



ENVIRONMENTAL  
LAW • INSTITUTE<sup>®</sup>

ENVIRONMENTAL LAW INSTITUTE  
RESEARCH REPORT

OPPORTUNITIES FOR PUBLIC  
INVOLVEMENT IN NOAA'S  
NATURAL RESOURCE  
DAMAGE ASSESSMENT AND  
RESTORATION EFFORTS:

Case Studies of the Tampa Bay Oil Spill  
and Hudson River PCB Contamination

September 2000

**OPPORTUNITIES FOR PUBLIC  
INVOLVEMENT IN NOAA'S NATURAL  
RESOURCE DAMAGE ASSESSMENT  
AND RESTORATION EFFORTS:**

**Case Studies of the Tampa Bay Oil Spill  
and Hudson River PCB Contamination**

September 2000

## ***Acknowledgements***

This report was prepared by the Environmental Law Institute (ELI) with funding from the United States National Oceanic and Atmospheric Administration (NOAA) under Purchase Order #40AANC901295. It does not represent the views of NOAA and no official endorsement should be inferred. This report was written by Lisa Pelstring, Elizabeth Gordon, Suellen Keiner, John Pendergrass, and Tanyara Mungkalarungsi. We would particularly like to thank the many respondents who agreed to be interviewed, including individuals from various interest groups in Florida and New York, as well as officials from NOAA, U.S. Fish and Wildlife Service, the Florida Department of Environmental Protection, and the New York State Department of Environmental Conservation. In addition, we would like to extend a special thanks to the many individuals from NOAA's Damage Assessment and Restoration Program who reviewed this report—Ann Berger, David Chapman, Darlene Finch, Stephanie Fluke, Brian Julius, Eli Reinharz, Carol-Ann Mannen, and Sharon Shutler.

*Opportunities for Public Involvement in NOAA's Natural Resource Damage Assessment and Restoration Efforts*

Copyright © 2000, Environmental Law Institute®, Washington, DC. All rights reserved. ELI Project # 9908-01, 9908-02, 9908-03, ELI ISBN #1-58576-002-1, Document #d.10.07.

(Environmental Law Institute®, The Environmental Forum®, and the Environmental Law Reporter®, are registered trademarks of the Environmental Law Institute.)

# Table of Contents

Executive Summary .....	i
I. Introduction .....	1
A. Purpose of Research .....	1
B. Methodology .....	2
II. An Overview of Public Participation in Federal Decision Making .....	3
A. Background .....	3
B. Problems with Traditional Public Participation .....	4
III. Natural Resource Damage Assessment .....	7
A. Background .....	7
B. The NRDA Process .....	8
IV. Public Participation in the NRDA Process – OPA, CERCLA, and NEPA .....	11
A. Public Participation under the OPA Regulations .....	11
B. Public Participation under the CERCLA Regulations .....	12
C. NEPA’s Requirements for Public Involvement in NRDA .....	13
V. Case Study I: 1993 Tampa Bay Oil Spill .....	15
A. Site History .....	15
B. Trustee NRDA Activities .....	17
C. Trustee Public Involvement Activities .....	18
D. Results of ELI Interviews .....	20
1. <i>Identifying and Educating Affected Citizens and Interest Groups</i> .....	21
2. <i>Obtaining Informed, Representative Input</i> .....	22
3. <i>Increasing Trust Among Citizens and NOAA and Co-Trustees</i> .....	23
E. Summary .....	24
VI. Case Study II: Hudson River PCB Contamination .....	27
A. Site History .....	27
B. Trustee NRDA and Public Involvement Activities .....	30
C. Results of ELI Interviews .....	32
1. <i>Identifying and Educating Affected Citizens and Interest Groups</i> .....	32
2. <i>Obtaining Informed, Representative Input</i> .....	33
3. <i>Increasing Trust Among Citizens and NOAA and Co-Trustees</i> .....	34
D. Summary .....	35
VII. General Conclusions – Lessons Learned from Hudson River and Tampa Bay .....	37
A. Develop Public Involvement Criteria for NRDA Cases .....	37
B. Clearly Articulate Objectives for Public Involvement .....	37
C. Redefine Public Participation .....	37
D. Identify Affected Citizens and Citizen Groups .....	38

E.	Conduct a Systematic Literature Search .....	39
F.	Learn from Other Agency Public Involvement Efforts .....	39
G.	Build on Existing Local and Regional Efforts to Involve the Public .....	39
H.	Meet Periodically with Major Constituency Groups .....	40
I.	Provide Information to Citizens and Interest Groups on a Regular Basis .....	40
J.	Evaluate Existing Public Information Materials and Outreach Efforts .....	40
	References .....	42
	Appendices	
	A: Examples of Public Participation Methods	
	B: Outline for Possible NOAA Guidance on Agency Public Participation	
	C: ELI's Two Interview Protocols for Agency and Non-Agency Officials	
	D: Examples of Article and Press Release about the Tampa Bay Oil Spill	
	E: Example of Article about Hudson River NRDA efforts	

## ***Executive Summary***

In June 1999, the National Oceanic and Atmospheric Administration's (NOAA) Damage Assessment Center (DAC) asked the Environmental Law Institute (ELI) to examine how NOAA might obtain broader citizen awareness of, understanding of, and involvement in its Natural Resource Damage Assessment (NRDA) process. As the primary federal trustee for publicly held natural resources in coastal and marine environments, NOAA: (1) evaluates injuries to natural resources and the services provided by those resources from damage caused by an oil spill, hazardous substance release, or direct human impacts in protected areas; and (2) restores injured resources and services.

This study examines two NRDA cases—contamination of the Hudson River with polychlorinated biphenyls (PCBs) and the 1993 Tampa Bay oil spill—and identifies public participation strategies that DAC may choose to implement for future NRDA efforts. ELI conducted approximately 60 interviews with agency officials and individuals reflecting a range of interests from both the Tampa Bay area and the Hudson River valley. ELI used the following objectives for public participation as reference points for examining NOAA and co-trustees'<sup>1</sup> efforts to inform and involve citizens:

- ! Identifying and educating affected citizens and interest groups;
- ! Obtaining informed, representative input from the public; and
- ! Increasing levels of trust among affected citizens and NOAA and co-trustee officials.

On the basis of these two case studies and related research for this project, ELI has developed ten recommendations that may improve citizen outreach and involvement for future NRDA efforts.

### **1. Develop Public Involvement Criteria for NRDA Cases**

NOAA can start identifying characteristics of cases that require more extensive involvement and outreach efforts to ensure that limited agency resources are used wisely. Some characteristics of a high priority case might include an active citizenry, organized and active interest groups, a responsible party aggressive in its public relations efforts, and long-term trustee involvement in the case. These kinds of characteristics will aid NOAA in determining when and how public participation is more or less appropriate and help allocate limited staff and financial resources.

---

<sup>1</sup>NOAA shares natural resource trusteeship with other federal, state, and tribal trustees.

## **2. Clearly Articulate Objectives for Public Involvement**

Prior to any formal public involvement effort, NOAA and co-trustees should first clearly articulate their objectives for involving the public and the types of information needed from the public. NOAA and co-trustees need to provide citizens with a clear understanding of the trustees' objectives for public participation, explain opportunities that will engage the public in substantive discussion with trustees, and describe any established criteria for how trustees will make decisions relating to the NRDA.

## **3. Redefine Public Participation**

NOAA officials need to consider expanding their current approach to public participation, which is based on traditional approaches such as public meetings, notices in legal sections of newspapers, and Federal Register notices, to include a broader range of methods for informing and involving the public. For example, trustees could conduct public surveys or focus groups to determine which restoration actions are most acceptable to the broader community. Surveys could be designed to impart general information about the NRDA process, as well as to elicit restoration preferences from the broader public. Conducting a random sample survey to obtain public comment will ensure more representative input and possibly balance the influence of vocal groups that attend public hearings and oppose particular restoration options but do not represent the views of most citizens.

NOAA and co-trustee staff assigned to these cases are not trained in which public involvement methods work best under specific circumstances, nor how to implement different approaches. A workshop for agency officials that explores how and when these methods for involving the public are most effective, as well as training on how to interact with the media, may prove useful. Hiring public involvement coordinators at NOAA field offices may ensure that adequate and more systematic attention is given to educating citizens and obtaining informed public comments for NRDA sites throughout the country.

## **4. Identify Affected Citizens and Citizen Groups**

An important first step in a public outreach effort is *understanding the different audiences or constituencies* that exist in an area affected by damage to natural resources. Before trustees attempt to involve citizens in an issue or decision, they could conduct research about the affected region and develop a community profile. Such a profile would include an analysis of the affected community/region; the range of local citizens' understanding, concerns, and information sources relating to the particular site; the types of organized interest groups that may reflect segments of the broader public and contribute substantively during the NRDA, and the general environmental concerns confronting a community and how such concerns may impact NOAA/trustee restoration efforts. This profile would provide trustees with a more comprehensive understanding of the social and political dynamics at a site. The profile would help identify individuals and organizations with knowledge and influence of relevant environmental issues, historical trends in natural resource uses, economic and aesthetic values of resources, and potentially other relevant social information.

## **5. Conduct a Systematic Literature Search**

One easy step toward obtaining site-specific social, political, and demographic information would be to conduct a broad literature search. During the earliest stages of a NRDA (the preassessment phase), trustees often gather relevant on-site data and review journal articles relating to the injured resources to determine whether a damage assessment is warranted. At this early phase, it would be useful to trustees to broaden literature searches to systematically collect basic information about local, regional, or community-based environmental restoration and protection efforts. Academic literature, trade and general press, and the Internet may reveal citizen attitudes toward restoration, communities and organized groups that are already implementing restoration in the affected area, and key interest groups or community leaders with whom NOAA and co-trustees may wish to meet. Information from such a literature search may also be useful to trustees when identifying lost human uses and economic injuries that need to be assessed.

