Appendix XXI

DRAFT

FISH AND WILDLIFE AND SENSITIVE ENVIRONMENTS ANNEX TO THE FEDERAL REGION IX REGIONAL CONTINGENCY PLAN

Note: This draft FWSEA was prepared in February 2007 by U.S. Department of the Interior, Office of Environmental Policy and Compliance, Region IX (OEPC) with input from Region IX Regional Response Team Natural Resources Subcommittee, chaired by OEPC. It is under review by U.S. Fish and Wildlife Service (USFWS), Regions 1 & 2; National Oceanographic and Atmospheric Administration, National Marine Fisheries Service; and State of California Office of Spill Prevention and Response (OSPR). This draft is not intended for official use.

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1.0 PURPOSE

The purpose of this Fish and Wildlife and Sensitive Environments Annex (FWSEA, or "Annex") is to provide Federal Region 9 On-Scene Coordinators (OSCs) and other first responders, information to identify sensitive environmental resources.

This information will help first responders to: (a) identify and prioritize protection of fish and wildlife resources and sensitive environments, (b) contact natural resources trustees and managers, and (c) provide guidance in selecting appropriate response strategies for avoiding or minimizing adverse ecological effects of a spill, including impacts associated with response activities.

This Annex establishes procedures and policy for meeting objectives set forth in 40 Code of Federal Regulations (CFR) Section 300.210(c)(4)(i) and 40 CFR Section 300.210(c)(4)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). It is not an all-inclusive technical guide for reducing or eliminating all adverse affects to natural resources. It should be used in conjunction with Sensitive Site Strategies in Region 9 Area or Sub-area Contingency Plans (ACPs) and National Oceanographic and Atmospheric Administration (NOAA) Coastal Environmental Sensitivity Index (ESI) Maps available at:

http://response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY% 28entry_subtopic_topic%29=entry_id,subtopic_id,topic_id&entry_id(entry_subtopic_topic)=451&subtopic_id(entry_subtopic_topic)=8&topic_id(entry_subtopic_topic)=1

2.0 SCOPE

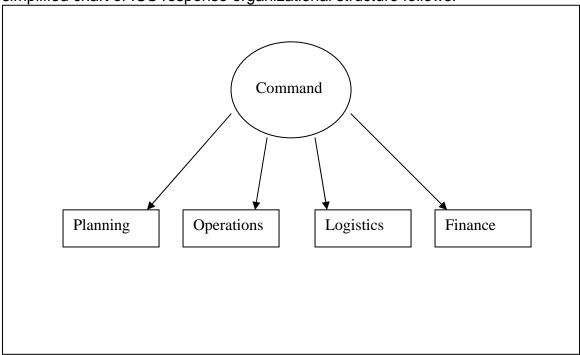
Information on sensitive sites in ACPs and ESIs may not cover all inland spill sites; this Annex provides a regional perspective to aid Area and Sub-Area Committees in identifying areas of concern requiring specific consideration during response planning.

This Annex includes information to assist the OSC in the sensitive environment classification and identification process. It addresses response techniques and consultation processes to facilitate coordination and consideration of potential environmental impacts during spill response.

3.0 RESPONSIBILITY AND ORGANIZATION

The organizational structure of a fish, wildlife and/or sensitive environments response fits within the Incident Command System (ICS). Federal directives and some states mandate use of ICS for oil and hazardous substance spill response. ICS is a standardized on-scene emergency management system designed to adopt an integrated organizational structure equal to the complexity and

demands of an incident without being hindered by jurisdictional boundaries. A simplified chart of ICS response organizational structure follows:



Command

The Command or Unified Command, which includes State and Federal OSCs, is responsible for authorizing and coordinating all incident operations. While UC may include other entities such as a Responsible Party OSC, only Federal and State OSCs have authority over fish, wildlife, and sensitive environments-related response decisions. OSC will consult with trustee agencies when fish, wildlife and sensitive environments may be impacted to determine appropriate response measures.

For incidents potentially affecting trust resources, such as endangered species, OSC may include trust resources agency representatives in UC.

Planning

When trust resources, such as fish, wildlife and sensitive environments, may be affected by an oil spill, trustee agency representatives will become involved in response effort through the Planning Section. They provide input on protecting sensitive resources and minimizing impacts to trust resources. Depending on the nature and extent of the spill, such activities may include response prioritization, tactics and strategy recommendations, identification of exclusion areas and controlled pathways through sensitive habitats, and wildlife operations including wildlife reconnaissance, carcass recovery, hazing, wildlife capture and transport, safety and communications, rehabilitation and release. Approval of all migratory bird and endangered species response actions must go through Incident Command and then to Unified Command. Responsibilities of the Planning Section include:

- Identifying environmentally sensitive areas, locating wildlife at risk, and recommending response priorities.
- Identifying need for, and obtaining permits, consultations, and authorizations required by provisions of Endangered Species Act, Migratory Bird Treaty Act (MBTA), and other wildlife laws.
- Developing a plan and response strategies for fish, wildlife, and bird protection (e.g., removing oiled carcasses, pre-emptive capture, hazing, capture and treatment).

Operations

Trustee agency representatives also serve within Operations Section to provide oversight of response activities affecting fish, wildlife and sensitive environments.

While Planning Section is responsible for maintaining communication of critical incident information vital to establishing and maintaining an effective command and control environment, responsibilities of Operations Section, when dealing with endangered species and sensitive environments response, include:

- Monitoring response activities to minimize endangered species take during spill response;
- Overseeing and coordinating all activities of private wildlife care providers, including groups employed by responsible party;
- Coordinating early aerial and ground reconnaissance of wildlife and possible environmentally sensitive spill sites and reporting results to Situation Unit Leader;
- Collecting and disposing oiled carcasses;
- Recovering and rehabilitating impacted wildlife;
- Collecting necessary samples and;
- Identifying and maintaining a wildlife processing center for evidence tagging, transportation, veterinary services, treatment and rehabilitation, storage, and other support needs.

Logistics

Logistics Section is responsible for providing facilities, services, and material in support of incident response, including housing for responders and on-site provisions.

Finance

Finance Section is responsible for financial and cost analysis aspects of spill response incident.

4.0 OBJECTIVES

National Contingency Plan (NCP), at 40 CFR §300.210(c)(4)(ii), delineates nine objectives for fish, wildlife and sensitive environments annexes. This Annex addresses each objective, collapsed into four subject areas for quick reference:

4.1 Identify and Establish Priorities for Resources at Risk

Fish and wildlife resources, other sensitive resources, and appropriate resource trustees and managers are identified. Agencies to be notified and consulted in establishing incident-specific priorities for protection of these resources are provided. Fish and wildlife and sensitive resources identified include: threatened and endangered species, and their designated critical habitats, environmentally sensitive lands, freshwater environments, and areas of economic significance (see Section 4.0 of NCP).

