

**FISH AND WILDLIFE AND SENSITIVE ENVIRONMENTS ANNEX III
TO THE REGION 8 REGIONAL CONTINGENCY PLAN**

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DEFINITIONS AND ACRONYMS

Definitions contained herein, unless otherwise specified, are taken from the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.5 (Definitions), Section 1001 of the Oil Pollution Act (OPA), 33 *United States Code* (U.S.C.) Section 2701 (Definitions), and Section 5 (Definitions) of the Region 8 Regional Contingency Plan (RCP).

Area Committee: As defined by Sections 311 (a) (18) and (j) (4) of the Clean Water Act (CWA), as amended by OPA, is the entity appointed by the President consisting of members from federal, state, and local agencies with responsibilities that include preparing an Area Contingency Plan (ACP) for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

Area Contingency Plan: As defined by Sections 311 (a) (19) and (j) (4) of CWA, as amended by OPA, is the plan prepared by an Area Committee, that in conjunction with the NCP, shall address removal of a discharge including a worst-case discharge and mitigation or prevention of a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Contingency Plan: (1) A document used by federal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to address spills of oil, hazardous substances, or other emergencies occurring upon their transportation vehicle, or at their facilities.

Discharge: As defined by Section 311 (a) (2) of CWA, includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under Section 402 of CWA.

Drinking water supply: As defined by Section 101 (7) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), means any raw or finished water source that is used or may be used by a public water system (as defined in the Safe Drinking Water Act) or as drinking water by one or more individuals.

Economically sensitive areas: Areas of explicit economic importance to the public that may require special protection because of their proximity to potential spill sources. Economically sensitive areas include, but are not limited to, potable and industrial water intakes, locks and dams, and public and private marinas.

Environment: As defined by section 101(8) of CERCLA, denotes navigable waters, waters of the contiguous zone, and ocean waters within which the natural resources are under exclusive management authority of the United States under the Magnuson Fishery Conservation and Management Act; and any other surface water, groundwater, drinking water supply, land surface and subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

Environmentally sensitive area: An especially delicate or sensitive natural resource that requires protection in the event of a pollution incident. Designations of areas considered sensitive are in the Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments, published by Department of Commerce (DOC) and National Oceanic and Atmospheric Administration (NOAA).

Groundwater: As defined by section 101(12) of CERCLA, water in a saturated zone or stratum beneath the surface of land or water.

Inland waters: Waters of the United States in the inland zone; waters of the Great Lakes and Lake Champlain; and specified ports and harbors on inland rivers.

Inland zone: The environment inland of the coastal zone excluding the Great Lakes, Lake Champlain, and specified ports and harbors on inland rivers. The term “inland zone” delineates an area of federal responsibilities for response actions. Exact boundaries are determined by U.S. Environmental Protection Agency (EPA)/U.S. Coast Guard (USCG) agreements, and are identified in RCPs.

Navigable waters: As defined by 40 *Code of Federal Regulations* (CFR) 110.1, includes: (1) all waters currently used, used in the past, or possibly susceptible to use in interstate or foreign commerce, including all waters subject to ebb and flow of the tide; (2) interstate waters, including interstate wetlands; (3) all other waters (such as intrastate lakes, rivers, streams, mudflats, sandflats, and wetlands), use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (a) that are or could be used by interstate or foreign travelers for recreational or other purposes; (b) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; (c) that are or could be used for industrial purposes by industries in interstate commerce; (4) all impoundments of waters otherwise defined as navigable waters under this Section; (5) tributaries of waters identified in (1) through (4) of this definition, including adjacent wetlands; and (6) wetlands adjacent to waters identified in (1) through (5) of this definition: provided that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the U.S.

Oil: As defined by Section 311 (a) (1) of CWA, oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, oil mixed with ballast or bilge water, vegetable oil, animal oil, and oil mixed with wastes other than dredged spoil.

On-Scene Coordinator (OSC): The government official at an incident scene responsible for coordinating response activities.

Regional Response Team (RRT): The federal response organization (consisting of representatives from selected federal and state agencies) that acts as a regional body responsible for planning and preparedness before an oil spill or hazardous substance release, and for providing advice to the EPA OSC in the event of a major or substantial spill or release.

Vulnerable Zone: For the purposes of this analysis, an estimated geographical area that may be subject to concentrations of an airborne extremely hazardous substance at levels that could cause irreversible acute health effects or death to human populations, within the area following an accidental release.

Vulnerable Zone Corridor: Similar to the vulnerable zone except this is estimated for a transportation route rather than for a fixed site.

Wetlands: Areas inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life under saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds (40 CFR 112.2 (y)).

ACRONYMS**Department and Agency Title Abbreviations:**

APHIS-WS	Animal and Plant Health Inspections Service-Wildlife Services
API	American Petroleum Institute
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CDNR	Colorado Department of Natural Resources
CDPHE	Colorado Department of Public Health and Environment
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOT	Department of Transportation
EPA	United States Environmental Protection Agency
MDEQ	Montana Department of Environmental Quality
MDFWP	Montana Department of Fish, Wildlife, and Parks
MDNRC	Montana Department of Natural Resources and Conservation
NDHCL	North Dakota Health and Consolidated Labs
NDGFD	North Dakota Game and Fish Department
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OLE	Office of Law Enforcement
OSHA	Occupational Safety and Health Administration
RRT	Regional Response Team
SDDENR	South Dakota Department of Environment and Natural Resources
SHPO	State Historic Preservation Office
UDEQ	Utah Department of Environmental Quality
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WDEQ	Wyoming Department of Environmental Quality
WGFD	Wyoming Game and Fish Department

ACRONYMS (Continued)**Operational Abbreviations:**

ACP	Area Contingency Plan
AIRFA	American Indian Religious Freedom Act
ARPA	Archaeological Resources Protection Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C., Sections 9601 <i>et seq.</i> ; also known as Superfund
CFR	<i>Code of Federal Regulations</i>
CWA	Clean Water Act, as amended by OPA, 33 U.S.C., 1251 <i>et seq.</i>
ESA MOA	Endangered Species Act – Memorandum of Agreement
ESI	Environmental Sensitivity Index
FLAT	Federal Lead Administrative Trustee
FWSEA	Fish and Wildlife and Sensitive Environments Annex
FRP	Facility Response Plan
HAZCOM	Hazard Communication Standard (29 CFR 1910.1200)
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSA	Historic Sites Act of 1935
ICS	Incident Command System
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR, Part 300
NRDA	National Resource Damage Assessment
OPA	Oil Pollution Act of 1990, 33 U.S.C. Section 2701 <i>et seq.</i>
OSC	On-Scene Coordinator
RCP	Regional Contingency Plan
RP	Responsible Party
T&E	Threatened and Endangered
UC	Unified Command
U.S.C.	United States Code

1.0 INTRODUCTION

1.1 PURPOSE

The Oil Pollution Act of 1990 (OPA), mandates that Area Contingency Plans (ACP) identify and prioritize sensitive areas and species within the area. This Fish and Wildlife and Sensitive Environments Annex (FWSEA) to the Region 8 Regional Contingency Plan (RCP) identifies sensitive areas and species and provides resources for evaluating risk, establishing protection priorities, and planning mitigation strategies. The goal of this FWSEA is to reduce the overall ecological impact of a spill event and impacts associated with response activities.

This FWSEA is intended for use by On-scene Coordinators (OSC) during the initial phase of a spill event, to assist them in ascertaining presence and location of spill-sensitive biological and cultural resources, services, and users. This FWSEA does not attempt to assist the OSC in evaluating impacts that may result from a spill; nor does it prioritize resources for subsequent response efforts. More detailed and current data should be available from on-scene resource experts when they engage with the response. Identifying relative priorities among resources and resource uses for a particular area requires considerable coordination and discussion among resource management agencies. Prioritization must occur on an incident-specific basis.

