Louisiana's Proposed Regional Restoration Planning Program

Public Review Document

June 2001

Planning Workgroup Members:

Louisiana Department of Environmental Quality
Louisiana Department of Natural Resources
Louisiana Department of Wildlife and Fisheries
Louisiana Oil Spill Coordinator's Office, Office of the Governor
National Oceanic and Atmospheric Administration
U.S. Department of the Interior

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER 1
INTRODUCTION

Overview

Federal and Louisiana natural resource trustees are developing a statewide comprehensive Regional Restoration Planning Program (RRP Program) including Regional Restoration Plans (RRPs) to assist the natural resource trustees in carrying out their responsibilities for discharges or substantial threats of discharges of oil (referred to as an "incident"). The goal of this planning effort is to establish a statewide program that will: expedite and potentially reduce the cost of the Natural Resource Damage Assessment (NRDA) process; provide for consistency and predictability by detailing the NRDA process, thereby minimizing uncertainty to the public and industry; and increase restoration of lost natural resources and services.

The Oil Pollution Act of 1990 (OPA), 33 U.S.C. § 2701 *et seq*., and the Louisiana Oil Spill Prevention and Response Act of 1991 (OSPRA), La. Rev. Stat. 30:2451 *et seq*. are the principal federal and state statutes authorizing federal and state agencies and tribal officials to act as natural resource trustees for the recovery of damages for injuries to natural resources resulting from an unauthorized discharge or substantial threat of a discharge of oil in Louisiana. The federally designated natural resource trustees include the U. S. Department of Commerce (National Oceanic and Atmospheric Administration [NOAA]), U. S. Department of the Interior, U. S. Department of Agriculture, U. S. Department of Energy, U. S. Department of Defense, and the federally recognized tribes. On the state level, the Louisiana Oil Spill Coordinator's Office, Office of the Governor (LOSCO); Louisiana Department of Natural Resources (LDNR); Louisiana Department of Environmental Quality (LDEQ); and Louisiana Department of Wildlife and Fisheries (LDWF) have been entrusted with this responsibility.

The RRP Program is being established to address substantial threats and unauthorized discharges of oil under OPA and OSPRA. The proposed RRP Program does not address injuries from releases of hazardous substances under the Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 *et seq*., or physical injuries to resources under the National Marine Sanctuaries Act, 16 U.S.C. § 1431 *et seq*., should a sanctuary be designated in the State of Louisiana, but this does not necessarily preclude its use for other purposes in the future.

Broad guidelines and the basic requirements of OPA provide the necessary direction for developing RRPs. These guidelines and requirements are contained in 15 C.F.R. § 990. In summary, the general provisions concerning regional restoration plans are that they:

- Are tools trustees should consider "*as a means to enhance successful restoration planning and implementation*" (Preamble to OPA Regulations, Subpart A, VI, A, 60 Fed. Reg. 440 [1996]);

- *"…may consist of compiling databases that identify, on a regional or watershed basis, or otherwise as appropriate, existing, planned, or proposed restoration projects that may provide appropriate restoration alternatives for consideration in the context of specific incidents"* (15 C.F.R. § 990.15*);*

- *"…must be capable of fulfilling OPA's intent for trustees to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources and/or services,* and can be used *provided that the plan…:*
    - *Was developed with public review and comment or is subject to review and comment;*
    - *Will adequately compensate the environment and public for injuries resulting from the incident;*
    - *Addresses, and is currently relevant to, the same or comparable natural resources and services as those identified as having been injured; and*
    - *Allows for reasonable scaling relative to the incident"* (15 C.F.R. §990.56*).*

The development of the proposed RRP Program is a coordinated effort between state and federal natural resource agencies, local governments, and the public. The state and federal natural resources trustees currently actively involved in the development of the Program include:

- Louisiana Department of Environmental Quality
- Louisiana Department of Natural Resources
- Louisiana Department of Wildlife and Fisheries
- Louisiana Oil Spill Coordinator's Office, Office of the Governor
- National Oceanic and Atmospheric Administration
- U.S. Department of the Interior

The Louisiana RRP Program will be jointly administered and used by the trustees to assist in carrying out their natural resource trust mandates under the OPA and OSPRA.

Purpose of Public Review Document

The development of the RRP Program is being conducted in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321 *et seq*. NEPA requires that an Environmental Impact Statement (EIS) be prepared as part of the review and approval process of major actions by federal agencies that significantly affect the quality of the human environment. This Public

Review Document initiates the formal scoping process under NEPA for the production of a Programmatic EIS on the statewide RRP Program. As such, it provides an ***explicit forum for public participation and input*** in the development of the proposed RRP Program and RRPs. The trustees invite the public to review and comment on this Public Review Document in order for the trustees to consider public input before the compilation of the Draft EIS.

This document describes the proposed Louisiana RRP Program, including the NRDA process under the OPA rule; the purpose of and need for the RRP Program and RRPs; the scope of the RRP Program, including the proposed RRP Regions and the benefits of the RRP Program. Components of the proposed RRP Program specifically described in this document are:

- Resources/services which potentially could be injured by incidents;
- Restoration types which potentially could be used to restore injured resources/services;
- Settlement alternatives; and
- Screening criteria.

At this time, the trustees are seeking public input on the following components of the proposed RRP Program:

- Potentially injured resources/services;
- Restoration types;
- Settlement alternatives;
- Screening criteria; and
- Regional boundaries of the proposed RRPs.

CHAPTER 2
NATURAL RESOURCE DAMAGE ASSESSMENT (NRDA) PROCESS

The goal of the NRDA provisions in OPA and OSPRA is to make the environment and public whole for injury to or loss of natural resources and services as a result of a discharge or substantial threat of a discharge of oil ("incident").

The OPA and OSPRA regulations for NRDA describe the process by which trustees:

- Identify injuries to natural resources and services resulting from an incident;
- Provide for the return of injured natural resources and services to baseline conditions and compensation for interim lost services; and
- Encourage and facilitate public involvement in the restoration process.

This chapter summarizes the NRDA process provided for in the OPA and OSPRA regulations.

Legal Mandates

Under OPA, 33 U.S.C. § 2706(b), and the National Contingency Plan, 40 C.F.R. § 300.600, certain federal and state agencies and tribal authorities are designated natural resource trustees for natural resources injured by a discharge or substantial threat of a discharge of oil. Additional authority was granted to the state trustees under Louisiana's OSPRA, La. Rev. Stat. 30:2451 *et seq*. As a designated trustee, each trustee is authorized to act on behalf of the public under state and/or federal law to assess and recover natural resource damages, and to plan and implement actions to restore natural resources and resource services injured or lost as the result of a discharge or substantial threat of a discharge of oil.

Federal regulations governing the NRDA process under OPA can be found at 15 C.F.R. Part 990. These regulations were promulgated by the U.S. Department of Commerce, acting through NOAA, and became effective February 5, 1996. State regulations for the NRDA process under OSPRA were promulgated by the LOSCO in March 1999 and can be found at La. Admin. Code 43:XXIX.Chap. 1.

Trust Natural Resources and Services

Trust natural resources are defined in the OPA regulations as:

> "*Natural resources* means land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the Exclusive Economic Zone), any State or local

government or Indian Tribe, or any foreign government, as defined in section 1001(20) of OPA (33 U.S.C. § 2701(20)." (15 C.F.R. § 990.30)

Natural resources provide various services to other natural resources and to humans. Loss of services is included in the definition of injury under the OPA regulations.

> "*Services* (or *natural resource services*) means the functions performed by a natural resource for the benefit of another natural resource and/or the public." (15 C.F.R. § 990.30)

Natural resource services may be classified as follows:

- Ecological services - the physical, chemical, or biological functions that one natural resource provides for another. Examples include provision of food, protection from predation, and nesting habitat, among others; and
- Human services - the human uses of natural resources or functions of natural resources that provide value to the public. Examples include fishing, hunting, nature photography, and education, among others (NOAA, 1996).

In considering both natural resources and services, trustees address the physical and biological environment, and the relationship of people with that environment.

NRDA Process

Both state and federal NRDA regulations provide for a step-by-step process for trustees to determine injuries, assess damages, and develop and implement restoration projects that compensate the public for injuries to natural resources impacted by an incident. This process is shown in Figure 1 and includes three phases:

- Preassessment;
- Restoration Planning; and
- Restoration Implementation.

