WILDLIFE RESPONSE PLAN
FOR OIL SPILLS IN CALIFORNIA

California Department of Fish and Wildlife
Office of Spill Prevention and Response

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WILDLIFE RESPONSE PLAN FOR CALIFORNIA

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ACRONYMS USED IN THE OILED WILDLIFE RESPONSE PLAN

ACP	Area Contingency Plan
ART	Applied Response Technology
ATV	All-Terrain Vehicle
BLM	Bureau of Land Management
CalOES	California Office of Emergency Services
CWHR	California Wildlife Habitat Relationship System
DFW	Department of Fish and Wildlife
DPR	Department of Parks and Recreation
DWR	Department of Water Resources
EPA	U. S. Environmental Protection Agency
ESI	Environmental Sensitivity Index
FESA	Federal Endangered Species Act
FOSC	Federal On-Scene Coordinator
GIS	Geographic Information System
GPS	Global Positioning System
IAP	Incident Action Plan
ICS	Incident Command System
ISB	In-situ Burning
MMSN	Marine Mammal Stranding Network
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NPS	National Park Service
OPA-90	Oil Pollution Act of 1990
OSPR	Office of Spill Prevention and Response
OSPRA	Lempert-Keene-Seastrand Oil Spill Prevention and Response Act
OWCN	Oiled Wildlife Care Network
PIO	Public Information Officer
PT. BLUE	Point Blue Conservation Science
RCP	Regional Contingency Plan
RP	Responsible Party
SCAT	Shoreline Cleanup Assessment Team
SSO	Site Safety Officer
SLC	State Lands Commission
SOSC	State On-scene Coordinator
SWRCB	California State Water Resources Control Board
USCG	U. S. Coast Guard
UC	Unified Command
USFS	U. S. Forest Service
USFWS	U. S. Fish and Wildlife Service
WBD	Wildlife Branch Director

WILDLIFE RESPONSE PLAN FOR CALIFORNIA

1. PREFACE

Wildlife are put at risk or injured when oil is spilled into the marine or terrestrial environment. Both Federal and State statutes mandate protection, rescue, and rehabilitation of oiled wildlife.

In response to the Federal Oil Pollution Act of 1990 (OPA 90), the National Oil and Hazardous Substances Pollution Contingency Plan ("National Contingency Plan" or NCP) update of 1994 stipulates that Area Contingency Plans (ACPs) contain a Fish and Wildlife and Sensitive Environments Plan "in order to provide for coordinated, immediate and effective protection, rescue, and rehabilitation of, and minimization of risk of injury to, fish and wildlife resources and habitat."

Similarly, the State of California's Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA) requires:

- Development of contingency plans for the protection of fish and wildlife;
- Establishment and funding of a network of rescue and rehabilitation facilities for seabirds, sea otters, and other marine wildlife;
- Assessment of injuries to natural resources from a spill; and
- Development of restoration plans to compensate for adversely affected wildlife resources and habitats.

In 2014, Governor Edmund G. Brown, Jr. signed Senate Bill 861 expanding California's oil spill prevention and response program to cover all surface waters of the state at risk of oil spills from any source, including pipelines, production facilities, and shipments of oil transported by railroads. As a result, the capacity to conduct rescue and rehabilitation of terrestrial and freshwater species has been expanded.

To address the statutory mandates and newer legislative authority established by SB 861, this Wildlife Response Plan for Oil Spills in California (Plan) has been developed by a group of Federal and State agencies and other interested parties. The Plan is a joint document of the U.S. Coast Guard (USCG) and the California Department of Fish and Wildlife, Office of Spill Prevention and Response (OSPR), and is part of the Regional Contingency Plan (RCP) for Federal EPA Region IX (California, Nevada, and Arizona), although it is also designed to function as a stand-alone document.

The Wildlife Branch is in the Operations Section of the Unified Command (UC) for oil spill response. The Plan details the Wildlife Branch's purposes, goals, objectives, responsibilities, and structure. As is always true, the structure may be expanded or contracted to fit the need, but the mission remains unchanged.

In California, the principal objectives of the Wildlife Branch during a spill response are to:

- Provide best achievable protection to wildlife and habitats from contamination;
- Minimize injuries to wildlife and habitats from the contamination;
- Minimize injuries to wildlife from the cleanup;
- Provide best achievable capture and care for injured wildlife;
- Document adverse effects that result from the spill and cleanup; and
- Prevent injuries to responders and the public.

While the Plan was originally designed to cover oil spills in marine waters as required by Federal and State law, this 2016 revision includes response to inland oil and non-oil spills as well. The organizational structure, roles, and responsibilities remain the same, although some functions may be altered, as appropriate. Binding Federal and State law governing the activation and mandate of wildlife response elements may differ.

1.1. History and Future Updates to the Wildlife Response Plan

The Plan was first drafted and adopted in 1999 as the statewide plan for wildlife response (prior to this, each ACP had its own similar wildlife response element). In a 2005 revision, the Plan was modified and expanded to ensure that the statutory requirements of best achievable treatment, protection, and restoration of wildlife are met. A 2011 revision clarified the organizational structure, and modified and detailed the required duties of the different positions within the Wildlife Branch. Additionally, the 2011 revision condensed the Plan, and most of the appendices that were in the 2005 version were removed and placed in what is now the OSPR Wildlife Response Handbook (an internal agency resource). This 2016 revision includes an update to the Wildlife Branch's organizational structure introducing a Field Stabilization Group and its duties, and removing the role of Transportation from the Recovery and Transportation Group and placing it under both the Recovery and Field Stabilization Groups. This 2016 update also includes language and additional appendices for terrestrial and freshwater animals to address OSPR's expansion to cover all state surface waters at risk of oil spills from any source.

The Plan was originally developed jointly by a working group of government agencies and interested parties. The Working Group included personnel from: OSPR, USCG, U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), CA Department of Parks and Recreation (DPR), National Park Service (NPS), the CA Coastal Commission, the UC Davis Wildlife Health Center, and industry. The Plan has been developed to meet the National Contingency Plan's Fish and Wildlife and Sensitive Environments Plan requirements set forth in 40 CFR Part 300, Sections 300.210(c)(4), and to be used throughout CA (the only coastal portion of Federal Region IX). This plan will be updated and/or revised if policy changes occur or if new protocols are developed. In addition, lessons learned from spills will be taken into account. This document should be considered a "living document" that is updated periodically. At a minimum, the Plan will be thoroughly reviewed every three years to assess the need for revision, and should be reviewed any time that the Region IX RCP is updated.

2. INTRODUCTION

When oil spills occur in California, the ICS (Incident Command System) is used as the organizational structure to coordinate response actions. The actual response organization grows to fit the level of response necessary for a specific incident. For that reason, when a specific ICS position is discussed in the Plan, readers should realize positions and duties may not be needed or may be combined. Readers new to the ICS should keep in mind that various people may fill any given ICS position, and normal day-to-day job titles do not relate to ICS position titles. If a suggested ICS position is not filled, the responsibility for the unfilled position's duties falls to the next higher ICS position. Those tasks will be performed unless they don't apply to the particular response.

The ICS organizational structure in an oil spill response typically includes the Unified Command (UC) and the Operations, Planning, Logistics and Finance Sections. In California, response actions concerning the protection, identification, rescue, processing and rehabilitation of oiled wildlife or at-risk-wildlife are performed by the Wildlife Branch, a branch in the Operations Section within the ICS (Figure 1). This Plan describes the responsibilities and capabilities of the Wildlife Branch within an ICS (under the UC) during an oil spill. The Plan describes procedures to be used, along with personnel and equipment needed, to meet wildlife protection responsibilities of Federal and State governments during a spill.

Primary responsibility for oiled wildlife protection, rescue, and rehabilitation will most likely be handled by OSPR because it has legal mandates as the lead state trustee agency for fish, wildlife and their habitats (Fish and Game Code Sections 1802 and 711.7) as well as specialized expertise with California's wildlife. Also, under OSPRA, OSPR has the mandate and the capacity to mobilize its wildlife response resources immediately, if necessary, to provide the best achievable protection for the state's wildlife in the event of a marine oil spill, in accordance with the State Contingency Plan and the ACP (Government Code §§ 8574.7, 8670.3(c) (1), 8670.5, and 8670.7(b)). Barring any unusual circumstances, an OSPR employee usually assumes the role of Wildlife Branch Director (WBD). Therefore, when a spill occurs, it is imperative to notify OSPR in a timely manner, because the best time to prevent or minimize adverse effects upon wildlife is during the earliest stages of the spill response.

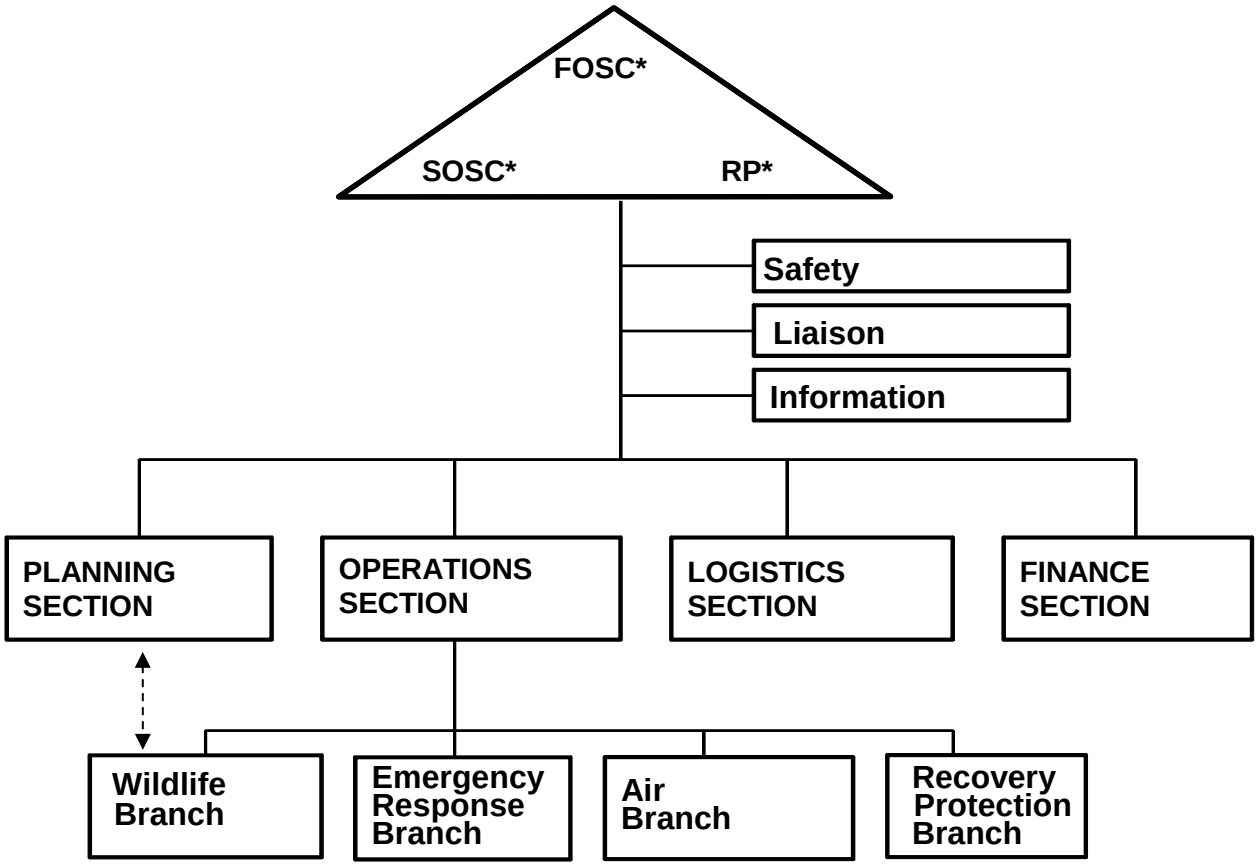
Although the Wildlife Branch is integrated into the UC, it is self-directed in many ways and largely self-contained with regard to wildlife response resources (both staff and equipment). The Wildlife Branch gathers much of its own spill information through wildlife reconnaissance, staffs its own Branch with pre-trained experts (e.g., biologists, veterinarians, rehabilitation staff, processing staff, capture experts, volunteers), and typically prepares its own sections of the Incident Action Plan for the Planning Section.

Although the Wildlife Branch is self-directed and self-contained in many ways, coordination between the Wildlife Branch and other Sections within the UC is critical. The Wildlife Branch

provides the Planning Section and Situation Unit with potential and known wildlife concerns, wildlife reconnaissance data, and wildlife recovery locations. The Planning and Operations Sections use this information to aid in strategic assessment and for planning response strategies. The Planning Section should use this information to evaluate different response countermeasures and strategies (including "no action") in order to reduce or prevent adverse effects to wildlife and wildlife habitat from response actions.

Through the Situation and Environmental Units in the Planning Section, the WBD also must provide the UC with updated wildlife statistics during the response. This information is also frequently relayed to the Joint Information Center (JIC) to be used in press releases. The WBD needs information from the other Sections as well. For example, the Resources-at-Risk Specialist in Planning (Environmental Unit) can provide information about sensitive species and habitats, maps of sensitive areas, and sensitive cultural resource location information for use when planning Wildlife Branch response operations.

Figure 1. Wildlife Branch position in the UC/ICS Organization. Typically the UC is comprised of a representative from the federal government (USCG or USEPA), state government (OSPR) and the responsible party (RP). Local governments may also be represented in the UC. The Wildlife Branch interacts closely with the Environmental and Situation Units within the Planning Section.



* Acronyms: FOSC = Federal On-Scene Coordinator, SOSC = State On-Scene Coordinator, RP = Responsible Party

3. STATUTORY BASIS FOR WILDLIFE BRANCH OPERATIONS

3.1 Federal and State Law Mandates

The Federal Oil Pollution Act of 1990 (OPA-90) requires that a Fish and Wildlife and Sensitive Environment Plan be developed for the National Contingency Plan, in consultation with the USFWS, NOAA, and other interested parties, including state fish and wildlife agencies (33 U.S.C. § 1321(d)(2)(M)). The NCP (the National Oil and Hazardous Substances Pollution Contingency Plan, updated in 1994), calls for Fish and Wildlife and Sensitive Environments Plans to be included in ACPs "in order to provide for coordinated, immediate and effective protection, rescue, rehabilitation of, and minimization of risk of injury to fish and wildlife resources and habitat." In 40 CFR Part 300, Section 300.210(c)(4), the requirements for this plan are set forth as an annex to Regional or Area Contingency Plans. The Plan has been written in conjunction with other sections of the RCP to address these Federal requirements.

In most respects, the fish and wildlife provisions of California's OSPRA (Government Code §§ 8574.7, 8670.37.5) parallel the OPA-90 provisions for fish and wildlife protection during spill responses. Under OSPRA, OSPR's Administrator has several duties regarding living natural resources. The OSPR Administrator must:

- Develop contingency plans for the protection of fish and wildlife;
- Assess injuries to natural resources;
- Establish rescue and rehabilitation stations for oiled wildlife;
- Require restoration plans for wildlife resources including habitat following spills.

The OSPRA and subsequent legislation provides for the establishment and funding of the Oiled Wildlife Care Network (OWCN; Government Code § 8670.37.5) as an essential component of California's wildlife response capability. Facilities within the OWCN "shall be established and maintained in a state of preparedness to provide the best achievable treatment for marine mammals and birds affected by an oil spill in marine waters." Both the recovery and care roles for oiled wildlife are typically conducted and managed by the OWCN, which is administered by the UC Davis Wildlife Health Center. In addition, the OSPR Administrator has a statutory mandate to "ensure that, as part of the response to any significant spill, biologists or other personnel are present and provide any support and funding necessary and appropriate for the assessment of damages to natural resources and for the collection of data and other evidence that may help in determining and recovering damages." (Government Code Section 8670.7 (h)(1)). This Plan does not specifically address Natural Resource Damage Assessment.

In 2014, SB 861 provided OSPR with regulatory authority and funding to expand the existing marine program to include all surface waters of the state at risk of oil spills from any source. As a result, OSPR and the OWCN are developing the capacity to conduct recovery and rehabilitation of terrestrial and freshwater species occurring inland.

3.2 Natural Resource Trustees for Wildlife

Pursuant to Fish and Game Code Sections 1802 and 711.7, Department of Fish and Wildlife is the lead state trustee agency for fish, wildlife, and their habitats. Other state trustee agencies that may participate in Wildlife Branch decisions and response activities are:

- Department of Parks and Recreation;
- State Lands Commission (tide lands);
- Department of Water Resources;
- State Water Resources Control Board; and
- Regents of the University of California (on university lands).

Pursuant to OPA-90 and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Governor has delegated State trustee authority to the Director of the California Environmental Protection Agency and the Secretary of the Resources Agency for resources within their purview.

Federal trustee agencies that are most likely to participate in Wildlife Branch decisions and response activities are as follows:

- Department of the Interior
  - National Park Service
  - U.S. Fish and Wildlife Service
  - Bureau of Land Management
  - Bureau of Indian Affairs
  - Bureau of Ocean Energy Management
- Department of Commerce
  - National Oceanic and Atmospheric Administration
    - National Ocean Service
      - Office of National Marine Sanctuaries
      - Office of Response and Restoration
    - National Marine Fisheries Service
- Department of Defense
- Department of Agriculture
  - U.S. Forest Service

The USCG and the US Environmental Protection Agency are not trustee agencies for natural resources, but are the lead Federal agencies during spill response (in marine and inland waters, respectively), thus they participate fully in Wildlife Branch decisions as parts of the UC.

In any spill, the responsible party or discharger is responsible to Federal and State resource trustees, to federally recognized American Indian tribes, and to foreign trustees, all of whom are

empowered to enforce remediation and seek compensation for injuries to natural resources which have been caused by a discharge (40 CFR Part 300, Subpart G, and California Govt. Code Section 8670.1 et seq. and Fish and Game Code Sections 2014 and 12016). Indian Tribes retain sovereign authority to manage wildlife resource issues within reservation boundaries. Consultation and coordination (typically through the UC Liaison Officer) is necessary with Tribal governments whose lands may be impacted by an oil spill. Regardless of whether an oil spill occurs directly on Tribal lands or moves onto or through Tribal lands, coordination is required to develop appropriate wildlife response strategies to address Tribal concerns.

Trustee agencies influence the response methods used so that Wildlife Branch operations comply with each trustee's governing laws and their obligations to preserve and protect wildlife and habitat. During a spill response, the wildlife trustee agencies will advise the WBD about local wildlife resources, especially sensitive species or habitats, logistical consideration, and other issues that arise.

Within waters of the State (typically including waters within 3 nautical miles of California's coastline and off-shore islands, OSPR will respond and lead Wildlife Branch operations. In addition, OSPR may respond to spills outside State waters if the spill threatens State waters, if the spill threatens wildlife under the trusteeship of the State, if the potential responsible party is a State-regulated entity, or if OSPR is requested to assist by the USCG, USFWS, or National Marine Fisheries Service (NMFS).

3.3 Interagency Agreements Regarding Joint Response Activities

In an effort to provide a more efficient and coordinated response, principal Federal and State fish and wildlife trustees have signed cooperative agreements clarifying response roles for spills of oil and other toxic substances. Most of these agreements can be found on the OSPR website at: www.dfg.ca.gov/ospr/wild-response.aspx and others can be found on the Regional Response Team Region IX website (www.rrt9.org) and the Pacific States-British Columbia Oil Spill Task Force website (www.oilspilltaskforce.org). Following is a synopsis of the agreements.

The "Memorandum of Understanding Designating California Department of Fish and Game as Primary Contact for Fish and Wildlife Issues in the Event of Oil or Toxic Substances Spill within the State of California" (1988) acknowledges that USFWS and DFG (now DFW) share trustee responsibilities for endangered species, migratory birds and migratory fishes. This document directs DFW to designate a primary contact person for support of the UC regarding fish and wildlife issues in California during oil spill response. The stated duties of this person are to:

- Advise on and coordinate activities related to fish and wildlife problems and issues related to the spill;
- Advise and direct efforts to minimize injury to wildlife;
- coordinate efforts to recover and care for oiled wildlife;

- Immediately contact USFWS and maintain communication with USFWS (see Appendix I(a) for contact information); and
- Adhere to conditions of federal and State wildlife permits.

These duties correlate directly with the responsibilities of the WBD.

The DFW entered into a similar agreement ("Memorandum of Agreement Between the California Department of Fish and Game Office of Oil Spill Prevention and Response and the National Marine Fisheries Service Southwest Region Regarding the California Marine Mammal Stranding Network and the Oiled Wildlife Care Network" 1997) to govern the rescue and rehabilitation of pinnipeds (seals and sea lions), cetacea (dolphins and whales), and sea turtles. This MOA gives specific instructions for coordinating with NMFS about dead and live marine mammal recovery or capture, rescue attempts, transportation, rehabilitation, and Marine Mammal and Sea Turtle Stranding Reports.

The primary purposes of the agreement with NMFS are: (a) to ensure that pinnipeds, cetaceans, and sea turtles affected by oil spills in marine waters of the State receive the best achievable treatment; and (b) to ensure the collection of sound biological and chemical data on such affected resources. The agreement ensures consistency with NMFS guidelines and protocols on the rescue and release of live, stranded pinnipeds, cetaceans, and sea turtles and incorporates them into the OWCN protocols for response, rescue, rehabilitation medical treatment, and eventual release of these animals, as outlined in the NMFS/OSPR Contingency Plan (Attachment A of the MOA). Other conditions include:

- The use of rehabilitation facilities that are members of both the California Marine Mammal Stranding Network and the OWCN, to the extent possible;
- Cooperative information and data exchange programs; and
- The collaborative development of training materials.

The Bureau of Land Management (BLM) and the State of California signed a Memorandum of Understanding (2000) that pertains to collaborative management of the California Coastal National Monument (islands, rocks, exposed reefs and pinnacles above mean high tide within 12 nautical miles from shore). Under this MOU, the State conducts day-to-day management of the Monument (including protection of nesting birds), but the BLM has ultimate legal responsibility for the area.

In addition, Memoranda of Agreement between the Minerals Management Service (now the Bureau of Ocean and Energy Management) and OSPR (1995) and between the USCG and OSPR (1993) call for cooperation of these agencies with regards to information sharing, and spill preparedness, prevention, and response. For response, all parties agree to mutual notification and to reliance on the UC for approval of response actions.

Because oil spills can cross state and national borders, agreements pertaining to California have been entered into with all the western states, British Columbia and Mexico. The states of Alaska, California, Hawaii, Oregon, and Washington, and the Province of British Columbia entered into a Memorandum of Cooperation in June 2001 (i.e., Pacific States/British Columbia Oil Spill Task Force). This Memorandum was developed to ensure effective coordination and resource sharing between the states and British Columbia in the event of a spill. International cooperation during spill responses is also enabled by the MEXUSPAC, an accord signed by the United States and Mexico. This accord also includes information needed for spill responders to cross the international border.

3.4 Compliance with Federal and State Wildlife Regulations

There are three Federal laws (discussed below) for the protection of wildlife relevant to spill response: the Migratory Bird Treaty Act, the Marine Mammal Protection Act, and the Endangered Species Act. In addition, the Bald Eagle Protection Act protects Bald Eagles and Golden Eagles.

The WBD will ensure that activities of the Wildlife Branch are in compliance with Federal laws, including implementation of all measures outlined in MOUs/MOAs and other agreements. In addition, the WBD will assist the Environmental Unit of the Planning Section to help ensure that laws and agreements pertaining to wildlife are complied with during other aspects of spill response.

3.4.1 Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (MBTA) prohibits anyone without a permit from pursuing, hunting, killing, possessing, or transporting (or attempting to do any of these things) most native birds in the United States. The MBTA applies to live and dead birds, and active nests (nests with eggs or chicks). The trustee agency overseeing the MBTA is the USFWS.

The OWCN, as well as key OWCN rehabilitation partners, holds a Migratory Bird Rehabilitation Permit as well as a Scientific Collecting permit that allows for personnel (including volunteers) working under OWCN to collect birds during oil spills. This includes dead birds and live oiled birds, as well as live un-oiled birds that may be captured "for the purpose of removing them from imminent danger." No federal permit is required for non-lethal deterrence (hazing) of migratory birds. Birds captured or collected must be reported to the USFWS (typically through notification to the Situation Unit and UC within the ICS structure), and any birds listed under the Federal Endangered Species Act must be reported within 24 hours. Disturbance related to spill response activities that would result in loss or abandonment of nests is not covered under the Migratory Bird Rehabilitation Permit; such disturbance should be avoided.

3.4.2 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) prohibits the take of marine mammals (including pinnipeds, cetaceans, and sea otters); "take" is defined under the MMPA as "to harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect." Under Section 109(h) of the MMPA, Federal, State and local government officials, or designees of the relevant Secretaries of the Departments of the Interior and Commerce, may take marine mammals during the course of official response duties if such taking is for the protection or welfare of the mammal, the protection of public health and welfare, or the non-lethal removal of nuisance animals. Other exemptions to the take prohibition that are relevant to oil spill response include activities conducted under a permit or agreement issued by NMFS or USFWS.

The DFW has a Memorandum of Agreement with NMFS regarding the California Marine Mammal Stranding Network (which is part of the National Marine Mammal Health and Stranding Response Program), as described above. Under this agreement, NMFS recognizes that the OSPR and the OWCN will participate in oiled wildlife response in California, with a mutual flow of information with NMFS via the California Marine Mammal Stranding Coordinator. The OWCN uses trained members and approved Stranding Agreement holders of California's Marine Mammal Stranding Network for collection and rehabilitation of marine mammals. The MOA contains specific instructions for coordinating with NMFS regarding dead and live mammal sightings and/or capture and provides directives for submitting Marine Mammal Stranding Reports. This agreement also includes sea turtles, which are not protected under the MMPA but which are managed by NMFS if found in ankle-deep water or deeper. Sea otters are not addressed in this agreement, as they are managed by the USFWS; response for sea otters is addressed separately in the Sea Otter Contingency Plan (Appendix II), which calls for close cooperation between DFW and USFWS.

The MMPA and the MOA between NMFS and the CDFW do not allow for disturbance or take of marine mammals or sea turtles incidental to aspects of spill response other than wildlife recovery. Permit 932-1905/MA-009526, issued jointly by the NMFS and USFWS to the Marine Mammal Health and Stranding Response Program allows members of the Marine Mammal Stranding Network to incidentally take marine mammals during emergency response; this permit specifically allows "close approach" to marine mammals, and "hazing away from harmful situations." Other incidental disturbance during spill response may be covered under the MMPA, allowing take by government agency employees or designees, or would be addressed through a consultation with NMFS during the spill response.

3.4.3 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) prohibits take of species listed as Threatened or Endangered under the Act. "Take" under the FESA is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The

USFWS oversees permitting authorization issues for the allowed take of listed terrestrial species, non-marine fish, birds, and sea otters; NMFS oversees permitting authorization of the allowable take of other marine mammals, sea turtles (in water), and marine and anadromous fishes.

In 2001, the USFWS and other Federal agencies signed an MOU regarding oil spill planning and response activities related to the FESA. This MOU recognized that oil spill response is a Federal action, and thus is subject to Section 7 of the FESA, which involves inter-agency consultations regarding Threatened and Endangered Species. The MOU includes guidelines for pre-spill planning (including protocols for listed species, as included in this Plan) and guidelines for emergency Section 7 consultations during and after spill response. As discussed above, the "Memorandum of Understanding Designating California Department of Fish and Game as Primary Contact for Fish and Wildlife Issues in the Event of Oil or Toxic Substances Spill within the State of California" acknowledges that USFWS and DFW share trustee responsibilities for endangered species in California. For more information on the consultation process, see RCP 2014 Section 4300, Endangered Species Act Consultation.

In California, the OWCN's Migratory Bird Rehabilitation Permit authorizes recovery, temporary possession, transport, and rehabilitation of oiled Threatened and Endangered bird species. In addition, 50 CFR 17.21 and 17.31 allow any employee or agent of the DFW to take listed species if such action is necessary to aid a sick, injured, or orphaned specimen (among other things). Additionally, in regulations issued under the FESA Section 4(d) for Threatened species including green sturgeon and several DPS of anadromous fish, take in an emergency situation may be allowed (see 65 FR 42422 and 75 FR 30714). To aid in minimizing potential impacts to Threatened and Endangered species that could be encountered during spill response, special protocols have been established for key species, such as Snowy Plovers (Appendix II).

Sea otters, managed by the USFWS, are covered under this agreement, and are also addressed separately in the Sea Otter Contingency Plan (Appendix II). The agreement between DFW and NMFS for other marine mammals and sea turtles does not include explicit coverage for species listed under the FESA. For issues related to take of listed pinnipeds, cetaceans, or sea turtles, the WBD should confirm that the Environmental Unit Leader (EUL) is working with the California Marine Mammal Stranding Coordinator and/or other NMFS personnel to facilitate a FESA Section 7 Emergency Consultation.

The FESA does not specifically authorize deterrence and preemptive capture of endangered species during oil spill response (although as noted previously, members of the California Marine Mammal Stranding Network may "haze" marine mammals, including species listed under the FESA). The Wildlife Branch, in consultation with the appropriate trustee agencies, will develop response strategies, if appropriate, for deterrence and preemptive capture of listed species for a specific spill incident. Take of listed species resulting from approved response actions will be deemed incidental to the primary action of the spill response and will be covered by the FESA Section 7 Emergency Consultation process, unless otherwise authorized by a permit.

3.4.4 State of California Wildlife Regulations

The California Endangered Species Act prohibits "take" of species listed as Endangered or Threatened by the State, or candidate species for listing. "Take" is defined by the State as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." However, "possession or take of Endangered, Threatened, or candidate species by employees and agents of the Department for scientific, educational and management purposes, and for law enforcement purposes, is not prohibited" (14 CCR § 783.1) and furthermore, California Fish and Game Code 1001 provides broad authority for the Department to take any plant or animal life for a variety of reasons, including "prevention or relief of suffering"; thus response activities for these species under the auspices of DFW are permitted.

Native wildlife in California are also protected under a variety of other regulations (e.g., Fish and Game Code Section 3500). The OWCN and key OWCN Member Organizations hold Wildlife Rehabilitation Permits issued by the State which allow them to temporarily collect and hold injured (as by oil) wildlife. Non-native restricted species cannot be released or transferred without written permission from DFW (14 CCR § 671).

For the safety of the public (as well as of wildlife), the California Code of Regulations prohibits members of the public from picking up disabled wildlife in a designated oil/toxic spill area (14 CCR § 679). Specifically, "no person may enter a Department designated oil/toxic spill area for the purpose of picking up disabled wildlife or transport or possess wildlife disabled by an oil spill or other spilled toxic substance unless that person has authorization from the Department."