1.2 SCOPE

As required by OPA, this FWSEA establishes procedures and policies for meeting the objectives set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and should be used to aid responders and planners in prioritizing and evaluating response techniques for spills in various freshwater environments and shoreline habitats. This FWSEA offers a general overview of the sensitive areas and provides the OSC with information to assist in identification of sensitive environments. Identifying response capabilities and options before a spill/release occurs is imperative for a coordinated, immediate, and effective response. This FWSEA aids in selection of appropriate spill protection, recovery, and cleanup techniques that will reduce ecological and economic impacts.

The task of identification and prioritization of all environmentally sensitive areas within the Region is an enormous undertaking and is accomplished in stages. This FWSEA will aid the Regional Response Team (RRT) in identifying special areas of concern. Special areas of concern are examined in detail during the sub-area contingency planning process. This FWSEA will also aid oil storage facilities in development of Facility Response Plans (FRP) required by OPA, as defined in 40 *Code of Federal Regulations* (CFR) 112.20.

Finally, this FWSEA assists Federal OSCs and Incident Commanders in protecting threatened and endangered (T&E) species and supporting habitats from the effects of response measures, and in fulfilling their consultation responsibilities under the Endangered Species Act, implementing regulations, and the *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* (Endangered Species Act Memorandum of Agreement [ESA MOA]), Annex IV of the RCP.

To adequately define sensitive resources and their geographic locations requires use of area-specific field observations and data available from published and non-published sources. Data from federal and state Natural Resource Trustees are provided in this document.

1.3 OBJECTIVES

The NCP (40 CFR 300.210(c)(4)(i)) delineates the objectives of the FWSEA. The objectives have been organized into four general sections:

1.3.1 Identify and Establish Priorities for Resources at Risk

Natural resources, other sensitive resources, and the associated Natural Resource Trustees are identified in Section 2.0. Agencies to be notified and consulted in establishment of incident-specific priorities for protection of these resources are identified in Attachment A. Sensitive resources identified include sensitive species (including T&E species), environmentally sensitive lands, freshwater environments, areas of historic or archeological significance, and areas of economic significance.

1.3.2 Determine Environmental Effects of Response and Countermeasures

Methods for determining and approving appropriate response techniques for specific environments and for monitoring effectiveness of response activities are outlined in Section 3.0.

1.3.3 Identify Fish and Wildlife Response Requirements

State and federal response capabilities and the contacts for obtaining permits for wildlife rescue and rehabilitation are outlined. Section 4.0 discusses re-arranging and acquiring the appropriate response equipment, personnel, mutual aid agreements, and training requirements defined by the Occupational Safety and Health Administration (OSHA) for workers and volunteers assigned to assist with fish and wildlife rescue efforts.

1.3.4 Evaluate the Interface Between the FWSEA and Non-Federal Plans

Section 6.0 discusses compatibility of this FWSEA with non-federal response plans regarding issues affecting fish, wildlife, and their habitats or sensitive environments.

2.0 IDENTIFICATION AND PRIORITIZATION OF RESOURCES

To minimize impacts of a spill on sensitive species and environments, resources should be identified prior to a spill event. The OSC and Responsible Party (RP) must be aware of the sensitive environments to ensure that appropriate measures are taken to minimize effects of a spill on ecologic and economic resources. Response strategies and protection prioritization depend on the material released and the location of the spill. An understanding of the aquatic environments and habitats is imperative when selecting a response strategy. **It is critical for responders to realize that an immediate, but inappropriate, response could be more damaging than waiting for mobilization of a proper response.** It is also important to recognize the value and importance of any historic properties/sites that may be affected by response activities.

2.1 NOTIFICATION OF AND CONSULTATION WITH NATURAL RESOURCE TRUSTEES

Notification and consultation with the Natural Resource Trustees and other natural resource management agencies are imperative during a response to an oil spill or hazardous materials incident. Their expertise can be

utilized in identifying and protecting sensitive environments, and Trustees will advise the OSC as to specialists who should be consulted.

Pursuant to Subpart G of the NCP, the following agencies have been designated as Natural Resource Trustees for Region 8:

- U.S. Department of the Interior (DOI);
- U.S. Department of Agriculture (USDA);
- U.S. Department of Defense (DOD);
- U.S. Department of Energy (DOE);
- Colorado Department of Public Health and Environment (CDPHE);
- Colorado Department of Natural Resources (CDNR);
- Colorado Department of Law (Attorney General);
- Montana Department of Environmental Quality (MDEQ);
- Montana Department of Fish, Wildlife and Parks (MDFWP);
- Montana Department of Natural Resources and Conservation (MDNRC);
- North Dakota Department of Health (NDH);
- North Dakota Game and Fish Department (NDGFD);
- South Dakota Department of Environment and Natural Resources (SDDENR);
- Utah Department of Environmental Quality (UDEQ);
- Utah Department of Natural Resources (UDNR);
- Wyoming Department of Environmental Quality (WDEQ);
- Wyoming Game and Fish Department (WGFD); and
- Each of the federally recognized Native American Indian Tribes in Region 8.

Contacts within the state and federal agencies are listed in Attachment A. A list of Native American Tribal leaders and environmental contacts appears in Attachment B.

2.2 CONSULTATION WITH NATURAL RESOURCE MANAGERS

Numerous entities have land and resource management responsibilities and/or expertise within each of the designated Natural Resource Trustee agencies. The Trustee will advise the OSC of the appropriate entities to consult regarding removal actions and site-specific information. These entities include:

DOI

- U.S. Fish and Wildlife Service (USFWS)
- Bureau of Land Management (BLM)
- National Park Service (NPS)
- Bureau of Reclamation (BOR)
- Bureau of Indian Affairs (BIA)

USDA

- United States Forest Service (USFS)
- Animal and Plant Health Inspections Service-Wildlife Services (APHIS-WS)

State of Colorado

- Division of Parks and Wildlife

State of Montana

- Department of Environmental Quality (MDEQ)
- Department of Fish, Wildlife, and Parks (MDFWP)
- Department of Natural Resources and Conservation (MDNRC)

State of North Dakota

- Game and Fish Department (NDGFD)