Each of the three phases is described in detail in Chapter 1 of the NOAA OPA guidance documents produced in August 1996 (NOAA, 1996). The following sections provide an overview of the NRDA process and were largely taken from the guidance documents. Figure 2 further illustrates the process through which the trustees implement the NRDA regulations. It is important to note that responsible parties (RPs) for incidents are encouraged to work cooperatively with the trustees through part or all of the NRDA process.

Preassessment Phase

The purpose of the Preassessment Phase is to determine if trustees have the jurisdiction to pursue restoration under OPA, and, if so, whether it is appropriate to do so (Figure 1). This preliminary phase begins when the trustees are notified of the incident by response agencies or other persons.

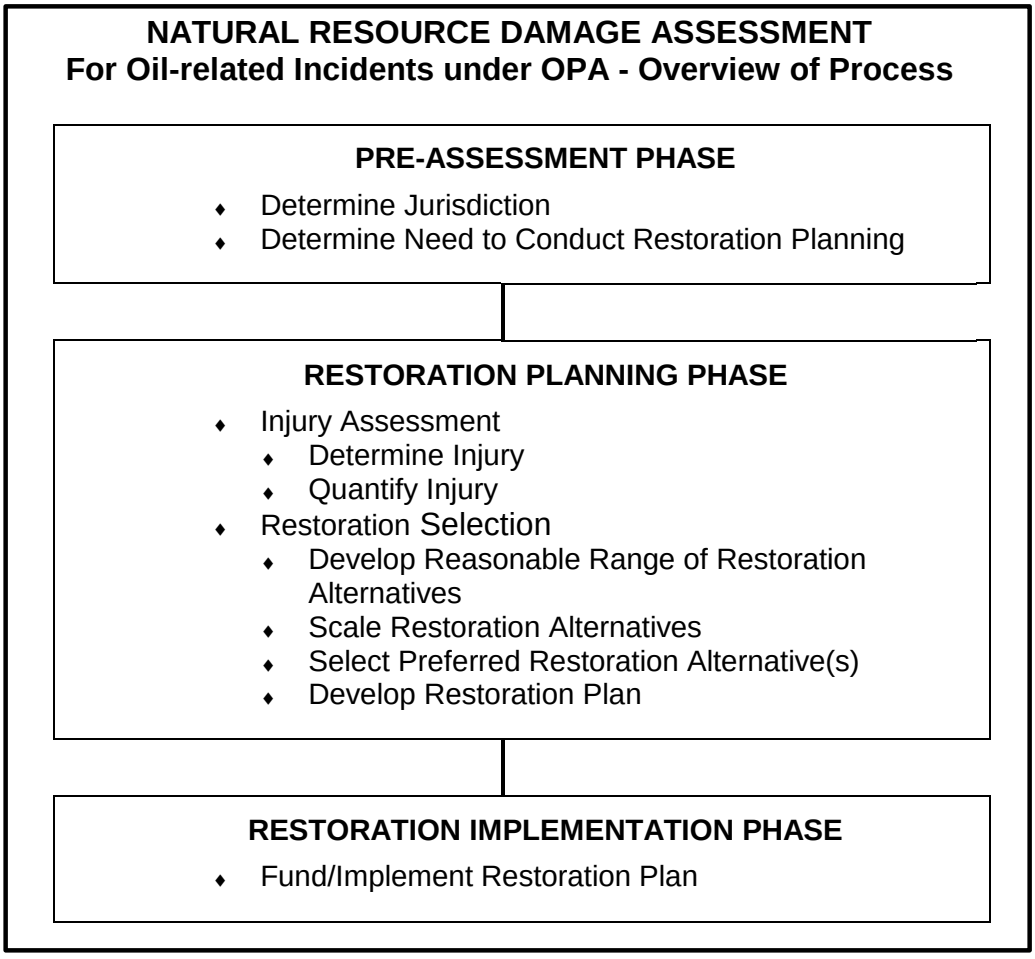

Figure 1: NRDA process (adopted from NOAA, 1996)

Once notified of an incident, trustees first determine if the criteria, such as applicability of OPA (and OSPRA) and potential for injury to natural resources under their trusteeship, that provide their authority to initiate the NRDA process, apply for the incident. Based on early available information, trustees also make a preliminary determination whether natural resources or services have been injured (see Step #1 in Figure 2). Through coordination with response agencies, trustees next determine whether response actions have addressed or will adequately address the injuries resulting from the incident, and if not, whether feasible primary and/or compensatory restoration alternatives exist to address such injuries. If the injuries will not be

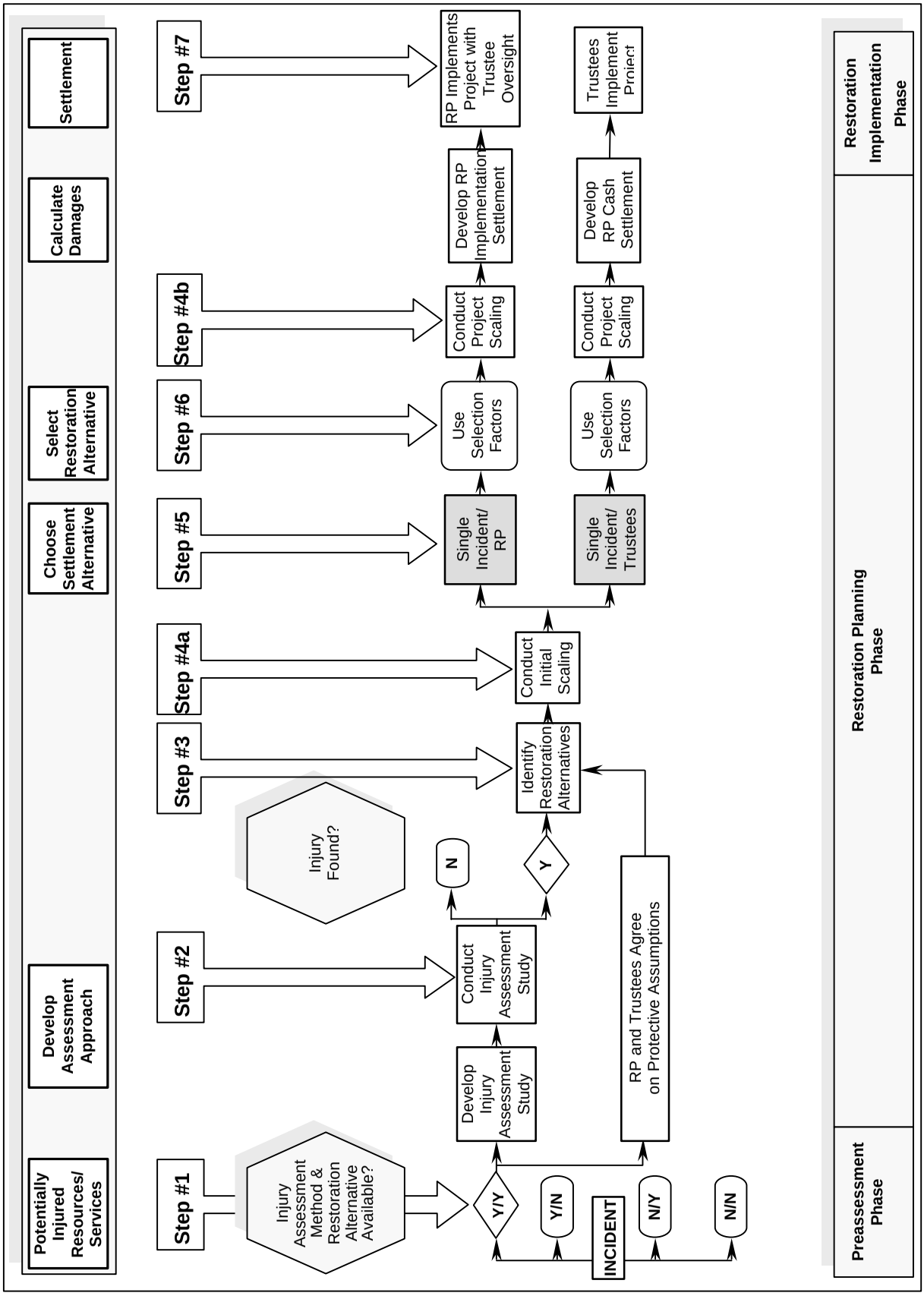

Figure 2: NRDA Process Implementation

adequately addressed by response actions and feasible restoration alternatives exist to address such injuries, trustees may proceed with the NRDA process.