## **6. Learn from Other Agency Public Involvement Efforts**

NOAA can examine more closely the operations of existing agencies' outreach and involvement programs, such as EPA's Superfund Community Involvement and Outreach Center (CIOOC), which has a well-developed infrastructure for conducting outreach and education at high-priority Superfund sites. In addition, EPA also provides funding for its regional offices to hire consultants/academicians to help the regions develop and implement targeted educational and involvement efforts. Many of these activities may also be appropriate for NOAA to adopt at high priority oil spills or CERCLA cases.

## **7. Build on Existing Local and Regional Efforts to Involve the Public**

For high-priority NRDA cases, NOAA and co-trustees can identify and build upon existing local or regional public involvement activities. For example, in both Tampa Bay and Hudson River, there are multi-interest citizen advisory groups for estuary management issues. Similarly, EPA has been doing remediation and public involvement work on the Hudson River since 1990 and has developed an extensive citizen participation framework for involving different local and regional interests. During the very early stages of a damage assessment at a Superfund or oil spill site, NOAA may want to explore the possibility of collaborating with these pre-existing efforts. More formally involving these local or regional multi-interest stakeholder efforts—while time consuming—could help NOAA and co-trustees to identify lost public uses and restoration priorities for a specific geographic area.

## **8. Meet Periodically with Major Constituency Groups**

Under OPA regulations for Pre-Incident Planning, NOAA could consult key representatives of its various constituencies on a quarterly or half-yearly basis. These meetings could focus on priority states or regions where there is a high incidence of oil spills or contamination and could take the form of facilitated, advisory workshops for invited participants. Participants could include representatives from shipping, chemical, oil, and insurance industries; local and regional businesses; local, regional, and national environmental



groups; user groups such as anglers; and academics. This periodic consultation would ensure more time-efficient NRDA in the future, ensure various interests provide input at key NRDA decisionmaking points, establish ongoing NOAA relationships with these groups, enhance agency image, build an agency constituency, and help educate these interests about the complexities of conducting a successful damage assessment. Alternatively, individuals representing these different constituencies could be invited to portions of the yearly NOAA Damage Assessment Center training workshops or meetings.

### **9. Provide Information to Citizens and Interest Groups on a Regular Basis**

Providing information about a NRDA case to affected citizens and interest/user groups on a regular basis will increase citizen understanding and trust in NOAA restoration efforts. Future trustee efforts to improve public outreach and involvement could include publishing a quarterly print/email newsletter updating affected interests, establishing a multi-interest advisory group that could provide ongoing public input to NOAA and co-trustees throughout the damage assessment process, establishing a multi-trustee web site for individual spills or CERCLA cases, or periodically publishing inserts or flyers in local daily and weekly newspapers.

### **10. Evaluate Existing Public Information Materials Efforts**

NOAA needs to examine the effectiveness of its current public information materials. How well do current NOAA materials convey information and increase citizen understanding of trustee activities? Is NOAA's web site ([www.DARP.noaa.gov](http://www.DARP.noaa.gov)) conveying appropriate levels and types of information and being used by affected citizens and groups? How well do citizens understand NOAA's one-page fact sheets describing different NRDA cases? Before developing new outreach materials or revising existing ones, NOAA could conduct a series of focus groups or develop and implement a series of public surveys to identify:

- ! How citizens perceive and understand NOAA's NRDA activities for both oil spills or hazardous substance contamination;
- ! Different levels and types of information citizens may find useful;
- ! Formats that the public prefer for receiving and understanding such information; and
- ! Region-specific public concerns relating to coastal and marine natural resources.

# **I. Introduction**

## **A. Purpose of Research**

Managing and protecting natural resources has become increasingly complex. Contributing to this complexity is the trend toward greater public involvement in how government agencies handle these conflicts. Federal and state government agencies have begun to search beyond the minimum standard tools of public hearings or Federal Register notices for methods that more meaningfully involve affected citizens in decisions about managing publicly-owned natural resources. The National Oceanic and Atmospheric Administration's (NOAA) Damage Assessment Center (DAC) asked the Environmental Law Institute (ELI) to examine how NOAA may promote broader citizen awareness of, understanding of, and involvement in the assessment and restoration of injured natural resources.

As the principal federal trustee for coastal and marine resources, NOAA serves as a trustee on behalf of the public to restore coastal and marine resources injured by an oil spill, hazardous substance release, or physical injury in a NOAA protected area. This process, called a Natural Resource Damage Assessment (NRDA), requires responsible parties that injure publicly held natural resources to compensate for the injury they have caused through restoration actions or funding to restore, replace, or acquire the equivalent of these injured resources. Ultimately, natural resource damage assessment is a litigation-driven process where the responsible party is held liable for injuries to natural resources.

Regulations under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 et seq., and the Oil Pollution Act of 1990 (OPA), 33 U.S.C. §§ 2701 et seq., guide the procedure for conducting a NRDA and also the role of trustees at the federal, state, and tribal government levels. CERCLA and OPA provide authority for NOAA to pursue damage claims for natural resources injured by hazardous materials and oil spills and to hold polluters financially responsible for damages caused by their discharges. Natural resource damage assessment regulations under CERCLA and OPA also call for public participation at various stages. *See* 43 C.F.R. §§ 11.32(c), 11.81(d)(4), 11.93(c); 15 C.F.R. §§ 990.23(c), 990.26(d), 990.44(c), 990.55(c). In addition, NOAA must follow National Environmental Policy Act (NEPA) regulations, which require early public involvement in agency decisions or actions that may affect the environment. *See* 42 U.S.C. § 4332. To carry out all these responsibilities, NOAA is seeking to improve public understanding of and involvement in the NRDA process.

This study examines two examples—contamination of the Hudson River with polychlorinated biphenyls (PCBs) and the 1993 Tampa Bay oil spill—and identifies a number of public participation strategies that NOAA may be able to implement in future NRDA cases. Specifically, ELI's research:

- ! Briefly analyzes existing CERCLA, OPA, and NEPA requirements for public participation in agency decisions and identifies opportunities for flexibility in adopting and implementing new approaches;
- ! Examines public participation activities that NOAA has undertaken for the Hudson River and Tampa Bay cases; and
- ! Develops an outline for NOAA to draft a possible guidance document on public participation in NRDA cases.

For the purposes of this study, ELI has used the following public participation objectives as reference points for examining trustees' efforts to inform and involve citizens in the NRDA process:

1. Identifying and educating affected citizens and interest groups;
2. Obtaining informed, representative input from the public; and
3. Increasing levels of trust among citizens and NOAA and co-trustee officials.

## **B. Methodology**

ELI used a qualitative, case-study approach to allow for flexibility in identifying local contextual factors relevant to the two study sites (Landre and Knuth 1997). ELI researchers also relied on some secondary demographic data. Academic literature on public participation in the context of marine and wildlife resource management was reviewed, as well as relevant regulations, other research studies, and government reports.

ELI first conducted preliminary, unstructured telephone interviews with NOAA and other agency officials to gather site-specific and general NRDA information and to identify the range of local and regional interests that could or should be involved in NRDA decisions. ELI identified possible respondents at the suggestion of trustee officials and by asking interviewees to identify other key individuals for interviewing. ELI used information from these preliminary interviews to develop two open-ended interview protocols that were administered in person or by telephone to selected agency officials and individuals who represented a range of interests or constituencies at the two sites.

For the two case studies, approximately 60 individuals were interviewed in total, and ELI agreed to keep names and affiliations confidential to ensure candid responses. Interviews lasted anywhere from ten minutes to over an hour, with the format varying depending on the interviewee's familiarity with the topic. Copies of ELI's interview protocols are included in Appendix B. ELI also used some secondary data from two databases to compile demographic information for Florida and New York ([www.census.gov](http://www.census.gov), [www.epa.gov/enviro/](http://www.epa.gov/enviro/)).

## **II. An Overview of Public Participation in Federal Decision Making**

### **A. Background**

Public participation in agency decisions was envisioned by our nation's founders as a key element of democracy (GSA 1997; CRS 1997; Cardozo 1981; and Nuskiewicz 1992, Gage and Epstein 1977). Since World War II, more frequent and formalized public participation in decisions of the executive branch and administrative agencies can be traced to the Administrative Procedure Act of 1946, 5 U.S.C. §§ 551 et seq., (Langton 1978; Fiorino 1989; ELI 1991), which introduced "notice and comment" rulemaking. The 1960s-70s saw what one researcher (Fiorino 1989) termed a "participation movement." The 1966 Freedom of Information Act provided citizens with access to agency information and data (ELI 1991; Fiorino 1989); the 1969 National Environmental Policy Act required early citizen involvement in certain agency decisions; and the 1972 Federal Advisory Committee Act specified a public process for advisory committees that give advice, ideas, and opinions to federal agencies (Ashford 1984; ELI 1991). See Fiorino 1989 for a more detailed history of federal agency public participation efforts.

Today, numerous laws and policies mandate some form of citizen involvement in agency decisions at both federal and state levels. See DeSario and Langton 1987; Laird 1993; Cox 1996; Blahna and Yonts-Shepard 1989; Heberlein 1976; Landre and Knuth 1993; Langton 1978. Most of these laws rely on traditional approaches to public involvement, such as notice and comment on proposed rules, which often provide very limited opportunities for the public to influence decisions. However, in recent years, citizens have become increasingly reluctant to defer to the "expert" opinions of agency staff and less willing to serve as passive sounding boards that simply rubber-stamp proposed agency plans and decisions (Pelstring *et al.* 1999). As a result, President Clinton and other federal and state agency administrators have recently adopted regulations, issued executive or administrative orders, and implemented new programs that attempt to involve affected "stakeholders" and are responsive to their constituents (Beierle and Konisky 1999). For example, President Clinton's 1994 Executive Order 12898 on Environmental Justice attempts to broaden citizen involvement to ensure that minority and low-income communities participate in management decisions (No 1996). See Exec. Order No. 12898, 59 Fed. Reg. 7629 (1994).