4.2 Determine Environmental Effects of Response Actions

Probable impacts of various response methods on general environments and habitats are provided. Methods for determining and approving appropriate response techniques for specific environments and habitats and for monitoring effectiveness of response activities are outlined (see Section 5.0 of NCP).

4.3 Identify Fish and Wildlife Response Capabilities

State and Federal response capabilities and initial personnel contacts for spill response assistance, wildlife rescue, and rehabilitation are outlined. Acquiring and pre-positioning appropriate response equipment, personnel, mutual aid agreements, and OSHA training requirements for volunteers assigned to fish and wildlife rescue and rehabilitation are discussed (see Section 6.0 of NCP).

4.4 Evaluate Interface of FWSEA with Non-Federal Plans

Compatibility of this Annex with non-Federal response plans on issues affecting fish, wildlife, their habitats and sensitive environments is evaluated (see Section 7.0 of NCP).

5.0 FISH AND WILDLIFE RESPONSE CAPABILITIES AND SERVICES

Consultation with natural resource trustees and other natural resource management agencies during spill events having potential for trust resource injuries is an essential requirement. Fish and wildlife response capabilities and services include:

5.1 Technical Expertise and Assistance

All information provided in this section (5.1) should be consistent with Best Practices for Migratory Bird Care During Oil Spill Response in Attachment 5 of this FWSEA.

During response, natural resource trustee contacts and managers will provide technical assistance and expertise on potential effects of oil on fish and wildlife,

their habitats, and other sensitive environments in impacted and potentially impacted zone.

They are usually familiar with area or habitats affected and are able to provide recommendations on best locations for equipment staging areas, boat access points, or boom anchor locations; and can identify, recommend, and prioritize sensitive environments where specific oil exclusion measures should be taken. They can assist in developing a monitoring plan and subsequent collection of data. The U.S. Fish and Wildlife Service (USFWS) and the State wildlife agency will participate in ICS, direct sections within ICS, or provide oversight for protection, rescue, and rehabilitation of fish, fisheries and wildlife.

Both USFWS and National Marine Fisheries Service (NMFS) will provide direct assistance to OSC with consultations pursuant to the ESA. It is important, for resource and legal reasons, that Federal OSC formally contact USFWS or NMFS to specifically request ESA consultation if he/she believes that endangered species may be affected by the spill or cleanup operations.

Attachment 1 provides a list of Federal and State wildlife agency contacts. Prior OSC approval is required for accessing Oil Spill Liability Trust Fund (OSLTF) to reimburse trustee response activities

5.1.1 Wildlife Protection and Deterrence

Measures to protect wildlife include the following:

- preventing spill from reaching areas where wildlife are located by containing, deflecting or recovering material, or
- **deterring** wildlife from entering areas already affected by contamination.

Preventing and deterring measures will be coordinated by trustee agencies in Operations and Planning sections of the Incident Command System.

Wildlife deterrence devices or methods are generally grouped into visual or auditory, or both. Types of equipment used and sources for their acquisition can be found in FWSEA Attachment 2. In an emergency, USFWS, State wildlife agency, or local USDA Wildlife Services office may be able to locate and provide limited amounts of this equipment.

5.1.2 Wildlife Capture and Treatment, Facility Requirements, Qualified Wildlife Rehabilitators, Volunteers, and Worker Health and Safety Guidelines

Exposure of birds and other wildlife to oil requires an immediate decision concerning capture and rehabilitation of oiled wildlife. That decision must be made in consultation with appropriate State and Federal natural resource trustees; State and Federal permits are usually required for such activities. The Secretary of the Department of the Interior (DOI) has statutory responsibilities (delegated to the USFWS) for protection of migratory birds and Federally listed

threatened and endangered species. Some States, such as California, may have pre-existing MOUs to address these needs as part of their routine trustee responsibilities (see note below).

If wildlife other than migratory birds or Federally listed species are found injured, appropriate trustee agencies would typically be State wildlife agency. All wildlife rescue and rehabilitation efforts will be directed by USFWS and/or State wildlife agency, including approval of a qualified wildlife rehabilitator (QWR). All wildlife rescue and rehabilitation efforts will be coordinated by trustee agencies in Operations and Planning sections of the Incident Command System.

NOTE: In California, extensive guidance for Wildlife recovery, handling, and rehabilitation has been established (see California Wildlife Response Plan and Annexes – RRT Appendix XXII a & b.) The QWR is the Oiled Wildlife Care Network (OCWN) (see below).

5.1.3 Guidelines for Selection of Qualified Wildlife Rehabilitator:

- must have, or be qualified to obtain, appropriate Federal and State permits and licenses to collect, possess, treat, and band migratory birds, resident wildlife or threatened and endangered species;
- must have adequate liability insurance to protect staff and volunteers;
- should have a proven record and experience in rescue and rehabilitation of oiled wildlife:
- must comply with all applicable Federal (Occupational Safety and Health Administration, etc.) and state safety regulations to protect staff and volunteers.

The *International Bird Rescue Research Center* is permitted and recognized nationally and internationally as experts in oiled bird rehabilitation:

International Bird Rescue Research Center 699 Potter Street Berkeley, California 94710 Phone: (510) 841-9086

Fax: (510) 841-9089

The **Oiled Wildlife Care Network**, headquartered at the <u>Wildlife Health Center</u> in the <u>School of Veterinary Medicine</u> at <u>University of California at Davis</u>, provides access to permanent wildlife rehabilitation facilities and trained personnel maintained in a constant state of readiness for oil spill response within California.

Oiled Wildlife Care Network

Main phone number: (530) 752-4167

Website: http://www.vetmed.ucdavis.edu/owcn/

For information concerning regional or local bird rehabilitation organizations with similar capabilities, contact USFWS Migratory Bird Permit office identified above.

5.1.4 Volunteers

Volunteers from environmental organizations may be able to make significant contributions to spill-related wildlife rehabilitation efforts. Volunteers must be appropriately trained, precisely scheduled for suitable tasks, and must be supervised at all times.

Volunteer coordination, health and safety considerations, and training should be consistent with Attachment 5: Best Practices for Migratory Bird Care During Oil Spill Response, Chapter 2.