Restoration Planning Phase

The purpose of the Restoration Planning Phase is to evaluate potential injuries to natural resources and service losses and use that information to determine the need for and scale of restoration actions. The Restoration Planning Phase provides the link between injury and restoration. The Restoration Planning Phase has two basic components: injury assessment and restoration selection (Figures 1 and 2).

Injury Assessment
The goal of injury assessment is to determine the nature, degree, and extent of injuries to natural resources and services (see Step #2 in Figure 2). This information is necessary to provide a technical basis for evaluating the need for, type of, and scale of restoration actions. Injury is defined as an observable or measurable adverse change in a natural resource or impairment of a natural resource service. To assess injury, trustees determine whether there is:

- Exposure, a pathway, and an adverse change to a natural resource or service as a result of an actual discharge; or
- An injury to a natural resource or impairment of a natural resource service as a result of response actions or a substantial threat of a discharge.

To proceed with restoration planning, trustees also quantify the degree, and spatial and temporal extent of injuries. Injuries are quantified by comparing the condition of the injured natural resources or services to baseline[1], as necessary.

Restoration Selection

a) *Developing Restoration Alternatives*
Once injury assessment is complete or nearly complete, trustees develop a plan for restoring the injured natural resources and services. In the NRDA process, trustees identify a reasonable range of restoration alternatives (see Step #3 in Figure 2), evaluate and select the preferred alternative(s), and develop a Draft and Final Restoration Plan. Acceptable restoration actions include any of the actions authorized under OPA (and OSPRA): restoration, rehabilitation, replacement, or acquisition of the equivalent or some combination of those actions.

Restoration actions are either primary or compensatory. Primary restoration is action taken to return injured natural resources and services to baseline levels, including natural recovery. Compensatory restoration is action taken to compensate for the interim losses of natural resources and/or services pending recovery. Each restoration alternative considered will contain

[1] Baseline means the condition or conditions that would have existed at the assessment area had the incident not occurred.

primary and/or compensatory restoration actions that address one or more specific injuries associated with the incident. The type and scale of compensatory restoration may depend on the nature of the primary restoration action, and the level and rate of recovery of the injured natural resources and/or services, given the primary restoration action.

When identifying the compensatory restoration components of the restoration alternatives, trustees must first consider compensatory restoration actions that provide services of the same type as those lost. If compensatory actions of the same type cannot provide a reasonable range of alternatives, trustees then consider other compensatory restoration actions that will provide services comparable to those lost.

b) *Scaling Restoration Actions*
To ensure that a restoration action appropriately addresses the injuries resulting from an incident, trustees must determine what scale of restoration is required to return injured natural resources to baseline levels and compensate for interim losses (see Step #4a and #4b in Figure 2). The approaches that may be used to determine the appropriate scale of restoration action are resource-to-resource (or service-to-service) and the valuation approach (see NOAA, 1997 for more information on scaling of restoration actions).

c) *Selecting a Preferred Restoration Alternative*
The identified restoration alternatives are evaluated based on a number of factors (see Step #6 in Figure 2) that include:

- Cost to carry out the alternative;
- Extent to which each alternative is expected to meet the trustees' goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses;
- Likelihood of success of each alternative;
- Extent to which each alternative will prevent future injury as a result of the incident, and avoid collateral injury as a result of implementing the alternative;
- Extent to which each alternative benefits more than one natural resource and/or service; and
- Effect of each alternative on public health and safety.

If the trustees conclude that two or more alternatives are equally favorable based on the above factors, the trustees must select the most cost-effective of two or more equally preferable alternatives.

d) *Developing a Restoration Plan*
A Draft Restoration Plan is made available to the public for review and comment. The Draft Restoration Plan describes the trustees' preassessment

activities, as well as injury assessment activities and results, evaluates restoration alternatives, and identifies the preferred restoration alternative(s). After reviewing public comments on the Draft Restoration Plan, trustees develop a Final Restoration Plan. The Final Restoration Plan will become the basis of a claim for damages.

Restoration Implementation Phase

The Final Restoration Plan is presented to the RPs to implement or fund the trustees' costs of implementing the Plan (Figure 1 and see Step #5 and #7 in Figure 2; Single Incident/RP or Single Incident/Trustees respectively), therefore providing the opportunity for settlement of the damage claim without litigation. Should the RPs decide to decline to settle the claim, trustees are authorized to bring a civil action for damages in court or to or present the claim [2] to the Federal Oil Spill Liability Trust Fund (OSLTF) or the State Oil Spill Contingency Fund (OSCF) for such damages. If the RPs choose to implement the restoration actions detailed in the Final Restoration Plan, then the trustees provide project-oversight which is funded by the RPs.

Restoration Monitoring
Restoration monitoring is necessary to document whether the restoration actions are providing the resources and/or services required to make the environment and public whole. In order to accomplish this task, trustees identify performance criteria against which success and completion of restoration actions are judged. Performance criteria may include structural, functional, temporal, and/or other demonstrable factors. The monitoring component to the Final Restoration Plan may address such factors as duration and frequency of monitoring needed to gauge progress and success, and level of sampling needed to detect success or the need for corrective action. Monitoring is usually conducted for a portion of the project's expected lifespan, a period of time sufficient to give assurance that the project will continue to perform as expected.

Corrective Action
If the monitoring program shows that the restoration actions are not meeting the performance criteria, then the trustees evaluate whether actions should be undertaken to correct the deficiencies.

[2] In the absence of a viable RP (e.g., where the RP is unknown, bankrupt or is not responsible due to a valid defense) or when a viable RP fails to respond to a demand letter after 90 days, the trustees have the option of going to the OSLTF and/or OSCF to seek monies to implement the restoration actions required for that case.

CHAPTER 3
PURPOSE AND NEED

Background

Louisiana's economy traditionally has been based on the State's natural resources. Both renewable (e.g., fishing, forest products) and non-renewable (e.g., oil, natural gas) resources are important, and the industries associated with each have co-existed for years. Louisiana, and in particular its coastal and wetland regions, are of significant value to the Nation -- contributing greatly to the Nation's fisheries, wild fur and hide harvest, providing wintering grounds for migratory bird populations, and buffering the destructive effects of hurricanes, storms, and floods. At the same time, 18% of the Nation's oil production and 24% of the gas production comes from coastal Louisiana (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation Authority of 1998, 16 U.S.C. § 3951 *et seq*.).

The exploration, production, transportation, and storage of large volumes of oil occurring within the state resulted in the recognition that Louisiana has a higher exposure to oil spills than any other state. Louisiana's natural resources are susceptible to oil spill injury from a variety of sources. Among them are shipping, land-based oil fields, oil platforms in state waters, oil storage facilities, oil terminals/ports, crude or refined oil pipelines, oil refineries, abandoned vessels, pits, reservoirs, and other industries using oil in their operations. In the coastal regions alone, Louisiana is crisscrossed by 1,570 miles of oil and gas pipelines (Coastal Wetlands Planning, Protection, and Restoration Act, 1990). It is estimated that approximately 250,000 oil and/or gas wells exist in Louisiana. There are approximately 800 abandoned vessels/barges of which roughly 200 were characterized as posing a potential pollution problem. A total of approximately 25,000 abandoned facilities, pits, sumps, or reservoirs in the Louisiana coastal area have been inventoried and are being evaluated to determine if the sites pose a risk to human health and safety, environment, and wildlife habitat through actual or potential discharge of oil. The majority of the abandoned sites consist of wells (60%), facilities (15%), and tank batteries (8%).

Although Louisiana's oil and gas industry tries to avoid adverse impacts on renewable natural resources, injuries do occur as a result of oil spill incidents. The cumulative impact of these incidents on fish, wildlife and the environment can be significant and adversely affect the industries and communities depending on natural resources for commerce and recreation.

Need

The high spill probability, both in frequency and magnitude, and wide expanse of fragile and sensitive resources that could be impacted present a true challenge to

the federal and Louisiana trustees when it comes to restoring natural resources held in public trust. Since 1991, a total of 13 NRDA cases for incidents have been initiated in the State of Louisiana. Figure 3 provides summary information for the oil spill incidents for which NRDAs were initiated and the status of the NRDA cases.