California Code of Regulations states that spill contingency plans for marine facilities and tank vessels must either: 1) utilize the OWCN to meet oiled wildlife care requirements, or 2) describe procedures that clearly outline how oiled wildlife care will be provided, including equipment, personnel, and facilities. (14 CCR § 817.02(i))

3.5 Other Plans

The Plan for California is a portion of the RCP for Federal Region IX (California, Nevada, and Arizona). The RCP also contains a Fish and Wildlife and Sensitive Environments Plan (as required by the National Contingency Plan, or NCP); the Plan complements and expands upon the Fish and Wildlife and Sensitive Environments Plan. Each ACP in California refers to the RCP with respect to their required Fish and Wildlife and Sensitive Environments Plans.

At the national level, the USFWS has prepared two related plans, the Best Practices for Migratory Bird Care During Oil Spill Response (2003) and the Fish and Wildlife Service National Oil Spill Contingency Plan (2005). NMFS's Marine Mammal Health and Stranding Response Program have developed Pinniped and Cetacean Oil Spill Response Guidelines, available at:

http://www.nmfs.noaa.gov/pr/publications/techmemos.htm as No. NMFS-OPR-52 (2015). These newly revised guidelines are a consequence of the Deepwater Horizon/Macondo oil spill of 2010. While this WRP is compatible with these plans, where plans differ, the WRP structure takes precedence for oil spills in California.

4. WILDLIFE BRANCH ORGANIZATION

In California, there are typically five Groups within the Wildlife Branch:

- Wildlife Reconnaissance (aerial, shoreline, and boat reconnaissance of wildlife in the spill area);
- Wildlife Hazing (deterring or pre-emptively capturing at-risk animals);
- Wildlife Recovery (search and collection);
- Wildlife Field Stabilization; and
- Wildlife Care & Processing (rehabilitation and collection of animal evidence).

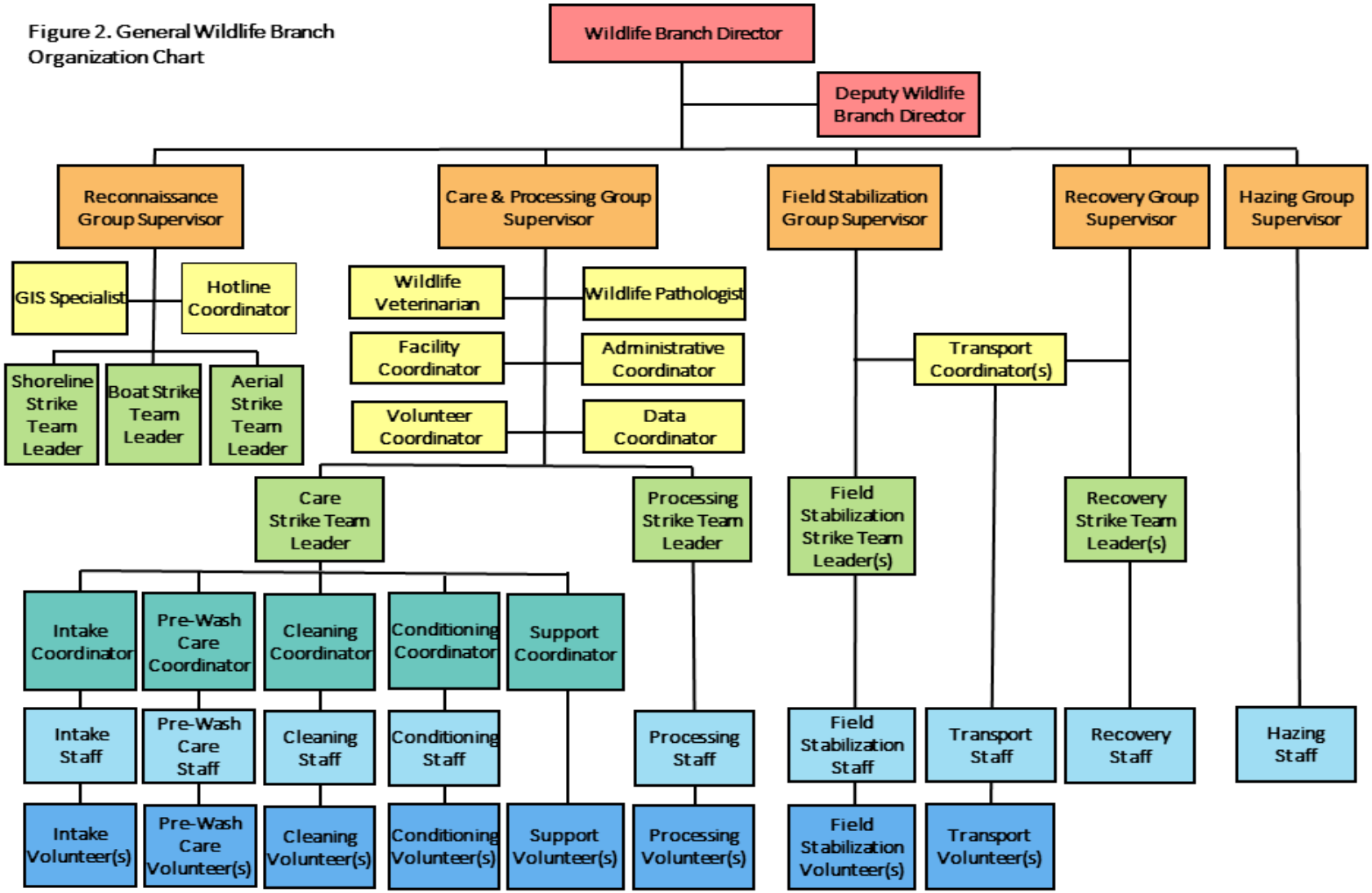
Figure 2 shows the relationship of these Groups within the Wildlife Branch. The duties of these Groups are described in detail below. Staffing of the Wildlife Branch is discussed in the next chapter (Chapter 5).

For large catastrophic spills (e.g., a Spill of National Significance, or SONS), an Area Command with multiple Incident Command Posts may be established. In this case, the ICS structure of the Wildlife Branch would potentially be replicated for each ICP, with an Area Wildlife Branch Director at the UC overseeing and coordinating activities of each site-specific Wildlife Branch.

4.1 Wildlife Reconnaissance Group

Baseline information on the status and distribution of wildlife and sensitive habitats are important in assessing Resources-at-Risk and developing appropriate response actions. This information is available during a spill response from the Environmental Unit of the Planning Section (Resources-at-Risk Specialist). However, variations from historic baseline conditions due to daily and seasonal movements of many animal species necessitate rapid, real-time reconnaissance of wildlife concentrations in the spill area. Depending upon the size and type of the spill and the habitats involved, real-time data will be collected using aircraft, boat, and/or ground surveys (discussed below). During spills, reconnaissance will also include phone calls from the public reporting sightings of oiled wildlife. The Wildlife Reconnaissance Group Supervisor is responsible for collecting and compiling all wildlife reconnaissance information and passing this information on to the Wildlife Recovery Group Supervisor, the Planning Section, and other Groups in the Wildlife Branch in a timely manner. It is important that information on the distribution of oiled wildlife is communicated to the Wildlife Recovery Group Supervisor on a regular basis. Reconnaissance activities should begin immediately, as appropriate, upon notification of a spill event.

Figure 2. General Wildlife Branch Organization Chart



NOTE: In certain situations (e.g., multiple animal groups, widespread recovery, multiple facilities), >1 Strike Team may be established within each Group

The Wildlife Reconnaissance Group can include Aerial, Boat, and Shoreline Strike Teams. The main objectives of reconnaissance surveys are to evaluate the numbers, species, and locations of animals that could be or have been impacted by the spill. This information will be used to help direct Wildlife Recovery teams, will be used by the Planning Section to develop response strategies that minimize adverse effects on wildlife, and will keep the Unified Command informed regarding potential impacts. Special protocols for activities within habitat for Ridgway's Rails, Snowy Plovers, Least Terns, and other T & E species by animal grouping such as fish, are provided in Appendix II. In addition, special protocols have been developed for reconnaissance on the Farallon Islands and the Northern Channel Islands (Appendix II). For entry on any public or private land, the appropriate land manager should be contacted (refer to ACP Planning Section, Site Summary Sheets for land manager/trustee information).

Experienced personnel are essential for effective wildlife reconnaissance. Observers should be able to identify species, behavioral characteristics, and be knowledgeable about local ecological factors. At a minimum, personnel conducting wildlife reconnaissance for a marine spill should be experienced at identifying species of marine mammals and California coastal birds and be able to determine at a distance whether a live animal is oiled. For an inland spill, reconnaissance personnel should have knowledge of terrestrial species, freshwater fish, amphibians, and sensitive habitats. Local trustee agency personnel, such as local USFWS refuge or USFS biologists, can be extremely valuable for timely reconnaissance. For small spills, Wildlife Reconnaissance Group teams may be integrated with Wildlife Recovery teams. If specialized surveys for Threatened and Endangered species (including listed fish or invertebrates) are needed, additional wildlife specialists may be called in by the Reconnaissance Group Supervisor or WBD. These specialists will advise the Branch Director and the UC about threats to listed species, the locations and numbers of oiled animals, and the potential need for pre-emptive capture, hazing or other protection strategies.

For smaller spills, the Wildlife Reconnaissance Group Supervisor role may often be filled by the WBD or the Deputy WBD. Although mapping of sensitive resources will occur at the Command Post using a common operating picture within the Situation Unit of the Planning Section, for larger spills it is desirable to have a dedicated GIS specialist working within the Reconnaissance Group of the Wildlife Branch.

4.1.1 Wildlife Reconnaissance: Wildlife Hotline

For any spill that may involve moderate to large numbers of oiled wildlife, a Wildlife Hotline will be established to allow the public a means of reporting oiled wildlife.

Oiled Wildlife Hotline: 1-877-UCD-OWCN (1-877-823-6926)

This number (above) is maintained by OWCN 365 days a year. When there is no active spill response, a phone tree directs callers to various resources and allows callers to report miscellaneous oiled wildlife, to report a spill, or conduct oil spill drills. During a spill response,

the number will be provided in press releases, and a Hotline Operator will be assigned to monitor the line. Information that should be noted by the operator includes:

- Date and time of call
- Caller's name and return phone number
- Date and time of observation
- Location of oiled animal(s), as specific as possible
- Type of animal (species, if known)
- Whether the animal is alive or dead
- Whether the animal is in hand, on land or in the water
- What degree of oiling is visible
- If the animal is alive, its behavior, and whether or not it appears to be catchable

The operator should request this information, and inform callers that they should not attempt to capture oiled wildlife themselves, for the safety of both the caller and the animal. The Hotline Operator should collate reports, and provide this information to the Reconnaissance Group Supervisor and (if directed by the Supervisor) to the WBD and the Recovery Group Supervisor regularly (e.g., immediately, or every 30 minutes, depending on the number of reports).

The OWCN hotline number will be internally transferred to another live phone line during the first days of a significant spill. This number will be an OSPR work phone number (the default), or the phone number for another organization or individual that will act as Hotline Operator. The Hotline Operator(s) may be any qualified individual, such as staff of a trustee agency or a qualified volunteer. Preferred qualifications include local area knowledge (e.g., local beach names) and some biological knowledge (appearance and behavior of common species). CalOES or local Emergency Operations offices may be able to facilitate multiple parallel operators (facilitated through the UC Liaison Unit).

In addition, during larger spills, the Wildlife Reconnaissance Group Supervisor may want to establish a separate hotline number for members of the response team to report oiled wildlife (e.g., for clean-up crews or SCAT personnel to report oiled wildlife).

4.1.2 Wildlife Reconnaissance: Aerial Survey Strike Team

The Aerial Survey Strike Team Leader, who reports to the Wildlife Reconnaissance Group Supervisor, is responsible for coordinating, conducting, and supervising aerial reconnaissance surveys of wildlife at the spill site and in areas at risk from the spill. This includes reporting observations to the WBD through the Wildlife Reconnaissance Group Supervisor, who in turn coordinates with the Air Operations Branch (typically through the WBD), and coordinates with other Trustees regarding any flight altitude restrictions.

Using a standardized protocol, the Aerial Survey Strike Team will characterize the abundance, distribution, and species identities of on-water birds and mammals, in or near the spill area.

This information is useful for helping direct response resources, both within and outside the Wildlife Branch, and is particularly important for larger spills offshore, and for large inland lake and wetland habitat spills where shoreline and boat reconnaissance may be difficult. At present, OSPR has a contract with pre-trained experts at UC Santa Cruz to perform aerial surveys for wildlife reconnaissance during oil spills. Any observers used for aerial reconnaissance for wildlife should have previous training regarding identification of waterbirds and marine mammals from the air, and knowledge of proper standardized survey techniques. A DFW Partenavia Observer (P-68) airplane is usually used for these flights. While in the air or immediately after landing, oral summaries or text messages of bird and mammal observations are reported to the Reconnaissance Group Supervisor who relays the information to the WBD, and electronic files are conveyed (e.g., via email) to the GIS Specialist who can prepare maps of survey results.

Current standardized protocols for surveys over the ocean or other large bodies of water involve the use of two trained observers who each survey a 75-meter strip transect on either side of the plane, and a navigator who helps direct the pilot to appropriate transects and enters data called out by the observers into a real-time data entry and mapping program (dLog) on a laptop computer. Flights are conducted at an altitude of 60 m (200 ft.); low overflights of bird colonies and pinniped rookeries are avoided to prevent disturbance. Transect locations/layout will vary depending on the size and location of the spill (for more information on aerial survey methods, see the internal "OSPR Guidelines for Aerial Survey of Wildlife").

These flights complement, but do not replace, operational overflights for mapping oil (typically conducted by NOAA) nor flights to document wildlife abundance and location prior to or following use of aerial dispersants. It is useful to have a qualified biologist participate in overflights for mapping oil, to report back on any large concentrations of wildlife. Although these flights are typically conducted at higher altitudes (making species identification difficult), they may occur before the Aerial Survey Strike Team has arrived on site. Helicopter overflights may also be useful for locating concentrations of oiled wildlife in areas with difficult access.

4.1.3 Wildlife Reconnaissance: Boat Survey Strike Team

The Boat Survey Strike Team Leader, who reports to the Wildlife Reconnaissance Group Supervisor, is responsible for coordinating, conducting, and supervising boat reconnaissance surveys of wildlife at the spill site and in areas at risk from the spill. The Strike Team Leader reports observations to the Reconnaissance Group Supervisor who relays the information to the WBD.

Boat-based surveys complement aerial surveys for wildlife and boat-based Recovery Group field work. Boat-based surveys are not always needed, but can be useful if fog or airport airspace prevents aerial surveys from occurring. Boat-based surveys can also provide more accurate estimates of abundance than aerial surveys if line-transect methods are used (e.g., standard practice for Marbled Murrelets), and can be used to search for oiled wildlife on shorelines not

accessible by land, or visible from the air. Dedicated Reconnaissance surveys can cover a larger area than boat-based Recovery, whose primary focus is collecting oiled wildlife.

Exact survey methods will vary on a case-by-case basis. Observers will collect information on species presence and their location and condition (alive, dead, oiled, and unoiled); basic weather and sea conditions; and any other notable information that may be useful to response efforts. Upon completing the survey or during the survey if appropriate, survey results should be transmitted to the Wildlife Reconnaissance Group Supervisor.

In some cases, Boat Reconnaissance Survey Strike Teams may also collect dead wildlife and catchable live oiled animals (usually, and preferably, this is a Wildlife Recovery Group duty). If this is a designated team assignment, personnel on board must have the necessary minimum qualifications, along with specialized training and equipment needed to capture animals that might be found. Otherwise, sightings of recoverable wildlife must be relayed to the Wildlife Reconnaissance Group Supervisor for immediate follow-up and coordination with the Wildlife Recovery Group.

Boat reconnaissance surveys would most likely be conducted by contracted experts or resource agency personnel. The survey method, survey route, and transect design are established just prior to the survey to accommodate the specific areas, issues, and species of concern for a particular spill. In all cases, at least one member of the team must be qualified to operate the boat, given the habitat, weather, and on-water conditions. Other personnel must be qualified to observe and identify wildlife and determine oiling status. Depending on the boat and search area, two persons are a minimum crew. However, an optimal and preferable boat crew has three people for safety and search efficiency. The WBD can make a request for the proper survey craft through the Logistics Section.

4.1.4 Wildlife Reconnaissance: Shoreline Survey Strike Team

The Shoreline Survey Strike Team Leader, who reports to the Wildlife Reconnaissance Group Supervisor, is responsible for coordinating, conducting, and supervising shoreline wildlife reconnaissance operations, which includes reporting observations to the Wildlife Branch Director through the Group Supervisor to aid in response strategy development. Duties also include coordinating with the other trustee agencies and land managers.

The Reconnaissance Group Supervisor or Shoreline Survey Strike Team Leader will provide assignments and reporting instructions. Survey teams should be provided with the Shoreline Wildlife Reconnaissance Form (Appendix III) that will be used to track survey effort as well as findings. GPS receivers should be used to record locations of survey beginning and end points, survey transect routes, and locations of oiled animals. Photo documentation is also useful. During moderate-sized spills, survey teams should consist of a minimum of two people for safety and to expedite the surveys. Reconnaissance teams should not collect any live or dead wildlife, to expedite surveying a large area quickly.

Walking beaches and along State surface waterways on foot is the most common and most effective method for locating wildlife with little disturbance. However, depending on the terrain and the size of the area to be covered, spotting scopes, four-wheel drive vehicles, or ATVs can also be used effectively to reduce survey or search time. Prior to authorizing any activities using vehicles for surveys or collections, the WBD must obtain authorization from appropriate trustee agencies and/or land owners and abide by special guidelines located in Appendix II for Sensitive Habitat, and listed species and species groups, e.g., Snowy Plovers, Threatened and Endangered Fish, if appropriate. Because motorized vehicles may haze animals back into the water, caution and planning must be exercised. There should be close coordination with the Recovery Group Supervisor to avoid unintentional hazing of injured wildlife by the Reconnaissance Group.

Because oiled wildlife often do not show up on shore within the first 24 hours after a marine or other large waterbody spill, Recovery personnel can often fill the role of the Reconnaissance Group initially, before transitioning to Recovery as more oiled animals come ashore. In contrast, in a drier CA State waterway environment, oiled wildlife would be capturable more immediately and Recovery Group personnel would focus solely on Recovery and setting out and checking trapping equipment.

4.2 Wildlife Hazing Group

Wildlife hazing is intended to minimize injuries to wildlife by attempting to keep animals away from oil and/or cleanup operations. If warranted, hazing activities are implemented to prevent animals from establishing or continuing regular use patterns within a contaminated area. If adverse effects on wildlife are deemed to be unavoidable given the predicted movement of oil in the hours and days following a discharge, then hazing can be used with little risk of worsening those adverse effects. Hazing should always be considered in heavily oiled habitats, particularly when clean sites are present in the vicinity. Hazing is likely to be most effective if discrete areas such as coastal lagoons, estuaries and bays have been oiled and wildlife can be kept out of these areas. Hazing is likely to be ineffective or counterproductive if the spill area is too large to focus deterrent actions or if animals are likely to be pushed into oiled habitat. Wildlife that has already been oiled should not be dispersed, because this can lead to the introduction of oiled animals into uncontaminated areas and populations. Rather, oiled animals should be captured as soon as practical.

Once oiled, habitats that have been traditionally attractive to wildlife may be candidates for hazing actions since wildlife often continue to use their traditional sites even when an area is oiled. If oil-free and disturbance-free habitats are known to be available in the vicinity and traditional use areas are oiled, hazing may protect wildlife. In addition to the benefits to living natural resources, there is also a strong economic incentive for hazing, in terms of savings associated with the cost of cleaning oiled birds (and subsequent compensatory restoration).

Through the WBD, the OWCN Hazing Group Supervisor will make a recommendation to haze to the UC. The recommendation will be guided by site-specific and species-specific factors present

at the time of the spill, and availability of proven hazing techniques. OWCN Hazing team members are properly trained in the use of hazing equipment, and must use appropriate PPE and other safety precautions, per the Site Safety Plan. Hazing activities must take place only under the authority and oversight of trustee agencies, in coordination with the UC. A FESA Section 7 consultation (or verbal approval) with the USFWS or NMFS will be required to haze federally-listed wildlife species. Hazing activities, observations, and results are to be reported to the WBD and the Wildlife Recovery Group Supervisor. The WBD will then pass this information on to the Planning Section's Environmental Unit Leader and to the UC.

Hazing usually includes deployment of acoustic or visual hazing devices. A variety of hazing devices are available and can be deployed to meet the situation, including aircraft, propane cannons, pyrotechnics, airboats, ATVs, sonic buoys, mylar tape, lasers, flags, distress and alarm calls, and effigies. Specialized hazing equipment, hazing techniques, and special hazing considerations for birds are described in detail in the *Bird Hazing Manual: Techniques and Strategies for Dispersing Birds from Spill Sites,* published by OSPR and U.C. Davis (available online at: http://anrcatalog.ucdavis.edu/pdf/21638.pdf). Specialized equipment is maintained by OWCN. For techniques related to marine mammal hazing, refer to NMFS's Pinniped and Cetacean Oil Spill Response Guidelines, available at: http://www.nmfs.noaa.gov/pr/publications/techmemos.htm as No. NMFS-OPR-52 (2015). Underwater sonic deterrence may be effective at hazing cetaceans (see the Northwest Wildlife Response Plan in the Northwest ACP [RRT Region X]. Exclusion of animals, including anadromous fish (e.g., with block nets or other physical impediments) out of an impacted area may also be an effective means of minimizing impacts.

4.3 Wildlife Recovery Group

Recovery of oiled wildlife involves collecting dead and capturing live animals. These activities occur under the direct supervision of the OWCN Recovery Group Supervisor. Wildlife collection (i.e., Recovery) by any agency or organization must be conducted under the direction of the WBD and the UC, via the OWCN Recovery Group Supervisor. Their activities must comply with agreements and permits from the appropriate management agencies (e.g., CDFW, NOAA-NMFS, and USFWS; see 14 CCR § 679(d)).

Trained Recovery personnel are drawn from OWCN member organizations, OSPR, other state and federal trustee agencies, and approved contractors. Although not preferable, for very small spills, Wildlife Recovery teams may be integrated with Wildlife Reconnaissance Group teams. Detailed guidelines for Wildlife Recovery are updated on a regular basis and can be found in the internal OSPR Wildlife Response Handbook.

Specific duties of the Recovery Group Supervisor include (but are not limited to):

- Overseeing all activities and safety of the Recovery Group;
- Inform the Safety Officer via the WBD of any hazards or protective procedures related to

wildlife recovery so they can be included in the Safety Plan;

- Staffing the Recovery Group at an appropriate level and managing resources to maximize effective recovery of oiled wildlife (see Figure 2 and Table 1 for ICS positions);
- Ensuring that members of the Group have read and signed the Site Safety Plan and are following proper safety protocols (e.g., wearing of PPE, if appropriate);
- Ensuring that members of the Group have the proper training for Wildlife Recovery, including the use of protocols for collection of pertinent data;
- Developing communication protocols, including morning and evening briefings, and ensuring that field Strike Teams have proper communication equipment such as mobile phones and/or two-way radios;
- Ensuring that field Strike Teams have the proper equipment, including PPE, nets, search effort reporting forms, GPS units, and animal carriers;
- Coordinating with local land managers and other trustee agencies (typically through the WBD);
- Providing information to field Strike Teams on protocols to avoid collateral damage to sensitive species or habitats (see Appendix II); and
- Providing timely information to the WBD on the status of Recovery Group activities.

The Recovery Group Supervisor and/or the WBD can coordinate with local land managers to locate appropriate staging areas. The Recovery Group is typically based out of a staging area with needed support features such as electricity, water, boat launch, restrooms, etc., and is often where the OWCN Recovery Sprinter is based. It can be co-located with the Field Stabilization trailer(s) or located at a different staging area (see Section 4.4.1). The Recovery Group staging site will act as a check-in and check-out site for staff, a staging area for capture equipment, and a site for personnel decontamination.

4.3.1 Recovery: Field Methods

Once animals have become oiled, habitat-specific and species-specific strategies to recover and remove oiled live animals and all dead wildlife are required. Under the direction of the Recovery Group Supervisor, systematic surveys for collecting affected wildlife should be carried out several times per day, including at least one survey as early as is safely possible after dawn. Successful captures not only depend on the condition of the animal, but also on the training and experience of the Recovery team, along with techniques and equipment used. The OWCN has developed detailed internal Recovery Policies and Procedures (see internal OSPR Wildlife Response Handbook). These detailed guidelines are provided to staff and agency personnel that conduct approved OWCN training; all Recovery personnel should receive this training.

Surveys are often conducted on foot or by boat; however, the use of spotting scopes, ATVs and four-wheel-drive trucks can expedite searches. Special considerations pertaining to collateral injuries to animals and habitat must be taken into account when using vehicles, or when

surveying on foot along wetlands, rivers, or streams, or on beaches that may support nesting Snowy Plovers or Least Terns (Appendix II).

Each team should consist of at least two people, and should be outfitted with the resources and equipment necessary to complete its assignment. At a minimum, the team should have proper PPE, long-handled nets, bird transport boxes, and use a Wildlife Search Effort Log (Appendix III) to document areas searched. GPS receivers should be used to mark locations of each survey's beginning and end points, locations where animals are collected or captured, and to locate where photos were taken.

While conducting Wildlife Recovery during a response, it is important that dead animals are collected, documented, and held (often for years) until disposal is approved by the trustees. It is not always feasible, reliable, or practical to attempt to discriminate in the field between spill-related and non-spill-related casualties; thus all dead animals should be collected. As well, the prompt removal of dead oiled animals from the environment can be critical to minimizing the risk for secondary oiling to occur, externally and/or internally to predators and scavengers. Recovery Team members should note the location of any sign of possible secondary oiling to the Group Supervisor. Signs may include oiled mammalian, reptilian, or amphibian tracks or scat, periodic oil spotting along wildlife trails, or near burrow and den entrances.

Recovery Group personnel should provide the following information (at a minimum) directly on each animal transport container or on an Animal Collection Tag attached to the container:

- Collector's name (and phone number if not part of the Recovery Group effort);
- Collection location: general name and GPS coordinates;
- The date the animal was *recovered* from the location;
- The time the animal was *recovered* from the location; and
- Species or known taxa (e.g., "gull", "frog") of animal.

Currently, OSPR and the OWCN are working on developing an electronic application that will capture these data directly and transfer this information to the WBD, Situation Unit, and Care & Processing Group to ease reporting of collected animals.

Although the standard method for Recovery of birds is capture on the ground with long-handled nets, various other techniques may be considered depending on conditions and species. For example, cannon nets may be considered for captures of large groups of birds (although there is a substantial collateral risk to birds from this technique), and boat-based dip-netting may be appropriate in some cases. For the capture of mammals, various sized traps may be considered. Noose-poles or cover boards could be considered for amphibian or reptile capture. The Recovery Group Supervisor, in coordination with the WBD, will ensure that Recovery Teams use the most appropriate methods for wildlife collection.

4.3.2 Recovery: Marine Mammals

The WBD and the Recovery Group Supervisor should evaluate the need for marine mammal capture on a case-by-case basis in consultation with those trustee agencies that have specific regulatory authority: USFWS (sea otters), NMFS (pinnipeds, cetaceans, and sea turtles). Specific instructions for coordinating with NMFS regarding dead animal recovery and live mammal capture can be found in the MOA with NMFS (in the internal OSPR Wildlife Response Handbook) which includes, as an attachment, the contingency plan for response to pinnipeds, cetaceans, and sea turtles. A Marine Mammal and Turtle Stranding Report must be submitted as soon as possible following capture and transport of live mammals and within 24 hours (if feasible) for dead marine mammals and sea turtles.

Southern sea otters are a special case because they are extremely susceptible to oil and they are a Federally-listed species. Capture and treatment of sea otters is addressed separately in the Sea Otter Oil Spill Contingency Plan (Appendix II). In California, sea otters will generally be captured by crews led by Federal or State trustee agency personnel. Sea otters that are not visibly oiled and are not displaying abnormal behavior will not be intentionally captured unless there is a substantial risk of oiling. Under dire circumstances, preemptive captures of animals at risk of oiling may be considered, if approved by the UC and adequate facilities for transport and holding are available.

Typically during large oil spill events, a separate Oiled Marine Mammal Recovery Strike Team or Recovery Group (composed of members of the California Marine Mammal Stranding Network acting within the OWCN) will respond to reports of live or dead oiled marine mammals. Standard protocols will be used to capture/recover marine mammals, in coordination with the NMFS Marine Mammal Stranding Network Coordinator or Deputy WBD overseeing marine mammal operations. Dead marine mammals encountered by Oiled Bird Strike Team personnel will be reported to the Recovery Group Supervisor, who will assign Oiled Mammal Strike Team personnel to collect the animal, or (if the animal is too large to collect) will coordinate with the Wildlife Care & Processing Group Supervisor to deploy a field Processing Team to collect either information/evidence from the carcass as appropriate. However, during smaller events and/or where minimal risk of oiling exists to marine mammals, field teams deployed to collect oiled birds can conduct initial observations, and a small number of marine mammal-specific teams can be deployed without initiating a separate Strike Team.

4.4 Wildlife Transportation

The Wildlife Transportation Coordinators arrange transportation of wildlife from the field, from the Recovery Group staging area(s), from the Field Stabilization Group area(s), and/or from secondary care facilities to the primary care facility. These Coordinators work closely with the OWCN Staffing and/or Volunteer Coordinators to find drivers, or directly with the DWBD or WBD to identify contractors to fill these roles. Depending on the particular situation, the Wildlife

Transportation Coordinators report to either the Recovery or the Field Stabilization Group Supervisor.

Transport of oiled wildlife from the field to the Recovery/Field Stabilization area(s), and/or to the primary care facility should be done as quickly and efficiently as possible. However, if a long transport is needed, animals should be checked on periodically during transport, and if needed, provided hydration and nutrition. The interior of the transport vehicle should be maintained comfortably warm if animals are hypothermic, or purposefully cooled if they are hyperthermic; the Field Stabilization Group Supervisor and/or the Wildlife Transportation Coordinator will advise transporters as to appropriate temperature control. Vehicles should be kept as quiet as possible (i.e., radios or stereos turned off, voices kept low). Drivers should ensure adequate ventilation for themselves to reduce exposure to fumes; fresh air vents should be open and directed at drivers' and passengers' faces. Transportation vehicles should be protected from oil contamination by lining animal holding areas (cargo areas and/or seats) with impermeable plastic. Oiled plastic should be disposed of in an oily waste container at the Recovery staging area, stabilization trailer, or care facility. Carriers (either cardboard or plastic pet carriers or plastic sky kennels) should be placed in the vehicle so that the boxes are level, and should be positioned so that there is space between each box to allow adequate ventilation. Carriers should be large enough to allow the animal to maintain as normal a posture as possible. At no time should oiled birds be transported in vehicles with children (under 18 years old) or other animals (i.e., pets, especially other birds).