A variety of cultural and technological factors may have contributed to this increased citizen interest in a more meaningful role in the work and decisions of government agencies (Pelstring *et al.* 1999). Increased media coverage of environmental and other issues (Langton 1978) and advancements such as the Internet have resulted in a heightened degree of citizen awareness of many issues, including protection and management of natural resources. Increased public involvement is also a result of citizens' declining trust in government, and in the growing perception that agency decisions are ignoring or neglecting citizen concerns, knowledge, and values (Slovic 1993). This apparent decline in trust has corresponded with growing grass-roots activism and increasing support for public interest organizations (DeSario and Langton 1987).

Research has recently shown that successful involvement of citizens produces more informed agency decisions and actions that incorporate a broader range of values (Fiorino 1990), greater public acceptance of controversial decisions (Landre and Knuth 1993), and potentially a stronger defense of agency actions in court (personal communication 1999). Although many agencies now recognize that improved public involvement is important, most agencies have had a difficult time developing effective programs for public participation or identifying internal resources to implement these programs. In fact, newspapers, trade and government journals, and legal and academic literature are rife with examples of dissatisfaction with existing government efforts to involve citizens and respond to affected constituencies' interests.

**B. Problems with Traditional Public Participation**

Citizens and agency officials alike complain that the traditional forms of public involvement—open hearings, public notices, and written comments—are often inadequate for truly meaningful public participation (personal communication 1999). Researchers have compared public hearings with other, less typical participatory mechanisms, such as workshops, quasi-experiments, ballot initiatives, public surveys, negotiated rule-makings, and citizen review panels (Heberlein 1973, Fiorino 1990), finding that all participatory methods have both benefits and drawbacks. For example, the most serious problem with the public hearing is that views presented are often not representative of all those potentially affected members of the public. Correspondingly, workshops or advisory groups may also not represent the full range of citizen interests, and public surveys may elicit uninformed opinions (Fiorino 1990). After evaluating five public participation mechanisms (see chart below) based on participatory criteria such as shared decisionmaking authority with citizens, one researcher concluded that no "sure-fire" mechanism exists that will meet all criteria.

**Table I: Fiorino's Evaluation of Agency Public Involvement Mechanisms**

<b>Mechanisms</b>	<b>Direct Involvement of Citizens</b>	<b>Shared Authority with Citizens</b>	<b>Back-and-Forth Discussion Among Citizens and Agency Officials</b>
Public Hearings	Yes	No	Limited
Ballot Initiatives	Yes	Yes	Possibly
Public Surveys	Yes	Limited	Unlikely
Citizen Review Panels	Yes	Limited	Yes
Negotiated Rule Making	Unlikely	Yes	Yes

\* Table modified from Science, Technology & Human Values, 15(2), Spring 1990

Flexibility is often a crucial ingredient to successful public participation—particularly when dealing with diverse audiences in different areas of the country where a combination of public involvement methods may be necessary. However, in a bureaucratic institution, flexibility is often difficult to achieve. Adding to this problem, agency officials may not have established a clear objective for involving the public in an agency decision—nor adequately conveyed this objective to the public. As one researcher has noted:

The term citizen participation conjures up diverse images .... To the government administrator, participation can mean a nuisance or a strategy, to the public affairs staff an opportunity, to the public interest group a tactic, and to newly-organized groups a symbol. Few terms in our contemporary political lexicon have been used with so little semantic precision (Fiorino 1989:523).

Another researcher describes citizen involvement as a "ladder" with objectives ranging from citizens who are empowered with decision-making authority at the very top rung to citizens without any input at the very bottom (Arnstein 1969).

When trustees conduct NRDAs, more traditional forms of public participation are typically used, such as Federal Register notices, legal notices in newspapers, and public meetings. However, various trustee agency officials at NOAA and elsewhere have expressed dissatisfaction with these methods for informing and involving citizens (personal communication 1999). This report provides an overview of two damage assessment cases, examines public participation in each context, and offers suggestions for ensuring more meaningful citizen involvement in future NRDAs.



### **III. Natural Resource Damage Assessment**

#### **A. Background**

The roots of today's NRDA process can be traced to the public trust doctrine, which articulates the concept that the public has some rights or interests in natural resources (Power 1995). *Illinois Central Railroad v. Illinois*, 146 U.S. 387, 13 S.Ct. 110 (1892), and *City of Milwaukee v. State*, 193 Wis. 423, 214 N.W. 820 (Wis. 1927), were two important cases that strengthened the public trust doctrine and government accountability to the public for management of publicly held natural resources (Power 1995). In both cases, the court enjoined the sale of publicly held natural resources to a private entity. In 1908, President Theodore Roosevelt's National Conservation Commission further developed the idea that natural resources should be regarded as property held in trust for all citizens, including future generations (Report of the National Conservation Commission, 1909). In a message to Congress, President Roosevelt anticipated many of today's conflicts over the nation's natural resources:

With the steady growth in population and the still more rapid increase in consumption, our people will hereafter make greater and not less demands per capita upon all the natural resources for their livelihood, comfort, and convenience. It is high time to realize that our responsibility to the coming millions is like that of parents to their children, and that in wasting our resources we are wronging our descendants. S. Doc. No. 60-676 at 2 (1909).

In the early 1970s, when many of our modern environmental laws were first enacted, Congress began passing laws that introduced the concept of recovering monetary damages from polluters for injuries to publicly held natural resources (Breen 1989), such as the Trans-Alaska Pipeline Authorization Act of 1973 (TAPPA), 43 U.S.C. § 1651 et seq., and the Deepwater Port Act of 1974 (DPA), 33 U.S.C. § 1501 et seq. In particular, the DPA authorized the Secretary of Transportation to act as a trustee on behalf of the public to recover monetary damages for injuries to natural resources (Breen 1989). In addition to TAPPA and DPA, Congress passed other statutes that contain natural resource trustee provisions, including the 1988 amendments to the Marine Protection, Research and Sanctuaries Act of 1972, 16 U.S.C. §§ 1431 et seq., the Federal Water Pollution Control Amendments of 1972 (Clean Water Act), 33 U.S.C. §§ 1251 et seq., and the Outer Continental Shelf Lands Amendments of 1978, 43 U.S.C. §§ 1801 et seq. (Breen 1989; Jones and Pease 1997; Kopp and Smith 1993).

The enactment of CERCLA in 1980 (42 U.S.C. § 9607(f)), and its subsequent amendments in 1986, explicitly provided federal and state agencies with trustee and enforcement authority to pursue claims for injuries to publicly held natural resources caused by damage from hazardous substances (Anderson 1993). Following the 1989 Exxon Valdez spill, Congress passed the OPA (33 U.S.C.A. § 2701 et seq.) providing authority for NOAA and other trustees to pursue natural resource damage (NRD) claims for resources injured by oil spills. Today, both sets of NRD regulations—one prepared by the Department of the Interior under CERCLA and the other prepared by NOAA under OPA—provide a framework for trustees to assess and restore injured resources—and lost uses of those resources—caused by hazardous



substances and oil spills. *See* 43 C.F.R. part 11; 15 C.F.R. part 990. Trustees include federal natural resource management agencies like the Departments of Interior and Commerce, other federal land-managing agencies like the Departments of Defense, Agriculture, and Energy, and state agencies and Native American tribes. Natural resources under trustees' jurisdiction include:

[L]and, 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. 33 U.S.C.A. § 2701(20). *See also* 42 U.S.C.A. § 9601(16); 15 C.F.R. § 990.30; 40 C.F.R. § 300.600(a); 43 C.F.R. § 11.14.

## **B. The NRDA Process**

While NRDA regulations adopted under OPA and CERCLA differ in some respects, the major steps are essentially the same (See Table II below). Once a spill or contamination is identified as significant enough to warrant attention,<sup>2</sup> trustees collect readily available information to develop a Preassessment Screen or Determination. Preassessment involves conducting a literature search relating to the effects of oil or other contaminants on species and habitats and, in some instances, conducting limited on-site data collection to determine if a NRDA is necessary.

A primary purpose of the preassessment is to ensure that there is a reasonable probability of trustees making a successful claim for damages against a potentially responsible party (PRP). CERCLA regulations do not require that the preassessment determination be formally announced to the public, but often NOAA will publish a Federal Register notice announcing the determination. *See* 43 C.F.R. §§ 11.20, 11.23. Under OPA regulations, however, trustees must publish a Notice of Intent to Conduct Restoration Planning once the preassessment determination is made. *See* 15 C.F.R. § 990.44. OPA regulations also requires trustees to send the notice to the PRP. *See* 15 C.F.R. § 990.44(d). In addition, OPA regulations require that trustees must provide notice to the public of any planned or anticipated emergency restoration actions. *See* 15 C.F.R. § 990.26(d).

After preassessment, trustees then proceed to the Assessment Phase, which involves conducting more on-site data collection to develop a draft damage assessment and restoration plan (DARP) for oil spills or an Assessment Plan and/or a Restoration and Compensation Determination Plan (RP) for CERCLA cases. *See* 15 C.F.R. § 990.50 et seq; 43 C.F.R. § 11.30 et seq. For oil spills, the draft DARP provides an overview of the natural resources and uses that were injured from the spill and proposes methods for assessing injuries and restoring resources and lost uses. For CERCLA cases, the Assessment Plan outlines the potential resources injured by the hazardous substance and the methods that will be used to assess and quantify injury. The Restoration and

---

<sup>2</sup> Under CERCLA regulations, trustees must first determine that the quantity and concentration of the discharged oil or released hazardous substance is sufficient to potentially cause injury to natural resources. *See* 43 C.F.R. § 11.23(e)(3). Under OPA regulations, trustees must find that response actions have not adequately addressed, or are not expected to address, the injuries resulting from oil spills. *See* 15 C.F.R. § 990.42(a)(3). Only after such a determination is made, can the NRDA process proceed.

Compensation Determination Plan, if prepared separately from the Assessment Plan, lists injuries to resources and services, reasonable restoration alternatives, and the trustees' preferred restoration alternative.

Two major activities occur during development of the draft DARP/RP: (1) injury assessment, to determine the nature and extent of injuries to natural resources and services; and (2) restoration evaluation and selection of preferred action(s) from a reasonable range of restoration alternatives. In preparing the plan, trustees evaluate the alternatives available for returning the injured resources and services provided by the resources to their baseline conditions, evaluate the restoration alternatives for compensating for interim resource service losses, and then select appropriate restoration actions.