RP	Location	Parish	Date of Incident	Amount (bbls)	Type of Incident	Preferred Alternative	Project
Williams Energy Services	Mosquito Bay	St. Mary	04/05/2001	1,000	Pipeline Rupture	To be Determined	To be Determined
Marine Oil Trader 3 Ltd.	Mississippi River	Plaquemines	11/28/00	13,500	Vessel Grounding	To be Determined	To be Determined
Mid Valley Pipeline	Haynesville	Claiborne	11/25/00	2,000-3,000	Pipeline Rupture	Planting	To be Determined
Chevron	Four Bayou Pass	Plaquemines & Jefferson	11/24/99	850	Pipeline Rupture	To be Determined	To be Determined
Equinox	L. Grande Ecaille	Plaquemines	09/22/98	500-1,500	Well Blowout	To be Determined	To be Determined
Sonat	Cravens	Vernon	08/08/97	13,000-19,000	Well Blowout	To be Determined	To be Determined
Apache	Freshwater City	Vermilion	06/21/97	2,000	Subsurface Pipeline	Planting	2.0 Acres Marsh
Texaco	L. Barre	Terrebonne	05/17/97	6,561	Pipeline Rupture	Planting	18.6 Acres Marsh
Pioneer Natural Resources	Attakapas	St. Mary	11/26/96	4,762	Well Blowout	Planting	30 Acres Forested Wetlands
Marathon	Blind River	St. James	05/24/96	11,308	Pipeline Rupture	Mitigation Bank	33 Acres Forested Wetlands
						Public Use Enhancement	Addition to Educational Center
Chevron	Dixon Bay	Plaquemines	01/12/95	250-2,500	Well Blowout	Crevasse Splay	5 Acres Marsh
Exxon	Paradis	St. Charles	01/15/93	~ 800	Leak in SWD System	Raking	1.6 Acres Primary Restoration
Greenhill	Timbalier Bay	Lafourche & Terrebonne	09/29/92	2,285	Well Blowout	Marsh Creation	21.7 Acres Marsh

Figure 3: Oil Spill NRDA Cases in the State of Louisiana (1991-to date)

The use of a RRP will help expedite the assessment, settlement and/or restoration implementation, while simultaneously minimizing associated costs. In addition, development of RRPs requires the examination of restoration alternatives across an entire region and may facilitate linkages with other regional or watershed objectives. The benefits of comprehensive, region-wide planning will accrue not only to the parties involved in the assessments, but also to the communities depending on natural resources for commerce and recreation.

Purpose of Proposed RRP Program

Federal and state natural resource trustees recently initiated a cooperative, interagency planning effort aimed at developing a statewide comprehensive RRP Program and specific RRPs. The goal of this initiative is to develop an institutional framework and procedures that will enable the trustees to select and implement projects that compensate the public and environment for losses of natural resources and services from unauthorized discharges or substantial threat of discharges of oil in an efficient and predictable manner. In addition, the RRP Program seeks to provide increased flexibility to the trustees and the RPs relative to the mechanisms through which NRDA cases are settled.

The Louisiana RRP Program will identify the statewide RRP Program structure, the decision-making process, and the criteria that will be used to select the restoration project(s) that restore the natural resources injured by a given incident. The RRPs will identify the resources and/or services that could potentially be impacted by an incident and the restoration projects that are available for implementation within a given region.

CHAPTER 4
PROPOSED RRP PROGRAM

This chapter describes the currently proposed RRP Program components in relation to the NRDA process and the goals and objectives of establishing the RRP Program. Each proposed component is described specifically in terms of where it fits into the NRDA decision-making process, and how it meets the program development objectives.

It is important to note that the NRDA process as described by implementing regulations and guidance both under OPA and OSPRA will not change as a result of the proposed RRP Program. The trustees are simply proposing to institutionalize an existing process, as well as identify potential ways to expedite and further define the specific steps of that process, expressly within the requirements of the OPA and OSPRA NRDA regulations.

In order to expedite and in turn make the NRDA process more cost-effective, the RRP Program proposes to shorten the restoration planning phase of the NRDA process through the development of individual RRPs, which will identify appropriate restoration projects subjected to public review prior to incidents occurring. In addition, the proposed RRP Program will help to inform the selection of restoration projects by identifying the types of restoration that may be suitable to restore those resources and services likely to be injured by oil spills in Louisiana. Consistent application of the RRP Program project selection criteria will enhance the predictability and accountability of the decision-making process. Flexibility will be increased through the introduction of additional settlement alternatives that are unique to the RRP process.

The scope of the RRPs to be included in the RRP Program as well as the components of the proposed RRP Program for which the trustees are currently seeking public input are described in detail below and further illustrated in Figure 4 relative to where they would fit into the NRDA decision-making process previously shown in Figure 2.

Regional Restoration Plans

Regional restoration planning is defined in the preamble of the OPA regulations as:

> "…compiling databases that identify existing, planned, or proposed restoration projects that may provide appropriate restoration alternatives for consideration in the context of specific incidents. Plans or projects developed on a regional basis (e.g., ecosystem, landscape, watershed, or any other) are appropriate so long as natural resources and/or services comparable to those expected to be injured by an incident are addressed in the plans. In no event

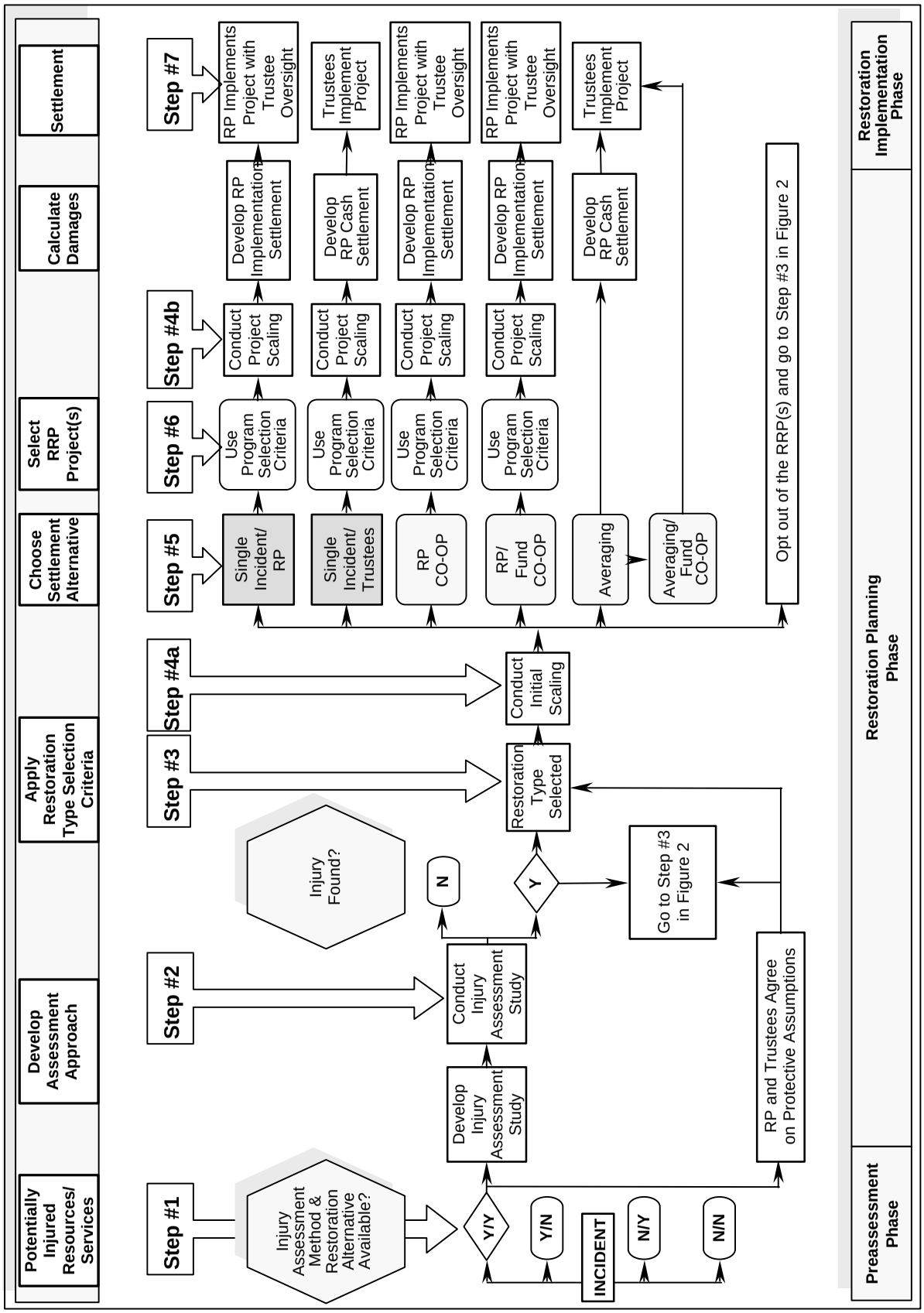

Figure 4: NRDA Process Implementation in proposed RRP Program

> may the use of a regional restoration plan or other existing proposed project restoration violate OPA's limitation that natural resource damages must be used solely to restore, rehabilitate, replace, or acquire the equivalent of natural resources and services injured by an incident." (OPA Regulations, Preamble Discussion, Subpart A-Introduction, VI. Considerations for Facilitating Restoration, C. Regional Restoration Planning, 60 Fed. Reg. 440 [1996])

