



Damage Assessment and Restoration Handbook

GUIDANCE FOR
DAMAGE ASSESSMENT AND RESTORATION ACTIVITIES IN
THE NATIONAL PARK SERVICE

Environmental Quality Division
Environmental Response, Damage Assessment, and Restoration Branch

1201 Eye Street, NW
Washington, D.C. 20005

December 2003

ACKNOWLEDGEMENTS

This guidance was developed under the direction of the National Park Service Environmental Quality Division. The initial drafts were written with assistance from Industrial Economics, Incorporated, under contract to Foster Wheeler Environmental Corporation (NPS Contract No. 1443CX2605-98-004, Task Order No. TO2605-00-A05).

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INTRODUCTION

In this section:

- Background
- Overview of the Park System Resource Protection Act (PSRPA)
- Comparison to Other Damage Assessment and Restoration Authorities
- Overview of the PSRPA Damage Assessment and Restoration Process

BACKGROUND

Congress has enacted a number of statutes that contain damage assessment and restoration provisions to make the public whole for injuries affecting natural resources and the services those resources provide. Damage assessment and restoration statutes that are relevant to the National Park Service (NPS) include the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Oil Pollution Act (OPA), the Clean Water Act (CWA) as amended by OPA, and the Park System Resource Protection Act (PSRPA).¹ These statutes are applied to acute pollution events (e.g., oil spills), chronic pollution (e.g., releases from uncontrolled hazardous substance sites), and, in the case of PSRPA, a variety of physical stresses on Park System resources. The goal of the damage assessment and restoration process, regardless of the specific underlying statutory authority, is to restore injured resources to their baseline conditions.

This handbook focuses on the authority provided specifically to NPS by PSRPA (16 USC 19jj). Presented in greater detail below, PSRPA authorizes NPS to seek civil damages, including the costs of response, assessment, and restoration, and to retain recovered costs for use by affected parks and program offices. Specifically, it enables parks to respond to incidents, assess injuries, determine damages, and restore injured resources and their associated services. Resources covered by PSRPA include natural and cultural resources, as well as other park facilities. Therefore, PSRPA provides a broad authority that applies to all park resource injuries. CERCLA, OPA, and CWA, on the other hand, apply only to natural resource injuries caused by oil spills or hazardous substance releases.

The primary objective of this handbook is to provide a straightforward, sequential discussion of the steps involved in preparing a claim for damages under PSRPA. These steps are necessary to

¹ These authorities contain provisions for civil damages, which are compensatory in nature. Other statutory authorities available to NPS contain penalty provisions. For example, the Archaeological Resources Protection Act contains provisions for civil and criminal penalties, but not for civil damages (although the value of the archaeological resource and the cost of restoration and repair are factors considered in determining penalty amounts). Director's Order 14 and this handbook address the civil damages authorities relating to injuries to Park System resources.

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ensure the restoration of injured resources and associated services. Although most of the procedures described in this handbook are appropriate for complex situations involving significant data collection and analysis efforts, a special set of procedures is described in Section 3 (Quick Claim Procedures) for more straightforward situations with limited data needs. Some damage assessment and restoration actions may be conducted under the authority of OPA or CERCLA in addition to, or alternatively to, PSRPA. For those situations, cross-references are provided to the applicable OPA and CERCLA guidance documents. The discussion in this handbook is geared to park superintendents and other park staff who coordinate response, damage assessment, and restoration actions. As such, the handbook is intended as a practical framework for internal use in applying the provisions of PSRPA.

Because it is a procedural guide, this handbook does not provide detail on the science of damage assessment and restoration or on the economics of compensatory restoration. The reader is referred to other sources providing more detailed technical information in those areas. In addition, to keep the handbook as streamlined as possible, detailed material such as sample forms and reports are presented in appendices.

The primary contact for damage assessment and restoration expertise within NPS is the Environmental Response, Damage Assessment, and Restoration Branch (ERDAR), located in the Environmental Quality Division (EQD) under the Associate Director for Natural Resource Stewardship and Science. EQD/ERDAR is responsible for providing guidance for the appropriate and consistent application of Federal damage assessment and restoration statutes within NPS, and for coordinating NPS damage assessment and restoration cases. EQD/ERDAR also serves as primary liaison with outside entities involved in NPS damage assessment cases, including the Department of the Interior (DOI) Office of the Solicitor and Natural Resource Damage Assessment and Restoration Program.

OVERVIEW OF THE PARK SYSTEM RESOURCE PROTECTION ACT (PSRPA)

The Park System Resource Protection Act allows NPS to seek compensation for injuries to Park System resources and use the recovered funds to restore, replace, or acquire equivalent resources, and to monitor and study such resources. The statute initially applied only to marine or Great Lakes resources but was expanded in 1996 as part of the Omnibus Park Act to cover injuries to resources within all National Park System units. The full text of the statute is included as Appendix A to this handbook.

The PSRPA statute is brief and clear. PSRPA provides for only civil damages and not for penalties. These civil damages provisions are compensatory in nature, not punitive; i.e., the statute gives NPS authority to seek recovery of certain costs, but not to penalize parties when resources are injured. Specifically, recoverable costs include:

- The costs of the response to the injury;

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- The costs of fully assessing the nature and extent of the injuries and determining damages; and
- The costs of restoring injured resources and/or replacing the services lost during the time that resources are injured, including the costs to monitor and study affected resources.

PSRPA also allows retention of monetary donations or services to meet expected or ongoing response costs. In granting these authorities, Congress left NPS discretion in implementing the statute. The NPS *Management Policies 2001*, Director's Order 14, and this handbook provide the NPS interpretation of how these responsibilities are fulfilled under PSRPA.

The types of compensation that are recoverable under PSRPA can be understood in terms of a practical analogy. In a sense, the statute is akin to insurance coverage following an auto accident. The insurance company will typically pay the policyholder to repair the car. Such coverage is analogous to the recovery of primary restoration costs under PSRPA. Likewise, the insurer may provide equivalent transportation during the period when the car is being repaired. This coverage can be compared to compensation for interim lost services experienced when a resource is injured.

The scope and applicability of PSRPA hinges on the definition of a number of key concepts. In general, this handbook adopts many of the concepts used in the damage assessment regulations for OPA. Therefore, a clear understanding of these terms is essential to the discussion below. The most important definitions are the following.

- **Baseline:** Baseline refers to the condition of resources and services that would have existed had the injury not occurred. The baseline concept is essential to determining the nature and extent of injuries.
- **Case Team:** A case team is the group of individuals responsible for managing and overseeing injury assessment and restoration determination actions taken under PSRPA. Additionally, the case team makes recommendations to NPS and other officials with decision-making authority. At a minimum, the case team will include a case officer assigned by EQD/ERDAR, a park representative assigned by park management, and an attorney assigned by the DOI Office of the Solicitor.
- **Damages:** Under PSRPA, damages includes the following.
 1. Compensation for:
 - A. The cost of replacing, restoring, or acquiring the equivalent of a Park System resource; *and* the value of any significant loss of use of a Park System resource pending its restoration or replacement or the acquisition of an equivalent resource; or
 - B. The value of the Park System resource in the event the resource cannot be replaced or restored.

2. The cost of damage assessments conducted under PSRPA. Damages should not be confused with the actual injuries affecting the resource.

- **Injury:** Injury means an observable or measurable adverse change in a Park System resource, or the loss or diminishment of services provided by a Park System resource. Injury may occur directly or indirectly to a Park System resource or service. Injuries include the destruction, loss, or diminishment of Park System resources and the services they provide. An injury to any Park System resource or service may constitute an impairment as defined in the NPS *Management Policies 2001*. However, impairment is not necessary for a determination of injury. See Section 4.0, “Definitions,” of Director’s Order 14.
- **Natural Resource:** Under CERCLA and OPA, natural resources means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any state or local government or Indian tribe, or any foreign government.
- **Park System Resource:** A Park System resource means any living or non-living resource that is located within the boundaries of a unit of the National Park System, except for resources owned by a non-Federal entity. This is inclusive of natural resources, cultural resources, physical facilities, and other resources that meet this definition.
- **Project Team:** A project team is the group of individuals responsible for managing and overseeing restoration planning and implementation actions taken under PSRPA. At a minimum, the project team will include a project manager assigned by EQD/ERDAR and a park representative assigned by park management.
- **Response:** Under PSRPA, response includes all necessary actions to prevent or minimize the destruction, loss of, or injury to Park System resources, or to minimize the imminent risk of such destruction, loss, or injury. For example, following a boating accident, response actions may involve cleaning up spilled fuel and closing beaches to protect visitors.
- **Responsible Parties:** Responsible parties include individuals, corporations, or other entities whose actions caused the injury in question. In addition, the instrumentality of injury (e.g., a vehicle or other equipment) is also liable.²
- **Restoration:** Restoration is the return of affected resources and services to baseline conditions. PSRPA includes in this concept, measures taken “to restore, replace, or acquire the equivalent of” injured resources. Replacement and acquisition of the

² The concept of holding an instrumentality responsible refers to an “*in rem*” proceeding. A proceeding *in rem* is one taken directly against property without direct reference to the owner of the property.

equivalent are taken to mean the replacement of injured resources with other resources that are capable of providing comparable services.

- **Restoration Fund:** The Restoration Fund, managed by the U.S. Department of the Interior (DOI), is established by appropriations law to provide permanent authority to accept receipts for damage assessment and restoration activities collected under the authorities of CERCLA, CWA, OPA, and PSRPA. These receipts are authorized to be invested and held until expended without further Congressional approval. See Section 4.0, “Definitions,” of Director’s Order 14.
- **Services:** Services refer to functions or uses provided by resources. Ecological services are the functions performed by a resource for the benefit of other resources, such as providing food and refuge for wildlife. Human use services are the uses park visitors make of resources. Examples of human use services include fishing and hiking. Other human use services include those provided by archeological, historical, cultural, and geological resources.
- **Trustee:** A trustee means any designated Federal, state, or tribal agency that is authorized to pursue claims for natural resource damages under CERCLA, CWA, or OPA. The trustee for DOI resources is the Secretary of the Interior. Trustees are also known as natural resource trustees.

COMPARISON TO OTHER DAMAGE ASSESSMENT AND RESTORATION AUTHORITIES

This guidance is primarily intended to assist parks in pursuing claims brought strictly under the authorities provided by PSRPA. However, some damage assessment and restoration actions may be conducted under the authorities of OPA or CERCLA in addition to (or as an alternative to) PSRPA. Therefore, this guidance should be considered complementary to the guidance for OPA and CERCLA. Where relevant, cross-references are provided to the appropriate OPA or CERCLA guidance documents. This section briefly examines how PSRPA compares with OPA, CERCLA, and CWA.

Enacted in 1990 as an amendment to the Clean Water Act, OPA (33 USC 2701, *et seq.*) seeks to “make the environment and public whole for injuries to natural resources and natural resource services resulting from an incident involving a discharge or substantial threat of a discharge of oil.” In 1996, the National Oceanic and Atmospheric Administration (NOAA) published regulations (15 CFR Part 990) governing how natural resource damage assessments are to be conducted under OPA. Natural resource trustees, including Federal and state agencies, Indian tribes, and foreign governments, are responsible for evaluating injuries, assessing damages for those injuries, and presenting a claim for damages. Apart from its limitation to oil spills, OPA is otherwise similar to PSRPA in that it seeks to return resources and services to baseline condition and compensate for interim lost services.

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Enacted in 1980, CERCLA (42 USC 9601, *et seq.*) likewise provides for the recovery of damages for injuries to natural resources. Commonly referred to as “Superfund,” the statute focuses on releases of hazardous substances identified under CERCLA as well as under CWA (33 USC 1251-1376). DOI first promulgated damage assessment regulations for CERCLA and CWA in 1986 (43 CFR Part 11). CERCLA authorizes Federal, state, and tribal trustees to pursue natural resource damages claims, while the CWA authorizes only Federal and state trustees to do so. As with OPA, trustee organizations for the injured resource collaborate to document injuries, assess damages, and present a claim for those damages.

Exhibit 1 compares the scope and features of PSRPA, OPA, CERCLA, and CWA. As shown, the authorities are similar in a number of respects, including the types of costs that are recoverable. However, the following key differences are noteworthy.

- OPA and CERCLA authorities cover natural resources and associated services, including physical and ecological services as well as human use services. In addition to natural resources and associated services, PSRPA authority also extends to cultural resources (e.g., historic sites, structures, objects, and landscapes) and physical facilities (e.g., signage, buildings, docks, and roads), and their associated services.
- While OPA and CERCLA authorities are restricted to oil spills and hazardous substance releases, respectively, PSRPA covers all causes of injury, including spills, releases, property encroachments, vessel groundings, and other incidents.
- OPA and CERCLA encourage trustees of natural resources to coordinate on damage assessment cases to avoid double recovery of damages. For example, both Federal and state trustees may not make independent recoveries for the same fish resource. In contrast, PSRPA cases frequently involve injured resources for which NPS is solely responsible, with no other concerned trustee parties. However, when PSRPA is used in conjunction with OPA or CERCLA in a particular case, NPS should cooperate with other involved trustees.
- Unlike OPA and CERCLA, PSRPA specifies that recoveries made under any Federal, state, or local law or regulation for injuries to Park System resources may be used for the restoration and replacement of such resources, or to reimburse the costs of response and damage assessment.
- Unlike OPA, PSRPA has no exception to its civil damages provisions for injuries caused by public vessels and facilities.

Finally, it is useful to review how PSRPA authority interacts with OPA and CERCLA authorities. When Park System resources are affected by an oil spill or a hazardous substance release, PSRPA can play a role in the OPA or CERCLA case. While PSRPA is independent of authorities under OPA and CERCLA, it can be used to complement OPA and CERCLA claims

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because PSRPA covers a broader range of resources. For example, OPA and CERCLA do not necessarily address injuries to cultural resources and park facilities.

OVERVIEW OF THE PSRPA DAMAGE ASSESSMENT AND RESTORATION PROCESS

The remainder of this handbook describes the steps involved in managing a PSRPA case. All cases involve response and case classification. Those steps are described in Sections 1 and 2, respectively. After that, the steps involved depend on how a particular case is classified. The steps for the Quick Claim classification are explained in Section 3, and the steps for the Expedited Assessment and Comprehensive Assessment classifications are explained in Sections 4 through 7. These steps are listed below.

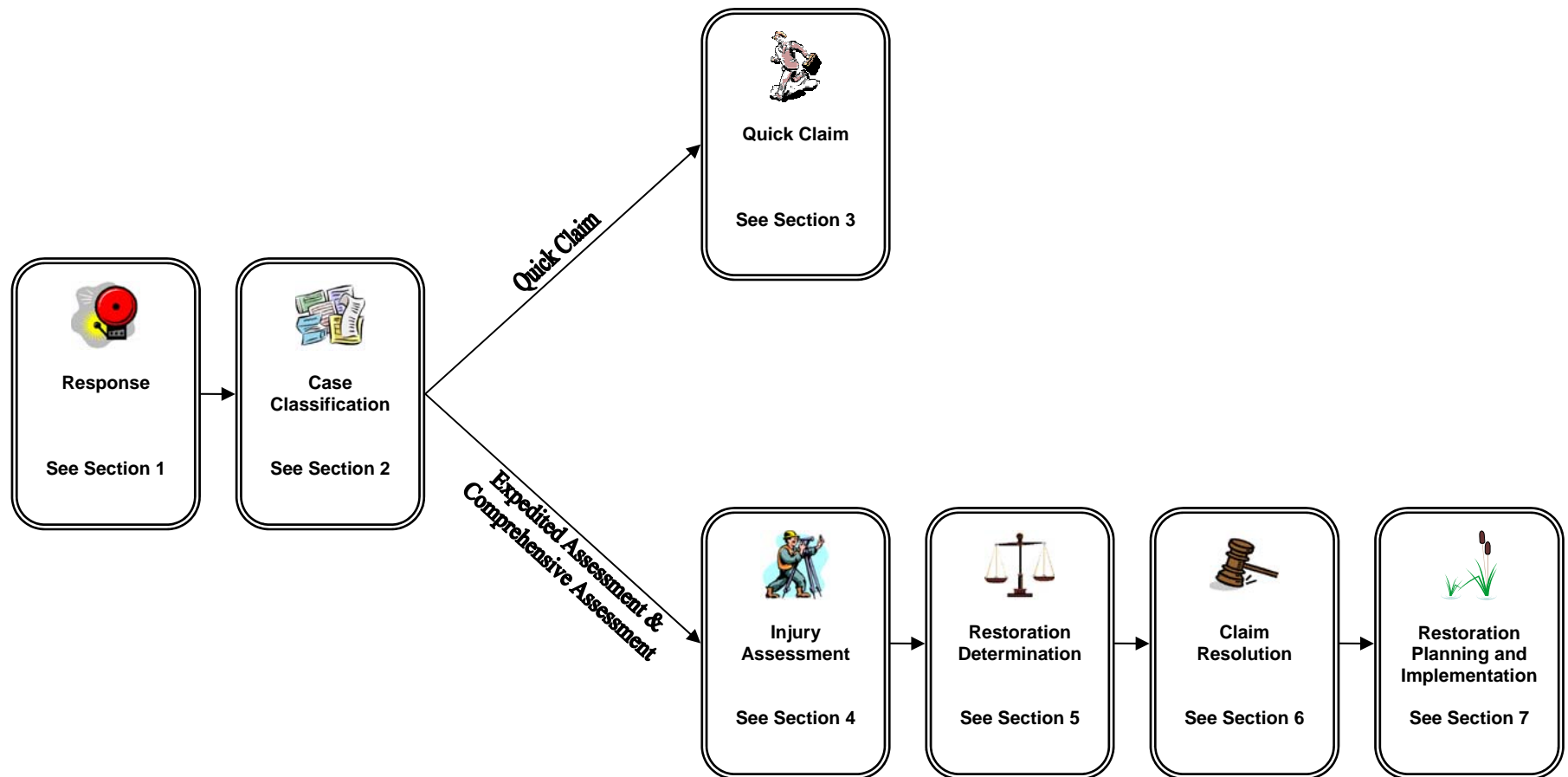
PSRPA Case Management Steps	
<input type="checkbox"/> Response	
<input type="checkbox"/> Case Classification	
<u>Quick Claim cases:</u>	<u>Expedited Assessment and Comprehensive Assessment cases:</u>
<input type="checkbox"/> Preparation of the Claim	<input type="checkbox"/> Injury Assessment
<input type="checkbox"/> Request for Payment	<input type="checkbox"/> Restoration Determination
<input type="checkbox"/> Management of Recovered Damages	<input type="checkbox"/> Claim Resolution
<input type="checkbox"/> Implementation of Restoration	<input type="checkbox"/> Restoration Planning and Implementation

Exhibit 2 illustrates the PSRPA case management steps as a flowchart. The icons in Exhibit 2 recur throughout the handbook to help differentiate the various process steps and to make the handbook more navigable.

Exhibit 1 Comparison of PSRPA, OPA, CERCLA, and CWA Authorities			
	PSRPA	OPA	CERCLA and CWA
Resources Covered	<ul style="list-style-type: none"> All Park System resources (including natural resources, cultural resources, and physical facilities) and associated services 	<ul style="list-style-type: none"> Natural resources and associated services 	<ul style="list-style-type: none"> Natural resources and associated services
Incidents Covered	<ul style="list-style-type: none"> All incidents resulting in injuries to Park System resources, including spills, vandalism, encroachments, etc. 	<ul style="list-style-type: none"> Discharges of oil resulting in injuries to natural resources 	<ul style="list-style-type: none"> Releases of hazardous substances/pollutants resulting in injuries to natural resources
Recoverable Costs	<ul style="list-style-type: none"> Response costs Assessment costs Restoration costs Monitoring costs Value of interim lost services 	<ul style="list-style-type: none"> Response costs Assessment costs Restoration costs Monitoring costs Value of interim lost services 	<ul style="list-style-type: none"> Response costs Assessment costs Restoration costs Monitoring costs Value of interim lost services
Non-recoverable Costs	<ul style="list-style-type: none"> Enforcement/litigation costs 	<ul style="list-style-type: none"> Enforcement/litigation costs 	<ul style="list-style-type: none"> Enforcement/litigation costs
Use of Recoveries	<ul style="list-style-type: none"> Only for restoration and cost reimbursement Acquisition of land or water rights must be approved in appropriations acts, and is subject to park organic legislation 	<ul style="list-style-type: none"> Only for restoration and cost reimbursement 	<ul style="list-style-type: none"> Only for restoration and cost reimbursement
Agency Interaction	<ul style="list-style-type: none"> NPS coordinates as needed to ensure consistency with other resource damages authorities 	<ul style="list-style-type: none"> Requires natural resource trustee coordination (e.g., Federal and state agencies, and Indian tribes) 	<ul style="list-style-type: none"> Requires natural resource trustee coordination (e.g., Federal and state agencies, and Indian tribes)
Recoveries Under Other Laws or Regulations	<ul style="list-style-type: none"> Amounts recovered under any Federal, state, or local law or regulation as a result of injuries to Park System resources may be used according to the provisions of PSRPA 	<ul style="list-style-type: none"> No analogous authority 	<ul style="list-style-type: none"> No analogous authority

Exhibit 1 (continued) Comparison of PSRPA, OPA, CERCLA, and CWA Authorities			
	PSRPA	OPA	CERCLA and CWA
Injury Standard	<ul style="list-style-type: none"> • Observable or measurable adverse change in a Park System resource, or loss or diminishment of associated services 	<ul style="list-style-type: none"> • Defined in regulation at 15 CFR Section 990.30 	<ul style="list-style-type: none"> • Defined in regulation at 43 CFR Section 11.14
Liability	<ul style="list-style-type: none"> • Liability is strict, applying to person or instrumentality (e.g., vessel in a grounding) causing injury • Liability may also be joint and several 	<ul style="list-style-type: none"> • Liability is strict, applying to owner/operator – but dollar amount may be limited as provided in statute 	<ul style="list-style-type: none"> • Liability is strict, joint, and several, applying to owner/operator and person arranging or accepting for transport, disposal, or treatment
Defenses	<ul style="list-style-type: none"> • Act of God or war • Injury caused by third party • Injury caused by Federal or state authorized activity 	<ul style="list-style-type: none"> • Act of God or war • Injury caused by third party • Injury caused by Federal or state authorized activity • Injury caused by a facility subject to the Trans-Alaska Pipeline Authorization Act 	<ul style="list-style-type: none"> • Act of God or war • Injury caused by third party • Injury caused by Federal or state authorized activity
Exception for Public Vessels or Facilities	<ul style="list-style-type: none"> • No exception for public vessels or facilities that cause an injury 	<ul style="list-style-type: none"> • Does not apply to discharges from public vessels and facilities that cause an injury 	<ul style="list-style-type: none"> • No exception for public vessels or facilities that cause an injury
Statute of Limitations	<ul style="list-style-type: none"> • No explicit statutory provision 	<ul style="list-style-type: none"> • Three years, beginning when “injury and its connection were reasonably discoverable” or from completion of assessment in accordance with OPA damage assessment regulations 	<ul style="list-style-type: none"> • If the site is on the National Priorities List, or is a Federal Facility, or one for which remedial actions have been scheduled, three years following completion of remedial actions • For all other sites, three years following discovery of the loss connected with the release

Exhibit 2 PSRPA Case Management Steps





SECTION 1: RESPONSE

In this section:

- Introduction
- Response Actions under PSRPA
- Notification
- Determination of Jurisdiction
- Required Documentation
- Comparison to Other Damage Assessment and Restoration Authorities

INTRODUCTION

Park staff's initial response to an incident can have a critical effect on the overall impacts to resources, the success of restoration efforts, and the success of the PSRPA claim. This section of the handbook discusses the first steps involved in responding to a resource injury or threat of a resource injury, and examines how to begin laying the groundwork for a PSRPA claim. Specifically, these steps include:

- Responding to the incident in the field;
- Notifying the appropriate parties of the injury and starting a case file; and
- Determining whether the resource injury falls within the scope of PSRPA (i.e., jurisdiction).

This section also describes the specific documentation required during the response stage and contrasts response under PSRPA with response actions under OPA and CERCLA.⁴

RESPONSE ACTIONS UNDER PSRPA

Response actions are the steps taken by park staff to prevent, abate, or minimize an injury (or imminent risk of injury) to park resources.⁵ While a wide variety of activities qualify as response actions, the following are the most common.

⁴ For response actions under CERCLA, see Director's Order 30, *Hazardous Spill Response*.

⁵ Many of these steps might be considered emergency restoration measures under CERCLA and OPA.



- **Actions to protect public health and safety, including that of park staff:** For example, a specific area may need to be closed to the public due to the existence of noxious fumes from a ruptured pipeline.
- **Actions to prevent or minimize the destruction, loss of, or injury to Park System resources:** For example, park staff may need to stabilize the slope of a denuded area to prevent additional erosion and plant losses.
- **Actions to abate or minimize the imminent risk of the destruction, loss of, or injury to Park System resources:** For example, park staff may need to construct a berm to prevent potential flooding and silting from a failing retention pond.
- **Actions to monitor the ongoing effects of incidents causing injury:** Park staff should make every attempt to accurately document the resource injuries prior to undertaking other response actions. For example, park staff may need to collect animal remains, sample environmental media, and take site photographs after an incident and before the site is further disturbed. Appendix B provides a detailed review of the types of immediate data collection park staff should perform.

Park staff should exercise good professional judgment in deciding what response actions are appropriate while also being aware of public and employee health and safety. In particular, it is often difficult to determine whether to address an injury immediately or wait until the restoration stage. Two principles should guide the decision. The first consideration should be protection of Park System resources; i.e., if waiting will place resources at risk of continued or increased harm, then immediate response may be advisable. A second, related, consideration is cost. In some cases, an injury may be inexpensive to address immediately and expensive if park staff wait until the restoration stage. Overall, prompt response may help reduce the extent of injury and the scale and cost of restoration later in the process.

While cost considerations play a role in the response decision, park staff should keep in mind that response costs, including staff time, are potentially recoverable as part of the damages claim. Therefore, park staff must track costs to support eventual cost recovery. Cost tracking forms are provided in Appendix C for this purpose.

NOTIFICATION

When an incident occurs and the park has taken initial response actions, park staff must contact the Environmental Response, Damage Assessment, and Restoration Branch (ERDAR) in the NPS Environmental Quality Division (EQD). Once EQD/ERDAR staff have been consulted on the details of the injury, they will establish a case file and assign a case officer.

EQD/ERDAR will notify the DOI Solicitor's Office (SOL) of the incident and request the assignment of an attorney. This contact will be made regardless of whether the case will be pursued under PSRPA's civil authority or other statutory authorities, including criminal.



Keeping SOL involved in all possible issues that may affect claim resolution is essential. Communications between NPS staff and SOL attorneys are presumed to be protected by attorney-client privilege. NPS staff should not pursue settlements or other actions without SOL's involvement or concurrence. Taking unilateral action could lead to confusion and undermine the case.

DETERMINATION OF JURISDICTION

Upon identifying a potential injury, park staff, in consultation with EQD/ERDAR, should first determine if PSRPA is applicable. One fundamental requirement is that the injured resource must be a Park System resource. A Park System resource means any living or non-living resource that is located within the boundaries of a unit of the National Park System, except for resources owned by a non-Federal entity. Beyond this fundamental requirement, the PSRPA statute includes the following defenses that remove or limit liability.

- No individual may be held liable if the injury was caused *solely* by an act of God or an act of war.
- No individual may be held liable if the person acted with due care and the injury was caused *solely* by an act or omission of a third party, other than an employee or agent of that individual.
- No individual may be held responsible if the injury was caused by an activity authorized by Federal or state law.

When determining jurisdiction, park staff also should be aware of the statute of limitations under PSRPA. While PSRPA has no explicit provision regarding this, statute of limitations considerations generally limit the time available to seek damages for resource injuries. Therefore, park staff should promptly begin the notification process (see above) when injuries are discovered and consult SOL concerning time limits. For internal NPS management purposes only, PSRPA cases should generally be prepared within two years of the discovery of the incident.

Pertinent information supporting PSRPA jurisdiction determinations should be included in the response report. See the discussion below on required documentation for a description of this report.

REQUIRED DOCUMENTATION

At all stages of assembling a damages claim, park staff should adequately document the injury and all associated costs so that a clear record of expenditures exists. In this regard, it is important to follow standardized procedures. Therefore, this handbook reviews the documentation required for each stage of the PSRPA process. These materials may ultimately be



placed in an administrative record supporting the case; therefore, they should be prepared carefully and retained until the completion of all case activities, including restoration.

At this stage, park staff should prepare a response report and response cost tracking documentation.

- **Response Report:** The overall goal of the response report is to document what response actions were taken and why. The report should include the following information.
 - ❑ **Incident Description:** The report should provide a detailed description of the incident, including maps, drawings, and information concerning how and when potential injuries were discovered, as appropriate under the circumstances of the incident. The official Case Incident Report, if any, should be referenced and attached as an appendix.
 - ❑ **Potentially Affected Resources:** The report should describe the potentially affected resources and explain, to the extent of park staff's knowledge, relevant circumstances surrounding the impact (e.g., trees and other vegetation were cut and removed, fish and other aquatic biota were killed, beaches were closed to the public).
 - ❑ **Responsible Party Identification:** To the extent feasible, the report should identify the responsible parties, including the individuals involved and their contact information, as well as the instrumentality involved in the incident (e.g., automobile, boat, airplane, bulldozer), owner, and insurance coverage.
 - ❑ **Response Actions:** The report should review how park staff responded to the incident. The discussion should include an explanation of the actions taken, i.e., how the immediate actions taken helped minimize the impacts to park resources. The report should also include work plans and any data collected.
- **Response Cost Tracking Documentation:** Because all costs, including staff time, are potentially recoverable, they need to be properly documented. Appendix C provides forms for tracking costs during the response stage and other stages of the incident.