At a minimum, OPA regulations require trustees to adhere to the Council on Environmental Quality public participation requirements under NEPA, and require the draft and final DARP to be developed with opportunity for public review and comment. *See* 15 C.F.R. § 990.55 (b)(3)(C). CERCLA regulations for public participation include a minimum 30-day period for public review of the RP and the Assessment Plan. *See* 43 C.F.R. §§ 11.81(d)(2), 11.32(c)(1). For both hazardous waste and oil spill cases, NOAA typically provides a 30-day comment period for draft plans by publishing a Federal Register notice and an announcement in the legal sections of local newspapers, and, in some cases, mailing the plan to interested citizens. NOAA and co-trustees may also hold open meetings to allow for public comments on a draft plan. Trustees then announce final plans to the public through a Federal Register notice, press release, and/or mailing to interested citizens before any restoration actions are implemented.

The potentially responsible party (PRP) can be held liable for the cost of restoring damaged natural resources plus reasonable assessment costs. At any time during the NRDA process, the trustees may conduct restoration and/or work with the U.S. Department of Justice to settle with the PRP and sign a consent decree outlining the amount the PRP must pay or restoration actions it must implement. The CERCLA regulations require that trustees give the PRP a minimum of 60 days to respond to the trustees' request for payment. *See* 43 C.F.R. § 11.91(d); OPA allows the PRP 90 days to respond to the trustees' demands. *See* 15 C.F.R. § 990.62(d). If the PRP, trustees, and DOJ reach a settlement, the consent decree is submitted for court approval and for public review. NOAA agency officials are more frequently using the OPA NRDA themes to conduct a damage assessment—regardless of whether the case involves an oil spill or hazardous substance. NOAA officials find that the OPA regulations allow for more flexibility in conducting a NRDA (personal communications 1999).

**Table II: The NRDA Process Under CERCLA and OPA**

<u><b>CERCLA</b></u>	<u><b>OPA</b></u>
! Preliminary Assessment	! Preassessment Phase
! Injury Assessment determination quantification	notification of incident jurisdictional determination restoration determination
! Economic Valuation	! Restoration Planning Phase
! Restoration Planning	injury assessment restoration selection
! Resolution of Claim	! Restoration Implementation Phase
! Restoration Implementation	

## **IV. Public Participation in the NRDA Process – OPA, CERCLA, and NEPA**

### **A. Public Participation under the OPA Regulations**

NRDA regulations under OPA recommend some form of public participation and provide NOAA with a policy on recovering costs spent on public involvement. Reasonable assessment costs under the OPA regulations include "costs associated with public participation." 15 C.F.R. § 990.30. The OPA regulations state:

Trustees must provide opportunities for public involvement after the trustees' decision to develop restoration plans or issuance of any notices to that effect, as provided in § 990.15 of this part. Trustees may also provide opportunities for public involvement at any time prior to this decision if such involvement may enhance trustees' decisionmaking or avoid delays in restoration. 15 C.F.R. § 990.14(d).

The OPA regulations also highlight agency compliance with NEPA, further emphasizing "early" public involvement:

Depending on the circumstances of the incident, federal trustees may need to consider early involvement of the public in restoration planning in order to meet their NEPA requirement. 15 C.F.R. § 990.23(b).

The nature of public review and comment on the Draft and Final Restoration Plans will depend on the nature of the incident and any applicable federal trustee NEPA requirements as described in § 990.14(d) and 990.23. 15 C.F.R. § 990.55 (c).

In addition to providing flexibility in terms of timing, the OPA regulations allow for flexibility as to how trustees inform and involve citizens. For example, if trustees conduct emergency restoration actions, they must inform citizens of the emergency actions but are provided with discretion as to the "means by which this notice" to the public is provided. 15 C.F.R. § 990.26(d). Similarly, once trustees decide to proceed with a NRDA, they are required to issue a Notice of Intent to Conduct Restoration Planning. Again, the "means by which the notice is made publicly available ... is left to the discretion of the trustees." 15 C.F.R. § 990.44(c).

The preamble to the final OPA rules further emphasizes the role of citizens in the NRDA process and specifically states that a "major goal of OPA is to involve the public in the restoration planning process." 61 Fed. Reg. 440, 444 (Jan 5, 1996). It further encourages citizen involvement at any time during an assessment "if such involvement is expected to enhance trustees' decisionmaking or facilitate the restoration." *Id.* The preamble gives trustees a broad mandate to involve the public in the entire NRDA process:

- To the fullest extent practicable, trustees should involve the public to:
- i. Encourage a broad understanding of restoration and build trust, thus allowing for quicker recognition and support of the restoration process overall;
  - ii. Provide opportunities for joint fact-finding, improving the collection of quality data; and
  - iii. Incorporate public concern, providing for more effective restoration planning.

*See id.*

## **B. Public Participation under the CERCLA Regulations**

The CERCLA NRDA regulations adopted by the Department of Interior specifically call for public comment once an Assessment Plan is developed:

Public involvement in the assessment plan. (1) The authorized official must make the Assessment Plan available for review by any identified potentially responsible parties, other natural resource trustees, other affected federal or state agencies or Indian tribes, and any other interested members of the public for a period of at least 30 calendar days, with reasonable extensions granted as appropriate. 43 C.F.R. § 11.32(c)(1).

The regulations also state that if a Restoration and Compensation Determination Plan (RP) is prepared later than the Assessment Plan, a public review and comments period of at least 30 days is required. *See* 43 C.F.R. § 11.81(d)(2).

The CERCLA regulations allow trustees to recover “public participation” costs from PRPs but fail to define the term. *See* 43 C.F.R. §§ 11.15(a)(3), 11.30(c). There is no specific language in the CERCLA regulations providing for early citizen involvement, although they do grant PRPs an early role in the NRDA process.

The authorized official shall send a Notice of Intent to Perform an Assessment to all identified potentially responsible parties. The Notice shall invite the participation of the potentially responsible party, or if several parties are involved and if agreed to by the lead authorized officials, a representative or representatives designated by the parties, in the development of the type and scope of the assessment and in the performance of the assessment. 43 C.F.R. § 11.32(a)(2)(iii)(A).

In response to comments on the final rules, the preamble to the CERCLA rules states:

While the Department recognizes the importance of participation by both interested members of the public and potentially responsible parties in the [NRDA] process, it does not consider their responsibilities or roles identical. The public has a right to review and comment on decisions at appropriate points in the process... The

public's role, however, is not meant to supplant that of authorized officials acting as trustees...In addition, [PRPs] are ultimately responsible not only for paying the assessed damages, but for the costs of the damage assessment. The Department believes that participation of potentially responsible parties in Assessment Plan development and performance protects those parties' interest in a cost-effective approach and promotes an amicable settlement of natural resource damage claims. Therefore, while the participation of potentially responsible parties and members of the public is not identical, it is equitable given the [PRPs] status as potential defendants and the authorized official's actions on behalf of the public. 51 Fed. Reg. 27674, 27703 (Aug 1, 1986). *See also* 58 Fed. Reg. 39328, 39332 (July 22, 1993).

### **C. NEPA's Requirements for Public Involvement in NRDA**

In addition to public participation requirements under CECLA and OPA, federal trustees must follow NEPA regulations requiring agencies to "solicit appropriate information from the public." 40 C.F.R. § 1506.6(d). NOAA typically satisfies its NEPA requirements by preparing the draft plan as an Environmental Assessment (EA) and publishing it for public review and comment. 15 C.F.R. § 990.23(c)(1). NOAA's OPA regulations state that NEPA requirements are applicable when federal trustees "propose to take restoration actions, which begins with the development of a Draft Restoration Plan." 15 C.F.R. § 990.23(b).

As implemented by the Council on Environmental Quality in 1978, the NEPA regulations explicitly give NOAA and other federal agencies authority to conduct early and meaningful public involvement by requiring agencies to provide the public with information "before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). In addition, where an Environmental Impact Statement is appropriate, CEQ requires federal agencies to reduce extraneous background information by providing a summary and "emphasizing the portions of the Environmental Impact Statement that are useful to decisionmakers and the public." 40 C.F.R. § 1500.4(f). CEQ's regulations outline a range of outreach and involvement activities an agency may implement that go well beyond legal notices in newspapers and announcements in the Federal Register. In short, as implemented by the CEQ regulations, NEPA provides NOAA and other federal trustees with flexibility in terms of timing and public outreach methods for NRDA's.

NOAA's Administrative Order "Environmental Review Procedures for Implementing the National Environmental Policy Act" provides agency officials with more specific guidance on public participation in agency actions covered by NEPA. *See* NOAA Administrative Order 216-6 (June 3, 1999). The guidance allows for a "scoping" process for either EISs or EAs to ensure important issues are addressed early:

Scoping is an "early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action (CEQ sec. 1501.7). The fullest practicable public participation and interagency consultation will be sought to ensure the early identification of significant environmental issues related to a proposed action. Usually scoping is conducted shortly

after a decision is made to prepare an EIS. However, scoping may be used during the EA process to help determine the need for an EIS. NOAA Administrative Order 216-6 section 6.04(a) (June 3, 1999).

The order provides latitude as to how NOAA may solicit public participation, identifying advisory groups, meetings, hearings, soliciting comments on draft and final documents, and “regular contacts” as appropriate methods for obtaining such comment. NOAA’s Administrative Order further emphasizes the importance of public involvement in NOAA activities:

Public involvement helps the agency understand the concerns of the public regarding the proposed action and its environmental impacts, identify controversies, and obtain the necessary information for conducting the environmental analysis. RPMs must make every effort to encourage the participation of affected federal, state, and local agencies, affected Indian tribes, and other interested persons throughout the development of a proposed action and to ensure that public concerns are adequately considered in NOAA’s environmental analyses of a proposed action .... NOAA Administrative Order 216-6 section 5.02(b) (June 3, 1999).