State of South Dakota

- Game, Fish, and Parks Department

State of Utah

- Division of Natural Resources

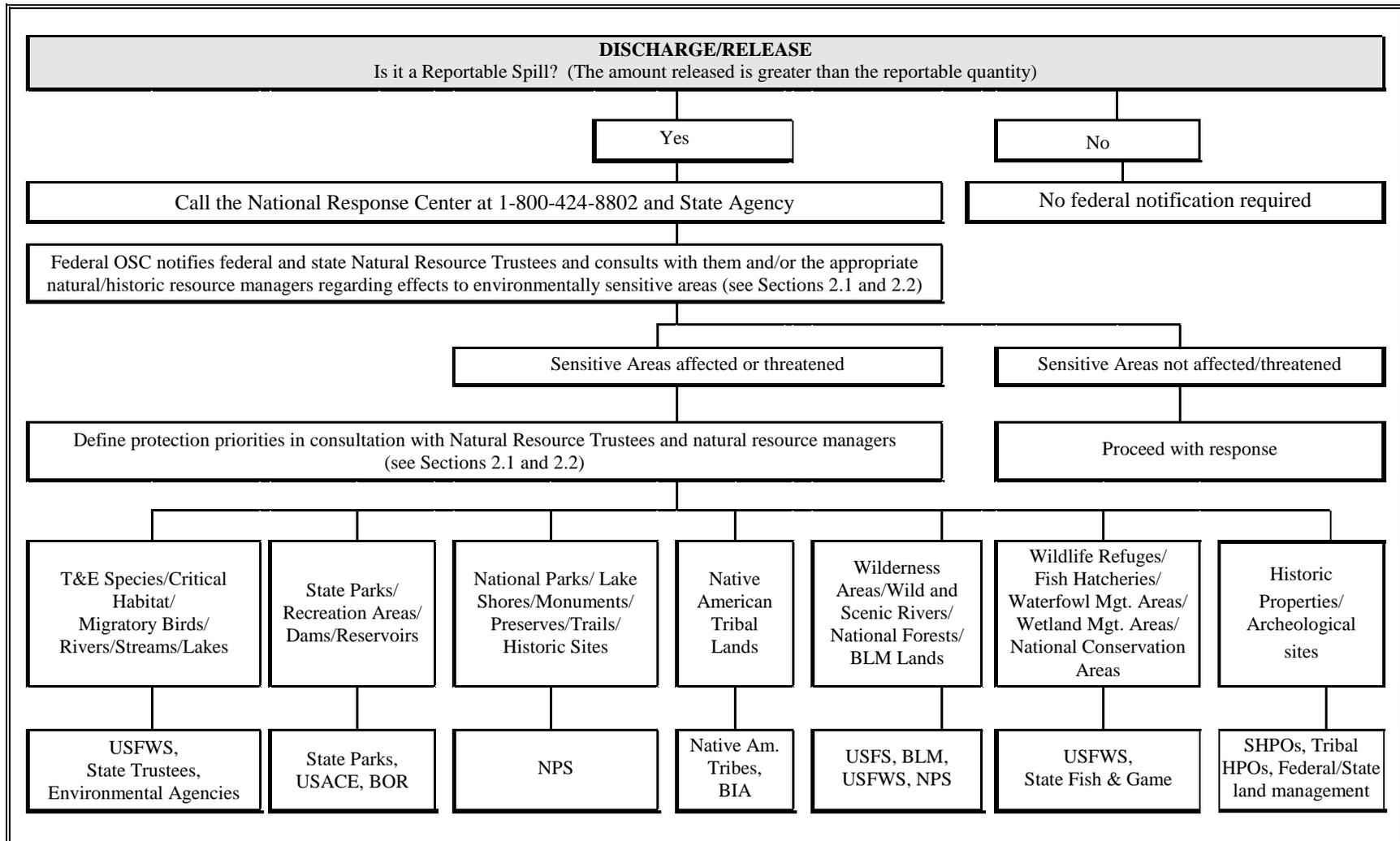
State of Wyoming

- Game and Fish Department (WGFD)

Figure 1 is a spill notification and Resource Trustee consultation flow chart.

FIGURE 1

NOTIFICATION AND CONSULTATION FLOW CHART



2.3 SENSITIVE NATURAL RESOURCES

The Natural Resource Trustees and other natural resource management agencies have identified many environmentally sensitive species and areas within Region 8. On or near rivers and lakes of Region 8 are many wildlife refuges, hatcheries, wild and scenic river reaches, waterfowl management areas, wetland management areas, national and state parks, monuments, preserves, recreational areas, primitive archaeological and historical sites, heritage program areas, and other important resources. Attachment C lists state and federally identified T&E species including listed, candidate, and proposed species. Included in the list are the telephone numbers of Natural Resource Trustee management entity contacts who are to be consulted if a spill has impacted or threatens to impact any of the resources listed. Natural Resource Trustees will provide additional information regarding natures and locations of sensitive areas and species.

2.3.1 Threatened and Endangered Species

T&E species live in or near almost every major body of water in the Region. USFWS provides an annually updated list of T&E species, by county, within Region 8. Each state also has a Natural Heritage Program that provides updated state and federal listings of T&E species. These lists appear in Attachment C. Additional information on compliance with the Endangered Species Act, implementing regulations, and the ESA MOA is in Section 4.5.

2.3.2 Freshwater Environments and Shoreline Habitats

Freshwater environments can be divided into three broad categories: standing water, such as lakes and ponds; flowing water, which includes streams and rivers; and wetlands. These three categories are discussed in further detail in the following subsections. The environments and habitats listed below are the primary freshwater environments and habitats identified by NOAA.

WATER ENVIRONMENTS

Open Water
Large Rivers
Small Lakes and Ponds
Small Rivers and Streams

SHORELINE HABITATS

Bedrock
Man-made Structures
Sand
Sand and Gravel
Vegetated Shores
Mud
Wetlands

Source: NOAA/American Petroleum Institute (API) 1994

Lakes and Ponds

The near-shore areas of standing freshwater environments usually support large numbers of various animals and plants. Populations residing in lakes and ponds are at greater risk from adverse affects than are populations in streams and rivers. Because of relative stillness in lakes and ponds, spilled oil tends to collect, undispersed by waves or currents.

Streams and Rivers

Oil entering a stream or river is typically carried downstream by the current. Oil entering slower flowing streams tends to remain on the surface, while oil discharged to a high-velocity, turbulent stream disperses throughout the entire water column of the stream. As a result of the turbulent agitation, oil may become trapped in sediment along the stream bed, resulting in fatalities of benthic organisms.

Stream reaches can be subdivided into three categories: low gradient, moderate gradient, and high gradient.

- **Low gradient** portions of a stream are characterized by meandering channels, moderate currents, wide zones of associated riparian vegetation, sand bars, intermediate oil residence time, numerous collection sites, and restricted mixing into the water column.
- **Moderate gradient** portions of a stream are characterized by intermittent rapids, moderately wide channels, associated riparian vegetation, brisk currents, sand and gravel bars, short oil residence time, few collection sites, and significant mixing into the water column.
- **High gradient** portions of a stream are characterized by numerous rapids, narrow associated riparian vegetation, strong currents, coarse gravel sediments, short oil residence time, no collection sites, and intense mixing into the water column.

Wetlands

Wetlands are extremely sensitive to oil spills. Wetlands such as freshwater swamps, marshes, and prairie potholes act as natural hatcheries, nesting areas, food sources, and watering areas for terrestrial and aquatic wildlife. Therefore, they are crucial areas for wildlife support.

NOAA's habitat-shoreline ranking scheme has been an effective planning and response tool for more than 10 years, and helps to provide consistent habitat designations throughout the planning process and response operations. The NOAA Environmental Sensitivity Index (ESI) identifies habitats and assigns priority classifications to them. The ESI ranking is based on biological productivity and ability to recover after exposure to oil, degree of exposure to natural removal processes, human use of the habitat, and ease of oil removal. Table 1 lists the ESI rankings for lacustrine and riverine shoreline habitats. The highest-priority habitats include vegetated wetlands (ESI = 10). The lowest priority habitats include high-energy shorelines of exposed rocky cliffs and banks (ESI = 1A).

A location's ranking may change seasonally, reflecting changes in distribution of natural resources or its sensitivity. The Region's seasonality is a major consideration in preparing and planning for a response. Ice and snow during the winter, fluctuations of river and stream flow rates and water levels, and migratory patterns of wildlife all must be considered on a location-by-location basis.

TABLE 1**PROPOSED NOAA ESI RANKINGS FOR INLAND HABITATS IN EPA REGION 8**

ESI No.	Lacustrine	Riverine (Large Rivers)
1A	Exposed rocky cliffs	Exposed rocky banks
1B	Exposed, hard, man-made structures	Vertical, solid revetments
2	Shelving bedrock shores	Rocky shoals, bedrock ledges
3	Eroding scarps in unconsolidated sediments	Exposed, eroding banks in unconsolidated sediments
4	Sand beaches	Sandy bars and gently sloping banks
5	Mixed sand and gravel beaches	Mixed sand and gravel bars and gently sloping banks
6A	Gravel beaches	Gravel bars and gently sloping banks
6B	Riprap structures	Riprap structures
7	Exposed tidal flats	Not present
8A	Sheltered scarps in bedrock	Vegetated, steeply sloping bluffs
9A	Sheltered vegetated low banks	Vegetated, low banks
9B	Sheltered sand/mud flats	Muddy substrates (non-vegetated)
10A	Not Applicable to Fresh Water Environments	
10B	Not Applicable to Fresh Water Environments	
10C	Freshwater marshes	Freshwater marshes
10D	Freshwater swamps	Freshwater swamps

2.3.3 Sensitive Areas and Statutory Authority

Environmentally sensitive areas have been designated by both state and federal agencies. State designations often overlap federal designations; however, Federal OSCs and facility planners need to be aware of separate state statutes.