At no time should oiled birds be transported in open-air trucks. Cargo vans, passenger vehicles or trucks with camper shells (if appropriate ambient temperature exists) should be used. Transport of oiled marine mammals or turtles will be arranged by the responding OWCN/California Marine Mammal Stranding Network member organization using appropriate species-specific protocols. Transportation protocols of other animals (e.g., fishes) will be determined as needed.

Transporters must ensure that data for each animal is transferred with that animal. This includes information related to animal capture (see above) and Chain of Custody forms if required (e.g., for mammals or sea turtles). Transporters should maintain communication (e.g., via cell phone) with the Wildlife Transportation Coordinator. At a minimum, the transporter should notify the Coordinator when he/she departs the field or staging area with oiled wildlife, and when he/she arrives at the stabilization trailer or primary care facility. The Wildlife Transportation Coordinator should notify the primary care facility of estimated time of arrival of oiled animals transported from the field.

4.5 Field Stabilization Group

The Field Stabilization Group provides initial care in the field prior to transportation to a primary care facility to increase survival and maximize efficient use of resources. If necessary, OSPR or OWCN mobile veterinary laboratories and animal care trailers can be dispatched to the field so veterinarians and staff can perform preliminary examinations and stabilize wildlife prior to their

transport to the rehabilitation facility. In addition, smaller wildlife rehabilitation centers can be used as stabilization sites and temporary stabilization centers can be set up using temporary structures.

The Field Stabilization Group Supervisor oversees activities at all field stabilization facilities. These facilities are set up to provide stabilization to wildlife that is recovered in the field before transportation to a primary care facility. In large responses, separate Field Stabilization Strike Teams (each with a designated Strike Team Leader) may be necessary when multiple field and permanent stabilization sites are activated. Stabilization typically includes warming (or some cases cooling) oiled animals to stabilize body temperature, and providing fluids and nutrition. Detailed protocols are maintained internally by OWCN. A field stabilization facility can also act as a staging area for transportation of wildlife, and for Wildlife Recovery & Wildlife Transportation teams to check in, check out, access equipment, and dispose of contaminated equipment or PPE. The WBD (or designee at the Incident Command Post) can help to locate the Field Stabilization Group through coordination with local agencies and land managers.

The Field Stabilization Group Supervisor is responsible for developing a plan for effective and efficient stabilization of wildlife (through activation of one or more trailers or facilities), for making staffing recommendations to the Wildlife Branch Director, for overseeing all activities at the facility(s) including collection and collation of field data, and for ensuring that the stabilization trailer/facility(s) is/are stocked with necessary supplies to provide appropriate care for wildlife. The Field Stabilization Group Supervisor works closely with the Transportation Coordinator to plan transportation of wildlife from the stabilization trailer/facility to the primary care facility on a timely basis. Close coordination between the Field Stabilization Group Supervisor and the Wildlife Recovery Group Supervisor is also required.

4.6 Wildlife Care & Processing Group

The Wildlife Care & Processing Group within the Wildlife Branch has two permanent Strike Teams: Wildlife Care and Wildlife Processing. The Wildlife Care Strike Team ensures that wildlife exposed to petroleum products receive the best achievable care by providing access to veterinary services and to rehabilitation centers. The Wildlife Processing Strike Team ensures that oiled animals are fully evaluated and data are captured, so the UC can obtain oiled wildlife statistics used for a variety of purposes, such as response strategy development and media updates. This Group is directed by the Wildlife Care & Processing Group Supervisor who reports to the WBD or (if activated) the Deputy WBD.

For large spills where high numbers of marine mammals or sea turtles are collected, entirely separate Bird and Marine Mammal Care/Processing Strike Teams or Groups may be activated. These Teams/Groups may be assembled and disassembled as necessary based on classes of animals either affected or predicted to be affected. Each Strike Team Leader is responsible for receiving live oiled animals requiring extended care and treatment at established treatment

centers, recording essential medical information, conducting triage, stabilization, treatment and rehabilitation. These personnel would work out of different primary care center(s) and have entirely separate personnel. Depending on the complexity of the event, the WBD may activate one or more Deputy WBDs to assist in the coordination of bird and marine mammal operations.

Similarly, depending on the size of the spill, Live Animal and Dead Animal Processing Task Forces can be formed to improve initial procedures for incoming animals. Dead animal strike teams would focus on documentation, sample collection, and potential necropsy of dead animals. Live animal strike teams would initially begin documentation and sample collection, then transfer live animals to the Wildlife Care Strike Team for full medical evaluations.

For exceptionally large spills in which rehabilitation centers may be overwhelmed, the Wildlife Care & Processing Group Supervisor, in consultation with the WBD and the UC, may implement protocols for triage and potential euthanasia of some animals, to maximize survival of as many animals as possible and maximize survival of special-status species. In the case of cleaned animals that require prolonged time to recover, transport to long-term care facilities may be considered (particularly for marine mammals).

In addition to Strike Teams, the Care & Processing Group includes support staff reporting to the Group Supervisor. This support staff includes (when needed) Wildlife Veterinarian(s), Wildlife Pathologist(s), Facility Coordinator(s), Wildlife (OWCN) Volunteer Coordinator(s), Administrative Coordinator(s), and Data Coordinator(s).

Specific duties of the Wildlife Care & Processing Group Supervisor include (but are not limited to):

- Activating and maintaining wildlife processing, and primary care centers during a response (permanent wildlife rehabilitation facilities are located throughout the State; see Figure 3 and Table 2);
- Staffing necessary roles in the Group and ensuring that proper safety protocols are followed by everyone working in the Group;
- Working with the Wildlife Transportation Coordinator(s) to coordinate activities and ensure transportation to established treatment centers for oiled animals;
- Receiving and processing dead and live wildlife, which includes collecting and securing necessary evidentiary (feather, fur, carapace swab, and/or tissue) samples from all animals, following the detailed procedures outlined in the OWCN Processing Unit Guidelines;
- Coordinating combined resources and capabilities of all OWCN member organizations to provide optimal treatment and rehabilitation services, following detailed OWCN Protocols for Care of Oil-Affected Birds and Marine Mammals.

- Keeping the UC updated (through the WBD) with status of animals (number, type, species, locations, and disposition of oiled wildlife at the care and processing facilities;
- Coordinating release of rehabilitated wildlife, including communication of this information to the UC (through the WBD); and
- Updating WBD (or Deputy) on activities at least daily.

4.6.1 Care & Processing: Wildlife Care Strike Team

The Wildlife Care Strike Team Leader is responsible for examining, cleaning, and rehabilitating live oiled wildlife, and coordinating the release of rehabilitated wildlife. To provide optimum treatment and rehabilitation services, the Strike Team Leader coordinates the combined resources and capabilities of all activated OWCN member organizations. Specific specialized protocols for care of oiled animals are not addressed here; the OWCN maintains specific protocols for animal care reflecting the most current information on wildlife care.

The Wildlife Care Strike Team typically includes five coordinators shown in Figure 2: Wildlife Intake, Pre-Wash Care, Cleaning, Pre-Release Conditioning, and Support. In small spills, the Wildlife Intake Coordinator can assume all live and dead processing duties following the same procedures used by the Wildlife Processing Strike Team. In moderate-sized events, Intake can process live animals, leaving dead animal processing to the Processing Strike Team. However, in large-scale spills, live and dead animal processing may be accomplished through the Wildlife Processing Strike Team with the establishment of Live and Dead Animal Processing Strike Teams. Specific protocols for this Strike Team and the other Coordinators of the Wildlife Care Strike Team are maintained in internal OWCN guidelines.

Birds are the most abundant wildlife received at primary care facilities. They are often treated and released within three weeks of capture, once they meet pre-established physiological and behavioral milestones specified by the detailed OWCN protocols. However, time in care depends on many different factors, including (but not limited to) spill location, type of petroleum product involved, the effect of the product on different species, pre-existing injuries, seasonal conditions, and other logistical concerns. When rehabilitated animals are ready for release, clean, non-oiled release sites should be chosen after consulting the appropriate trustee agency or agencies and the Environmental Unit of the Planning Section (typically through the WBD). While exceptions can be made during spill emergencies, some agencies have specific requirements or policies regarding releasing animals on their properties. For example, trustee agencies, such as California State Parks or National Marine Sanctuaries, may only allow the release of an animal on their property if that animal was captured from the subject area or if there has been a determination that the release will not be detrimental to the ecosystem. As a part of spill response actions, birds and mammals are banded or tagged and, in some cases, fitted with tracking equipment for post-release monitoring.

OWCN primary care facilities (Table 2) are typically used for wildlife rehabilitation during oil spills in California. Primary care facilities can be expanded if needed (e.g., with additional outdoor tents and pools), and additional temporary facilities can be created. Any existing or created veterinary facilities used for oil spill response must meet minimum space requirements and incorporate all required aspects of wildlife treatment and rehabilitation. An ideal facility should include:

- Security Plan (restricted public access);
- Areas for intake, physical exam, and evidence processing that can be easily cleaned and disinfected;
- Locked storage for animal carcasses and data;
- Isolation capabilities;
- Indoor wildlife housing and caging;
- Food storage and preparation facilities;
- Animal washing and rinsing areas;
- Indoor drying pens;
- Outdoor pool and pen areas;
- Pathology/necropsy facilities;
- Restroom, eating and volunteer training facilities;
- Administrative offices with multiple phone and fax lines and conference space;
- General and secured storage;
- Access to a large parking area; and
- Adequate ventilation, hot and cold water, and climate control.

Typically, spill response is focused only on native wildlife. Non-native wildlife (introduced or invasive, hybrid, feral or peri-domestic animals) may be collected and treated during spill response only if:

- Care of non-native animals does not detract from care of native wildlife during the current spill response;
- Non-native animals are not released back into the environment (see below);
- Animals will not be included in oiled wildlife logs and/or documentation/evidence; and
- Costs associated with non-native wildlife care will not be borne by the response unless specifically authorized by the UC.

Exceptions to the second condition above (release of non-native animals) may be made only as specifically directed by the UC with concurrence from DFW. In the case of non-native restricted species under CRC Title 14 Section 671, these species will not be released or transferred without

written permission from DFW. Pets should be brought to their local veterinarian with instruction on cleaning provided by the Wildlife Care Strike team leader or designee.

4.6.2 Care & Processing: Wildlife Processing Strike Team

The Wildlife Processing Strike Team Leader, who reports to the Wildlife Care & Processing Group Supervisor, is responsible for receiving, documenting, and storing all data and samples from all animals that have been collected, following detailed procedures outlined in the OWCN Processing Strike Team Guidelines. Wildlife processing is necessary to provide sufficient information to enable the UC to make timely and accurate statements concerning effects on wildlife, to help determine whether or not the animals collected are spill-related, and for injury determination. If provided in a timely manner, this information is also useful to help in directing Recovery efforts. Timely information on the number of animals affected each day is typically one of the most pressing issues for the UC and the JIC.

The Processing Strike Team Leader is responsible for maintaining and reporting information on wildlife collected including number, type, species, locations, and disposition of oiled wildlife, using appropriate forms (Appendix III). Information must be provided daily to the Wildlife Care & Processing Group Supervisor, who collates this information in the Wildlife Branch Daily Report Form (Appendix III). The Wildlife Care & Processing Group Supervisor and WBD need to be briefed at least daily by the Processing Strike Team Leader. The roles of Wildlife Processing Strike Team Leader and Wildlife Care Strike Team Leader may be filled by the same person during small spills.

Ideally, all live and dead animals are transported to the primary care facility (or facilities), where the Processing Strike Team is based. However, in instances where large dead marine mammals are found, per California Marine Mammal Stranding Network and OWCN protocols, *in situ* processing through deployment of a Field Processing Strike Team composed of trained and experienced marine mammal experts may occur.

In most circumstances, only dead animals will be processed by the Wildlife Processing Strike Team. During such spills, all processing responsibilities for live animals will be absorbed by the Wildlife Care Strike Team and will follow the Live Animal protocols. However, during large-scale incidents, separate Live and Dead Animal Processing Task Forces within the Processing Strike Team may be mobilized to effectively and efficiently process large numbers of animals. In these spills, multiple stations for processing may be needed and roles within each station include a manager, receiver, data collector, data recorder, photographer, and animal handler. In such instances a single person may fill several roles simultaneously.

In all spills, photographs must be taken and oil samples collected and preserved in case chemical fingerprinting of the oil becomes necessary. Species identification will be determined and oiling

information documented. All information necessary to complete either the live or dead bird and mammal (or other animal) log (Appendix III) is collected before animals enter the care process or dead animals are taken to storage. Detailed protocols for the Processing Strike Team are maintained internally by OWCN.

To guide the Wildlife Care Strike Team in the treatment of remaining animals, necropsies on selected birds or sea otters may be desired and conducted by wildlife veterinarians or pathologists during a spill response. However, the WBD or his designee must obtain pre-approval from the UC and the Federal trustee agency (USFWS) for such examinations. Necropsies may be important in identifying pathogens in captivity-related diseases, to help guide corrective actions in wildlife care. Necropsies of other marine mammals (pinnipeds and cetaceans) are considered standard operating procedures for spill response, as gross examination can be used to determine whether apparently un-oiled animals ingested petroleum products. Detailed sampling procedures for marine mammals can be found within NMFS's Pinniped and Cetacean Oil Spill Response Guidelines http://www.nmfs.noaa.gov/pr/publications/techmemos.htm as No. NMFS-OPR-52 (2015). Animal remains post-necropsy shall be placed in the original bag (if possible) with the following information added to the original label: the word "Necropsied" along with the date and initials of the person who performed the necropsy. Carcasses and samples should be kept locked and only leave the facility following appropriate Chain of Custody procedures.

Following processing and documentation, all dead animals that have had appropriate evidence collected (photos, feather samples and fur/carapace/skin swabs) should be systematically packaged and stored in locked freezers on site until the conclusion of the event. In certain instances when on-site storage capacity is exceeded, carcasses and samples can be transported (following appropriate Chain of Custody procedures) to a secure freezer for storage, such as those at the Marine Wildlife Veterinary Care and Research Center at Santa Cruz, San Francisco Bay Oiled Wildlife Care & Education Center in Fairfield, or the Los Angeles Oiled Bird Care & Education Center in San Pedro. This will protect the interests of trustees, RPs, and USCG. If necessary, the carcasses can be re-examined to resolve problems with body counts and species identification, or to secure additional samples for investigations. When federal and state trustee agencies give the authorization, carcasses will be disposed of in accordance with federal and state laws.

4.7 Interaction with Other ICS/UC Sections

As noted previously, it is important that the Wildlife Branch Director coordinates with staff in the Planning Section, particularly the Environmental Unit. Coordination is also important between the Wildlife Branch and the JIC and with the Natural Resources Damage Assessment (NRDA) group, which is outside the UC structure. For larger spills, it is useful to fill specific roles for both a Wildlife Media Specialist (to assist with media relations at primary care facilities) and an NRDA Wildlife Specialist to coordinate wildlife-specific NRDA issues with the Wildlife Branch.

4.8 Wildlife Branch Director (WBD) Duties

All California Wildlife Branch operations during spill response are directed by the WBD, who supervises the five Groups described above. The WBD's duties include, but are not limited to:

- Arranging for staffing of the Branch;
- Developing the Wildlife Branch operations portion of the Site Safety Plan with approval of the Site Safety Officer and ensuring that the Site Safety Plan is implemented by all members of the Branch;
- Developing the Branch-specific portions of the Incident Action Plan for each operational period (ICS forms 204 and 215) through coordination with the Planning Section;
- Updating the UC, Operations Chief, Environmental Unit and Situation Unit (Planning Section), JIC, and Liaison Officer with information on spill related wildlife statistics (e.g., numbers of dead/live oiled birds);
- Establishing internal communications protocols within the Branch;
- Determining resource needs in the Branch and arranging for resources through the Logistics Section (ICS form 213RR);
- Coordinating with the Sampling Specialist in the Planning Section, Environmental Unit regarding oil (from wildlife) samples being collected by Wildlife Branch personnel (if applicable);
- Coordinating with the various land managers and/or trustee agencies (refer to ACP Planning Section, Environmental Sensitivity Indices, Site Summary Sheets for land manager/trustee contact information) regarding Wildlife Branch operations, including potential beach closures to minimize human disturbance to oiled wildlife;
- Identifying methods to minimize collateral damage to wildlife and habitat from recovery, transportation, and reconnaissance operations and ensuring that the Branch implements these measures;
- Coordinating with Air Operations, if applicable (e.g., for aerial reconnaissance);
- Coordinating decontamination protocols for all personnel in the Branch and proper disposal of any oily waste generated by Branch operations;
- Coordinating with the NRDA wildlife specialist;
- Ensuring the appropriate use of technology to expedite tasks and to provide greater accuracy of information.

5. WILDLIFE BRANCH STAFFING

Activation of personnel and equipment is based on a number of variables, but primarily on anticipated adverse effects upon wildlife. Number of personnel needed may vary from a WBD and a few additional staff, to hundreds of personnel for a catastrophic spill. For catastrophic spills, Multiple Area Commands may be established with parallel structures of the Wildlife Branch. Primary personnel typically come from OSPR or the OWCN, as described below. The

largest Groups within the Branch are typically the Recovery Group and the Care & Processing Group, each of which may require dozens to hundreds of personnel. In the event of a very large catastrophic spill or a spill affecting an exceptionally sensitive site, many volunteers or additional staff may be needed. In this case, special training sessions would need to be conducted, potentially including 4-hour Oil Spill Clean-up Worker abbreviated safety training, a one-time offer.

OSPR has developed a Wildlife Branch staffing table (Table 1) to be used as a general guide to meet staffing needs for a variety of spills and Wildlife Branch needs. Three levels of Wildlife Branch personnel response are shown in Table 1. Most often the Wildlife Branch Director will initially mobilize personnel at the lowest level (Level I), but each response must be tailored on a case-by-case basis based on an assessment of risk to wildlife in the area. Some circumstances would justify Level II or III (highest) mobilization at the outset. The Wildlife Branch (typically the WBD) will notify the appropriate UC representative (e.g., Planning Section Chief) immediately of changes in the deployment of personnel and equipment as they occur.

As with personnel, mobilization of equipment is highly dependent on the situation, and the level of activation for equipment must be determined on a case-by-case basis by the WBD in consultation with the UC. In all cases, an OWCN Primary Care Facility (Table 2) would be utilized for animal care. OSPR and OWCN maintain specialized equipment (e.g., boats, vehicles, hazing equipment) that will be deployed as needed.

5.1 Office of Spill Prevention and Response (OSPR)

OSPR staff will assume the role of Wildlife Branch Director during a spill response in California. This is a natural consequence of the pivotal position of the Department of Fish and Wildlife, because the Department:

- Is the lead state trustee agency for California's fish and wildlife;
- Has permits and agreements with other Federal agencies to care for special status species and other protected wildlife;
- Has legal mandates to protect wildlife, beyond OPA-90 and OSPRA; and,
- Has the needed expertise, training and experience.

Table 1: Wildlife Branch Staffing Table - Recommended Response of Personnel for Wildlife Branch Operations

This table should be used as a general guide for Wildlife Branch personnel resource needs. Wildlife Branch resources should be tailored specifically to meet the needs of each incident. For incidents involving marine mammals, staffing levels will increase (above levels shown here) to allow for parallel recovery, transport, and processing of mammals and birds. For large catastrophic events (e.g., a Spill of National Significance), Level III staffing will be increased beyond the maximum values shown here.

Staff	Level I (<100 birds)	Level II (100-500 birds)	Level III (>500 birds)
General			
Wildlife Branch Director	1	1	1
Deputy Wildlife Branch Director	0-1	0-1	1
Data Management Coordinator	0	0-1	1
Wildlife Recovery			
Recovery Group Supervisor	1	1	1
Field Recovery Strike Team Leader	0-1	1	2-3
Recovery Field Staff	2-20	8-40	12-60
Field Stabilization			
Field Stabilization Group Supervisor	0-1	1	1
Field Stabilization Strike Team Leader	0-1	1	2-3
Field Stabilization Staff	0-1	2-6	4-12
Transportation Coordinator	0-1	1	1
Transportation Staff	0-4	2-10	6-20
Wildlife Care & Processing			
Wildlife Care & Processing Group Supervisor	1	1	1
Wildlife Care Strike Team Leader	0-1	1	1
Wildlife Care Staff	1-3	6-10	8-30
Wildlife Care Volunteers	0-20	15-40	30-100+
Wildlife Veterinarian/ Pathologist	0-1	1	1-3
Wildlife Processing Strike Team Leader	0-1	1-2	1-2
Wildlife Processing Staff	0-3	2-6	4-10
Facilities Coordinator	1	1	1
Volunteer Coordinator	1	1	1-2
Data Coordinator	0	0-1	1-2
Administrative Coordinator	1	1	1
Administrative Staff	0	0-2	1-2
Wildlife Hazing			
Wildlife Hazing Group Supervisor	0-1	0-1	0-1
Wildlife Hazing Staff	0-3	0-3	0-5
Wildlife Reconnaissance			
Wildlife Reconnaissance Group Supervisor	1	1	1
Wildlife Hotline Operator	0-1	1	1
GIS Technical Specialist	0-1	1	1
Aerial Reconnaissance Strike Team Leader & Staff	0-3	0-3	0-3
Boat Reconnaissance Strike Team Leader & Staff	0-3	0-3	0-6
Shoreline Reconnaissance Strike Team Leader & Staff	0-6	1-10	4-20

Typically, the OSPR Field Response Team responding biologist will assume the role of WBD upon arrival at the scene. Depending on the severity of the spill and staffing needs, this person may be replaced by other OSPR staff with specialized wildlife response training. OSPR staff may also fill various other roles within the Branch, such as Deputy WBD and/or various Reconnaissance roles.

5.2 Oiled Wildlife Care Network (OWCN)

The OWCN, a statewide cooperative system of specialized wildlife health centers and organizations set up by statute (Government Code § 8670.37.5), is integral to Wildlife Branch operations. The OWCN is administered by the Karen C. Drayer Wildlife Health Center (WHC) at UC Davis. The WHC has a Memorandum of Understanding with OSPR related to the OWCN for the establishment and equipping of wildlife rescue and rehabilitation stations, and providing services for the rescue and rehabilitation of oiled wildlife. Specifically, this Memorandum states that " in the event of any oil spill that impacts or threatens to impact the marine waters of the state, the WHC will provide to the Administrator, upon request, the OWCN Director and administration and coordination of all available trained OWCN personnel to provide services for the rescue, medical treatment, and rehabilitation of oiled marine wildlife."

OWCN maintains a corps of veterinarians, paid staff, and professionally-trained volunteers. OWCN has currently enlisted more than 30 academic, private non-profit, and rehabilitation organizations (OWCN Member Organizations) to actively participate during oil spill responses, and includes 10 permanent wildlife care facilities along the California coast (see Figure 3 and Table 2) for use during a spill. During a spill, if a particular wildlife care facility becomes overwhelmed, additional facilities can be utilized. For more information on the OWCN, see the OWCN website at www.owcn.org.

The Recovery, Field Stabilization, Care & Processing, and Hazing Groups are typically staffed and managed by the OWCN. Through regular training programs, the OWCN maintains a corps of pre-trained volunteers with training in wildlife capture techniques as well as HAZWOPER certification.

Table 2: OWCN Primary Care Facilities

Organization	County	Year Became Member Organization	Designed Oiled Animal Capacity
Northcoast Marine Mammal Center, Crescent City	Del Norte	Nov. 1995	15 marine Mammals
Humboldt State University, Arcata	Humboldt	Jan. 1997	400 birds
The Marine Mammal Center, Sausalito	Marin	Dec. 1995	40 marine mammals 10 sea otters
San Francisco Bay Oiled Wildlife Care and Education Center (OSPR/IBR), Cordelia	Solano	May 2000	1000 birds
Marine Wildlife Veterinary Care Research Center (OSPR), Santa Cruz	Santa Cruz	July 1997	125 sea otters, 50 birds, 10 other marine mammals
Pacific Wildlife Care, Morro Bay	San Luis Obispo	Apr. 2000	200 birds
Los Angeles Oiled Bird Care and Education Center (OSPR/IBR), San Pedro	Los Angeles	Sept. 1999	1000 birds
Marine Mammal Care Center at Fort MacArthur, San Pedro	Los Angeles	Nov. 1995	20 marine mammals
Wetlands and Wildlife Care Center of Orange County, Huntington Beach	Orange	Mar. 1997	400 birds
Sea World San Diego, San Diego	San Diego	Dec. 1996	20 marine mammals including sea otters; 400 birds; sea turtles as needed

Figure 3: Map of Oiled Wildlife Care Facilities and Member Organizations (as of Oct 2015)

5.3 Volunteers

Wildlife Branch personnel may include "pre-trained" volunteers, "convergent" volunteers, or both, whose training may range from none to highly skilled. Most "pre-trained" volunteers used in animal care activities are provided by OWCN Member Organizations and managed by the OWCN Volunteer Coordinator. Management of convergent (previously un-trained) volunteers that may be utilized for tasks both related and unrelated to wildlife capture and rehabilitation is coordinated by the OSPR Statewide Volunteer Coordinator. During a spill, the WBD, in coordination with the Wildlife Care & Processing Group and Recovery Group Supervisors, will determine the need for volunteer assistance and coordinate with the OWCN and OSPR Volunteer Coordinators.

The Coordinators will establish volunteer outreach mechanisms (e.g., toll free numbers, public information announcements, press releases) and manage the influx of convergent and pre-trained volunteers. If there is a need for an Emergency Volunteer Center, the State and the OWCN Volunteer Coordinator may work directly with an OWCN Member Organization volunteer coordinator for additional staffing, facility use and call-out. The Member Organization's volunteer coordinator must be trained by both the State Volunteer Coordinator and the OWCN Volunteer Coordinators on the protocols for volunteer activation during an oil spill response. Convergent volunteers who wish to assist with oiled wildlife will be jointly screened by the OWCN and OSPR Volunteer Coordinators. Volunteers must have proper health and safety training per the Site Safety Plan. Volunteers working under the auspices of the DFW must also meet all safety requirements of the DFW and OWCN.

5.4 Wildlife Experts/Contractors

There are a number of experts and contractors that can assist with Wildlife Branch operations (e.g., for wildlife reconnaissance). OSPR maintains this list of experts in a separate document titled "List of Experts and Contractors for Wildlife Response", which is updated on a regular basis. Included in this category are staff of other resource agencies, including the USFWS, National Park Service, NOAA, California State Parks, other regional agencies, and contractors.

5.5 Potential Responsible Party

A potential responsible party (contingency plan holder) can (and typically does) name the OWCN in its contingency plan(s) as its identified wildlife response organization. The responsible party may include other wildlife care staff in Wildlife Branch positions through the UC. All personnel and equipment supplied by the responsible party to the Wildlife Branch will be managed by the WBD under the UC.

5.6 Personnel Safety

Worker safety must be considered before any wildlife reconnaissance, protection or retrieval effort is conducted. Safety hazards that may confront Wildlife Branch personnel include, but are not limited to, toxic vapors, fire hazard, hazardous weather and seas, unsafe footing, diseases or injuries inflicted by wild animals, and fatigue. Therefore, all Wildlife Branch activities must conform to the Site Safety Plan for the response, and all personnel involved in Wildlife Branch operations must have appropriate job-specific safety training for the tasks to be performed. They must be adequately protected with the appropriate personal protective equipment (PPE). To minimize dangers associated with fatigue, Group Supervisors should establish appropriate staffing rotations.

Personnel conducting wildlife care at the rehabilitation and/or stabilization facility and/or wildlife transportation must typically have Hazard Communication (HAZCOM) training. Personnel conducting wildlife recovery/capture activities must have, at a minimum, current 24-hour HAZWOPER training, unless otherwise approved by the Site Safety Officer (e.g., if they will not be entering a "hot zone").

Those people involved with animal handling should be trained in techniques that ensure worker safety and present the least amount of stress to wildlife. All personnel involved in wildlife capture are required to have taken the OWCN Recovery training (unless otherwise approved by the OWCN or WBD), which includes information on topics such as proper PPE, how to handle wildlife, and protocols related to zoonotic diseases.

A spill-specific Site Safety Plan can be modified to address specific wildlife response operational needs. A sample wildlife-specific Site Safety Plan is provided in Appendix II; the wildlife portion of the Site Safety Plan is typically prepared by the WBD and submitted to the Site Safety Officer for approval and incorporation into the Site Safety Plan. Wildlife Branch personnel are required to read and sign the Site Safety Plan prior to commencing activities. In the event a Site Safety Plan has not yet been prepared, the Initial Site Safety Plan should be read and signed. In addition, a task-specific "Tailgate" Safety Meeting should be conducted by the Supervisors/Leaders each day prior to daily activities.

5.7 Interaction with Local Agencies

Local government agencies and local NGOs can potentially help staff the Wildlife Branch and provide logistical support. Interactions with local agencies and other groups is typically conducted through the Liaison Officer. Local agencies can provide local expertise on sensitive sites (and are typically integrated into the Environmental Unit of the Planning Section for this purpose), can assist with staffing the Wildlife Reporting Hotline, can assist with beach closures to reduce disturbance to wildlife, and can provide staging and/or stabilization sites for Wildlife Recovery and Field Stabilization. Although they typically do not have HAZWOPER certification, local animal control agencies can potentially provide logistical support.

6. PREVENTING AND REDUCING IMPACTS TO WILDLIFE AND OTHER RESOURCES DURING SPILL RESPONSE

6.1 Considerations for Implementing Response Countermeasures (Offshore and Shoreline Oil Recovery and ARTs)

The primary objective of the Wildlife Branch is to minimize wildlife impacts, which includes helping to prevent injury to wildlife or habitats from both the oil and from the implementation of response countermeasures, as well as providing the best achievable care to impacted wildlife. Response countermeasures include mechanical offshore recovery methods, applied response technologies (ARTs, such as dispersants), and shoreline recovery techniques. The application of these countermeasures, whether for wildlife protection or for other aspects of spill response, should be guided by the sensitivity and vulnerability of wildlife and habitats in the spill response area. Similarly, staging areas and site access for equipment and response personnel should be selected carefully to avoid collateral impacts.

The simplest means of protecting wildlife from an oil spill is to prevent oil from reaching areas where wildlife are concentrated, through coordination by the Planning Section with the Operations Section. In many cases, this can be accomplished by tailoring the use of standard spill response equipment and techniques to increase protection of wildlife. The Planning Section, with input from the Wildlife Branch when possible, will evaluate spill response countermeasures for their potential to cause collateral harm to wildlife, and propose the alternative that is least harmful to wildlife and habitats.