Regulations under OPA, CERCLA, and NEPA, as well as NOAA’s own guidance for implementing NEPA, provide flexibility for trustees to decide how and when citizens may participate in agency issues. For oil spill cases, agency officials have the flexibility to involve the public during the earliest stages of a NRDA. For hazardous waste sites, the CERCLA regulations allow, at a minimum, for public review and comment on draft restoration plans, but do not expressly prohibit expanded outreach or public participation. The CEQ regulations and NOAA guidance for implementing NEPA allow trustees to expand the role of citizens in both CERCLA and OPA cases and provide a menu of public involvement actions which trustees could implement.

## **V. Case Study I: 1993 Tampa Bay Oil Spill**

### **A. Site History**

Tampa Bay, located on the west central coast of Florida, is the state's largest open water estuary and has been designated as one of the nation's 28 Estuaries of National Importance (Tampa Bay NEP 1996). It covers almost 400 square miles, includes six different counties, and draws from a watershed more than five times its size (NOAA Damage Assessment and Restoration Plan- DARP Volume I 1997). More than 100 tributaries flow into the bay, including the Manatee River, the Hillsborough River, Little Manatee River, and the Alafia River (www.tbep.org. March 28, 2000).

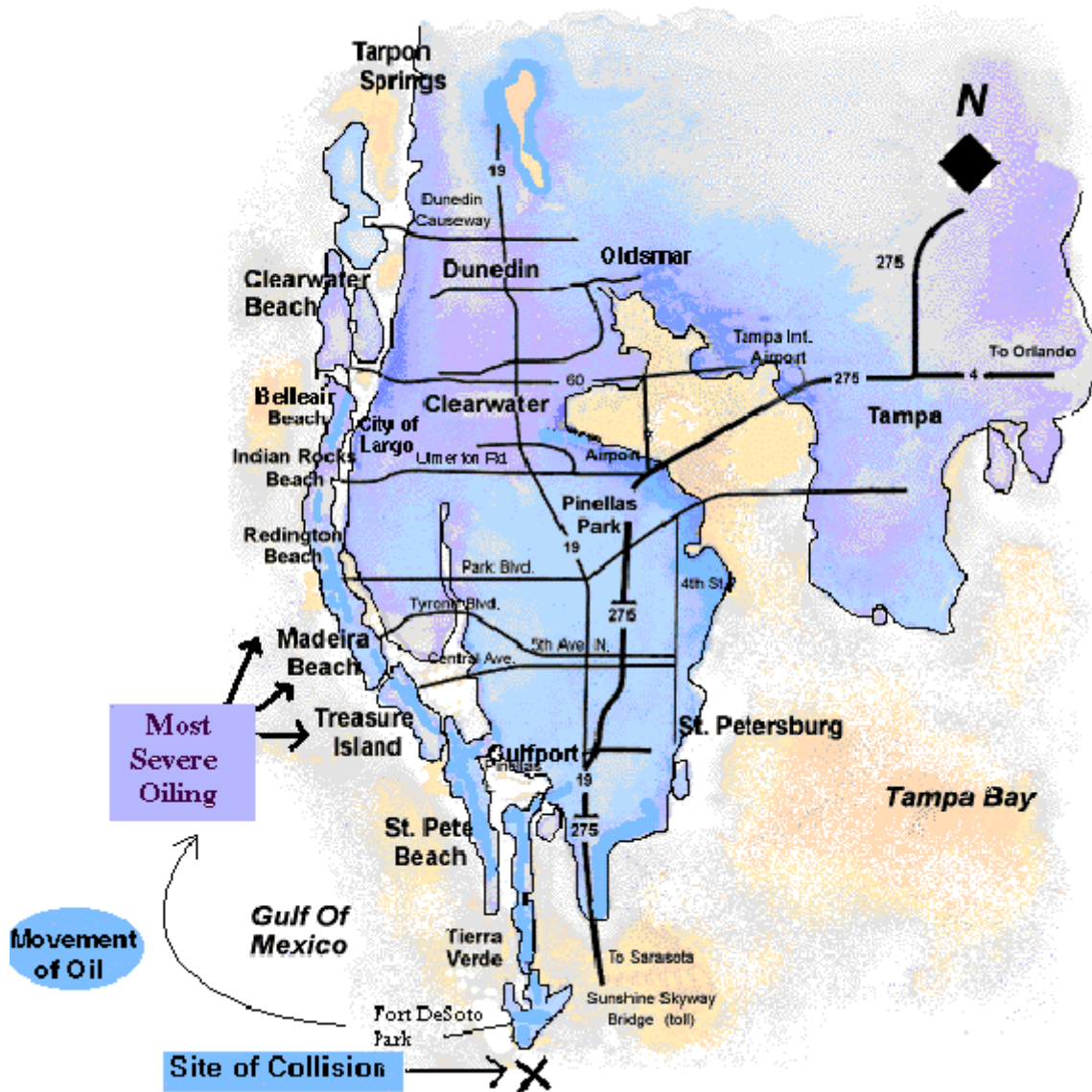
Tampa Bay's combination of deep water and coastal habitats supports thousands of plant and animal species and provides critical feeding, reproductive, and nursery habitats, such as seagrasses, mangroves, and salt marshes. The estuary is home to roughly 200 species of fish, including snook, redfish, and spotted sea trout, more than 500 bottlenose dolphins, and several federally protected wildlife species, such as the West Indian manatee and the Atlantic green turtle (Tampa Bay NEP 1996). The Bay's mangrove islands—considered to be among the most important nesting sites for coastal and marine birds in the nation—support brown pelicans, cormorants, ibis, spoonbills, herons, egrets and skimmers.

Tampa Bay is also Florida's largest port with a high level of commercial vessel traffic. More than four billion gallons of oil and other hazardous materials pass through the Bay each year (Tampa Bay NEP 1996). The estuary and surrounding waters host a number of important recreational and commercial fisheries (NOAA DARP I 1997). Tourists, residents, and businesses, such as hotels, restaurants, boating, and recreational angling, are drawn to the area by the Bay's many natural resources.

The Tampa Bay oil spill occurred on August 10, 1993, when three vessels—the *Maritrans Barge Ocean 255*, the *Bouchard Barge 155*, and the *MV Balsa 37*—collided near the mouth of the Bay (see map on page 18) causing a fire that lasted 18 hours. Over 32,000 gallons of jet fuel, diesel, and gasoline and roughly 300,000 gallons of heavy oil spilled from the barges. The oil spill affected 300 square miles of offshore waters, 27 square miles of bay-area waters, an estimated 5.7 acres of mangrove habitat, 16 miles of sand beaches, 1.25 acres of sea grass, and one acre of salt marsh (NOAA Preassessment Screen, 1993). In addition to injuring important marine and coastal habitats and adversely affecting fish and wildlife species, the spill also impacted local recreational and commercial interests. Following the spill, area waterways were obstructed, shoreline beaches were oiled, and shellfishing areas were closed. Local businesses submitted thousands of claims for lost revenue or damages to boating and fishing equipment, and a class action suit was filed by local business operators who believe they were inadequately compensated (St. Petersburg Times, January 8, 1999; and personal communication October 14, 1999). The spill temporarily prevented access to and use of resources by both residents and tourists for a range of recreational activities, such as swimming, fishing, and boating.



## Map A: Pinellas County, Florida



The spill and cleanup efforts primarily affected Pinellas County. Located on a 280 square-mile peninsula with twenty-four incorporated municipalities, Pinellas includes coastal communities such as Madeira Beach, Treasure Island, Clearwater Beach, Indian Rocks Beach, Indian Shores, Redington Shores, and St. Pete Beach (see map on page 18). The county is home to over 850,000 people, with a resident ethnic/minority population of 11% (U.S. Census Bureau 1990). The county's citizens are fairly well educated; 78% hold a high school diploma, and 18.5% hold a bachelor's degree and/or graduate/professional schooling. The county's population has an above-average income; less than 10% are considered impoverished, compared with the national average of 13.1%.

Immediately following the spill, the Coast Guard issued a series of press releases and held meetings informing the public of its emergency response actions. Environmental advocacy and local planning groups, such as Tampa Baywatch, Pinellas Seabird Rehabilitation Center, the Agency on

Bay Management, and the Tampa Bay Estuary Program, provided the public with information about current conditions and opportunities to become involved in cleanup and wildlife rehabilitation efforts. Many citizens responded by volunteering with wildlife rehabilitation and conservation groups to rescue oiled birds.

## **B. Trustee NRDA Activities**

In addition to NOAA, Florida's Department of Environmental Protection (Florida DEP) and the Department of the Interior's Fish and Wildlife Service (USFWS) served as trustees to identify and restore injured Tampa Bay resources and public uses. In April 1994, NOAA and the co-trustees developed a *Natural Resource Damage Assessment Strategy*, in coordination with two of the three responsible parties (RPs), Bouchard Transportation Co., Inc. and Maritrans Operating Partners, that outlined the known and potential injuries to be evaluated. The strategy was circulated to all three responsible parties.

The NRDA process was separated into two components. The Damage Assessment and Restoration Plan/Environmental Assessment – Volume I (DARP I) was completed in June 1997 and addressed ecological impacts and restoration efforts. Work to plan and complete a damage assessment and restoration plan addressing the lost use of natural resources (DARP II) for public recreation was ongoing when NRDA claims arising from the spill were settled in May 1999. The settlement included funds to plan and implement restoration actions to compensate for the lost recreational uses of natural resources. A Draft Restoration Plan/Environmental Assessment (Draft RP/EA) outlining preferred restoration actions was released for public review in March 2000. (Source:Urquhart-Donnelly et. al 2000.)

DARP I addressed nine categories of ecological resources that were injured, including mangroves, seagrasses, the water column, birds, sea turtles, salt marshes, shellfish beds, sediments, and beaches due to sand removal. Trustees identified a range of restoration projects to address these ecological injuries including a marshland restoration project, a beach monitoring project to protect sea turtles, a project to enhance enforcement of shrimper/fisher use of turtle excluder devices, and a project to address water column injuries. In addition, trustees cooperated with the RPs to conduct an emergency restoration in July 1995 to remove oil that continued to affect oyster reefs near Elnor Island.