Further, the OPA regulations require that:

> "Regional restoration plans must be developed or annotated in such a way that trustees are able to justify linking the injuries from a particular incident or set of incidents with specific restoration projects within the plan. This may be facilitated by describing the types of injuries anticipated from incidents to specific natural resources within a region, …." (OPA regulations, Preamble Discussion, Appendix A - Considerations to Facilitate the Restoration Process)

The trustees propose to develop specific RRPs for each of the regions (see Chapter 5, *Proposed RRP Regions*) delineated under the proposed RRP Program by identifying the resources/services in each region that are likely to be injured by an incident involving oil, the appropriate restoration types for each of the resources/services, and the available restoration projects for each of the restoration types identified in each RRP.

Identification of available projects will be achieved through a two-step process. The first step consists of soliciting projects from the public, government agencies, and industry. The types of restoration projects that will be incorporated into the RRPs must address the restoration of natural resources and/or services that will be or are likely to be injured by an incident. (See description of Potentially Injured Resources/Services and Restoration Types below.) Therefore, the trustees are developing selection criteria for determining whether a given restoration project can be included in an RRP. The following represent proposed criteria, currently under consideration, for selection of restoration projects for incorporation into each RRP:

- Has a strong nexus to injuries included in the specific RRP;
- Is technically feasible;
- Likelihood of success;
- Is consistent with existing laws and regulations;
- Meets trustees expectations to return resources to baseline condition and compensate the public for interim losses;
- Is one of the restoration types identified in this RRP; and
- Must be at least partially located within the boundaries of the RRP region.

Projects in each RRP will be grouped by restoration type in order to facilitate the determination of the nexus between injuries and specific restoration projects, as well as the selection of specific restoration projects for a given NRDA.

The RRPs will be updated through regular solicitations and the plans will be revised accordingly.

Potentially Injured Resources/Services

The proposed RRP Program will define those trust natural resources and services in Louisiana that are likely to be or are anticipated to be injured (i.e., at risk) by incidents as "potentially injured resources/services." Identification of these "potentially injured resources/services" will facilitate the development of the RRPs and provide more detail to the preassessment phase in the NRDA process. (See Step #1 in Figure 4 where "Potentially Injured Resources/Services" were identified prior to the incident occurring and are subsequently examined as part of the Preassessment Phase of the NRDA process.) This information would also assist in the coordination of response activities by informing incident response agency personnel which resources may be of greatest concern to the trustees.

The potentially injured resources/services currently under consideration for inclusion in the proposed RRP Program are listed under three broad categories: coastal, inland, and, statewide:

- Coastal
  - Herbaceous Wetlands
  - Forested Wetlands
  - Beaches/Shorelines
  - Oyster and Other Reefs
  - Water Column Organisms
- Inland
  - Herbaceous Wetlands
  - Forested Wetlands
  - Beaches/Shorelines
  - Streambeds
  - Upland Vegetation
  - Water Column Organisms
- Statewide
  - Birds
  - Other Wildlife
  - Recreation
  - Groundwater
  - Cultural

Restoration Types

In the restoration planning phase (after the injury assessment has been conducted [Step #2 in Figure 4]), the trustees must identify a reasonable range of restoration alternatives. Identification of these "restoration alternatives" as defined in the OPA regulations (Step #3 in Figure 2) involves both the identification and selection of the appropriate "restoration types" (Step #3 in Figure 4) and specific "restoration projects" (see discussion on screening criteria for project selection below and Step #6 in Figure 4) under the proposed RRP Program.

As part of the RRP Program development, the trustees propose to identify one or more restoration types that are appropriate for the restoration of injuries for each of the "potentially injured resources/services" in the proposed RRP Program. The trustees also propose to develop restoration type selection criteria that will further assist in determining which of the various restoration types identified in the RRP Program will be most appropriate to restore the injured resources/services during a given incident.

The restoration type selection criteria currently considered for incorporation in the RRP Program include:

- Strength of nexus to the injury
- Ability to scale
- Availability of projects for this restoration type

Application of the restoration type selection criteria during a given incident would occur in Step #3 in Figure 4 (where potential "Restoration Types" were identified in the RRP Program, prior to the incident occurring.)

Furthermore, restoration projects in each RRP will be grouped by the restoration type(s) identified in the plan which will allow the process of evaluating and selecting preferred restoration projects (Step #6 in Figure 4) to be streamlined.

The currently proposed restoration types under the proposed RRP Program include the following seven broad categories:

- **Creation or enhancement of a habitat** – Examples of creation of a habitat include physical construction of a habitat such as marsh or a reef and planting of submerged aquatic vegetation on a non-vegetated water bottom. Enhancements might include hydrological changes to improve a habitat, such as crevasses or water diversions; or any habitat manipulation that benefits a species, for example, providing nesting sites, increasing the food base, reducing predation, etc.
- **Acquisition or legal protection of a resource** – Acquisition or servitude of land as a buffer or protection of created or enhanced habitat is an example of restoration under this type. Acquisition of a habitat or resource already

afforded protection under law, such as purchase of marsh or wetlands, would **not** be considered under this restoration type. In addition, habitat or resources not likely to be adversely altered in the absence of acquisition or legal protection also may be excluded from this restoration type.

- **Physical protection of a habitat** – Physical protection of a riparian habitat by fencing off cattle would be an example of restoration under this type.
- **Protection of fauna** – For example, fencing in an area where birds are nesting to keep predators out. Another example would be to remove fishing line from trees and other vegetation to prevent birds from getting entangled and dying.
- **"Stocking" of fauna** – The stocking of fish, birds, or other wildlife falls under this restoration type.
- **Restoration of a recreational resource** – The restoration of any habitat that provides recreational services such as fishing, hunting, nature photography, education, etc., falls under this type. The construction or enhancement of structures such as fishing piers, boat ramps, etc., also could be considered restoration if it can be shown that the amenity would restore lost recreational services to the public.
- **Restoration of a cultural resource** – Restoration of natural resources that also have cultural resource value would be an example of restoration under this type (OPA only covers those cultural resources which also have natural resource value.)

These seven broad categories of restoration types have a number of types of restoration within them, under three broad categories: coastal, inland, and statewide.

Figure 5 demonstrates conceptually the restoration types currently considered for restoring the proposed "potentially injured resources/services." As part of the development of the RRP Program, the trustees propose to populate the chart in Figure 5 by identifying those restoration types that are found to be reasonable for restoring each of the proposed resource/service categories. Identification of appropriate restoration types will again increase the predictability and consistency of the NRDA decision-making process.

Settlement Alternatives

Under the currently proposed RRP Program, selection of the settlement alternative to be used in a given incident (Step #5 in Figure 4) occurs after a restoration type(s) has been identified and initial scaling has been conducted (Step #4a in Figure 4). This is done to obtain a general estimate of the appropriate quantity of replacement natural resources and/or services that will compensate for the amount of injured natural resources or services.