5.1.5 Health and Safety Concerns in Wildlife Rescue and Rehabilitation For more information about "HazCom" log onto: http://www.osha.gov/SLTC/hazardcommunications/index.html

Two Occupational Safety and Health Administration (OSHA) regulations cover the majority of occupational health and safety issues encountered during wildlife rescue and rehabilitation: Hazardous Wastes Operations and Emergency Response rule (29 CFR 1910.120) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazardous Wastes Operations and Emergency Response rule (HAZWOPER) applies to organizations or individuals involved in wildlife retrieval and rehabilitation efforts. Because each state may also have its own worker safety requirement, coordination with the appropriate state agency should be conducted to ensure requirements are met.

Rehabilitation organizations are legally required to educate and protect all employees, including volunteers. Individuals working with animals need information concerning all potential hazards associated with handling those animals. The following minimum requirements should be applied to wildlife rescue and rehabilitation personnel, including volunteers:

- Wildlife rescue and rehabilitation management personnel this is core team of certified rehabilitators who direct operations. These people must have 24 hours of classroom training in hazardous waste operations and emergency response.
- Rehabilitation facility volunteers work at rehabilitation facility (typically located well away from spill site) under direction of facility management team. They are not allowed on-scene (within response center and staging areas), nor in "hot zone" (affected area) unless additional training is provided. Volunteers working in this category must receive a minimum of four hours of training in the Hazard Communication Program before they can begin work.
- Retrieval volunteers work under direction of search and rescue management team and may be allowed on-scene, but not in "hot zone".

Volunteers working in this category must receive 4 to 8 hours of training in the Hazard Communication Program before they can begin work.

 "Hot zone" wildlife retrieval and capture activities must be performed by personnel having a minimum of 40 hours of classroom safety training meeting OSHA guidelines for hazardous waste workers, including eight-hour annual refresher training.

OSC, in consultation with OSHA's representative to Regional Response Team, has responsibility for making decisions when training requirements are in question. For more information visit:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=13932

5.2 Federal and State Permit Requirements

Federal and State permits generally allow permit holder to collect, transport, possess, rehabilitate, euthanize, release, or band migratory birds. Some permit holders also have authority to handle threatened and endangered species under separate Federal permits. Each of these permits can encompass more than one species. If a bird were considered migratory, but also threatened or endangered, it must be covered under a threatened and endangered species permit.

If migratory bird rescue and rehabilitation efforts are deemed necessary and worthwhile, the following Federal permits might apply:

Banding or Marking: 50 CFR 21.22.

Special Purpose Permit: 50 CFR 21.27.

Rehabilitation Permits: 50 CFR 21.31.

Eagle Permits: 50 CFR 22.

Endangered Species: 50 CFR 17.22 and 17.32. Also see Attachment 5 (ESA

MOA - RCP Appendix XVIII).

NOTE: There may be permits beyond those listed in this document, particularly if wildlife will be transported across international boundaries (e.g. import/export permits), or for activities such as hazing.

5.3 Law Enforcement

U.S. Fish and Wildlife Service's Division of Law Enforcement (DLE) is responsible for investigating suspected and alleged violations of Federal wildlife laws including Migratory Bird Treaty Act, 16 USC 703 et seq., Endangered Species Act, 16 USC 1538 et seq., Eagle Protection Act, 16 USC 668a et seq., National Wildlife Refuge Act, 16 USC 668dd et seq., and several others.

Wildlife injuries, mortalities, and habitat impacts resulting from spills can constitute violations of DLE-enforced laws. Special Agents of DLE or Refuge Officers of Division of Refuges (when USFWS lands are involved) might be

required to initiate investigations during spill response phase in order to document violations and collect evidence in a timely manner. These law enforcement officers will normally coordinate their activities with OSC or other on-scene law enforcement personnel. Additionally, Special Agents will insure that responders possess necessary federal permits (see Section 6.2.2) and that wildlife-related response activities are accomplished in accordance with applicable law and permit provisions.

Special Agents and Refuge Officers often have detailed knowledge of local terrain and can provide timely, site-specific information to response personnel. In many cases, DLE and USFWS' NRDA personnel (see Section 6.4.2) have shared and similar interests and will work cooperatively on collecting or sampling, recording, storage, transportation, and laboratory analysis of injured or dead wildlife. When necessary, additional personnel operating under guidance and direction of DLE can be brought on-scene to assist with wildlife handling or collection.

Department of the Interior, Office of Environmental Policy and Compliance, sends copies of National Response Center spill reports to USFWS Regional Response Spill Coordinators, and in turn forwards copies to the USFWS DLE's Environmental Investigations Coordinator (EIC). DLE/EIC reviews these reports and may initiate contact with responsible party(ies) and/or responders in order to ascertain magnitude and impacts of the spill and determine whether a DLE response is warranted.

NMFS, Office of Law Enforcement, is responsible for investigating suspected and alleged violations of Federal wildlife laws including Magnuson-Stephens Fishery Conservation and Management Act (Essential Fish Habitat), Marine Mammal Protection Act, and ESA for marine species and habitats under their jurisdiction (e.g., whales, sea turtles, Guadalupe fur seals, Stellers sea lions, various salmonids).

In California, OSPR has a core of Wardens trained to deal with pollution/wildlife issues and Department Wardens who will support federal enforcement of MBTA when requested. All Department of Fish and Game Wardens have statutory authority to prosecute violations of parallel State laws and are sworn federal officers for purpose of enforcing the Migratory Bird Act. These Wardens have extensive local knowledge and contacts which can be invaluable.

In many states, Federal enforcement will be shoulder to shoulder with state enforcers who are pursuing criminal investigations.

Possible Arizona Law Enforcement Contacts

- 1. AZ Department of Environmental Quality (602) 771-2330
- 2. AZ Department of Public Safety (877) 272-8329

3. AZ Emergency Response Commission (602) 231-6346

Possible California Law Enforcement Contacts

- 1. Marine Safety Office San Francisco (415) 399-3547
- 2. CA State Emergency Services (916) 262-1621
- 3. CA Department of Fish and Game Dispatch (916) 358-1300

Possible Nevada Law Enforcement Contacts

- 1. NOAA 1ST CLASS BB RPTS FOR NV (206) 526-6344
- 2. RSPA Office Hazardous Materials (202) 366-1863
- 3. Nevada Division of Environmental Protection (775) 687-4670

Possible Law Enforcement Contacts for All States

- 1. Department of Transportation Crisis Management Center (202) 366-1863
- 2. EPA Office of Emergency Management (202) 564-3850
- 3. U.S. EPA Region IX (415) 227-9500
- 4. Federal Emergency Management Agency (800) 634-7084
- 5. National Response Center Headquarters (202) 267-1136
- 6. Department of the Interior/Office of Environmental Policy and Compliance in Oakland (510) 817-1477
- 7. Transportation Security Administration Maritime and Land (703) 563-3236
- 8. U.S. Coast Guard Homeland Security Operations Center at Department of Homeland Security (202) 282-8114
- 9. U.S. Coast Guard Investigative Service Headquarters (202) 493-6607

6.0 IDENTIFICATION AND PRIORITIZATION OF RESOURCES AT RISK

To ensure that appropriate steps are taken to minimize overall impacts of an oil discharge on ecological and economic resources, stakeholders must be aware of sensitive environments and important resource areas in their chosen transportation route. The purpose of this Section is to identify sensitive areas **before** a spill event occurs. Environmentally sensitive areas are identified in Area Contingency Plans (ACPs) Sensitive Site Strategies, Geographic Response Plans (Area Committee plans for inland sites chaired by EPA), and NOAA Coastal ESI maps.