COMPARISON TO OTHER DAMAGE ASSESSMENT AND RESTORATION AUTHORITIES

Under PSRPA, response actions should be governed by the objective to minimize impacts to Park System resources, and to protect public health and safety. The response framework is considerably different and more complex under OPA and CERCLA. Under both OPA and CERCLA, response actions, often referred to as “clean-up,” are governed by the National



Contingency Plan (NCP) (40 CFR. part 300), the Federal blueprint for responding to oil spills and hazardous substance releases. Along with provisions in OPA and CERCLA, the NCP defines various types of response actions and procedures that may be used after oil spills and other release events. The NCP also vests certain authorities in the Federal response agencies, like the U.S. Coast Guard and the U.S. Environmental Protection Agency (EPA), and outlines the roles of Federal and state agencies in coordinated response actions.

Similar to PSRPA, response costs may also be recoverable under OPA and CERCLA.⁶ However, for those costs to be recoverable, response actions under OPA and CERCLA must not be inconsistent with the NCP, and must be approved by the Federal official in charge of the incident, normally the Federal On Scene Coordinator (FOSC). No such constraint exists under PSRPA.

For response actions under OPA, costs incurred by NPS can be reimbursed by the Oil Spill Liability Trust Fund (OSLTF). This Fund, managed by the U.S. Coast Guard, reimburses response costs relatively quickly without legal action against the responsible party (the Coast Guard assumes that responsibility). Response costs in an OPA incident must be approved in advance by the FOSC, typically using a Pollution Removal Funding Agreement (PRFA). EQD/ERDAR should be consulted when seeking a PRFA with the FOSC of an oil spill. EQD/ERDAR can also help parks when billing the OSLTF and adjudicating NPS bills with the U.S. Coast Guard.

⁶ For response actions under CERCLA, see Director's Order 30, *Hazardous Spill Response*.



SECTION 2: CASE CLASSIFICATION AND INITIAL CASE MANAGEMENT

In this section:

- Introduction
- Case Classification Criteria
- Types of Cases
- Case Management and Coordination
- Cooperative Assessments
- Natural Resource Trustee Councils
- Funding Sources and Assistance
- Criminal Proceedings Arising from Injuries to Park System Resources

INTRODUCTION

Once park staff have implemented response actions, performed the initial notifications, and determined that the incident is within the jurisdiction of PSRPA, the process moves forward to case classification. The objective of case classification is to examine the size and nature of the case and consider how to pursue it, if at all.

Case classification is somewhat analogous to a preassessment screen performed under other damage assessment and restoration authorities, wherein trustees determine whether feasible restoration measures exist to address the injuries and whether to proceed with the damage assessment process. Under PSRPA, a key distinction is the classification of specific cases as “Quick Claim,” “Expedited Assessment,” or “Comprehensive Assessment” to reflect expected investments in staff time, funding, and other resources.

This section examines several components of the case classification process and the initial elements of case management. Specifically, the topics addressed include case classification criteria, types of cases, case management and coordination, cooperative assessments, natural resource trustee councils, funding sources and assistance, and criminal proceedings arising from injuries to Park System resources.

A park superintendent initiates this process by sending EQD/ERDAR a written request to consider a case. A copy of the relevant Case Incident Report should accompany this request.



CASE CLASSIFICATION CRITERIA

EQD/ERDAR, in consultation with park staff and SOL, will consider several criteria that help classify the case and determine the best path for proceeding. General case classification criteria include the following.

- **Is the fact base sufficient?** How much is known about the basic circumstances surrounding the case? For example, is the nature and extent of the injury clear? Is the responsible party known with certainty? How clearly linked are the injury and the responsible party's actions? If the injury involves hazardous substances or pollutants, are the contaminants known with certainty? The better the fact base is, the more confident NPS can be in planning restoration and pursuing the case.
- **Is the responsible party financially viable?** Is the responsible party likely to have the resources to pay for response, restoration, and other costs associated with the case? A case may face practical obstacles if NPS seeks damages from individuals or other entities with limited financial resources. Be aware that responsible parties may claim that they lack the resources to pay damages, so an analysis of assets and financial status may be necessary.
- **How readily can NPS assess injuries and determine restoration measures?** Do feasible and cost-effective methods of assessing injuries and determining restoration measures exist?
- **Is restoration feasible and cost effective?** Do reasonable and cost-effective restoration measures potentially exist?

Specific criteria relative to the different case types are discussed below. Many of these criteria will be considered in more detail if the case proceeds to formal injury assessment and restoration determination. Case classification requires a more limited inquiry into these issues, basing preliminary conclusions on existing information and interviews with park staff.

TYPES OF CASES

The purpose of case classification is to help the case team allocate appropriate levels of staff time, funding, and other resources to a particular case. Additionally, case classification is intended to identify potential litigation costs which must be anticipated by the park, and which generally are not recoverable. Accordingly, the following case types are listed in the order of the level of complexity and resource need, beginning with the most straightforward, Quick Claim, and ending with the most involved, Comprehensive Assessment. These classifications are points on a spectrum of complexity. Cases may fall anywhere along that spectrum and may even evolve from one level of complexity to another. Therefore, judgment in applying the general



criteria discussed above and the specific criteria listed below are used in classification on a case-by-case basis.

- **Quick Claim:** Criteria that indicate a Quick Claim classification include (1) the exclusive involvement of NPS jurisdictions, (2) simple resource injuries that do not require compensatory restoration, (3) assessments and determinations that involve straightforward investigations and analyses, and (4) primary restoration measures that can be readily identified and implemented. Examples of this type might include cases involving the destruction of traffic signs or designed landscapes that can be readily repaired or replaced. These cases could include claims for response costs only, where little or no injury has been determined. A key distinction of this case type is that compensatory restoration is not contemplated for any interim lost services of injured resources. Therefore, it is important that such a determination be made by park management prior to classification as a Quick Claim. The concepts of primary and compensatory restoration are discussed in Section 5. Quick Claim procedures are explained in Section 3.
- **Expedited Assessment:** Criteria that indicate an Expedited Assessment classification include (1) the exclusive involvement of NPS jurisdictions, (2) injuries to resources that are not otherwise threatened or critical, (3) assessments and determinations that involve moderate investigations and analyses, and (4) primary and compensatory restoration measures that can be readily identified and implemented. Examples might include cases involving injuries to upland deciduous forest or native grassland habitats that do not contain threatened or endangered species. Because these injured resources likely require significant recovery times, compensatory restoration is contemplated for the resulting interim lost services. However, only moderate efforts will be required to assess the injuries and to determine appropriate restoration measures. Expedited Assessment procedures are explained in Sections 4 through 7.
- **Comprehensive Assessment:** Criteria that indicate a Comprehensive Assessment classification include (1) the involvement of OPA or CERCLA authorities or non-NPS jurisdictions, (2) injuries to resources that are unusually sensitive or critical, (3) assessments or determinations that require extensive investigations or analyses, (4) primary or compensatory restorations measures that require significant research to identify or implement, and (5) the involvement of novel or precedent-setting policy issues. Examples of this type might include Superfund sites, oil spills into navigable waters, or other situations requiring significant staff and funding investments for case management, injury assessment, or restoration determination. Additionally, cases with potential implications for Service-wide resource management policy would qualify for this classification. Comprehensive Assessment procedures are explained in Sections 4 through 7.



CASE MANAGEMENT AND COORDINATION

The criteria discussed above represent important considerations when classifying the case. EQD/ERDAR will work closely with park staff to review available information, identify needed expertise, and form a case team. At a minimum, the case team will include a case officer assigned by EQD/ERDAR, a park representative assigned by park management, and an attorney assigned by SOL. A case team agreement and funding agreement will be required for comprehensive assessments, or if non-park funds are involved. Please see Appendix D for a sample case team agreement.

Coordination is essential to achieving consistency in claim development and accountability of funds recovered and expended. Therefore, in all cases, park staff should coordinate with EQD/ERDAR through the case team to ensure that case reports, correspondence, and other materials are properly developed and reviewed. The case team will develop a schedule of damage assessment actions that is cognizant of statute of limitations issues. EQD/ERDAR is available for technical consultation in support of all elements of claim development.

COOPERATIVE ASSESSMENTS

Cooperative assessments are injury assessment and restoration determination activities that are conducted with the participation of responsible parties. Participation by responsible parties may take the form of full or partial funding; consultation on approaches and methods; data sharing; or providing expertise, equipment, or facilities. Depending on the specifics of a particular case, cooperative assessments may be more cost-effective than other assessments by eliminating duplicate efforts by the case team and responsible party. Cooperative assessments may also expedite the damage assessment and restoration process by encouraging active responsible party participation.

The decision to pursue a cooperative assessment, as well as the scope of participation to be offered a responsible party, rests with the case team. These decisions are made on a case-by-case basis and are influenced by a number of factors. Significant factors include (1) the willingness of the responsible party to participate in and fund a cooperative assessment, (2) the ability of the responsible party to participate in injury assessment and restoration determination activities in a technically sound and timely manner, (3) the willingness of the responsible party to be bound by the results of agreed-to injury assessment and restoration determination activities, and (4) the actions of the responsible party in previous damage assessment and restoration cases. Although cooperative assessments may provide significant advantages, the case team is ultimately responsible for the findings of injury assessment and restoration determination as discussed in Sections 4 and 5 of this handbook.



A cooperative assessment must be documented in a written cooperative participation agreement.⁷ This agreement must clearly specify each party's rights and responsibilities, and provide a mechanism for resolving disputes. Cooperative participation agreements must also allow NPS to terminate the participation of a responsible party that interferes with the performance of case team duties as described in this handbook. It is important that cooperative participation agreements clearly state that any consideration received from a responsible party in the form of funding or other assistance will not release that party from other liabilities incurred under applicable law and regulation. Cooperative participation agreements must be reviewed and approved by SOL to ensure the enforceability and protection of the government's rights.

NATURAL RESOURCE TRUSTEE COUNCILS

If the incident involves an oil spill or a release of hazardous substances, and if there are multiple Federal, state, or tribal agencies involved, a trustee council may be formed to manage and oversee a joint damage assessment and restoration process under OPA or CERCLA. The natural resource trustees may form a council for either a portion of or the entire damage assessment and restoration effort. Even if the park is pursuing its own claim under PSRPA, it should participate in the joint damage assessment and restoration process as a member of the trustee council. Typical functions of trustee councils throughout case management include:

- Developing an injury assessment and restoration determination framework;
- Conducting or overseeing scientific and technical studies, sampling, and other matters related to the injury assessment and restoration determination for trust resources that may have been lost, injured, or destroyed;
- Seeking compensation from responsible parties for the costs of planning and implementing the assessment;
- Participating in negotiations with responsible parties;
- In accordance with applicable law and agency policy, making all necessary decisions on a case-by-case basis for the management and administration of assessment funds;
- In accordance with applicable law, arranging for contracts with consultants that the trustee council determines are necessary to assist in claim development; and
- When applicable, identifying a contact (normally a Federal Lead Administrative Trustee - see below) for coordination with the U.S. Coast Guard and/or EPA regarding access to the Oil Spill Liability Trust Fund.

⁷ See Director's Order 20, *Agreements*.



If a trustee council is formed, it is recommended that the park contact EQD/ERDAR for assistance. Council membership may be formed at a very high level. For example, the Assistant Secretary for Fish, Wildlife and Parks represented all DOI bureaus involved in the Exxon Valdez oil spill. In other cases, the council may be formed at a field staff level. In all cases, trustee council members should have delegated authority from their agencies to make appropriate decisions. In large or complex cases, trustee councils may also form technical subgroups (e.g., legal teams, technical advisory teams, and peer review teams) to inform decisions.

FUNDING SOURCES AND ASSISTANCE

Unlike CERCLA and OPA cases, there is no fund specifically established to support PSRPA cases. Funding may be internally available from NPS sources; however, external sources may need to be considered, depending on the scope and complexity of the injury. Although funds invested in PSRPA cases may be ultimately recoverable, it is important to note that some expenditures, such as those for enforcement and litigation, may not be recoverable. A number of potential funding sources exist, and the case team should explore the applicability of the following to determine how best to fund necessary actions.⁸

- **NPS Funding:** This encompasses all internal sources, including those at the park, regional, and national levels.
- **Responsible Party Funding:** In some instances, it is worthwhile to explore the possibility of arranging full or partial funding from the responsible party. The feasibility of obtaining responsible party funding depends heavily on the conditions surrounding the case. Such funding should be arranged under a cooperative participation agreement between the responsible party and NPS as part of a cooperative assessment. Whenever responsible party funding is arranged, the case team should carefully explain that such funding does not absolve the party of responsibility for other actions or liability (e.g., restoration costs). However, early participation by the responsible party may expedite the process of damage assessment and restoration, ultimately reducing the overall cost of addressing the injury. Cooperative participation agreements must be reviewed and approved by SOL to ensure enforceability and protection of the government's rights.
- **Oil Spill Liability Trust Fund:** Only cases involving OPA oil spill incidents potentially qualify for funding from this source. The U.S. Coast Guard's National Pollution Funds Center manages the Oil Spill Liability Trust Fund (OSLTF). This Fund covers response (including emergency restoration), the initiation of damage assessment activities, and damages associated with oil spills when the responsible

⁸ Another source, the Central HAZMAT Fund, is potentially available to fund hazardous material clean-up activities. However, those activities are not directly related to the damage assessment and restoration activities addressed in this handbook. See Director's Order 30, *Hazardous Spill Response*, for applicable guidance on the use of this funding source.



party is unknown or unwilling or unable to pay. To receive funds for emergency restoration and response actions, park staff should coordinate with EQD/ERDAR to develop a Pollution Removal Funding Agreement with the Federal On-Scene Coordinator. Forms and conditions are provided in the U.S. Coast Guard Technical Operating Procedures.⁹ To initiate damage assessment work with funds from the OSLTF, a Federal Lead Administrative Trustee (FLAT) must be designated, and NPS must be a member of a trustee group requesting funding through the FLAT.¹⁰ An inter-agency agreement among the involved trustees will be required to initiate damage assessment activities with OSLTF funds.

- **DOI Restoration Fund:** Consistent with its damage assessment authorities under CERCLA, CWA, OPA, and other statutes, DOI maintains a Restoration Fund. The overall mission of the fund is to support priority natural resource damage assessment and restoration activities in cases involving resources for which DOI agencies have trustee responsibility. This is a revolving fund, to which recoveries of past costs are returned. Park staff should coordinate with EQD/ERDAR through the case team to determine whether the particular situation might qualify for funding from the Restoration Fund. Funding proposals are submitted annually for review by the DOI Natural Resource Damage Assessment and Restoration (NRDAR) program manager.
- **Donations:** Donations of money or services may be accepted under PSRPA to meet expected, immediate, or ongoing response costs. A funding agreement is required to accept such donations.¹¹ Park staff should also consult Director's Order 21, Section 4.5.2 (Prohibited Sources) and SOL for additional guidance on when acceptance of donations is appropriate. For example, park staff may not accept donations from a particular party if NPS is currently involved in litigation with that party.

Non-monetary resources can also play an important role in managing a case. In addition to the funding sources listed above, the case team should also consider taking advantage of technical and administrative expertise that resides within DOI and elsewhere. In particular, staff in EQD/ERDAR can contribute significant technical assistance, drawing on their experience with PSRPA and other damage assessment cases. In addition, EQD/ERDAR can assist in securing support contractors. Other potential sources of information and technical assistance include expertise located under the NPS Associate Director for Natural Resource Stewardship and Science, NPS Associate Director for Cultural Resource Stewardship and Partnerships, and the U.S. Geological Survey, particularly the Biological Resources Division.

⁹ See <http://www.uscg.mil/hq/npsc/tops.htm>.

¹⁰ See <http://www.uscg.mil/hq/npsc/nrd.htm>.

¹¹ See Director's Order 20, *Agreements*.



CRIMINAL PROCEEDINGS ARISING FROM INJURIES TO PARK SYSTEM RESOURCES

Law enforcement personnel often initially address incidents affecting Park System resources. In some instances, they will request that criminal proceedings be commenced against the person(s) who caused the injury. A decision on whether to proceed criminally will typically be made by park management in coordination with the U.S. Attorney's Office.

In a scenario where both criminal and civil cases are pursued, U.S. Department of Justice (DOJ) policy requires coordination between the criminal and civil attorneys for the government. In circumstances where there is no civil referral to DOJ, or where the decision whether or not to commence a civil case is deferred (it is not unusual to defer a civil case to await developments in the criminal case), SOL should be advised of the criminal proceedings and the criminal prosecutor should be provided with the name of the SOL attorney.

Where restitution to NPS is sought in criminal proceedings, it is important to consult with EQD/ERDAR in providing a damages amount to the criminal prosecutor. Such coordination between law enforcement personnel and technical experts is necessary to maintain consistency in how injuries are valued between criminal and civil cases. It is essential that there be a clear understanding with the criminal prosecutor about how damage assessment information will be used.

The criminal prosecutor has no authority to settle an NPS civil damages claim. Settlement of a civil claim may occur only with the approval of DOJ civil attorneys (with the concurrence of DOI) if the claim is for more than \$100,000, and by SOL (with the concurrence of NPS) if DOI's total claim is less than \$100,000. However, the criminal prosecutors do have the authority to pursue restitution and to agree to the amount of restitution in a plea agreement resolving the criminal matter. Typically, a prosecutor would consult with NPS law enforcement personnel before agreeing to a restitution amount. It is important, therefore, that NPS law enforcement personnel and other appropriate NPS staff working on a potential civil damages claim keep one another informed. An inadequate amount of restitution in a plea agreement may undercut the NPS civil damages claim. On the other hand, if the amount of restitution is sufficient, then the government resources that would have been consumed in a civil proceeding may be applied to other matters.

Defendants will sometimes request, as a condition of a plea agreement, that all of their potential liabilities, including civil ones, be resolved. It is inappropriate and potentially a crime for anyone to use, or threaten to use, criminal prosecution to gain an advantage in a civil matter. However, if the defendant's counsel asks the criminal prosecutor for a "global" settlement of all potential claims against the defendant, then NPS may wish to settle its civil claim, using PSRPA to achieve an overall settlement with the defendant. A written record of the request from the defendant's counsel is advisable.



Amounts awarded as restitution in criminal proceedings may be retained by NPS and applied to the injured resources pursuant to 16 USC 19jj-3.



SECTION 3: QUICK CLAIM PROCEDURES

In this section:
➤ Introduction
➤ Procedures

- Introduction
- Procedures

INTRODUCTION

EQD/ERDAR classifies PSRPA cases as one of three types: Quick Claim, Expedited Assessment, or Comprehensive Assessment. Quick Claim cases are the least complex and least difficult to pursue. For example, these cases could include claims for response costs only, where little or no injury has been determined. (See Section 2 of this handbook for a comprehensive discussion of the different case types and the case classification process.)

Criteria that indicate a Quick Claim classification include the following.

- **Exclusive involvement of NPS jurisdictions:** PSRPA is the only civil damages authority relied on, and NPS is the only trustee agency involved. A Quick Claim may be appropriate even if there are criminal proceedings. Please see Section 2 of this handbook for a discussion of how those proceedings relate to civil damages actions.
- **Simple resource injuries that do not require compensatory restoration:** Examples might include cases involving the destruction of traffic signs or designed landscapes that can be readily repaired or replaced. Compensatory restoration involves measures that replace lost resource services during the time a resource remains injured. Although Quick Claim cases involve measures that return injured resources to their baseline condition (i.e., primary restoration), they do not address compensatory restoration.
- **Assessments and determinations that involve straightforward investigations and analyses:** The efforts required to develop the claim for damages can be readily implemented with the resources at hand.
- **Primary restoration measures that can be readily identified and implemented:** The restoration measures required to return injured resources to their baseline conditions are clear and do not require significant research to identify or implement.



The procedures described in this section are appropriate only for cases that are classified as Quick Claim. Other cases, classified as either Expedited Assessment or Comprehensive Assessment, must follow the procedures described in Sections 4 through 7 of this handbook. If the circumstances of a particular case change, notify EQD/ERDAR immediately because re-classification may be needed.

PROCEDURES

These Quick Claim procedures are designed to streamline the damage assessment and restoration process for straightforward situations that do not involve compensatory restoration. For cases classified as Quick Claim, park staff can follow the five-step process below to minimize the number of reports and other process steps that are required to document PSRPA cases.

1. **Case Classification:** EQD/ERDAR, in consultation with park staff and SOL, classifies the case as Quick Claim. Cases that are not classified as Quick Claim must follow the procedures described in Sections 4 through 7. See Section 2 for an explanation of the case classification process.
2. **Preparation of the Claim:** Park staff document the details of the claim in the Case Incident Report. These details include a description of the incident and injured resources, an explanation of the causal links to the responsible party, an accounting of any response and damage assessment costs incurred as a result of the incident, and a description of required primary restoration measures and costs. The Case Incident Report will be reviewed by the EQD/ERDAR case officer.
3. **Request for Payment:** A request for payment of the claim is then prepared and signed by the park superintendent. (A suggested format is included in Appendix H.) This request is sent to the responsible party along with a copy of the Case Incident Report. Copies of these documents are also sent to EQD/ERDAR and the appropriate SOL office.



If the responsible party refuses the request for payment, contact the EQD/ERDAR case officer for consideration of next steps.

4. **Management of Recovered Damages:** All monetary damages recovered under PSRPA must be deposited in the DOI Restoration Fund. Recoveries for restoration costs earn interest while deposited in this fund, and may be withdrawn at any time to implement restoration. Other recoveries may also be withdrawn at any time; however, they do not earn interest. See Appendix F of this handbook for detailed deposit and withdrawal instructions.
5. **Implementation of Restoration:** Park staff plan and implement primary restoration of injured resources, and ensure compliance with environmental statutes and other requirements. Any recovered damages remaining after the costs of response, damage

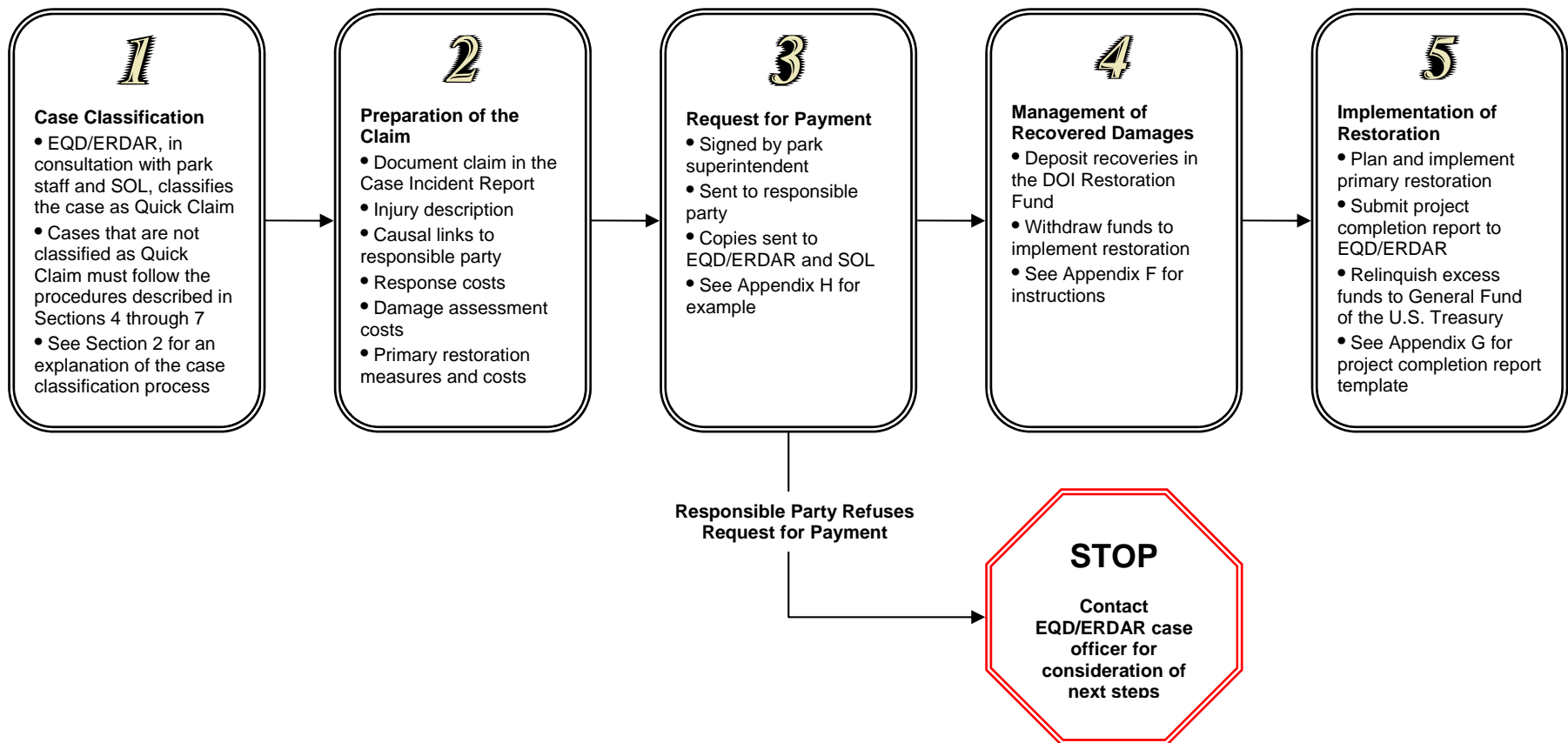


assessment, and restoration have been paid must be relinquished to the General Fund of the U.S. Treasury. Therefore, the park superintendent must submit a project completion report to EQD/ERDAR to document the restoration of injured resources and expenditure of recovered damages. See Appendix G of this handbook for the project completion report form.

These procedures are illustrated in Exhibit 3. EQD/ERDAR is available to provide guidance for claim preparation and other steps of the Quick Claim process as needed.



Exhibit 3 PSRPA Case Management Process: Quick Claim





SECTION 4: INJURY ASSESSMENT

In this section:

- Introduction
- Injury Determination
- Injury Quantification
- Required Documentation

INTRODUCTION

Injuries are typically assessed in two stages.

- First, the case team will make determinations regarding whether an injury has occurred relative to PSRPA authority, and whether the injury is linked to the behavior of the responsible party.
- Second, if an injury has occurred relative to PSRPA authority, the case team will proceed with quantifying the extent of the injury.

This section discusses these steps and reviews the documentation that the case team should compile as part of the injury assessment for a PSRPA case.

INJURY DETERMINATION

The case team should consider a number of fundamental issues as the first step in assessing injuries to Park System resources. First, consistent with the preceding discussion of response, the case team should determine whether the resources are located within the boundaries of a unit of the National Park System and not owned by a non-Federal entity, and whether any of the defenses under PSRPA apply (see Section 1).

Second, in determining whether an injury has occurred, the case team should consider the condition of the affected resources in addition to the purposes and values of those resources and the management objectives of the park. This will involve, for example, reviewing the NPS Organic Act and *Management Policies 2001*,¹² the park's enabling legislation and General Management Plan, and other relevant planning documents to determine that a measurable

¹² The NPS Organic Act is codified at 16 USC 1. The NPS *Management Policies 2001* can be viewed at <http://www.nps.gov/policy/mp/policies.pdf>.



adverse change has occurred with respect to the park’s management objectives. In other words, does the injury interfere with the ability of the park to conserve and manage its resources?

At this stage, the case team should prepare a written determination of injury. The determination should be qualitative and should address how the condition of the resource has changed relative to baseline conditions. The determination should also identify any information demonstrating a causal relationship between the incident and the adverse change in park resources. This determination serves as a basic starting point for injury quantification (see below) and will be included in the injury assessment report.

INJURY QUANTIFICATION

Considerations for Injury Quantification

Injury quantification is the process by which the case team, with the assistance of outside experts if necessary, determines the severity, extent, and duration of the adverse effect on Park System resources. The case team should consider several guidelines when gathering data and characterizing injuries. First, the nature of the injury must be characterized precisely. For example, if trees were removed from a site, it is important to specify if the land was bulldozed or if select species were targeted. This helps to determine not only the type of resource impacted, but also the percent of lost services provided by the trees and other vegetative cover. For instance, an area that was scraped clean by a bulldozer may have a 100-percent service loss, whereas an area that was selectively cut may only have a 60-percent service loss. This information is required to determine appropriate restoration measures for the injury.

Checklist of Considerations for Injury Quantification
<ul style="list-style-type: none"> <input type="checkbox"/> Characterize the nature of the injury precisely. <input type="checkbox"/> Use tangible, quantitative metrics to measure injuries. <input type="checkbox"/> Collect and preserve ephemeral data promptly. <input type="checkbox"/> Consider injuries relative to baseline conditions. <input type="checkbox"/> Characterize injuries in ways that will provide relevant information for restoration planning.

Second, to the extent possible, the injury should be characterized in quantitative terms rather than descriptive terms that are left open to subjective interpretation. For example, it is insufficient to describe a boating mishap as having spilled “extensive amounts” of gasoline. Instead, the case team should make a more precise estimate of the number of gallons of fuel spilled or estimate probable ranges if the precise volume is unknown. Furthermore, it is best if the metrics used are clear and tangible to a wide audience. For instance, if part of the park must be closed to the public, then the numeric change in visitation is a good metric for assessing the impact of the injury. The number of visitor days affected by the closure of an area (e.g., the number of visitors turned away at the entrance to a beach that was temporarily closed), or any impacts on special user groups related to the closure (e.g., boaters or equestrian groups) are particularly important.