The Resources-at-Risk Specialist in the Planning Section's Environmental Unit, in close coordination with local experts and the WBD, should identify known wildlife concerns (e.g., areas containing threatened and endangered species) and use available wildlife reconnaissance data (e.g., identification of large flocks of pelagic birds) to help the Planning Section evaluate environmental tradeoffs from different response strategies. This must be accomplished quickly but must also be consistent with the overall response needs.

Anytime ARTs (e.g., dispersants or *in-situ* burning) are considered, special attention should be paid to their potential effects on wildlife, their method of application, and monitoring during application. Dispersants should not be applied directly to concentrations of seabirds, marine mammals, or sea turtles within or outside of an oil slick. There is a separate California Dispersant Use Plan (section 4900 of the Region IX Regional Contingency Plan) that details conditions and constraints for dispersant use, including separate wildlife reconnaissance. If *in-situ* burning is considered, the plan should include wildlife hazing within the burn area and capturing wildlife at sea if animals are already oiled. During a spill response, approval to use dispersants or *in-situ* burning would be evaluated and approved of by the Regional Response Team and UC on a case-by-case basis. Wildlife reconnaissance ("wildlife spotters") and wildlife hazing associated with ARTs would be coordinated by the Environmental Unit of the Planning Section or ART Specialist appointee per the EUL, with assistance from the Wildlife Branch.

6.2 Reducing Disturbance-Related Impacts to Wildlife and Other Resources During Spill Response

In order to recover as many spill-affected animals as possible, the WBD should identify actions to reduce human-related disturbances of wildlife along oiled beaches, shorelines, and known stranding areas. Live oiled or injured wildlife typically will not stand on a shoreline that has constant intensive human activity. This causes the wildlife to stay at sea or search for more isolated locations. A delay in stranding can cause a delay in capture and subsequent rehabilitation that, in turn, can decrease chances of survival. Thus, when feasible, it is advisable for the UC to have the Liaison Officer work with trustees or local jurisdictions to close such areas to the public (especially to off-leash dogs), and allow access only to response personnel. OSPR wardens, DFW Natural Resource Volunteers, local law enforcement, and/or convergent volunteers can potentially be used to help direct the general public away from impacted areas.

It is also important that response activities do not adversely affect wildlife (particularly special-status species) or sensitive habitats. To minimize collateral damage, the WBD may assist the Environmental Unit of the Planning Section in identifying locations where response actions may disturb wildlife. Personnel involved in response activities should be alerted via Special Instructions in block 8 on ICS-204-CG Work Assignments, or via maps and detailed instructions on ICS-204a, to the presence of nesting birds, pinniped pupping and haul-out areas, listed critical habitat, and other sensitive habitats. Sensitive habitats should be posted and access should be restricted. The WBD and the Resources-at-Risk Specialist in the Planning Section's Environmental Unit should consult and work in conjunction with other trustee agencies and land managers (e.g. the NPS, DPR, National Marine Sanctuaries, and National Wildlife Refuge System) in order to reduce or eliminate collateral damages to natural resources during response efforts. To avoid adverse impacts to cultural resources, the WBD should coordinate with the Historic Property Specialist (see RCP 2014 Section 1700 National Historic Preservation Act at: http://www.rrt9.org/go/doctype/2763/49383). This coordination typically occurs through the Planning Section.

Special protocols have been developed for response within potential habitat for Ridgway's Rails, Snowy Plovers, and Least Terns (see Appendix II). At the Farallon Islands National Wildlife Refuge, special protocols have been developed that greatly limit spill response activities to minimize impacts to sensitive wildlife resources (Appendix IId). Similarly, at Channel Islands National Park, biosecurity protocols have been established to minimize the possibility of introduction of non-native species (Appendix IIe), and wildlife Recovery activities should occur only after consultation with National Park natural resource personnel (see the Los Angeles/Long Beach ACP Section 9814 for more information). For other particularly sensitive sites, such as islands used by nesting birds (e.g., Año Nuevo Island, San Clemente Island, or Castle Rock NWR), special protocols should be developed through consultation with appropriate trustees early in the response.

The public and response personnel outside of the Wildlife Branch should be instructed not to attempt to capture, disturb, or dispose of oiled wildlife, but to contact the Oiled Wildlife

Reporting Hotline to report the stranding. The public should also be alerted (via the Joint Information Center) to leave both live stranded animals and dead animals in place and undisturbed so that they may be retrieved by trained response personnel. It is particularly important to keep dogs away from incapacitated wildlife. The locations of stranded animals can be flagged by cleanup personnel to alert wildlife recovery teams and aid in expedited recovery.

6.3 Pre-emptive Capture of Wildlife

In rare cases, pre-emptive capture of wildlife should be considered in situations when significant numbers of species of high conservation value are at risk. The primary factor limiting the efficacy of this technique is the question of what to do with the animals once they are captured. The sea otter contingency plan (Appendix II), for example, allows for this technique, and facilities exist (including mobile floating pens) in which otters can be housed for the duration of a spill event. However, OWCN facilities may become filled with oiled birds and mammals during larger spills; thus before pre-emptive capture is considered, a site for relatively long-term care in captivity should be identified (animals captured and released elsewhere could return to the site of the spill). Pre-emptive capture may be prioritized for certain special-status species for which loss of even a few individuals could have population-level consequences, or for birds that are flightless during wing-feather molt (e.g., alcids during late summer/fall). For special-status species, pre-emptive capture may include the collection of eggs or chicks for captive rearing (see Appendix II). Pre-emptive capture of marine or anadromous fishes, sea turtles, or abalone would be conducted in coordination with NMFS.

Pre-emptive capture would be conducted by a special team of the Wildlife Hazing Group. Pre-emptive capture would require prior approval from the UC and relevant Trustee agencies, and could require special permits.

6.4 Wildlife Capture Guidelines; Preventing Negative Impacts

The Recovery Group Supervisor will provide Recovery teams with information on which birds should be captured; an effort should be made to avoid capturing birds that are not impacted by the spill. For example, sea ducks roosting on the shoreline may seem abnormal, but if no oil is observed and the birds are otherwise acting normally, they should not necessarily be captured during spill response.

6.5 Preventing the Introduction of Invasive Species

Invasive species can cause harm to the environment, economy, and human health. They are non-native plants or plant parts such as seeds, animals, or microbes with characteristics that include the ability to quickly establish, reproduce, and spread. During spill response, the introduction of an invasive species via a responder or equipment can cause more damage to wildlife and habitat than the oil spilled. It is far more cost effective to prevent the arrival of introduced species than to attempt to eradicate them after arrival. In many cases, it may be impossible to eliminate an

invasive pest species once it has arrived. DFW has an entire program dedicated to the preventing the spread of Quagga Mussels and New Zealand Mudsnails in California State Waters. DFW Guidelines for preventing the spread of these aquatic invasive species are located in Appendix lli. Biosecurity Protocols for preventing the introduction of invasive species to Channel Islands National Park are located in Appendix lle. These guidelines should be followed when working in any California location, most critically in areas that are biologically rich or critical habitat.

7. ACTIVATION AND DEMOBILIZATION OF WILDLIFE BRANCH RESPONSE

7.1 Activation of OSPR Wildlife Response Resources

OSPR's early response Wildlife Branch operations will be guided by the ACP and this Plan, and then will be integrated with the UC as it is formed. Because OSPR has the mandate and the capacity, the UC may anticipate that OSPR will mobilize its wildlife response resources and begin operations (starting with Reconnaissance) immediately upon notification of a significant spill. When taking early actions, OSPR will maintain close coordination with the evolving UC and in particular with the Situation Unit Leader. Such early but prudent initiation of a wildlife response will ensure timely mobilization of dedicated resources, will minimize adverse effects upon wildlife, and will contribute to effective cost containment.

Initially, essential roles (Table 1) will be filled by on-scene personnel. As response actions become more involved, OSPR and OWCN staff will be brought in from other locations to help fill Wildlife Branch roles. OSPR and OWCN both maintain lists of available personnel that have been trained for various ICS positions in spill response. As soon as feasible, but in any event after the first 24 hours of a spill, the acting WBD will direct the development of the Wildlife Branch operations element of the Incident Action Plan, will submit it for review and approval by the UC, and will begin coordinating with the other trustee agencies for staffing needs, as warranted.

7.2 Activation of OWCN Wildlife Branch Response Resources

The OWCN operates in conjunction with OSPR with respect to Wildlife Branch Response activities and, if needed, activation can be virtually simultaneous. OWCN may be activated by OSPR's On-Duty Officer (ODO), by the State On-Scene Coordinator, by the WBD, or by the Responsible Party (if OWCN is listed in RP's contingency plan). Through the OWCN, dedicated wildlife response equipment and specially-trained response personnel can be deployed immediately in combinations dictated by spill-specific circumstances (see Table 1). In consultation with the UC and the WBD, the OWCN Director (or his or her designee) may begin early notification actions of OWCN response personnel and facilities, placing them on stand-by, and enabling them to prepare their facilities. Activation of field response teams occurs after sufficient details on the spill are available to allow OWCN to determine what resources to deploy and where.

OSPR and OWCN can be contacted directly regarding spill notification and Wildlife Branch response at any one of the following telephone numbers:

OWCN Response Hotline:	(877) 823-6926 (877) UCD-OWCN
DFW OSPR/California Department of Parks and Recreation Dispatch (NORCOM):	(916) 358-1312
CalOES Hotline:	(800) OILS-911 and (916) 845-8911

7.3 Criteria for Activating Wildlife Branch Operations

When there is a reported spill, the decision of whether to activate Wildlife Branch operations generally will be based on the expertise of the responding OSPR Environmental Scientist. In short, any time that wildlife impacts (even one animal) are expected from a reported spill, a Wildlife Branch response should be initiated. However, the following conditions should be taken into consideration regarding activating Wildlife Branch operations:

- Product type (e.g., refined products are more acutely toxic);
- Extent of release, size of area impacted;
- Presence of Listed Species;
- Numbers and types of animals in the area;
- Habitat type (e.g., wetland);
- Seasonality (breeding season, migration period); and/or
- Weather and sea state.

OSPR/OWCN will sometimes receive notification directly about oiled wildlife in the absence of a reported spill. OSPR maintains internal guidelines for response to "mystery events" but, for the most part, notification and activation activities listed below should be followed. The decision whether to activate will then be made by the appropriate OSPR representative (e.g., WBD or other OSPR Scientific staff, in consultation with OWCN). In such events, if the source of the oiling is unknown, samples of oiled feathers/fur will typically be sent to the OSPR Petroleum Chemistry Lab for immediate testing (see internal OSPR Guidelines for Wildlife Response to "Mystery Spill "Events). Internal guidelines for mystery events match the guidelines below in terms of thresholds for activation.

There are two levels of initial response to oiled wildlife events: Notification and Activation. Notification involves notifying the OWCN of the potential for Activation, but does not involve any actual mobilization of resources, and no costs are incurred. Early Notification of OWCN is always important to allow prompt mobilization if Activation is required. Prior to Activation, the OWCN may put staff and/or an OWCN facility on stand-by. Activation involves actual mobilization of resources (and the incurring of appropriate costs) for wildlife response, and may include initial mobilization of Recovery teams, Reconnaissance, Hazing and Field Stabilization groups, and subsequent Care & Processing personnel and facilities.

7.3.1 OWCN Notification

If there is a reported spill (i.e., reported to CalOES) with potential risk to wildlife, the OSPR on-call staff (the responding scientist or ODO) should Notify the OWCN (877-823-6926).

If there is no report of a spill but oiled wildlife are reported to the OWCN (typically via its Member Organizations), the OWCN should contact NORCOM to Notify the OSPR on-call staff if and when:

- At least 3 live or dead oiled animals are reported from the same general location in a single day,
- There are reports from 3 consecutive days of 1 or more oiled animal collected per day from the same general location, or
- There is at least 1 live or dead oiled sea otter reported.

The on-call OSPR warden and scientist, in consultation with the OWCN, will determine if there is a need to Activate Wildlife Branch operations, the degree of Activation, and whether to notify CalOES. These actions will occur on a case-by-case basis. The on-call scientist assumes the role of WBD immediately (i.e., even in the absence of a UC), but may request a more experienced WBD as the situation develops further. The OSPR Wildlife Response Coordinator should also be notified if the criteria above are met.

7.3.2 OWCN Activation

If there is a declared spill (i.e., reported to CalOES) with observed or imminent impacts to wildlife, the OSPR responding scientist should contact OWCN (877-823-6926) for Activation. Activation of OWCN should occur after sufficient information about the spill is known to allow for appropriate initial staffing levels and equipment resources to be determined.

If there is no reported spill but oiled wildlife are reported either to the OWCN (typically via its Member Organizations) or through other sources of information, the OWCN and OSPR should mobilize resources and activate Wildlife Branch operations (and CalOES should be contacted to notify other response agencies and a CalOES Hazardous Materials Spill Notification Report should be filed) in most cases if and when:

- At least 5 live or dead oiled animals have been confirmed in a single day from the same general location;
- There are confirmed reports from 3 consecutive days of at least 2 live or dead oiled animals per day from the same general location,;
- There is 1 or more live oiled pinniped or cetacean in obvious distress; and/or
- There is 1 or more oiled sea otter(s) (live or dead) observed.

Samples of oiled feathers or fur should be sent to the OSPR Petroleum Chemistry Lab immediately for testing to determine if the source is likely anthropogenic as opposed to natural petroleum seepage.

These guidelines allow for some flexibility, and the ultimate decision to activate Wildlife Branch operations should be based on group discussions with OSPR (including the Wildlife Response Coordinator) and the OWCN.

7.4 Criteria for Deactivating/Demobilizing Wildlife Branch Operations

The WBD, in consultation with the Planning Chief, the Recovery Group Supervisor, and other trustee agencies, will determine at what point to deactivate Wildlife Recovery in total or for given operational divisions. Typically, Recovery will continue until field effort results in no additional captures for one or more days. Individual "Hot Shot" Recovery teams may be established to only respond to reports of oiled wildlife and not conduct regional surveys. These teams may either be established and staged in the field or, where logistically able, placed on stand-by at facilities.

The WBD may extend Recovery within a division or geographic area if warranted by a change in weather or sea state conditions (e.g., on-shore winds, extreme tidal fluctuations, or both) that could likely bring more oiled wildlife ashore. Wildlife Branch operations will continue while there is any Recovery activity, or any animals are still in care. Wildlife Branch operations will be deactivated when no animals remain in care.

Upon conclusion of Wildlife Branch operations, its activities are demobilized, following standard checkout procedures identified through the ICS and coordinated with the UC (note: demobilization of other non-wildlife response activities is addressed in the ACP). Wildlife Branch operations demobilization occurs only after a conclusive determination by the WBD, in consultation with Wildlife Branch Group Supervisors and other trustee agencies and land managers, that recovery and care activities are no longer needed for wildlife affected by the spill. Demobilization of Wildlife Branch Groups and Strike Teams will generally lag behind that of response equipment and personnel for several reasons, such as animals remaining in rehabilitative care, the presence of residual oil, and the presence of visibly oiled animals.

One of the last resources of the UC to be demobilized will often be OWCN personnel, equipment and facilities used during the spill. Animals brought to the rehabilitation center late in the response may still require cleaning, treatment and rehabilitation. In general, the rehabilitation center will continue to operate for three weeks following admission of the last animal into rehabilitation. During that time, as more animals are released and fewer animals remain in care, personnel and equipment resources will be gradually demobilized. Before closing, after the last animal leaves care, the center will be decontaminated, sanitized, restocked and prepared for the next response.

APPENDICES TO THE WILDLIFE RESPONSE PLAN FOR OIL SPILLS IN CALIFORNIA

Appendix I. RESOURCES

a. Key Phone Numbers
b. List of Internal OSPR Resources
c. List of Internet Resources
d. List of Threatened and Endangered Coastal Species (animals only)
e. ALL State & Federally Listed Endangered & Threatened Animals of CA

Appendix II. SPECIAL PROTOCOLS & PLANS

a. Guidelines for Spill Response involving Western Snowy Plovers
b. Guidelines for Spill Response involving California Least Terns
c. Guidelines for Spill Response involving Ridgway's Rails
d. Protocol for Wildlife Response at the Farallon Islands NWR
e. Biosecurity Requirements for the Channel Islands National Park
f. Sea Otter Oil Spill Contingency Plan
g. Wildlife-Specific Safety Plan
h. Guidelines for Spill Response involving Threatened and Endangered Fish
i. Guidelines for Preventing the Introduction of Invasive Species

Appendix III. FORMS

a. Wildlife Search Effort Log
b. Shoreline Wildlife Reconnaissance Survey Form
c. Wildlife Branch Daily Report Form
d. Processing Strike Team Forms
e. Volunteer Forms

APPENDIX I

RESOURCES

a. Key Phone Numbers
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APPENDIX Ia

KEY PHONE NUMBERS

General Response

DFW OSPR/CA Dept. Parks and Rec. Dispatch (NORCOM):	(916) 358-1312
US National Command Center:	(800) 323-7233
CalOES Oil Spill Hotline	(800) OILS-911 or (916) 845-8911
RRT 9 Coordinators – Susan Krala	(510) 437-2794
Lance Richmond	(415) 972-3022

OWCN/OSPR

OWCN Activation/Oiled Wildlife Hotline	(877)-823-6926
	(877)-UCD-OWCN
OSPR Volunteer Hotline	(800) 228-4544

USFWS

Primary contacts listed below; for complete listing see the "USFWS Oil and Hazardous Materials Spill Response Contacts" elsewhere in the RCP and in the OSPR internal resources.

Regional Response Coordinator - Damian Higgins	(916) 414-6548 (office)
	(916) 943-8529 (mobile)
Arcata Fish & Wildlife Office – Kathleen Brubaker	(707) 822-7201 (office)
(Del Norte, Humboldt, Mendocino, Siskiyou, Trinity Counties)	
Klamath Falls Fish & Wildlife Office – Daniel Blake	(541) 885-2512 (office)
(Modoc and Siskiyou Counties)	(541) 591-9905 (mobile)
Sacramento Fish & Wildlife Office – John Henderson	(916) 414-6595 (office)
(Central Valley, Sierra Nevada, S.F. Bay south to Santa Cruz)	(916) 799-0588 (mobile)
Ventura Fish & Wildlife Office – Jenny Marek	(805) 644-1766 x335 (office)
(Monterey County south to Los Angeles County)	(805) 612--2783 (mobile)
Carlsbad Fish & Wildlife Office – Carol Roberts	(760) 431-9440 x271 (office)
(Los Angeles south to San Diego County)	(760) 607-9768 (mobile)

NOAA-NMFS

California Marine Mammal Stranding Network	(562) 506-4315 (24/7 mobile)
Coordinator – Justin Viezbicke/Justin Greenman	

APPENDIX Ib

LIST OF INTERNAL OSPR RESOURCES

The following resources are not included in these appendices to the Wildlife Response Plan, but can be found on the OSPR internal server as the OSPR Wildlife Response Resources for reference. These documents are generally updated more frequently than the Wildlife Response Plan, and have details that are not necessary to include here.

1. Job Aids

- 1.1 Guidelines for Wildlife-Related Public Relations
- 1.2 List of Literature Related to Wildlife Response
- 1.3 List of Resources-at-Risk (RAR) Sources of Information
- 1.4 Tips and Considerations for the Wildlife Branch Director
- 1.5 Sample Wildlife Response Plan
- 1.6 Sample Completed ICS Form 204
- 1.7 Staff Availability Forms

2. OWCN Guidelines

- 2.1 OWCN Recovery & Transportation Guidelines
- 2.2 OWCN Wildlife Capture Techniques
- 2.3 OWCN Protocols for Care of Oil-affected Birds
- 2.4 OWCN Protocols for Care of Oil-affected Marine Mammals
- 2.5 OWCN Response Personnel Compensation and Travel Reimbursement Policy

3. Wildlife Processing Protocols

4. OSPR Guidelines

- 4.1 OSPR Guidelines for Wildlife Response During “Mystery Spill” Events in California
- 4.2 OSPR Guidelines for Aerial Survey of Wildlife
- 4.3 OSPR Guidelines for Oil Sample Collection and Shipment

5. Contact Information

- 5.1 OSPR List of Experts and Contractors for Wildlife Response
- 5.2 USFWS Oil and Hazardous Materials Spill Response Contacts (complete listing)
- 5.3 List of OSPR and OWCN Wildlife-Specific Equipment

6. MOUs

- 6.1 Federal Interagency MOU
- 6.2 USFWS Cooperative Agreement and MOU
- 6.3 NMFS MOA
- 6.4 BLM MOU regarding National Monuments
- 6.5 OWCN MOU between OSPR and University of California

APPENDIX Ic

INTERNET RESOURCES

General:

Wildlife Response Plan for California (and other misc. items):
http://www.wildlife.ca.gov/OSPR/Preparedness/Wildlife-Response

Area Contingency Plans (see sections 9800): http://www.wildlife.ca.gov/OSPR

Bird Hazing Manual; Techniques and Strategies for Dispersing Birds from Spill Sites (by W. Paul Gorenzel and Terrell P. Salmon) is available as a PDF document at:
http://anrcatalog.ucdavis.edu/pdf/21638.pdf

Oiled Wildlife Care Network: http://www.owcn.org

California Avian Data Center Spill Response Forms:
http://data.prbo.org/cadc2/index.php?page=oil-spill-response-tools

Resources-at-Risk:

ERMA (Emergency Resource Management Application) is a web-based Geographic Information System (GIS) tool that assists both emergency responders and environmental resource managers in dealing with incidents that may adversely impact the environment:
http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-response-management-application-erma/southwest-erma.html and https://erma.noaa.gov/southwest

California Wildlife Habitat Relationship (CWHR) Database is a predictive model for California's regularly occurring birds, mammals, reptiles and amphibians; and four aquatic habitats – Riverine, Estuarine, Lacustrine, Marine. Queries by location are possible (e.g., county), T&E Status: http://www.dfg.ca.gov/biogeodata/cwhr/

Lists of Threatened and Endangered Species Occurring in California (animals only):
http://www.dfg.ca.gov/wildlife/nongame/

Geographical Response Plans: http://www.wildlife.ca.gov/OSPR

U.S. Fish and Wildlife Service's "IPac" is a system is designed for public access to information about the natural resources for which the U.S. Fish and Wildlife Service has trust or regulatory responsibility. Examples include Threatened and Endangered species, migratory birds, National Refuge lands, and NWI Wetlands: http://ecos.fws.gov/ipac/

NOAA NMFS' Habitat Protection – Essential fish habitat includes all types of aquatic habitat—wetlands, seagrasses, rivers—where fish spawn, breed, feed, or grow to maturity. Essential Fish Habitat Mapper is an on-line GIS mapping tool:
http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html

California Natural Diversity Data Base (CNDDB) is a program (available by CDFW subscription only) that inventories the status and locations of *some* rare plants and animals in California. ***WARNING:*** this database is not comprehensive, it represents positive detections only, i.e., a blank spot on the map does not indicate absence: http://www.dfg.ca.gov/biogeodata/cnddb/

Environmental Sensitivity Index maps: http://response.restoration.noaa.gov/
(under "pollutants in the marine environment" go to "assessing risk to ecological resources", work your way through to downloading PDF maps…)

Northern California Brown Pelican Roost Site Atlas:
https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=19934&inline=true

Biogeographic Assessment off North/Central California (for National Marine Sanctuaries):
http://ccma.nos.noaa.gov/products/biogeography/canms_cd/welcome.html
(look at analyses/maps)

Biogeographic Assessment of the Channel Islands National Marine Sanctuary:
http://www2.coastalscience.noaa.gov/publications/detail.aspx?resource=G8rjtyDjlx0ZPw3OCCWrsRE7hDUTUAspqAJpyMdpXpM=
(scroll to bottom to click on and open PDF)

Western Snowy Plover recovery Units (approximate overview of nesting sites):
http://www.westernsnowyplover.org/recovery_plan.html
(click on Appendices Part 2 and 3)

APPENDIX Id

List of Threatened and Endangered Coastal Species Occurring in California (animals only, as of March 2015). For updated information, see http://www.dfg.ca.gov/wildlife/nongame .

Scientific Name	English Name	Federal Endangered Species Act	California Endangered Species Act	Habitat	Range
Birds					
Phoebastria albatrus	Short-tailed Albatross	EN		Ocean	Throughout Pacific
Pelecanus occidentalis californicus	California Brown Pelican	Delisted	Delisted	Ocean/bays	Throughout Pacific
Sternula antillarum browni	California Least Tern	EN	EN	Ocean/bays	North to SF Bay (summer)
Brachyramphus marmoratus	Marbled Murrelet	TH	EN	Ocean	South to Morro Bay
Synthliboramphus scrippsi	Scripps's Murrelet		TH	Ocean	Throughout CA
Synthliboramphus hypoleucus	Guadalupe Murrelet		TH	Ocean	Throughout CA
Rallus longirostris obsoletus	California Ridgway's Rail	EN	EN	Salt marsh	SF Bay
Rallus longirostris flavipes	Light-footed Ridgway's Rail	EN	EN	Salt marsh	Southern CA coast
Laterallus jamaicensis coturniculus	California Black Rail		TH	Salt marsh	SF Bay
Charadrius nivosus	Western Snowy Plover (Pacific Coast)	TH		Beaches/wetlands	Throughout CA
Haliaetus leucocephalus	Bald Eagle	Delisted	EN	Bays (rare)	Throughout CA
Gymnogyps californianus	California Condor	EN	EN	Various	Big Sur area (on coast)
Passerculus sandwichensis beldingi	Belding's Savannah Sparrow		EN	Salt marsh	Southern CA coast
Mammals					
Reithrodontomys raviventris	Salt-marsh harvest mouse	EN	EN	Salt marsh	SF Bay
Enhydra lutris nereis	Southern sea otter	TH		Ocean	SF Bay to Southern CA
Arctocephalus townsendi	Guadalupe fur seal	TH	TH	Ocean/islands	Very rare on Channel Islands
Eumatopias jubatus	Steller sea lion (eastern)	Delisted		Ocean/islands	South to central CA
Balaenoptera musculus	Blue whale	EN		Ocean	Throughout Pacific
Balaenoptera physalus	Fin whale	EN		Ocean	Throughout Pacific
Megaptera	Humpback	EN		Ocean	Throughout

Scientific Name	English Name	Federal Endangered Species Act	California Endangered Species Act	Habitat	Range
novaengliae	whale				Pacific
Orcinus orca	Killer whale (Southern res. DPS)	EN		Ocean	South to Monterey Bay
Physeter glacialis	Sperm whale	EN		Ocean	Throughout Pacific
Fish					
Acipenser medirostris	Green sturgeon (southern DPS)	TH		Rivers/ocean	Sacramento River/ delta/ San Francisco Bay
Oncorhynchus mykiss	Steelhead (various DPS)	TH/EN		Rivers/streams	South to LA County
Oncorhynchus kisutch	Coho salmon (various DPS)	TH/EN	TH/EN	Rivers/streams	South to central CA
Oncorhynchus tshawytscha	Chinnok salmon (various DPS)	TH/EN	TH/EN	Rivers/ocean	South to SF Bay
Hypomesus transpacificus	Delta smelt	TH	EN	Brackish delta	San Francisco Bay Delta
Spirinchus thaleichthys	Longfin smelt (SF Bay Delta pop.)	Candidate	TH	Brackish delta	San Francisco Bay Delta
Thaleicthys pacificus	Pacific eulachon (southern DPS)	TH		Rivers/ocean	South to northern CA
Eucyclogobisu newberryi	Tidewater goby	EN		Coastal lagoons	Throughout CA
Invertebrates					
Haliotus cracherodii	Black abalone	EN		Rocky subtidal	Throughout CA
Haliotus sorenseni	White abalone	EN		Rocky subtidal	North to Pt. Conception
Syncaris pacifica	California freshwater shrimp	EN	EN	Streams	North SF Bay area
Amphibians					
Rana aurora draytonii	California red-legged frog	TH		Ponds/ streams/ coastal lagoons	North to Sonoma County
Reptiles (sea turtles)					
Chelonia mydas	Green sea turtle	TH		Ocean	Rare in southern CA
Dermochelys coriacea	Leatherback sea turtle	EN		Ocean	Throughout CA
Caretta caretta	Loggerhead sea turtle	EN		Ocean	Rare throughout CA
Lepidochelys olivacea	Olive Ridley sea turtle	EN		Ocean	Rare in southern CA

*** Codes:** EN = Endangered, TH = Threatened

APPENDIX Ie

List of ALL State & Federally Listed Endangered & Threatened Animals of California (July 2015). For updated information, see http://www.dfg.ca.gov/wildlife/nongame/.

State of California
The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Biogeographic Data Branch
California Natural Diversity Database

STATE & FEDERALLY LISTED ENDANGERED & THREATENED ANIMALS OF CALIFORNIA
July 2015

This is a list of animals found within California or off the coast of the State that have been classified as Endangered or Threatened by the California Fish & Game Commission (state list) or by the U.S. Secretary of the Interior or the U.S. Secretary of Commerce (federal list). The federal agencies responsible for listing are the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS).