6.1 Notification of Natural Resource Trustees and Natural Resource Managers

As required by National Contingency Plan (NCP), following notification of a spill, OSC shall notify relevant Federal, State, or Tribal natural resource trustees and managers. Immediate notification of and consultation with natural resource trustee contacts and other natural resource management agencies is imperative so that their expertise can be utilized in identifying and protecting sensitive environments and they can be efficiently integrated into the ICS. Persons initially contacted are responsible for notifying other critical personnel within their respective agencies.

Natural resource trustees and managers will provide OSC with information concerning presence of trust or important natural resources, as well as technical assistance concerning impacts or potential impacts to those resources. Assistance that federal trustees provide OSC concerning impacts or potential impacts on natural resources extends to conducting consultations under the Endangered Species Act, as necessary.

Pursuant to Subpart G of the NCP, the following officials and agencies have been designated trustees for natural resources and their supporting ecosystems in EPA Region 9: Secretary of Commerce, Secretary of the Interior, Secretary of Defense, Secretary of Energy, and Secretary of Agriculture; State Trustees; Native American Tribes; and Foreign Trustees.

Attachment 1 of the FWSEA contains a roster of current members of the standing Regional Response Team (RRT) and Tribal Historic Preservation Officers (THPO) for Federally recognized Native American Tribes in Region IX.

6.2 Consultation with Natural Resource Trustees and Natural Resource Managers

When a spill occurs, impacts to the ecosystem are usually unavoidable. However, such impacts can be minimized through proper planning and coordination with State, Federal, Tribal, and/or foreign natural resource trustees and managers both before and during a spill.

USFWS and States share co-trusteeship for migratory birds and threatened and endangered species within Region 9. Both need to be consulted if such resources are affected.

States are sole trustees for resident (non-migratory) fish and wildlife. National Marine Fisheries Service is responsible for threatened and endangered marine species and habitats including anadromous salmonids. Indian tribes are trustees for natural resources, including their supporting ecosystems, belonging to, managed by, controlled by, or appertaining, to the tribe.

Consultation and coordination with natural resource trustees and managers during the pre-spill planning phase aids in identifying and understanding potential natural resource concerns and issues as a result of spills in general. This consultation is not equivalent to 'consultation' as defined by the Endangered Species Act, however aspects may be applicable to both planning and response activities as laid out in the Endangered Species Act Memorandum of Agreement (ESA MOA - RCP Appendix XVIII) (see Section 4.3.1 of NCP).

Consultation and coordination during a spill are essential to ensure that site-specific resource concerns are addressed. In addition to designated natural resource trustees, other Federal and State agencies and Tribal organizations with land and resource management responsibilities and expertise, need to be consulted regarding response actions. USFWS can provide responders with information concerning presence of trust natural resources, as well as technical assistance concerning effects of oil and response actions on these resources.

6.3 Prioritization

Considering diversity and extent of sensitive natural resources in Region 9, it is important to reach a consensus, to extent possible, on highest resource priorities in order to provide time-sensitive, coordinated, and effective protection, rescue, and restoration. Although prioritization is difficult, several criteria have been identified:

- relative abundance or scarcity of a particular resource;
- species protected by Federal and State laws;
- relative diversity and abundance of resources at a particular site;
- productivity of biological resources;
- vulnerability to spills;
- toxicity of the product discharged;
- amenability to product recovery and restoration;
- economic importance.

Locations of environmentally sensitive areas are identified by Area and Sub-area Committees as part of their spill planning process. Contingency plans for each area and sub-area provide excellent reference of sensitive areas and should be accessed early in spill response. NOAA ESI Atlases provide information for California coastal shoreline sensitivity, biological resources, and human-use resources in order to identify sensitive resources before a spill occurs so that protection priorities may be established. Information about these areas may need to be refined or augmented during an actual spill due to seasonal and annual variations.

Additional sources of information about environmentally sensitive areas may include commercially available local maps and State atlases, National Wetland Inventory maps, U.S. Geological Survey quadrangle maps, maps developed by the Area and Sub-Area Committees. Also, maps and information developed as part of facilities plans, and maps and information developed by various government agencies. Many State and Federal agencies have extensive Geographic Information System (GIS) information for both habitats and species of interest.

OSCs may also refer to http://www.uscg.mil/d11/m/rrt9web/ to find GIS data. This website contains an array of data, for example, NOAA Coastal Environmental Sensitivity Index Atlases and USFWS designated critical habitat websites for Region 9.

6.3.1 Threatened and Endangered Species

In the event of an oil spill or hazardous substance release, the Endangered Species Act (ESA) [50 CFR 402.2] must be considered in development of Federal response activities and actions during an oil spill response. As spill response occurs, OSC must consult with natural resource trustees as laid out in Section V.B of the ESA MOA (Attachment 6).

Threatened and endangered species inhabit nearly every county in Region 9. USFWS Field Offices maintain an updated list of threatened and endangered species by county; revised when species are added or removed. Such information is made available to other agencies and the public.

Attachment 3 provides links to State and County lists of federally listed threatened, endangered and proposed species in Region 9.

6.3.2 Recreational Areas

Tourism and recreation might be impacted by a spill, with restrictions or potential closures of important fishing streams, boating and canoeing areas, beaches and other recreational amenities (e.g., marinas, boat launch sites) associated with oceans, rivers and lakes. Identifying and protecting these recreational resources should be considered during planning and response actions. Developing timely response procedures to notify, inform and accommodate potentially impacted recreational users will help minimize disruption.

7.0 DETERMINING ADVERSE ENVIRONMENTAL EFFECTS OF RESPONSE AND COUNTERMEASURES

Response personnel should understand that an immediate - but poorly conducted - response might result in greater overall environmental impact than one delayed to consider and implement measures protective of fish and wildlife and sensitive environments.

