuary, Team Leader of Education and  
Outreach

Laura Francis, Channel Islands National Marine Sanctuary, Education Coordinator

Andrew Breaux, Bureau of Land Management – Hollister Field Office, Partnership  
Outreach Planning Coordinator, SPN Webmaster

Joshua Hammari, Bureau of Land Management – Interpretive Lead, California

### ***Coordinated Law Enforcement Working Group***

#### **Bureau of Land Management**

**Co-Lead** - BFO Ranger, Kelly Cole – (661)391-6089

[kccole@blm.gov](mailto:kccole@blm.gov)

**Co-Lead** - HFO Range, Peter Fonken – (831)394-8314

[pfonken@blm.gov](mailto:pfonken@blm.gov)

#### **Cal Fish & Game:**

*San Luis Obispo County:*

Lt Todd Tognazzini –(805) 238-4236

[ttognazzini@dfg.ca.gov](mailto:ttognazzini@dfg.ca.gov)

Lt Mark Crossland (Patrol Boat Bluefin – Morro Bay)

[mcrossland@dfg.ca.gov](mailto:mcrossland@dfg.ca.gov)

*Santa Barbara County:*

Lt Jim Solis- (805) 861-8174

[jsolis@dfg.ca.gov](mailto:jsolis@dfg.ca.gov)

*Ventura County:*

Lt Cindy Wood

[cwood@dfg.ca.gov](mailto:cwood@dfg.ca.gov)

Lt Wes Boyle (Patrol Boat Swordfish – Ventura)  
[wboyle@dfg.ca.gov](mailto:wboyle@dfg.ca.gov)

*Los Alamitos Regional Office:*

Lt Specialist George Struble  
[gstruble@dfg.ca.gov](mailto:gstruble@dfg.ca.gov)

Lt Specialist Rebecca Hartman  
[rhartman@dfg.ca.gov](mailto:rhartman@dfg.ca.gov)

**National Park Service – Channel Island National Park (Ventura and Santa Barbara Counties)**

Chief Ranger Dave Ashe  
[david\\_ashe@nps.gov](mailto:david_ashe@nps.gov)

Marine Patrol Supervising Ranger Mike Morales  
[mike\\_morales@nps.gov](mailto:mike_morales@nps.gov)

**US Fish & Wildlife – Criminal Investigations (Torrance Office, covers north through SLO county)**

Special Agent Mona Iannelli  
[Mona\\_Iannelli@fws.gov](mailto:Mona_Iannelli@fws.gov)

**National Oceanic and Atmospheric Administration (NOAA)**

Special Agent , Bill Struble  
(805) 739-5317

**Vandenberg Air Force Base**

Wayne Moses, Conservation Law Enforcement  
30 SFS/S3W  
108 Colorado Ave  
B13675  
Vandenberg AFB, Ca 93437-6300  
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## APPENDIX B

### BLM EXPENDITURES

Bureau of Land Management Expenditure Report for Phase One of the Torch Project  
Seabird Protection Network – Point Sur to Point Mugu

| LINE ITEM                   | 2010                | 2010 NOTES                           | 2011                | 2011 NOTES                             | 2012              | TOTAL               |
|-----------------------------|---------------------|--------------------------------------|---------------------|--|-------------------|---------------------|
| BLM LABOR                   | \$8,318.20          |                                      | \$57,024.82         |  | \$5,591.99        | \$70,935.01         |
| BLM BENEFITS                | \$2,675.31          |                                      | \$19,272.41         |  | \$791.53          | \$22,739.25         |
| SUPPLIES/MATERIALS          | \$0.00              |                                      | \$2,049.40          | > SPN Table Top Display Materials      | \$0.00            | \$2,049.40          |
|                             |                     |                                      |                     | > PRBO Assessment Report (\$1,998.38)  |                   |                     |
| TRAVEL                      | \$0.00              |                                      | \$1,229.33          | > Cambria Pines Coordination Meeting   | \$0.00            | \$1,229.33          |
| GRANTS                      | \$15,600.00         | > AA to State Parks Outreach Program | \$122,000.00        | > AA to PRBO, Monitoring Program       | \$0.00            | \$137,600.00        |
| CONTRACTS                   | \$141,562.00        | > IGO to USFWS Aerial Photo Analysis | \$904.12            | > Payment PRBO Monitoring Plan Prep    | \$0.00            | \$142,466.12        |
|                             |                     |                                      |                     | > Payment for Seabird Artwork          |                   |                     |
| PRINTING                    | \$0.00              |                                      | \$981.19            | > SPN Network Brochures                | \$0.00            | \$981.19            |
|                             |                     |                                      |                     | > SPN Table Top Banner                 |                   |                     |
| RENT/UTILITIES              | \$0.00              |                                      | \$200.00            | > Cambria Pines Conference Room Rental | \$0.00            | \$200.00            |
| EQUIPMENT                   | \$0.00              |                                      | \$821.70            | > Digital Cameras For LE Rangers       | \$0.00            | \$821.70            |
| <b>TOTALS</b>               | <b>\$168,155.51</b> |                                      | <b>\$203,661.27</b> |  | <b>\$6,383.52</b> | <b>\$379,022.00</b> |
|                             |                     |                                      |                     |  |                   |                     |
| <b>TORCH DEPOSIT TO BLM</b> | <b>\$379,022.00</b> |                                      |                     |  |                   |                     |
| <b>SPENT TO DATE</b>        | <b>\$379,022.00</b> |                                      |                     |  |                   |                     |
| <b>BALANCE</b>              | <b>\$0.00</b>       |                                      |                     |  |                   |                     |