	State Listing		Federal Listing	
Gastropods				
Trinity bristle snail *Monadenia infumata setosa*[1]	ST	10-02-80		
Morro shoulderband (=banded dune) snail *Helminthoglypta walkeriana*			FE[2]	1-17-95
White abalone *Haliotis sorenseni*			FE[3] FE	11-16-05 6-28-01
Black abalone *Haliotis cracherodii*			FE[4] FE	4-13-11 2-13-09
Crustaceans				
Riverside fairy shrimp *Streptocephalus woottoni*			FE	8-03-93
Conservancy fairy shrimp *Branchinecta conservatio*			FE	9-19-94
Longhorn fairy shrimp *Branchinecta longiantenna*			FE	9-19-94
Vernal pool fairy shrimp *Branchinecta lynchi*			FT	9-19-94
San Diego fairy shrimp *Branchinecta sandiegonensis*			FE	2-03-97
Vernal pool tadpole shrimp *Lepidurus packardi*			FE	9-19-94
Shasta crayfish *Pacifastacus fortis*	SE ST	2-26-88 10-02-80	FE	9-30-88
California freshwater shrimp *Syncaris pacifica*	SE	10-02-80	FE	10-31-88
Insects				
Zayante band-winged grasshopper *Trimerotropis infantilis*			FE	2-24-97
Mount Hermon June beetle *Polyphylla barbata*			FE	2-24-97
Casey's June beetle *Dinacoma caseyi*			FE	10-24-11
Delta green ground beetle *Elaphrus viridis*			FT	9-15-80
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*			FT	9-15-80
Ohlone tiger beetle *Cicindela ohlone*			FE	10-03-01

	State Listing		Federal Listing	
Kern primrose sphinx moth *Euproserpinus euterpe*			FT	5-09-80
Mission blue butterfly *Plebejus icarioides missionensis*[1]			FE	6-08-76
Lotis blue butterfly *Plebejus anna lotis*[2]			FE	6-08-76
Palos Verdes blue butterfly *Glaucopsyche lygdamus palosverdesensis*			FE	8-01-80
El Segundo blue butterfly *Euphilotes battoides allyni*			FE	6-08-76
Smith's blue butterfly *Euphilotes enoptes smithi*[3]			FE	6-08-76
San Bruno elfin butterfly *Callophrys mossii bayensis*[4]			FE	6-08-76
Lange's metalmark butterfly *Apodemia mormo langei*			FE	6-08-76
Bay checkerspot butterfly *Euphydryas editha bayensis*			FT	10-19-87
Quino checkerspot butterfly *Euphydryas editha quino (=E. e. wrighti)*			FE	1-16-97
Carson wandering skipper *Pseudocopaeodes eunus obscurus*			FE	8-07-02
Laguna Mountains skipper *Pyrgus ruralis lagunae*			FE	1-16-97
Callippe silverspot butterfly *Speyeria callippe callippe*			FE	12-05-97
Behren's silverspot butterfly *Speyeria zerene behrensii*			FE	12-05-97
Oregon silverspot butterfly *Speyeria zerene hippolyta*			FT	10-15-80
Myrtle's silverspot butterfly[5] [6] *Speyeria zerene myrtleae*			FE	6-22-92

[1] *Synonymous with Icaricia icarioides missionensis.*
[2] *Synonymous with Plebejus idas lotis and Lycaeides argyrognomon lotis.*
[3] *Synonymous with Philotes enoptes smithi and Shijimiaeoides enoptes smithi.*
[4] *Synonymous with Incisalia fotis bayensis and Callophrys fotis bayensis.*
[5] The USFWS and others have not yet determined if the taxonomic expansion by Emmel and Emmel (1998) into *S. z. myrtleae* and *S. z. puntareyes* is warranted. *Speyereia zerene* along the coast of Marin and Sonoma counties are Federally Endangered under the subspecies concept in the 1992 listing.
[6] Includes all spawning populations south of the Eel River.

	State Listing		Federal Listing	
Delhi Sands flower-loving fly *Rhaphiomidas terminatus abdominalis*			FE	9-23-93
Fishes				
Green sturgeon - southern DPS *Acipenser medirostris*			FT'0	6-06-06
Mohave tui chub *Siphateles bicolor mohavensis*[7]	SE	6-27-71	FE	10-13-70
Owens tui chub *Siphateles bicolor snyderi*[8]	SE	1-10-74	FE	9-04-85
Thicktail chub (**Extinct**) *Gila crassicauda*	**Delisted** SE	10-02-80 1-10-74		
Bonytail[9] *Gila elegans*	**SE** ST	1-10-74 6-27-71	FE	5-23-80
Clear Lake hitch *Lavinia exilicauda chi*	ST	12-26-14		
Colorado pikeminnow *Ptychocheilus lucius*	SE	6-27-71	FE	3-11-67
Modoc sucker *Catostomus microps*	**SE** ST	10-02-80 1-10-74	FPD **FE**	2-13-14 7-11-85
Santa Ana sucker *Catostomus santaanae*			FT[10]	5-12-00
Shortnose sucker *Chasmistes brevirostris*	**SE** ST	1-10-74 6-27-71	FE	8-17-88
Lost River sucker *Deltistes luxatus*	**SE** ST	1-10-74 6-27-67	FE	8-17-88
Razorback sucker *Xyrauchen texanus*	**SE** ST	1-10-74 6-27-71	FE	11-22-91
Delta smelt *Hypomesus transpacificus*	**SE** ST	1-20-10 12-09-93	FT[11]	3-05-93
Longfin smelt *Spirinchus thaleichthys*	ST	4-05-09		
Pacific eulachon - southern DPS *Thaleichthys pacificus*			FT FT	4-13-11[12 13] 5-17-10

[7] Listed by the State of California as *Gila bicolor mohavensis.*
[8] Listed by the State of California as: *Gila bicolor snyderi.*
[9] Federal common name: bonytail chub.
[10]Populations in the Los Angeles, San Gabriel, and Santa Ana River basins.
[11]Candidate for uplisting to Endangered by USFWS 5-15-13
[12]Eulachon was listed as Threatened by the NMFS in 2010 and by the USFWS in 2011.
[13]According to the American Fisheries Society Special Publication 29 (2004), "clarkii" has two i's.

	State Listing		Federal Listing	
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*[11]			FT FE	7-16-75 10-13-70
Paiute cutthroat trout *Oncorhynchus clarkii seleniris*			FT FE	7-16-75 3-11-67[14]
Coho salmon - south of Punta Gorda[15] *Oncorhynchus kisutch*	SE[16]	3-30-05	FE[17] FT	8-29-05 11-30-96
Coho salmon - Punta Gorda to the N. border of California[18] *Oncorhynchus kisutch*	ST[19]	3-30-05	FT2[20] FT	8-29-05 6-05-97
Steelhead - southern California DPS[21] *Oncorhynchus mykiss*			FE[22 23] FE	2-06-06 10-17-97
Steelhead - south central California coast DPS[21] *Oncorhynchus mykiss*			FT[24] FT	2-06-06 10-17-97
Steelhead - central California coast DPS[25] *Oncorhynchus mykiss*			FT[26]0 FT	2-06-06 10-17-97
Steelhead - California Central Valley DPS[27] *Oncorhynchus mykiss*			FT[28] FT	2-06-06 5-18-98
Steelhead - northern California DPS[29]			Ft[30]4	2-06-06

[14]All species with a list date of 03-11-67 were listed under the Endangered Species Preservation Act of 15 Oct 1966.

[15]The Federal listing is for central California coast Coho ESU and includes populations from Punta Gorda south to, and including, the San Lorenzo River as well as populations in tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River system.

[16]The Coho south of San Francisco Bay were state listed in 1995. In Feb 2004 the Fish and Game Commission determined that the Coho from San Francisco to Punta Gorda should also be listed as Endangered. This change was finalized by the Office of Administrative Law on 30 Mar 2005.

[17]The NMFS completed a comprehensive status review in 2005 reaffirming the status.

[18] The Federal listing is for southern Oregon/northern California coast Coho ESU and includes populations in coastal streams between Cape Blanco, Oregon and Punta Gorda, California.

[19] The Fish and Game Commission determined that the Coho from Punta Gorda to the Oregon border should be listed as Threatened on 25 Feb 2004. This determination was finalized by the Office of Administrative Law on 30 Mar 2005.

[20]The NMFS completed a comprehensive status review in 2005 reaffirming the status.

[21]Coastal basins from the Santa Maria River (inclusive), south to the U.S.-Mexico Border.

[22]The NMFS completed a comprehensive status review in 2006 reaffirming the status.

[23]Coastal basins from the Pajaro River (inclusive) south to, but not including, the Santa Maria River.

[24]The NMFS completed a comprehensive status review in 2006 reaffirming the status.

[25] Coastal streams from the Russian River (inclusive) to Aptos Creek (inclusive), and the drainages of San Francisco, San Pablo, and Suisun Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers; and tributary streams to Suisun Marsh including Suisun Creek, Green Valley Creek, and an unnamed tributary to Cordelia Slough (commonly referred to as Red Top Creek), exclusive of the Sacramento-San Joaquin River Basin of the California Central Valley.

[26]The NMFS completed a comprehensive status review in 2006 reaffirming the status.

[27]The Sacramento and San Joaquin Rivers and their tributaries.

[28]The NMFS completed a comprehensive status review in 2006 reaffirming the status.

[29] Naturally-spawned populations residing below impassable barriers in coastal basins from Redwood Creek in Humboldt County to, and including, the Gualala River in Mendocino County.

	State Listing		Federal Listing	
Oncorhynchus mykiss			FT	8-07-00
Little Kern golden trout *Oncorhynchus mykiss whitei*[31]			FT	5-15-78
Chinook salmon - winter-run[32] *Oncorhynchus tshawytscha*	SE	9-22-89	FE[33] FE FE	8-29-05 2-03-94 11-30-90
Chinook salmon - California coastal ESU[34] *Oncorhynchus tshawytscha*			FT[35] FT	8-29-05 11-15-99
Chinook salmon - spring-run[36] *Oncorhynchus tshawytscha*	ST	2-05-99	FT[37] FT	8-29-05 11-15-99
Bull trout[38] *Salvelinus confluentus*	SE	10-02-80	FT	12-01-99
Desert pupfish *Cyprinodon macularius*	SE	10-02-80	FE	4-30-86
Tecopa pupfish (**Extinct**) *Cyprinodon nevadensis calidae*	**Delisted** SE	1987 6-27-71	**Delisted** FE	2-16-82 10-13-70
Owens pupfish *Cyprinodon radiosus*	SE	6-27-71	FE	3-11-67
Cottonball Marsh pupfish *Cyprinodon salinus milleri*	ST	1-10-74		
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	SE	6-27-71	FE	10-13-70
Rough sculpin *Cottus asperrimus*	ST	1-10-74		
Tidewater goby *Eucyclogobius newberryi*			FE[39]	3-07-94

[30]The NMFS completed a comprehensive status review in 2006 reaffirming the status.

[31]Originally listed as *Salmo aguabonita whitei.* The genus *Salmo* was reclassified as *Oncorhynchus* changing the name to *Oncorhynchus aguabonita whitei.* However, recent studies indicate this is a subspecies of rainbow trout, therefore *Oncorhynchus mykiss whitei.*

[32]The federal designation is for Chinook salmon - Sacramento River winter-run ESU and described as winter-run populations in the Sacramento River and its tributaries in California.

[33]The NMFS completed a comprehensive status review in 2005 reaffirming the status.

[34]Rivers and streams south of the Klamath River to the Russian River.

[35]The NMFS completed a comprehensive status review in 2005 reaffirming the status.

[36] The State listing is for "Spring-run Chinook salmon *(Oncorhynchus tshawytscha)* of the Sacramento River drainage." The Federal listing is for Central Valley spring-run Chinook ESU and includes populations of spring-run Chinook salmon in the Sacramento River and its tributaries including the Feather River.

[37]The NMFS completed a comprehensive status review in 2005 reaffirming the status.

[38]Considered to be extirpated in California.

	State Listing		Federal Listing	
Amphibians				
California tiger salamander[40] *Ambystoma californiense*	ST	8-19-10	(FE) (FT)	
California tiger salamander - central California DPS *Ambystoma californiense*	(ST)		FT[41]	9-03-04
California tiger salamander - Santa Barbara County DPS *Ambystoma californiense*	(ST)		FE[45]	9-15-00
California tiger salamander - Sonoma County DPS *Ambystoma californiense*	(ST)		FE[45]	3-19-03
Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum*	SE	6-27-71	FE	3-11-67
Siskiyou Mountains salamander[46] *Plethodon stormi*	ST[47]	6-27-71		
Scott Bar salamander *Plethodon asupak*	ST[48]	6-27-71		
Tehachapi slender salamander *Batrachoseps stebbinsi*	ST	6-27-71		
Kern Canyon slender salamander *Batrachoseps simatus*	ST	6-27-71		
Desert slender salamander *Batrachoseps major aridus*[42 43 44 45 46]	SE	6-27-71	FE	6-04-73
Shasta salamander *Hydromantes shastae*	ST	6-27-71		

[39] See Federal Register 79(49):14340-14362, 13 Mar 2014, for proposed down-listing determination.
[40] The State listing refers to the entire range of the species.
[41] In 2004 the California tiger salamander was listed as Threatened statewide. The Santa Barbara County and Sonoma County Distinct Vertebrate Population Segments (DPS), formerly listed as Endangered, were reclassified to Threatened. On 19 Aug 2005 U.S. District court vacated the down-listing of the Sonoma and Santa Barbara populations from Endangered to Threatened. Therefore, the Sonoma & Santa Barbara populations are once again listed as Endangered.
[42] The common name is spelled incorrectly in Title 14 of the CCR as "Siskiyou mountain salamander."
[43] Was a State Candidate for Delisting on 30 Sep 2005. No action was taken by the FGC after the CDFW presented a Department report on 3 Nov 2006; SMS was tabled at the 3 May 2007 FGC meeting, and there was nothing to report regarding the Department's environmental documents at the 11 Oct 2007 meeting. Therefore, with respect to Fish & Game Code 2075, it is assumed that this is no longer a candidate for delisting.
[44] As recognized by the FGC, the Scott Bar salamander is currently protected under the CESA as a sub-population of the Siskiyou Mountains salamander *(Plethodon stormi)* (Calif. Regulatory Notice Register, No. 21-Z, p. 916, 25 May 2007).
[45] Listed by the State of California as *Batrachoseps aridus* and originally listed by the USFWS as *B. aridus.* USFWS 5-year review refers to *B. major aridus.*
[46] Listed by the State of California as *Bufo exsul.*

	State Listing		Federal Listing	
Limestone salamander *Hydromantes brunus*	ST	6-27-71		
Black toad *Anaxyrus exsul*[50]	ST	6-27-71		
Arroyo toad *Anaxyrus californicus*[47]			FE	1-17-95
Yosemite toad *Anaxyrus canorus*			FT	6-30-14
California red-legged frog *Rana draytonii*[48] [49]			FT	6-24-96
Oregon spotted frog *Rana pretiosa*			FT	9-29-14
Southern mountain yellow-legged frog[53] *Rana muscosa*	SE	4-01-13	(FE)	
Mountain yellow-legged frog - southern California DPS[54] *Rana muscosa*	(SE)		FE	8-01-02
Mountain yellow-legged frog - northern California DPS[55] *Rana muscosa*	(SE)		FE	6-30-14
Sierra Nevada yellow-legged frog *Rana sierrae*	ST	4-01-13	FE	6-30-14
Reptiles				
Desert tortoise *Gopherus agassizii*	ST	8-03-89	FT	4-02-90
Green sea turtle[56] *Chelonia mydas*			FT FE	7-28-78 10-13-70
Loggerhead sea turtle - North Pacific DPS[57] *Caretta caretta*			FE FT	10-24-11 7-28-78
Olive (=Pacific) ridley sea turtle *Lepidochelys olivacea*			FT	7-28-78
Leatherback sea turtle *Dermochelys coriacea*			FE	6-02-70

[47] At the time of listing, arroyo toad was known as *Bufo microscaphus californicus*, a subspecies of southwestern toad. In 2001, it was determined to be its own species, *Bufo californicus*. Since then, many species in the genus *Bufo* were changed to the genus *Anaxyrus*, and now arroyo toad is known as *Anaxyrus californicus.*

[48] *Synonymous with Rana aurora draytonii.*

[49] Though the scientific name *Rana muscosa* is not disputed, the State uses this common name, whereas the USFWS listing refers to two distinct population segments. This species is also known by the common name Sierra Madre yellow-legged frog (Vredenburg et al. 2007).

	State Listing		Federal Listing	
Barefoot banded gecko[58] *Coleonyx switaki*	ST	10-02-80		
Coachella Valley fringe-toed lizard *Uma inornata*	SE	10-02-80	FT	10-27-80
Blunt-nosed leopard lizard *Gambelia silus*[59]	SE	6-27-71	FE	3-11-67
Flat-tailed horned lizard *Phrynosoma mcallii*	SC	2-12-2015		
Island night lizard (**Recovered**) *Xantusia riversiana*			**Delisted** **FT**	5-1-14 8-11-77
Southern rubber boa *Charina bottae umbratica*[660]	ST	6-27-71		
Alameda whipsnake *Masticophis lateralis euryxanthus*[50 51 52 53 54 55 56 57]	ST	6-27-71	FT	12-05-97
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	SE	6-27-71	FE	3-11-67
Giant garter snake *Thamnophis gigas*[58]	ST	6-27-71	FT	11-19-93
Birds				
Short-tailed albatross *Phoebastria albatrus*[59 60 61 62 63]			FE FE	8-30-00[64] 6-02-70
California brown pelican[65] (**Recovered**) *Pelecanus occidentalis californicus*	**Delisted** SE	6-03-09 6-27-71	**Delisted** FE	12-17-09 2-20-08 10-13-70
Cackling (=Aleutian Canada) goose (**Recovered**)			**Delisted**	3-20-01

[50] San Gabriel, San Jacinto, and San Bernardino Mountains only.
[51] North of the Tehachapi Mountains from the Monarch Divide to portions of the Kern River drainage.
[52] Current nomenclature: green turtle.
[53] The 1978 listing was for the worldwide range of the species. The 24 Oct 2011 final rule is for the North Pacific DPS (north of the equator & south of 60 degrees north latitude).
[54] Current nomenclature: Barefoot gecko.
[55] Current taxonomy: *Gambelia sila.* Originally listed under the ESA as *Crotaphytus wislizenii silus.*
[56] Current taxonomy: *Charina umbratica.*
[57] *Synonymous with Coluber lateralis euryxanthus.*
[58] Listed by State of California as *Thamnophis couchi gigas.*
[59] Synonymous with *Diomedea albatrus.*
[60] Listed as Endangered in one of the original species lists, but "due to an inadvertent oversight" when the 1973 ESA repealed the 1969 Act, short-tailed albatross was effectively delisted. Proposed listing to fix this error in 1980, with final rule in 2000.
[61] Federal nomenclature: Brown pelican *(Pelecanus occidentalis).*
[62] At time of federal listing, known as *Branta canadensis leucopareia.*
[63] The Post-delisting Monitoring Plan will monitor the status of the bald eagle over a 20 year period with sampling events held once every 5 years.

	State Listing		Federal Listing	
Branta hutchinsii leucopareia [66]			FT FE	1-11-91 3-11-67
California condor *Gymnogyps californianus*	SE	6-27-71	FE	3-11-67
Bald eagle *Haliaeetus leucocephalus*	SE (rev) SE	10-02-80 6-27-71	Delisted[67] FT FE (rev) FE	8-08-07 8-11-95 3-16-78 3-11-67
Swainson's hawk *Buteo swainsoni*	ST	4-17-83		
American peregrine falcon (Recovered) *Falco peregrinus anatum*	Delisted SE	11-04-09 6-27-71	Delisted FE	8-25-99 6-02-70
Arctic peregrine falcon (Recovered) *Falco peregrinus tundrius*			Delisted FT FE	10-05-94 4-19-84 6-02-70
California black rail *Laterallus jamaicensis coturniculus*	ST	6-27-71		
California clapper rail *Rallus longirostris obsoletus*	SE	6-27-71	FE	10-13-70
Light-footed clapper rail *Rallus longirostris levipes*	SE	6-27-71	FE	10-13-70
Yuma clapper rail *Rallus longirostris yumanensis*	ST SE	2-22-78 6-27-71	FE	3-11-67
Greater sandhill crane *Grus canadensis tabida*	ST	4-17-83		
Western snowy plover *Charadrius nivosus nivosus*[68]			FT[69]	4-05-93
California least tern *Sternula antillarum browni*[10]	SE	6-27-71	FE	6-02-70
Marbled murrelet *Brachyramphus marmoratus*	SE	3-12-92	FT	9-28-92
Scripps's murrelet (=Xantus's murrelet) *Synthliboramphus scrippsi*[11]	ST	12-22-04		
Guadalupe murrelet (=Xantus's murrelet) *Synthliboramphus hypoleucus*[12]	ST	12-22-04		
Western yellow-billed cuckoo[73] *Coccyzus americanus occidentalis*	SE ST	3-26-88 6-27-71	FT	11-3-2014
Elf owl *Micrathene whitneyi*	SE	10-02-80		

	State Listing		Federal Listing	
Northern spotted owl *Strix occidentalis caurina*	SC	12-11-13	FT	7-23-90
Great gray owl *Strix nebulosi*	SE	10-02-80		
Gila woodpecker *Melanerpes uropygialis*	SE	3-17-88		
Gilded (=Gilded northern) flicker *Colaptes chrysoides*[14]	SE	3-17-88		
Willow flycatcher *Empidonax traillii*	SE[75]	1-02-91		
Southwestern willow flycatcher *Empidonax traillii extimus*	(SE)		FE	3-29-95
Bank swallow *Riparia riparia*	ST	6-11-89		
Coastal California gnatcatcher *Polioptila californica californica*			FT	3-30-93
San Clemente loggerhead shrike *Lanius ludovicianus mearnsi*			FE	9-12-77
Arizona Bell's vireo *Vireo bellii arizonae*	SE	3-17-88		

[68] Synonymous with *Charadrius alexandrinus nivosus.*
[69] Federal status applies only to the Pacific coastal population.
[70] Listed by the State of California and federal government as *Sterna antillarum browni.*
[71] At the time of listing, this species was known as the Xantus's Murrelet (*Synthliboramphus hypoleucus,* with California breeding populations ascribed to *Synthliboramphus hypoleucus* subsp. *scrippsi).*
[72] At the time of listing, this species was known as the Xantus's Murrelet *(Synthliboramphus hypoleucus,* with breeding populations from Baja California ascribed to *Synthliboramphus hypoleucus* subsp. *hypoleucus*).
[73] Listing is for the western DPS of *Coccyzus americanus.*
[74] Listed by the State of California as *Colaptes auratus chrysoides.*
[75] State listing includes all subspecies.

	State Listing		Federal Listing	
Least Bell's vireo *Vireo bellii pusillus*	SE	10-02-80	FE	6-02-86
Inyo California towhee *Melozone crissalis eremophilus*[16]	SE	10-02-80	FPD FT	11-04-2013 9-02-87
San Clemente sage sparrow *Artemisiospiza belli clementeae*[77]			FT	9-12-77

Belding's savannah sparrow *Passerculus sandwichensis beldingi*[78]	SE	1-10-74		
Santa Barbara song sparrow (Extinct) *Melospiza melodia graminea*			Delisted FE	10-12-83 6-04-73
Mammals				
Point Arena mountain beaver *Aplodontia rufa nigra*			FE	12-12-91
Nelson's (=San Joaquin antelope) antelope squirrel *Ammospermophilus nelson*	ST	10-02-80		
Mohave ground squirrel *Xerospermophilus mohavensis*[19]	ST	6-27-71		
Morro Bay kangaroo rat *Dipodomys heermanni morroensis*	SE	6-27-71	FE	10-13-70
Giant kangaroo rat *Dipodomys ingens*	SE	10-02-80	FE	1-05-87
San Bernardino kangaroo rat[80] *Dipodomys merriami parvus*			FE	9-24-98
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	SE	6-11-89	FE	8-08-88
Fresno kangaroo rat *Dipodomys nitratoides exilis*	SE ST	10-02-80	FE	3-01-85
Stephens' kangaroo rat *Dipodomys stephensi*	ST	6-27-71	FE	10-31-88
Pacific pocket mouse *Perognathus longimembris pacificus*			FE	9-26-94
Amargosa vole *Microtus californicus scirpensis*	SE	10-02-80	FE	12-17-84
Riparian woodrat *Neotoma fuscipes riparia*			FE	3-24-00
Salt-marsh harvest mouse *Reithrodontomys raviventris*	SE	6-27-71	FE	10-13-70

[76] Listed by the State of California and federal government as *Pipilo crissalis eremophilus.*

[77] Federal nomenclature at time of listing: *Amphispiza belli clementeae.*

[78] Listed by the State of California as *Passerculus sandwichensis beldingii*

[79] Listed by the State of California as *Spermophilus mohavensis.*

[80] Federal nomenclature: San Bernardino Merriam's kangaroo rat.

Riparian brush rabbit *Sylvilagus bachmani riparius*	SE	5-29-94	FE	3-24-00

Buena Vista Lake ornate shrew *Sorex ornatus relictus*			FE	4-05-02
Lesser long-nosed bat *Leptonycteris yerbabuenae*			FE	10-31-88
Townsend's big-eared bat *Corynorhinus townsendii*	SC	12-11-13		
Gray wolf *Canis lupus*	SE[64]	10-18-14	FPD **FE**	6-13-13 4-10-78
Island fox *Urocyon littoralis*	ST[65]	6-27-71	(FE)	
San Miguel Island Fox *Urocyon littoralis littoralis*	(ST)		FE	4-05-04
Santa Catalina Island Fox *Urocyon littoralis catalinae*	(ST)		FE	4-05-04
Santa Cruz Island Fox *Urocyon littoralis santacruzae*	(ST)		FE	4-05-04
Santa Rosa Island Fox *Urocyon littoralis santarosae*	(ST)		FE	4-05-04
San Joaquin kit fox *Vulpes macrotis mutica*	ST	6-27-71	FE	3-11-67
Sierra Nevada red fox *Vulpes vulpes necator*	ST	10-02-80		
Guadalupe fur seal *Arctocephalus townsendi*	ST	6-27-71	**FT** FE	1-15-86 3-11-67
Steller sea lion - Eastern DPS (**Recovered)** *Eumetopias jubatus*			**Delisted**[66] FT	12-4-13 6-4-97[67]
Southern sea otter *Enhydra lutris nereis*			FT	1-14-77
North American wolverine *Gulo gulo luscus*[68]	ST	6-27-71		
Pacific fisher[86] Pekania [=Martes] *pennanti*	SC[87]	3-1 1-13	FPT	
Sierra Nevada (= California) bighorn sheep *Ovis canadensis sierrae*[88]	**SE** ST	8-27-99 6-27-71	FE	1-03-00

[64]Notice of Findings to list the gray wolf as endangered published by the FGC on October 18, 2014. Final effective date of regulation pending.
[65]State listing includes all 6 subspecies on all 6 islands. Federal listing is for only 4 subspecies on 4 islands.
[66]Delisted by NMFS.
[67]The NMFS reclassified Steller sea lion as two distinct population segments: western DPS west of 144 degrees longitude (Endangered), and eastern DPS east of 144 degrees longitude (Threatened).
[68]Listed by the State of California as *Gulo gulo.*

Peninsular bighorn sheep DPS[89] *Ovis canadensis nelsoni*	ST	6-27-71	FE	3-18-98
North Pacific right whale *Eubalaena japonica*[69 70 71 72 73 74 75]			FE[91] FE	4-07-08 6-02-70
Sei whale *Balaenoptera borealis*			FE	6-02-70
Blue whale *Balaenoptera musculus*			FE	6-02-70
Fin whale *Balaenoptera physalus*			FE	6-02-70
Humpback whale[92] *Megaptera novaeangliae*			FE	6-02-70
Gray whale - Eastern North Pacific DPS (Recovered)			Delisted[76 77] FE	6-16-94 6-02-70
Killer whale - Southern Resident DPS *Orcinus orca*			FE[94] FE	4-04-07 2-16-06
Sperm whale *Physeter macrocephalus*[78]			FE	6-02-70

Abbreviations

CCR: California Code of Regulations

CDFW: California Department of Fish and Wildlife (previously known as Department of Fish and Game (DFG))

CESA: California Endangered Species Act DPS: Distinct population segment

[69] California candidacy is under *Martes pennanti* and common name Pacific fisher, whereas the USFWS refers to *Martes pennant* and common name fisher. USFWS candidacy refers to the West Coast DPS in California, Oregon, and Washington.

[70] The FGC Notice of Findings stated that the Pacific fisher was a candidate for listing as either an Endangered or Threatened species. At the 23 Jun 2010 meeting the FGC determined that the listing was not warranted. An 11 Mar 2013 Notice of Findings stated that pursuant to court order, the FGC set aside its 15 Sep 2010 findings rejecting the petition to list, and the Pacific fisher is a candidate species for the purposes of CESA.

[71] Listed by the State of California as California bighorn sheep *(Ovis canadensis californiana).*

[72] Listed by the State of California as *Ovis canadensis cremnobates.* The subspecies *O.c. cremnobates* has been synonymized with *O.c. nelsoni.* The desert bighorn sheep in the Peninsular Ranges, the Peninsular bighorn sheep, is now considered to be a Distinct Population Segment (DPS) of *O.c. nelsoni.*

[73] The scientific name was clarified in the Federal Register Vol. 68, No. 69 April 10, 2003.

[74] The NMFS completed a status review of right whales in the N. Pacific and N. Atlantic Oceans and determined the previously Endangered northern right whale *(Eubalaena* spp.) as two separate Endangered species: North Pacific right whale *(E. japonica)* and North Atlantic right whale *(E. glacialis).*

[75] Also known as Hump-backed whale.

[76] The NMFS delisted the California population (Eastern North Pacific DPS), while keeping the Western North Pacific DPS as Endangered.

[77] The Southern Resident DPS of killer whale was listed as Endangered by the NMFS on Feb 16, 2006 and by the USFWS on Apr 4, 2007.

[78] Federal nomenclature at time of listing: *Physeter catodon*.

ESA: Endangered Species Act (Federal)
ESU: Evolutionarily significant unit

APPENDIX II

SPECIAL PROTOCOLS AND PLANS

a. Guidelines for Spill Response involving Snowy Plovers
b. Guidelines for Spill Response involving Least Terns
c. Guidelines for Spill Response involving Ridgway's Rails
d. Protocol for Wildlife Response at the Farallon Islands NWR.
e. Biosecurity Requirements for the Channel Islands National Park
f. Sea Otter Oil Spill Contingency Plan
g. Wildlife-Specific Safety Plan
h. Guidelines for Spill Response involving Listed Fish and Fish Habitat
i. Guidelines for Preventing the Introduction of Invasive Species.

APPENDIX IIa

GUIDELINES FOR SPILL RESPONSE INVOLVING SNOWY PLOVERS

The Pacific Coast population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*) is listed as Threatened under the Federal Endangered Species Act. Because Snowy Plovers occur on beaches throughout California, there is a strong possibility that Snowy Plovers could be affected during oil spill response. The USFWS and DFW have a cooperative agreement that allows for the collection of sick or injured (including oiled) listed species for rehabilitation (Appendix V), and USFWS and NMFS conduct emergency Section 7 consultations during spill response for potential impacts to listed species incidental to response activities (e.g., disturbance to listed species from clean-up activities; See Section 3600.2). The guidelines here are provided to reduce negative impacts to Snowy Plovers as much as possible. It is important to consider potential collateral damage associated with spill response, and to balance the need for effective response with the need to not cause further harm to listed, rare, and declining species.

Background Natural History

The Western Snowy Plover is a small shorebird that nests on beaches, salt flats, levees around salt ponds, river gravel bars, and other similar habitats. Western Snowy Plovers nest in California between February and September (primarily between late March and late August), and occur statewide on coastal beaches year-round. Nests consist of three well-camouflaged eggs laid in a small depression directly on the sand. Adult plovers share incubation duties for approximately 30 days until the eggs hatch; after hatching, the precocial chicks leave the nest within a few hours, and are attended by the male parent for the next month until they are able to fly. Females usually leave to breed with another male; both males and females typically nest at least twice per breeding season. Adults and chicks feed on flies and other invertebrates, often associated with kelp wrack. In California, we have both resident and migrant Western Snowy Plovers; in winter, some local breeders migrate south (e.g., to Mexico), and at the same time, wintering populations are augmented with migrants from inland-breeding populations.