Federal classification of environmentally sensitive areas, their administering agencies, and the relevant statutory authority are available in various sources that include, but are not limited to, the following:

- **Critical Areas Under the Clean Lakes Program** [EPA, States, Section 314 Clean Water Act (CWA), (33 *United States Code* (U.S.C.) ' 1324)];
- **Critical Habitats for Federal Designated Endangered or Threatened Species** [USFWS, Endangered Species Act, (16 U.S.C. ' 1531, *et seq.*; 50 CFR 424.02)];
- **Designated Federal Wilderness Areas** [BLM, USFS, NPS, USFWS, National Wilderness Preservation Act (16 U.S.C. ' 1131, *et seq.*)];
- **Federal Designated or Proposed Endangered or Threatened Species** [USFWS, Endangered Species Act (16 U.S.C. ' 1531, *et seq.*; 50 CFR 424.02)];
- **Federal and State Designated Wild and Scenic Rivers** [BLM, USFS, NPS, USFWS, States, National Wild and Scenic Rivers Act, (16 U.S.C. ' ' 1271-1287)];
- **National Conservation Areas** [USFWS, Refuge Recreation Act, (16 U.S.C. ' 460k, *et seq.*)];
- **National Wildlife Refuges** [USFWS, National Wildlife Refuge Administration Act of 1966 (16 U.S.C. ' ' 668dd-668ee) or comparable state law];
- National Parks, National Monuments, National Lakeshore Recreational Areas [NPS, Act of August 25, 1916 (16 U.S.C. ' 1, *et seq.*)];
- **Coordination Areas** are designated wildlife management areas and are designated within the states = **Wildlife Management Areas** (16 U.S.C. ' 661-666c);
- **Waterfowl Production Areas** are wetlands and potholes administered by the USFWS and are crucial habitats for waterfowl production [16 U.S.C. ' 718d8];
- **Wetlands** are defined in 40 CFR 230.3 and by USFWS. These areas include swamps, marshes, bogs, and similar areas.

2.4 AREAS OF ECONOMIC SIGNIFICANCE

Responders must recognize and protect areas of economic importance. A discharge of oil or other hazardous materials could adversely impact public drinking water intakes, industrial water users, aquaculture sites, and agricultural water users. Water intakes in shallow lakes and rivers are at greatest risk from an oil spill. Timely procedures by responders to identify and notify water users of an oncoming spill are imperative. With prompt notification, water intake/diversions can be shut down or boomed off. Numerous agricultural, industrial, and municipal water users still must be identified. OSCs must be aware that this list is not complete.

Attachment A lists state and federal contact agencies that administer water use. Facilities preparing FRPs must locate all water diversions within their downstream planning distances and plan accordingly.

2.5 AREAS OF HISTORIC/ARCHEOLOGICAL SIGNIFICANCE

As required under the *Programmatic Agreement on Protection of Historic Properties During Emergency Response under the National Oil and Hazardous Substances Contingency Plan (Programmatic Agreement)*, plans shall ensure inclusion of information on consideration of historic properties. This should be developed in consultation with the appropriate parties for immediate and effective protection of, and minimization of risk of damage to, historic properties that may be jeopardized by a discharge. Specific requirements are outlined in Section 5 and Annex V of the RCP.

3.0 DETERMINING THE ENVIRONMENTAL EFFECTS OF RESPONSE AND COUNTERMEASURES

Response decisions should take into account the relative impact of various response methods on sensitive areas. Informed decisions can be made to deploy appropriate protective measures using information collected regarding downstream sensitive areas and spill response guidelines. In a decision on a method of response, the most important consideration should be to balance effectiveness of each method available in removing spills of oil or other hazardous materials with effectiveness in protecting affected habitats.

3.1 IMPACTS OF RESPONSE METHODS ON SENSITIVE ENVIRONMENTS AND HABITATS

NOAA and API collaborated on a study of methods for responding to inland oil spills. Their findings were finalized in May 1994. This was the first comprehensive guidance for responding to freshwater inland oil spills. NOAA/API classified specific oil response methods and their relative impacts on given environments and habitats in the absence of oil. Physical, chemical, and biological response methods are discussed, and response impacts on the environment are classified as a low, moderate, or high, and ineffective or inapplicable. Low, medium, and high impacts as defined by NOAA/API are as follows:

- **Low** – Physical damage to the substrate and vegetation is minimal. Toxic impact is likely to be of limited areal extent and short duration. Re-stabilization or repopulation of the habitat is likely within 6 months.
- **Moderate** – Physical damage to the substrate and vegetation may occur, with increased erosion potential in sedimentary habitats. Toxic impact is such that re-stabilization or repopulation of the habitat may take 6 to 12 months.
- **High** – Physical damage to the substrate and vegetation is expected. Erosion potential may be high from the technique. The ecosystem may be adversely affected. Re-stabilization or repopulation of the habitat may take more than 12 months.

Table 2, taken from the NOAA/API manual, includes findings regarding impacts of response methods on freshwater environments and shoreline habitats.

TABLE 2

RELATIVE IMPACTS OF RESPONSE METHODS IN THE ABSENCE OF OIL

RESPONSE METHOD	WATER ENVIRONMENT				SHORELINE HABITAT							
	Open Water	Small Lakes/Ponds	Large Rivers	Small Rivers/Streams	Bedrock	Man-made	Sand	Vegetated Shores	Sand and Gravel	Gravel	Mud	Wetlands
PHYSICAL RESPONSE METHODS												
Vegetation Removal	L	H	M	H	-	-	-	H	-	-	-	H
In-situ Burning	L	M	L	M	L	L	M	M	M	M	H	M
Natural Recovery	-	-	-	-	-	-	-	-	-	-	-	-
Booming	L	L	L	L	-	-	-	-	-	-	-	-
Skimming	L	L	L	L	-	-	-	-	-	-	-	-
Barriers/Berms	-	-	-	H	-	-	-	-	-	-	-	-
Physical Herding	L	L	L	L	-	-	-	-	-	-	-	-
Manual Oil Removal/Cleaning	L	H	L	M	L	L	L	H	M	M	H	H
Mechanical Removal	L	H	H	H	-	M	M	H	M	M	H	H
Sorbents	L	L	L	L	L	L	L	L	L	L	M	M
Vacuum	L	L	L	L	L	L	L	M	L	L	H	M
Debris Removal	-	L	L	L	L	L	L	L	L	L	M	M
Sediment Reworking	-	H	-	H	-	-	M	H	M	M	H	H
Flooding	-	-	-	-	L	L	L	L	M	L	L	L
Low-Pressure, Cold-Water Flushing	-	-	-	-	L	L	M	L	L	M	H	L
High-Pressure, Cold-Water Flushing	-	-	-	-	L	L	H	H	H	H	H	H
Low-Pressure Hot-Water Flushing	-	-	-	-	M	L	H	H	M	M	H	H
High Pressure, Hot-Water Flushing	-	-	-	-	M	L	H	H	H	H	H	H
Steam Cleaning	-	-	-	-	M	L	H	H	M	M	H	H
Sand Blasting	-	-	-	-	H	M	-	-	-	-	-	-
CHEMICAL RESPONSE METHODS												
Dispersants	L	H	L	H	-	-	-	-	-	-	-	-
Demulsifiers	L	L	L	M	-	-	-	-	-	-	-	-
Visco-Elastic Agents	L	M	L	L	-	-	-	-	-	-	-	-
Herding Agents	L	M	L	H	-	-	-	-	-	-	-	-
Solidifiers	L	L	L	L	L	L	M	M	M	L	M	M
Chemical Shoreline Pretreatment	-	-	-	-	I	I	I	I	I	I	I	I
Shoreline Cleaners	-	-	-	-	M	L	M	I	M	M	M	I
BIOLOGICAL RESPONSE METHODS												
Nutrient Enrichment	L	M	L	L	L	L	L	L	L	L	L	L
Natural Microbe Seeding	I	I	I	I	I	I	I	I	I	I	I	I

Source: API/NOAA 1994 L = Low M = Moderate H = High I = Incomplete Information - = Ineffective or Inapplicable for Habitat

3.2 APPROPRIATE RESPONSE METHODS FOR SPECIFIC SENSITIVE ENVIRONMENTS AND HABITATS

Many issues dealing with appropriate response methods will be addressed in detail during Sub-Area Contingency Planning. Response sections of Sub-Area Contingency Plans will include:

- Identification of specific areas of concern throughout the sub-area, pre-planning for the materials most commonly spilled, and locations where spills are most likely to occur;
- Response methods for habitats and sensitive areas using the NOAA/API guidance, *Options for Minimizing the Environmental Impacts of Freshwater Spill Response*;
- Pre-approval of appropriate removal actions, including use of chemicals and dispersants, in accordance with 40 CFR 300.900-920, Subpart J – *Use of Dispersant and Other Chemicals*; Subpart J and Annex IX of the RCP;
- Locations of access points, staging areas, and boom anchor locations.