When settling a NRDA case with an RP for a given incident, the trustees and RPs generally have two options (Figure 2): (1) the RP can implement the restoration

actions that are required to restore the injured resources and services for the incident with trustee oversight, or (2) provide funding for the trustees to implement

DRAFT PROPOSED RESTORATION TYPES			DRAFT PROPOSED POTENTIALLY INJURED RESOURCES/SERVICES														
			Coastal					Inland						Statewide			
			Herbaceous Wetlands	Forested Wetlands	Beaches/Shorelines	Oyster Reefs (& other)	Water Column Org.	Herbaceous Wetlands	Forested Wetlands	Beaches/Shorelines	Streambeds	Upland Vegetation	Water Column Org.	Birds	Wildlife	Recreational	Groundwater	Cultural
	C/E[1]	Coastal Herbaceous Wetlands																
		Coastal Forested Wetlands																
		Coastal Beaches/Shorelines																
		Coastal Oyster Reefs (& other)																
		Coastal Artificial Reefs																
		Coastal SAV																
		Inland Herbaceous Wetlands																
		Inland Forested Wetlands																
		Inland Beach/Shoreline																
		Inland Streambeds																
		Inland Upland Vegetation																
	PP[2]	Coastal Herbaceous Wetlands																
		Coastal Forested Wetlands																
		Coastal Beaches/Shorelines																
		Inland Herbaceous Wetlands																
		Inland Forested Wetlands																
		Inland Beach/Shoreline																
		Inland Streambeds																
		Inland Upland Vegetation																
	Ac/LP[3]	Coastal Oyster Reefs (& other)																
		Inland Herbaceous Wetlands																
		Inland Forested Wetlands																
		Inland Beach/Shoreline																
		Inland Streambeds																
		Inland Upland Vegetation																
	S[4]	Coastal Water Column Org.																
		Coastal Oyster Reefs (& other)																
		Inland Water Column Org.																
		Birds																
		Wildlife																
	PF[5]	Birds																
		Wildlife																
		Recreation																
		Groundwater																
		Cultural																

(1) Creation/Enhancement
(2) Physical Protection of Habitat
(3) Acquisition/Legal Protection
(4) Stocking of Fauna
(5) Physical Protection of Fauna

Figure 5: Proposed restoration types by resource/service category

the required restoration actions (i.e., “cash out”). In the absence of a viable RP (e.g., where the RP is unknown, bankrupt or is not responsible due to a valid

defense) or when a viable RP fails to respond to a demand letter after 90 days, the trustees also have the option of going to the OSLTF and/or OSCF to seek monies (similar to the "cash out" option) to implement the restoration actions required for that case. Under the NRDA process described in Chapter 2, *Natural Resource Damage Assessment (NRDA) Process* (NOAA, 1996), the required restoration action(s) generally involves a specific restoration project(s) that has (have) been selected, in part, because it (they) provide(s) the appropriate quantity of replacement natural resources and/or services to compensate for the amount of injured natural resources or services resulting from a given incident.

The proposed RRP Program describes a number of additional case settlement alternatives that will assist the trustees and RPs in negotiations to resolve RP liabilities for incidents. These proposed settlement alternatives generally represent different ways of resolving liability from an incident under one or the other of the two options described above. These settlement alternatives also may provide opportunities for implementing restoration projects more quickly and cost-effectively, pooling settlements to implement larger projects than could be accomplished by using individual settlements, and potentially addressing basin-wide, ecosystem-level initiatives. It is important to note that it is only with the agreement of the trustees that any of the settlement options are possible.

The proposed settlement alternatives are depicted in Figures 4 (See step #5, "Choose Settlement Alternatives") and 6 and described below according to two categories: those general alternatives that already are used and those that currently are being considered for possible inclusion as part of the RRP Program.

Existing Settlement Alternatives

Single Incident - RP Implemented Restoration Project
This settlement alternative provides for the implementation of an entire RRP restoration project by a single RP who is liable for injuries resulting from a specific incident. (RP implementation of an entire restoration project is the only settlement alternative that has been used in Louisiana to resolve liability for incidents involving oil under OPA and/or OSPRA.)

Single Incident - Trustees Implemented Restoration Project
This settlement alternative provides for a cash settlement between a single RP and the trustees. The RP provides cash to the trustees based on the cost of implementing a specific restoration project in order to resolve liability for a specific incident. The trustees in turn use the settlement funds to implement a specific restoration project in an RRP. (This method of resolving liability has been widely used in other states under OPA.)

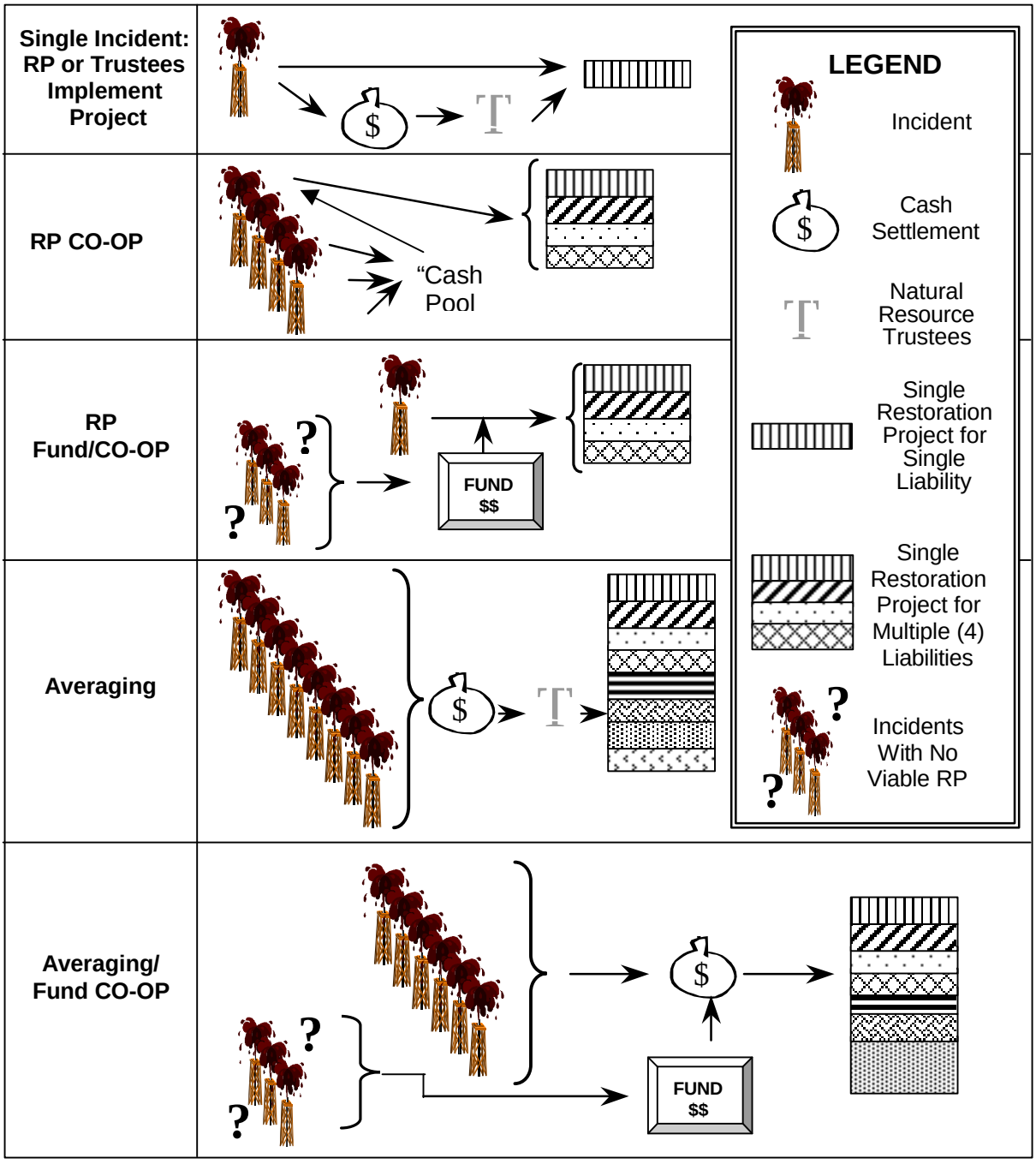

Figure 6: Proposed funding mechanisms for project implementation of draft RRP settlement alternatives.

Proposed Additional Settlement Alternatives

RP CO-OP
This proposed settlement alternative provides an opportunity for RPs to partner with others to implement a restoration project identified in an RRP that is larger than their specific individual liability for a specific incident, and thereby cost-share the implementation costs (e.g., engineering and design, permitting, mobilization and demobilization, etc.). This alternative may allow the RP(s) to take advantage of the economies of scale in implementing a larger project, thereby lowering their costs of resolving their specific liabilities. Specifically, RPs could potentially partner to implement a larger project in a number of ways, for example:

- A group of RPs could jointly implement a project by pooling funds based on their specific liability;
- One RP could implement a project with other RPs contributing the funds based on their specific liabilities;
- One and/or a group of RPs could implement a project that appropriately resolves the RP(s)'s OPA NRDA liability and that is carried out in conjunction with restoration needs for other purposes; or
- An RP with other "partner(s)" (e.g., other state or federal restoration programs, conservation organizations, etc.) could jointly implement a project that meets the needs of both partners and still appropriately resolves the RP's liability.