Other tangible injury measures include injured habitat area, percent of services lost, and the length of time for the resource to recover.

Third, as noted earlier, park staff should gather data promptly after the incident, preferably during the initial response stage. Many types of injury data are ephemeral in nature, that is, the initial impacts fade quickly over time. These data should be gathered promptly to ensure an accurate record of the incident and its immediate effects. For instance, photographs of an oil slick will be essential to characterizing the initial impacts of a spill prior to dispersion of the oil. Appendix B contains immediate data collection procedures for this purpose.

Fourth, the case team should always develop the quantitative injury description in terms of the difference between the baseline and injured conditions. Baseline refers to the condition of resources and services that would have existed had the injury not occurred. Injury refers to an observable or measurable adverse change in a resource, or the loss or diminishment of services provided by that resource. Therefore, the injury quantification describes the reduction in the quality, function, or abundance of the resource from its baseline condition to its injured condition. The baseline condition of an injured resource may already be documented in previous studies or in routinely collected data such as the park's visitation statistics. Otherwise, the baseline condition will need to be established through the use of reference sites or other means.

Finally, when assessing injuries, it is imperative to think forward to the restoration determination phase. Specifically, the case team should consider measuring injury in ways that will provide relevant information for restoration planning. For example, measuring the number of campsites affected by a fire may provide relevant information for a restoration effort focused on replacing camping resources within the park.

Injury Assessment Methods

Appropriate injury assessment methods for PSRPA cases will vary greatly, depending on the nature and severity of the injury. PSRPA cases frequently entail injuries that require straightforward analyses compared to injury assessments for oil spills and hazardous substance releases addressed by OPA and CERCLA. This may be because of the nature of the injuries (e.g., acute physical injuries rather than chronic injuries with complex ecological implications) and the associated simplicity of demonstrating a causal link between responsible party behavior and resource injuries. As a result, PSRPA injury assessments often will not require extensive analysis to demonstrate that an injury has occurred or to evaluate the extent of the injury. Therefore, the type of quantitative characterization described above (e.g., acres burned, campsites lost) is often adequate for assessing injuries.

In addition, the team of individuals involved with PSRPA injury assessments is often smaller than teams for other, multi-agency damage assessment authorities (CERCLA and OPA). The absence of multiple trustees means that NPS staff can work relatively independently on injury assessments, reducing the effort devoted to multi-agency communication and coordination.



However, as with OPA and CERCLA cases, assessment methods selected for PSRPA cases should be generally accepted and scientifically sound.

While many cases may entail simple injury assessments, some cases will be more complex and require advanced assessment methods. These more advanced studies may entail any or all of the following components typical of a rigorous injury assessment.

- **Literature Reviews:** The ecological science and damage assessment literature may provide useful information for assessing injuries. In particular, documentation on past resource injuries may help in evaluating the current and potential extent of injuries involved in the incident under examination. A number of factors will influence the relevance of the literature studies, including the stressors (e.g., pollutants) involved and the exact resources (e.g., wildlife species) affected. Past NPS studies, especially those referenced in the park's General Management Plan, may be helpful.
- **Field Studies:** Field studies in the area of the incident may yield the most useful information for assessing injuries. The case team can develop a base of information through direct observation, photographs, videos, and samples of biota, sediment, water, or other relevant media. Data collection and analysis can sometimes be performed in consultation with local colleges and universities. In addition, the case team should take advantage of any data collected immediately after the incident. Even if data were not formally gathered as part of the initial response by NPS, other groups (e.g., local law enforcement officials) may have useful data to contribute.
- **Laboratory Studies:** In CERCLA cases involving contaminants, laboratory studies are often used to analyze field data, to determine the extent of exposure and injury, and to analyze the pathways through which pollutants move. For example, laboratory studies may measure how exposure to a pollutant affects the reproductive success of a particular species. These toxicity data may help in assessing likely injuries caused by the incident under consideration. Depending on the magnitude and importance of the incident, original laboratory studies may be warranted.
- **Modeling:** Scientists use models to analyze complex physical, chemical, or biological processes and systems. Typically developed through analysis of field data, a model establishes a set of mathematical relationships that allow the user to simulate how changes in key parameters affect an outcome of interest. For example, a model for assessing the fate and transport of heavy metals in soil and groundwater could simulate how long it will take a release of cadmium to reach a groundwater aquifer based on geological conditions and other variables. Other models may estimate how a pollutant affects wildlife in terms of survival, reproductive success, or other outcomes.

The above discussion represents only a brief introduction to the topic of injury assessment. A more detailed discussion of injury assessment methods can be found in the guidance materials



developed for use in damage assessment cases under OPA, i.e., *Guidance for Natural Resource Damage Assessment Under the Oil Pollution Act of 1990*, 1996 (Chapter 3, Injury Assessment Methods).¹³ For example, this OPA guidance provides more detailed information on spatial and temporal design for field sampling. Although that information applies to oil spills, much of it is generally applicable to any type of pollutant release incident.

Regardless of the methods applied, the case team should always exercise proper quality control in developing the injury assessment. Depending on the scope and complexity of the injuries, the assessment may involve extensive data collection and analysis. To ensure that the assessment results will hold up to scrutiny in litigation, the case team should manage all the relevant information carefully. This may involve, for example, documenting the methodology used to gather field data. Quality assurance efforts can range from common-sense actions (e.g., recording dates when photographs were taken, placing reference objects in photos to clarify the size of the subject) to formalized quality assurance programs that entail appointment of a quality assurance manager and development of a detailed quality assurance project plan. The OPA injury assessment guidance (see above) discusses the quality assurance process in greater detail.

REQUIRED DOCUMENTATION

The case team, in assessing injury, should produce the following documents.

- **Injury Assessment Report:** Although no one format is recommended, the injury assessment report should include:
 - ❑ A discussion of the factors (e.g., physical harm, contaminants) that caused the injury;
 - ❑ A description of the specific resources affected, including the same detailed injury description used in the injury quantification stage;
 - ❑ A discussion of the interim lost services associated with the injured resources (e.g., visitor day counts, habitat recovery periods, percent lost services);
 - ❑ A discussion of the methods used to assess injuries (e.g., direct observation, literature, models); and
 - ❑ A finding of injury determination.
- **Injury Assessment Cost Tracking Documentation:** Because the costs incurred in assessing injuries are potentially recoverable under PSRPA, the case team should

¹³ The OPA guidance is mentioned only as an example of injury assessment procedures, i.e., it is not incorporated by reference. All of the OPA guidance materials are available at <http://www.darcnw.noaa.gov/opa.htm>.



document all relevant expenditures, including time spent on the case. Appendix C provides cost tracking forms for this purpose.

The case team should determine, upon consultation with the assigned SOL attorney, which materials should be retained for inclusion in the case file.¹⁴ The NOAA injury assessment guidance for oil spills includes a listing of materials that may be useful in developing the claim. Note that if the case is to be pursued under OPA or CERCLA, a formal administrative record is required.¹⁵

One topic that deserves special attention is the handling of electronic mail. In general, e-mail correspondence should be printed out and included in the case file only if it is part of the sequence of decision-making on the case. However, all e-mail may be subject to discovery requests in litigation. Therefore, all correspondence, including e-mail, should be professional in tone and content, regardless of whether the case team plans to include it as part of the case file.

¹⁴ Also see Director's Order 19, *Records Management*.

¹⁵ See SOL memorandum "Guidance on Compiling an Administrative Record" dated January 7, 2000.



SECTION 5: RESTORATION DETERMINATION

In this section:
<ul style="list-style-type: none">➤ Introduction➤ Primary Restoration➤ Compensatory Restoration➤ Factors Affecting Selection of Restoration Measures➤ Required Documentation

INTRODUCTION

Once the injury assessment is complete, the case team uses the assessment to determine what restoration measures are appropriate. In general, restoration refers to the process of returning injured resources to their baseline conditions and replacing the services lost when resources are injured. Determining the proper type and amount of restoration is often challenging and must be done carefully to ensure that the damages claim is defensible. The restoration project team provides restoration design and cost expertise to assist the case team in this determination. This section reviews the two main categories of restoration described below.

- **Primary Restoration:** Primary restoration measures return injured resources and resource services to their baseline conditions.
- **Compensatory Restoration:** Compensatory restoration measures replace resource services lost during the time that a resource is injured.

The discussion below examines applicable restoration determination methods and the interaction between primary and compensatory restoration. Finally, the documentation required at the restoration determination stage is reviewed.

PRIMARY RESTORATION

As noted, primary restoration refers to the process of returning injured resources and associated services to their baseline conditions. In some situations, primary restoration may involve active measures that accelerate the return of injured resources to baseline. In other situations, primary restoration may rely on passive measures that allow injured resources to return to baseline, such as fencing to control deer browsing.



The following discussion addresses the various categories of primary restoration, how primary restoration is scaled to the injuries in question, and how to determine the cost of primary restoration.

Selection of Primary Restoration

In general, primary restoration measures include restoring the injured resource directly, replacing the injured resource, and acquiring an equivalent resource. This categorization can be broken down further, as follows.

- **On-Site and In-Kind Restoration:** This approach involves restoring resources or services at the site where the injury occurred. Furthermore, the physical, biological, or cultural nature of the resources or services restored is the same as those lost. For example, if an adjacent landowner drains freshwater wetlands on NPS property, the process would include restoring those wetlands to their previous condition.
- **Off-Site and In-Kind Replacement:** This approach involves restoring resources or services of the same physical, biological, or cultural nature as the injured resources, but at a site different from the injury. Continuing the above example, the process would include restoring wetlands, but in a separate area of the affected park.
- **On-Site and Out-of-Kind Replacement:** This approach entails restoration at the affected site, but the resources or services restored are physically, biologically, or culturally distinct from those injured. Continuing the example, rather than restoring wetlands at the injured site, the process might include planting trees and establishing forest habitat on the affected land.
- **Off-Site and Out-of-Kind Replacement:** This approach entails restoring resources that are physically, biologically, or culturally distinct from those injured and which are in a different location. Continuing the example, the process might include restoring forest habitat in a separate area of the affected park.
- **Acquisition of the Equivalent:** Under the acquisition approach, NPS may allow the responsible party to acquire equivalent resources or services by purchasing private property and placing the property under public ownership and protection. Alternatively, NPS may use monetary damages recoveries to acquire equivalent resources or services. Such measures are intended to ensure that the relevant resources and services will not be lost in the future. For example, a settlement of damages could specify that the responsible party buy a private parcel that has resources and resource services that are comparable to those injured or lost. Nevertheless, it is important to note that acquisitions of land or water rights made from PSRPA damages recoveries must be specifically approved in advance in Congressional appropriations acts, and are subject to any limitations contained in the



organic legislation for the park (16 USC 19jj-3(b)). If this approach is followed, it is important to consider all the costs associated with land acquisition in the claim (e.g., survey and environmental compliance costs).

These categories of restoration measures are presented in hierarchical order. That is, the preferred method of restoration is to directly restore the injured resource in question, i.e., on-site and in-kind restoration. Park staff should keep in mind that the further down the hierarchy they move, the greater the need to demonstrate that the recommended restoration addresses the injured resources and lost services.

The selection of primary restoration measures should also consider the relative project implementation costs. The cost of implementation is considered reasonable if it is necessary for the restoration measure to achieve baseline and if the restoration measure conforms to applicable management policies and objectives. Feasible restoration measures should be arrayed according to their anticipated effectiveness in achieving baseline, conformity with applicable management policies, and cost of implementation. This determination should be documented in the Restoration Determination Report.

Scaling Primary Restoration

At this point, the case team scales the selected primary restoration measures to be commensurate with the resource injury. Scaling is the process of determining the appropriate size or degree of restoration. Because the goal of primary restoration is to return the injured resources and resource services to their baseline conditions, scaling primary restoration involves comparing the condition of the injured resource to its baseline condition, then determining the quantities of labor, materials, equipment, and other requirements needed to re-establish baseline.

Scaling primary restoration will be straightforward in many situations. For example, if a fire partially destroys a forest, scaling might simply involve determining the number of trees and the amount of labor needed to re-vegetate the burned area. That could be done by obtaining contractor bids or by relying on expertise within the park.

A number of factors can make scaling primary restoration more complex, however. In the example above, if the baseline conditions of the burned forest are not known, it may be necessary to establish statistically controlled baseline reference plots in adjacent areas with a similar ecological setting to determine the proper mix of species to plant. Other primary restoration measures, such as invasive species control and area closures, may also need to be scaled to successfully re-establish the forest.

In addition, restoration approaches other than on-site/in-kind will require closer attention to scaling questions. For instance, if a different type of forest habitat is to be established in exchange for the injured forest, simple scaling rules (e.g., X acres of one type of forest habitat is equivalent to Y acres of another type) may not exist. The case team will need to craft a rationale



that justifies the scale of primary restoration, preferably in terms of ecological or human use services provided.

Estimating the Costs of Primary Restoration

Completing a Restoration Determination Report will require proposing one or more restoration measures as well as estimating the costs associated with those measures. The demands associated with estimating prospective restoration costs vary greatly, depending on the nature of the restoration. For example, estimating the cost of replacing injured signage will involve minimal research. In contrast, rebuilding coral reef structure injured by a vessel grounding may require substantial research by experts in engineering and marine sciences.

In many cases, an effective approach to estimating restoration costs will be to gather competitive bids from commercial contractors specializing in the desired restoration services (e.g., wetlands restoration and construction). For larger restoration operations (e.g., those costing more than a few thousand dollars), it is advisable to gather multiple bids to ensure that the cost estimates are reasonably priced and defensible. Costs incurred by NPS in obtaining such estimates should be tracked and included as assessment costs in the claim. The case team should request clearly documented bids that itemize costs to a level that helps EQD/ERDAR and other parties involved in the case understand the proposed restoration process and the final “product” that will result. When appropriate, costs should also be stated on the unit level (e.g., dollars per acre of wetland restored); such figures will help incorporate cost considerations into the restoration selection process.

Certain types of restoration are common and established enough that key cost parameters can be obtained through literature reviews and applied in developing preliminary cost estimates. For example, data exist on the per-acre cost of replanting deciduous forests. This information would allow the case team to develop a preliminary estimate of restoration costs to assist in planning and selecting primary restoration measures. Note that the availability of literature-based cost information does not necessarily eliminate the need for bids from contractors. Such bids will help support the claim and will assist in managing the process during the restoration implementation phase.

Researchers have compiled restoration cost literature reviews for a number of resources and injury types. For instance, the primary restoration guidance manual developed for damage assessment under OPA provides cost information on restoration of a variety of habitats, including salt marshes, forested wetlands, mangrove swamps, seagrass beds, kelp beds, and sand beaches.¹⁶

¹⁶ See *Primary Restoration: Guidance Document for Natural Resource Damage Assessment Under the Oil Pollution Act of 1990*, 1996, NOAA, Chapter 4. All of the OPA guidance materials are available at <http://www.darcnw.noaa.gov/opa.htm>. The OPA guidance material is mentioned only as an example of restoration cost literature and is not incorporated by reference.



Finally, it is important to include all the ancillary costs of restoration to ensure effective implementation. These include the costs to prepare a restoration plan, to conduct environmental or other required compliance studies, such as that required under the National Environmental Policy Act (NEPA), and to fund the continued operation of a trustee council if pursuing a claim under CERCLA or OPA. Some costs can be estimated by obtaining bids from commercial contractors with the appropriate expertise. It might also be possible to estimate certain costs, such as those to fund the continued operation of a trustee council, based on past agency experience with similar cases.

COMPENSATORY RESTORATION

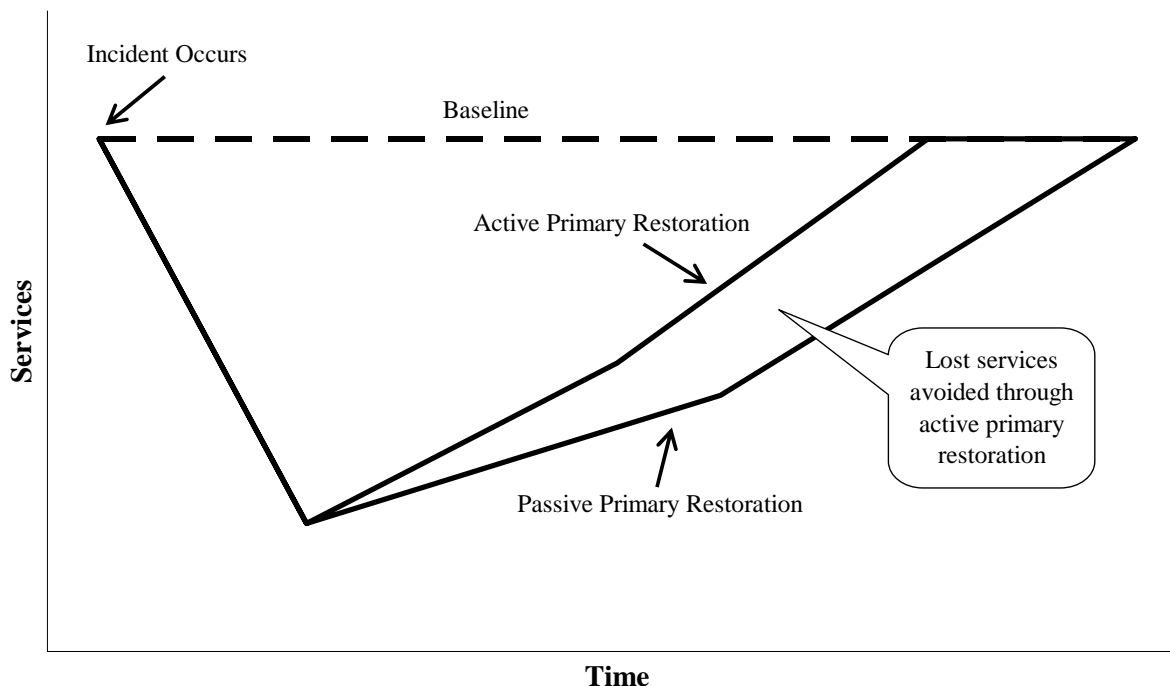
Distinct from primary restoration, compensatory restoration activities are intended to replace a specific quantity of lost or diminished services. The lost or diminished services provided by a resource can involve either ecological services or human use services. Losses continue from the time of the injury until baseline conditions are achieved. For example, a primary restoration program may, over several years, replace illegally filled wetlands. However, during the time that wetland restoration is being implemented, wildlife and the public lose the services that the wetlands would have provided absent the injury. As with other damage assessment statutes, PSRPA allows NPS to recover damages for these interim lost services.

This concept is illustrated by the example in Exhibit 4. In this example, an incident results in a resource injury, which causes resource services to drop below the baseline levels that otherwise would have occurred. If passive primary restoration measures that allow natural recovery are selected, the services provided by the injured resource are expected to follow the lower restoration time path labeled “Passive Primary Restoration.” Alternatively, if active primary restoration measures that accelerate recovery are selected, the services provided by the injured resource are expected to follow the higher restoration time path labeled “Active Primary Restoration.” In either situation, the amount of lost services at any point in time would be defined by the distance between baseline and the chosen restoration time path. Therefore, as this example illustrates, active primary restoration measures accelerate recovery to baseline conditions and reduce the total amount of lost services.

This resource recovery pattern illustrates how the type and amount of primary restoration directly influences the type and amount of compensatory restoration required. The total quantity of lost services to be replaced by compensatory restoration depends, in part, on how rapidly and how completely injured resources are returned to their baseline conditions through primary restoration. Therefore, before the scale of compensatory restoration can be determined, appropriate primary restoration measures must be selected. The determination of compensatory restoration may also be influenced by response actions because injured resources may be partially or even completely restored to their baseline conditions by such actions.



Exhibit 4
Relationship Between Primary Restoration and Lost Services



This section discusses the selection and scaling of compensatory restoration measures. The considerations relevant to estimating the cost of compensatory restoration are the same as those discussed above for primary restoration, and are not repeated here.

Selection of Compensatory Restoration

Compensatory restoration measures must be selected to replace lost services with comparable services. Consistent with the automobile accident analogy discussed earlier, compensatory restoration is the equivalent of providing comparable transportation services (e.g., a rental car) during the time that the injured party’s car is being repaired. To consider a more pertinent example, if a fire destroys a campground area, compensatory restoration might entail establishing temporary camping facilities elsewhere in the park until primary restoration measures restore the original campground. Another option would be to enhance existing campgrounds to offset service losses at the injured site.

The selection of compensatory restoration measures to provide comparable services depends on the nature of the lost services. Measures to replace lost ecological services should be tailored to provide services or functions that are comparable to those provided by the injured habitat in its baseline condition. For example, compensatory restoration measures for an encroachment that involved cutting native tree species might replace lost services through invasive species control in similar habitats elsewhere in the park. Similarly, measures to replace lost human use services



should benefit visitor use. If a hiking trail was closed as a result of an injury, compensatory restoration measures could provide comparable services by improving access to hiking trails or by enhancing interpretative opportunities along trails within the park.

The selection of compensatory restoration measures should also consider the relative project implementation costs. The cost of implementation is considered reasonable if it is necessary for the restoration measure to provide comparable services and if the restoration measure conforms to applicable management policies and objectives. Feasible restoration measures should be arrayed according to their anticipated effectiveness in providing comparable services, conformity with applicable management policies, and cost of implementation. This determination should be documented in the Restoration Determination Report.

Scaling Compensatory Restoration

Determining the proper scale of compensatory restoration can be complex. It requires a basic understanding of key ecological and economic concepts. These concepts are discussed below in terms of two categories of resource services that compensatory restoration typically addresses: lost human use services and lost ecological services.

Lost Human Use Services

People generally benefit from the activities they choose to participate in, and may suffer a loss when those choices are restricted by an event outside their control. Therefore, when a resource injury forces National Park visitors to endure a diminished experience or to forgo their visits altogether, they may incur a loss. For example, park visitors may have their hiking experience diminished by a tree cutting encroachment that mars an otherwise scenic view. Similarly, would-be park visitors who cannot swim at a seashore because of an oil spill may lose their desired experience altogether.

Economists have developed generally accepted methods for measuring the economic value of lost human use services. All of the applicable methods quantify lost economic value. Economic value is a net-benefit concept that equals the maximum willingness to pay for a resource or service minus the costs incurred to use that resource or service.¹⁷ As such, economic value is analogous to the equity value of real estate. In that analogy, equity equals the maximum sales potential of real estate minus the costs of ownership (including any transactions costs incurred in transferring real estate). Therefore, equity represents the true value of real estate because the owner is free to spend or invest that amount at will. In the same way, the lost economic value incurred by park visitors represents the true value of their losses resulting from a resource injury.

¹⁷ Maximum willingness to pay is the most a person is willing to give up in other goods and services to use the resource or service in question. Maximum willingness to pay can be quantified in dollars because the number of dollars a person is willing to pay for something indicates how much of other goods and services he or she is willing to exchange for that item. See Freeman (1993) for a more detailed discussion of this concept.



When planning and scaling compensatory restoration, it is important to consider the full suite of economic values that park resources can provide to visitors. First, remember that resources, especially natural resources, provide market as well as “non-market” services. Some resources (e.g., water, timber) are bought and sold in markets that provide information on their economic value. In contrast, non-market goods and services are not traded in conventional markets with buyers and sellers and established prices. However, individuals value many of these goods and services in much the same way as they do commercially traded goods and services. For example, a recreational angler may value the opportunity to fish in a pristine stream, despite the fact that he or she pays no explicit price for this activity.

In addition, the case team may examine potential losses of both use and “non-use” values. As implied, use values accrue to individuals who directly use a resource (e.g., an angler who fishes in a stream). However, economists also analyze economic benefits that accrue to those who do not directly or currently use the resource and perhaps never intend to do so. Economists refer to these benefits using several different terms, including non-use value, intrinsic value, existence value, and passive use value. The underlying motivations for non-use value include the satisfaction that a particular resource exists in a given state and/or a desire to preserve the resource for future generations. The concept of non-use value is generally accepted by most economists, is officially recognized by many state and Federal agencies, and is recognized in Federal as well as in many state courts. This concept is also central to the National Park System mission of preserving examples of our natural and cultural history for the use and enjoyment of future generations.

Under PSRPA, the compensatory restoration of lost human use services is generally scaled using the following three-step process.

- Step 1:** Estimate the economic value of lost human use services using applicable methods. This step must be coordinated closely with EQD/ERDAR to ensure defensibility.
- Step 2:** Select compensatory restoration projects that provide human use services comparable to those lost as a result of the resource injury.
- Step 3:** Scale selected projects such that their cost equals the economic value of lost human use services.

In certain situations involving the assessment of oil spills under OPA, the process in Step 3 may be changed to scaling selected projects such that the *economic value* they provide equals the economic value of lost human use services. See the OPA damage assessment regulations at 15 CFR Section 990.53(d)(3) for applicable requirements in those situations. If required, that approach may involve significantly more time and budget resources to implement than the three-step PSRPA process described above.

Appendix E presents a general overview of the economic valuation methods that economists apply to value the human use services that park resources provide. The case team will employ



the expertise of the Economic Support Unit of EQD/ERDAR to determine the applicability of these methods for scaling compensatory restoration.

Lost Ecological Services

Park System resources often provide ecological services in addition to human use services. These services include the functions performed by a resource for the benefit of other resources, such as when a habitat provides food and refuge for fish and wildlife species. People generally value such ecological services, and these values can be assessed using applicable original research methods described in Appendix E.

Under certain conditions, an expedited approach called Habitat Equivalency Analysis (HEA) can be used to scale the compensatory restoration of lost ecological services. HEA scales compensatory restoration such that the total quantity of ecological services to be provided by compensatory restoration is sufficient to offset the total quantity of lost ecological services resulting from the injury.¹⁸ In that way, the compensation for lost ecological services is determined in the form of “in-kind” restoration. Rather than relying on economic valuation methods to establish the monetary value of an injury, HEA focuses on quantifying the physical restoration measures that are required to replace lost ecological services with comparable services.

HEA is a widely used method in damage assessments conducted under PSRPA, OPA, and CERCLA. HEA is specifically listed as a method that may be used to scale compensatory restoration in the preamble to the damage assessment regulations for OPA (see volume 61, page 498 of the Federal Register, January 5, 1996). HEA is also described in the U.S. Fish and Wildlife Service manual for conducting natural resource damage assessments.¹⁹

Appendix E presents a more detailed description of this method, including the conditions for its valid application. The case team will employ the expertise of the Economic Support Unit of EQD/ERDAR in determining the applicability of and conducting HEA for particular cases.

¹⁸ Ecological services lost or provided at different times are compounded or discounted at an appropriate rate to reflect time preference considerations. See Appendix E for a description of this process.

¹⁹ See Unsworth and Petersen 1995.



FACTORS AFFECTING SELECTION OF RESTORATION MEASURES

Feasible primary and compensatory restoration measures should be arrayed according to their effectiveness, conformity with applicable management policies, and cost of implementation. The nature and extent of the resource injury and service loss will define the relevant measures for evaluation. The case team, in consultation with the restoration project team, must consider restoration measures that benefit the injured resource or that address the affected resource service. Other factors affecting the evaluation of restoration measures include consistency with existing management plans and the consideration of existing partnerships. These are discussed separately below.

Factors Affecting Selection of Restoration Measures
<ul style="list-style-type: none"><input type="checkbox"/> Consider measures that benefit the injured resource or address the affected resource service.<input type="checkbox"/> Array measures according to their effectiveness, conformity with policy, and implementation cost.<input type="checkbox"/> Consider General Management Plans and other management documents as a source of restoration measures.<input type="checkbox"/> Consider restoration measures recommended by existing resource management partners.

Consistency with Management Plans

The case team may want to identify overlap or synergies between restoration measures and existing park plans such as the General Management Plan. For instance, a particular restoration measure may already be part of an existing park-wide restoration plan, and the PSRPA cost recovery would allow NPS to implement the measure without drawing on park budget. Such synergies also may facilitate implementation of the restoration measures by eliminating or reducing permitting, planning, or scoping efforts. Although such considerations may not be the overriding factor in selecting a restoration measure, they are important in the overall evaluation of a set of restoration measures.

Consider Existing Partnerships

When examining restoration measures, the case team should also consider resource management partnerships with non-governmental organizations or other interested parties. For example, resource management partners may have presented restoration recommendations in the past that could be implemented through PSRPA restoration recoveries. Integrating partners' perspectives into restoration selection may make the restoration plan more appealing to them and help preclude opposition later in the process.



REQUIRED DOCUMENTATION

The case team, in determining restoration measures, should prepare a restoration determination report and cost tracking documentation. Although these materials do not constitute the restoration plan, they do set the framework for its development.

- **Restoration Determination Report:** Although no particular format is required, the restoration determination report should include:
 - ❑ A summary of the injury assessment methods and findings, and their relevance to the selection of primary and compensatory restoration measures;
 - ❑ A description of the restoration goals, including key resources and service flows to be restored;
 - ❑ A description of the possible restoration measures considered;
 - ❑ A description of the selected primary and compensatory restoration measures and their associated costs;
 - ❑ An explanation of how the selected primary and compensatory restoration measures benefit the injured resource or address the affected resource service;
 - ❑ A summary of the primary and compensatory restoration scaling methods, analyses, and results; and
 - ❑ A determination that the selected primary and compensatory restoration measures, and their scales, are appropriate for the resource injury and lost services. This determination should include considerations of effectiveness, conformity with applicable policy, and implementation cost.
- **Restoration Determination Cost Tracking Documentation:** As with the response and injury assessment stages, the case team must keep detailed records of the expenses incurred during restoration determination. These expenses may include park staff time and the time of individuals providing analytic support (e.g., EQD/ERDAR). Include time spent not only preparing the report but also managing the planning process (e.g., consultations with resource management partners). Other costs may include expenses associated with obtaining bids on restoration projects and field study costs beyond those associated with the injury assessment. See Appendix C for cost tracking forms.