Decisions regarding appropriate response actions should take into account relative impact of various response methods on fish and wildlife and sensitive environments. Informed decisions can be made on deployment of appropriate countermeasures by consulting appropriate natural resource agency(ies). During response, OSC and/or responsible party **must** consult with appropriate Federal and State natural resource trustees and land management agencies in regards to response activities related to following concerns:

- a. physical disturbance of wildlife, their habitat, and other sensitive areas;
- illegal or inadvertent "taking" of live fish and wildlife or disturbance of carcasses by response personnel;
- c. use of cleaning or bioremediation agents in fish and wildlife habitat and environmentally sensitive areas; and,
- d. movement of oiled debris and other material in fish and wildlife habitat and other sensitive environments.

"Taking" in (b) above is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" in the Endangered Species Act and the Migratory Bird Treaty Act (Attachment 6).

7.1 Impacts of Response Methods on Sensitive Environments and Habitats Selecting oil spill response strategy, including natural recovery, involves considering tradeoffs among potential environmental impact, appropriateness for habitat, and application timing.

OSCs must consult with appropriate trustee agencies in Planning Section to determine an oil spill response strategy's impact to fish, wildlife, and sensitive environments and consider implications of impacts to fish, wildlife, and sensitive environments in determining response strategies.

Considerations of impacts to fish, wildlife and sensitive environments should be consistent with guidelines discussed in the following sections.

7.1.1 Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments

Characteristics of Response Strategies and its companion guide, Characteristic Coastal Habitats: Choosing Spill Response Alternatives (NOAA 2000), are based on information contained in Environmental Considerations for Marine Oil Spill Response, published by American Petroleum Institute, National Oceanic and Atmospheric Administration, U.S. Coast Guard, and U.S. Environmental Protection Agency.

Refer to that publication for complete information on proper use and cautions regarding information. *Characteristics of Response Strategies* is useful for

informing people who will be participating in cleanup assessments as part of Planning and Operations Sections within Incident Command System.

Web links to Characteristics of Response Strategies and its companion guide, Characteristic Coastal Habitats: Choosing Spill Response Alternatives (NOAA 2000) are included in Attachment 7.

7.1.2 The RRT IX Selection Guide for Oil Spill Applied Response Technologies (ART), part B (see RCP Appendix X)

The ART, Part B: Review/Select Potential Options and Products provides decision-makers with detailed means for evaluating spill response strategies and products. It facilitates easy review and comparison of individual products and strategies to evaluate their potential value to individual response conditions.

The RRT IX Selection Guide for Oil Spill Applied Response Technologies (ART) is an appendix to the RRT IX RCP.

7.1.3 The RRT IX Dispersant Use Policy

At an oil spill incident, OSC is authorized to evaluate use of chemical dispersants. Currently, all dispersant use in Region IX is governed by either preapproval process; pre approval with consultation process; or, incident-specific RRT approval-required process. For marine waters, the California Dispersant Plan provides guidance in detail (Refer to RRT Appendix XI).

For those spill situations not in marine waters, OSC authorization to use dispersants requires concurrence of RRT Co-Chairs (U.S. Coast Guard and U.S. EPA) and State representatives to the RRT; and in consultation with the DOI/DOC/FS, as appropriate representatives.

Trustee agencies with responsibility for oil spill prevention and response will select one trustee wildlife designee who will observe dispersant application operations and will be located in dispersant spotter aircraft. It is the role of the trustee wildlife spotter (TWS) to observe wildlife and assist dispersant spotter and pilot avoid spraying of wildlife, making notes as necessary and appropriate to document the operation. If inadvertent spray of wildlife occurs, TWS should make a note of this (including number of animals, species and location if possible) and include this information in their report to Unified Command at the end of each dispersant operation.

If at any time dispersant operations are not being conducted in accordance with California Dispersant Plan, TWS should report back immediately to Unified Command.

The primary purpose of TWS is to monitor dispersant operations and provide confirmation that dispersant application operations are being conducted in accordance with policies and procedures for wildlife protection outlined in dispersant use plan.

Although it is the commitment of RRT that TWSs be used when at all possible, dispersant operations will not be unduly delayed should a trained spotter not be available prior to dispersant application.

For a copy of the Region IX Regional Contingency Plan Dispersant Use Policy see: http://www.uscg.mil/d11/m/rrt9web/RCP.htm

7.1.4 Wildlife Response Plan for California

Oil spill response in California must be consistent with *Wildlife Response Plan for California* (Wildlife Plan). Wildlife Plan addresses Federal Oil Pollution Act of 1990 (OPA 90) that requires a Fish and Wildlife and Sensitive Environments Plan be developed and include immediate and effective protection, rescue and rehabilitation of wildlife resources and habitat harmed by a spill. Wildlife Plan also addresses State of California's Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA) that requires:

- Development of contingency plans for protection of fish and wildlife,
- Establishment of rescue and rehabilitation facilities.
- Establishment and funding of a network of rescue and rehabilitation facilities, known as the Oiled Wildlife Care Network,
- Assessment of injuries to natural resources from a spill,
- Development of restoration plans to compensate for adversely affected wildlife resources and habitats.

The Wildlife Plan was developed by a group of federal and state agencies and other interested parties, and is a part of Regional Response Plan/Area Contingency Plan for California, a joint document of U.S. Coast Guard (USCG) and California Department of Fish and Game, Office of Spill Prevention and Response (OSPR).

The Wildlife Plan details Wildlife Operations Branch purposes, goals, objectives, responsibilities, and structure. Wildlife Operations Branch is in Operations Section of Incident Command System for oil spill response. Wildlife Operations Branch structure needed in California and detailed in this plan is expanded beyond that described in USCG Incident Management Handbook at the Group level. Structure may be expanded or contracted to fit need, but mission remains unchanged.

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

- Protect wildlife and habitats from contamination,
- Minimize injuries to wildlife and habitats from contamination,
- Minimize injuries to wildlife from cleanup,

- Provide best achievable care for injured wildlife, and,
- Document adverse effects that result from spill and cleanup.

For a web link to the Wildlife Plan see Attachment 4. (Refer to RCP Appendix XXII a & b)

7.1.5 The Best Practices for Migratory Bird Care During Oil Spill Response, USFWS

Best Practices for Migratory Bird Care During Oil Spill Response (Best Practices) was created by a Fish and Wildlife Countermeasures Coordination Project undertaken by USFWS.

Goals include development of national "best practices" using established protocols for keeping unoiled birds away from an oil spill and for dealing with oiled birds. Establishing a standardized approach helps protect wildlife resources, enables OSCs to focus on other aspects of spill response, and helps instill public confidence in overall response activities.