The second component of the Tampa Bay NRDA process (DARP II) focused on assessing four categories of lost use injuries: lost use of surface waters for recreation; lost use of shellfish beds for recreation; lost use of commercial navigation; and lost use of shoreline for recreation.

Under the May 1999 settlement, the responsible parties provided funds to cover the costs of conducting the NRDA and provided an additional \$3.1 million to fund other restoration actions. Of this amount, \$2.5 million is allocated for restoration projects to address the lost use of natural resources for public recreation caused by the spill. In addition, the responsible parties agreed to and have implemented other restoration actions, under trustee oversight.

### **C. Trustee Public Involvement Activities**

NOAA and co-trustees for Tampa Bay relied, for the most part, on standard approaches for public participation. At the time of this writing, public outreach activities were still occurring relating to the lost use injury assessment. Consequently, while outreach efforts related to lost use assessment activities are described, this case study focuses principally on examining public outreach efforts relating to DARP I, the ecological portion of the damage assessment.

As Table III notes below, public meetings, mailings, other public notices, opportunities for public comment, and press events were the primary methods used to alert citizens to NRDA activities and seek their views on the draft and final versions of DARP I. In addition, an administrative record was established at NOAA and Florida DEP offices in the Tampa Bay area for all NRDA-related documents.

The draft and final DARP I was mailed to 120 recipients including agency officials and the public; trustees received two public comments—both from outside the Tampa Bay area. It is important to note that both of these comments were from out-of-state. While the trustees may have many out-of-state contacts interested in their NRDA efforts, in-state parties should not be overlooked as these individuals are directly affected by trustee actions. Consequently, ELI examined the trustees' mailing list to understand better which Tampa Bay community members were receiving information from the trustees. Of the 120 individuals on the DARP I mailing list, 64 were out-of-state (principally other agencies and consultants) and 46 were in-state contacts. These 46 in-state contacts fell roughly into the following groups:

- ! 16 agency officials, including local, state, and federal;
- ! 7 individuals from law firms, consulting agencies, and/or industry;
- ! 12 local and regional environmental organizations;
- ! 6 municipal representatives: four mayors and two county commissioners; and
- ! 5 individuals whose affiliations were unclear.

NOAA and co-trustee representatives gave several presentations in the Tampa Bay area explaining the NRDA process, DARP I, and progress to date. Examples include the September 1994 *Environmental Excellence Awards* convened by the Florida Marine Research Institute (an arm of the Florida DEP) with roughly 150 people attending and a meeting with the Agency on Bay Management, an advisory group to the Tampa Bay Regional Planning Council. Outside the Tampa Bay area, trustee representatives presented information on the oil spill at two national and international conferences. In addition, trustees sent a number of press releases to several local newspapers that received varying degrees of coverage.

In developing the Draft RP/EA for the lost recreational uses, the trustees met with local officials from municipalities four to five times each to identify projects that would compensate for lost use injuries. Many of these meetings were open to the public and were attended by local citizens and the media. In March 2000, the trustees sent mailings to the same municipalities asking them to provide updates on previously proposed restoration projects and alerting them to an

upcoming workshop. A March workshop was held to provide an overview of DARP II activities, describe the trustees' preferred restoration alternatives, and provide an opportunity for the public to identify additional restoration project ideas.

NOAA and co-trustees also coordinated two press events relating to the spill and NRDA efforts. In January 1999, the trustees held an event to announce the case settlement and consent decree which received coverage in two articles in the *St. Petersburg Times* (January 27 and 29, 1999). A second press event, held in the summer of 1999, commemorated the sixth anniversary of the oil spill and celebrated the completion of the Cross Bayou restoration project by the RPs for DARP I.

**Table III: Tampa Bay Trustee Public Participation Activities**

<b>August 10, 1993</b>
Over 330,000 gallons of oil spilled into Tampa Bay.
*
<b>November 1993</b>
Trustees complete the <i>Preassessment Screen and Determination</i> and send legal notices for publication in <i>St. Petersburg Times</i> , <i>Tampa Tribune</i> , and the <i>Federal Register</i> .
*
<b>April 1994</b>
Trustees complete the <i>Natural Resource Damage Assessment Strategy Document</i> and send copies to the three Responsible Parties.
*
<b>May 1994</b>
Trustees issue press release announcing <i>Preassessment Screen and Determination</i> and <i>Strategy Document</i> .
*
<b>September 1994</b>
Trustee representative presents NRDA information at Environmental Excellence Awards sponsored by Florida Marine Research Institute in St. Petersburg.
Trustee representative presents NRDA information to the Agency on Bay Management, an advisory group to the Tampa Bay Regional Planning Council.
*
<b>April 1995</b>
Trustees begin meetings with local municipalities to scope restoration project ideas for lost recreational uses.
*
<b>July 1995</b>
Trustees issue press release announcing the start of Oyster Restoration Project on Johns Pass Islands, an emergency restoration action.
*
<b>December 1995</b>
Trustees release Draft DARP I and publish legal notices in <i>Federal Register</i> and <i>St. Petersburg Times</i> . Trustees mail Draft DARP I to over 100 interested parties.
*

**June 1997**

Trustees release Final DARP I and publish legal notices in Federal Register and *St. Petersburg Times*. Copies sent to interested parties (same list that draft DARP I was mailed to).

\*

**January 1999**

Trustees hold press conference at the Florida Marine Research Institute to announce settlement and Consent Decree, receiving coverage in *St. Petersburg Times* on January 27 and 29, 1999, as well as coverage on local TV and radio news broadcasts.

\*

**August 1999**

Trustees hold press event on anniversary of spill to celebrate completion of the Cross Bayou restoration project by the RPs for DARP I. Trustees alert audience at press event about additional restoration projects for ecological injuries and lost-uses. Mostly reporters from local papers attended. Trustees also issue public notice and press release on developing restoration plan for lost recreational uses and receive coverage in two newspapers.

\*

**August 17, 1999**

Trustees alert municipalities and affected parks through mailing about opportunity to update trustees on restoration projects for lost recreational uses.

\*

**March 2000**

Trustees brief the Big "C" --the Barrier Islands Government Council--about the settlement and funds for restoration projects.

Trustees hold public workshop to provide public with opportunity to comment on trustees preferred restoration alternatives and to identify additional restoration project ideas relating to lost recreational use.

In the next section, results from interviews with respondents provide an indication of the success of such efforts and suggest ways to improve future NRDA public involvement activities.

**D. Results of ELI Interviews**

ELI staff interviewed people who reflected a range of interests in the Tampa Bay area to ask them about environmental concerns relating to the spill, their knowledge of NRDA, the efficacy of trustee public involvement efforts, and ways to improve future public involvement. These interviewees included individuals from environmental advocacy and wildlife conservation interests, local municipalities, elected officials, recreational community interests, commercial angling interests, local businesses, newspapers, academia, and state and federal agencies. In addition to these interviews, ELI staff reviewed the administrative record for the NRDA and visited the site of the spill. ELI used the following public participation objectives as reference points for examining trustees' efforts to inform and involve citizens in the NRDA process:

1. Identifying and educating affected citizens and interest groups;
2. Obtaining informed, representative input; and
3. Increasing trust among citizens and agency officials.

### **1. Identifying and Educating Affected Citizens and Interest Groups**

Interviewees' impressions about NOAA and co-trustee outreach efforts were mixed. Many agency officials who were interviewed felt that trustees did a good job at public outreach, particularly given that the Tampa Bay spill was the first major incident since the passage of the new OPA regulations. Trustee representatives did meet with several local and regional interest groups, providing them with basic information about the NRDA process. In addition to meetings, the trustees sent press releases to local media and held several press events to announce achieving key milestones in the Tampa Bay NRDA process. The press events and press releases produced articles in several local newspapers, including the widely read *St. Petersburg Times* (see Appendix C), as well as radio and local TV coverage. During assessment activities for lost recreational uses, trustees actively involved and solicited information from local municipality officials through meetings and multiple telephone calls to identify restoration projects that would address lost uses.

Most interviewees were generally aware of activities that occurred immediately after the spill, including Coast Guard response actions, attempts to rehabilitate wildlife, and efforts by the RPs to compensate individuals for their damage claims. However, many respondents were unaware of, or only vaguely familiar with, trustee efforts and unable to distinguish between NRDA activities and other spill-related efforts. When specifically asked about "awareness of federal or state efforts to assess damages and restore natural resources or lost human uses," interviewees responded:

- ! "I am aware of general response efforts to the spill...but can't clearly distinguish between federal efforts and those of nonprofits and the responsible parties.... It's all a blur."
- ! "I know that someone was checking out damages to the mangroves."
- ! "I don't recall any contact with NOAA or other agency officials."
- ! "I was aware that DEP and Florida Game and Fish were actively responding to the spill."
- ! "I knew that NOAA was in charge of the damage assessment but was unaware of specifics."

When asked about particular trustee activities for public outreach, such as press conferences, public meetings, or legal notices, many interviewees said they were unaware of such efforts. Other interviewees expressed concern that they were not made aware of efforts until it was too late to become involved. One respondent commented that she became aware of trustee efforts only after the consent decree was finalized, well past any opportunity to submit restoration proposals. Several interviewees who work for or volunteer with environmental and conservation groups were largely unaware of trustee activities and opportunities to participate.

The majority of interviewees, however, expressed enthusiasm about participating in future NRDA efforts. They replied positively when ELI staff asked if they would participate in one-on-one meetings with agency officials, future public meetings, and advisory groups, as well as whether they wanted to receive information through the mail and respond to phone inquiries or interviews.

Respondents were particularly positive about receiving regular updates on NRDA activities through the mail or an email list-serve. But when asked whether they would participate in public meetings, several individuals felt that such meetings could be more effective:

- ! “Public meetings and vague informational meetings are too general and unproductive. [My attendance] would depend on the goals or objectives of the meeting.”
- ! “Most public meetings are boring and unproductive.”
- ! “Agencies always schedule meetings during the middle of the day—I can't close my business.”