SECTION 6: CLAIM RESOLUTION

In this section:

- Introduction
- Elements of the Claim Report
- Claim Approval Process
- Resolution of Damages
- Receipt of Damages

INTRODUCTION

Once restoration measures are determined, NPS can present a claim for damages. The objective of this stage is to prepare the demand for payment of damages to be presented to the responsible party (RP). Full payment of the demand will release the RP from liability to the U.S. and thus “settle” the case. If settlement cannot be reached, the U.S. may choose to litigate the case by filing a civil lawsuit in the appropriate Federal district court and seek payment of damages consistent with requirements and limitations in the PSRPA statute.

This section discusses the process for resolving PSRPA claims, including compiling the claim report, approving the claim, resolving the claim through settlement or litigation, and depositing recoveries into the DOI Restoration Fund.

ELEMENTS OF THE CLAIM REPORT

The claim report gathers and integrates the cost and damages information developed in earlier stages of the process. It consists of several documents packaged together, specifically:

- The response report (described in Section 1);
- The injury assessment report (described in Section 4);
- The restoration determination report (described in Section 5); and
- The cost documentation report.

In addition to the components of the claim report already described in Sections 1, 4, and 5, the case team will need to assemble the cost documentation prepared at various stages and organize this material into an overall cost documentation report. This report should first clearly document and summarize actual costs incurred to date and include all supporting materials (i.e., receipts,



invoices, time sheets, etc.). These costs may include, for example, the cost of NPS and SOL staff time and that of consulting agencies (e.g., U.S. Fish and Wildlife Service), of non-governmental organizations retained by NPS, and of contractors tasked to develop the injury assessment and determine appropriate restoration measures. Second, the report should present and summarize all expected future costs, including the estimated costs of implementing the preferred primary and compensatory restoration measures, including project oversight, design, permitting, and environmental compliance costs. Additionally, the report should include anticipated management fees for recovered funds. There are no management fees associated with funds deposited in the DOI Restoration Fund. However, other mechanisms, such as court registry accounts, may have associated fees.

If other state or Federal agencies assist the park at any stage in the assessment process, NPS must establish some form of cooperative agreement (interagency agreement or memorandum of understanding) with them, clearly outlining procedures for payment of services. These documents should be submitted with the cost package. Likewise, in the case of a contractor or NGO, a copy of the contract should be provided with the cost documentation report.

When preparing the cost documentation report, the case team should include both direct and indirect costs. Direct costs include labor hours, travel costs, contractor costs, and costs of materials that are devoted specifically to the case. In contrast, indirect costs are those costs that are not associated specifically with the case but are attributable to various activities within the park, NPS, or DOI. For example, indirect costs may include the cost of senior management, support services (e.g., copying), and some share of rent, utilities, office supplies, and other costs not solely linked to a specific project or activity. Any presentation of indirect costs must be supported by an appropriate analysis and supporting documentation.

Elements of the Claim Report	
<input type="checkbox"/>	Response Report
<input type="checkbox"/>	Injury Assessment Report
<input type="checkbox"/>	Restoration Determination Report
<input type="checkbox"/>	Cost Documentation Report
<input type="checkbox"/>	Past and future costs
<input type="checkbox"/>	Direct and indirect costs

Because indirect costs are not solely linked to a specific activity, they are typically derived using an indirect cost rate. This rate is usually applied to direct labor costs to calculate total indirect costs. The following describes indirect cost rates that may apply to a single damage assessment case.

- The DOI headquarters indirect rate covers the cost of involvement by the Office of the Secretary, SOL, the Office of the Inspector General, and the Interior Service Center and National Business Center. The headquarters indirect rate is currently 16.84 percent and is applicable to direct labor costs.²⁰ That is, all direct labor costs

²⁰ This rate is subject to change; the case team should verify that up-to-date indirect rates are used in formulating costs. See the memorandum from the DOI NRDAR Program Manager dated August 4, 2000, in Appendix F of this handbook.



attributable to a particular case should be multiplied by 0.1684 to calculate these indirect costs. This indirect rate applies to CERCLA and OPA cases only.

- The DOI program management indirect rate reflects costs associated with DOI's Restoration Program Office. This program includes representatives from SOL, the Office of Environmental Policy and Compliance, and other DOI support bureaus. The indirect rate for program management is currently under review. This indirect rate also applies to CERCLA and OPA cases only.
- Each DOI bureau may have an indirect rate that is applied to derive indirect costs incurred by respective bureaus. NPS indirect rates are currently under development.
- Finally, by statute, DOJ must collect 3 percent of any recovery in which it was involved.

Appendix F provides further explanation and guidance on indirect cost recovery.

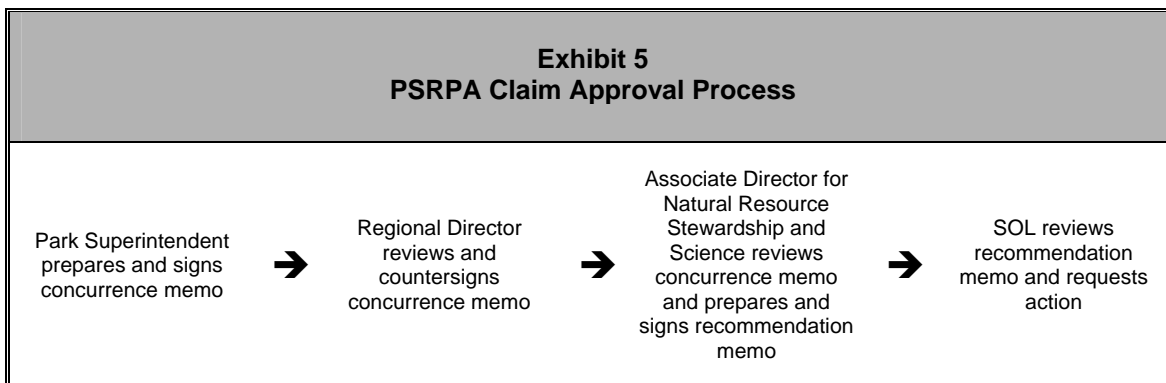
CLAIM APPROVAL PROCESS

Once a claim report is prepared, it must pass through three review and approval steps. Exhibit 5 summarizes the steps that must occur before a PSRPA case passes to the damages resolution stage. These steps include the following.

- First, the park superintendent prepares and sends a brief concurrence memorandum to the Associate Director for Natural Resource Stewardship and Science through the Regional Director. A copy of this memorandum should also be sent to the SOL attorney assigned to the case. This memorandum summarizes the components of the claim and recommends a settlement or litigation position. It highlights the restoration measures to be performed, either by the RP or NPS, and the benefits to NPS resources that can be expected from restoration. It also describes funds to be recovered to reimburse NPS for response, assessment, and future restoration costs, and provides a monetary range within which the park is willing to settle the claim. This range should be agreed to by all NPS parks and offices involved in the case. The range of settlement is important in that it gives SOL and DOJ guidance for negotiations. The settlement range, once agreed upon, should be based on the inclusion or exclusion of certain components of the claim, so as to provide a framework for restoration planning.
- The Regional Director reviews and countersigns the concurrence memorandum, and then forwards it to the Associate Director for Natural Resource Stewardship and Science.



- Upon receipt of the fully executed concurrence memorandum, the Associate Director for Natural Resource Stewardship and Science sends a recommendation memorandum to SOL. This memorandum, which constitutes the official NPS approval of the recommended settlement or litigation position, requests appropriate action by SOL (e.g., referral to DOJ).



The approval process for a CERCLA or OPA damage assessment case is essentially the same as for a PSRPA case with two exceptions. First, under OPA and CERCLA, NPS must obtain concurrence from the other natural resource trustees involved in the case (e.g., U.S. Fish and Wildlife Service, state agencies, and tribal agencies). The second exception is that the Associate Director for Natural Resource Stewardship and Science sends a recommendation memorandum to the DOI Authorized Official (AO) designated for the case, rather than to SOL. However, a copy of this memorandum should be sent to the SOL attorney assigned to the case. See Director’s Order 14, *Resource Damage Assessment and Restoration*, and Part 521, Chapter 2, in the DOI Departmental Manual for more information concerning the AO.

RESOLUTION OF DAMAGES

Once the required approvals are obtained, the claim enters the resolution of damages stage. Here, the case team focuses on presenting the claim (which supports the conditions set forth in the demand) and resolving it through either litigation or a settlement agreement with the responsible party. At this point, the case team may expand to include an attorney assigned by DOJ. DOJ typically takes the lead at this stage, so other case team members should expect to play more of a support role during resolution of damages. Only DOJ has authority to settle claims greater than \$100,000 whereas SOL can settle lesser claims. NPS cannot accept or reject offers directly, but can set the conditions of settlement. These conditions may include restoration measures to be performed by the RP and/or monetary recoveries as documented in the concurrence memo.

The claim is usually communicated as a demand letter, informing the responsible party of the injury and explaining his or her legal and financial obligations under PSRPA. The exact nature of the demand letter will vary depending upon the injury and other circumstances. The demand



letter will summarize the injury, itemize the various categories of costs incurred and anticipated, and explain the restoration process. The demand can only be communicated to an RP under the signature of the appropriate SOL attorney or other delegated official. However, prior to sending the demand letter, the claim must go through the approval process described above.

Settlement

In resolving PSRPA claims, NPS seeks to minimize litigation costs through settlement negotiations with the RP, provided that a fair and reasonable settlement can be achieved that is adequate in the judgment of NPS to satisfy the goals of PSRPA. In that regard, NPS gives particular consideration to the adequacy of a proposed settlement to replace, restore, or acquire the equivalent of injured Park System resources and their associated services. The claim report provides the framework for this consideration because it documents the nature and extent of injuries and the specific restoration measures deemed appropriate to address those injuries. Therefore, the adequacy of any proposed settlement should be weighed against the assessments and determinations documented in the claim report in addition to such factors as delayed recovery through protracted litigation, unrecoverable litigation costs, and litigation risks (see below).

Certain other factors are also important when considering a particular settlement position. First, any settlement should account for the ancillary costs of restoration to ensure effective implementation. These include the costs to prepare a restoration plan, to conduct environmental or other required compliance studies, such as that required under NEPA, and to fund the continued operation of a trustee council if pursuing a claim under CERCLA or OPA. If the park is planning other restoration projects, it may be possible to take advantage of economies of scale by combining the planning and compliance efforts of different projects, and thereby mitigate these ancillary costs to some degree. However, if that is being contemplated for a particular settlement, care must be exercised to ensure that such economies of scale are actually possible and can be reasonably achieved.

And finally, the case team should consider how to build flexibility in the resolution document (e.g., consent decree) to accommodate potential changes in restoration measures that may be necessitated as a result of environmental and other compliance actions. This is particularly important for restoration-based settlements involving the performance of specific restoration measures by responsible parties. Flexibility may also be needed if restoration planning identifies infeasible restoration measures. Flexibility in the settlement document is important to preclude re-negotiating a settlement position with the responsible party and obtaining requisite court approvals. These issues should be discussed with the assigned SOL and DOJ attorneys early in the settlement negotiations.



Litigation

If a case moves forward into protracted litigation, the additional workload and cost may be extensive. First, the case team may need to assemble information and identify potential witnesses to support the NPS case. Fact witnesses testify as to the chain of events that led to the injury, how the injury was discovered, and what initial steps were taken to respond to the incident and/or assess injuries. Case team members should expect to be called as fact witnesses if the case enters litigation. Expert witnesses may be employed to testify to the scientific basis of the claim. Expert witnesses are typically non-park staff and may include ecologists, biologists, engineers, economists, or other individuals with expertise in a key discipline. Typically, SOL and DOJ are responsible for selecting witnesses, but NPS may be required to fund their involvement.

Response to interrogatories and other discovery requests represents another work task and cost requirement in litigation. Counsel for the responsible party may ask the government to respond to written questions regarding the facts of the case (i.e., interrogatories). Moreover, all materials related to a case are subject to discovery requests by the responsible party's attorneys. These materials may include intermediate reports, notes from meetings, and all correspondence, including e-mail. Labeling case material as "confidential" and/or "attorney-client privileged" may be advisable where appropriate, but does not necessarily exempt the material from discovery. Therefore, all reports and communications should have a professional tone and be prepared with the assumption that they may be obtained by the RP during discovery. The case team has the responsibility for determining that information produced in discovery is accurate and complete.

Depositions are also a key component of litigation. Depositions are discovery actions in which the attorney for one party asks oral questions of the other party or witnesses. A deposition is conducted under oath, but outside of the courtroom. The case team and other NPS staff may be called on to provide a deposition or to review the depositions of others involved in the case. The case team may also be asked to review expert witness reports developed by the defendant or to help prepare the government's expert witnesses.

Litigation Risks

All, including park staff, should keep in mind the risks associated with litigation. Throughout the process, SOL attorneys communicate the technical and legal strengths of the case to DOJ. Together, the case team advises park management and the Associate Director for Natural Resource Stewardship and Science whether to settle or litigate, and, if relevant, what level of resources to invest in litigation.

There are no guarantees that damages will be awarded. The outcome of a case depends on many factors, including whether any of the legal defenses are found to apply, whether injuries are



clearly linked to the responsible party's actions, and whether the restoration plan is credible and likely to succeed. In addition, it is important to note that costs involved in litigation are not recoverable under PSRPA or any of the other Federal damage assessment and restoration authorities. NPS will have to bear all litigation costs not covered by DOJ litigation funds. Therefore, the case team should work with counsel to understand the demands of litigation and estimate what NPS participation may cost. In particular, it is important to weigh the continuing loss or injury to the resources involved in the incident against the uncertain benefits of prolonged litigation, especially when the RP makes a settlement offer.

RECEIPT OF DAMAGES

Upon resolution of the claim, the RP must follow the instructions provided in the settlement or judgment document and remit payment of damages to NPS or DOJ. All recovered funds must be deposited in the DOI Restoration Fund. In anticipation of receipt of the damages, the case team should initiate a deposit form, which tells the DOI Restoration Fund manager how to allocate recovered funds between restoration, past costs, and future costs. This allocation must be consistent with the settlement or judgment document and the underlying claim report. The deposit form also specifies which entities (e.g., park, EQD/ERDAR, SOL) are entitled to past costs and how much they are to receive.

Appendix F describes the management of funds in greater detail and provides the appropriate forms for depositing (and withdrawing) funds in (and from) the DOI Restoration Fund. Proper management of recoveries is critical to the process and the case team should review the instructions carefully.



SECTION 7: RESTORATION PLANNING AND IMPLEMENTATION

In this section:

- Introduction
- Restoration Planning
- Withdrawing Funds
- Project Completion
- Required Documentation

INTRODUCTION

Once a resolution of damages has been achieved, the process proceeds to restoration planning and implementation. At this point, EQD/ERDAR will work closely with park staff on a project team to review restoration requirements and perform restoration measures. At a minimum, the project team will include a project manager assigned by EQD/ERDAR and a park representative assigned by park management. This section reviews several key activities, including preliminary planning steps that the project team should complete before proceeding with restoration, withdrawing funds from the DOI Restoration Fund, and documenting the completion of restoration activities.

RESTORATION PLANNING

To restore injured resources in a timely manner, the project team should be formed within three months of the time that damages are deposited into the DOI Restoration Fund. Forming the project team is crucial to restoring the injured resources as quickly as possible, thus minimizing any further injury that could occur due to the initial injuries. The project team should determine the appropriate restoration planning steps and documents that will be required before restoration implementation.

A restoration plan must always be prepared before implementation of any restoration measure. This plan may be in the form of a memorandum, formal plan, or any other acceptable means that clearly describes the restoration measure, its associated costs, and how it links to the injured resources and/or affected resource services. Other planning activities may also be required before the implementation of restoration measures. These actions may include the preparation of a restoration plan combined with an environmental assessment (RP/EA), an environmental impact statement, a project implementation plan, or a project management plan, depending on the nature and extent of restoration measures.



Depending on the nature of the injury and the chosen restoration measures, a variety of preliminary activities may also be necessary prior to implementation. Key considerations include ensuring environmental compliance, providing for public participation, establishing roles and responsibilities, checking consistency with other plans, forming a trustee council (for CERCLA and OPA cases), and establishing success criteria. These planning activities are discussed below.

Key Restoration Planning Activities

- Ensure environmental compliance.
- Provide for public participation if required.
- Establish roles and responsibilities.
- Check consistency with other park plans.
- Form a trustee council if required.
- Establish success criteria.

Environmental Compliance

Restoration measures must comply with a suite of statutes that apply to NPS and other Federal agencies. The most relevant and far-reaching statute is the National Environmental Policy Act (NEPA). NEPA requires that Federal agencies analyze the environmental consequences of their proposed actions and examine alternatives to the action. NPS has produced a detailed guidance manual on NEPA compliance requirements affecting management of Park System resources.²¹

The specific requirements for NEPA compliance in a restoration project will depend on the nature and scope of the restoration activities. Most restoration activities will require an environmental assessment (EA) or equivalent. An environmental impact statement (EIS) may also be required. Although there is no categorical exclusion specifically for PSRPA restoration measures, other specific categorical exclusions may apply to certain restoration activities in certain situations. The project team should consult the NPS guidance manual on NEPA compliance for specific requirements and conditions.

A variety of other Federal and state statutes may have provisions affecting restoration of Park System resources. These include the Endangered Species Act, the Coastal Zone Management Act, the National Marine Sanctuaries Act, the Marine Mammal Protection Act, the Clean Water Act, the Archeological Resources Protection Act, and others. The project team should investigate the relevance of these statutes and how they may affect restoration implementation.

Environmental compliance may also involve the acquisition of permits and the establishment of performance bonds. Before restoration is begun, the project team should determine whether any environmental permits are necessary. For example, new construction may require a CWA Section 404 permit from the Army Corps of Engineers. The project team should check whether NPS already has a nationwide permit to implement the restoration measure in question.

If a third party (e.g., a contractor) performs the restoration field work, park staff may need to issue a special use permit allowing the individual or organization to use NPS resources. Such a permit may be contingent on obtaining a performance bond or other financial guarantee. Under a

²¹ See Director's Order 12 and associated handbook.



performance bond, the party implementing the restoration guarantees compliance with the special use permit conditions and can be held financially responsible if those conditions are not met. Director's Order 53 explains special park uses and bonding in more detail.

Public Participation

While PSRPA itself does not address public participation, it may be required if the restoration measures undergo NEPA review. NEPA requires NPS to solicit public comment at various stages of an EA or EIS. The goal of such participation is to help the public understand the proposed action, have their concerns considered, and provide opportunities for information sharing. Public participation may include commenting on draft reports, discussing restoration measures in public meetings, or other types of interaction. When public participation is needed, NPS should estimate staff time and other costs associated with organizing the public participation and include these costs as part of the restoration claim. Director's Order 12 reviews the NEPA public participation requirements in greater detail.

Roles and Responsibilities

Different parties can take primary responsibility for restoration planning and implementation, depending on the particular requirements specified in the settlement or judgment document (e.g., consent decree). For example, in the event of a monetary settlement, NPS or another involved trustee would have the responsibility for implementing restoration with the recovered damages. Given a "restoration-based" settlement, on the other hand, the RP may be required to perform restoration with oversight by NPS or other trustees. In that situation, the project team should establish clear performance standards that must be satisfied before the project could be declared complete.

Regardless of which party implements the restoration, the project team has project management and oversight responsibility. Therefore, in estimating the cost of restoring the injured resource, allot time for supervising the progress and final adequacy of the restoration measures.

Consistency with Other Plans

Before implementing restoration measures, the project team also should consider consistency with existing resource management plans. Section 5 discusses the value of reviewing the General Management Plan or park-wide restoration plans to assist in restoration determination. Likewise, the project team should ensure that the chosen restoration plan does not conflict with these other plans. Similarly, the project team may want to examine the restoration plan's consistency with Habitat Conservation Plans that may be in place for specific areas of the park or for specific resources in the park.



Trustee Councils

As discussed in Section 2, a trustee council may be formed when a case involves multiple Federal, state, or tribal agencies with natural resource jurisdictions under OPA or CERCLA. Although a claim based exclusively on PSRPA is unlikely to involve trustee councils, it is important that NPS fully participate when trustee councils are established in cases involving park resources. Park staff should consult with EQD/ERDAR about the formation and operation of trustee councils, and about their participation on trustee councils.

Success Criteria

As part of restoration planning, the project team should decide how to monitor progress and measure the effectiveness of the restoration. In the simplest sense, the goal of restoration is achieved when the injured resource is able to provide its baseline set of services and any lost services have been replaced. Monitoring restoration progress and measuring success pose different demands, depending on the nature of the restoration measure. For instance, measuring the success of rebuilding a boat dock would not require extensive analysis; whereas, measuring the success of coral reef restoration would.

Measuring the success of natural resource restoration may require detailed, long-term analysis. The project team should consider the function, not merely the physical appearance, of the resource in measuring the success of restoration. For example, restoration of seagrass beds should not be assessed simply on the replacement of the injured vegetation, but on the return of fish populations using the seagrass as habitat. This type of evaluation will often involve comparing data on current conditions with baseline data from the injured site or data from a comparable reference site.²² The technical requirements of natural resource monitoring are discussed in greater detail in NPS-75, *Natural Resources Inventory and Monitoring*, and in NPS-77, *Natural Resources Management Guidelines*.

Keep in mind that NPS may need to make midcourse corrections in the restoration plan and the criteria used to define success. Unanticipated factors such as weather events may impede the progress of the restoration and necessitate revisions to schedules and the results that can reasonably be achieved.

WITHDRAWING FUNDS

Once recoveries have been deposited in the DOI Restoration Fund, the project team can withdraw funds to cover past and upcoming expenses. These funds include the following.

²² Note that while these success criteria are discussed as part of restoration implementation, the project team should establish the criteria at the restoration planning stage.



- Reimbursements for past expenses may be withdrawn without a restoration plan. Likewise, funds may be withdrawn for writing a restoration plan. A withdrawal form must be prepared according to Appendix F. EQD/ERDAR will then work with the DOI Restoration Fund and NPS budget personnel to withdraw the funds and transfer them to the park.
- Damages recovered for future restoration can be withdrawn when needed. A withdrawal form must be prepared according to Appendix F. In addition, the project team must submit or reference an approved restoration plan (see below). EQD/ERDAR will then work with the DOI Restoration Fund and NPS budget personnel to withdraw the funds and transfer them to the park.

Appendix F describes the management of funds in greater detail and provides the appropriate forms for withdrawing funds from the DOI Restoration Fund. The withdrawal form must be routed through EQD/ERDAR for concurrence. Proper management of recoveries is critical to the process, and the project team should review the instructions carefully.

PROJECT COMPLETION

Once restoration is complete, park management must sign a project completion report similar to that produced for any park construction, improvement, or other project. This report describes the work performed, any modifications made to the original restoration plan, the final cost of the project, and any restoration recoveries not expended. Appendix G provides a project completion report template. The report must be submitted to EQD/ERDAR. This step completes the damage assessment and restoration process.

Upon receipt of the project completion report, EQD/ERDAR will recommend to the Associate Director for Natural Resource Stewardship and Science whether any restoration recoveries not expended at that point are excess funds subject to the requirements of 16 USC 19jj-3(c). Excess funds must be deposited into the General Fund of the U.S. Treasury.

REQUIRED DOCUMENTATION

The project team should produce the following documents as part of the restoration planning and implementation stage.

- **Restoration Plan:** The project team must develop a restoration plan that incorporates (or refers to) a description of the planned restoration measures, relevant environmental compliance documents, the public participation plan (if relevant), a time schedule for completion, and the criteria used to measure success.
- **Environmental Compliance Documents:** If relevant, the project team must develop the necessary environmental compliance documents. These may include NEPA



reports (e.g., environmental assessment), special use permits, and other documents. Consult Director's Order 12 for further guidance on NEPA compliance.

- **Project Completion Report:** See Appendix G for a project completion report template.

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LIST OF ACRONYMS

AO – Authorized Official

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CFR – Code of Federal Regulations

CWA – Clean Water Act

DOI – U.S. Department of the Interior

DOJ – U.S. Department of Justice

EA – Environmental Assessment

EIS – Environmental Impact Statement

EPA – U.S. Environmental Protection Agency

EQD – Environmental Quality Division

ERDAR – Environmental Response, Damage Assessment, and Restoration Branch

FLAT – Federal Lead Administrative Trustee

FOSC – Federal On-Scene Coordinator

HEA – Habitat Equivalency Analysis

NCP – National Contingency Plan

NEPA – National Environmental Policy Act

NOAA – National Oceanic and Atmospheric Administration

NPS – National Park Service

NRDAR – Natural Resource Damage Assessment and Restoration

OPA – Oil Pollution Act

OSLTF – Oil Spill Liability Trust Fund

PRFA – Pollution Removal Funding Agreement

PSRPA – Park System Resource Protection Act

RP – Responsible Party

SOL – Office of the Solicitor

USC – United States Code

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APPENDIX A

**FULL TEXT OF PARK SYSTEM
RESOURCE PROTECTION ACT**

TITLE 16 - CONSERVATION

CHAPTER 1 - NATIONAL PARKS, MILITARY PARKS, MONUMENTS, AND SEASHORES

SUBCHAPTER III-B - PARK SYSTEM RESOURCE PROTECTION

Sec. 19jj. Definitions

As used in this subchapter the term:

- (a) “Attorney General” means the Attorney General of the United States.
- (b) “Damages” includes the following:
 - (1) Compensation for –
 - (A)
 - (i) the cost of replacing, restoring, or acquiring the equivalent of a park system resource; and
 - (ii) the value of any significant loss of use of a park system resource pending its restoration or replacement or the acquisition of an equivalent resource; or
 - (B) the value of the park system resource in the event the resource cannot be replaced or restored.
 - (2) The cost of damage assessments under section 19jj-2(b) of this title.
- (c) “Response costs” means the costs of actions taken by the Secretary of the Interior to prevent or minimize destruction or loss of or injury to park system resources; or to abate or minimize the imminent risk of such destruction, loss, or injury; or to monitor ongoing effects of incidents causing such destruction, loss, or injury.
- (d) “Park system resource” means any living or non-living resource that is located within the boundaries of a unit of the National Park System, except for resources owned by a non-Federal entity.
- (e) “Regimen” means a water column and submerged lands, up to the high-tide or high-water line.
- (f) “Secretary” means the Secretary of the Interior.

- (g) “Marine or aquatic park system resource” means any living or non-living part of a marine or aquatic regimen within or is a living part of a marine or aquatic regimen within the boundaries of a unit of the National Park System, except for resources owned by a non-Federal entity.

Sec. 19jj-1. Liability

- (a) In general

Subject to subsection (c) of this section, any person who destroys, causes the loss of, or injures any park system resource is liable to the United States for response costs and damages resulting from such destruction, loss, or injury.

- (b) Liability in rem

Any instrumentality, including but not limited to a vessel, vehicle, aircraft, or other equipment that destroys, causes the loss of, or injures any park system resource or any marine or aquatic park resource shall be liable in rem to the United States for response costs and damages resulting from such destruction, loss, or injury to the same extent as a person is liable under subsection (a) of this section.

- (c) Defenses

A person is not liable under this section if such person can establish that –

- (1) the destruction, loss of, or injury to the park system resource was caused solely by an act of God or an act of war;
- (2) such person acted with due care, and the destruction, loss of, or injury to the park system resource was caused solely by an act or omission of a third party, other than an employee or agent of such person; or
- (3) the destruction, loss, or injury to the park system resource was caused by an activity authorized by Federal or State law.

- (d) Scope

The provisions of this section shall be in addition to any other liability which may arise under Federal or State law.

Sec. 19jj-2. Actions

- (a) Civil actions for response costs and damages

The Attorney General, upon request of the Secretary after a finding by the Secretary –

- (1) of damage to a park system resource; or
- (2) that absent the undertaking of response costs, damage to a park system resource would have occurred;

may commence a civil action in the United States district court for the appropriate district against any person who may be liable under section 19jj-1 of this title for response costs and damages. The Secretary shall submit a request for such an action to the Attorney General whenever a person may be liable or an instrumentality may be liable in rem for such costs and damages as provided in section 19jj-1 of this title.

- (b) Response actions and assessment of damages
 - (1) The Secretary shall undertake all necessary actions to prevent or minimize the destruction, loss of, or injury to park system resources, or to minimize the imminent risk of such destruction, loss, or injury.
 - (2) The Secretary shall assess and monitor damages to park system resources.

Sec. 19jj-3. Use of recovered amounts

Response costs and damages recovered by the Secretary under the provisions of this subchapter or amounts recovered by the Federal Government under any Federal, State, or local law or regulation or otherwise as a result of damage to any living or nonliving resource located within a unit of the National Park System, except for damage to resources owned by a non-Federal entity, shall be available to the Secretary and without further congressional action may be used only as follows:

- (a) Response costs and damage assessments

To reimburse response costs and damage assessments by the Secretary or other Federal agencies as the Secretary deems appropriate.

- (b) Restoration and replacement

To restore, replace, or acquire the equivalent of resources which were the subject of the action and to monitor and study such resources: Provided, That no such funds may be used to acquire any lands or waters or interests therein or rights thereto unless such acquisition is specifically approved in advance in

appropriations Acts and any such acquisition shall be subject to any limitations contained in the organic legislation for such park unit.