Also, this settlement alternative provides an opportunity for a single RP to use one project to address their liability for two or more of their own incidents.

RP Fund/CO-OP
This proposed settlement alternative provides an opportunity to the RP(s) to implement a restoration project identified in an RRP that is larger than their specific liability for a specific incident and, therefore, cost-share the implementation costs (e.g., engineering and design, permitting, mobilization and demobilization, etc.) with either OSLTF or OSCF monies received by the trustees to resolve liability from similar incidents for which there was no viable RP or a viable RP failed to respond to a demand letter after 90 days. This settlement alternative is similar to the RP CO-OP settlement alternative except that instead of the RP partnering with other parties to share the cost of a larger project, the RP cost shares the implementation of the project with the trustees using cash settlements received from the OSLTF and/or the OSCF. A prerequisite for the potential use of this settlement alternative is the prior occurrence of a spill incident(s) for which the trustees have received monies to implement required restoration actions from the OSLTF and/or the OSCF. This alternative may allow the RP to take advantage of economies of scale in implementing a larger project and thereby may lower their costs of resolving their specific liabilities.

Averaging
This proposed settlement alternative would enable the trustees to implement a "priority project(s)" identified in an RRP by using monies pooled from multiple cash settlements for incidents in that region. This alternative requires the identification of "priority projects" by restoration type, the scaling of the selected "priority projects" to an estimated implementation date, and the estimation of the associated project implementation cost. The average cost of implementing all of the predetermined "priority projects" for each restoration type would provide the basis for cash settlements in this settlement alternative. In other words, RPs who choose to cash out with this settlement alternative would resolve their liability by settling for the average implementation cost per a predetermined metric (e.g., Discounted Service Acre Years [DSAYs]) of a group of predetermined priority projects. The average cost of implementing all of the predetermined priority projects for each restoration type would be provided in each RRP.

The trustees are considering using the following criteria for selecting the "priority projects" for each restoration type as part of the proposed averaging settlement alternative:

- Degree to which project addresses multiple injuries;
- Is technically feasible;
- Likelihood of success;
- Regional geographic balance of priority project locations;
- Cost-effectiveness (including ability to partner) of project;
- Ability to implement project with minimal delay (e.g., engineering/design and/or permitting completed or underway; flexibility of design/implementation);
- Degree to which project supports existing strategies/plans; and
- Ability to scale project.

This settlement alternative provides the RP a mechanism for cashing out and quickly resolving their liability for a specific incident.

Averaging/Fund CO-OP
This proposed settlement alternative would enable the trustees to implement a "priority project" identified in an RRP by using monies from a "pool" of cash settlements from the RPs (as described above under the Averaging alternative) and cash settlements received by trustees from the OSLTF and/or the OSCF. This alternative provides the RP a quick mechanism for cashing out and resolving their liability for a specific incident. It also allows the trustees to implement a "priority project" more quickly.

Screening Criteria for Project Selection

After selecting the appropriate restoration type(s), conducting initial scaling and selecting the settlement alternative, a specific restoration project(s) will be selected

(Step #6 in Figure 4) and scaled, if required (Step #4b in Figure 4) for implementation (Step #7 in Figure 4). In order to provide consistency, predictability and accountability in this phase of the NRDA decision-making process, the trustees propose to establish project selection/screening criteria to assist in selecting the specific restoration action(s) required.

Examples of project selection/screening criteria currently being considered for that purpose include the following:

- Cost-effectiveness of project (including ability to partner);
- Degree to which project addresses multiple injuries;
- Technical feasibility of project;
- Likelihood of success of project;
- Geographic proximity of project to the impacted resources;
- Ability to implement project with minimal delay (e.g., engineering/design and/or permitting completed or underway; flexibility of design/implementation);
- Degree to which project supports existing strategies/plans (i.e., regional/ecosystem considerations in other plans);
- Ability to scale project;
- Extent of benefit to injured resources/services;
- Avoidance of future additional injury resulting from project; and
- Urgency of project (i.e., need to implement project within window of opportunity).

Use of the RRP Program and RRPs

The trustees propose to use the RRP Program and RRPs in a variety of situations, as appropriate. In the vast majority of circumstances, it is anticipated that the projects in a RRP will be used by trustees as potential restoration alternatives for all injuries and service losses requiring restoration during the restoration planning phase of the NRDA process, thereby minimizing the need to do incident-specific restoration planning as part of the damage assessment process for most incidents. There will be circumstances where the trustees may do incident-specific restoration planning due to the complexity of the case; however, this option is provided for in the context of the proposed RRP Program and the OPA rule (i.e., “Go to Step #3 in Figure 2” and “Opt out of the RRP(s) and go to Step #3 in Figure 2” [Figure 4]). Also, there may be cases where the RRPs will be used to provide restoration projects for certain injuries from an incident, and case-specific restoration planning will occur for other injuries in the case. Alternatively, incident-specific restoration planning may result in using a restoration project(s) identified in the RRP(s), thereby making the incident-specific restoration planning more cost-effective.

CHAPTER 5
PROPOSED RRP REGIONS

Based on an evaluation of the existing Louisiana plans/programs as well as other data, the trustees propose that the state be divided into nine RRP regions (Figure 7). These nine regions include the four COAST 2050[3] regions along the coast, including state waters, (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation Authority, 1998) plus five inland regions, created through a combination of LDEQ's defined watersheds (LDEQ, 2000). The ability to show "nexus," or the ability to link potential injuries to restoration alternatives and/or projects within a region, is simplified due to habitat similarities within these boundaries. It is anticipated that dividing the state into nine regions will facilitate trustee implementation of the proposed RRP Program and the management of the RRPs.

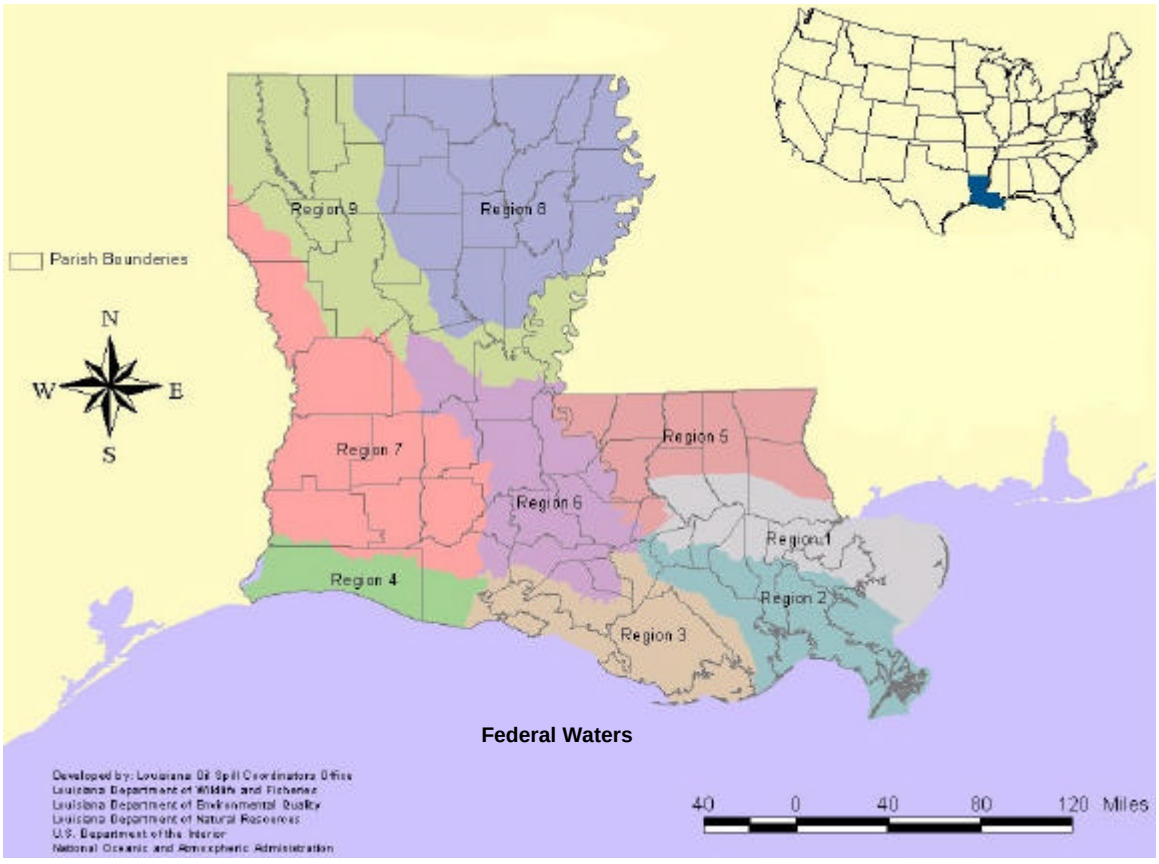

Figure 7: Proposed Regional Boundaries for the RRP Program

[3] The Coast 2050 Plan is the Louisiana coastal resources management plan that was developed "to sustain a coastal ecosystem that supports and protects the environment, economy and culture of southern Louisiana, and that contributes greatly to the economy and well-being of the nation."