This document, Best Practices for Migratory Bird Care During Oil Spill Response, is intended for use by USFWS and other natural resource management agencies, oiled bird rehabilitators, OSCs, and Potentially Responsible Parties (PRPs) as a guide in:

- Developing appropriate sections of Area Contingency Plans;
- Evaluating contractors for bird capture and rehabilitation;
- Making informed choices during spill responses; and
- Evaluating oiled bird rehabilitation activities to improve field practices.

Creators of this document set out to define and recommend the best practices for their field with the aim of promoting the welfare of migratory birds during an oil spill response. Actual bird responses will depend on factors including size of the spill, species involved, type of product spilled, time of year, and location.

There are significant differences between spill affecting 10 birds and one involving 1,000 birds. It is important that spill responders and pre-spill planners recognize that the degree of effort and complexity in bird response can be significant when comparing small and large events. This document is intended to help pre-spill planners and spill responders make informed decisions keeping best interests of the birds in mind.

In defining best practices of a migratory bird response, each aspect of a response is discussed separately. Topics include safety, training, capture and handling, stabilization and rehabilitation, and release criteria. This document describes factors that constitute highest and best migratory bird care and recommendations for achieving highest standard of care.

Best Practices document is to serve as guidance for acquiring best achievable care for birds during an oil spill response. This document is not intended to be an exhaustive list of techniques in this field, in which practical knowledge is being continuously refined and developed. This document will be periodically reviewed and updated. If techniques not included here are proposed during an oil spill response, USFWS will seek most current and best information on which to determine an appropriate course of action.

For a web link to Best Practices for Migratory Bird Care During Oil Spill Response see Attachment 5 of this FWSEA.

7.2 Monitoring Response Effectiveness - Monitoring Plans

A continuous monitoring program is essential throughout cleanup to ensure maximum removal of spilled product and protection of the environment. A spill is dynamic and cleanup efforts must adjust to changes in conditions. Over time, spilled product will typically spread, move downstream or downwind, and become weathered. Climatic and geographic conditions might also change. Efforts to control, contain and clean up the release can involve any of a number of containment and recovery methods, including booms, barriers, skimmers, sorbents, chemical agents, burning, and manual recovery. A monitoring program better insures that appropriate response adjustments are continually made.

7.2.1 Monitoring Response Effectiveness

OSC, in consultation with natural resource trustee contacts, managers, and responsible party, will monitor effectiveness of response activities in protecting sensitive habitats and removing discharges of oil. OSC should consult natural resource trustees and managers regarding need for, and methods to be employed in, an incident-specific long-term monitoring plan. Since each of these methods have limitations, continued monitoring is necessary to ensure successful cleanup. Monitoring will be necessary to ensure that selected response actions do not cause more harm than good. Monitoring activities may include visual observation, sampling, data collection and evaluation, and replacement of saturated or defective materials.

Assessment of aquatic biota health and abundance will, in some instances, be done by State environmental agency or fish and wildlife agency. Evaluation of spill effects on fish and wildlife, during and after cleanup, is responsibility of both trustees and State fish and wildlife agency.

Effects of specific removal actions or countermeasures, with regard to wildlife, will be judged based on status of fish and wildlife populations remaining in affected area after cleanup. When no new animals are becoming fouled with oil, exposed to or otherwise injured by spill or countermeasures, and after consultation with natural trustee representative, the cleanup can be judged to have been successfully completed. A plan to identify a sufficient cleanup

endpoint is recommended, otherwise collateral impacts from cleanup may exceed cleanup mitigation benefits.

7.2.2 Monitoring Plan Design

Monitoring spill response activity provides OSC with useful information on effectiveness of response actions and will assist trustees and natural resource managers in identifying and documenting potential impacts to the environment. Specific plans for each incident response should be developed in consultation with natural resource trustees and natural resource agency managers and include following points:

- a. **Monitoring Intensity Levels** Field activities consisting of reconnaissance, environmental parameters assessment, sampling and documentation efforts, and laboratory activities should be conducted on a scale appropriate to response and potential environmental risks.
- b. Selection of Treated and Unaffected Sites Treated and unaffected (or reference) sites are useful for gauging degree of cleanup achieved and for establishing background conditions for Natural Resource Damage Assessment (NRDA) pre-assessment phase. Such sites should exhibit similar chemical and physical characteristics to support their comparability. The following criteria should be considered: (1) environmental parameters, (2) physical habitat and geological morphology, and (3) degree of contamination by the released product and probability of further contamination.
- c. Monitoring Parameters and Collection Frequency Size of samples collected should be based on requirements of analytical methods to be used for analysis. Sample preservation and holding times are considerations for success of any monitoring plan
- d. **Data Quality Requirements and Assessments** Follow applicable EPA guidelines.
- e. Sample Custody Procedures Follow applicable EPA guidelines.
- f. Sampling and Analytical Methods All media to be sampled, sampling methods, and laboratory analyses to be performed should be arrived at following consultation with natural resource trustees and natural resource managers and should follow EPA or other approved methods unless otherwise stipulated or requested by the OSC. Any variations from EPA or other approved methods should be documented and noted as such.
- g. **Revising Plans and Procedures** Monitoring plans should include provisions for modifications, including additional consultation with natural resource trustees and natural resource managers as necessary.

Note: The use of the Special Monitoring of Advanced Response Technologies (SMART) should be considered. SMART is a joint project of NOAA, USCG,

EPA, Centers for Disease Control and Prevention, and Minerals Management Service. SMART relies on small, highly mobile teams that collect real-time scientific data during dispersant and in-situ burning operations to monitor efficacy of dispersant application as well as particulates concentration in sensitive environments: http://response.restoration.noaa.gov/oilaids/SMART/SMART.html

8.0 EVALUATING THE INTERFACE OF FWSEA WITH NON-FEDERAL RESPONSE PLANS

Section 300.210(c)(4)(i) of the NCP mandates that FWSEA to each Area Contingency Plan define requirements for evaluating its compatibility with non-Federal response plans on issues affecting fish and wildlife, their habitat, and sensitive environments.

The final rule on Oil Pollution Prevention for Non-Transportation-Related Onshore Facilities, 40 CFR Part 112, requires facilities with a total oil storage capacity greater than or equal to one million gallons to submit Facility Response plans if located at a distance such that a discharge of oil could cause injury (as defined at 40 CFR 112.2) to fish, wildlife, sensitive environments and public water intakes.