(c) Excess funds

Any amounts remaining after expenditures pursuant to subsections (a) and (b) of this section shall be deposited into the General Fund of the United States Treasury.

Sec. 19jj-4. Donations

The Secretary may accept donations of money or services for expenditure or employment to meet expected, immediate, or ongoing response costs. Such donations may be expended or employed at any time after their acceptance, without further congressional action.

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APPENDIX B

IMMEDIATE DATA COLLECTION PROCEDURES

INTRODUCTION



Field conditions may be hazardous to human health and safety. Appropriate safety planning and procedures should always be followed. In the event of potentially dangerous situations, only personnel with an up-to-date HAZWOPER certificate should be allowed entry to the incident area. Employees are not permitted to respond to hazardous material spills unless they are properly qualified and certified in accordance with Director's Order 30, Hazardous Spill Response.



Park staff have many responsibilities in responding to an incident. Among these is the collection of information that will assist in response planning and implementation, injury assessment and determination, and eventually making a damages claim. Some of the data and information may be ephemeral in nature, either due to natural factors (e.g., scavenging of dead animals) or response actions (e.g., removal of oil from a beach). These data must therefore be gathered as quickly and accurately as possible.

This appendix provides eight protocols for collecting a wide array of potentially ephemeral data. These protocols are general in nature, and may require modification to suit the particular circumstances of each incident. NPS includes parks encompassing a wide variety of environments and habitats that are associated with an equally wide variety of uses. These data collection procedures cannot foresee all possible data collection needs. They therefore present a few generalized procedures that can be readily adopted to the specific conditions encountered. Additional sources of information on these procedures are provided to assist park staff when the situation requires modification or extension of the basics described in this appendix. In some parks, the presence of unique and sensitive environments (e.g., sea grass beds or alpine tundra) may merit specific data collection procedures and forms. In these situations, park staff should seek expert guidance.

Prior to implementing any of the protocols described here, a preliminary evaluation of the incident is important in determining which data collection efforts are relevant. For example, sediment sampling may be unnecessary for a gasoline spill in water if the spilled material will evaporate before contaminating sediments. Preliminary analysis should include the collection of information about the geomorphology of the impact area, habitat types, species present, and/ or general characteristics and behavior of any spilled material. This information will help organize the structure of further information collection and management in a manner most appropriate for the particular situation at hand, including the identification of key ephemeral data. Park staff should make every attempt to accurately document resource injuries prior to undertaking other response actions.

This appendix includes the following eight protocols.

- Incident Description and Mapping (page B-3)

- Information and Data Management (page B-5)
- Photo and Video Documentation (page B-11)
- Visitor Surveys (page B-18)
- Transect and Quadrat Surveys (page B-27)
- Sampling of Spilled Substances (page B-33)
- Sampling of Environmental Media (page B-36)
- Estimation of Fish or Other Animal Loss (page B-41)

The first three of these protocols are for use by park staff engaged in any type of response to an incident. The remaining protocols are relevant only in cases where an injury assessment of park resources is contemplated, whether expedited or comprehensive.

Collection of field data may require specialized technical expertise or may entail health and safety risks. Park staff should use their judgment, combined with guidance from EQD/ERDAR, to determine when expert response organizations (e.g., hazmat teams) are better qualified to implement initial response actions and data collection. The individual protocols call attention to key technical and safety issues that park staff may encounter. Above all, park staff are responsible for protecting their own health and safety. No piece of data is worth collecting if it means putting people at risk of physical injury or exposure to hazardous substances.



When responding to incidents, a comprehensive health and safety review should always be considered, especially when all potential hazards are not known.



INCIDENT DESCRIPTION AND MAPPING

Objectives

One of the most important actions taken in the early phases of incident response is the initial documentation of the nature and extent of impact. As the incident develops (especially in the case of a spill of oil or other hazardous substance), so does the need to accurately describe changes in the distribution of a contaminant and/or impacts to park resources. This protocol provides park staff with guidance on documenting the initial stages of incident response for inclusion in a Response Report (see section titled “Required Documentation” in Section 1 of the Handbook).

Park Staff Responsibilities

As park staff will often be the initial responders to an incident, they are responsible for rapidly developing an understanding of the nature and extent of potential impacts. It is recommended that park staff have access to previously acquired base maps of the park for use during incident response. In some situations, staff efforts can focus on documenting response actions for cost recovery purposes only. However, in other situations, subsequent damage assessment and restoration actions may need to rely on more extensive documentation of the incident and affected resources. In incidents where impacts may be significant (either in area or intensity), the efforts of local park staff may be augmented by EQD/ERDAR staff or other experts.

Documentation Procedures

- Immediately begin keeping a timeline of events. Follow procedures as described in the Information and Data Management protocol. Record the following information in as much detail as possible:
 - an incident description (cause, parties involved, time and location of initial impact, material spilled, etc.);
 - weather conditions (wind speed and direction, precipitation, flooding, etc.);
 - response actions (actions underway in different areas, justification for response measures chosen, parties involved in response);
 - measurements of the impacted area;
 - locations and types of resources affected; and
 - staff, materials, and equipment costs, purchases, etc.
- Use maps to record information about the area of impact, response actions taken, and locations of affected or potentially affected resources. Include notations regarding areas for use as reference sites when investigating the area of impact. If available, use a Global Positioning System (GPS) device to accurately locate key points or

boundaries. If a GPS device is used, be sure to record its calibration information and sensitivity limits.

Sources of Additional Information

Acquiring good maps of the affected area can expedite initial incident response and planning, improve the quality of data collection, and guide surveyors and data collectors in the field. There are several types of maps that are relevant to assessment efforts.

- USGS Topographic Maps - These maps are available for most areas of the country in 1:24,000 scale. They are inexpensive (about four dollars per sheet) and provide an excellent overview of a general area with respect to major land features, roads, and populated areas. They serve as good maps for recording large-scale themes, such as the distribution of a spilled substance; locations of response actions, including any resulting disturbance; and habitat types. USGS topographic maps are often available at local sporting goods or “outdoor” stores, and online at http://mcmweb.er.usgs.gov/topomaps/ordering_maps.html.
- Satellite and Aerial Photography - These images are available in a wide range of scales and image characteristics. Some types of impacts, such as physical disturbance or oil spills, are visible on ordinary color photographs. For experienced analysts, infrared imagery is especially useful for delineating areas of vegetation and their density and overall health. Satellite and aerial photography is also available for most areas, and can serve as a key source of information on pre-incident conditions. Aerial photography can also be custom-ordered to ensure up-to-date coverage of the area of interest at the desired scale. This imagery is available from a variety of sources (e.g., <http://mapping.usgs.gov> and <http://asapdata.arc.nasa.gov/>).
- Digital Maps - With the increasing use of Geographical Information Systems (GIS) for environmental applications, digital cartographic data has become widely available. Digital maps can range from simple scans of existing USGS topographic maps (see <http://mcmweb.er.usgs.gov/drg/index.html>) to digital feature data that permit integration with data from a GPS device, precise location of sample locations, and calculations of ground areas and shoreline lengths. Working with these electronic files typically requires some expertise in GIS software such as ArcInfo, ArcView, or MapInfo.
- Wetlands delineations from the National Wetlands Inventory are available from the U.S. Fish and Wildlife Service at <http://www.nwi.fws.gov>.
- Environmental Sensitivity Index maps may be available from NOAA's Office of Response and Restoration (<http://response.restoration@noaa.gov>).

INFORMATION AND DATA MANAGEMENT

Objectives

NPS must manage damage assessment and restoration information collection activities such that all data are of sufficient quality to support litigation. This protocol for information and data management is designed to ensure that the methods, processes, and documentation for data collection maintain sample quality and the validity of the resulting data.

Park Staff Responsibilities

As the initial (and potentially only) responders to an incident, park staff have the responsibility to achieve the following two goals.

- Maintain thorough and well-organized record-keeping, as accurate and complete documentation is necessary to ensure the acceptance of data in litigation.
- Maintain proper sample handling, storage, and chain-of-custody procedures.

The second goal will generally apply only to incidents that develop into a comprehensive assessment. For incidents that develop into either a quick claim or an expedited assessment, record-keeping may account for the majority of park staff efforts.

Information and Data Management Procedures

Recordkeeping

The Natural Resource Damage Assessment Emergency Guidance Manual published by NOAA in 1996 summarizes the general requirements for thorough and organized record-keeping:

- All information pertinent to field activities and measurements should be recorded in a field logbook. The logbook should be treated as the primary repository of information regarding the incident and response. The logs are also useful in refreshing the responder's memory in the event he/she later testifies regarding his/her actions.
- Standard operating procedures for all sampling procedures must be written in detailed, clear, simple, and easy-to-follow language. Any changes in procedures, including the justification for the changes, must be recorded in detail in the field logbook.

- All information should be accurate, objective, and complete. The descriptions should be complete enough to allow anyone reading the entries to reconstruct the sampling situation.
- Additional information may be provided by field data sheets and photographs, both of which should be referred to in entries in the field logbook.
- Sample tags are NOT appropriate forms for recording important field data unless the information written on each label is transferred to data sheets or the logbook at the end of each day. There is no guarantee that the information recorded on the sample tag will be recorded by the laboratory or made available to the sample director.
- The entries for each day should be closed out with a horizontal line, dated, and initialed.
- Record all entries with a ball-point pen or waterproof ink and have each page signed by the sample collector and any available witness.
- Errors in entries should be corrected by drawing a single line through the error, entering the correct information, and signing and dating the correction. No entry should be erased.
- As the logbook accompanies the responder in the field and may be lost or injured, photocopies of all entries and forms should be made on a daily basis during the response.
- Completed logbooks and field data sheets must be kept under chain-of-custody procedures until the trustees release them (see section below).

Chain-of-Custody Procedures (including sample handling and storage)

- “Chain-of-custody” procedures are followed to “authenticate” a sample from the time it is taken until the results are introduced as evidence into court. It is important that each member of the field team understand the basic custody requirement and to take time to ensure that team members understand the various labels and forms that need to be filled out. The procedures outlined here represent one acceptable method. The failure in any particular instance to follow one or more of the steps listed here does not necessarily render evidence either inadmissible or unusable, but every effort should be made to avoid such a failure.
- As few people as possible should handle the sample from its collection through laboratory analysis. Sample tags, filled out in waterproof ink and attached to the sample container at the time the complete sample is collected, should be used to identify each sample and should contain the following information: sample ID #,

contents, time/date of collection, location, and collector. This information should also be recorded in the field logbook and/or field data sheets.

- The sample collector is responsible for the care and custody of samples until they are properly delivered to the laboratory or turned over to an assigned custodian or courier. The sample collector must assure that each sample is in his/her “custody” so no one can tamper with it. A sample is in your custody when:
 - it is in your physical control and presence;
 - it is in your view; or
 - it is not in your view or physical presence but is secured in a place of storage to which only you and identified others have access.

- All samples must be collected and stored such that they are not “contaminated” in the sampling process. For further discussion of sample collection and storage guidelines, see the appropriate protocol (e.g. Environmental Media, Spilled Substances, Fish/Animal Kills) and the “clean” requirements for sampling equipment and sample containers in the NOAA Natural Resource Damage Assessment Emergency Guidance Manual, page 43 to 44 (1996).

- During all transfers, samples must be accompanied by the original chain-of-custody form. The transferor and transferee should sign and record the time and date on the sheet when possession of a part or all of the samples is turned over to a field station or laboratory. A copy of the chain-of-custody form should be kept by the field or project coordinator. A chain of custody form follows this protocol.

- Samples are to be packed and sealed for shipment in appropriate containers to avoid injury (see NOAA Emergency Guidance Manual, Appendix 5 for examples of appropriate containers and the Dangerous Goods Regulations published by IATA, Section 5, 1995). A sample seal should be attached across the lid of each shipping container in such a manner that the container cannot be opened without breaking the seal. This lock and/or seal is not to be removed until the shipping container is opened by the laboratory custodian or a designee.

- If sent by USPS, use Registered Mail with Return Receipt Requested. If sent by a commercial carrier, all shipping receipts should be retained as part of the permanent chain-of-custody documentation. Couriers picking up samples at the airport, post office, etc., should sign the shipping documents to acknowledge receipt of the samples.

Sources of Additional Information

IATA. 1995. Dangerous Goods Regulations, 36th edition: IATA, Montreal, Quebec, 646pp.

NOAA. 1996. Emergency Guidance Manual, Version 3.0, National Oceanic and Atmospheric Administration Damage Assessment Center, Silver Spring, Maryland.

CHAIN OF CUSTODY FORM

Project: _____

Sampler: _____

Sample I.D. #	Date/Time Collected	Location	Sample Type (e.g., oil, water, species name and tissue type, etc)	Comments

Collected by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

CHAIN OF CUSTODY FORM (cont.)

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

Relinquished by (<i>signature</i>)	Received by (<i>signature</i>)	Condition	Date/Time

(December 2003)



PHOTOGRAPHY AND VIDEO DOCUMENTATION

Data Collection Objectives

Photographs and video recordings are valuable tools for showing the nature and extent of an environmental disturbance or release of a contaminant; recording the condition of impacted animals, habitats, or cultural resources; and documenting field observations. They can also be used to collect photo-quadrats that can be viewed later for species identification and enumeration. This protocol provides guidance on using still photography and video recording to obtain the best results.

Park Staff Responsibilities

Photo and video documentation should commence as soon as possible after an incident is reported. It is recommended that the park staff be familiar with cameras and video equipment prior to an incident such as a spill or contaminant release. In the event of a hazardous material release, park staff should not enter any area where they could risk exposure. Instead, they should wait for personnel experienced with hazardous material training and personal protection equipment before proceeding with ground surveys in contaminated areas. Information on the potential risk posed by the release of a hazardous material as well as personal protection requirements can be found on the Material Data Safety Sheet (MSDS). The following Internet site provides a listing of several dozen online sources of MSDS information:
<http://www.ilpi.com/msds>.

	Field conditions may be hazardous to human health and safety. Appropriate safety planning and procedures should always be followed. In the event of potentially dangerous situations, only personnel with an up-to-date HAZWOPER certificate should be allowed entry to the incident point.	
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Data Collection Procedures

Recommended Equipment

Although recommended photography and video equipment is described below¹, park staff should make use of the resources available to them during an incident. Data collection should not be avoided or delayed if available equipment is different than what is recommended here.

¹ This recommendation is not intended to exclude higher quality or more advanced equipment.

- **Video Recorder:** High band Super VHS-C and Hi8 camcorders are recommended for exceptional picture quality and sound. If possible the equipment should have the following features: date and time stamp, shutter speed selector, white balance control, macro focus, electronic image stabilizer, hi-fi sound (with noise-reduction capabilities), liquid crystal display, character generator, insert editing, low light imaging capabilities, high gain control, backlight switch, power zoom lens, clear glass lens guard, neutral density filter, and a polarizing filter (NOAA, 1997).
- **Camera:** 35-mm single lens reflex with 50-mm or 55-mm lens is recommended for best picture quality. Use a UV filter to protect the lens as well as a polarizing filter to eliminate glare (for water photography). Kodachrome 64 and Fujichrome 100 and 200 are recommended film types. In addition, a digital camera is useful for capturing images that can quickly be transferred to EQD/ERDAR and other parties.
- **Other Equipment:** Global Positioning System (GPS), extra batteries and battery charger, extra videotape and film, photo scales, maps, data sheets, water resistant housing for camera and video recorder.

Pre-Survey

- Determine the location and amount of area to be surveyed. If necessary, divide the survey area into sub-areas based on severity of impact and/or habitat type. Assign primary and alternative areas to each team. Arrange for logistics, communications, and emergency notification.
- Decide how the photo/video survey will be used: 1) photographs or short video shots to document visual observations that are recorded in field notebooks or on sketch maps; 2) with a photo scale or quadrat frame for later species identification and enumeration; and/or 3) video transects to document site conditions (e.g., number of freshly cut trees per 100 m, health of unaffected areas).
- Check that all equipment is in good working condition before leaving. Prepare and label film, videotapes, and video logs with survey number, photographer's initials, location, date, time and tape number prior to survey to save time and minimize mistakes. Enter this information into field notebooks where related notes and sketches will be entered.
- Check weather conditions. Make note of sun angles and tidal stages (if applicable) of the area to be surveyed. Plan surveys for between 10:00 AM and 2:00 PM to minimize low sun angles, or for times that reflect different periods of use (e.g., mid-day surveys to count the number of beach visitors).

Ground Survey Procedures

- At the start of the transect, use GPS to record latitude and longitude coordinates into the field notebook and note location on topographic maps. Include landmarks or other details of interest.
- Videotape continuously from the beginning of the transect to the end. Shoot still photographs to augment the video record. A shutter speed of 1/125 is best; 1/60 of a second for darker conditions is recommended. A slower shutter speed will yield greater depth of field, but may require use of a tripod or monopod.
- When using either video recorder or camera, shoot with the sun behind you. Avoid areas in dark shadow.
- Minimize sudden movements and vibrations. Move in a slow deliberate manner, maintaining camera angle and orientation.
- Make sure the horizon is straight and avoid excessive amounts of sky in filming. Shots should be composed of one-third sky or less.
- Use photo-scale for close up shots. Give a wider angle view for reference as well.
- Use a polarizing filter in bright areas to reduce glare, especially when filming objects or contamination on the water surface or snow cover.
- If shooting indoors, use a flash or supplemental light source to ensure sufficient lighting for clear images.
- Provide detailed audio commentary on videotapes. At the beginning of a tape or take, give the project name, photographer name, location, date, time, tape #, and purpose of survey. Describe landmarks, direction of filming and movement, observations on weather, water conditions, geomorphology, habitat types, contaminant distribution and characteristics, biota present, economic or human-use features present, etc. Remember to keep talking, emphasizing the description of what is being recorded by the camera.

Storage/Handling

- Maintain photography and video logs, film and videotape labels, and chain-of-custody forms. Rolls of film, photographs, and videotapes should be treated as samples for purposes of chain-of-custody requirements. Photography and video log forms follow this protocol.

- Consider leaving blank spaces at the beginning and end of each tape or take, to edit in titles, text, graphics, maps, etc.
- Review film on a quality monitor following individual missions or at the end of the day to insure proper equipment and operator function. This will help determine if the video adequately captured the conditions observed.
- Make back-up tapes, and place originals in a secure location. Never edit original data tapes.
- Treat video tapes similar to computer disks: avoid magnetic fields, dust, excessive heat or cold, moisture, etc.

Other Considerations

- Practice with equipment before the survey; know how to change batteries, tapes, and film quickly.
- Do not be afraid to repeat yourself while recording; the more information given, the better. Similarly, take lots of photos; film is cheap.
- Always move the video recorder from left to right when panning. This is the conventional direction for our eyes.
- Avoid excessive use of zoom features. Zooming can cause blurring while recording and give poor image quality.
- Choose standard play over extended play on video recorders for better picture quality.
- Mark on a topographic map where still photography was taken by labeling with the shot number and direction of view.
- When taking photos under difficult lighting conditions, bracketing can help ensure quality images. If the camera is capable of manual operation, take one photo at +0.5 f-stop (i.e., slightly under-exposed) and one at -0.5 f-stop (i.e., slightly over-exposed) in addition to the photo taken at the presumed best f-stop.

Sources of Additional Information

Nelson, J.Y., 1996, Overflights, photodocumentation, and shore description. Study Element 1, In: Guidelines for the Scientific Study of Oil Spill Effects (Draft), Petroleum Environmental Research Forum (PERF). Atlantic Richfield Company (ARCO).

Owens, E.H., and P.D. Reimer, 1991, Aerial videotape shoreline surveys for oil spill reconnaissance, documentation, and mapping. Pages 601-605, In: Proc. 1991 International Oil Spill Conference. American Petroleum Institute, Washington, D.C.

NOAA, 1997. Videography Guidelines. Damage Assessment Center, NOAA, Silver Spring, MD. 9pp.

PHOTOGRAPHIC LOG

Project: _____ Photographer: _____

Film Type: _____ Film #: _____ Date Processed: _____

Notes: _____

Frame #	Date/Time Taken	Location/Description
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

Signature: _____

Date: _____

(December 2003)

VISITOR SURVEYS

Data Collection Objectives

A hazardous substance release or other incident may injure a wide range of park resources. A loss of some or all of the services these resources provide is often associated with such injuries. Lost services may be either ecological or human use in nature. Ecological services are the functions performed by a resource for the benefit of other resources, such as the provision of food and refuge for wildlife. Human use services are the uses park visitors make of resources, such as fishing and hiking. Other human use services include those provided by archeological, historical, cultural, and geological resources. This protocol addresses the immediate data collection procedures for lost human use services.

After an incident, it is important to collect as much visitor information as possible to help understand the nature and extent of lost human use services that may have occurred. This protocol is intended to provide park staff with guidance on how to use surveys to collect ephemeral visitor data as well as advice on the types of information that would be most useful for the park in the context of a damage assessment. More detailed data collection efforts may be necessary later in the injury assessment and restoration determination steps. The data collection procedures are organized into several major topic areas, followed by guidance for use of the questionnaire templates, which are provided at the end of the protocol.

Park Staff Responsibilities

The types of information park staff need to collect to gain a preliminary understanding of injuries are often relatively limited and straightforward. Park staff should be capable of achieving useful results by administering a simple survey as described in this protocol.² Any efforts to construct a more detailed survey or to introduce statistical sampling procedures should involve consultation with experts at EQD/ERDAR and professional survey researchers.

Data Collection Procedures

First, it is important to be able to answer the questions: “Who (among park visitors) was affected by the incident and what form did this effect take?” For example, NPS may wish to know what proportion of visitors to a park intended to hike a trail that was closed due to physical injury from off-road vehicle use, and whether those visitors were able to find acceptable substitutes for that activity. Once the objective of the survey is determined, the surveyor should decide what

² Such surveys are exempt from the Information Collection Review requirements of the Paperwork Reduction Act (see 5 CFR section 1320.4(a)(2)).

information is most important to collect to answer these questions. For the types of incidents that may occur at park facilities, data to gather may include:

- Intended activities as part of park visit;
- Activities successfully pursued at the park and/or other locations; and
- Basic socioeconomic characteristics of the affected population.

The following paragraphs provide guidance on the general procedures for developing and administering a visitor survey.

Initiation of Data Collection and Visitor Counts: In the event of an incident, changes in park use will begin almost immediately. Getting an accurate count of the number of visitors affected by an incident is a necessary component for applying the survey results to all park visitors. In addition, data on visitation in the wake of an incident can be compared to previous estimates and/or counts to assess potential reductions in the number of visitors due to the incident. Therefore, park staff should be prepared to develop a plan of action, collect visitor counts, and conduct surveys as quickly as possible. Counts of the number of visitors to the park in the days following an incident should be tabulated and retained by the park until they are transferred to the case team.

Survey Distribution: The confidence one has in the results of a survey is dependent, in part, on the number of surveys completed, often referred to as the “sample.” Therefore, administer the survey to all visitors. While not all visitors receiving the survey will complete it, sampling and coverage biases will be minimized by administering it to all visitors. If this is not possible, use a simple sampling rule, such as selecting every *n*th visitor (e.g., one survey for every three visitors). It may seem obvious, but keep in mind that the resulting size of the sample will be directly correlated with the sampling frequency. If a larger sample is desired, sample more frequently (e.g., every third visitor rather than every fifth). Note that each visiting *party* (e.g., carload) is typically treated as one visitor and fills out a single questionnaire. A responsible adult should complete the questionnaire. In addition, some negatively affected visitor activities may only have a few participants. To capture the effects of the incident on activities with relatively limited participation, park staff should make an added effort to have as many of these visitors as possible complete the survey.

Survey Mode: This protocol assumes in-person distribution of the survey questionnaire to respondents. In some cases, the respondent may be able to complete the questionnaire at the time of receipt, and therefore return it directly to the survey researcher. Most often the questionnaire will need to be returned to NPS via mail. When a mailed return is necessary, the questionnaire may be pre-printed with the mailing address of the park on the reverse such that when folded, the form becomes its own envelope. Providing postage, if feasible, will generally result in higher response rates. Another method that has proven successful at increasing response rates of “mail-back” surveys is the use of a “thank-you” postcard. After giving the survey form to the respondent, the researcher asks them to also write their name and address on a

mailing label. This will allow NPS to send the respondent a postcard reminder of the survey and to convey appreciation for participating. A week after the initial survey contact, park staff should mail the postcard reminding the respondent to complete and return the questionnaire. Gathering this information also gives NPS a way of contacting respondents for additional information about their visit, should that be necessary. For more details on this practice in the context of a national park visitor survey, see Dillman (2000).

Survey Administration: Administer the survey using the following steps.

- Ask politely if the visitor would be willing to help NPS by completing a short survey. Convey that the purpose of the survey is to measure park visitation and use patterns.
- If the questionnaire can be completed immediately, ask the visitor to do so and return it to you. This may require visitors to pull to the side of the road in their vehicles. Be prepared to offer the option of returning the questionnaire by mail at a later date.
- If the questionnaire cannot be completed immediately, reiterate the importance of the survey and ask the respondent to return it by mail as soon as possible. If included in the survey protocol, remember to ask the respondent to fill out a mailing label.
- Record the survey procedures followed, including any deviation from or changes to the established or agreed-upon protocols. Track the number of questionnaires distributed to allow calculation of the response rate. A simple way of doing this is to make a known number of copies of the questionnaire (e.g., 500). After survey administration is complete, subtracting the number of copies remaining gives the number of questionnaires distributed. Returned questionnaires should be handled using chain-of-custody procedures, as described in the Information and Data Management Protocol.

The Questionnaire: The questionnaires provided with this protocol are designed to be “self-reporting” (i.e., they require no interaction with the surveyor beyond the initial contact) and should take no more than a few minutes for the respondent to complete.

- Because visitor activities vary considerably from park to park, determine which visitor activities and/or attractions to include on the questionnaire for the incident at hand. Include the most popular activities sought by visitors, as well as activities most likely to be adversely affected by the incident. Use specific descriptions and distinguish among important sub-activities. For example, use “fly-fishing in streams” or “bait-casting in lake” rather than “fishing.”
- Although the questionnaire templates show a limited number of activities, include more if necessary to capture the range of activities available and/or adversely affected at your park.

- Always retain at least one “Other” activity to allow visitors to write in their own description of their activities.
- For all surveys, collect basic socioeconomic information to give the Service an idea of the types of people who visit the park. Typical questions are included on the questionnaire templates. This section of the questionnaire should convey to the respondent that responses to the socioeconomic questions are not linked to their personal identifying information. No personal information will be kept by NPS that relates their responses to their identity.
- If time and resources allow, additional questions may be added to the questionnaires. However, do not make it overly complex. Longer questionnaires reduce the likelihood that an individual will participate.

Circumstances Requiring a Survey

The two sample questionnaires provide suggestions on how to address two types of incidents that may affect park visitation. Park staff should modify the templates as necessary to suit the particular characteristics of their park and the specific incident at hand.

For Incidents that Eliminate or Limit the Length of a Park Visit: In the case of an incident (or associated incident response) that may pose a threat to public safety, the Service may close a park or a park unit. Visitors already admitted to the park would be required to leave, and those arriving after the closure would be turned away. In this case, the focus of the visitor survey will be on determining what portion of the respondent's visit was lost, the activities the visitor participated in (if any), and the activities the visitor intended to participate in. Questionnaire A is designed to collect this information.

- Administer the survey as visitors depart or are turned away from the park.
- Briefly describe to the respondent the need to return the questionnaire via mail so that information on substitute activities may be collected.

For Incidents that Result in a Changed Visitor Experience: Some incidents will not prevent visitors from participating in the activities they wish to, but will result in a changes to their experience. For example, a small brush fire might reduce visibility from scenic vistas in the park, or close a small section of trail. Questionnaire B is designed to gather information on the extent to which a visitor's experience was diminished by an incident for which NPS is pursuing a damage assessment.

- Administer the survey as visitors depart the park.

- Convey to them the importance of the survey, and ask if they can spend a few minutes completing it immediately, rather than taking it with them.

Sources of Additional Information

Dillman, D.A. 2000. Mail and Internet Surveys: The Tailored Design Method. John Wiley & Sons. New York.

“What is a Survey?” The American Statistical Association, Survey Research Methods Section, <http://www.amstat.org/sections/srms/>.

“Guide to Questionnaires and Surveys.” Frédéric D'Astous. http://members.tripod.com/frede_dast/conseill_a.html.

United States Department of the Interior



NATIONAL PARK SERVICE
 1201 Eye Street, N.W.
 Washington, DC 20005

Visitor Use Survey

Your assistance is requested in answering the following questions. While participation is voluntary, your answers will help us learn more about park visitation patterns and the activities visitors engage in. Thank you in advance for your help.

Where did you travel from?

State (which one?) _____
 County (which one?) _____
 Another country (which one?) _____

For how long did you intend to visit this park?

One day only Overnight Two nights Multiple nights (please specify) _____ nights

For how long did you actually visit this park?

Not at all (Park Closed) One day only Overnight Multiple nights (please specify) _____ nights

Activity Participation - For each activity, please indicate if you intended to participate in this activity during this visit and whether or not you actually did participate.

Activity	Did you intend to participate?		Did you actually participate?	
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 1	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 3	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other (specify) _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

(Questionnaire A, December 2003)

APPENDIX B

Substitute Activities - If you intend to seek substitute opportunities for those activities you could not participate in, please take this questionnaire with you. When your trip is over, please complete the following questions regarding substitute opportunities and return the questionnaire to the National Park Service by US Mail.