The above comments are not atypical for public meetings. As an institutionalized mechanism for public involvement, public meetings are often criticized for their minor influence on public policy or decisions and unbalanced community representation (McComas and Scherer 1996). The individuals quoted above believed that citizen involvement at public meetings might increase if they were scheduled in late afternoon and evening hours and structured to facilitate and foster substantive input from all attendees, such as by breaking large meetings into smaller working groups.

## **2. Obtaining Informed, Representative Input**

The trustees at Tampa Bay had difficulty obtaining representative and informed comments from the public, possibly because there was no coordinated effort to identify and educate affected interest groups or citizens. The trustees' efforts for DARP II—meeting with local municipality officials—may have been an effort to obtain more informed and representative comments. It is unclear, however, the extent to which a variety of potentially affected interests, such as recreational boaters, anglers, and environmental groups, were represented at such meetings. Trustees may better elicit participation from a broader audience by supplementing municipality meetings with additional interest group meetings and with an “informational” survey that informs citizens about the NRDA process while obtaining their views about lost uses and restoration preferences.

Interviewees also recommended newspapers, television, radio, and the Internet as effective means of communicating general information about the Tampa Bay NRDA to a broader public. The oil spill and immediate cleanup efforts were extensively covered on television and in newspapers. As a result, many interviewees received general information about the spill from the media. Interviewees frequently cited the *St. Petersburg Times* as a source of information about the spill. In addition, those interviewed believed that some combination of the following methods would inform a broader audience:

- ! increasing agency officials' contact with local community groups and citizens;
- ! issuing public service announcements or commercials on TV and radio;
- ! advertising more widely the existence of NOAA's web site;
- ! placing inserts or flyers in local newspapers to convey NRDA information and solicit public comment;
- ! publishing full or half-page advertisements for multiple days in prominent sections of local and major newspapers;

- ! ensuring NRDA activities are covered at a minimum in the environmental section of local newspapers;
- ! developing a newsletter that is distributed on a regular basis by mail and e-mail to interested and affected citizens and interest groups;
- ! using the public access cable television channel to educate citizens about the case and publicize opportunities for involvement; and
- ! coordinating better and increasing interaction with existing institutions, such as the Agency on Bay Management, the Barrier Islands Government Council (or Big “C”), and weekly/monthly municipality meetings.

### **3. Increasing Trust Among Citizens and NOAA and Co-Trustees**

Many individuals had misperceptions about the role of the trustees. Some interviewees believed that the trustees were responsible for ensuring that the responsible parties adequately compensate private business owners for losses and damages. In addition, several interviewees commented that trustees should have focused their restoration efforts on communities most affected by the spill and that there was little guidance for municipal officials seeking to submit adequate restoration proposals. The vast majority of information received by the public was from the media, particularly newspapers, with the *St. Petersburg Times* cited frequently as an important information source. However, several agency officials characterized some of this newspaper coverage of the Tampa Bay spill and NRDA process as inaccurate.

Interviewees also said that trustees needed to improve their efforts to disseminate information and called for (1) more effective advertising of opportunities for public comment and (2) more frequent and formal interaction among trustees and citizens. The trustees’ public participation efforts for the Tampa Bay case were also criticized for poor timing with one individual noting, “The agencies have to *want* the public to participate.” This individual suspected that the Tampa Bay trustees did not want the additional burdens of outreach and education. Interviewees criticized the trustees’ announcement of comment opportunities and trustee decisions solely in legal sections of newspapers or the Federal Register. Comments included:

- ! “Most people read the newspaper ... only a fraction read the legal section.”
- ! “I knew there was lots of coverage of the spill itself immediately after the event. But there was little detailed information about the NRDA process later on.”
- ! “My impression is that there was not a major NOAA effort to involve the public. The press conference I went to happened after the settlement and plans were agreed to.”
- ! “There wasn’t much effort on the agency’s behalf to inform the public and get them involved.”

In turn, trustee representatives expressed their concerns and some of the obstacles to public involvement that they encountered:

- ! “I was shocked the public gave so little input when given the opportunity to comment.”



- ! “My background is in biology, not public affairs, so it is difficult for me to know what kinds of public activities to plan and how to plan them.”

## **E. Summary**

Trustee representatives were disappointed at the small number of comments received from the public for the draft DARP I and believed they had made adequate efforts to inform and involve citizens. Individual trustees said they had good community contacts in the Tampa Bay area and were able to alert individuals through mailings, meetings, and phone and informal conversations. However, as the interviews above indicate, public awareness and understanding of the NRDA process was mixed, even among interviewees who might be considered community leaders.

While various outreach activities did occur in connection with the NRDA for Tampa Bay, NOAA and co-trustee efforts to identify various constituencies and public concerns were largely uncoordinated. From interviews with NOAA and other trustee representatives, ELI learned that there was no comprehensive effort to identify affected parties early in the NRDA process, nor to identify the most appropriate methods for involving these interests or delegate agency responsibility for public involvement actions. The resulting outreach was piecemeal in nature.

Because NOAA and co-trustees made no systematic effort to identify, inform, and involve affected interest groups and citizens early in the NRDA process, the range of public awareness and knowledge of trustee efforts is not surprising. At a minimum, trustees could develop basic informational materials and a public involvement plan *early* in the NRDA process. Such a plan would:

- ! identify target audiences;
- ! develop methods to reach these audiences;
- ! assign one trustee representative the responsibility for coordinating public outreach and acting as liaison to the public and media; and
- ! establish a timeline for NRDA activities and opportunities for public involvement.

To foster and improve trust among affected interest groups, individual citizens and the trustee agencies, NOAA and co-trustees could develop guidance for restoration proposals that explains the process and criteria for selecting projects in simple, non-bureaucratic language. NOAA could avoid public uncertainty as to what constitutes a "good" restoration project at Tampa Bay—for both ecological and recreational injuries—in the future by clearly specifying the agency’s decision-making criteria for selecting restoration projects. Because citizens rely on local newspapers for most of their information needs, NOAA could devote more time and effort to developing relationships with newspaper reporters to inform them about the NRDA process resulting in more accurate and timely coverage. Similar outreach to radio and television reporters could also lead to better results in terms of more accurate coverage and increased public awareness and understanding of the NRDA process.

While individual trustees may have alerted their personal contacts about the DARP I NRDA process at Tampa Bay, there was no comprehensive or coordinated plan to identify and involve other affected interests. DARP II trustees did meet with mayors and commissioners in the Bay area to ask for their help in identifying potential lost-use restoration projects, successfully reaching one of

several local constituencies. However, there appears to have been no concerted effort to do the same for DARP I restoration. Some trustee representatives said that the public was unconcerned or ignorant about ecological restoration and more interested in projects to restore lost recreational uses. ELI's interviews, however, partially contradict this perception. Interviewees voiced concerns relating to issues of water quality and quantity, particularly due to stormwater runoff pollution and low groundwater levels. Many interviewees participate in recreational fishing or boating and were also concerned about the environmental impacts of offshore oil drilling in the Gulf of Mexico and impacts on habitat and wildlife.

In the future, to more effectively engage and involve the public in restoration activities relating to ecological injuries, NOAA and co-trustees could emphasize the connections between local public concerns and ecological restoration efforts. For example, the Tampa Bay DARP I identified nine ecological injury categories—ranging from mangroves to salt marshes to water quality—and restoration projects to address many of these injuries. Prior to developing DARP I, NOAA and co-trustees could have met with interested citizens, local interest groups, and the media to provide them with examples of restoration projects, as well as to explain how such projects could improve water quality, help maintain or improve species productivity, or address other environmental concerns voiced by citizens and interest groups. Better information and education at the onset may improve the level of citizen awareness, concern, and involvement in future restoration activities. In this manner, NOAA could have made clear to the public how their concerns would be met in DARP I and, more importantly, why their active participation would be a worthwhile effort.

In the future, NOAA could structure public participation to foster substantive citizen involvement *early* in the NRDA process. Mailing lengthy agency documents to individuals or publishing legal notices in newspapers or the Federal Register may not effectively alert citizens and interest groups to issues affecting them. Trustees should also clearly articulate objectives for citizen outreach and participation in the NRDA process. Does NOAA wish to educate citizens? Does NOAA want citizen input on preferred restoration alternatives? Are there other instances in the NRDA process where citizen input is useful—identifying data collection or sampling sites or helping to identify the range of ecological and lost use injuries? NOAA's future public involvement efforts should establish clear objectives, provide citizens with basic information about the NRDA process, and identify concrete opportunities for citizens to become substantively involved in NRDA decisions.