Guidelines for the Development of Sensitive Area Protection Strategies, prepared by NOAA and the U.S. Coast Guard (USCG), provides guidance for prioritizing resources at risk and developing site-specific protection strategies. This manual, adapted from the *Shoreline Mechanical Protection Manual (11/93)*, provides resource priority worksheets, site summary sheets, and field verification checklists for locating and defining sensitive areas to be protected. Sub-Area Contingency planners may find it useful for prioritizing specific resources within their respective Sub-Areas.

3.3 MONITORING RESPONSE EFFECTIVENESS – MONITORING PLANS

An oil spill is dynamic and cleanup efforts must adapt as conditions change. Over time, the oil will spread, move downstream, and deteriorate. Climatic conditions may also change. A continual monitoring program is essential to ensure maximum removal of oil and protection of the environment throughout the cleanup.

The OSC, in consultation with the Natural Resource Trustees and the RP, will monitor effectiveness of response activities in protecting sensitive habitats and removing discharges of oil or releases of hazardous substances. The OSC will consult with Natural Resource Trustees and natural resource agency managers to determine need for and methods of implementing an incident-specific, long-term monitoring plan. Efforts to control, contain, and remove oil typically involve multiple methods of containment and recovery that may include booms, barriers, skimmers, sorbents, chemical agents, and manual recovery. Because each method has limitations, continued monitoring is necessary to ensure a successful cleanup. Monitoring activities may include visual observation, sampling, data collection and evaluation, and removal and replacement of saturated or defective material. Monitoring of ecological impacts associated with the response actions will also be necessary to ensure that the response does not cause more harm than good. Consultation with the appropriate natural resource agencies is essential to minimize injury to fish and wildlife and their habitats or to other sensitive environments.

Section 300.210(E) of the NCP requires that the FWSEA provide monitoring plan(s) to evaluate effectiveness of different countermeasures or removal actions in protecting the environment. This is an outline for such plans. Specific plans for each response must be developed in consultation with Natural Resource Trustees and natural resource agency managers.

3.3.1 Objectives and Scope

Determine effectiveness of the selected countermeasures or removal actions in counteracting effects of the discharge or release. Evaluate the environmental impact of these activities.

3.3.2 Monitoring Plan Design

- **Monitoring Intensity Levels** – Intensity of monitoring efforts may be adjusted to the intensity of the response. Field activities consisting of reconnaissance, environmental parameters assessment, sampling and documentation efforts, and laboratory activities should occur on a scale appropriate to the response.
- **Selection of Treated and Untreated Sites** – Treated and untreated (or control) 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 from the released substance and probability of further contamination.

3.3.3 Monitoring Parameters and Collection Frequency

Monitoring at each site, such as water depth (as appropriate) and time should be performed in triplicate. Volumes of samples collected should be based on requirements of the analytical methods to be used for analysis of those samples.

3.3.4 Data Quality Requirements and Assessments

All data collection activities must be planned and conducted to produce data of known and acceptable quality. To ensure that these objectives are met, all contractors performing work as part of the monitoring effort must submit a quality assurance plan. Parameters for defining data quality include appropriateness of analyses, detection limits, precision, accuracy, representativeness, comparability, and completeness. Representativeness and comparability should be designed into the monitoring plan through provisions for replicate sampling from remediated and control areas, and use of standard, approved methods for sampling and laboratory analysis.

3.3.5 Sample Custody Procedures

Accurate identification and proper control of samples are important to ensure acceptability and usability of resulting analytical data. Standard sample custody procedures are particularly important if more than one individual will perform sample collection and if the individuals collecting samples will not be the ones analyzing the samples. When the monitoring program is conducted by a contractor, the contractor should designate a sample custodian who will ensure tracking of samples and that custody procedures are properly followed.

3.3.6 Sampling and Analytical Methods

All sampling and laboratory analysis should be developed in 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.

3.3.7 Response Organization and Resource Requirements

The decision to implement a monitoring plan is made in accordance with the NCP and the Region 8 RCP. A project manager, under direction of the OSC, is responsible for implementing the plan.

- **Project Manager** – Specific responsibilities of the project manager include obtaining approval from the OSC for the monitoring plan, assembling teams to perform observations and sampling as appropriate, coordinating activities with the OSC to ensure monitoring operations do not interfere with other response operations, naming a sample custodian to handle sample transfers and chain-of-custody concerns, ensuring representation from each RRT member agency that wishes to participate, ensuring consultation with the Natural Resource Trustees and natural resource managers, ensuring and documenting data quality, and ensuring preparation and submission of all required reports. The number of additional personnel required will depend on the size of the spill and the monitoring effort.
- **Equipment Requirements** – Equipment requirements will be determined by the scope of the monitoring effort. However, sufficient equipment to complete required sampling and photo documentation must be available.

3.3.8 Data Validation

All data will be subject to a thorough check by the OSC and the monitoring Project Manager, or their designated representative, for errors in transcription, calculation, or computer input. In addition, the Project Manager will review all incident logs, sample logs, and data forms to ensure that requirements for documentation and data quality assessment have been met.

3.3.9 Performance and System Audits

To ensure that work is being performed, whether by a contractor, EPA, or state personnel, and is progressing in accordance with the monitoring plan and specified objectives and procedures, the OSC, through the monitoring project manager, maintains the right to conduct performance or system audits of field and laboratory collection activities. The categories of audits are described below:

- **Management System Reviews** – Evaluate the quality assurance program of an organization, such as a firm contracted to conduct a monitoring project or a laboratory sample analysis. The purpose of this review is to verify whether the quality assurance management procedures stated by the contractor are in place prior to a contract award.
- **Data Quality Audits** – Evaluate a data set or all data sets of a particular project by comparing the data set against specified data quality requirements for that data set.
- **Technical System Audits** – Evaluate the actual environmental measurement data-collection systems and their associated quality control systems. These audits involve on-site auditing of field sampling activities, field measurement activities, and laboratory analytical procedures.

- **Performance Audits** – Evaluate analytical methods and procedures of a laboratory. These audits proceed by submittal of performance evaluation samples to a laboratory for analysis. The samples should contain specific pollutants in known matrices whose concentrations and identities are unknown to the testing laboratory.

3.3.10 Documentation and Reporting

During the course of response activities and accompanying monitoring efforts, the following reports should be prepared and submitted to the OSC:

- **Activity reports** – Provide descriptions of the response activity area, weather, unique observations, and activities undertaken, as well as the names, affiliations, and signatures of persons on site. Activity reports should be prepared whenever activities occur at a site.
- **Analytical reports** – Provide results from laboratory analyses of environmental and control samples. Analytical reports should be prepared and submitted by the analytical lab within 10 business days after receipt of environmental samples for analysis.
- **After action report** – Provide a description of the overall bio-remediation activity and accompanying monitoring effort, including results of both field and laboratory activities.

3.3.11 Revising Plans and Procedures

Monitoring plans should include provisions for modifications, including additional consultation with Natural Resource Trustees and natural resource managers.

4.0 FISH AND WILDLIFE RESPONSE CAPABILITIES

Over the past 20 years, increasing success has been achieved in rescue, rehabilitation, and release of wildlife into the natural environment after spill events. Continuing success, however, depends on proper planning, management, equipment, experienced response personnel, and trained volunteers. Effectively rescuing contaminated fish and wildlife requires effective management of the media, volunteer and staff training, human health hazards, liability issues, and disposal of waste water. Furthermore, wildlife rehabilitation requires specialized medical expertise and stockpiles of specially designed equipment.