Activity	Did you seek substitute opportunities for this activity?		Did you successfully find substitute opportunities and participate?	
Activity 1	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 3	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other (specify) _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

For those substitute opportunities you participated in, please answer the following questions.

Activity	To what extent did you incur additional travel expenses to participate in the substitute?		Were you satisfied with your substitute experience?	
Activity 1	<input type="checkbox"/> None	<input type="checkbox"/> Less than 20% additional <input type="checkbox"/> More than 20% additional	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 2	<input type="checkbox"/> None	<input type="checkbox"/> Less than 20% additional <input type="checkbox"/> More than 20% additional	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 3	<input type="checkbox"/> None	<input type="checkbox"/> Less than 20% additional <input type="checkbox"/> More than 20% additional	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 4	<input type="checkbox"/> None	<input type="checkbox"/> Less than 20% additional <input type="checkbox"/> More than 20% additional	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other (specify) _____	<input type="checkbox"/> None	<input type="checkbox"/> Less than 20% additional <input type="checkbox"/> More than 20% additional	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Socioeconomic Information - The following information will help the National Park Service better understand the types of people who visit this park and engage in different activities. **This information will NOT be linked to you personally.**

- Gender: Female Male
- Age: under 21 21-30 31-50 51-65 over 65
- Highest Education Level: High School College Graduate or Professional School
- Annual Household Income: less than \$30,000 \$30,000 - \$60,000 over \$60,000
- Number of people visiting the park with you: zero 1 2 3 or more

Please fill in the dates on which you received and completed this questionnaire:

Received on: _____ Completed on: _____

Thank you for your assistance!

(Questionnaire A, December 2003)

United States Department of the Interior



NATIONAL PARK SERVICE
1201 Eye Street, N.W.
Washington, DC 20005

Visitor Use Survey

Your assistance is requested in answering the following questions. While participation is voluntary, your answers will help us learn more about park visitation patterns and the activities visitors engage in. Thank you in advance for your help.

Where did you travel from?

State (which one?) _____
 County (which one?) _____
 Another country (which one?) _____

How long was your visit to this park?

One day only Overnight Two nights Multiple nights (please specify) _____ nights

Activity Participation - For each activity, please indicate if you intended to participate in this activity during this visit and whether or not you actually did participate.

Activity	Did you intend to participate?		Did you actually participate?	
Activity 1	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Activity 3	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other (specify) _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Activity Satisfaction - For those activities you participated in, please answer the following questions:

Activity	How would you rate your satisfaction with the activities you participated in? (please circle one)			
Activity 1	Mostly Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Mostly Satisfied
Activity 2	Mostly Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Mostly Satisfied
Activity 3	Mostly Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Mostly Satisfied
Other (specify) _____	Mostly Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Mostly Satisfied

(Questionnaire B, December 2003)

APPENDIX B

For those activities you were mostly or somewhat dissatisfied with, please indicate the reason or reasons for your dissatisfaction. For those activities you were somewhat or mostly satisfied with, please check N/A:

Activity	Why were you dissatisfied with the activity? (please check all that apply)
Activity 1	<input type="checkbox"/> N/A <input type="checkbox"/> Poor visibility <input type="checkbox"/> Too crowded <input type="checkbox"/> Pollution or man-made injury <input type="checkbox"/> Didn't see plants or animals of interest <input type="checkbox"/> Interpretive materials were not informative or interesting <input type="checkbox"/> Other (please specify) _____
Activity 2	<input type="checkbox"/> N/A <input type="checkbox"/> Poor visibility <input type="checkbox"/> Too crowded <input type="checkbox"/> Pollution or man-made injury <input type="checkbox"/> Didn't see plants or animals of interest <input type="checkbox"/> Interpretive materials were not informative or interesting <input type="checkbox"/> Other (please specify) _____
Activity 3	<input type="checkbox"/> N/A <input type="checkbox"/> Poor visibility <input type="checkbox"/> Too crowded <input type="checkbox"/> Pollution or man-made injury <input type="checkbox"/> Didn't see plants or animals of interest <input type="checkbox"/> Interpretive materials were not informative or interesting <input type="checkbox"/> Other (please specify) _____
Other (specify) _____	<input type="checkbox"/> N/A <input type="checkbox"/> Poor visibility <input type="checkbox"/> Too crowded <input type="checkbox"/> Pollution or man-made injury <input type="checkbox"/> Didn't see plants or animals of interest <input type="checkbox"/> Interpretive materials were not informative or interesting <input type="checkbox"/> Other (please specify) _____

Socioeconomic Information - The following information will help the National Park Service better understand the types of people who visit this park and engage in different activities. **This information will NOT be linked to you personally.**

Gender: Female Male

Age: under 21 21-30 31-50 51-65 over 65

Highest Education Level: High School College Graduate or Professional School

Annual Household Income: less than \$30,000 \$30,000 - \$60,000 over \$60,000

Number of people visiting the park with you: zero 1 2 3 or more

Please fill in the dates on which you received and completed this questionnaire:

Received on: _____ Completed on: _____

Thank you for your assistance!

(Questionnaire B, December 2003)

TRANSECT AND QUADRAT SURVEYS

Data Collection Objectives

Transect and quadrat surveys are methods for collecting semi-quantitative data in areas affected by the release of a contaminant or some physical harm. These methods limit surveys to a fraction of the entire impact area in a systematic fashion. Because the results of the survey are then extrapolated to the entire area, transect and quadrat surveys can dramatically reduce the time and effort necessary to develop a good understanding of the effects of an incident. Quadrats (rectangular or circular plots of standard size and orientation) are useful for estimating abundance and percent cover of organisms and vegetation in areas where the habitat type (e.g., elevation, vegetation, or water depth) or degree of injury is relatively uniform. Transects (linear cross-sections) are more appropriate for areas where species or injuries rapidly change along a gradient. Both surveying methods can be used to document the condition of the biota and the substrate, as well as species composition and abundance. This protocol provides guidance for conducting transect and quadrat surveys within an area that has been exposed to a contaminant or has suffered some physical injury.

Park Staff Responsibilities

Park staff should discuss the most appropriate survey or surveys to conduct based on the location of the injury or release; begin these surveys as soon as possible. Some technical skill may be required in species identification but no specialized knowledge is necessary for establishing transect lines or quadrats in an area. However, in the event of a hazardous material release, park staff should wait for personnel experienced with hazardous material training and personal protection and avoid putting themselves or others at risk for exposure to hazardous conditions.



Field conditions may be hazardous to human health and safety. Appropriate safety planning and procedures should always be followed. In the event of potentially dangerous situations, only personnel with an up-to-date HAZWOPER certificate should be allowed entry to the incident point.



Data Collection Procedures

Transect Surveys

- Equipment: Tape measure (metric if available), one-meter stakes (two per transect), hammer/mallet (to drive in stakes), compass, camera (35 mm), film, videocamera, videotapes, maps, aerial photographs, photo scales, labels, waterproof heavy marking pens, pencils, field notebooks, GPS receiver, identification guides, estimation charts,

data sheets, zip lock bags for vegetation samples, precleaned glass jars, cooler, ice, shovel, and/or coring device, nylon gloves, wooden tongue depressors or metal spoons (to collect soil samples).

- Conduct a preliminary ground survey to assess the magnitude and extent of vegetation or substrate injury (e.g., light, moderate, and heavy). Establish categories of impact based on habitat type (e.g., vegetation type, physical setting, soil conditions) and degree of exposure or injury. Delineate the impacted area using these categories. Identify representative unaffected areas as reference sites.
- Describe the basic conditions in each category (extent of physical injury or contamination, biota, substrate type) and record in field notebook.
- Set up at least three transects within each site category and three corresponding transects at the reference sites. Select a transect orientation that will cross the contamination or major disturbance at right angles. If the disturbance has no major orientation, locate transects to cross vegetation or biota zones.
- Name each transect using codes that indicate the injury and category (see below for examples).
- Use the tape measure to create the transect line. Permanently mark transect location using stakes at each end. Label each stake with the transect number.
- Measure the transect bearing by using a compass and lining up the stakes, so it can be resurveyed at a later date, even if one stake is lost. Record whether angle reading is magnetic or corrected to true north. Use the GPS receiver to identify the beginning and end of each transect and record in the field notebook and on topographic map.
- Use a leveling technique such as the Emery method to account for changes in elevation (Emery, 1961). A tape is stretched out along the transect interval and lined up with the stake marking the end of the transect. Using the horizon or a hand level, line up the top of the front stake with the corresponding point on the back stake.
- Photograph and/or videotape transects from several perspectives and record them in the field notebook and on a sketch map.
- Observations can be recorded along transects at regularly spaced intervals or at changes in slope, vegetation, biota, and degree of contamination.
- At each interval along the transect record the following on prepared datasheets:
 - Distance and elevation change from previous interval
 - Descriptors of the physical injury or type of contamination

- Vegetative parameters: species present and condition (percent live, dead, turning yellow, other descriptors), percent cover, stem height and density, etc.
 - Biological parameters (percent live cover, biota zone type, percent abundance, condition, behavior of animals, etc.)
 - Descriptors for the geologic, soil, or substrate condition (grain size, percent disturbance, color, mineralogy, etc.)
 - Vertical contaminant interval, thickness, and percent contaminant cover on vegetation
 - percent contaminant cover on the substrate and depth of contaminant penetration into the soils (use a shovel or coring device)
 - type and extent of plant or substrate disturbance such as trampling, cutting, erosion.
- Collect vegetation and soil samples as needed (see below).

Quadrat Surveys

- Equipment: quadrats (0.063, 0.25, and 1.0 m²) made of PVC, camera, film, videocamera, videotapes, maps, calculator, waterproof labels, gloves, photo scales, forceps, ziplock bags for vegetation samples, precleaned glass jars, waterproof heavy marking pens, pencils, field notebooks, GPS receiver, compass, identification guides, estimation charts, data sheets.
- Conduct a preliminary ground survey to assess the magnitude and extent of vegetation or substrate injury. Where appropriate, develop categories for the degree of impact (e.g., light, moderate, and heavy) and habitat type (e.g., vegetation type, physical setting, soil conditions). Delineate the impacted area using these categories. Identify representative unaffected areas as reference sites.
- Set up at least three quadrat locations within sites representing each category of injury and its reference area (total of 6 quadrats per category). Quadrat locations should be generated using a random numbers table and a compass (see Elzinga, 1998 below). Alternatively, they can be located in areas that are representative of the injury category.
- Name each quadrat using codes that indicate the injury and category (see examples below). Record location of the quadrat using GPS and record in the field notebook and on the map.
- A quadrat with an area of 0.25 m² is the standard size used in survey work. Quadrats with smaller areas (0.063 m²) are used if the target species is overly abundant (density > 25 per quadrat). Data may be collected more quickly by dividing the quadrats into subquadrats.

- Place the quadrat using a consistent protocol (e.g., orient the quadrat to the north, or parallel to the adjacent water body). Place a permanent stake in the same corner of the quadrat (e.g., upper left) and record the stake location using GPS.
- Prepare a label for each quadrat with the ID #, date, and assemblage description. Place the label on the edge of the quadrat and photograph from a vertical perspective.
- Estimate percent cover of flora and fauna by species within each quadrat by using the estimation charts. Record the percent cover of live versus dead vegetation.
- Collect vegetation and soil samples as needed (see below).
- Where two layers or fronds of the same species overlie one another, the resultant cover is only estimated once. Where one species overlies a second species, the percent cover of each is included in the total cover.
- Count the number of individuals for each species within the quadrat if they can be identified as discrete entities and are not overly abundant.
- In the count, include organisms that cross quadrat boundaries only if more than 50% of the area covered by the individual is within the quadrat boundary.
- When counting fauna, only include individuals >2 mm across in the greatest dimension. Record the number of smaller individuals (juveniles) separately from the mature individuals of the same species within a quadrat.
- If burrowing species can be determined, count the number of burrows in the ground or sediment surface.

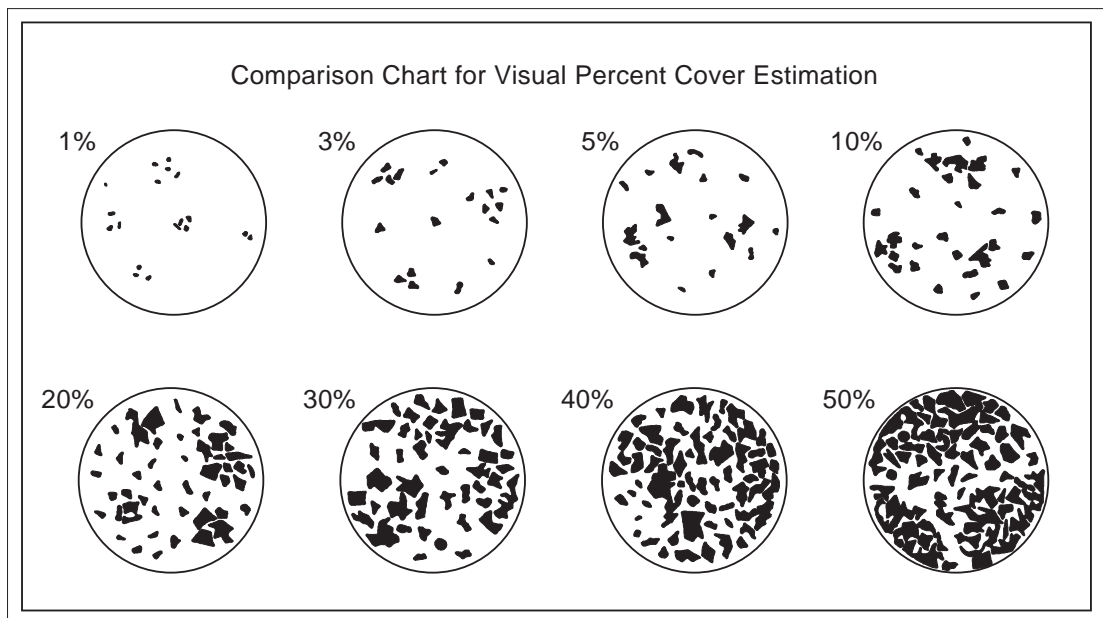
Preservation/Handling

- Use packing material around glass containers to prevent breakage.
- Store all biological specimens on ice.

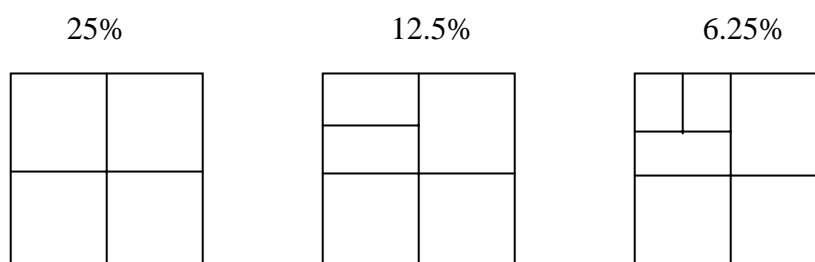
Other Considerations

- Be careful not to cause additional injury to the vegetation and substrate while conducting the surveys. In particular, avoid further mixing of a contaminant into the soils while walking through contaminated areas.

- If the contaminant or disturbance is readily visible, consider having vertical aerial photography flown for the site so that the areal extent of injury categories can be mapped. The scale of the photography has to be large enough so that the injury can be visible. For many incidents, photography at a scale of 1 inch = 200 feet (1:2,400) is appropriate (RPI, 1997b).
- Make sure that the reference sites have the same physical settings (exposure to tides, vegetation, elevation) as the contaminated sites.
- When naming transects or quadrats, it is advisable to use codes that indicate the injury. For example, at a site where fringing and interior wetlands were divided into areas of heavy, moderate, and light injury, transects/quadrats in heavily impacted fringing wetlands would be identified as FH-#; those in moderately impacted interior wetlands would be identified as IM-#, etc.
- The chart below provides a visual reference for estimating percent cover.
- Convene all survey teams and conduct a calibration exercise at the start of the survey. To calibrate percent cover estimates for a contaminant, have everyone estimate percent cover in the quadrat. Next, mentally herd the contaminant into one corner, or if possible, move it into one corner of the box. Draw a line to divide the original quadrat in half. Keep halving the area until all of the contaminant fits into a corner. Estimate the area of the contaminant and compare with the original estimates. Repeat for different amounts of contaminant, AND until everyone is making similar estimates. See diagram below.



Representative of percent cover exercise



Sources of Additional Information

Braun-Blanquet, J. 1965. Plant Sociology: the study of plant communities. London: Hafner.

Elzinga, C.L., D.W.Salzer, and J.W. Willoughby (eds). 1998. Measuring and Monitoring Plant Populations. Bureau of Land Management, Denver, Colorado. 492 pp.

Emery, K.O. 1961. A simple method of measuring beach profiles. Limnology & Oceanography 6: 90-33.



NOAA, 2001. Stranded oil quantification for beaches. Damage Assessment Center, Silver Spring, MD.

Robertson, S.B.(ed.). 1999. Guidelines for the Scientific Study of Oil Spill Effects. Prepared by various authors for PERF (Petroleum Environmental Research Forum) Project 94-10.

SAMPLING OF SPILLED SUBSTANCES

Data Collection Objectives

One of the most important activities during a spill event is the collection of an authentic sample of the spilled material. A pure sample from as close to the source of the spill as possible is essential for characterization and fingerprinting, as well as predicting the fate and effects of the spilled substance. Analysis of the sample can provide information on the toxicity of the substance and how it will degrade or weather over time. Identification of a released material is also important in determining the best response options to be used at the site. This protocol provides guidance for efficient sampling at the source of a spill and maintaining the integrity of samples during collection, transport, and storage.

	<p>Field conditions may be hazardous to human health and safety. Appropriate safety planning and procedures should always be followed. In the event of potentially dangerous situations, only personnel with an up-to-date HAZWOPER certificate should be allowed entry to the incident point. Employees are not permitted to respond to hazardous material spills unless they are properly qualified and certified in accordance with Director's Order 30, Hazardous Spill Response.</p>	
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Park Staff Responsibilities

If the spilled material is unknown, park staff should contact the local fire department and/or personnel with hazardous material training to respond to the spill site. Personnel from either of these two groups should be able to collect a pure sample from the site if the spill is considered hazardous and requires special protective equipment. If the spilled substance has been identified and is not hazardous (as determined by a review of the MSDS), park staff should begin collecting samples as soon as possible after the incident.

Data Collection Procedures

- Safety is of greatest concern. Be aware of physical and chemical hazards at the site. Do not enter confined spaces unless they have been determined to be safe. Always use recommended safety equipment and procedures for confined-space entry.
- Equipment for liquid samples includes a 1-L wide-mouth glass container, pens, labels, GPS, coolers, ice, and packing material. Sampling equipment can vary, as long as it is clean and does not contaminate the sample.

- For solids, the equipment and methods are similar, with the exception that the material may be collected using cleaned metal spoons, plastic scoops, wooden spatulas, etc.
- Collect the source sample as soon as possible after the incident. Collect the freshest sample of the spilled material, even if it is from the water, shoreline, etc.
- Collect at least 1 liter from all possible sources. For example, if railroad cars have overturned and a liquid substance has been released, responders need to sample materials from each railroad car that originally held liquids.
- Collect samples directly into the sample container to minimize risks of cross-contamination. Alternatively, use a new sampler for each different source to be sampled, since it may be very difficult to adequately clean a sampler.
- Label each sample container uniquely and sequentially, whether it is a replicate from one location or samples from different locations. Record the location and sample number on both the container label and lid. Record on the log sheet: sample number, date/time, and location (latitude/longitude).
- Fill out the chain-of-custody form, noting where each source sample was collected (e.g., “source sample from shoreline 50 feet from tanker truck” or “source sample from hold #3”), sampling device used, time/date, size and container type, and sampler name.
- Make special notation on the chain-of-custody form about any problems or observations during sampling, such as visual differences in samples from different locations, presence of water or dirt in the sample, etc.
- Maintain strict chain-of-custody during sample storage and transportation.
- Ship source samples separately from environmental samples to reduce risk of cross contamination.

Preservation/Handling

- Immediately place all samples in a cooler with ice and keep at 4°C (do not freeze).
- Determine if a sample falls under the category of dangerous goods or hazardous materials, as defined by the U.S. Dept. of Transportation and the International Air Transport Association (IATA). If it does, then special packing and shipping procedures are required for transportation by air. The IATA Dangerous Goods Regulations contain provisions and rules to correctly package and safely transport

dangerous goods by air. Only persons who have received Hazardous Materials Shipping training are allowed to ship hazardous materials. There are specific requirements for marking and labeling of the outer box, completing the waybill, etc. Dangerous Goods training/guidance is available through FedEx (800-238-5355), IATA (800-716-6326) and HAZMATPAC (800-677-3210), among others.

- Use packing material around containers to prevent breakage. Place the sample inside a plastic bag with enough absorbent material (e.g., vermiculite, cat litter, etc.) to soak up all the liquid should the container break during shipping.

Other Considerations

- In some events, there may be different products loaded in different compartments of storage, even when only one type of product is involved (e.g., different runs of gasoline). Get a loading diagram and as much data as possible on the products. Sample each unique product, if possible.
- Make sure that the source sample(s) collected represent the material actually released. Again, product in intact holds or containers may not be the same as the released product.
- Be aware of sources of contamination or mixing of products on-scene, such as transferring of product between holds, dilution with fire-fighting water, etc.



SAMPLING OF ENVIRONMENTAL MEDIA

Data Collection Objectives

The collection of environmental media (water, benthic sediments, onshore sediments, and soil) is a necessary step in determining: 1) the type and source of contamination; 2) the concentrations at which organisms are exposed as a result of the incident; 3) the areal extent of the affected area; and 4) background levels. Environmental samples are used to determine when water and sediment quality standards have been exceeded. Concentration data can be used with bioassay data to predict the extent and duration of toxic effects on biota. Samples are also used to document the source of contamination and characterize how the contaminant changes during weathering. This protocol provides guidance on efficient collection of environmental media and discusses how to maintain the integrity of samples during collection, transport, and storage.

Park Staff Responsibilities

Park staff should begin collecting samples as soon as possible after an incident. Some familiarity with sampling equipment is helpful, but no specialized knowledge is necessary for the actual sampling of water and sediments. In the event of a hazardous material release, park staff should wait for personnel experienced with hazardous material training and personal protection equipment before proceeding with data collection in contaminated areas. Review the MSDS for personal protection requirements.

	Field conditions may be hazardous to human health and safety. Appropriate safety planning and procedures should always be followed. In the event of potentially dangerous situations, only personnel with an up-to-date HAZWOPER certificate should be allowed entry to the incident point.	
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Data Collection Procedures

Water

- Equipment: water sampler, sampling containers, pens, labels, GPS, coolers, ice, and packing material.
- Collect samples directly into the sample container (amber glass is preferred), to minimize risks of cross-contamination. Samples can be collected by hand or using a sampler that holds the container. Leave headspace of about 2 cm in the top of the sample container.

- When the objective is to measure the concentration in the water column, collect the sample below the water surface, so as to exclude any floating surface contamination.
- Sampling equipment **MUST** be deployed and retrieved in the closed position. Open or un-cap the sampler only at the sampling depth.
- Clear any surface contaminants prior to deploying the equipment, but carefully so that the contaminant is not dispersed into the water column.
- For each day or sampling excursion, fill a sampling container with distilled water and carry with you at all times. This “field blank” should be analyzed along with the field samples to control for potential contamination acquired during sampling.
- Record the sample number on both the container label and lid. Record the following on the log sheet: sample number, date/time, location (latitude/longitude), and water depth. Start a chain-of-custody record.

Benthic Sediments (sediments that are under water or associated with a waterbody)

- Equipment: sampling device capable of collecting sediments underwater without disturbing the sediment layers (e.g., van Veen grab, Ekman grab, box dredge, core tube), flat scoops, glass containers, siphon, pens, labels, GPS, coolers, ice, and packing material.
- Avoid contamination from the water surface if a slick or debris is present.
- Lower and retrieve the sampling device at a controlled speed of approximately 1 foot per second.
- The device should contact the bottom gently; only its weight or piston mechanism should be used to penetrate the sediment, so there is minimal disturbance to the surface of the sediment.
- Inspect the sample to make sure that it meets the following criteria:
 - the sampler is not overfilled and the sediment surface is not pressed against the sampler top;
 - overlying water is present, indicating minimal leakage;
 - sediment surface is undisturbed, indicating lack of channeling or sample washout; and
 - the desired penetration depth is achieved (e.g., 4-5 cm for a 2 cm sample).
- Siphon off the overlying water near one side of the sampler.

- Using a scoop, accurately collect the top 2 cm, avoiding sediments in contact with the sides of the sampler. Collect other depth intervals, if specified in the sampling plan. Use a new scoop for each depth.
- Repeat the sampling three times at each location. Combine equal amounts of sediment from each of the three samples to create a composite sample for analysis.
- Record the sample number on both the label and lid. Record the following on the field log sheet: sample number; date/time; location (latitude/longitude); water depth; penetration depth; surface sediment characteristics: texture, color, biota, debris, contaminant characteristics; vertical changes in sediment characteristics. Start the chain-of-custody record.

Onshore Sediment and Soils (sediments without overlying water)

- Equipment: glass containers, coring tubes, shovel, stainless steel blade or wooden spatula, pens, labels, GPS, coolers, ice, and packing material.
- To reduce the need for field decontamination, use pre-cleaned, disposable utensils. The only equipment to be used between sites is a shovel.
- Photograph the sampling site prior to sample collection to document the site conditions.
- For surface sediments, use a wooden spatula or stainless steel blade to accurately collect the top 2 cm, avoiding contact with sediments that have been displaced, disturbed, or contaminated during the sampling effort.
- To collect subsurface samples in coarse sediments (sand and gravel), it is easiest to use a shovel to dig a small trench and collect the desired sediment intervals from the exposed trench wall. Remove sediments that were in contact with the shovel prior to sampling.
- To collect subsurface samples in fine sediments (mud), use a shovel to expose the sediments at the desired depth. Collect the sample from the natural break side, rather than the shovel side.
- Coring tubes can be used in muddy sediments when the sampling intervals have not been determined. Plastic tubes (polycarbonate or polyethylene is okay) should be 5 cm (2 in) in diameter, with a wall thickness of about 3 mm. It is usually easiest to store the core upright on ice and then freeze it for sub-sampling in a laboratory.
- Place the sample in glass containers and record the sample number on both the label and lid. Record the following on the field log sheet: sample number; date/time;

station location; description of contaminant conditions; sediment characteristics (texture, color, debris, odor, etc.). Start the chain-of-custody record.

- Make a quick sketch in a field log book or sketch form showing the sampling locations in enough detail that they can be located later.

Preservation/Handling

- Immediately place all water and sediment samples in cooler with ice and chill to 4 degrees Celsius. All sediments samples, except those that will be used in a total organic carbon analysis (TOC), should be frozen at the end of the day. Do not freeze water samples.
- Use packing material around containers to prevent breakage.
- Water samples can be held at 4°C in the dark for up to 7 days without loss of sample integrity. Sediment samples can be held frozen in the dark for one month without loss of sample integrity.

Other Considerations

- Decontaminate all water and sediment samplers before each use. Wash with laboratory-grade detergent (use dishwashing soap as a substitute) and clean water (distilled or bottled water from a local store is OK). Rinse three times with clean water. Next, rinse with methanol or acetone, followed by methylene chloride or hexane (Capillary GC Pesticide Residue Grade or equivalent) if possible, though an acetone rinse only is acceptable. Allow solvents to evaporate before use.



Decontamination solvents may be hazardous to human health and safety and the environment. Appropriate safety planning and procedures should always be followed. If unfamiliar with the proper handling of these materials, consult the MSDS or qualified personnel.



- Be aware of sources of contamination on the sampling platform. Segregate dirty/clean areas. Lay out clean substrates (e.g., plastic drop cloth, clean butcher paper or newspaper) to work on and replace frequently. Be aware of contamination from shovels and boots. Collect background samples from clean sites representative of pre-contamination conditions, as well as areas not yet contaminated but at risk. Always start sampling at the least contaminated sites and progress to the most contaminated sites.

- Use a mental model of the extent of water-column/benthic contamination to determine the number and location of samples. Minimum guidelines are at least three samples per area of relatively uniform exposure or distinct waterbody. Also, sample along exposure gradients at regular intervals proportionate to the exposure area.
- It is very important to have a defined sampling strategy prior to conducting field work. Sediments are difficult to sample because of the inherent heterogeneity of a contaminant over space, depth, and time. Truly quantitative samples have to be collected in a very precise manner and be related to a surface area or defined zone. “Representative” samples can be used for qualitative and initial assessments. Documenting exposure of onshore areas can also be done with photography, video, and good field notes and sketches (see protocol for photo and video documentation).

ESTIMATION OF FISH OR OTHER ANIMAL LOSS

Data Collection Objective

The observed response of biota is an important indicator of the presence of contaminants in the environment or other harm to natural resources. In severe cases, individuals of one or more species may experience mortality. Accurate documentation of the number of organisms killed by an incident is necessary to understand the nature of the incident, to support a damages claim, and to assist in restoration scaling.

Because animal kills are typically unexpected and short-lived, this data collection protocol is intended to provide guidance on procedures for generating a defensible estimate of losses without the use of complex and time-consuming methods. Nonetheless, no guidelines are feasible for every set of field conditions. Each kill is unique and requires some adaptation of general methods. For this reason, procedures specific to fish kills are included after general data collection procedures. In addition, the references listed at the end of this protocol include more detailed discussions of methods and may provide insight into necessary adaptation of these general guidelines to the unique situation of a particular incident.