Facility owners or operators must determine maximum distance at which a worst-case oil spill from their facility could cause injury to fish and wildlife and sensitive environments and develop a plan for mitigating that discharge's potential adverse effects. Facility plans must be consistent with this Annex. EPA reviews and approves Facility Response Plans for compatibility with this Annex. Pipeline plans in the Region are reviewed and approved by the U.S. Department of Homeland Security.

Participation by facilities in Area and Sub-area Committees is encouraged. Joint exercises will be conducted to test facility plans' interface with this Annex.

9.0 ACRONYMS

ACP Area Contingency Plan

Annex Fish and Wildlife and Sensitive Environments Annex

CFR Code of Federal Regulations

CWA Clean Water Act

DLE Division of Law Enforcement, U.S. Fish and Wildlife

Service, Department of the Interior

DOC Department of Commerce

DOD Department of Defense

DOE Department of Energy

DOI Department of the Interior

EIC DLE's Environmental Investigations Coordinator,

U.S. Fish and Wildlife Service, DOI

EPA U.S. Environmental Protection Agency

ESA MOA Endangered Species Act Memorandum of Agreement

ESI Environmental Sensitivity Indices, National Oceanic

and Atmospheric Administration

FLAT Federal Lead Administrative Trustee

FOSC Federal On-Scene Coordinator

FWSEA Fish and Wildlife and Sensitive Environments Annex

GIS Geographic Information System

HAZCOM Hazard Communication Standard

HAZWOPER Hazardous Waste Operations and Emergency

Response Standards [29 CFR 1910.120 and 40 CFR 320]

MBTA Migratory Bird Treaty Act

NCP National Contingency Plan

NMFS National Marine Fisheries Service

NOAA National Oceanic and Atmospheric Administration

OEPC Office of Environmental Policy and Compliance

OPA Oil Pollution Act

OSC On-Scene Coordinator (Federal or State)

OSHA Occupational Safety and Health Administration

OSLTF Oil Spill Liability Trust Fund, U.S. Coast Guard

OSPR Office of Spill Prevention and Response, State of California

Department of Fish and Game

OSPRA Oil Spill Prevention and Response Act

OWCN Oiled Wildlife Care Network

QWR Qualified Wildlife Rehabilitator

PRP Potentially Responsible Party

RCP Regional Contingency Plan

RRT Regional Response Team

SHPO State Historic Preservation Officer

SMART Special Monitoring of Advanced Response Technologies

T&E Threatened and Endangered Species

THPO Tribal Historic Preservation Officer

TWS Trustee Wildlife Spotter

USCG U.S. Coast Guard

USDA U.S. Department of Agriculture

USFS U.S. Forest Service

USFWS U.S. Fish and Wildlife Service

Disclaimer: Information contained in this Annex will be updated periodically. Please take this into consideration when using the following contacts.

ATTACHMENT 1: CONTACTS FOR NATURAL AND CULTURAL RESOURCES TRUSTEES AND MANAGERS

Federal Natural Resources Trustee and/or Manager Contacts:

U.S. Department of the Interior (Designated Federal Trustee)

OEPC

Patricia Sanderson Port, Regional

Environmental Officer Ph: (510) 817-1477 Cell: (415) 420-0524 oepcsfn@aol.com

U.S. Department of Commerce National Oceanic and Atmospheric Administration

NOAA Scientific Support Coordinator

Jordan Stout

Ph: (510) 437-5344 24 hr: (206) 321-3320 <u>Jordan.stout@noaa.gov</u>

Alan Mearns

Ph: (206) 526-6336 24 hr: (206) 526-4911 alan.mearns@noaa.gov

National Marine Fisheries Service NOAA Restoration Center

Southwest Region Supervisor Patrick Rutten

Ph: (707) 575-6059

Water Quality Coordinator

Joe Dillon

Ph: (707) 575-6093

<u>Joseph.j.dillon@noaa.gov</u>

Department of Energy

Mike Cornell

Ph: (925) 422-0138

Mike.cornell@oak.doe.gov

Department of Agriculture USFS

Belinda Walker Ph: (909) 382-2607 brwalker@fs.fed.us

Anne Fischer (Alternate)
Ph: (602) 225-5359
afischer@fs.fed.us

Department of Defense U.S. Dept. of Navy

Don Montoro

Ph: (619) 556-3135

Montoro.don@ns.cnrsw.navy.mil

CA Department of Fish and Game OSPR

Mike Sowby

Ph: (916) 324-7629

msowby@ospr.dfg.ca.gov

Yvonne Addassi (Alternate)

Ph: (916) 324-7626

Yaddassi@ospr.dfg.ca.gov

AZ Department of Environmental Quality

Emergency Response Ph: (602) 771-2330

NV Division of Environmental Protection

Spill hotline

In state: (775) 687-9485 Out-of-state: (888) 331-6337

State Cultural Resource Trustees:

State Historic Preservation Officers Arizona

Mr. James W. Garrison, SHPO Ph: (602) 542-4174 jwq2@azstateparks.gov

California

Mr. Milford Wayne Donaldson, SHPO

Ph: 916-653-6624

mwdonaldson@parks.ca.gov

Nevada

Mr. Ronald James, SHPO

Ph: 775-684-3440

Tribal Historic Preservation Officers:

Arizona

Ms. Loretta Jackson Hualapai Tribe (928) 769-2224 lorac@citlink.net

Mr. Alan Downer Navajo Nation Historic Preservation Department (928) 871-6437 alandowner@navajo.org

Ms. Vernelda Grant San Carlos Apache Tribe (928) 475-5797 apachevern@yahoo.com

Mr. Mark Altaha White Mountain Apache Tribe Heritage Program (928) 338-3033 markaltaha@wmat.nsn.us

California

Mr. Richard Begay Agua Caliente Band of Cahuilla Indians (760) 883-1368 Mr. Bill Helmer Big Pine Tribe Paiute Tribe of the Owens Valley (760) 938-2003

Mr. Leland Chavez Bishop Paiute Tribe (760) 873-3665

Mr. Paul Angell Blue Lake Rancheria (707) 668-5101

Mr. Ray Martell Elk Valley Rancheria (707) 464-4680 rmartell@elk-valley.com

Ms. Suntayea Steinruck Smith River Rancheria (707) 487-9255 sunsteinruck@tolowa.com

Mr. Reno Franklin Stewart's Point Rancheria Kashia Band of Pomo Indians (707) 591-0580

Ms. Barbara Durham Timbisha Shoshone Tribe (760) 786-2374

Dr. Thomas Gates Yurok Tribe (707) 482-1822 ythpo@yahoo.com Ms. Helene Rouvier
Table Bluff Reservation - Wiyot Tribe
Tribal Historic Preservation Office
(707) 733-5055
cultural@wiyot.com