In addition, the trustees are proposing to address impacts to the resources in federal waters off the State of Louisiana by use of restoration projects from one or more of the coastal RRPs. "Federal waters" encompasses the federal waters offshore Louisiana between the boundary of the Federal/Louisiana territorial seas to the extent of the Exclusive Economic Zone.

Definition of Proposed RRP Regional Boundaries

The proposed regional boundaries are defined as follows:

Region 1
Includes a portion of the Lake Pontchartrain Basin, extending from the Mississippi River on the west to the Chandeleur Islands on the east, and from the Prairie Terrace on the north to the Mississippi River Gulf Outlet on the south. All or portions of the following parishes fall within Region 1: Livingston, Tangipahoa, St. Tammany, St. Bernard, Orleans, Jefferson, St. Charles, St. John the Baptist, St. James, and Ascension. Also included is Region 10 as defined below.

Region 2
Consists of the Barataria Basin and a portion of the Mississippi River Basin. It includes the Breton Sound, Barataria Basin, and the Mississippi River Birdsfoot Delta, stretching from the Mississippi River Gulf Outlet on the east, to Bayou Lafourche on the west, to the Mississippi River on the north and the Gulf of Mexico on the south. Region 2 consists of all or portions of the following parishes: St. Bernard, Plaquemines, Jefferson, Lafourche, St. Charles, St. James, St. John the Baptist, and Assumption. Also included is Region 10 as defined below.

Region 3
Encompasses parts of the Terrebonne, Atchafalaya, and the Teche-Vermilion Basins. The region extends from Bayou Lafourche on the east, to Freshwater Bayou Canal on the west, and north to the boundary of coastal wetlands as defined in the Louisiana Coastal Wetlands Conservation Plan (LDNR, 1997). Included in Region 3 are all or parts of the following parishes: Lafourche, Terrebonne, Assumption, Iberville, St. Martin, Iberia, St. Mary, Lafayette, and Vermilion. Also included is Region 10 as defined below.

Region 4
Encompasses an area from the western bank of the Freshwater Bayou Canal westward to the Louisiana/Texas border in Sabine Lake, and from the marsh areas just north of the Gulf Intracoastal Waterway south to the Gulf of Mexico, consists of portions of both the Mermentau and the Calcasieu-Sabine basins. Portions or all of the following parishes are a part of Region 4: Vermilion, Cameron and Calcasieu. Also included is Region 10 as defined below.

Region 5

Consists of the Pearl River Basin and sections of both the Lake Pontchartrain and Mississippi River basins. Bordered on the north by the Louisiana/Mississippi border, it includes that portion of the Mississippi River Basin flowing from the confluence of the east/west Louisiana/Mississippi border with the Mississippi River to the headwaters of Bayou Lafourche near Donaldsonville. Region 5 extends south to include the Prairie Terrace. Region 5 includes all or portions of the following parishes: Ascension, Concordia, East Baton Rouge, East Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, St. Tammany, Tangipahoa, Washington, West Baton Rouge, and West Feliciana.

Region 6

Is composed of portions of the Terrebonne, Atchafalaya River and Vermilion-Teche River Basins. On the east, this region is bounded by the Mississippi River from Simmesport to Donaldsonville. The southern boundary of this region is the northern boundary of the coastal wetlands as defined in the Louisiana Coastal Wetlands Conservation Plan (LDNR, 1997), extending from Bayou Lafourche near Donaldsonville to Freshwater Bayou Canal on the west. The western boundary of Region 6 extends from Freshwater Bayou Canal north, following the western boundary of the Vermilion-Teche River Basin to the confluence of the Red River, Calcasieu and Vermilion-Teche River Basins near the town of Otis, Louisiana. The northern boundary extends from that point to the Louisiana/Mississippi border, following the southern portion of the Red River Basin. Included in Region 6 is that portion of the Mississippi River Basin from the Old River Control Structure south to the confluence of the east/west Louisiana/Mississippi border with the Mississippi River. Included in Region 6 are all or parts of the following parishes: Acadia, Allen, Ascension, Assumption, Avoyelles, Concordia, Evangeline, Grant, Iberia, Iberville, Lafayette, Pointe Coupee, Rapides, St. Landry, St. Martin, St. Mary, Vermilion, West Baton Rouge, and West Feliciana.

Region 7

Includes parts of the Calcasieu River, Mermentau River and Sabine River Basins. The southern boundary extends from the western bank of the Freshwater Bayou Canal westward to the Louisiana/Texas border, along the northern boundary of Region 4. On the west, Region 7 follows the Louisiana/Texas border from the marsh areas just north of the Gulf Intracoastal Waterway north to the confluence of the Louisiana/Texas border, the Red River and the Sabine River Basins, approximately three miles south of the town of Bethany, Louisiana. The eastern boundary follows the eastern edge of the Sabine, Calcasieu and Mermentau Basins inclusively. Region 7 incorporates all or sections of the following parishes: Acadia, Allen, Beauregard, Caddo, Calcasieu, Cameron, De Soto, Evangeline, Jefferson Davis, Lafayette, Natchitoches, Rapides, Sabine, St. Landry, Vermilion, and Vernon.

Region 8

Is comprised of the Ouachita River Basin and a section of the Mississippi River Basin. Bounded on the north by the Louisiana/Arkansas border, on the east by the

Mississippi River (from the Louisiana/Mississippi border south to approximately three miles south of the town of Waterproof, Louisiana), and on the west and south by the Red River Basin. Falling within Region 8 are all or portions of the following parishes: Bienville, Caldwell, Catahoula, Claiborne, Concordia, East Carroll, Franklin, Grant, Jackson, La Salle, Lincoln, Madison, Morehouse, Ouachita, Rapides, Richland, Tensas, Union, West Carroll, and Winn.

Region 9

Includes the Red River Basin and a portion of the Mississippi River Basin. The region's eastern boundary follows the Louisiana/Mississippi border from a point approximately three miles south of the town of Waterproof, Louisiana, to the Old River Control Structure near Simmesport. Region 9 is bordered on the north and west by the Louisiana/Arkansas and Louisiana/Texas borders respectively. The region's southern boundary is the extent of the Red River Watershed, which lies north of the Atchafalaya, Vermilion-Teche, Mermentau, Calcasieu, and Sabine River Basins. Region 9 is comprised of all or parts of the following parishes: Avoyelles, Bienville, Bossier, Caddo, Catahoula, Claiborne, Concordia, De Soto, Grant, La Salle, Lincoln, Natchitoches, Rapides, Red River, Sabine, Tensas, Vernon, Webster, and Winn.

CHAPTER 6
SUMMARY OF BENEFITS OF THE PROPOSED RRP PROGRAM

The proposed RRP Program, including the RRPs, will benefit the public, industry and natural resource trustees by:

- **Providing greater opportunities to make the public and the environment whole for injuries to trust resources/services;**
- **Expediting restoration of injured resources/services from oil incidents;**
- **Pooling of individual case recoveries to provide for implementation of larger, ecologically significant restoration projects;**
- **Minimizing the cost of restoration planning and implementation;**
- **Providing for more consistency and predictability through detailing the NRDA process, thereby reducing uncertainty to the public and industry;**
- **Improving coordination between restoration activities under the NRDA mandates and other restoration efforts in the State;**
- **Enhancing the capability for trustees to restore resources/services injured by oil incidents for which there is no viable RP;**
- **Maximizing opportunities for partnering among RPs, trustees, and other public and private restoration efforts; and**
- **Increasing opportunity for public participation in the NRDA process through pre-incident planning.**

REFERENCES

Coastal Wetlands Planning, Protection, and Restoration Act of 1998, 16 U.S.C. § 3951 *et seq*., Pub. L. No. 101-646 (1990).

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