Park Staff Responsibilities

Estimating the extent of an animal kill requires some familiarity with transect and quadrat survey methods (see Transect and Quadrat Survey protocol) but in most cases will not require specialized biological or ecological knowledge. As long as dead individuals can be located and accurately identified as to species, park staff may be capable of conducting most or all of the data collection. For larger incidents or more widespread impacts, initial kill counts performed by park staff, even if limited in scope and extent, can provide data necessary for determining the need for further assessment. In the situation where species identification is difficult (i.e., if killed freshwater mussels must be enumerated by species or if decomposition or scavenging is severe), park staff may need the assistance of experts.

General Data Collection Procedures

- Delineate the area affected, dividing it into sub-areas depending on habitat type, degree of injury, etc. See information on stratified random sampling under “Other Considerations” below). Aerial surveys may help in delineating the extent of the injury, species and numbers injured, and locations of concern. Other sources of information include base maps, and response data on the distribution of impacts or spilled materials.
- Consider site safety restrictions, logistics for teams, and access issues.

- Determine which species were affected by the incident. Are any of the species or types of animals of higher priority for investigation, whether due to special status (i.e., threatened or endangered) or importance to the park's management objectives and provision of services (e.g., a species that draws visitors for viewing, such as bison at Yellowstone)?
- Decide if grouping killed individuals by type of animal (e.g., all fish) is feasible and will not diminish the ability to determine injuries and scale restoration. Grouping is not advisable if one species is likely to be responsible for a substantial portion of the injuries from the incident (e.g., in the case of a key sportfish species).
- Decide on the survey method: census (counting of all dead animals in the entire impact area) or sampling (counting dead animals in a representative area followed by extrapolation of the results to the entire area). As a census is only practical in smaller incidents, survey sampling methods are often necessary. These are described in the Transect and Quadrat Survey protocol.
- Devise field forms so that teams consistently collect the same information. Consider having all the teams do one survey together to finalize terminology, species identification details, and revise survey methods to address site conditions. Surveyors should keep a detailed chronological log of the survey and record data such as: location, date, observer information, species, age and sex (when possible), evidence of cause of death, stage of decomposition, and evidence of scavenging. Photographs and maps should be used extensively for documentation of injured animals and pollutant exposure, site conditions, and other factors (see Photo and Video Documentation protocol). Consider the use of GPS for marking the start/end of transects and the location of survey quadrats.
- Set guidelines for collection of samples for chemical analysis, histopathology, necropsy, and voucher identification.³
- At the end of each day of sampling, summarize daily results, review current conditions, and revise the survey plan as needed. Decide if additional resources are needed.

³ Voucher samples are representative specimens that are collected in biological field surveys and research, and that are preserved to permit independent verification of results and to allow further study.

Special Considerations for Fish Kills

- When conducting surveys of dead fish in a moving waterway, the movement of drifting fish must be considered. Counts from transects conducted perpendicular to stream flow do not require correction. Counts from transects moving up or downstream must be corrected using the following procedure.
 - ❑ For transects moving upstream, record the time necessary to finish the segment. Then, count all fish that drift past a stationary point at the upstream end of the segment for an equivalent time. Subtract this count from the transect count.
 - ❑ When moving downstream, use the same procedure as when moving upstream, except add the fish drifting past the stationary point to the transect count. In addition, when moving downstream, fish drifting past the observer should be counted separately and subtracted from the total count. For more detailed information, refer to American Fisheries Society Special Publication 24.

Other Considerations

- Stratified random sampling is an effective tool to achieve greater precision in survey results. Stratification refers to the subdivision of a survey into two or more parts called strata. Each stratum is surveyed independently, often with varying intensity of sampling effort. As an example, areas of high impact may be surveyed more intensively than areas of low impact. Stratification may also be based on differing physical environments. For example, consider a fish kill in a lake. The majority of dead fish are likely to be found on the shore, but some will be found in the open water. The shoreline may be divided into segments, while transects are more appropriate for the open water area. Stratified random sampling can reduce overall variability and allow for distinction between accessible and inaccessible areas. Thus, greater precision can be achieved.
- When possible, design surveys to facilitate comparison with available baseline data. Compare population densities or other metrics between injured and reference study areas. Note that reference areas should always be included, even if baseline data exist. Surveys in similar but unaffected areas are needed to account for a “background” deposition rate for dead animals unrelated to the incident being investigated.
- Binoculars and a field guide may be useful for identifying carcasses. In addition, use of binoculars can minimize disturbance or displacement of surviving animals. Do not guess at the species; if unknown, describe species and label as unknown.

- Estimates of losses based on counts of dead animals will be conservative due to rapid scavenging, the return of small mammals to their burrows before death, or sinking of fish carcasses.
- If bagging and collection of carcasses is not possible or if carcasses are being left in place as part of a “natural removal rate” study, mark counted carcasses to avoid double counting (e.g., clip a pre-specified toe on bird carcasses).

Sources of Additional Information

American Fisheries Society. 1992. Investigation and valuation of fish kills. American Fisheries Society Special Bulletin 24.

California Department of Fish and Game. 2001. Wildlife Response Plan for California. Office of Spill Prevention and Response. Sacramento, California. At:
<http://www.dfg.ca.gov/ospr/misc/wildlife%20plan%20sec9710.pdf>.

NOAA Damage Assessment Center. Bird Injury Quantification. In press.

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APPENDIX C
COST TRACKING FORMS

INTRODUCTION

PSRPA allows NPS to seek recovery of a variety of costs associated with an incident, including:

- The costs of the initial response to the injury,
- The costs of fully assessing the nature and extent of the injuries,
- The costs of restoring injured resources and/or replacing the services lost during the time that resources are injured, and
- The costs to monitor and study affected resources.

Accurate cost tracking is essential to the successful recovery of these costs. This appendix provides the forms that park staff should use to record and report costs. These forms constitute the Incident Daily Cost Report system that EQD/ERDAR has developed specifically for use on PSRPA cases. The system groups costs into four functional categories and provides instructions and forms for each. Specifically, the following forms are provided.

- Summary Sheet (EQD/ERDAR 2.10)
- Government Personnel (EQD/ERDAR 2.11)
- Purchases/Expendables (EQD/ERDAR 2.12)
- Travel Costs (EQD/ERDAR 2.13)
- Government Equipment (EQD/ERDAR 2.14)
- Short Form - covering all cost categories (EQD/ERDAR 2.15)

These forms should be completed and submitted to the case team periodically during the incident. The summary sheet (EQD/ERDAR 2.10) must be attached to each submission. The next four forms (EQD/ERDAR 2.11, 2.12, 2.13, and 2.14) are submitted to report costs by category. Alternatively, the short form (EQD/ERDAR 2.15) may be submitted if the number of items per category is limited. These forms are available electronically from EQD/ERDAR.

SUMMARY SHEET (EQD/ERDAR 2.10)

This form should be attached to each Incident Daily Cost Report submission. Each submission may cover multiple days.

How to Complete Form

1. **Case Name:** Name assigned to the incident
2. **Submission Date:** Date of this submission
3. **Report Type:** Check “Final” if this is the final submission for this incident. Otherwise, check “Interim”
4. **Report Period:** Enter the dates covered by this submission
5. **NPS Unit:** Unit or office for which costs are reported
6. **Description of Activities:** Brief description of activities conducted, and the objective of each activity
7. **Forms Attached:** Enter how many forms are attached to this submission by category
8. **Contacts:** Enter the name, affiliation (NPS unit, other agency, contractor firm, etc.), and phone number of individuals who can verify information or provide additional information for this submission
9. **Remarks:** Any amplifying information relevant to this submission



**National Park Service
Incident Daily Cost Report
Summary Sheet**

Case Name: _____	Submission Date: _____
Report Type: Interim _____ Final _____	Report Period: From <i>(date)</i> _____ To <i>(date)</i> _____
NPS Unit: _____	

Description of Activities

Forms Attached	Number
Government Personnel (EQD/ERDAR 2.11):	_____
Purchases/Expendables (EQD/ERDAR 2.12):	_____
Travel Costs (EQD/ERDAR 2.13):	_____
Government Equipment (EQD/ERDAR 2.14):	_____
Short Form (EQD/ERDAR 2.15):	_____

Contacts		
Name (last, first)	Affiliation	Phone Number

Remarks

(EQD/ERDAR 2.10, December 2003)

GOVERNMENT PERSONNEL (EQD/ERDAR 2.11)

This form should be completed for government personnel costs incurred each day.

How to Complete Form

1. **Case Name:** Name assigned to the incident
2. **Date:** The date for which costs are reported
3. **NPS Unit:** Unit or office for which costs are reported
4. **NPS Account Number:** NPS account number to charge against

Supply items 5 through 11 for each person involved in the incident.

5. **Name (last, first):** First and last name
6. **Pay Grade:** Pay grade (e.g., WG-5, GS-9)
7. **Pay Status:** Pay status (e.g., Regular, Overtime, Night Differential)
8. **Hours:** Actual hours spent performing duties
9. **Pay Rate:** Pay rate commensurate with indicated pay grade and pay status - this should be the “loaded” rate that includes both salary and benefits
10. **Total Cost:** Hours multiplied by pay rate
11. **Activity Code:** Activity code that describes duties performed - activity codes are listed at the bottom of the form
12. **Remarks:** Any amplifying information relevant to this incident and date



National Park Service Incident Daily Cost Report Government Personnel

Case Name: _____	Date: _____
NPS Unit: _____	NPS Account Number: _____

Name (last, first)	Pay Grade	Pay Status	Hours	Pay Rate	Total Cost	Activity Code
Total:						

Remarks

Activity Codes		
1.0 Incident investigation	3.2 Determine jurisdiction	13.0 Restoration determination report
1.1 Incident screening	4.0 Case management	14.0 Prepare demand/claim
1.2 Incident classification	4.2 Establish case accounts	14.1 Calculate damages
1.3 Preliminary discussion w/ EQD/ERDAR	4.4 Track costs	14.2 Review claim
1.4 Meet w/ case team	5.0 Contact SOL/AUSA	14.3 Negotiations
1.5 Preliminary discussion w/ RP	6.0 Prepare assessment work plan	14.4 Assemble administrative record
2.0 Response action determination - general	6.1 Conduct assessment	15.0 Prepare and execute concurrence doc.
2.10 Response action work plan formulation	7.0 Prepare/review project agreement	16.0 Review settlement
2.11 Response implementation/oversight	8.0 Injury determination	16.1 Prepare Restoration Fund deposit form
2.12 Response report	9.0 Prepare DO 55 determination	17.0 Prepare restoration plan
3.0 Assemble jurisdictional information	10.0 Injury quantification	17.1 Implement restoration plan
3.1 Analysis of jurisdiction	11.0 Injury assessment report	18.0 Conference call
	12.0 Restoration determination	20.0 Travel

(EQD/ERDAR 2.11, December 2003)

PURCHASES/EXPENDABLES (EQD/ERDAR 2.12)

This form should be completed for costs incurred each day associated with purchases and expendables, including contractor support.

How to Complete Form

1. **Case Name:** Name assigned to the incident
2. **Date:** The date for which costs are reported
3. **NPS Unit:** Unit or office for which costs are reported
4. **NPS Account Number:** NPS account number to charge against

Indicate whether purchase orders were completed, how many purchase orders were completed, and whether all purchase orders are attached. Complete items 5 through 7 for each purchase order that is not attached.

5. **Description of Item:** Description of item purchased
6. **Purchase Order Number:** Purchase order number issued for the item
7. **Cost:** Cost of the item purchased
8. **Remarks:** Any amplifying information relevant to this incident and date



National Park Service Incident Daily Cost Report Purchases/Expendables

Case Name: _____	Date: _____
NPS Unit: _____	NPS Account Number: _____

Were purchase orders completed? (yes/no): ____ If yes, how many? ____			
Are all purchase orders attached? (yes/no): ____ If no, complete items below for those not attached			
Description of Item	Purchase Order Number	Cost	Office Use
Total:			

Remarks

TRAVEL COSTS (EQD/ERDAR 2.13)

This form should be completed for travel costs incurred each day.

How to Complete Form

1. **Case Name:** Name assigned to the incident
2. **Date:** The date for which costs are reported
3. **NPS Unit:** Unit or office for which costs are reported
4. **NPS Account Number:** NPS account number to charge against

Indicate whether travel authorizations were issued, how many travel authorizations were issued, and whether all travel authorizations are attached. Complete items 5 through 8 for each travel authorization that is not attached. Also indicate whether all paid travel vouchers are attached. If any paid travel vouchers are not attached, submit them when received.

5. **Name (last, first):** First and last name of traveler
6. **Travel Authorization Number:** The number assigned to the travel authorization
7. **Issued By:** NPS unit issuing the travel authorization
8. **Estimated Cost:** Estimated cost associated with the travel authorization
9. **Remarks:** Any amplifying information relevant to this incident and date



**National Park Service
Incident Daily Cost Report
Travel Costs**

Case Name: _____	Date: _____
NPS Unit: _____	NPS Account Number: _____

Were travel authorizations issued? (yes/no) _____ If yes, how many? _____

Are all travel authorizations attached? (yes/no) _____ If no, complete items below for those not attached

Are all paid travel vouchers attached? (yes/no) _____ If no, submit those not attached when received

Name (last, first)	Travel Authorization Number	Issued By	Estimated Cost	Office Use
Total:				

Remarks

(EQD/ERDAR 2.13, December 2003)

GOVERNMENT EQUIPMENT (EQD/ERDAR 2.14)

This form should be completed for government equipment costs incurred each day.

How to Complete Form

1. **Case Name:** Name assigned to the incident
2. **Date:** The date for which costs are reported
3. **NPS Unit:** Unit or office for which costs are reported
4. **NPS Account Number:** NPS account number to charge against

Supply items 5 through 11 for each equipment item involved in the incident.

5. **Item Description:** Description of equipment item
6. **Rate Basis:** Basis for equipment cost rate (e.g., hourly, daily, weekly, etc.)
7. **Number of Units:** Number of units equipment was used (e.g., number of hours, days, weeks, etc.)
8. **Rate per Unit:** Cost rate charged per unit of use (e.g., dollars per hour, day, week, etc.) - attach standard rate table or a calculation of how the rate was determined
9. **Rate Charge:** Number of units multiplied by rate per unit
10. **Non-Rate Charge:** Cost charges not assessed on the identified rate basis (e.g., mileage, fuel, mobilization/demobilization)
11. **Total Cost:** Sum of rate charge and non-rate charge
12. **Remarks:** Any amplifying information relevant to this incident and date



National Park Service Incident Daily Cost Report Government Equipment

Case Name: _____	Date: _____
NPS Unit: _____	NPS Account Number: _____

Item Description	Rate Basis	Number of Units	Rate per Unit	Rate Charge	Non-Rate Charge	Total Cost	Office Use
Total:							

Remarks

(EQD/ERDAR 2.14, December 2003)

SHORT FORM (EQD/ERDAR 2.15)

This form may be completed for all costs incurred each day if the number of items per category is limited. The longer forms (EQD/ERDAR 2.11, 2.12, 2.13, or 2.14) can be used if there are more items to report for particular categories. The summary sheet (EQD/ERDAR 2.10) must always be attached to the Incident Daily Cost Report submission.

How to Complete Form

1. **Case Name:** Name assigned to the incident
2. **Date:** The date for which costs are reported
3. **NPS Unit:** Unit or office for which costs are reported
4. **NPS Account Number:** NPS account number to charge against

Government Personnel

Supply items 5 through 11 for each person involved in the incident.

5. **Name (last, first):** First and last name
6. **Pay Grade:** Pay grade (e.g., WG-5, GS-9)
7. **Pay Status:** Pay status (e.g., Regular, Overtime, Night Differential)
8. **Hours:** Actual hours spent performing duties
9. **Pay Rate:** Pay rate commensurate with indicated pay grade and pay status - this should be the “loaded” rate that includes both salary and benefits
10. **Total Cost:** Hours multiplied by pay rate
11. **Activity Code:** Activity code that describes duties performed - activity codes are listed at the bottom of the form

Purchases/Expendables

Indicate whether purchase orders were completed, how many purchase orders were completed, and whether all purchase orders are attached. Complete items 12 through 14 for each purchase order that is not attached.

12. **Description of Item:** Description of item purchased
13. **Purchase Order Number:** Purchase order number issued for the item
14. **Cost:** Cost of the item purchased

Travel Costs

Indicate whether travel authorizations were issued, how many travel authorizations were issued, and whether all travel authorizations are attached. Complete items 15 through 18 for each travel

authorization that is not attached. Also indicate whether all paid travel vouchers are attached. If any paid travel vouchers are not attached, submit them when received.

15. **Name (last, first):** First and last name of traveler
16. **Travel Authorization Number:** The number assigned to the travel authorization
17. **Issued By:** NPS unit issuing the travel authorization
18. **Estimated Cost:** Estimated cost associated with the travel authorization

Government Equipment

Supply items 19 through 25 for each equipment item involved in the incident.

19. **Item Description:** Description of equipment item
20. **Rate Basis:** Basis for equipment cost rate (e.g., hourly, daily, weekly, etc.)
21. **Number of Units:** Number of units equipment was used (e.g., number of hours, days, weeks, etc.)
22. **Rate per Unit:** Cost rate charged per unit of use (e.g., dollars per hour, day, week, etc.) - attach standard rate table or a calculation of how the rate was determined
23. **Rate Charge:** Number of units multiplied by rate per unit
24. **Non-Rate Charge:** Cost charges not assessed on the identified rate basis (e.g., mileage, fuel, mobilization/demobilization)
25. **Total Cost:** Sum of rate charge and non-rate charge



National Park Service Incident Daily Cost Report Short Form

Case Name: _____	Date: _____
NPS Unit: _____	NPS Account Number: _____

Government Personnel

Name (last, first)	Pay Grade	Pay Status	Hours	Pay Rate	Total Cost	Activity Code
Total:						

Purchases/Expendables

Were purchase orders completed? (yes/no): _____ If yes, how many? _____			
Are all purchase orders attached? (yes/no): _____ If no, complete items below for those not attached			
Description of Item	Purchase Order Number	Cost	Office Use
Total:			

Travel Costs

Were travel authorizations issued? (yes/no) _____ If yes, how many? _____				
Are all travel authorizations attached? (yes/no) _____ If no, complete items below for those not attached				
Are all paid travel vouchers attached? (yes/no) _____ If no, submit those not attached when received				
Name (last, first)	Travel Authorization Number	Issued By	Estimated Cost	Office Use
Total:				

Government Equipment

Item Description	Rate Basis	Number of Units	Rate per Unit	Rate Charge	Non-Rate Charge	Total Cost	Office Use
Total:							

APPENDIX C

Activity Codes	3.2 Determine jurisdiction	13.0 Restoration determination report
1.0 Incident investigation	4.0 Case management	14.0 Prepare demand/claim
1.1 Incident screening	4.2 Establish case accounts	14.1 Calculate damages
1.2 Incident classification	4.4 Track costs	14.2 Review claim
1.3 Preliminary discussion w/ EQD/ERDAR	5.0 Contact SOL/AUSA	14.3 Negotiations
1.4 Meet w/ case team	6.0 Prepare assessment work plan	14.4 Assemble administrative record
1.5 Preliminary discussion w/ RP	6.1 Conduct assessment	15.0 Prepare and execute concurrence doc.
2.0 Response action determination - general	7.0 Prepare/review project agreement	16.0 Review settlement
2.10 Response action work plan formulation	8.0 Injury determination	16.1 Prepare Restoration Fund deposit form
2.11 Response implementation/oversight	9.0 Prepare DO 55 determination	17.0 Prepare restoration plan
2.12 Response report	10.0 Injury quantification	17.1 Implement restoration plan
3.0 Assemble jurisdictional information	11.0 Injury assessment report	18.0 Conference call
3.1 Analysis of jurisdiction	12.0 Restoration determination	20.0 Travel

(EQD/ERDAR 2.15, December 2003)

APPENDIX D

SAMPLE CASE TEAM AGREEMENT

<p style="text-align: center;">CASE TEAM AGREEMENT</p> <p style="text-align: center;">TITLE OF INCIDENT</p> <p style="text-align: center;">PARK</p> <p style="text-align: center;">DATE</p>

APPROVED:

Regional Solicitor, REGION

Date

APPROVED:

Superintendent, PARK NAME

Date

APPROVED:

Chief, Environmental Response, Damage Assessment and Restoration Branch

Date

CONTENTS

INTRODUCTION

TERMS AND CONDITIONS OF THE CASE TEAM AGREEMENT

- Communication
- Funding
- Case Management
- Contracting
- Litigation Support

THE CASE TEAM

CASE TEAM AGREEMENT AMENDMENT PROCESS

INTRODUCTION

This case team agreement establishes an understanding on the scope, roles and responsibilities of case team members for _____ incident. The individuals listed (on the attached letter) will constitute the CASE TEAM and will abide by the conditions set forth in this document. The agreement will remain in place from the date of the last signature through the receipt of recovered funds into the DOI Restoration Fund or the date of the settlement agreement, whichever is later. At any time, the signatories to this agreement can propose changes to or dissolution of the agreement with consensus of the other parties.

The goal of this agreement is to cooperatively work through response and damage assessment, to develop a claim and collect funds and/or compensation from the responsible parties (RPs) to make the park whole for injuries related to and/or attributable to this incident. This agreement recognizes that coordination among these parties is essential for a successful case. It also recognizes that success depends on developing close working relationships with all those involved in the response actions, assessment activities and litigation.

The key to success for conducting case activities will be developing coordination within the case team. This Agreement covers response, damage assessment, and restoration determination activities. The NPS will rely heavily on the team for: (1) gathering and analyses of injury data and development of restoration alternatives; (2) working with experts and/or RPs and their representatives; (3) coordination/strategy with the SOL and DOJ; and, (4) supporting litigation and participating in settlement negotiations.

TERMS AND CONDITIONS OF THE CASE TEAM AGREEMENT

The purpose of this effort is produce a claim for injuries to PARK living and non-living resources under the Park System Resource Protection Act (16 U.S.C. 19jj) and to support litigation. The activities required to prepare the claim and support litigation will be conducted in consideration of the following terms and conditions.

Communication

1. All case team members will copy all other members on communication including faxes, e-mails and letters.
2. All case team members will be notified of any and all meetings and/or conference calls.
3. All communication is potentially discoverable therefore all case team members will communicate in a professional manner.

Funding

4. The Case Team will aggressively endeavor to recover all costs associated with response, damage assessment and restoration.
5. EQD/ERDAR will provide in kind support by paying salaries, benefits and travel for their staff to participate in this case.
6. PARK/REGION will provide in kind support by paying salaries, benefits and travel for their staff to participate in this case.
7. When funds are available, EQD/ERDAR and/or PARK/REGION may provide funding for portions of the case. A funding agreement addendum will be attached each time funds are obligated for the case.
8. All recoveries for past costs will be remitted to the DOI Restoration Fund and then distributed back to the obligating accounts as designated on the deposit form once the case is settled. In the event that not all past costs are recovered, the park and EQD/ERDAR will prorate any deficiencies in recovered funds according to the costs presented in the claim and supported with documentation.

Case Management

9. Case Team members agree to keep accurate cost records and make them available in the format suggested by EQD/ERDAR for use during cost recovery proceedings. These records must include for each item of personnel costs: date, employee name, description of the activity performed, the amount of time and the rate including overtime, hazard, night, and weekend differentials. These records must also include a detailed list of any purchases related to this case (including receipts); any contractor costs; any travel related expenses (including vouchers); and, any transportation related expenses ,i.e. boats, vehicles, aircraft, etc. using either previously agreed upon schedules or government approved schedules/contracts such as OAS, NPFC TOPS vehicle/boat use schedule, etc.
10. The Case Team develops strategy, case budget and claim. The EQD/ERDAR Case Officer will arrange for review of the resulting reports.
11. Each case team member will maintain their own case file in such a manner as to be readily accessible for potential FOIA or Discovery requests.
12. All case team members will follow correct evidentiary procedures when taking, logging and labeling photos, video or other physical data.
13. PARK agrees to keep all records, photos, videos, and discussions with non-park/EQD/ERDAR personnel, and case findings confidential unless otherwise directed by the Department of the Interior's Solicitors Office (SOL) or the U.S. Department of Justice

(DOJ). Also, to the extent required to protect the integrity of the site, all access to the site by non-NPS personnel should be restricted until otherwise agreed upon by the Case Team. All press releases, press conferences, scientific papers must be reviewed and cleared for release by the Solicitor until the case is settled. Release of material and/or discussions outside of NPS/DOI/DOJ regarding the case may waive the United States' confidentiality privilege for these materials and may hinder our ability to recover costs and damages.

14. The Superintendent will be responsible for briefing the Regional Director prior to the submission of a claim/demand to SOL/DOJ.
15. Written concurrence with the findings of the final claim and demand will be obtained from the park and RD. The AD-NRSS will recommend the final claim to the SOL.

Contracting

16. EQD/ERDAR agrees to make available its nationwide contractors under indefinite quantity contracts for the purposes of conducting response, damage assessment and/or restoration actions under the funding arrangement outlined in the attached funding agreement addendum(s). Parks can also use their own contractors or sole source when appropriate.
17. If EQD/ERDAR provides any funding for any contractor, an EQD/ERDAR staff member will act as the COTR, having responsibility for reviewing and approving payment of receipts. If the park assists in funding a task order through the NPS nationwide contracts, bills and receipts will be provided upon request.
18. If PARK provides full funding for a contractor then the PARK is the COTR; however, any contribution of EQD/ERDAR funds for contracting will require EQD/ERDAR to be the COTR.
19. Communication to the contractors will be processed through the COTR.

Litigation Support

20. All case team members will provide support for litigation. This may include preparing documents for discovery requests, reviewing expert witness reports, depositions and possibly testifying in court.
21. When in litigation, case team members will not have discussions with the RP, their attorneys or their representatives without notifying SOL or DOJ first.
22. If DOJ requires assistance and/or information from individuals outside of the Case Team, the SOL will communicate these requests through the Case Officer for consideration by the Case Team.

23. Case team members will be required to adhere to SOL/DOJ confidentiality guidelines regarding the release of data, information and findings.

THE CASE TEAM

As already stated, success of this agreement is contingent upon the Case Team working closely together and with the SOL and DOJ. It should be everyone's intent to keep all case team members updated in a professional manner and to support the process.

The following have been identified as Case Team Members:

Case Officer –
PARK Representative –
SOL Attorney -

CASE TEAM AGREEMENT AMENDMENT PROCESS

Any party to the agreement, subject to concurrence by all parties may amend this case team agreement. Circumstances that may result in an amendment to this agreement include any changes in scope and staffing. Amendments will be in the form of revisions to the original agreement or changes documented through standard correspondence or electronic mail.

ATTACHMENT A
Funding Agreement
Between PARK
And The
Environmental Response, Damage Assessment, and Restoration Branch

The National Park Service's Environmental Response, Damage Assessment, and Restoration (EQD/ERDAR) Branch has agreed to provide funding in the amount of \$XXXXXX for pursuit of XXXXXX activities related to the CASE.

The PARK/Region has agreed to provide funding in the amount of \$XXXXXX for pursuit of XXXXXX activities related to the CASE.

TERMS & CONDITIONS

All Case Team members will follow the Terms and Conditions as set out in the Case Team Agreement (Attached).

THEREFORE, we the undersigned agree to the amount of funds provided by EQD/ERDAR and/or the PARK/Region, their intended uses, as well as the TERMS & CONDITIONS of this agreement with regards to cost tracking, reporting, recovery, and confidentiality.

PARK NAME

Superintendent

DATE

EQD/ERDAR

Branch Chief

DATE

APPENDIX E

**COMPENSATORY RESTORATION
SCALING APPROACHES**

INTRODUCTION

As discussed in the text of the manual, determining the proper scale of compensatory restoration often requires application of relatively advanced economic valuation methodologies. These methods are necessary because the injured resource often is not bought and sold in conventional markets, making it more difficult to place a price on the resource. For example, anglers may not directly pay for recreational fishing opportunities, but such activity can be valued through a variety of analytic approaches. Such resources are often called “non-market” resources.

This appendix briefly reviews methods that resource economists have developed for analyzing the value associated with non-market goods, such as many of the services that Park System resources provide. The objective is not to provide detailed guidance on implementation of these methods. Instead, the discussion is designed to familiarize you with applicable methods as well as the associated data and analytic demands. In all cases, coordinate closely with EQD/ERDAR for guidance and assistance in scaling compensatory restoration.

The following discussion addresses two major categories of scaling methods.

- **Original Research Methods for Scaling Compensatory Restoration:** These methods rely on data collection and analysis that is specifically designed and implemented for the particular case at hand.
- **Expedited Methods for Scaling Compensatory Restoration:** These methods rely on information transfers from existing economic studies and other techniques that are typically implemented with significantly less time and budget than original research methods. Two types of expedited methods are described: “benefits transfer” for scaling the compensatory restoration of lost human use services, and “habitat equivalency analysis” for scaling the compensatory restoration of lost ecological services.

ORIGINAL RESEARCH METHODS FOR SCALING COMPENSATORY RESTORATION

Resource economics measures resource values consistent with an ability to satisfy human needs. In this regard, the valuation of non-market resources is not different from the valuation of other resources such as buildings or cars. All resources (buildings, cars, historic sites, etc.) provide services that people demand and appreciate to various degrees. Further, the more abundant a resource is, the better able it is to provide these services. Therefore, individual preferences and resource scarcity are key determinants of the economic value of non-market resources.