## APPENDIX C

### STATE PARK EXPENDITURES

#### Torch Seabird Protection Network

#### PCA Tracking For Year 1 Outreach/Education

| Month                         | Year | Hours                   | Hourly Rate              |
|-------------------------------|------|-------------------------|--------------------------|
| October                       | 2010 | 22                      |                          |
| November                      | 2010 | 32                      |                          |
| December                      | 2010 | 42                      |                          |
| January                       | 2011 | 28                      |                          |
| February                      | 2011 | 24                      |                          |
| March                         | 2011 | 40                      |                          |
| April                         | 2011 | 24                      |                          |
| May                           | 2011 | 41                      |                          |
| June                          | 2011 | 49                      |                          |
| July                          | 2011 | 30                      |                          |
| August                        | 2011 | 20                      |                          |
| September                     | 2011 | 21                      |                          |
| October                       | 2011 | 10                      |                          |
| November                      | 2011 | 10                      |                          |
| December                      | 2011 | 7                       |                          |
| January                       | 2012 | 22                      |                          |
| February                      | 2012 | 12.5                    |                          |
| March                         | 2012 | 0                       |                          |
| April                         | 2012 | 16                      | 3.5 hours charged to CSP |
| May                           | 2012 | 21                      | 21 hours charge to CSP   |
| June                          | 2012 | 23                      | 23 hours charged to CSP  |
|                               |      | 494.5                   | \$33.49                  |
| Total Hourly Expenditure      |      |                         | \$16,560.81              |
| Software Purchase             |      |                         | 665.00                   |
| Total Expenses for Year One   |      |                         | \$17,225.81              |
|                               |      |                         |                          |
| Cara's Effective Hourly Rate  |      | \$25.76 + 30% = \$33.49 |                          |
| Total Allocation for Year One |      |                         | \$15,600                 |



## APPENDIX D

### PRBO EXPENDITURES

#### Year 1 Costs of Seabird Monitoring for the Point Sur to Point Mugu Chapter of the Seabird Protection Network

##### *PRBO Conservation Science*

|   | Hours   | Bill<br>Rate | Cost       |
|---|---------|--------------|------------|
| <i>Protocol Development</i>                         |         |              |            |
| Howar   | 26      | 46.41        | 1,206.66   |
| Robinette   | 50      | 57.49        | 2,874.50   |
| Jahncke   | 10      | 76.93        | 769.30     |
| <i>Data Collection and Entry</i>                    |         |              |            |
| Bishop  | 693     | 28.23        | 19,563.39  |
| Kauffman  | 693     | 28.23        | 19,563.39  |
| Pereverziev   | Stipend |              | 7,279.88   |
| Robinette   | 216     | 57.49        | 12,417.84  |
| <i>Field Coordination and Data Management</i>       |         |              |            |
| Howar   | 313     | 46.41        | 14,526.33  |
| Robinette   | 119     | 57.49        | 6,841.31   |
| Jahncke   | 23      | 76.93        | 1,769.39   |
| <i>Data Summaries and Report Writing</i>            |         |              |            |
| Acosta  | 48      | 37.74        | 1,811.52   |
| Ball  | 66      | 42.29        | 2,791.14   |
| Howar   | 138     | 46.41        | 6,404.58   |
| Robinette   | 148     | 57.49        | 8,508.52   |
| Jahncke   | 10      | 76.93        | 769.30     |
| <i>Coordination with SPN Chapter</i>                |         |              |            |
| Robinette   | 40      | 57.49        | 2,299.60   |
| <i>Total Labor</i>                                  |         |              | 109,396.75 |
| <i>Equipment and Supplies</i>                       |         |              | 2,000.61   |
| <i>Meeting Travel</i>                               |         |              | 1,844.21   |
| <i>Field Travel</i>                                 |         |              | 3,460.23   |
| <i>Indirects on Equipment, Supplies, and Travel</i> |         |              | 2,447.20   |
| <i>Total Expenses</i>                               |         |              | 119,149.00 |