Distribution

Western Snowy Plovers nest on many beaches along the California coast, but they are most abundant in the Monterey Bay area, the central coast (Cayucos to Lompoc), Ventura County, and San Diego County. Nesting sites may vary from year to year, thus it is important to check with local experts regarding the status of Snowy Plovers in any given area. USFWS in Arcata (Tel: 707-822-7201) maintains a list of experts for each Recovery Unit throughout the range of the listed population. These experts, who conduct intensive monitoring of nesting sites, are typically contractors or non-profit groups, and hold section 10(a)(1)(A) recovery permits for monitoring Western Snowy Plovers. The USFWS in Arcata should be contacted to determine

who the current local experts are for a given area, and those experts should be contacted to get information on current status of Snowy Plovers in that area.

Seasonal Considerations

The primary concern regarding collateral damage during spill response is during the nesting season, which should be considered to run from February 15 through September 31. Most nesting occurs from April through July, with chicks present through August, but nests have been recorded as early as February, and pre-fledging chicks may be present through September. During the nesting season, there is concern that eggs or chicks may be harmed.

During the non-breeding season (October 1 through February 14), Snowy Plovers may be disturbed by response activities, but the primary concern for harm is potential interactions with fast-moving vehicles. There are records of adult plovers being struck by vehicles, especially at night or during low-light conditions.

Disturbance Associated with Spill Response

Human activity during the breeding season (March through September) near Snowy Plover nests or chicks can lead to abandonment of those nests or chicks. Before any activities are planned within potential Snowy Plover habitat, the local experts (see Distribution, above) should be contacted regarding the species' status locally. Based on the locations of active nests or young broods (chicks with an adult), responders be directed to reduce disturbance as much as possible.

Disturbed adults may leave a nest, and may even abandon a nest if disturbance persists for an extended period (e.g., more than 30 minutes). Drifting windblown sand may cover unattended nests, also resulting in abandonment by the adult, and unattended eggs may be exposed to inclement weather. Adults with chicks may respond to disturbance by attempting to lure humans away from the chicks, which can result in separation and loss of the chicks from attending adults.

Responders should keep in mind that not all nests or chicks will be within fenced areas. In particular, chicks and adults often feed near the high-tide wrack line, outside of fenced areas. When disturbed, chicks may crouch and hide on the lower beach. Eggs and chicks can be inadvertently crushed by trampling and by vehicles. Thus, it is extremely important to be aware of the potential presence of Snowy Plovers when operating vehicles on the beach.

Impact Minimization

If local experts have indicated that Snowy Plover nests or chicks may be of concern during spill response, the following guidelines should be followed:

Nesting Season (February 15 through September 30)

1. All responders, including Recovery & Transportation personnel, will be informed of the potential for Snowy Plovers to be impacted, and of measures (below) intended to reduce potential impacts.
2. Local experts will convey (typically through the Recovery & Transportation Coordinator) which areas may contain nests or chicks.
3. If possible, all response personnel (SCAT teams, clean-up crews, NRDA teams, and wildlife recovery & transportation teams) operating in geographic divisions that could have nesting Snowy Plovers should be accompanied by a permitted (with a Section 10 recovery permit) local Snowy Plover monitor who would be able to direct non-essential activities away from nests or chicks.
4. All activities near Snowy Plover nests or chicks should occur on the lower beach (wet sand), if possible.
5. If vehicles are used near Snowy Plover nests or chicks, speed should be kept to less than 15 mph, and vehicles should remain on the lower beach (wet sand), if possible. If it is not possible to remain on the lower beach (e.g., it is high tide), responders should stop every 100 m and scan ahead with binoculars to look for Snowy Plovers adults that may be attending chicks. The number of vehicles and number of vehicle trips should be reduced to the maximum extent practicable.
6. If chicks, adults tending chicks, or "broody" adults (adults with chicks will often try to lure threatening intruders away with broken wing or tail-drag displays) are seen, responders should move cautiously away from that area, if feasible, to avoid separating chicks from parents.
7. Responders should remain outside of any fenced area, or any other area marked as closed for Snowy Plovers, unless they are told by local experts that there is no concern in that particular area.
8. Any Snowy Plover nest or individual inadvertently harmed during spill response should be collected, and the situation should be reported to the Recovery & Transportation coordinator, who will pass the information on to the Wildlife Branch Director and the USFWS.

Non-breeding Season (October 1 through February 28)

During winter, Snowy Plovers roost and feed on coastal beaches, but there is substantially less concern regarding their disturbance during emergency spill response. If disturbed, they may move out of the way, but will likely not suffer long-term harm (although repeated disturbance during cold/inclement weather may affect body condition, particularly if plovers are oiled). Wintering plovers are often grouped, and use micro-features such as footprints and vehicle tracks to stay out of the wind; this behavior also makes them more cryptic and increases the chance that they will be run over by vehicles (particularly in low-light conditions). Between October 1 and February 14, and/or if local experts state that no local nesting is occurring, responders should still drive slowly on the beach to avoid running over roosting plovers.

Response for Oiled Snowy Plovers

Snowy Plovers generally occur higher on the beach than other shorebirds, and are thus somewhat less susceptible to oiling. However, Snowy Plovers are regularly oiled during large spills, usually on their legs and bellies. In most cases, local experts (see above) will be contracted for reconnaissance of Snowy Plovers, to determine if any have become oiled. If any oiled Snowy Plovers are detected, the Recovery & Transportation Coordinator should be contacted, who will consult with local experts and/or the USFWS regarding response actions. In some cases, capture and rehabilitation may cause more stress to the bird than a small amount of oiling. Factors that should be considered in the decision of whether to trap a bird for rehabilitation include:

- Degree of oiling
- Behavior (e.g., excessive preening; lethargic behavior)
- Nesting status

During the nesting season, oiled adults may pass the oil on to eggs or chicks, compounding the problem; however, capture of adults during the nesting season could also lead to the loss of that bird's active nest or dependent chicks. Ideally, local experts will know the nesting status of individually marked birds to aid in such decisions; in some cases it may be possible to collect eggs or chicks for hatching and rearing in captivity (with prior approval of the USFWS).

If it is determined that adults should be captured for cleaning and rehabilitation, the capture should ideally be conducted by an expert with a section 10(a)(1)(A) permit for capturing and handling Western Snowy Plovers. Snowy Plovers are typically captured using noose mats (segments of hardware cloth with multiple monofilament nooses attached), although mist nests or other methods may be used in some instances. Banding and monitoring may be warranted to determine survivorship and potential sub-lethal effects (e.g., reproductive effects) related to the spill.

APPENDIX IIb

GUIDELINES FOR SPILL RESPONSE INVOLVING LEAST TERNS

The Pacific California Least Tern (*Sternula antillarum browni*) is listed as Endangered under the both the Federal and California Endangered Species Acts, and is listed as Fully Protected by DFG. Because Least Terns nest on beaches in central and southern California, there is a strong possibility that Snowy Plovers could be affected during oil spill response. The USFWS and DFW have a cooperative agreement that allows for the collection of sick or injured (including oiled) listed species for rehabilitation (Appendix V), and USFWS and NFMS conduct an emergency Section 7 consultation for potential impacts to listed species incidental to response activities (e.g., disturbance to listed species from clean-up activities; See Section 3600.2). The guidelines here are provided to reduce negative impacts to Least Terns as much as possible. It is important to consider potential collateral damage associated with spill response, and to balance the need for effective response with the need to not cause further harm to listed, rare, and declining species.

Background Natural History

The California Least Tern is a small seabird that nests on beaches, salt flats, levees around salt ponds, and other similar habitats. California Least Terns nest in California between April and September and migrate south out of California during the non-breeding season. Nests consist of two or three well-camouflaged eggs laid in a small depression directly on the sand. Adults incubate the eggs for approximately 30 days until the eggs hatch. After hatching, the chicks remain in the vicinity of the nest, where they are fed fish by their parents. Adults forage in bays, ponds, and nearshore marine habitats.

Distribution

California Least Terns nest at selected sites between the San Francisco Bay area and the Mexico border. Nesting sites may vary from year to year, thus it is important to check with local experts regarding the status of Least Terns in any given area. Nancy Frost of CDFG (Tel: 858-467-4208) and/or the local USFWS field office maintain a list of local monitors of Least Terns. These experts, who conduct intensive monitoring of nesting sites, are typically contractors or non-profit groups, and hold section 10(a)(1)(A) recovery permits for monitoring California Least Terns. CDFW or USFWS should be contacted to determine who the current local experts are for a given area, and those experts should be contacted to get information on current status of Least Terns in that area. In many cases, Least Terns and Western Snowy Plovers co-occur; thus, measures to minimize effects to both species can be achieved simultaneously.

Seasonal Considerations

The concern regarding collateral damage during spill response is during the nesting season, which should be considered to run from April 15 through September 31. During the nesting season, there is concern that eggs or chicks may be harmed, and there is potential for adults to collide with fast-moving vehicles.

Disturbance Associated with Spill Response

Human activity during the breeding season near Least Tern nests or chicks can lead to abandonment of those nests or chicks. Before any activities are planned within potential Least Tern habitat, the local experts (see Distribution, above) should be contacted regarding the species' status locally. Based on the locations of active nests, responders can be directed to reduce disturbance as much as possible.

Responders should keep in mind that although most nesting areas are fenced and marked, not all nests or chicks will be within fenced exclosures. Eggs and chicks can be inadvertently crushed by trampling and by vehicles; it is thus important to be aware of the potential presence of Least Terns when operating vehicles on the beach.

Impact Minimization

If local experts have indicated that Least Tern nests or chicks may be of concern during spill response, the following guidelines should be followed:

1. All responders, including Recovery & Transportation personnel, will be informed of the potential for Least Terns to be impacted, and of measures (below) to reduce potential impacts.
2. Local experts will convey (typically through the Recovery & Transportation Coordinator) which areas may contain nests or chicks.
3. If possible, all response personnel (SCAT teams, clean-up crews, NRDA teams, and wildlife recovery & transportation teams) operating in geographic divisions that could have nesting Least Terns should be accompanied by a permitted (with a Section 10 recovery permit) local Least Tern monitor who would be able to direct non-essential activities away from nests or chicks.
4. All activities near Least Tern nests or chicks should occur on the lower beach (wet sand), if possible.
5. If vehicles are used near Least Tern nests or chicks, speed should be kept to less than 15 mph, and vehicles should remain on the lower beach (wet sand), if possible. If it is not possible to remain on the lower beach (e.g., it is high tide), responders should stop every 100 m and scan ahead with binoculars to look for Least Terns on the beach. The number

of vehicles and number of vehicle trips should be reduced to the maximum extent practicable.

6. Responders should remain outside of any fenced area, or any other area marked as closed for Least Terns, unless they are told by local experts that there is no concern in that particular area.
7. Any Least Tern nest or individual inadvertently harmed during spill response should be collected, and the situation should be reported to the Recovery & Transportation coordinator, who will pass the information on to the Wildlife Branch Director and the USFWS.

Response for Oiled Least Terns

Least Terns are at risk of oiling if they forage in nearshore waters that have been oiled. If any oiled Least Terns are detected, the Recovery & Transportation Coordinator should be contacted, who will consult with local experts and/or the USFWS regarding response actions, likely capture and cleaning. Factors that should be considered in the decision of whether to trap a bird for rehabilitation include:

- Degree of oiling
- Behavior (e.g., excessive preening; lethargic behavior)
- Nesting status

During the nesting season, oiled adults may pass the oil on to eggs or chicks, compounding the problem; however, capture of adults during the nesting season could also lead to the loss of that bird's active nest or dependent chicks. In some cases it may be possible to collect eggs or chicks for hatching and rearing in captivity (with prior approval of the USFWS).

If it is determined that adults should be captured for cleaning and rehabilitation, the capture should ideally be conducted by an expert with a section 10(a)(1)(A) permit for capturing and handling California Least Terns.

APPENDIX IIc

GUIDELINES FOR SPILL RESPONSE IN RIDGWAY'S RAIL (FORMERLY CLAPPER RAIL) HABITAT

Ridgway's Rails (*Rallus longirostris*) are secretive marsh-dwelling birds. There are two subspecies listed under the Federal Endangered Species Act on the California coast: the California Ridgway's Rail (*R. l. obsoletus*), and the Light-footed Ridgway's Rail (*R. l. flavipes*). If spill response in California involves any activities in coastal marshes, there is a possibility that Ridgway's Rails could be affected. Several other listed species, including the salt marsh harvest mouse (*Reithrodontomys raviventris*) in San Francisco Bay, and the Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*) in southern California, may co-occur with Ridgway's Rails in this habitat.

The USFWS and DFW have a cooperative agreement that allows for the collection of sick or injured (including oiled) listed species for rehabilitation (Appendix V), and DFG consults with USFWS and NFMS during spill responses through an emergency Section 7 consultation for potential impacts to listed species incidental to response activities (e.g., disturbance to listed species from clean-up activities; See Section 3600.2). These guidelines are provided to reduce negative impacts to Ridgway's Rails and other marsh-nesting species as much as possible. It is important to consider potential collateral damage associated with spill response, and to balance the need for effective response with the need to not cause further harm to rare and declining species.

Background Natural History

California Ridgway's Rails occur only in marshes in the San Francisco Bay area, and Light-footed Ridgway's Rails occur only in marshes along the southern California coast, from Carpenteria south to Mexico. Both subspecies occur in tidal salt marsh, and occasionally in diked or brackish marshes. They forage on invertebrates such as crabs and bivalves, and are very secretive, usually remaining hidden in vegetation or in marsh channels. Ridgway's Rails nest from approximately March through August. Nests are built on or near the ground, hidden in marsh vegetation. Ridgway's Rails occur in coastal marshes year-round.

Distribution

Ridgway's Rails occur in coastal marshes in San Francisco Bay and in southern California. It is important to check with local experts regarding the status of Ridgway's Rails in any given area. In the San Francisco Bay area, the San Francisco Bay NWR (Tel: 510-792-0222) is aware of the current distribution of the California Ridgway's Rail. In southern California, the USFWS Ventura Field Office or Carlsbad Field Office can be contacted regarding the current distribution of the Light-footed Ridgway's Rail.

Seasonal Considerations

The primary concern regarding collateral damage during spill response is during the nesting season, which should be considered to run from March 1 through August 31. During the nesting season, there is concern that eggs or chicks may be harmed by trampling, or nest abandonment could occur.

During the non-breeding season (September 1 through February 28), there is still concern that individuals could be trampled.

Disturbance Associated with Spill Response

Human activity during the breeding season (March through August) near Ridgway's Rail nests could lead to abandonment of those nests or chicks, or direct trampling. Before any activities are planned within potential Ridgway's Rail habitat, the local experts (see Distribution, above) should be contacted regarding the species' status locally to allow responders to reduce disturbance as much as possible.

Nests are typically well hidden in vegetation, and adults and juveniles have also been known to crouch and hide in vegetation in response to threats such as people in their habitat. Thus, it is possible (and not unheard of) for humans to trample and injure or kill adult Ridgway's Rails hiding in marshes.

If local experts have indicated that Ridgway's Rails may be of concern during spill response, the following guidelines should be followed:

1. All responders, including Recovery & Transportation personnel, will be informed of the potential for Ridgway's Rails to be impacted, and of measures (below) to reduce potential impacts.
2. Local experts will convey (typically through the Recovery & Transportation Coordinator) which areas may be occupied.
3. If possible, all potential occupied habitat will be avoided altogether. Salt marshes are sensitive habitats that can often be damaged more by response actions that by oil spills. Response actions should focus on preventing oiling of this sensitive habitat, and clean-up and wildlife response at the margins of the marsh (e.g., by boat).
4. If it is necessary for some reason to enter a marsh that may be occupied by Ridgway's Rails, all personnel entering the habitat should be accompanied by a Ridgway's Rail expert (i.e., someone holding a 10(a)(1)(A) recovery permit), who will direct personnel how to best avoid impacts (e.g., through carefully watching where each foot is placed).
5. Any Ridgway's Rail nest or individual inadvertently harmed during spill response should be reported to the Recovery & Transportation coordinator, who will pass the information on to the Wildlife Branch Director and the USFWS.

Response for Oiled Ridgway's Rails

If reconnaissance teams or recovery & transportation teams determine that a live Ridgway's Rail is oiled, the Recovery & Transportation Coordinator will consult with local experts and/or the USFWS regarding response actions. In some cases, capture and rehabilitation may cause more stress to the bird than a small amount of oiling. Factors that should be considered in the decision of whether to trap/capture a bird for rehabilitation include:

- Degree of oiling
- Behavior (e.g., excessive preening; lethargic behavior)
- Nesting status

During the nesting season, oiled adults may pass the oil on to eggs or chicks, compounding the problem; however, capture of adults during the nesting season could also lead to the loss of that bird's active nest or dependent chicks. If it is determined that adults should be captured for cleaning and rehabilitation, the capture should ideally be conducted by an expert with a 10(a)(1)(A) permit for capturing and handling Ridgway's Rails.

APPENDIX IId

PROTOCOL FOR WILDLIFE RESPONSE OPERATIONS AT THE FARALLON ISLANDS NWR

Summary

Due to the sensitivity of the resources at risk on the South Farallon Islands (SFI), these protocols were developed to determine what recovery and transportation activities would be appropriate, what procedures would be followed for data collection and reporting, and what activation criteria would trigger these protocols. An earlier version of these protocols was developed in partnership with the US Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife Oil Spill Prevention and Response (OSPR), Oiled Wildlife Care Network (OWCN), NOAA Greater Farallones National Marine Sanctuary (NOAA), National Marine Fisheries Service (NMFS), and US Coast Guard (USCG) to prepare for the Luckenbach vessel recovery. In keeping with the site safety plan for any response, all operations will be conducted in a safe and appropriate manner.

The Farallones National Wildlife Refuge (FNWR) is managed under the San Francisco Bay NWR Complex headquarters in Fremont/Newark, CA (Contact = Farallon Refuge Manager, 9500 Thornton Ave., Newark, CA 94560; 510-792-0222). The USFWS has a cooperative agreement with Point Blue Conservation Science (PT. BLUE)(formerly PRBO) to staff the island "24/7", conduct biological monitoring, and other caretaking duties. PT. BLUE staff biologists or interns would be the primary personnel involved in conducting activities outlined below. (Contact = PT. BLUE, 3820 Cypress Drive #11, Petaluma, CA 94954; 707-781-2555).

Wildlife Response for spill operations on the Farallones involve three potential activities: Reconnaissance, Recovery, and Transportation (discussed below). In general, Recovery and Transportation of oiled wildlife will NOT be conducted on the Farallones, due to the sensitivity of breeding seabirds (and their habitats), breeding and hauled-out pinnipeds, and the difficult logistics of transporting animals back to the mainland.

Reconnaissance

Routine Monitoring Activities

PT. BLUE personnel routinely record any oiled wildlife observed either on the island or in waters near the shoreline in the course of conducting their daily monitoring, research and other duties. PT. BLUE personnel conducting weekly pinniped surveys, daily shorebird surveys (fall to spring only), daily seabird watches, elephant seal tagging during the winter, seabird monitoring during the spring/summer, and shark watches during the fall, will be alert for the presence of oiled

wildlife. When encountered, the species, location, and % of body oiled are noted and recorded in the Island Journal daily.

Information on oiled wildlife is summarized from the Island Journal at the end of each month for the monthly report. This information will be provided monthly via email to the USFWS [gerry_mcchesney@fws.gov], OWCN [mhziccardi@ucdavis.edu], and OSPR [holly.gellerman@wildlife.ca.gov].

Increased Reporting

If one of the following occurs, island personnel will send weekly reports of oiled wildlife observed to the e-mail list above:

1) Three or more birds observed on/around SFI per day
2) Ten or more birds observed on/around SFI per week
3) Increased occurrence of oiled wildlife on mainland shorelines triggers a Recovery & Transportation effort by OSPR or OWCN. In this case, a request for heightened reporting will be sent by OSPR to the Refuge Manager, who will request weekly reports from the island.

Daily reports MAY be requested if the number of birds encountered on SFI is three or more per day, or if an oil spill is reported.

Increased Reporting will cease, and frequency of reporting will return to monthly, when the number of oiled wildlife falls below the above thresholds for two continuous days, or when informed by the Wildlife Branch Director* or the Refuge manager that weekly reports are no longer needed.

[* as described in earlier sections of this Wildlife Response Plan, the *Wildlife Branch Director* is a position established during spill response, which would be staffed by OSPR personnel]

Heightened Awareness Protocols

Heightened awareness protocols will be activated if any of the below circumstances occur. Notification and communications between the USFWS Refuge Manager, PT. BLUE Farallon Program Manager, OSPR Wildlife Branch Director and OWCN Recovery & Transportation Coordinator will be made as necessary to implement these protocols. These actions will be under the Wildlife Branch of an active spill response, and will thus be covered financially by the Responsible Party, or per the guidelines for mystery spills (Appendix Id).

1. If more than 20 oiled birds and/or mammals are observed by SFI biologists during a week
2. If an oil spill or release occurs in the vicinity of SFI, or has a trajectory with the potential of affecting wildlife on the Farallon Islands

3. If greater than 30 oiled birds and/or mammals are captured during a 72 hour period on the mainland between Bodega Bay and Monterey.

Heightened awareness protocols involve the following activities:

- Twice each day, 15 minute visual surveys will be conducted to detect live, sub-lethally oiled animals on the water from the following observation points: East Landing, North Landing. If oiled wildlife are observed, the species, location of the oil, and % body covered with oil will be noted and reported.
- Once each day, shoreline surveys will be conducted to detect dead and sub-lethally oiled wildlife at accessible places where they are likely to wash up, such as: Sea Lion Cove, Sewer Gulch, Garbage Gulch, Sea Pigeon Gulch, North Landing, and others as sea and weather conditions and wildlife disturbance issues permit (approx. length of survey: 1-1/2 hrs).
- Birds and mammals in monitored colonies/rookeries will be observed closely for signs of oil. If oiled birds are observed, the species, location of animal, location of the oil on the body, and % body covered with oil will be noted and reported.
- Documentation of oiled animals will be conducted and will include taking photographs and oiled feather/fur samples of recovered deceased animals.
- Oiled bird and mammal numbers will be reported daily via email to USFWS, OWCN, and OSPR. If greater than 60 oiled animals are observed in a single day, phone notification should be made to the OWCN (pager: 916-556-7509). Daily phone conferences including the Refuge Manager, PT. BLUE, and the Wildlife Branch Director (or designee) may be warranted.

Heightened awareness protocols will be deactivated when conditions drop back below threshold levels for two consecutive days or when otherwise directed by the Wildlife Branch Director (or designee) or by the Refuge Manager.

Recovery and Transportation

Shore Based Island Recovery & Transportation Operations: The Entire Year

There will typically be no recovery & transportation activities on SFI. This determination was made based on the large numbers of breeding birds on the island (ca. 300,000) and the potential for large scale disturbance and destruction of sensitive breeding habitat. Post-breeding season concerns include disturbance to visiting seabirds that attend nesting areas (e.g., Common Murres), crushing auklet nesting burrows, disturbance to pinnipeds, and logistical constraints (e.g., transportation of oiled wildlife to the mainland).

Due to extreme sensitivity of SFI wildlife and habitat to human disturbance, recovery & transportation procedures would likely negatively impact more seabirds than the small number

that would benefit through treatment and rehabilitation. However, if a large proportion of the SFI Common Murre population is affected by an oil spill, the potential for island recovery & transportation may be re-evaluated, based on the following guidelines and criteria:

If greater than 300 oiled live Common Murres are observed on the island over a 3 day period, an emergency meeting may be convened between USFWS, PT. BLUE, OSPR, and the OWCN to evaluate whether island-based recovery & transportation operations will be undertaken. An island-based search effort will only be conducted if it is determined that 1) a recovery effort can be conducted in a way that will not significantly disturb wildlife or habitats; 2) the benefits of a recovery effort will outweigh any negative impacts to wildlife and habitats; 3) sufficient island resources exist to support the recovery effort; and 4) logistics associated with temporary housing of birds on the island and transportation of birds and personnel can be accomplished.

Boat-based Recovery & Transportation Operations around Farallon Islands

If 60 or more oiled animals are observed within a 3 day period, boat-based collection of oiled wildlife may be considered for waters around the Farallon Islands. The Wildlife Branch Director in consultation with USFWS and the Recovery & Transportation Group Supervisor will determine the appropriateness of such activities. All activities, personnel and resources necessary will be provided by the Unified Command for the spill. Support from SFI should not be counted on due to resource, logistical, and operational constraints. Transportation for personnel and oiled wildlife would need to be arranged. Note that there is a "special closure" area around much of Southeast Farallon Island prohibiting boats from approaching within 300' of the island; permission will need to be granted by the California Department of Fish and Wildlife (in this case, through OSPR, after consultation with USFWS) to enter this closure.

Seabird Breeding Season Protocols (March 15-August 15)

Boat operations during the seabird breeding season will only be conducted if: 1) it is deemed safe and necessary by the Wildlife Branch Director in consultation with the USFWS and the Unified Command, and 2) it is determined (in consultation with the Refuge Manager) that boat recovery can be conducted in such a way that it will not disturb wildlife on the refuge. During the breeding season, special caution adjacent to permitted search areas needs to be exercised to avoid flushing birds from nest sites and pinnipeds from breeding areas. It is a violation of federal law to disturb wildlife on a National Wildlife Refuge without a permit (50CFR 27.51). Prior to conducting boat operations, seabird breeding sites as marine mammal breeding or haul out locations will be verified and all exclusion zones must be avoided.

During boat operations, island personnel will monitor the response of wildlife on the island. If there is any disturbance, the Refuge Manager will be immediately notified. The boat recovery operation may be directed to cease or modify its operation if disturbance has occurred.

Seabird Post-breeding Season Protocols (August 16-March 14)

Boat operations may be conducted as long as they can be conducted in such a way that will not disturb wildlife on the Refuge. It is a violation of federal law to disturb wildlife on the refuge (50CFR 27.51). Prior to conducting boat operations, the Wildlife Branch Director shall ensure that the following procedures are followed: 1) a determination shall be made that boat recovery is appropriate and necessary and can be conducted in a safe manner; 2) the Refuge Manager shall be contacted to verify bird and pinniped activity and other sensitive wildlife areas on the island; and 3) maps and other directional information shall be provided to the boat crews so that exclusion zones and other sensitive areas can be avoided.

Marine Mammal Recovery & Transportation

If oiled marine mammals are observed, the Wildlife Branch Director will consult with the NMFS Marine Mammal Stranding Coordinator (Justin Viezbicke) and the SFI marine mammal biologist to discuss if further evaluation is warranted. If necessary, the mammal biologist and personnel from OWCN or OSPR will perform an animal capture evaluation and make recommendations to NMFS. Upon approval from NMFS, capture procedures will be planned and undertaken.

APPENDIX IIe

Biosecurity Protocols:
Preventing the introduction of non-native species to Channel Islands National Park

Background and Rationale

The Channel Islands National Park was established to conserve the rich biological ecosystems of five islands and nearby rocks and islets. The naturally small populations found on islands can be easily driven to extinction by new introductions and, therefore, islands are unusually vulnerable to the impacts of new invaders.

It is much more cost effective to prevent the arrival of introduced species than to attempt to eradicate after arrival. In many cases, it may be impossible to eliminate a pest once it has arrived.

Protocols

Personal Gear:

- Maximum use of hard sided boxes. Any cargo packaged and stored overnight must be stored in a hard-sided box. Food may only be stored in containers that are totally sealed (i.e. hard-sided box with a tight fitting top and no holes). The park has purchased a number of plastic boxes with lids that can be used by anybody traveling on park boats or flights.
- Minimize use of megabags. Megabags need to be shaken out prior to each loading. They need to be clean. Megabags should never be loaded except immediately prior to being slung onto a boat. No supplies left in a megabag overnight will be loaded onto a boat without first unloading and inspecting all of the gear.
- No corrugated cardboard boxes may be used to transport food. No corrugated cardboard boxes that are second-hand use (i.e. banana boxes) may be used for any reason.
- All other corrugated cardboard is discouraged. However, items (not food) in original cardboard packing (preferably sealed) may be used. The park will assess the level of risk that is posed by new boxes.
- Personal gear should be stored in clean, pest-free conditions at home. Gear should be cleaned and packed. Boots, sleeping bags, tents, nets should be cleaned prior to packing.
- All footwear, clothing, and gear (especially Velcro, shoelaces, cuffs, and boot lugs) should be clean and inspected for seeds and soil before departing for the islands, when boarding boats, and when moving between islands.

Equipment and Supplies:

- Equipment (large and small) should be stored and transported in a manner which prevents the attraction or transport of seeds, invertebrates, vertebrates and pathogens. Wherever possible, gear should be loaded into, stored and transported in containers with

tight fitting lids that can prevent access by mobile species such as invertebrates and vertebrates (such as rodents). Corrugated cardboard boxes should be avoided to transport equipment and gear as the corrugations provide hiding places for invertebrates such as earwigs, beetles, and ants.

- Gear and equipment should NOT be left or stored where it is at risk for attracting and harboring potential non-native species prior to departing. For example, leaving large equipment in the open is a dangerous practice; it provides cover and food for rodents and insects. Gear that is left out in the open may also be exposed to potential weed seeds blown around or carried by other species. Types of safe storage units include plastic or metal containers with tight fitting lids, Conex boxes, inside park buildings, or cold (freezer) storage.
- During the loading and unloading process all containers used in transport (e.g. dumpsters) should be cleaned of any item that may have spilled, especially foodstuffs, plant materials and soil. This practice will reduce the risk of attracting insects, rodents or other pest species

Lumber and Wood Products:

- Lumber should only be used if it is clean, new, processed lumber from California. CAUTION: California Pine could contain blister rust or pitch canker and California Oaks could have the pathogen that causes Sudden Oak Death. All lumber must be certified pest and pathogen-free by either the distributor or the Park before use on the islands.
- Bundled lumber should be taken apart, inspected thoroughly, and restacked before leaving the mainland as it could harbor animals and/or seeds. The only exception is if a wholesale supplier has certified lumber pest and pathogen-free and it is tightly bundled and closely packed. Ideally, lumber should be inspected and cleaned before bundling.
- Under no circumstances should firewood or any unprocessed lumber with bark be allowed on the Channel Islands. Bark can provide habitat to many invertebrates and could carry pathogens such as pine blister rust, pitch pine canker, and Sudden Oak Death.
- All wood products should be processed and ideally treated, with no traces of bark or soil.

Waste:

- The build-up and disposal of waste is a significant issue on the Channel Islands. A waste management and disposal plan should be designed with CINP input and buyoff as early as possible in the response.