Where non-market resource valuation is different from the valuation of other resources is in the way relevant information can be obtained. If a resource can be purchased in a reasonably competitive market, then estimating its value would be a straightforward matter of observing the

quantities that trade at various prices. However, non-market resources often have characteristics that thwart competitive markets. The inability to exclude individuals from enjoying a scenic view, for example, permits “free riders” to use the resource without paying for it. In these situations, various methods have been developed to estimate non-market resource values in a manner that is conceptually consistent with resource values that are determined in competitive markets.

An introduction to these methods can be found on the World Wide Web at <http://www.ecosystemvaluation.org>, and a general discussion is provided by the U.S. Fish and Wildlife Service manual for conducting natural resource damage assessments (Unsworth and Petersen 1995). Detailed technical descriptions can be found in Freeman (1993) and Kopp and Smith (1993).

Classification of Methods

Non-Market resource valuation methods have been classified according to two characteristics (Freeman 1993; Mitchell and Carson 1989). The first characteristic is whether an individual’s preferences are *directly* or *indirectly* revealed. Direct revelation yields a value for the subject resource itself by observing a market price, or eliciting a willingness to pay, for the resource. Indirect revelation infers a value for the subject resource by applying some behavioral model that links the resource to other goods and services that can be valued directly.

The second characteristic of non-market resource valuation methods is whether revealed preferences obtain from *observed* or *hypothetical* behavior. Observed behavior involves individuals making binding choices regarding real alternatives. Values derived from observed behavior are generally considered to be credible because they reflect actual tradeoffs. However, because they are generally based on choices that are actually made and not contemplated for the future, these values often do not account for any uncertainty about the future desirability or suitability of a resource to satisfy human needs.

Hypothetical behavior, on the other hand, involves individuals making non-binding choices regarding alternatives that are constructed for purposes of value elicitation only. Methods that employ hypothetical behavior are not constrained by the limited universe of observed behavior. Rather, these methods can account for uncertainty regarding the future desirability and suitability of resources, and can flexibly accommodate a large range of valuation scenarios. However, it is necessary to assume that individuals behave the same in hypothetical situations as in actual situations. Therefore, these methods must ensure that survey respondents give considered answers, do not behave strategically, and are not unduly influenced by the survey itself.

The classification of non-market resource valuation methods according to these two characteristics is illustrated in Exhibit E-1. All such methods can be placed in one of four possible categories: direct-observed, direct-hypothetical, indirect-observed, and indirect-hypothetical. These categories are briefly described below. The list of methods presented in

Exhibit E-1 is intended only to illustrate the nature of each category, and is therefore not exhaustive.

Exhibit E-1			
Classification of Non-Market Resource Valuation Methods			
		-----Behavior-----	
		OBSERVED	HYPOTHETICAL
Preference ----- Revelation-----	DIRECT	<u>Direct-Observed</u> Competitive Markets Simulated Markets Referenda	<u>Direct-Hypothetical</u> Contingent Valuation
	INDIRECT	<u>Indirect-Observed</u> Travel Cost Hedonic Pricing	<u>Indirect-Hypothetical</u> Conjoint Analysis Contingent Behavior

Adapted from Freeman (1993) and Mitchell and Carson (1989).

Direct-observed methods estimate values by observing the actual tradeoffs individuals make to obtain or use the subject resource itself. For example, the value of grazing forage might be estimated by observing the quantities that trade at various prices in a *competitive market* for that resource. However, when determining resource damages, such market prices are appropriate only when the associated commodity *and its uses* are closely related to the injured resource *and its uses*. For example, commercial “stumpage” values would not be appropriate in valuing a loss of trees that were managed to provide ecological services rather than lumber. Other direct-observed methods include *simulated markets*, in which actual markets are created to elicit values, and *referenda*, in which voters indicate whether they support proposed public programs.

Indirect-observed methods also rely on observed behavior. However, the value of the subject resource is inferred by applying a behavioral model that links that resource to other resources and services that can be valued directly. These methods are useful when tradeoffs for the subject resource cannot be directly observed. For example, access to a free public beach cannot be valued directly from observed behavior since nothing is paid to use the beach. Nevertheless, people indicate their values for beach use by their willingness to pay for other goods and services that facilitate beach use, such as travel and lodging services. Accordingly, the *travel cost* method relies on a hypothesized relationship between the observed demand for travel-related services and the unobserved demand for the subject resource. Indirect-observed methods also include *hedonic pricing*, in which resource values are inferred from an analysis of commodity prices they influence (e.g., proximity to a national park may influence real estate prices).

Direct-hypothetical methods query survey respondents about their values for subject resources in hypothetical settings. For example, *contingent valuation* can directly elicit an individual’s

willingness to pay for proposed changes in the quality or quantity of a natural resource and its services. The validity of such methodologies relies on the correct application of economic theory and survey research techniques. From the perspective of economic theory, such methodologies avoid having to rely on the behavioral assumptions required by indirect methodologies to link subject resources to marketed goods and services. The researcher has the flexibility to tailor the hypothetical setting to suit specific valuation needs, such as eliciting values directly for subject resources that are not traded in actual markets. As with other hypothetical methods, contingent valuation also allows one to account for non-use values and any uncertainty about the future desirability or suitability of the subject resource. To meet the imperatives of survey research, however, the hypothetical setting must be meaningful to respondents, and free of incentives which might bias the results.

Indirect-hypothetical methods also query survey respondents using hypothetical settings. However, the responses to these surveys are only indirectly related to a monetary value of the subject resource. For example, *conjoint analysis* describes alternative resource conditions or situations, and then asks respondents to simply rank these alternatives in order of preference. Another example is a *contingent behavior* survey that asks respondents how far they would be willing to drive to use a particular resource. The main point is that these methods elicit behavioral responses, not monetary values. These responses are then translated into monetary values using behavioral models that link subject resources to the indicated behavior, like other indirect methods.

Data Requirements

The data requirements for original research can vary considerably among the different methods. Data requirements for the competitive markets method may be modest if the relevant market conditions are routinely reported. Data may also be available for the hedonic pricing method; however, prodigious quantities are generally required, raising the cost of implementation. Most other original research methods require the generation of new data using surveys. Surveys increase the costs of original research since generated data must be statistically controlled and of a sufficient quantity and quality to produce reliable results. Methods requiring surveys generally cost at least \$100,000, and even more depending on the scope and complexity of the particular application. For example, hypothetical methods such as contingent valuation and conjoint analysis require significant developmental work (e.g., focus groups) to ensure that survey respondents give considered answers, do not behave strategically, and are not unduly influenced by biases that may be introduced by the survey itself. The cost of hypothetical methods may exceed \$1 million in some cases.

EXPEDITED METHODS FOR SCALING COMPENSATORY RESTORATION

NPS relies frequently on two expedited methods for scaling compensatory restoration: “benefits transfer” for scaling the compensatory restoration of lost human use services, and “habitat equivalency analysis” for scaling the compensatory restoration of lost ecological services. These methods rely on information transfers from existing economic studies and other techniques that are typically implemented with significantly less time and budget than original research methods. Therefore, these methods are appropriate in cases involving a relatively small amount of damages. Additionally, these methods are useful when making time and budget allocations for additional injury assessment and restoration determination activities. A preliminary estimate of restoration needs using these methods can help identify data gaps and indicate appropriate methods for damage assessment. Finally, these methods are useful in developing settlement positions in negotiations with responsible parties.

Benefits Transfer

Benefits transfer is an expedited method that is used to scale the compensatory restoration of lost human use services. This method involves using economic values that have been previously estimated and reported in existing studies to address similar issues in other contexts. Specifically, per-unit value estimates from existing economic studies are combined with site-specific resource information to estimate the total economic value of a loss. For example, suppose an injury precludes 150 angler-days of fishing along a river within a park. Then, per angler-day value estimates from studies of comparable resources could be obtained from the economics literature and multiplied by 150 to estimate the total economic value of the loss. Some original research may be required to obtain the necessary site-specific resource information such as the number of affected visitor-days.

The obvious advantage of the benefits transfer method is the avoided cost of conducting site-specific economic studies. That cost could easily exceed the total economic value of the loss itself in certain situations. Moreover, site-specific economic studies take additional time to plan and implement the required data collection and analysis activities. The disadvantage of benefits transfer is that the scope of existing economic studies limits the resulting valuation. In this regard, certain criteria should be applied to ensure that appropriate studies are selected for benefits transfer. Such criteria have been developed for natural resource damage assessments conducted under OPA. Those criteria, published in volume 61, page 499 of the Federal Register (January 5, 1996), are paraphrased below.

- Studies selected for benefits transfer must reasonably represent the injured resource in terms of physical characteristics, service flows, user characteristics, and available substitutes;

- Studies selected for benefits transfer must reasonably represent the change in the quantity or quality of the injured resource; and
- Studies selected for benefits transfer must be scientifically sound and use appropriate valuation methodologies.

The limitations of benefits transfer yield uncertainties in the resulting valuation due to potential differences in resource and user characteristics, and the quality of existing studies. Therefore, the usefulness of benefits transfer will depend on efforts taken to assess the comparability of resource and user characteristics, the number and quality of existing studies considered, and the valuation needs of the injured resource.

Habitat Equivalency Analysis

Habitat equivalency analysis (HEA) is an expedited method that is used to scale the compensatory restoration of lost ecological services. The criterion that rationalizes this method requires compensatory restoration projects to provide replacement services that have a total economic value at least as great as the total economic value of lost services. That is, the size of the selected compensatory restoration project must be sufficient to offset the total economic value of lost services.

To satisfy this criterion, HEA determines the size of the compensatory restoration project such that the total quantity of replacement services provided through time is sufficient to offset the total quantity of lost services.¹ These services are quantified in physical units of measure such as *acre-years*.² Given the offset of the total quantity of lost services, the compensatory restoration project will be sufficient to offset the total economic value of lost services if the unit economic values of the replacement services are comparable to those of the lost services. Therefore, to apply HEA, compensatory restoration must provide ecological services that are comparable to those lost as a result of the resource injury.³

In general, the incidence of lost and replacement ecological services extends over a period of time. Therefore, since these services occur at different times, they must be adjusted within HEA to comport with generally observed differences in the public's perception of value as such losses and gains are displaced further in time. This adjustment process, known as *discounting*, permits

¹ Services lost or provided at different times are discounted at an appropriate rate to reflect time preference considerations.

² An acre-year refers to all the resource services provided by one acre of habitat for one year. This measure of resource services is specific to habitat since different habitats provide different services.

³ This condition is satisfied if 1) the unit economic values of the replacement services are comparable to those of the lost services, 2) these unit economic values are invariant with respect to the scale of compensatory restoration within a relevant range, and 3) these unit economic values are invariant with respect to time (except for adjustments for inflation and time preference).

one to examine values occurring at different times on a comparable basis. The adjustment involves decreasing future value, and increasing past values, each year by a proportional amount known as the discount rate. Discounting in this context is analogous to a bank's calculation of compound interest for a deposit or loan.

The following conditions qualify the application of HEA.

- Before the scale of compensatory restoration can be determined, the case team must select appropriate primary restoration measures. This is because the total quantity of lost services to be replaced by compensatory restoration depends, in part, on how fast and how completely injured resources are returned to their baseline conditions through primary restoration.
- The replacement services provided by compensatory restoration must be comparable to the lost services. HEA cannot account for significant differences in unit economic values that may occur between different types of services.
- In general, HEA should be used in situations primarily involving the loss of ecological services with relatively little or no loss of direct, on-site human use.⁴ HEA cannot account for the reductions in marginal values that may occur as people become satiated with increasingly larger compensatory restoration projects or as congestion increases.

Assuming these conditions hold, HEA implicitly offsets the lost economic values resulting from the resource injury with the economic values provided by compensatory restoration.

⁴ See Discussion Subpart E, Section III.B.4.a of the preamble to the OPA natural resource damage assessment regulations (61 FR 453).

References

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- Kopp, R. J., and V. K. Smith, eds. Valuing Natural Assets: The Economics of Natural Resource Damage Assessment. Washington, DC: Resources for the Future, 1993.
- Mitchell, R. C., and R. T. Carson. Using Surveys to Value Public Goods: The Contingent Valuation Method. Washington, DC: Resources for the Future, 1989.
- Unsworth, R. E., and T. B. Petersen. "A Manual for Conducting Natural Resource Damage Assessment: The Role of Economics." Manual prepared by Industrial Economics, Inc., for the U.S. Fish and Wildlife Service, 1995.

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APPENDIX F
MANAGEMENT OF RECOVERED FUNDS

INTRODUCTION

PSRPA allows NPS to seek recovery of various restoration-related costs when Park System resources are injured. As discussed in the handbook, recoverable costs include response costs, damage assessment costs, restoration costs, and monitoring costs. Other recoverable costs include various categories of indirect costs and the three-percent fee charged by DOJ. The proper management of those recoveries is essential to fulfilling the mission of PSRPA and avoiding legal pitfalls.

This appendix briefly explains the system for managing funds recovered in PSRPA cases. Specifically, it discusses rules for depositing and withdrawing funds in the DOI Restoration Fund. This appendix also reviews other funds management requirements associated with OPA and CERCLA cases.

DEPOSITING RECOVERIES

All funds recovered under PSRPA authority must be managed through the Restoration Fund. In general, all recoveries made under PSRPA, CERCLA, and OPA must be deposited in the Fund before reimbursements for past costs can be made, or before using the recoveries to effect future restoration actions. Several aspects of the Fund are noteworthy.

- The Restoration Fund holds the deposits in park- and case-specific accounts. As a result, there should be no concern that recoveries will be used for purposes other than the PSRPA case in question.
- Once deposited, damages recovered for restoration accrue interest. However, recoveries for response and assessment costs do not.
- There are no management fees associated with the Fund.

Attachment F-1 provides detailed deposit instructions and the associated form used to deposit recoveries. EQD/ERDAR will fill out and initiate all deposit forms. As discussed, deposits can be made by check or by electronic funds transfer. All deposits must be accompanied by a deposit form that categorizes recovered funds as either (1) costs incurred for response actions; (2) costs of assessment actions; or (3) costs of past and future restoration actions.

WITHDRAWING RECOVERIES

Park staff must use the form in Attachment F-2 to withdraw funds recovered under PSRPA.¹ The following general guidelines apply to withdrawal actions.

- All funds deposited in the DOI Restoration Fund are no-year funds.
- All funds deposited in the DOI Restoration Fund, except response and assessment cost recoveries, will be invested and the interest will remain with the park- and case-specific account. However, all funds can remain in the DOI Restoration Fund until needed. Therefore, it is advisable to allow restoration funds to remain in the Fund accruing interest until needed. Monthly account updates reflecting interest and the current balance can be provided upon request. Since funds are invested, the Fund Manager requires at least 60 days to remove funds from the investment stream, prior to withdrawal of invested funds.
- To withdraw restoration funds, a memorandum or restoration plan (determined in consultation with EQD/ERDAR as indicated by the size and complexity of the project) signed by the Superintendent and transmitted to EQD/ERDAR is required. No explanation is required to withdraw response or assessment cost recoveries.
- Along with the transfer of restoration funds, EQD/ERDAR will transmit project completion report forms to be completed when the restoration projects are fully implemented and certified as complete under the signature of the Superintendent.
- Destination accounts must have a 630 PWE.
- Submit completed PSRPA withdrawal forms and accompanying restoration project documentation to the EQD/ERDAR Restoration Program Manager listed on the attached contact sheet.
- It is important to note that, as provided for in 16 USC section 19jj-3(c), any excess funds following reimbursement to the benefiting accounts of response and damage assessment costs and/or after the certified completion of all restoration projects must be deposited in the U.S. Treasury's General Fund.

¹ This form is available electronically from EQD/ERDAR.

MANAGEMENT OF NON-PSRPA RECOVERIES

It is important to recognize that there are different management procedures for recoveries made under CERCLA and OPA than those used for PSRPA recoveries. The recovery of response costs under OPA must be previously approved using a Pollution Removal Funding Agreement (PFRA). Costs for the initiation of damage assessment under OPA must be approved using an IAG between the Federal Lead Administrative Trustee and the NPFC. In either case, the NPFC TOPS manual provides forms and guidance for the management of those funds, requiring the use of the SF-1081, which is a standard form for inter-agency fund transfers. The SF-1081 can only be executed by the agency's Chief Financial Officer, not the Superintendent or Park/Region Administrative Officer. In cases where a DOI AO has been designated, all damage assessment and restoration costs must be submitted to the AO for recovery. Similarly, in oil spill incidents using initiation of damage assessment funding, all costs must be submitted to the Federal Lead Administrative Trustee for payment. All cost recoveries made under OPA must be initially deposited in the DOI Restoration Fund, including any funds recovered from the Oil Spill Liability Trust Fund for the future costs of developing a restoration plan, for uncompensated assessment costs, or for uncompensated natural resource damages.

In addition, there are financial management rules that apply to funds recovered under CERCLA and OPA that do not apply to PSRPA recoveries. Park staff should consult with EQD/ERDAR for applicable guidance.

All non-PSRPA recoveries of response and assessment costs require review by EQD/ERDAR to ensure that all NPS costs are accounted for, are consistent with NPS and DOI cost recovery guidelines, and are presented in the correct format. EQD/ERDAR will audit the cost recovery package and seek a recommendation by the AD/NRSS for submission to the RP or NPFC for payment. It is important to note that the NPFC TOPS manual recommends approaching the RP for payment prior to submitting costs to NPFC. Consult with the assigned SOL attorney so that he or she can contact the RP's legal representatives to begin these discussions.

ATTACHMENTS

The remainder of this appendix consists of the following attachments.

- Attachment F-1: Deposit Form and Instructions
- Attachment F-2: Withdrawal Form
- Attachment F-3: DOI indirect cost recovery guidance (discussed in Section 6 of the handbook)

Attachment F-1

INSTRUCTIONS FOR THE PAYMENT AND DEPOSIT OF FUNDS RECOVERED UNDER PSRPA

Settlement payments should be made directly to the DOI Restoration Fund. Responsible parties, DOI attorneys, and court registry account managers should direct payments to the DOI Restoration Fund. Payments can be made by check or electronic funds transfer (EFT).

Payment by Check

Checks should be made payable to the Department of the Interior - designating any other payee will delay deposit. Responsible parties should send checks directly to the following address.

Department of the Interior
NBC/Division of Financial Management Services
Branch of Accounting Operations
Mail Stop D-2777
7401 W. Mansfield Avenue
Lakewood, CO 80235

The following information *must* be included with the check.

- Account number 14X5198 (NRDAR)
- Site or case name
- Location of the site (including the park's 4-letter alpha code), and
- Responsible party's name

Notification of Payments

Consent decrees and other settlement documents should include instructions for responsible parties to notify the DOI Restoration Fund Manager when payments are made to DOJ or EPA for subsequent transmittal to DOI, or when payments made by check or EFT are sent directly to the DOI Restoration Fund. Such notices should be sent to the following address.

Department of the Interior
Natural Resource Damage Assessment and Restoration Program
Attn: Restoration Fund Manager
1849 C Street, NW
Mail Stop 4449

Washington, D.C. 20240

Notices should reference the DOJ case number, site name, location, and the responsible party's name.

Questions concerning these procedures should be directed to the DOI Restoration Fund Manager: Bruce Nessler, 202-208-4093 (bruce_a_nessler@ios.doi.gov).

Payment by Electronic Funds Transfer

The preferred electronic funds transfer method is the Department of the Treasury's Automated Clearing House (ACH)/Remittance Express. If the responsible party does not have access to ACH deposit transmission capabilities, the Treasury's Federal Wire (FedWire) transfer procedure is the required alternative. Contact EQD/ERDAR for detailed instructions.

After Receipt of Payment

Upon receipt of payment, the DOI Restoration Fund Manager will work with EQD/ERDAR to ensure proper deposit of the payment. The Restoration Fund Manager will provide periodic reports showing deposit activity.

EQD/ERDAR will fill out the attached deposit form with the appropriate settlement document (e.g., consent decree or plea agreement) attached. Recoveries will be categorized as either:

- Costs incurred for response actions,
- Costs incurred for assessment actions, and
- Costs incurred for past and future restoration actions.

The deposit form must be signed by the park superintendent and submitted promptly to the EQD/ERDAR Damage Assessment Program Manager listed on the attached contact sheet. The EQD/ERDAR Damage Assessment Program Manager then countersigns and forwards the deposit form to the Chief, EQD for final approval. The Chief, EQD will then forward the deposit form to the DOI Restoration Fund Manager.

All recoveries deposited in the Restoration Fund are no-year funds, and remain in the designated accounts until withdrawn. Recovered response and assessment costs cannot be invested; however, restoration funds can be invested with the interest staying with the account until withdrawn.

Attachment F-2

The following form must be used to withdraw funds recovered under PSRPA. Instructions are provided in Appendix F.



National Park Service Restoration Fund Withdrawal Form

Withdrawal request date: _____

EQD/ERDAR tracking number: _____

Project Identification

Case name:
Park name:
EQD/ERDAR case number:
Restoration Fund account/project number:

Funds Category	Requested Amount	Date Needed	Partial/Complete	Destination Account Number
Response				
Assessment				
Restoration				
Total				

Remarks

Is the restoration plan or memorandum attached? <i>(yes/no)</i>

Concurrence

Park Superintendent Date

EQD/ERDAR Restoration Date
Program Manager

Chief, EQD Date

(December 2003)

Attachment F-3



United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, D.C. 20240

August 4, 2000

Memorandum

To: Deputy Commissioner, Bureau of Indian Affairs
Director, Bureau of Land Management
Commissioner, Bureau of Reclamation
Director, Fish and Wildlife Service
Director, National Park Service
Deputy Solicitor
Director, Office of Environmental Policy and Compliance

From: Frank DeLuise, Program Manager
Office of Natural Resource Damage Assessment and Restoration

Subject: Policy on Recovering Indirect Costs

The purpose of this memorandum is to provide instruction and guidance on the use of an indirect cost rate by bureaus and offices that participate in the Natural Resource Damage and Assessment Program (Restoration Program). The focus of the Restoration Program is to develop claims for the injury and loss of natural resources related to the release of hazardous waste and oil spills and then to seek compensation to restore those injured resources. In addition to seeking compensation for restoration of natural resources, the Department as a natural resource trustee, has both the authority and the responsibility to recover reasonable costs, both direct and indirect, of bringing claims against those responsible for natural resource injuries. Until now, the Department had not developed a Departmental methodology for determining an indirect cost rate for activities conducted under the Restoration Program.

There are three components to the Department's methodology for calculating the indirect cost rate for natural resource damage cases, including a DOI headquarters indirect rate, a program management indirect rate, and bureau indirect rates. The application of all three components provide a complete indirect cost amount for an individual case. At this time, a **provisional** headquarters' indirect cost rate has been determined and should be used in developing natural resource damage claims. There are additional steps needed to complete the Department's

program management indirect cost calculation, as well as developing guidance to bureaus to implement their own respective indirect cost rates. We anticipate completion of these remaining tasks by the end of the calendar year.

The provisional headquarters indirect rate includes the Office of the Secretary, the Office of the Solicitor, the Office of the Inspector General, and the Interior Service Center and National Business Center. This indirect rate represents the non-programmatic functions and services of the Department that support the Restoration Program. The calculated provisional rate for the headquarters function is **16.84%**, to be multiplied by all direct labor costs from the bureau(s) that are involved in a natural resource damage case. The rate should not be applied to any non-labor related direct costs such as travel, contracts, or supplies.

An example of the application of the provisional 16.84% indirect rate might be a case involving the National Park Service and the Fish and Wildlife Service, where 16.84% would be applied to the total direct labor costs for both the National Park Service and the Fish and Wildlife Service for that particular case. The headquarters indirect costs would then be added to the direct costs and included in the natural resource damage claim for purposes of settlement negotiations or litigation. Please note that this rate should be applied not only to past direct costs incurred, but should also be included in your calculations developing any future direct labor costs for assessment, restoration and oversight activities.

The second component of the Department's indirect cost calculation is the program management indirect rate, which is based on the Department's Restoration Program Office costs. The Restoration Program includes representatives from the Office of the Solicitor, Office of Environmental Policy and Compliance (OEPC) and the bureaus that participate in the Restoration Program. The indirect rate for program management is still under review; however, once completed, the program management indirect rate will be applied to the total of all program direct costs from all bureaus, the Office of the Solicitor and OEPC. The program management indirect cost rate, once completed, will be provided to bureaus along with guidance on the calculation and use of the rate.

The third and final component for calculating the Department's indirect cost rate for natural resource damage cases are the indirect rates for individual bureaus that are applied to each bureau's direct costs. While bureaus may already have indirect rates in use, we will be discussing those rates with bureaus to make sure they are consistent with the methodology used in the development of the headquarters rate and the program management rate for use in natural resource damage cases. Bureaus and offices need not adopt the methodology used to develop the headquarters function. It is only necessary that (1) direct labor for specific tasks be identifiable, and (2) that neither direct nor indirect costs include any costs for which reimbursement is received from headquarters, the NRDAR program office, or any other bureau.

Bureaus involved in the development of natural resource damage claims should immediately begin to apply the provisional headquarters indirect rate of 16.84% to bureau direct labor costs for both hazardous waste cases and oil spill cases. The provisional headquarters indirect rate for any given case is calculated by multiplying all direct labor costs by 16.84% and adding this

amount to the natural resource damage claim (along with the other natural resource damage components) that is presented to responsible parties in settlement negotiations or litigation.

The Restoration Program Office is working on a number of concurrent issues which coincide with this order to immediately begin including the 16.84% provisional headquarters indirect rate in your claim. First, a template will be developed to help the Solicitor's Office calculate claims, which will clearly identify the multiple components of a claim. The initial template will include components such as bureau direct charges, Solicitor direct charges, and the headquarters indirect rate. Future versions of the template will incorporate the program management indirect rate and lastly, bureau indirect rates.

The Restoration Program will be developing a policy reflecting the Program's priorities in the event of less-than-complete recovery of all costs. We anticipate this policy will be weighted towards the recovery of sufficient restoration funds and past assessment costs provided by the Restoration Fund.

Please note that all bureaus and offices working on specific natural resource damage cases should keep complete records of all direct costs, including labor and non-labor costs, for purposes of cost recovery. It is important for cost recovery to have complete and accurate direct cost figures not only to recover direct costs from PRPs but also to accurately calculate indirect costs for individual cases.

Further guidance on program management indirect cost rate and agency indirect cost rate for use in natural resource damage cases will be forthcoming. Please contact the Restoration Program Office at (202) 208-4143 if you have any questions related to this policy.

cc: Restoration Program Work Group
Restoration Program Executive Board
Bill Webber, PFM

APPENDIX G

RESTORATION PROJECT COMPLETION REPORT TEMPLATE



**National Park Service
Restoration Project Completion Report**

Project name:

Brief incident and project summary:

Contract and contract modifications:

Project closeout date:

(December 2003)

National Park Service Restoration Project Completion Report Fact Sheet		EQD/ERDAR case number:
		Restoration plan submitted by:
NPS Park:	NPS Region:	Restoration performed by:
Location within Park:	State(s):	Date started:
Project name:		Date completed:
Description of restoration project:		
<p>This restoration project has been completed in accordance with the approved restoration plan.</p>		
Submitted by: _____ (signature)	Name:	Date:
Approved by: _____ (signature)	Name: Park Superintendent	Date:
Approved by: _____ (signature)	Name: EQD/ERDAR Restoration Program Manager	Date:

(December 2003)

APPENDIX G

National Park Service Restoration Project Completion Report Composition of Costs		EQD/ERDAR case number:
		Restoration plan submitted by:
NPS Park:	NPS Region:	Restoration performed by:
Location within Park:	State(s):	Date started:
Project name:		Date completed:
1. Government personnel services		\$
2. Government travel services		\$
3. Contract services		\$
4. Supplies and materials		\$
5. Other direct costs		\$
6. Purchase of construction equipment		\$
7. Purchase of other accountable equipment		\$
8. Other costs		\$
9. Total restoration costs (sum items 1 through 8)		\$
10. Funds received from settlement/judgement		\$
11. Funds received from other sources		\$
12. Total funds available (sum items 10 and 11)		\$
13. Deficit funds (item 9 minus item 12, if any)		\$
14. Surplus funds (item 12 minus item 9, if any)		\$

(December 2003)

APPENDIX H

SAMPLE REQUEST FOR PAYMENT (QUICK CLAIM)

(print on park letterhead)

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

[date]

[responsible party name]
[responsible party address]

Re: [incident name and date]

Dear [Mr./Ms. responsible party last name]:

On [date] [brief description of the incident and resulting injuries]

As the person responsible for these injuries, you are liable for certain costs and damages. The Park System Resource Protection Act (16 U.S.C. section 19jj) provides that any person who injures any Park System resource is liable for response costs and damages. Damages in this case include the necessary costs of restoring or replacing the injured resources and the costs of damage assessment. Response costs include the expenses incurred by [park name] to prevent or minimize injuries to Park System resources, to abate or minimize the risk of such injuries, and to monitor the ongoing effects of the incident.

Consequently, it is necessary for you to fully reimburse the National Park Service for the response costs and damages arising from this incident. An itemization of these costs and damages is enclosed. By no later than [payment due date], please deliver a certified check payable to the U.S. Department of the Interior in the amount of [total claim amount] to the following address.

U.S. Department of the Interior
NBC/Division of Financial Management Services
Branch of Accounting Operations
1849 C Street, NW (Mail Stop 1313)
Washington, DC 20240

This check must reference Account Number 14X5198 (NPS 19jj), [incident name], and [park name].

Thank you for your cooperation in this matter.

Sincerely,

[superintendent name]
Superintendent

Enclosure

cc: [SOL attorney]
EQD/ERDAR