Consultation and coordination with Natural Resource Trustees and other natural resource management agencies during the pre-spill planning phase and the response are essential to identify and understand potential natural resource concerns. Categories of fish and wildlife response capabilities include technical expertise and assistance, wildlife protection, wildlife rescue and rehabilitation, and health and safety concerns.

4.1 TECHNICAL EXPERTISE AND ASSISTANCE

During an oil spill response, Natural Resource Trustees and natural resource managers will provide technical assistance and expertise regarding potential effects of oil on fish and wildlife and their habitats or on other sensitive environments within the affected area. Natural Resource Trustees and natural resource managers are familiar with the area and habitats affected, and should be able to recommend the best locations for staging areas, access points, or anchor locations. Natural Resource Trustees and natural resource managers will recommend specific habitats where protective measures should be taken, and will provide advice on response actions to be taken. They can assist in development of a response monitoring plan and subsequent collection of data. In addition, USDA APHIS-WS has extensive operational and technical capabilities to assist with proper humane capture, handling, hazing, transport, and other issues that typically arise in spill situations. A list of USDA APHIS-WS State Offices is accessible on the [USDA APHIS Website](#), or see Table 3. Finally, USFWS and the state wildlife agency will direct or oversee protection, rescue, and rehabilitation of fisheries and wildlife.

TABLE 3

USDA APHIS OFFICES FOR REGION 8

State	Contact Office for USDA APHIS	Contact Name	Normal Business Hours
Colorado	Colorado Wildlife Services State Director 12345 West Alameda Parkway Suite 204, Lakewood, CO 80228	Mike Yeary	Phone: (303) 236-5810 FAX: (303) 236-5821
Montana	Montana Wildlife Services State Director P.O. Box 1938 Billings, MT 59103	John E. Steuber	Phone: (406) 657-6464 FAX: (406) 657-6110
North Dakota	North Dakota Wildlife Services State Director, 2110 Miriam Circle, Suite A Bismarck, ND 58501	Phil Mastrangelo	Phone: (701) 250-4405 FAX: (701) 250-4408
North Dakota	South Dakota Wildlife Services State Director, 2110 Miriam Circle, Suite A Bismarck, ND 58501	Phil Mastrangelo	Phone: (701) 250-4405 FAX: (701) 250-4408
Utah	Utah Wildlife Services State Director P.O. Box 26976 Salt Lake City, UT 84126	Mike Linnell	Phone: (801) 975-3315 FAX: (801) 975-3320
Wyoming	Wyoming State Director Wildlife Services P.O. Box 67 Casper, WY 82602	Rod Krischke	Phone: (307) 261-5336 FAX: (307) 261-5996

4.2 WILDLIFE PROTECTION

When an oil spill occurs, Natural Resource Trustees or natural resource managers will provide timely advice on measures necessary to protect wildlife from exposure to oil, as well as priorities and timing of such measures. Protective measures may include one or more of the following:

- **Preventing** oil from reaching areas where migratory birds and other wildlife are present by either containing or recovering the oil;

or

- **Deterring** birds or other wildlife from entering areas affected by oil via use of wildlife hazing devices or other methods.

Wildlife hazing devices or methods are generally grouped as either visual or auditory, or a combination of both. In an emergency, USFWS, APHIS-WS, the state wildlife agency, a local animal damage control agent, or the RP may locate and provide this equipment.

4.3 WILDLIFE RESCUE AND REHABILITATION

If exposure of birds and other wildlife to oil cannot be prevented, an immediate decision must be made regarding whether to capture and rehabilitate oiled birds and other wildlife. DOI has statutory responsibilities for protecting migratory birds and federally listed T&E species. These responsibilities are delegated to USFWS. If animals other than migratory birds or federally listed T&E species are found injured, the responsible agency would typically be the state wildlife agency. The decision to rescue and rehabilitate oiled wildlife **must** be made in consultation with the applicable state and federal natural resource management agencies, because state and federal permits are required by law.

State and federal permits are required to collect, possess, treat, or band migratory birds and T&E species. The laws and regulations that require such permits are as follows:

- **Migratory Bird Treaty Act of 1918, as amended, (16 U.S.C. 703 et seq.)** – This Law stipulates that no person shall take, possess, import, export, transport, sell, purchase, or barter any migratory bird, or the parts, nests, or eggs of such bird, except as permitted under the terms of a valid permit issued by USFWS pursuant to the provisions of 50 CFR 21 and 50 CFR 13. Enforcement authority and penalties for violations are provided.
- **Bald Eagle Protection Act of 1940, as amended, (16 U.S.C. 668 et seq.)** – This Law stipulates that no person shall take, possess, or transport any bald eagle or any golden eagle, or the parts, nests, or eggs of such birds, except as permitted under the terms of a valid permit issued by USFWS pursuant to 50 CFR 22 and 50 CFR 13. Enforcement authority and penalties for violations are provided.
- **Endangered Species Act of 1973, as amended, (16 U.S.C. 1531 et seq.)** – This Law makes it unlawful for any person to commit, attempt to commit, solicit another to commit, or cause to be committed, the import or export, taking, possessing, sale, or offering for sale of any endangered species except as permitted under the terms of a valid permit issued by USFWS pursuant to 50 CFR 17. Enforcement authority and penalties for violations are provided.

If rescue and rehabilitation efforts are deemed necessary and worthwhile, a federal permit is required for handling oiled migratory birds. Another federal permit is required for handling oiled T&E species. Each of these permits may encompass more than one species. If a species is considered a migratory bird, but is also a T&E species, it should be listed under the T&E species permit.

USFWS personnel will handle all federal permit activities through the field office having jurisdiction for the area where the spill occurs. State permits must be obtained through the appropriate state agency office.

Permits for migratory birds are issued at the Migratory Bird Permit Office in Denver, Colorado, for EPA Region 8. Permits for T&E species are issued at the Ecological Services Division of each USFWS Field office in the applicable state. The USFWS Field office will verify need for a permit and contact the regional office before a permit is issued (see Table 4).

TABLE 4
PERMIT-ISSUING OFFICES FOR REGION 8

State	Contact Office for Migratory Birds	Contact Name	Normal Business Hours
All States	USFWS, Migratory Bird Permit Office P.O. Box 25486, Denver Federal Center (60154), Denver, CO 80225-0486	Branch Chief	303-236-8169 or 8171 Fax: 303-236-8017
State	Contact Offices for All Other Wildlife	Contact Name	Normal Business Hours
Colorado	East of Continental Divide: P.O. Box 25486, Denver Federal Center (65412), Denver, CO 80225-0486	Field Supervisor	303-236-4744 Fax: 303-236-4005
	West of Continental Divide: 445 West Gunnison Ave, Suite 240 Grand Junction, CO 81501-5720	Assistant Field Supervisor	970-243-2778 x 29 Fax: 970-245-6933
	Colorado Division of Wildlife Special Licensing Unit 6060 Broadway, Denver, CO 80216-1000		303-291-7143 Fax: 303-346-4541
Montana	USFWS, Ecological Services 585 Shepard Way, Helena, MT 59601	Field Supervisor	406-449-5225 Fax: 406-449-5339
	Montana Department of Fish, Wildlife, & Parks (MDFWP) PO Box 200701, Helena, MT 59602-0701	none	406-444-2602 Fax: 701-444-4952
North Dakota	USFWS, Ecological Services 3425 Miriam Avenue, Bismarck, ND 58501	Field Supervisor	701-250-4481 Fax: 701-355-8513
	North Dakota Game and Fish Department (NDGFD) 100 North Bismarck Exp., Bismarck, ND 58501	Randy Kreil	701-328-6330 Fax: 701-328-6352
South Dakota	USFWS, Ecological Services 420 S. Garfield Ave., Suite 400, Pierre, SD 57501	Field Supervisor	605-224-8693 Fax: 605-224-9974
	South Dakota Game, Fish and Parks 523 East Capitol Street, Pierre, SD 57501	Jeff Vonk	605-773-3718 Fax: 605-773-6245
Utah	USFWS, Ecological Services 2369 West Orton Circle, Suite 50 West Valley City, UT 84119	Field Supervisor	801-975-3330 Fax: 801-975-3331
	Division of Wildlife Resources 1594 West North Temple, Salt Lake City, UT 84116	Jim Karpowitz	801-538-4812 Fax: 801-538-4745
Wyoming	USFWS, Ecological Services 5353 Yellowstone Road, Suite 308A, Cheyenne, WY 82009	Field Supervisor	307-772-2374 Fax: 307-772-2358
	Wyoming Game and Fish Department (WGFD) 5400 Bishop Blvd., Cheyenne, WY 82006	Steve Ferrell	307-777-4600 Fax: 307-777-4699

Important: All rescue and rehabilitation efforts will be directed by USFWS and the state wildlife agency, including notification of a qualified wildlife rehabilitation organization and acquisition of necessary permits.