Dumpsters:

- Dumpsters are a large risk for transport of non-native animals. Whenever possible, dumpsters should not be used for personal food wastes. These should be taken off by the individual generating the waste.
- Dumpsters may only be used for construction and/or spill clean-up projects and will be located in a manner that they will not be used for food materials.

- Under no circumstances should dumpsters go to the islands with any garbage. The inside and outside, including the wheels, of the dumpsters should be pressure washed and treated with a disinfectant solution before leaving the mainland.
- Dumpsters must be inspected, emptied, and cleaned before departing the mainland for the islands.
- Under no circumstances should dumpsters move between islands.

Ground Vehicles:

- All vehicles should be washed and inspected prior to departure, especially earth moving and heavy equipment such as vehicles, tractors, shovels, and associated construction equipment. In particular, equipment should be cleaned of soil and vegetative matter before being leaving their departure point, be this mainland or island.
- Heavy equipment (especially construction and earth moving equipment) should not be allowed to move between islands without: 1) being transported first to the mainland and cleaned; or 2) being cleaned on island prior to moving. In some situations it may be necessary to clean equipment while at sea but this should not be routine. Not only is this difficult and dangerous, the boat itself could become a vector for removed contaminants.
- All vehicles should be washed and inspected to ensure no transport of soil or vegetative matter. Using a hoist for washing is ideal; special attention should be paid to the undersides and insides of vehicles.

Vessels:

- Every boat shall have armed bait boxes that are checked monthly. Also, sticky traps should be deployed on every boat and changed monthly.
- Boat decks should be washed clean between cargo runs. No soil or other debris should remain on a boat.
- Any sign of rodents on a boat should be reported to the Superintendent.
- Any landing craft should be trapped intensively using a combination of bait boxes, snap traps, and sticky traps when a load is placed on the boat.
- No scrubbing of boat bottoms at the islands. Vessels should be cleaned in the harbor or offshore.

Planes:

- Planes should follow the same rules for containers and food storage as do boats.
- Planes should be maintained in a clean manner and routinely be swept out.
- The presence of yellow star-thistle at the landing strip at Santa Cruz Island poses a risk to the other islands. If a flight is to visit multiple islands, Santa Cruz should be the last island visited. An aircraft should never go from Santa Cruz Island to another park island.
- Planes and helicopter shall have their landing gear and passenger compartments of their aircraft cleaned and inspected prior to leaving the mainland.

Soil & Gravel:

- The transportation of soil and gravel from the mainland to islands is discouraged. If material is to be transferred, it must be freshly dug and transported to an island as soon as possible. Material that is held on the mainland must be tarped to protect from non-native seeds. The site where soil or gravel is deposited on an island will be mapped and provided to the Chief of Natural Resource for monitoring.

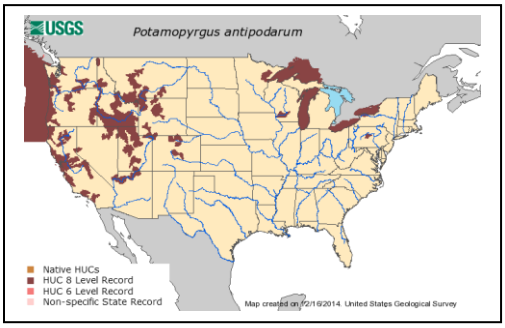
Education:

- Education is the best defense against the introduction of non-native plants and animals to the islands. Prior to responders departing for the islands, CINP personnel shall give an overview of the dangers and precautions necessary to mitigate those dangers to response personnel.

Protocol for Preventing Introduction of New Zealand Mud Snails to Santa Rosa and Santa Cruz Islands

The non-native, invasive New Zealand mud snail (*Potamopyrgus antipodarum*) occurs in freshwater streams in southern California, including the Santa Clara River, streams in the Santa Monica Mountains, central California, and other locations.

New Zealand mud snails are very small, easily overlooked, and can reproduce through cloning. A single juvenile, essentially invisible to the unaided eye, transported to Santa Rosa or Santa Cruz Islands could be enough to permanently alter their freshwater communities.



Therefore, ANY BOOTS, GEAR, OR EQUIPMENT that have been in freshwater streams on the mainland are considered CONTAMINATED and must be decontaminated or replaced with new equipment. The recommended decontamination is at least 48 hours in a -20° C freezer.

- AQUATIC SAMPLING EQUIPMENT is of highest concern. All equipment must be new or proof must be provided that the equipment has been decontaminated. Equipment includes water quality sampling equipment, benthic organism sampling equipment, crest gauges, PVC pipe, clipboards, and measuring tapes.

- Any aquatic boots, such as waders or aquatic shoes must be new or proof provided of decontamination.

- Regular island staff, volunteers, and upland researchers should have boots and personal gear that are ONLY used on the islands. This will greatly reduce risk of introductions due to the frequency of transport of gear between the mainland and the islands.

I certify that I have taken, or will take, the above measures to prevent introduction of New Zealand mud snails to Channel Islands National Park.

_____ _____

Researcher Date

APPENDIX IIf

SEA OTTER OIL SPILL CONTINGENCY PLAN FOR CALIFORNIA – April 2014

This summary provides an overview of how the Unified Command would respond to oiled sea otters in California. More specific protocols and guidelines are maintained by CDFW-OSPR and OWCN for facility-specific issues, logistical concerns, and details of animal care.

Agency Coordination

As noted previously, CDFW personnel will typically lead the Wildlife Branch during spill response, in coordination with the USFWS. For a spill response involving oiled sea otters, guidance from the USFWS will be particularly important. The CDFW has the authority to collect, transport, and rehabilitate oiled sea otters under the Marine Mammal Protection Act (50 CFR 18.22) and the Federal Endangered Species Act (50 CFR 17.21 and 17.31); however, explicit approval from the USFWS will be required prior to hazing otters or pre-emptively capturing unoiled otters at risk of becoming oiled. The USFWS will also coordinate closely with CDFW regarding evidence collection and possible necropsies.

Personnel and Organization

As with all aspects of Wildlife Branch activities, response to oiled sea otters will be conducted using the Incident Command System (ICS), under the auspices of the Unified Command. The decision to conduct any capture and rehabilitation effort for sea otters will be made by the Wildlife Branch Director, typically in consultation with the USFWS. Only pre-trained personnel will be used for most activities, including field capture and most aspects of captive care and rehabilitation. Personnel used for these activities will have completed appropriate Oiled Wildlife Care Network (OWCN) trainings and have appropriate experience working with sea otters. Currently, trained personnel qualified to lead or assist with an oil spill response involving sea otters are available from CDFW-OSPR, OWCN (U.C. Davis), the U.S. Geological Survey (USGS), the Monterey Bay Aquarium (MBA), U.C. Santa Cruz, and The Marine Mammal Center. Personnel from other OWCN member organizations that typically work with marine mammals may also be qualified to assist with sea otters. CDFW-OSPR and OWCN will coordinate activation of trained personnel as needed, including the potential use of volunteers for less skilled tasks. For spills involving numerous oiled sea otters, a separate Sea Otter Task Force may be established, with its own Recovery, Field Stabilization, and Care & Processing Groups.

Facilities

The CDFW-OSPR Marine Wildlife Veterinary Care and Research Center (MWVCRC) in Santa Cruz is pre-identified as the primary care facility for oiled sea otters recovered anywhere in California. This facility was designed and built specifically to handle (including cleaning and care) up to 125 oiled sea otters at one time. Other OWCN affiliate facilities with a capability for cleaning and/or

housing small numbers of sea otters are shown in Table 1 (with approximate sea otter capacity which may vary depending on current needs for other animals). Housing for clean otters at these OWCN affiliate facilities could potentially be scaled up to handle additional otters if needed, using temporary facilities.

Table 1. Facilities in California capable of caring for oiled sea otters.

Facility	Location	Sea Otter Capacity	Capability
CDFW MWVCRC	Santa Cruz	125	Washing and housing
The Marine Mammal Center	Sausalito	10	Washing and housing
SeaWorld San Diego	San Diego	10	Washing and housing
Monterey Bay Aquarium	Monterey	10	Housing
UCSC Long Marine Lab	Santa Cruz	5	Housing
Aquarium of the Pacific	Long Beach	5	Housing

Portable, floating pens for holding larger numbers of clean rehabilitated or preemptively caught sea otters may be deployed in marine waters free of oil contamination (i.e., outside the spill-affected area). CDFW-OSPR currently has an agreement with the San Mateo County Harbor District to use Pillar Point Harbor in Half Moon Bay for net pens, but other sites could potentially be used as well (Horseshoe Cove, just inside the north end of the Golden Gate Bridge has also been identified as a suitable location). The MWVCRC maintains four large and three small portable net pens.

Capture, Transport, and Field Stabilization

Oiled sea otters could potentially be captured on shore (stranded animals) or on the water. On-water capture will occur only after consultation with the UC and the USFWS. On-water capture techniques may include dip-netting and (if approved by the UC and Trustee Agencies), tangle nets. SCUBA may be approved to capture sea otters outside of the "hot zone," but will not typically be used for capture of oiled animals. In California, sea otters will generally be captured by crews of experienced personnel from CDFW-OSPR, MBA, and USGS. All dead sea otters will also be recovered, and transported to the primary care facility for processing.

Live sea otters that are not visibly oiled and are not displaying abnormal behavior will not be intentionally captured unless there is a substantial risk of oiling. Under dire circumstances, pre-emptive capture of animals at risk of oiling may be considered, if approved by the UC and the USFWS, and adequate facilities for transport and holding are available.

Field Stabilization may not be necessary, but may be used if deemed helpful (e.g., prior to a long transport to the primary care facility). Live sea otters will typically receive tags (thermistor PIT tags and flipper tags) at the primary care facility (see below), but they may receive PIT tags at Field Stabilization for tracking body temperature.

Every sea otter captured or collected will be issued a unique identification number in the field. This number will be used to track the animal and associated field collection information until the animal is processed at the primary care facility. Official chain of custody (COC) will be initiated upon processing at the primary care facility.

Transport kennels (#300 or #400 sky kennels or custom wooden transport boxes) will be fitted with a raised bottom grate (to avoid further fur fouling), and metal grates or other potential sources of tooth damage will be covered (e.g., with PVC tubing) . Shaved ice or any other form of fresh water ice (to combat hyperthermia and dehydration) and a chew toy or toys (to divert potential chewing on hard surfaces) would usually be provided in transport kennels. Sea otters should not be taken into commercial veterinary facilities containing domestic pets or any other non-OWCN affiliate facility.

Intake and Processing

Upon arrival at the primary care facility each animal will be logged in as per OWCN/OSPR protocols to ensure proper information and evidence collection and to start official chain of custody records.

During the intake process, live sea otters will receive a thermistor (temperature-reading) PIT tag subcutaneously in the right inguinal area, unless heavy oiling or other health concerns make this unfeasible (in which case the PIT tag will be implanted after washing). During the intake exam, the examining veterinarian will begin the animal's medical record and determine if the animal is stable enough for washing, or if it requires stabilization prior to washing. Euthanasia may be considered as an option for animals that are unlikely to recover.

Cleaning

Sea otters stable enough for washing will be anesthetized using fentanyl and midazolam or similar drugs by an experienced veterinarian. Anesthetized animals will be placed on washing tables and maintained on isoflourane, and core body temperature will be monitored. Washing tables will be equipped with one or two well aerated nozzles dispensing temperature controlled (80 to 110^{o} F), softened (2-4 grains per gallon), fresh water. If tar or congealed products are involved, a vegetable oil (olive or canola) may be first used to solubilize the tar. Washing will constitute a cyclic wash, rinse, wash, rinse, etc., with a dilute (~4%) solution of Dawn^{TM} dish washing detergent and water. Each animal will be rinsed thoroughly, for up to one hour upon completion of the washing cycle. Four to five people are required per washing table, one (with heavy gloves) specifically to hold the head-paws area. Depending on the degree of oiling, the entire washing procedure will usually take 1 to 2 hours

Animals will then be towel dried and moved to a drying table. Ideally, each drying table will be serviced by three or four air hoses with nozzles which deliver high volume, dried, temperature controlled air. Following drying, each animal will be reversed from the anesthetic (with

naltrexone or a similar drug) and placed in a large, slat-floor kennel with a sliding top (intensive care cage) or other easy-access pen for intensive care monitoring.

When fully recovered from anesthesia, and if its medical condition allows, each otter will be moved to one of the "two-otter pen-pools" (1 pool, 2 haul-outs, aka "totes") which will be serviced by abundant, clean, warm soft fresh water. As health and fur condition improve, otters may be moved to larger pools with warmed seawater within 24-48 hours, and if body temperature is stable, they can transition to pools with ambient seawater. It may take 2-4 days after cleaning and drying for an animal's fur to regain proper water repellency.

Oily equipment (e.g., cages and dip nets) should be wiped down thoroughly with oil sorbent pads then washed with detergent and water and disinfected with a chlorine solution. All oil contaminated solid waste must be treated as hazardous waste and disposed of properly. Waste water from animal and equipment washing will be diverted to a holding tank and tested to assess whether petroleum concentrations are low enough to discharge to the local sewer system.

Pre-release Conditioning

Animals will be retained in captivity until they meet OWCN health guidelines for release (typically one to two weeks). Food will be offered every two to three hours around the clock for animals in intensive care and four or five times a day for animals once they enter a two-otter pool-pen or larger pool. Food will be prepared in each facility's existing food room closely coordinated by that facility's food room supervisor. Food offered will amount to 10 to 15 pounds per day per otter and consist of recently thawed clams, shrimps, sea urchins, market crabs, fish fillets, mussels, abalones, squids, etc. as available (the ink sack should be removed from each squid to prevent confusion in diagnosing enteritis). Exoskeletons and squid pens may have to be removed to prevent drain clogging. Uneaten food will be removed and discarded prior to each feeding to insure that spoiled food is not consumed. Notes on amount of food consumed, behavior and coat condition will be kept on each otter, and data sheets will be filled out at regular intervals as per OWCN protocols.

Prior to release, animals will receive standard flipper tags for post-release identification.
If habitat that may be used by released rehabilitated otters is still contaminated by oil, otters may be held in captivity (seawater pools or floating net pens) until it is deemed safe to release them to the wild.

Release

If there is negligible danger of introducing disease into the wild population, and giving due consideration to possible quarantine protocols, rehabilitated sea otters will be released into the wild as soon as they are deemed physiologically and behaviorally normal. Animals will be released as near the original capture site as practicable, to reduce dispersal (and thereby

increase survival). Post-release tracking of cleaned and rehabilitated otters should be planned prior to release and implemented using the best available technology.

APPENDIX IIg

WILDLIFE-SPECIFIC SAFETY PLAN

(Sample)

STATE OF CALIFORNIA
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE *OFFICE OF SPILL PREVENTION AND RESPONSE*
SITE SAFETY PLAN

Page 1 of ___

Site Safety Plan
Location & Hazard ID and Control

1. Incident Name	2. Date/Time Prepared	3. Operational Period
4.Safety Officer (Include method of contact)	5. SOSC / Incident Commander	
6. Location	7. Attachments	

8. LOCATION / ACTIVITY	9. HAZARDS	10. PERSONAL PROTECTIVE EQUIPMENT
Wash Room	Heat, humidity, Slip/Trips/Falls	Gloves, goggles, aprons
Drying Room	Heat, humidity, Slip/Trips/Falls	None required
Holding Areas	Heat, humidity, Slip/Trips/Falls	Tyvek protective clothing, gloves
Intake/Processing	Oil exposure, Heat, animal handling	Tyvek protective clothing, gloves, goggles or safety glasses
Conditioning Tent	Halogen lamps, Propane heaters	None required
Pool Yard	Slip/Trip/Falls	None required
Wildlife Field Capture	Oil exposure, Heat, animal handling, remote area	Tyvek protective clothing, gloves, goggles or safety glasses
Transportation	Oil vapors	None required

STATE OF CALIFORNIA
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
OFFICE OF SPILL PREVENTION AND R ESPONSE
SITE SAFETY PLAN

Site Safety Plan
Hazard ID/Eval/Contol

Page 1 of ___

1. Incident Name		2. Date/Time Prepared	3. Operational Period
5.Safety Officer (Include method of contact)		5. SOSC / Incident Commander	
6. Location		7. Attachments	
8. TASKS / ACTIVITY	**9. HAZARDS**	**10. CONTROL MEASURES**	
Boat Ops	Water immersion	Any duties requiring work in and around water will require a life vest or appropriate floatation devices, wearing of appropriate clothing. If immersed, get out of the water as soon as possible and return to shore to change clothes.	
	Slip/Fall	Personnel working in or operating boats should wear appropriate shoes/boots designed to help maintain traction on wet surfaces. Be aware of unstable decks. Avoid jumping across gaps/openings	
Use of electric equipment/tools	Electric shock Fire	Proper handling and grounding methods will be used by staff when working on or around electrical hazards. Preventive methods will be employed to reduce or eliminate potential electrical hazards. Extension	

		cords and/or surge strips will not be "daisy chained" or strung through walls/windows
General site activities	Lifting Material handling	Proper lifting techniques will be used when lifting/handling large and/or heavy objects. Whenever possible, loads will be broken down. When loads cannot be reduced, lifting/carrying aids or the buddy system will be used.
	Heat stress	Workers will be informed of the hazards and symptoms of heat stress prior to work. Workers will be provided with at least 1 quart of water per hour, take appropriate rest breaks, and participate in heat stress monitoring when wearing CPC in temperatures above 70^{o} F, A shade area will be provided for staff during periods of potential heat stress.

Site Safety Plan
Hazard ID/Eval/Contol

Page 1 of ___

1. Incident Name	2. Date/Time Prepared	3. Operational Period
6.Safety Officer (Include method of contact)	5. SOSC / Incident Commander	
6. Location	7. Attachments	

8. TASKS / ACTIVITY	9. HAZARDS	10. CONTROL MEASURES
General site activities (field)	Fatigue	Workers need to be able to recognize the signs and symptoms of fatigue and possible ways to reduce its onset. Rest breaks will be taken as needed to remain mentally alert.
	Steep or Unstable Terrain	Plan each step carefully. Do not rely on the unstable terrain to support your body weight. If you must work in this area, avoid being directly above or below others.
	Vehicles	Be aware of traffic around you. Watch for vehicles in the roadway as well as those parked or entering/exiting work or parking areas.
	Encounter with hostile / violent person / illegal activity	Prior to working in remote inland areas, confirm that the area has been cleared (e.g., meth labs / pot grows) by CDFW Law Enforcement. Listen to person's comments and don't argue or further aggravate situation. Ignore sarcastic remarks. Stay calm and try to control your emotions.

		Apologize for inconveniences and ask what you can do to help him or her. Inform enforcement personnel as soon as possible.
	Ultraviolet radiation	Employees will be informed of the risks of sunburn and taught preventive measures for reducing injury, (blocking agents for ultraviolet light, hard hats, sunglasses, etc.). Sunscreen must be applied, per the manufacturer's instructions, for protection from ultraviolet radiation.
	Unstable or uneven surfaces Slick or slippery surfaces	Be aware of terrain and footing at all times. Sturdy work boots or appropriate footwear must be worn to provide sufficient traction and ankle support.
	Biological Hazards (Poisonous plants, spiders, reptiles, animals and/or insects)	Any disease-causing organism that can infect site staff will be evaluated. Poisonous plants (poison oak), insects (bee, wasp, ticks, black widows), and animals will be evaluated, considered, and communicated to staff prior to the start of work. Preventive methods and appropriate handling techniques will be communicated to staff prior to potential exposure.

Site Safety Plan
Hazard ID/Eval/Contol

Page 1 of ___

1. Incident Name		2. Date/Time Prepared	3. Operational Period
7.Safety Officer (Include method of contact)		5. SOSC / Incident Commander	
6. Location		7. Attachments	
8. TASKS / ACTIVITY	**9. HAZARDS**	**10. CONTROL MEASURES**	
All-Terrain Vehicle (ATV) use	Collision Roll-over Hot objects	Wear appropriate riding gear: ANSI-approved helmet, goggles, gloves, over-the-ankle boots, long-sleeve shirt and long pants. The mechanical condition of your ATV (including tires, chain, fuel, oil, lights and switches) must be inspected prior to each ride. The ATV should not be operated if the driver is fatigued.	
Air Operations	Helicopters	Passengers must receive a safety briefing from the pilot before liftoff. The briefing should include: safety features and equipment and their location on the individual aircraft; PPE; helicopter underwater escape procedures when appropriate; and emergency information.	
		Passengers and ground crew members approaching helicopters shall stay in a crouched position, and must be in clear view of the pilot while	

		approaching or departing a helicopter.
		Passengers and ground crew should approach/depart from the FRONT of the helicopter only when signaled by the pilot; and shall never walk under or around the tail, rotor or exhaust.
		Loose fitting clothing, hats, hard hats, or other gear, which might be caught in rotor downwash, must be secured or removed within 100 feet of operating helicopters.
		Passengers shall wear seat belts at all times, and personal floatation devices when flying over bodies of water.

Site Safety Plan
Hazard ID/Eval/Contol

Page 1 of ___

1. Incident Name		2. Date/Time Prepared	3. Operational Period
8.Safety Officer (Include method of contact)		5. SOSC / Incident Commander	
6. Location		7. Attachments	
8. TASKS / ACTIVITY	**9. HAZARDS**	**10. CONTROL MEASURES**	
Oiled Bird Handling	Potential to encounter elevated bacteria levels	Personnel must wear proper personal protective equipment, such as nitrile gloves and Tyvek (or similar) when handling oiled animals. Hands must be washed after handling any debris, animals or their caging material and before eating, drinking, applying cosmetics or smoking.	
	Eye injury Cut or puncture wounds	If bitten, scratched or otherwise injured, the injury must be reported to the supervisor immediately and seek appropriate medical attention.	
		Handling and restraint techniques will vary from species to species, so an unfamiliar species should only be handled with the guidance of a more experienced supervisor. Safety glasses or goggles must be worn when handling animals due to the risk of eye injury.	
		Keep birds at waist level in order to avoid injuries to the handler's face.	

		With this in mind, the bird can be moved to another area or passed to another person, transferring first the body, then the head, and making sure to communicate your actions to the other person.
		Oiled animals must always be washed by at least a two person team - never alone. One person is designated the holder and the other person is the washer. Large animals should be washed by at least a three person team.
	Toxic chemical exposure	Freshly oiled animals are often emitting vapors; therefore always maintain adequate ventilation in the vehicle to protect both humans and animals from inhaling such fumes.
	Heat lamps Toxic vapors	Oiled wildlife handlers must recognize areas of particular potential for harm to both humans and animals, e.g., heat lamps hanging near sheets, inadequate ventilation leading to an accumulation of toxic vapors, and certain drugs or disinfectants that may have undesirable secondary effects.

Site Safety Plan
Hazard ID/Eval/Contol

Page 1 of ___

1. Incident Name		2. Date/Time Prepared	3. Operational Period
9.Safety Officer (Include method of contact)		5. SOSC / Incident Commander	
6. Location		7. Attachments	
8. TASKS / ACTIVITY	**9. HAZARDS**	**10. CONTROL MEASURES**	
Night Ops	Slips / Falls	Be aware of terrain and footing at all times. Workers will be equipped with flashlights and/or head lamps for each individual.	
	Hypothermia	All staff will be fully informed of the signs and symptoms of hypothermia and possible ways to reduce its onset. Workers will be equipped with weather-appropriate clothing.	

APPENDIX IIh

GUIDELINES FOR SPILL RESPONSE INVOLVING LISTED FISH AND FISH HABITAT

California inland waters support a wide variety of fish species. Most inland species inhabit streams and rivers of the central valley and north coast while some of the more rare species occur in isolated environments such as desert springs, intermittent streams, and alkaline lakes. In addition to these resident species, the central valley and coastal streams are home to several types of anadromous fish which are highly prized by both sport and commercial fishermen. A significant oil spill could have serious impacts to these resources, especially for species that reside in shallow or confined waters.

The WBD will contact CDFW Fisheries personnel using the Listed Fish CDFW Contacts List in OSPR Wildlife Internal Resources. The WBD will put the correct CDFW person in contact with any Fisheries personnel from NOAA/NMFS and/or USFWS at the ICP. If CDFW Fisheries staff determines that capacity exists for fish response, they will lead the response.

The following is a list of suggested methods to employ during a response to reduce further impacts to fisheries.

1. Walking on the bank or through the water should be avoided or limited to reduce accelerated erosion and the increase of sediment in the water column and prevent damage to aquatic vegetation. Sediment overload may clog fish gills if water transports excessive amounts of sediment. Sediment can also cover fish eggs and the gravel nests they rest in. It can also destroy the food supply for many species of fish by covering aquatic insect habitat on the stream bottom. Further, sediment may carry pollutants that are spread by water action and cause problems both at the source and downstream. Walking in an oiled stream can also result in the pollutant being pushed down into the sediment and increasing recovery time. Damage to aquatic vegetation can result in loss of amphibian habitat and egg masses.

2. Many fish species have sensitivity to bright light. Lighting may be manipulated to restrict fish movement in specific areas at night, i.e. away from oil. Conversely, bright light can be avoided at night to avoid changes to natural behavior.

3. During all activities at project work sites, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas. Any material that does fall into a stream during response shall be immediately removed in a manner that has minimal impact to the streambed and water quality.

4. To ensure that further contamination of the habitat is avoided, staging/storage areas for equipment, materials, fuels, lubricants, and solvents should be located outside of the stream's high water channel and associated riparian area where it cannot enter the stream channel. Motorized equipment located near the stream should be positioned over drip-pans.

The number of access routes, number and size of staging areas, and the total area of the response shall be limited to the minimum necessary to complete the work and minimize riparian disturbance. The same entrance and exit points should be utilized, if possible, as well as walking on established trails. Less stable areas on a bank should be avoided to reduce the risk of channel instability.

APPENDIX IIi

GUIDELINES FOR PREVENTING THE INTRODUCTION OF AQUATIC INVASIVE SPECIES

California Department of Fish and Wildlife Aquatic Invasive Species Decontamination Protocol

The California Department of Fish and Wildlife (CDFW) is committed to protecting the state's diverse fish, wildlife, and plant resources, and the habitats upon which they depend. Preventing the spread of aquatic invasive species (AIS) in both CDFW's activities, as well as those activities CDFW permits others to conduct is important to achieving this goal. The protocols outlined below are a mandatory condition of your CDFW authorization to work in aquatic habitats. They are intended to prevent the spread of AIS, including New Zealand mudsnail *(Potamopyrgus antipodarum),* quagga mussel *(Dreissena rostriformis bugensis)* and zebra mussel *(Dreissena polymorpha).* Information about New Zealand mudsnails and quagga and zebra mussels is summarized in Attachments A and B. For complete information on the threats of AIS and aids to their identification, please visit the Department's Invasive Species Program webpage at https://www.wildlife.ca.gov/Conservation/Invasives or call (866) 440-9530.

Many AIS are difficult, if not impossible to see in the environment and can be unknowingly transported to new locations on equipment. Therefore, decontamination is necessary to prevent the spread of AIS between collection locations. Equipment shall be decontaminated between each use in different waterbodies. All equipment, including but not limited to, wading equipment, dive equipment, sampling equipment (e.g., water quality probes, nets, substrate samples, etc.), and watercraft, must be decontaminated using one or more of the protocols listed below. As an alternative to decontaminating on-site, you may wish to have separate equipment for each site and to decontaminate it all at the end of the day. Listed below are three options for equipment decontamination. Use your judgment and field sampling needs to select the method(s) that are appropriate for your equipment and schedule. **Because there are currently no molluscicides registered with the California Department of Pesticide Regulation that have been demonstrated to be effective for these three species, CDFW cannot recommend chemical decontamination.** If you would like training on implementing these protocols please contact the Invasive Species Hotline at (866) 440-9530 or e-mail invasives@wildlife.ca.gov

General field procedures to prevent the spread of AIS:

- If decontamination is not done on site, transport contaminated equipment in sealed plastic bags and keep separate from clean gear.
- When practical, in flowing water begin work upstream and work downstream. This avoids transporting AIS to non-infested upstream areas.
- For locations know to be infested with AIS, use dedicated equipment that is only used in infested waters. Store this equipment separately.

Equipment Decontamination Methods

Option 1: Dry

- Scrub gear with a stiff-bristled brush to remove all organisms. Thoroughly brush small crevices such as boot laces, seams, net corners, etc.
- Allow equipment to thoroughly dry (i.e., until there is complete absence of moisture), preferably in the sun. Keep dry for a minimum of 48 hours to ensure any organisms are desiccated.

Option 2: Hot water soak

- Scrub gear with a stiff-bristled brush to remove all organisms. Thoroughly brush small crevices such as boot laces, seams, net corners, etc.
- Immerse equipment in 140° F or hotter water. If necessary, weigh it down to ensure it remains immersed.
- Soak in 140° F or hotter water for a minimum of five minutes.

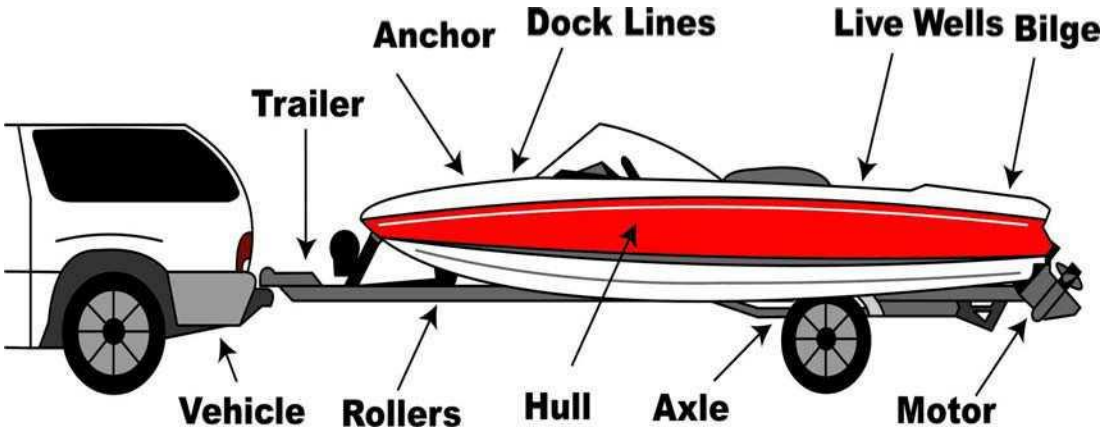
Option 3: Freeze

- Scrub gear with a stiff-bristled brush to remove all organisms. Thoroughly brush small crevices such as boot laces, seams, net corners, etc.
- Place in a freezer 32°F or colder for a minimum of eight hours.