Region IX Regional Response Team Members (Also see RCP Appendix II):

Federal members:

http://www.uscg.mil/d11/m/rrt9web/About_Us/federal_members.htm

State members:

http://www.uscg.mil/d11/m/rrt9web/About_Us/state_members.htm

Regional Response Team, Region IX: Arizona, California, Nevada – Oil & HazMat Response Preparedness:

http://www.dfg.ca.gov/ospr/organizational/scientific/acp/marine3/2005RCP/2005rcp_index.htm

ATTACHMENT 2: STATE AND COUNTY LISTING OF FEDERALLY THREATENED (T), ENDANGERED (E) AND PROPOSED (P) SPECIES IN EPAREGION 9

For listings by state log onto: http://endangered.fws.gov/wildlife.html#Species

For State of Arizona contact: Arizona Game & Fish Department Main Office (602) 942-3000

For State of California contact: California Department of Fish & Game Information Services-Natural Diversity Data Base (916) 324-3812

For State of Nevada contact: Nevada Department of Wildlife Headquarters/Statewide Contacts (775) 688-1500

OSCs may refer to http://www.uscg.mil/d11/m/rrt9web/ to find GIS data. The website contains an array of data, for example, NOAA Coastal Environmental Sensitivity Index Atlases to USFWS designated critical habitat websites for Region 9.

For coastal spills, the ACPs provide details on occurrence of federally and state-listed species in sensitive sites summaries. The ACPs for Los Angeles/Long Beach and San Diego ACPs include location information updated as recently as 2004/2005.

ATTACHMENT 3: WILDLIFE RESPONSE PLAN FOR CALIFORNIA (Also see RCP Appendix XXII a & XXII b)

http://www.dfg.ca.gov/Ospr/misc/wildlife.htm

ATTACHMENT 4: BEST PRACTICES FOR MIGRATORY BIRD CARE DURING OIL SPILL RESPONSE

http://www.fws.gov/contaminants/OtherDocuments/best_practices.pdf

ATTACHMENT 5: INTERAGENCY MEMORANDUM OF AGREEMENT REGARDING OIL SPILL PLANNING AND RESPONSE ACTIVITIES UNDER THE FEDERAL WATER POLLUTION CONTROL ACT'S NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN AND THE ENDANGERED SPECIES ACT (ESA MOA - RCP Appendix XVIII) http://www.nrt.org/Production/NRT/NRTWeb.nsf/PagesByLevelCat/Level2ESAMO U?Opendocument

ATTACHMENT 6: FISH AND WILDLIFE SERVICE OIL SPILL CONTINGENCY PLAN

http://www.fws.gov/contaminants/FWS_OSCP_05/FWSContingencyTOC.htm

ATTACHMENT 7: Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments is based on information contained in Environmental Considerations for Marine Oil Spill Response, published by the American Petroleum Institute, National Oceanic and Atmospheric Administration, the U.S. Coast Guard, and the U.S. Environmental Protection Agency. Refer to that publication for complete information on proper use and cautions regarding the information presented in this document.

http://response.restoration.noaa.gov/book shelf/910 response.pdf

ATTACHMENT 8: COUNTY ASSESSOR PAGES TO DETERMINE PROPERTY OWNERSHIP

California Counties:

Alameda www.acgov.org/prop_assessment_app/index.jsp Calaveras www.co.calaveras.ca.us/parcelsearch.asp

El Dorado http://main.co.el-dorado.ca.us/CGI/WWB012/WWM400/A

Imperial www.geoviewerims.net/website/icpublic/viewer.htm

http://imperialcounty.net/Assessor

Kern http://assessor.co.kern.ca.us/kips/property_search.asp
http://assessor.co.kern.ca.us/kips/property_search.asp
www.co.merced.ca.us/kips/property_search.asp
http://assessor.co.kern.ca.us/kips/property_search.asp
http://assessor.co.kern.ca.us/kips/property_search.asp
www.co.merced.ca.us/countyWeb/pages/parcelmap.aspx

Nevada http://new.mynevadacounty.com/gis/index.cfm?CCS=628

Riverside http://pic.asrclkrec.com/Default.aspx

San Diego http://arcc.co.san-diego.ca.us/arcc/sevices/parcelmap/search.aspx

http://arcc.co.san-diego.ca.us/arcc/services/prcpchar/search.aspx

San Francisco http://gispubweb.sfgov.org/website/sfparcel/index.htm

San Joaquin www.sjmaps.org/mapapps.asp

San Luis Obispo

www.slocounty.ca.gov/Assessor/property_information_search.htm

Santa Clara http://eservices.sccgov.org/ari/search.do

Santa Cruz http://gis.co.santa-cruz.ca.us

Solano http://www.solanocounty.com/resources/scips/asr/situssearch.asp

Sonoma

www.sonoma-county.org/Assessor/html_Documents/SearchRoll/Frameset_SearchRoll.htm

Sutter www.co.sutter.ca.us/apps/recordsquery/assessor/asmtsearch.aspx

Yolo www.yolocounty.org/org/Assessor/StreetDirectory.htm

Yuba www.co.yuba.ca.us/content/departments/assessor/parcelinfo.asp

Nevada Counties:

Douglas www.co.douglas.nv.us/databases/assessors/default.asp

Eureka http://207.212.113.130/assessorcached.html
Carson http://207.228.41.46/jwalk/assessorcached.html
www1.lyon-county.org/jwalk/assessorcached.html

Arizona Counties:

Coconino
Apache
Apache
Gila
Greenlee
Maricopa

http://gis-map.coconino.az.gov/website/coconino/getgisdata.asp
www.co.mohave.az.us/apache/assessor/assessdatalink.asp
www.co.mohave.az.us/gila/assessor/assessdatalink.asp
www.co.mohave.az.us/greenlee/assessor/assessdatalink.asp
www.maricopa.gov/assessor/ParcelApplication/Default.aspx

Navajo www.co.navajo.az.us/assessor/search.aspx

Pima www.asr.pima.gov/APIQ/index.aspx

Pinal http://apps.co.pinal.az.us/Assessor/search

Santa Cruz www.co.mohave.az.us/santacruz/assessor/assessdatalink.asp Yavapai http://mapserver.co.yavapai.az.us/parcelinfo/search_address.asp

ATTACHMENT 9: NOAA SATELLITE AND INFORMATION SERVICE, NATIONAL CLIMATIC DATA CENTER (NCDC)

Note: Free data can be found at http://www.ncdc.noaa.gov/oa/mpp/freedata.html