Guidelines for Selection of a Wildlife Rehabilitator

The following criteria will be applied by USFWS and state wildlife agencies in selecting a rehabilitation organization:

- The selected wildlife rehabilitator must have, or be able to obtain, the appropriate federal and state permits and licenses to collect, possess, treat, and band migratory birds and/or T&E species.
- The wildlife rehabilitator must demonstrate high standards of practice, treatment, conduct, and ethics, as reflected by organizations such as the National Wildlife Rehabilitator Association, the American Veterinarian Association, and the American Society for Prevention of Cruelty to Animals.
- The wildlife rehabilitator must have adequate liability insurance to protect both staff and volunteers.
- The wildlife rehabilitator should have a proven record and experience in rescue and rehabilitation of oiled wildlife.
- The wildlife rehabilitator must comply with all applicable federal (OSHA, etc.) and state safety regulations to protect staff and volunteers.

Two organizations, International Bird Rescue in Berkeley, California, and Tri-State Bird Rescue and Research, Inc., in Newark, Delaware, are recognized experts in oiled bird rehabilitation:

Tri-State Bird Rescue and Research, Inc.
170 Old Possum Hollow Road
Newark, Delaware 19711
Telephone: 302-737-9543
Fax: 302-737-9562

International Bird Rescue Research Center
Northern California Center
4369 Cordelia Road
Emergency Oil Spill Line (888) 447-1743
Fairfield, California 94534
Telephone: 707-207-0380
Fax: 707-207-0395

Both organizations have extensive experience in bird rescue and rehabilitation, and have worked with both government and industry. Other local, less well-known bird rehabilitation organizations with requisite knowledge may be present in this area. Veterinarians and researchers from USFWS, other federal agencies, state wildlife agencies, and universities may also be able to provide assistance and expertise during wildlife rehabilitation efforts.

All rescue and rehabilitation efforts will be directed by USFWS and the state wildlife agency, including notification of a qualified wildlife rehabilitation organization and acquisition of necessary permits.

4.4 HEALTH AND SAFETY CONCERNS IN WILDLIFE RESCUE AND REHABILITATION

The NCP 300.210 8 II (H) states that the FWSEA will identify the minimum required OSHA/EPA training for volunteers, including those who assist with injured wildlife.

Two OSHA regulations address most of the occupational health and safety issues encountered during wildlife rescue and rehabilitation:

- The OSHA standard for Hazardous Waste Operations and Emergency Response (HAZWOPER) (29 CFR 1910.120) regulates organizations or individuals involved directly in on-site (hot-zone) retrieval or clean-up efforts. In addition, each state may have its own worker safety requirements. Coordinate with the appropriate state agency to ensure these requirements are also met.
- The Hazard Communication Standard (HAZCOM) (29 CFR 1910.1200), also known as Right-to-Know Law, requires full evaluation of all chemicals in the work place for possible physical or health hazards, and availability of all information relating to these hazards to each worker. HAZCOM does apply to rehabilitation organizations because petroleum is considered a hazard to human health.

Rehabilitation organizations are legally required to educate and protect all employees, including volunteers, in accordance with the OSHA standards. Individuals working with oiled animals need information regarding all potential hazards associated with handling said animals. The following minimum requirements should be applied to wildlife rescue and rehabilitation personnel, including volunteers:

- **Wildlife rescue and rehabilitation management personnel** – This is the core team of certified rehabilitators who will direct operations. Each individual must have 24 hours of classroom training in hazardous waste operations and emergency response.
- **Rehabilitation facility volunteers** – These volunteers work under direction of the management team and are not allowed on scene or in the hot-zone unless additional training is provided (see retrieval volunteers). Volunteers in this category must receive 4 hours of training at the HAZWOPER Awareness level or have sufficient training or proven experience in specific competencies before they can begin work.
- **Retrieval volunteers** – These volunteers work under direction of the search and rescue management team, and are allowed on scene, but not in the hot zone. Volunteers working in this category must receive between 4 and 8 hours of HAZWOPER training (Awareness level) and an additional 8 hours of site-specific safety training before they can begin work.
- **Hot-zone retrieval of animals** – An individual conducting this must have 40 hours of classroom safety training for hazardous waste workers, and 24 hours of supervised field experience that meets OSHA guidelines, including 8 hours of annual refresher training, if applicable.

The OSC, in consultation with OSHA’s representative to the RRT, is responsible for assessing which training requirements are applicable.

In addition to chemical hazards, mechanical, physical, and biological hazards may also be present during rescue and rehabilitation activities. Workers must be trained on site-specific hazards as well. In addition to the above, training elements may include the following:

Facility concerns:

- Behavior of oiled birds;
- Proper animal restraint;
- Personal protective equipment and clothing to protect workers from blood-borne pathogens and zoonoses;
- Proper heavy lifting techniques;
- Safe working practices, (e.g., no slippery or messy floors); and
- Electrical safety.

Field concerns (in addition to the above):

- Climatic conditions (e.g., cold, heat);
- Terrain;
- Proper retrieval methods;
- Vehicle safety (including boats);
- Water hazards; and
- Other response operations hazards.

Other safety concerns may apply to either the spill site or the rehabilitation facility. These concerns should be addressed on a site-specific basis.

4.5 ENDANGERED SPECIES ACT CONSULTATION

The following is a summary of Federal OSC and USFWS responsibilities under the Endangered Species Act, implementing regulations, and the ESA MOA. For detailed information on Endangered Species Act consultation requirements and procedures, see Annex IV to the RCP.

PRE-SPILL PLANNING

Area/Sub-Area Committee Chair Responsibilities

- Request (in writing) endangered species expertise, a species list, and a description of their habitats from USFWS.
- Engage in informal and, as necessary, formal consultation on the Area Contingency Plan (ACP) and Sub-Area Plans.
- Upon receipt, distribute updated species information to all holders of the RCP and Sub-Area Plans. Distribute updated T&E Species sections of the Fish and Wildlife and Sensitive Environments Plan and all Sub-Area plans at least annually.

USFWS Responsibilities

- In response to a request, provide species list and a description of their habitats, and identify a listed species expert to assist the Area/Sub-Area Committee.
- Engage in informal and, as necessary, formal consultation on the ACP and Sub-Area Plans.
- As changes occur, but no less than semiannually, provide updated species information to the Area/Sub-Area Committee Chairs, through the DOI RRT/Area Committee Representative.

DURING SPILL RESPONSE

Federal OSC Responsibilities

- If fish and wildlife resources may be affected by a discharge or release, notify federal and state Natural Resource Trustees and managers, and consult with them on the removal actions to be taken.
- If listed species and/or critical habitat are or could be present, immediately contact USFWS to initiate emergency consultation pursuant to the ESA, implementing regulations, and the ESA MOA.
- Keep USFWS and the DOI RRT/Area Committee Representative apprised of ongoing response actions.
- Document any adverse effects (including incidental take) on listed species or their habitat.
- Maintain a record of all oral and written communications that document and are relevant to decisions made with USFWS during the response.

USFWS Responsibilities

- Provide the Federal OSC with timely recommendations on actions to avoid or minimize impacts on listed species and/or their habitats throughout the duration of the response.