Watercraft Decontamination

- Prior to leaving the launch area, remove all plants and mud from your watercraft, trailer, and equipment. Dispose of all material in the trash.
- Prior to leaving the launch area drain all water from your watercraft and dry all areas, including motor, motor cooling system, live wells, bilges, and lower end unit.
- Upon return to base facilities, pressure wash the watercraft and trailer with 140° F water79, including all of the boat equipment (i.e. ropes, anchors, etc.) that came into contact with the water.
- Flush the engine with 140° F water for at least 10 minutes and run 140° F water through the live wells, bilges, and all other areas that could contain water.

To ensure 100% mortality the water needs to be 140° F at the point of contact or 155° F at the nozzle



Reporting Aquatic Invasive Species

If you suspect you have found New Zealand mudsnail, quagga and zebra mussels, or other AIS, please immediately notify the CDFW Invasive Species Program at (866) 440-9530 or e-mail invasives@wildlife.ca.gov. Please provide your contact information, specific location of discovery, and digital photographs of the organisms (if possible).

New Zealand Mudsnail
The threat posed by New Zealand mudsnails (NZMS):

- NZMS reproduce asexually therefore it only takes a single NZMS to colonize a new location.
- NZMS are prolific, and a single NZMS can give rise to 40 million snails in one year.
- Densities of over 750,000 NZMS per square meter have been documented.
- NZMS out-compete and replace native invertebrates that are the preferred foods of many fish species and alter the food web of streams and lakes.

Identifying NZMS:

- NZMS average 1/8 inch in length, but young snails may be as small as a grain of sand. Adults bear live young.
- See the photos, below, for assistance identifying NZMS. Expert identification will be necessary to confirm identification.

NZMS Habitat:

- NZMS can live in most aquatic habitats, including silted river bottoms, clear mountain streams, reservoirs, lakes and estuaries.
- NZMS have a temperature tolerance of 32-77° F.
- NZMS can survive out of water for more than 25 days in cool, moist environments, and have been found over 40 feet from water.

Current known locations of NZMS in California can be found at
http://nas.er.usgs.gov/taxgroup/mollusks/newzealandmudsnaildistribution.aspx

Quagga and Zebra Mussels

The threat posed by quagga and zebra mussels (Dreissenid mussels):

- Dreissenid mussels multiply quickly and out-compete other species for food and space.
- Their presence can alter food webs and alter environments, negatively affecting native and game fish species.
- Dreissenid mussels attach to hard and soft surfaces, and negatively impact water delivery systems, hydroelectric facilities, agriculture, recreational boating and fishing.
- Adults can survive up to 30 days out of water in cool, humid conditions.
- Produce microscopic larvae that can be unknowingly transported in water, including live-wells, bilges, and motors.

Identifying Dreissenid mussels:

- Typically the same size as a fingernail but can grow up to about 2 inches long.
- Variable, usually dark and light alternating stripes. May also be solid cream, brown, or black.

Dreissenid mussel habitat:

- Variable, including both hard and soft surfaces in freshwater.
- From surface depth to more than 400 feet in depth.

Current known locations of Dreissenid mussels in California can be found http://nas.er.usgs.gov/taxgroup/mollusks/zebramussel/maps/CaliforniaDreissenaMap.jpg

APPENDIX III
FORMS

a. Wildlife Search Effort Log
b. Shoreline Wildlife Reconnaissance Survey Form
c. Wildlife Care and Processing Daily Report Form
d. Processing Unit Forms
e. Volunteer Forms

APPENDIX IIIa
WILDLIFE SEARCH EFFORT LOG – for use by ALL Wildlife Recovery Group Teams

WILDLIFE SEARCH EFFORT LOG GUIDELINES

The Wildlife Search Effort Log documents the search effort associated with finding live and dead birds. This assists CDFW in analyzing the effectiveness of the response and estimating the full impacts of the spill.

California Department of Fish and Wildlife
Office of Spill Prevention and Response

Wildlife Search Effort Log

OSPR-NRDA Use Only SEARCH # _____

Names of Searchers: _____

_____

Spill Name: _____

Date (Page #1): _____

Order	Beach Name or Division	Method (Foot/ ATV/ Point Scan)	Time Search Starts	Time Search Ends	Starting Latitude & Longitude	End/Turnaround Lat & Longitude	Live Animals Collected (# and spp.)	Dead Animals Collected (# and spp.)	Additional Animals, Observations, or Comments:
Example 1	*Monterey Beach Park*	*Foot*	*0815*	*0925*	*N 36.6114 W 121.8596*	*N 36.6017 W 121.8898*	*1 COMU 2 WEGR*	*1 Unid. bird 2 WEGR*	*1 dead sea lion (reported to the WRGS)*
Example 2	*MR-H*	*ATV*	*1240*	*1350*	*N 36.6373 W 121.9338 or Pt. Pinos*	*N 36.6217 W 121.9039 or Pt. Cabrillo*	*None*	*None*	
A									
B									
C									
D									

Fill Out Even When No Animals Are Collected

California Department of Fish and Wildlife
Office of Spill Prevention and Response

Wildlife Search Effort Log

OSPR-NRDA Use Only SEARCH # _____

Names of Searchers: _____

_____

Spill Name: _____

Date (Page #2): _____

Order	Beach Name or Division	Method (Foot/ATV/ Point Scan)	Time Search Starts	Time Search Ends	Starting Latitude & Longitude	End/Turnaround Lat & Longitude	Live Animals Collected (# and spp.)	Dead Animals Collected (# and spp.)	Additional Animals, Observations, or Comments:
E									
F									
H									
I									
J									
K									
L									

Fill Out Even When No Animals Are Collected

APPENDIX IIIb. Shoreline Wildlife Reconnaissance Form

Incident Name:	Page _____ of _____ for this location and date
Division or General Location:	Date:
Specific Location:	Observers:
GPS Start:	Time Start:
GPS End:	Time End:
GPS Datum:	Survey Method (foot/binocs/scope/vehicle):

Species (4-letter Code)	No. of Animals	No. Oiled	Live/Dead	Marked? (toe-clip; band)	Comments (location, recoverable, catch technique, etc.)

APPENDIX IIIc. Wildlife Branch Daily Report Forms (2 pages).

WILDLIFE BRANCH SUMMARY

Spill Name:	
Report Date/Time:	
Reported by:	

WILDLIFE DATA				
Date	Birds Collected Alive	Birds Collected Dead	Mammals Collected Alive	Mammals Collected Dead
Cumulative Totals	0	0	0	0

STAFFING DATA				
Wildlife Recovery Personnel	Wildlife Field Stabilization and Transportation Personnel	Care & Processing Staff	Care & Processing Volunteers	Wildlife Hazing Personnel

Notes (T&E species, etc.):

SUMMARY:

WILDLIFE CARE & PROCESSING GROUP INFORMATION

BIRDS	CARE STRIKE TEAM INFO (Live Birds)					PROCESSING STRIKE TEAM INFO (Dead Birds)			
Date	Birds Collected Alive on Date	Birds Died/ Euthanized on Date	Birds Released on Date	Current Oiled Birds in Care	Current Clean Birds in Care	Daily Birds Collected Dead	Total Dead Birds Visibly Oiled	Total Dead Birds Not Visibly Oiled	Total Dead Birds Unassessed
Cumulative Totals	0	0	0			0	0	0	0

Notes:

MAMMALS	CARE STRIKE TEAM INFO (Live Mammals)					PROCESSING STRIKE TEAM INFO (Dead Mammals)			
Date	Mammals Collected Alive on Date	Mammals Died/ Euthanized on Date	Mammals Released on Date	Current Oiled Mammals in Care	Current Clean Mammals in Care	Daily Mammals Collected/Recorded Dead	Total Dead Mammals Visibly Oiled	Total Dead Mammals Not Visibly Oiled	Total Dead Mammals Unassessed
Cumulative Totals	0	0	0			0	0	0	0

Notes:

APPENDIX IIId– Processing Strike Team Forms

Original forms available at:
http://data.prbo.org/cadc2/index.php?page=oil-spill-response-tools

OWCN Oiled Animal Data Log: DEAD Animals

Oil Spill Name:					Facility:	Circle One: Bird Mammal Other				Circle One: New Restrand			
Log Number (D-xxxx)	Date Arrived (m/d/y)	Time Arrived (24 hr)	Date Collected (m/d/y)	Time Coll'ted (24 hr)	First Initial & Last Name of Collector (use deliverer & "DEL:" if collector unknown)	Collection Location (Beach Name)	GPS Coordinates (N)	GPS Coordinates (W)	Band/Tag Color & No. (Field or temp; C-XXXX)	Date Proc'ed (m/d/y)	Time Proc'ed (24 hr)	Name of Processor	Species Code (XXXX)

Front Side of Page _____ of _____ PCA/Index:

OWCN Oiled Animal Data Log: DEAD Animals (continued from front side)

Oil Spill Name:								Facility:				Circle One: Bird Mammal Other				Circle One: New Restrand	
Log Number (D-xxxx)	Condition	Scavenging	Oiling Status	% Oiled	Depth Oiled	Where Oiled	Sample/ Photo Taken? (Y/N)	Wing (mm) [unflatt.]	Tarsus (mm)	Bill Depth (mm) [track where taken]	Culmen / Nares to Tip (mm) [proximal]	Exposed Culmen (mm)	Age	Sex	Morgue Box #	Notes (any other observations, including **wing/toe clipping**, breeding condition, contamination by petroleum products such as plastic or another specimen, the **federal band** if bird arrived banded)	

Back Side of Page _____ of _____ PCA/Index:

OWCN Oiled Animal Data Log: LIVE Animals

Oil Spill Name:				Facility:		Circle One: Bird Mammal Other		Circle One: New Re-strand	
Log Number (L-xxxx)	Date Arrived (m/d/y)	Time Arrived (24 hr)	Date Collected (m/d/y)	Time Collected (24 hr)	First Initial & Last Name of Collector (use deliverer & "DEL:" if collector unknown)	Collection Location (Beach Name)	GPS Coordinates (N)	GPS Coordinates (W)	Field Band or Tag Color & Number (C-XXXX)

Front Side of Page _____ of _____ PCA/Index:

Oiled Wildlife Care Network Appendix C-II

Protocols for the Care of Oil-Affected Birds *updated Jan 2014*

OWCN Oiled Animal Data Log: LIVE Animals (continued from front side)

Oil Spill Name:				Facility:			Circle One: Bird Mammal Other				Circle One: New Re-strand
Log Number (L-xxxx)	Date Processed (m/d/y)	Time Processed (24 hr)	First Initial & Last Name of Examiner	Species Code (XXXX)	Temp Band/Tag Color & Number (C-XXXX)	Oiling Status (0-5)	Sample/ Photo Taken? (Y/N)	Disposition Status (R,D,E,T)	Disposition Date (m/d/y)	Disposition Details (federal band given at release, morgue box, or where transferred)	Notes (e.g., the **federal band** number if bird arrived banded, morphometrics, age/sex, cross-contamination info)

Back Side of Page _____ of _____ PCA/Index:

Code Key for OWCN/Wildlife Processing Unit
Live & Dead Oiled Animal Data Logs

Record incident name, location, and page; circle live vs. dead. Please be sure all fields are filled in with the appropriate code.

The following list of fields are filled out by receivers upon the animal's arrival:
Intake #: Starting with L for live and D for dead, record the sequential i.d. number which animal was given upon arrival.
Date and Time Collected (2 fields): Date and time (24-hour format) of collection.
Collector Name: Record first initial and last name of collector (from bag/box); if public, put phone number as well.
Collection Location: Name of initial collection/capture location. If necessary use Notes on back for overflow.
GPS Coordinates (2 fields): Coordinates of collection/capture location.
Field Band Number: Provide # of temporary band affixed during initial collection/capture; for dead this will be only band.
Date and Time Arrived (2 fields): Date and time (24-hour format) animal arrived at processing station.

The following list of fields are filled out during processing, not during receiving, or are transferred from other forms: Date and Time Processed (2 fields): Date and time (24-hour format) the rest of processing (data fields below) was initiated.
Processor Name: First initial and last name of data collector for the individual animal.
Species: Standard 4-letter abbreviation; if unknown, indicate lowest taxonomic category determined (e.g. gull; alcid; bird).
Temp Band/Tag #: For birds enter color and number of band (i.e., B198 if Blue band #198) placed on leg (or elsewhere with string as necessary for incomplete carcasses). This is for live birds other than shorebirds, and dead birds not given a field band. For turtles or phocids, plastic NMFS tags should be fitted on the hind flipper. For otariids, tags go on front flipper
Condition: (dead log only) **1**=freshly dead whole carcass with no evidence of scavenging; **2**=freshly dead and scavenged with no body parts missing; indicate in Notes the location (e.g., breast) of scavenging. **3**=decomposing whole carcass; **4**=body parts only - fresh (elaborate on which body parts are present in Notes); **5**=body parts only - decomposing (elaborate in Notes); **6**=dessicated, mummified carcass; **99**=not evaluated.
Extent of Scavenging: (dead log only) **0=**none detected; **1**=light; **2**=moderate; **3**=heavy
Oiling Status: In hierarchical order (choosing lowest number to apply), indicate presence of oil (jet fuel, diesel, gasoline, vegetable oil, fish oil or other) by: **0**=no signs of oil detected; **1**=yes, oil visually detected; **2**=yes, smell oil; **3**=yes, skin burned; **4**=unknown but skin wet/not waterproof; **5**=unknown but plumage misaligned, parted, or sticky; **99**=not evaluated.
% of Bird Oiled or Sheened: (dead log; for live, transferred over from medical forms) **1**=<2% of body; **2**=2-25% of body; **3**=26-50% of body; **4**=51-75% of body; **5**=76-100% of body; **6**=oil detected but extent undeterminable due to state of carcass; **7**=no oil detected but this may be due to state of carcass (i.e., partial); **99**=not evaluated or applicable (use if not visibly oiled).
Depth of Oil: (dead log only) **1**=surface (oil penetrated <1/4 way down feather shaft); **2**=moderate (<1/2 down shaft); **3**=deep (penetrated to skin); **99**=not evaluated or applicable (use if not visibly oiled).
Where Oiled: (dead log only) **1**=bill/mouth area only; **2**=body (1 spot); **3**=spotty (spots in multiple areas); **4**=waterline (keel downwards); **5**=entire body; **99**=not evaluated or applicable (use if not visibly oiled).
Feather/Oil Sample Taken?: Take a sample from oiled locations. If no apparent oil, take samples from areas frequently oiled. **Y**=feather/fur/tissue/swab sample taken; **N**=no sample taken. Shiny or dull side makes no difference. Record the following on both the envelope AND foil in which sample is placed: intake #, species code, band number, processing date, spill event name.
Photo Taken?: Y=yes; **N**=no. Write the time it was taken on photo (if polaroid); see protocols if not polaroid. In photo itself backdrop should clearly show: intake #, species code, band number, date, facility, and spill name (if designated).
Disposition Date: (live log only): Record the date of the disposition (transferred over from Post Mortality Log).
Disposition Status: (live log only): Manner in which live animals left the care of veterinarians at the facility. **R**=released; **T**=transferred for rehabilitation; **E**=euthanized; **D**=died (transferred over from Post Mortality Log).
Federal Band number: Record here any federal metal bands birds arrived with; federal bands given to shorebirds in lieu of temporary plastic bands; and federal bands given upon release. WPU will report recoveries and OWCN newly placed bands.
Morphometrics and Age/Sex: If time allows, during processing on dead birds record the unflattened wing, tarsus, bill depth(s), nares to tip, exposed culmen, age, and sex, as appropriate for the species. Proper training is required; refer to the complete protocols for the Wildlife Processing Unit for a thorough description of how to collect each data type.
Morgue Box #: Box # in which the carcasses is placed. If bags are used record those numbers also. Live and dead are given different series (alpha vs. numeric); Special Status and unidentified birds placed in unique boxes. Live are transferred over from Post Mortality Log.
Notes: Any extra observations, e.g., breeding condition; conspicuous cause of death if not related to oil; contamination by other petroleum products (e.g. wrapped in plastic) or other carcasses; and **detection of toe or wing clipping** on dead birds.

OWCN PHOTOGRAPH CORRECTIONS LOG

For documenting corrections to digital photos

Circle One: Live Dead **Circle One:** Bird Mammal Other **Camera/Card #:**_____

Spill Name:_____ **Facility:**_____

Log #	**Date**	**Time**	**Photographer**	**Correction** (e.g., species/band/log #, date correction; photo was retaken and the first one should be disregarded; etc.)

Spill Name: _____ Facility: _____ Page _____ of _____

OWCN Post-Arrival Mortality Log
(Received through Live Intake)

Initials	**Log #**	**Band #** (as read on carcass; may not agree with what was originally given)	**Species** (as identified here)	**Date of Death**	**Died/Euth** (Record D, E, or if unknown D/E)	**Morgue Box #**	**Comments and Morphometrics** (wing, tar, exp cul; and bill depth, nares to tip *as appropriate;* if date of death unknown, record date carcass received as latest possible date of death)

Avian Species Codes and Status – For OWCN/Wildlife Processing Unit

Bird species, species status, 4-letter codes, suggested federal band sizes, likelihood of each to be processed at wildlife processing centers, and the type of morgue box in which the corpse should be stored. ***Species of federal or state special status (endangered, threatened, special concern) are to be placed in morgue boxes designated for special status carcasses. All other identified carcasses are to be placed in morgue boxes with no designation. Unidentified fragments or carcasses are to be placed in morgue boxes designated for unidentified carcasses.*** This table is not exhaustive and is generalized for all of coastal California. You may encounter species not occurring here (e.g., landbirds); see the Bird Banding Lab website for appropriate federal band size and code (http://www.pwrc.usgs.gov/BBL/manual/bandsize.htm). Birds are listed in alphabetical order.

Species	Code	Band	Likelihood	Morgue Box
Albatross, Black-footed	BFAL	7B	Rare	No Status
Albatross, Laysan	LAAL	7B	Rare	No Status
Albatross, Short-tailed ***	STAL	8	Extremely Rare	**Special Status**
Alcid, Unidentified	ALCI	n/a	n/a	Unidentified
Auklet, Cassin's	CAAU	3B-3A	Common	No Status
Auklet, Parakeet	PAAU	4	Rare	No Status
Auklet, Rhinoceros *	RHAU	6-5	Common	**Special Status**
Avocet, American	AMAV	4-4A°	Extremely Rare	No Status
Blackbird, Red-winged	RWBL	2	Rare	No Status
Blackbird, Tricolored *	TRBL	2	Rare	**Special Status**
Brant *	BRAN	7A	Uncommon	**Special Status**
Bufflehead	BUFF	5	Rare	No Status
Canvasback	CANV	7A	Rare	No Status
Coot, American	AMCO	6-5	Rare	No Status
Cormorant, Brandt's	BRAC	8	Common	No Status
Cormorant, Double-crested	DCCO	8-7B	Uncommon	No Status
Cormorant, Pelagic	PECO	7A-7B	Common	No Status
Cormorant, Unidentified	CORM	n/a	n/a	Unidentified
Curlew, Long-billed	LBCU	5-6	Rare	No Status
Dowitcher, Long-billed	LBDO	2	Rare	No Status
Dowitcher, Short-billed	SBDO	2	Rare	No Status
Dowitcher, Unidentified	DOWI	n/a	n/a	Unidentified
Duck, Harlequin *	HARD	5	Rare	**Special Status**
Duck, Ring-necked	RNDU	6	Rare	No Status
Duck, Ruddy	RUDU	6-7A	Uncommon	No Status
Duck, Unidentified	DUCK	n/a	n/a	Unidentified
Dunlin	DUNL	1B-1A	Rare	No Status
Egret, Great	GREG	7A-7B	Extremely Rare	No Status
Egret, Snowy	SNEG	6	Extremely Rare	No Status
Fulmar, Northern	NOFU	6	Common	No Status
Gadwall	GADW	6	Rare	No Status
Godwit, Marbled	MAGO	4	Rare	No Status
Goldeneye, Barrow's *	BAGO	7A	Extremely Rare	**Special Status**
Goldeneye,Common	COGO	6	Rare	No Status
Goldeneye, Unidentified	GOLD	n/a	n/a	Unidentified
Goose, Canada	CAGO	8	Rare	No Status
Goose, Greater White-fronted	GWFG	7B-8	Extremely Rare	No Status
Grebe, Clark's	CLGR	7A-B	Rare	No Status
Grebe, Eared	EAGR	5	Common	No Status
Grebe, Horned	HOGR	6-5	Common	No Status
Grebe, Pied-billed	PBGR	5-6	Rare	No Status
Grebe, Red-necked	RNGR	7A	Rare	No Status
Grebe, Western	WEGR	7A-B	Very Common	No Status
Grebe, Western/Clark's	WCGR	7A-B	n/a	Unidentified
Grebe, Eared/Horned	EHGR	5-6	n/a	Unidentified
Grebe, Unidentified	GREB	n/a	n/a	Unidentified
Guillemot, Pigeon	PIGU	4A	Common	No Status
Gull, Bonaparte's	BOGU	3-3B	Uncommon	No Status

Gull, California	CAGU	5	Common	No Status
Gull, Glaucous	GLGU	7A	Rare	No Status
Gull, Glaucous-winged	GWGU	7A	Common	No Status
Gull, Heerman's	HEEG	4A	Common	No Status
Gull, Herring	HERG	6	Common	No Status
Gull, Mew	MEGU	4A	Common	No Status
Gull, Ring-billed	RBGU	4A	Common	No Status
Gull, Sabine's	SAGU	3	Uncommon	No Status
Gull, Thayer's	THGU	6	Common	No Status
Gull, Western	WEGU	6	Very Common	No Status
Gull, Western x Glaucous-winged	HYGU	6-7A	Common	No Status
Gull, Unidentified	GULL	n/a	n/a	Unidentified
Heron, Black-crowned Night	BCNH	7A	Rare	No Status
Heron, Great Blue	GBHE	7B	Extremely Rare	No Status
Heron/Egret, Unidentified	HERO	n/a	n/a	Unidentified
Jaeger, Long-tailed	LTJA	4A-4	Rare	No Status
Jaeger, Parasitic	PAJA	4A	Rare	No Status
Jaeger, Pomarine	POJA	5	Rare	No Status
Killdeer	KILL	2	Uncommon	No Status
Kingfisher, Belted	BEKI	3B-3A	Uncommon	No Status
Kittiwake, Black-legged	BLKI	4A	Common	No Status
Loon, Arctic	ARLO	7B	Uncommon	No Status
Loon, Common *	COLO	8	Common	**Special Status**
Loon, Pacific	PALO	7B	Common	No Status
Loon, Red-throated	RTLO	7B	Common	No Status
Loon, Yellow-billed	YBLO	9	Extremely Rare	No Status
Loon, Unidentified	LOON	n/a	n/a	Unidentified
Mallard	MALL	7A	Rare	No Status
Merganser, Common	COME	7A	Rare	No Status
Merganser, Hooded	HOME	5-6	Rare	No Status
Merganser,Red-breasted	RBME	6-5	Rare	No Status
Murre, Common	COMU	6M	Very common	No Status
Murrelet, Ancient	ANMU	3B-3	Rare	No Status
Murrelet, Craveri's	CRMU	2	Rare	No Status
Murrelet, Marbled *	MAMU	3B-3	Rare	**Special Status**
Murrelet, Xantus' *	XAMU	2	Rare	**Special Status**
Oystercatcher,Black	BLOY	5	Rare	No Status
Peep, Unidentified "Peep" shorebird	PEEP			Unidentified
Pelican, American White *	AWPE	9-9C °	Rare	**Special Status**
Pelican, Brown ***	BRPE	8-9	Common	**Special Status**
Petrel, Mottled	MOPE	3	Extremely Rare	No Status
Phalarope, Red	REPH	1A	Common	No Status
Phalarope, Red-necked	RNPH	1B	Common	No Status
Phalarope, Wilson's	WIPH	1A-2	Uncommon	No Status
Pintail, Northern	NOPI	6	Rare	No Status
Plover, Black-bellied	BBPL	3B	Rare	No Status
Plover, Semipalmated	SEPL	1A-1B	Rare	No Status
Plover, Snowy **	SNPL	1B,1P	Rare	**Special Status**
Plover, Unidentified	PLOV	n/a	n/a	Unidentified
Puffin, Horned	HOPU	5	Rare	No Status
Puffin, Tufted *	TUPU	6-5	Rare	**Special Status**
Rail, Black **	BLRA	5	Extremely Rare	**Special Status**
Rail, Clapper ***	CLRA	5	Extremely Rare	**Special Status**
Rail, Virginia	VIRA	2-3°	Extremely Rare	No Status
Redhead *	REDH	6	Extremely Rare	**Special Status**
Sanderling	SAND	1A	Rare	No Status
Sandpiper, Least	LESA	1-1B	Rare	No Status
Sandpiper, Pectoral	PESA	1A	Extremely Rare	No Status
Sandpiper, Spotted	SPSA	1B-1A	Rare	No Status
Sandpiper, Western	WESA	1B	Rare	No Status

Scaup, Greater	GRSC	6-5	Rare	No Status
Scaup, Lesser	LESC	6-5	Rare	No Status
Scaup, Unidentified	SCAU	n/a	n/a	Unidentified
Scoter, Black	BLSC	7A	Rare	No Status
Scoter, Surf	SUSC	7A	Common	No Status
Scoter, White-winged	WWSC	7A	Common	No Status
Scoter, Unidentified	SCOT	n/a	n/a	Unidentified
Shearwater, Black-vented	BVSH	4	Rare	No Status
Shearwater, Buller's	BULS	4	Uncommon	No Status
Shearwater, Flesh-footed	FFSH	4	Uncommon	No Status
Shearwater, Pink-footed	PFSH	4	Common	No Status
Shearwater, Short-tailed	SHOS	4	Common	No Status
Shearwater, Sooty	SOSH	4-5	Common	No Status
Shearwater, Unidentified	SHOR	n/a	n/a	Unidentified
Shoveler, Northern	NSHO	5-6	Rare	No Status
Skimmer, Black *	BLSK	4	Rare	**Special Status**
Snipe, Common	COSN	3	Rare	No Status
Sora	SORA	2°	Extremely Rare	No Status
Stilt, Black-necked	BNST	3A-4 °	Rare	No Status
Storm-Petrel, Ashy *	ASSP	1B	Rare	**Special Status**
Storm-Petrel, Black *	BLSP	1A	Rare	**Special Status**
Storm-Petrel, Fork-tailed *	FTSP	1B	Rare	**Special Status**
Storm-Petrel, Leach's	LHSP	1B	Rare	No Status
Storm-Petrel, Unidentified	SPSP	n/a	n/a	Unidentified
Surfbird	SURF	2	Rare	No Status
Tattler,Wandering	WATA	3-2	Rare	No Status
Teal, American Green-winged	AGWT	4-4A	Rare	No Status
Teal, Blue-winged	BWTE	5-4A	Rare	No Status
Teal, Cinnamon	CITE	5-4A	Rare	No Status
Tern, Arctic	ARTE	2-1A	Rare	No Status
Tern, Black *	BLTE	2-1A	Extremely Rare	**Special Status**
Tern, Caspian	CATE	5-4A	Rare	No Status
Tern, Common	COTE	2	Rare	No Status
Tern, Elegant *	ELTE	3	Rare	**Special Status**
Tern, Forster's	FOTE	3	Rare	No Status
Tern, Least ***	LETE	1A-1B	Rare	**Special Status**
Tern, Royal *	ROYT	4A	Rare	**Special Status**
Tern, Unidentified	TERN	n/a	n/a	Unidentified
Turnstone, Black	BLTU	2	Rare	No Status
Turnstone, Ruddy	RUTU	2-3	Rare	No Status
Turnstone, Unidentified	TURN	n/a	n/a	Unidentified
Vulture, Turkey	TUVU	8V	Extremely Rare	No Status
Whimbrel	WHIM	4	Rare	No Status
Wigeon, American	AMWI	6	Rare	No Status
Willet	WILL	4	Rare	No Status
Yellowlegs, Greater	GRYE	3-3B	Rare	No Status
Yellowlegs, Lesser	LEYE	2	Extremely Rare	No Status
Yellowlegs, Unidentified	YELL	n/a	n/a	Unidentified

Last modified 13 October 2004

*Indicates a California Species of Special Concern
**Indicates a species of federal or state threatened status
***Indicates a species of federal or state endangered status
° Band above the tarsometatarsal joint only.

Marine Mammal & Sea Turtle Species Codes and Status

Marine Mammal and sea turtle species (by common name), species status, and suggested name abbreviation are present
Although no official four letter species codes exist for marine mammals and turtles, the convention used for birds was appl
The first two letters of the first and last common name were used as the code. This table is not exhaustive, so it is possibl
to encounter species not listed. This table has been generalized for all of coastal California.

Common Name	Code Abbr.		Common Name	Code Abbr.
Baleen Whales			Seals & Sea Lions	
Whale, Blue ***	BLWH		Fur Seal, Guadalupe **	GFSE
Whale, Fin ***	FIWH		Fur Seal, Northern	NFSE
Whale, Gray	GRWH		Sea Lion, California	CASL
Whale, Humpback ***	HUWH		Sea Lion, Steller **	STSL
Whale, Minke	MIWH		Otariid, Unidentified	OTAR
Whale, Sei ***	SEWH		Seal, Harbor	HASE
Whale, Baleen - Unidentified	WHALE		Seal, Northern Elephant	NESE
			Phocid, Unidentified	PHOC
Toothed Whales: Dolphins & Porpoises			Pinniped, Unidentified	PINN
Dolphin, Bottlenose	BODO			
Dolphin, Common	CODO		Otters	
Dolphin, Northern Right Whale	NRWD		Otter, River *	RIOT
Dolphin, Pacific White-sided	PWSD		Otter, Sea **	SEOT
Dolphin, Risso's	RIDO			
Dolphin, Unidentified	DOLP		Sea Turtles	
Porpoise, Dall's	DAPO		Turtle, Eastern Pacific Green ***	GRTU
Porpoise, Harbor	HAPO		Turtle, Hawksbill ***	HATU
Porpoise, Unidentified	PORP		Turtle, Leatherback ***	LETU
Whale, False Killer	FKWH		Turtle, Loggerhead ***	LOTU
Whale, Killer	KIWH		Turtle, Pacific (Olive) Ridley ***	ORTU
Whale, Dwarf Sperm	DSWH			
Whale, Pigmy Sperm	PSWH			
Whale, Sperm ***	SPWH			
Whale, Toothed - Unidentified	ODON			
Beaked Whales				
Beaked Whale, Baird's	BABW			
Beaked Whale, Cuvier's	CUBW			
Beaked Whale, Hubb's	HUBW			
Beaked Whale, Unidentified	BEAK			

* Indicates a California Species of Special Concern
** Indicates a species with a threatened status
*** Indicates a species with endangered status

APPENDIX IIIe

VOLUNTEER FORMS

California Department of Fish and Wildlife volunteer information and forms can be found at:

https://www.wildlife.ca.gov/OSPR/Volunteer