- Respond to requests for emergency consultation pursuant to the Endangered Species Act, implementing regulations, and the ESA MOA.
- If incidental take is anticipated, so advise the Federal OSC.
- Upon request, participate in the Incident Command System (ICS)/Unified Command (UC).
- Maintain a record of all oral and written communications with the Federal OSC during the response.

POST RESPONSE

Federal OSC Responsibilities

- If listed species or critical habitat have been adversely affected by response activities, initiate formal consultation of the effect of these activities pursuant to the Endangered Species Act, implementing regulations, and the ESA MOA. See Annex XIV to the RCP (ESA MOA) for specific requirements and procedures.

USFWS Responsibilities

- Respond to requests for formal consultation in accordance with the Endangered Species Act, implementing regulations, and the ESA MOA.

4.6 LAW ENFORCEMENT

The USFWS Office of Law Enforcement (OLE) is responsible for investigating suspected and alleged violations of federal wildlife laws including the Migratory Bird Treaty Act, 16 USC 703 *et seq.*; the Endangered Species Act, 16 USC 1538 *et seq.*; the Eagle Protection Act, 16 USC 668a *et seq.*; the 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 OLE-enforced laws. Special Agents of the OLE or Refuge Officers of the Division of Refuges (when USFWS lands are involved) may be required to initiate investigations during the spill response phase to document violations and collect evidence in a timely manner. These law enforcement officers will coordinate their activities with the OSC or other on-scene law enforcement personnel. Additionally, the Special Agents/Refuge Officers will ensure that responders possess the necessary federal permits (Section 6.3), and that wildlife-related response activities are accomplished in accordance with applicable laws and permit provisions.

Many Special Agents and Refuge Officers have detailed knowledge of the local terrain and can provide timely, site-specific information to response personnel. In many cases, the OLE and other USFWS responders 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 the OLE may be brought on scene to assist with wildlife handling or collection.

4.7 OTHER ROLES AND RESPONSIBILITIES OF NATURAL RESOURCE TRUSTEES

In the event of a spill, it may be necessary for Natural Resource Trustees and managers to initiate a Natural Resource Damage Assessment (NRDA). NRDA is the process by which trustees collect, compile, and evaluate data, information, and statistics to determine the extent of injury to natural resources. This information is used to assess damages, the dollar amount necessary to restore injured natural resources and compensate for lost use as a result of the injury, and then to seek recovery of those damages from the RP.

At the same time removal actions occur to contain and remove oil and wildlife rescue, and rehabilitation activities occur, the Natural Resource Trustees may initiate NRDA activities through the Federal Lead Administrative Trustee (FLAT). These activities are usually initiated to acquire data and materials likely to be lost if not collected during or immediately after a spill has occurred. Such field sampling and data collection is typically limited to:

- Samples necessary to preserve perishable materials likely to have been affected by or contain evidence of the oil. These samples will generally be biological material that is either dead or has been visibly injured by the oil.
- Samples of other ephemeral conditions or materials, such as surface water, sediments, soil, or the oil itself, which are necessary for identification and measurement of concentrations. These samples would otherwise be lost because of such factors as dilution, movement, decomposition, or leaching if not collected immediately.
- Counts of dead or visibly injured organisms, which if delayed may not be possible because of factors such as decomposition, scavengers, sinking, or water movement.

Under certain circumstances, a Natural Resource Trustee may undertake emergency restoration efforts consistent with existing authority to prevent or reduce immediate migration of oil onto or into a trust resource. Emergency restoration would be undertaken by the trustee only if the RP does not do it or the EPA is precluded under statutory authority from conducting response and removal actions rapidly enough to protect natural resources.

Because initiation of NRDA activities may occur concurrently with removal actions as part of the response, all sampling and field work by the Natural Resource Trustees must be coordinated with the lead response agency so as to minimize any interference with response operations or duplication of sampling and data collection efforts. Any data collected by the Trustees will be provided to the OSC for consideration and use during the response as soon as possible. Prior OSC approval is required for any work in support of removal activities and before any associated costs will be reimbursed by the Oil Spill Liability Trust Fund. Other activities that are part of initiation of damage assessments are reimbursable by the Oil Spill Liability Trust Fund if these activities are submitted to the National Pollution Fund Center by the FLAT and approved in advance by the Fund Center.

5.0 HISTORIC/ARCHEOLOGICAL RESOURCES RESPONSE

Although the NCP does not include language specific to protection of historic properties, several laws require consultation to prevent impacts on these resources. Additionally, numerous federal agencies including EPA, DOI, USCG, NOAA, DOE, DOD, and USDA signed the *Programmatic Agreement on Protection of Historic Properties during Emergency Response under the National Oil and Hazardous Substances Contingency Plan*. This Agreement ensures that historic properties are taken into account in planning for and conducting emergency responses. Many states also have laws defining and protecting historic properties. Consultation with the State Historic Preservation Officer (SHPO), Indian Tribes, or other state and federal land management agencies during pre-emergency response planning and/or in the course of an emergency response will enable the Federal OSC to avoid or minimize impacts on these important resources. (See Annex XIII of the RCP for a copy of the *Programmatic Agreement*).

5.1 TECHNICAL EXPERTISE AND ASSISTANCE

During a response, historic resource managers/specialists can provide technical assistance and expertise regarding potential effects of oil on sensitive archeological and/or historic environments within the impacted area. They are familiar with the area and are able to recommend the best locations for staging areas and access points. They will recommend specific protective measures and provide advice on response actions to be taken. They can assist in development of a monitoring plan and subsequent collection of data.

5.2 HISTORIC SITE PROTECTION

When a discharge or release occurs, historic resource managers can provide timely advice on necessary measures to avoid exposure of protected sites to oil or hazardous substances, and priorities and timings of such measures. Protective measures are often site-specific.

Applicable laws and regulations governing historic property protection include, but are not limited to:

- **Historic Sites Act (HSA) of 1935** – established NPS as the Federal Government’s paramount historic preservation advocate.
- **Archaeological Resources Protection Act (ARPA)** – prohibits unauthorized excavation, removal, or defacement of archaeological resources on federal and Indian lands. “Archaeological resources” are comprehensively defined to include archeological sites, structural remains, artifacts, bones, debris, etc. The ARPA imposes stiff penalties for violators, and spells out permit requirements (uniform regulations jointly issued by DOI, USDA, and DOD).
- **American Indian Religious Freedom Act (AIRFA)** – is a joint Congressional resolution declaring that the U.S. Government will protect the inherent rights of Indian Tribes to free exercise of their traditional religions. Generally, this requires agencies to consult with Tribes when any action is contemplated that might affect practice of traditional religion.
- **Executive Order 13007** – requires agencies to avoid, to the best of their abilities, physical damage to Indian sacred sites on federal and Indian land.

6.0 EVALUATING THE INTERFACE OF THE FWSEA WITH NON-FEDERAL PLANS

As mandated by OPA, the final rule on Oil Pollution Prevention for Non-Transportation-Related On-shore Facilities, 40 CFR 112.20, requires facilities with total oil storage capacity exceeding or equaling one million gallons to submit an FRP if the facility is at a location where a discharge of oil could injure fish, wildlife, sensitive environments, or public water intakes. Facilities with capacity to store 42,000 gallons or more, and that transfer oil over water to vessels must also submit an FRP.

Facility owners or operators must determine the distance at which an oil spill could injure fish and wildlife and sensitive environments, and have a plan for mitigating a discharge to reduce adverse effects. Facility plans must be consistent with the requirements of the NCP, RCP, and this FWSEA. EPA reviews and approves FRPs for compatibility with this FWSEA. Pipeline plans in the Region are reviewed and approved by DOT. Figure 2 illustrates relationships among federal plans, the FWSEA, and non-federal response plans. Participation by facilities on the Area and Sub-Area Committees is encouraged. Joint exercises will occur to test FRPs and their interface with this FWSEA.

FIGURE 2

RELATIONSHIPS AMONG FEDERAL AND NON-FEDERAL RESPONSE PLANS