## **VI. Case Study II: Hudson River PCB Contamination**

### **A. Site History**

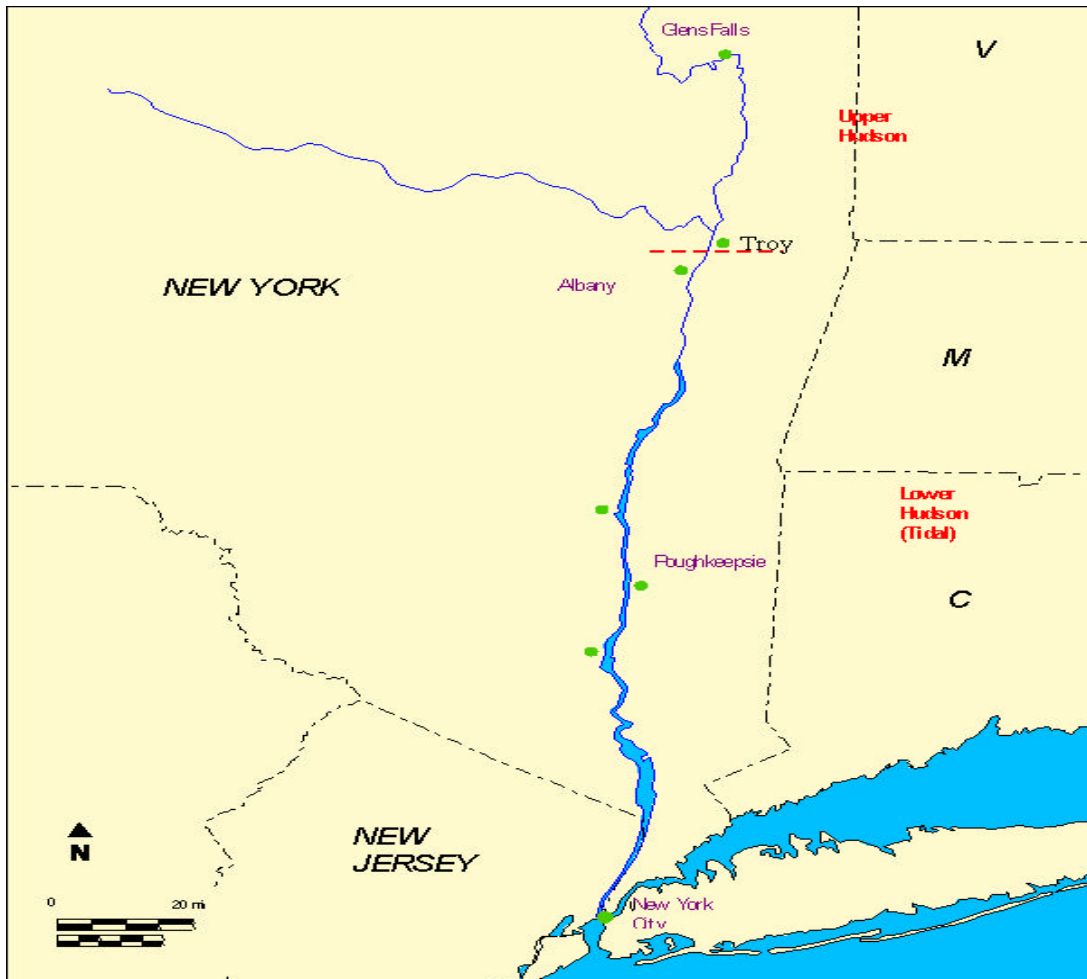
The Hudson River is one of New York's largest watersheds, roughly 315 miles long from its lake source in the Adirondacks to the Battery at the southern tip of Manhattan in New York Harbor. The upper Hudson flows from its source on Adirondack's Mt. Marcy to the federal dam at Troy. This upper portion above the Troy Dam contains eight locks for barge and large boat traffic. The lower Hudson—from the Troy Dam to New York Harbor—is sea level and tidal. Both the upper and lower river are critical feeding and breeding areas for a variety of fish, shellfish, and migratory and resident bird species, as well as several endangered and threatened plant and animal species. (Sources: Final Hudson River Estuary Management Plan 1996; Cronin and Kennedy 1997; NYSDOH 1996. For additional information about the Hudson River, see Boyle 1969.)

Nineteen counties bordering the Hudson River are home to eight million New Yorkers, most residing in New York City's metropolitan area. The river serves a range of commercial and recreational purposes including angling, swimming, boating, wildlife viewing, municipal and industrial water supplies, commercial fishing, transportation for port cities, and commercial and residential waste disposal. Environmental concerns of citizens residing along the Hudson River may best be described as falling along an attitudinal—and geographic—continuum. At one end of the continuum, many lower river residents have been characterized as pro-environment and willing to sacrifice economic gain to protect the environment. At the opposite end, upper river residents have been characterized as wanting to promote both economic development and environmental protection (personal communications 1999).

From 1947 to 1977, the General Electric Company (GE) discharged over one million pounds of PCBs (polychlorinated biphenyls) into the Hudson River from two sites located upriver near Glens Falls and Hudson Falls—the Fort Edward Transmission Systems facility and the Hudson Falls facility (US EPA 1984 and 1991; DEC 1997). GE used PCBs as an insulating fluid in the manufacture of capacitors (US EPA 1984; [www.epa.gov/region02/superfund](http://www.epa.gov/region02/superfund), April 4, 2000; Cronin and Kennedy 1997; Moore 1999).

A class of chemicals first manufactured in the 1920s, PCBs can have toxic effects on a variety of organisms, including fish, birds, and mammals. EPA has classified PCBs as a probable human carcinogen with possible neurological and developmental effects (sources: EPA [www.epa.gov/region5](http://www.epa.gov/region5); [www.britannica.com](http://www.britannica.com), April 4, 2000). These chemicals are relatively insoluble in water and do not degrade in high temperatures ([www.clearwater.org](http://www.clearwater.org), April 4, 2000). Although the production and application of PCBs has been restricted in the United States since 1977 under provisions of the Toxic Substances Control Act, their high resistance to decomposition allows PCBs to remain in soil and water for many years.

## Map B: Hudson River Area



PCB concentrations in Hudson River sediments and surface waters may serve as pathways that affect fish and fish-eating birds and mammals, including humans. Monitoring by the New York State Department of Environmental Conservation first discovered in 1976 that fish from portions of the Hudson River were contaminated with high levels of PCBs. In some instances, fish contamination levels were ten to eleven parts per billion (ppb), whereas Food and Drug Administration (FDA) safety levels were then five ppb. As a result of these high PCB levels, NYSDEC banned fishing from 1976-1995 from the upper Hudson River below Hudson Falls, a stretch of water 40 miles long. Today fishing in this segment is limited to catch and release only. In 160 miles of the lower Hudson River, fishing advisories of varying degrees due to PCBs have been in place since 1976. The commercial striped bass fishery was also closed in 1976. Similar health advisories exist for some waterfowl due to PCBs and other contaminants (NOAA Preassessment Screen 1997).

Potential PCB health impacts led the US Environmental Protection Agency to place sections of the Hudson River on the CERCLA National Priorities List (NPL) in 1983. In 1984, EPA completed a Remedial Investigation and Feasibility Study (RI/FS) and issued an interim “no action” decision concerning the contaminated river sediments. EPA also initiated a treatability study to evaluate the effectiveness of removing PCBs from the river and did in-place capping, containment, and monitoring of shoreline deposits (US EPA 1984; DEC 1997). Under CERCLA, EPA was required to reassess its “no action” Record of Decision within a five-year period. EPA began its reassessment in 1990 and is currently conducting an interim characterization and analysis and a feasibility study on Hudson River PCBs. The agency estimates that 498,245 to 661,387 pounds of PCBs remain in the Hudson (USEPA 1984).

In 1991, a previously unknown source of PCB contamination was identified. Subsequent studies found that PCBs are still seeping from the bedrock beneath the GE Hudson Falls facility (DEC 1997). Currently, EPA has identified roughly 40 contaminated “hot spots” in a 40-mile segment of the river between Fort Edward and the Troy Dam, with many located near the Thompson Island Pool. EPA is scheduled to release a final ROD in 2001 ([www.epa.gov/region02/superfnd](http://www.epa.gov/region02/superfnd) and [www.darp.noaa.gov](http://www.darp.noaa.gov), April 4, 2000).

Over the last ten years, EPA has developed an extensive, multi-level public outreach program to inform and involve concerned interest groups and residents in the Superfund process. Specifically, the Community Involvement and Outreach Office (CIOC) of EPA Region II has a well-developed infrastructure for conducting outreach and education at high-priority Superfund sites. CIOC EPA headquarters is involved in providing training for its regional staff on public involvement, developing general informational materials, evaluating programs, and hiring staff at the regional level to develop site-specific informational materials and implement citizen involvement programs. CIOC provides Technical Assistance Grants (TAGs) to local citizen groups so they can hire consultants or academicians who explain the science involved in remediation and risk assessments. CIOC has developed a mailing list of 1700 concerned New York citizens, and has convened multi-level public advisory groups that meet when major EPA or state actions or decisions are pending. According to CIOC, roughly 240 citizens participate in EPA’s environmental, political, agricultural, or general interest liaison groups. In addition, upper level EPA and DEC officials and liaison group chairs are all members of the Hudson River PCB Oversight Committee to ensure that communication and education occurs at multiple levels. EPA also has established a voluntary Scientific Technical Committee so that scientists and academicians interested in and concerned about Hudson River remediation can express their views.

In addition to EPA’s public advisory groups, there are numerous local, regional, and national advocacy, conservation and environmental justice organizations—such as Scenic Hudson, Clearwater, and the Arbor Hill Environmental Justice Group—that are active in promoting Hudson River protection and cleanup. Furthermore, DEC has established a multi-interest advisory group to help develop and implement a Hudson River Estuary Management Plan (DEC 1996). GE has also developed a website—“GE is committed to a Cleaner Hudson River” at [www.hudsonwatch.com](http://www.hudsonwatch.com)—and a quarterly newsletter, *Riverwatcher*, which is mailed to all interested residents of the Hudson River Valley.

PCB contamination of the Hudson River has been a socially and politically charged issue for

many decades, and various federal and state agencies—from EPA to the New York State Department of Health—have been involved in different aspects of remediation, restoration, and issuing public health advisories. In addition to GE, other interests include local, regional and national environmental, conservation, and citizen groups, as well as groups representing farmers, anglers, and hunters. There is confusion and concern among these different audiences about agency roles and responsibilities and about how they can participate in both NOAA/trustee and EPA decisions relating to Hudson River cleanup, damage assessment, and restoration.

## **B. Trustee NRDA and Public Involvement Activities**

In 1997, NOAA and co-trustees from the U.S. Fish and Wildlife Service and New York DEC signed a memorandum of agreement to begin the natural resource damage assessment process for the Hudson River. The trustees completed a preassessment screen in October 1997 and prepared a draft scoping document in September 1998, outlining what resources and public uses they would examine during the damage assessment process. At the end of 1999, trustees were entering the second major stage of the NRDA—the Assessment Phase—and were developing a draft natural resource damage assessment plan. This document will detail the scientific studies the trustees will implement to evaluate and document natural resource and lost public use injuries.

For both the preassessment screen and the draft scoping document, the Hudson River trustees developed and implemented communication and outreach plans. As seen in the table below, public hearings, direct mailings, and public notice and comment opportunities have been the principal methods used to date for alerting citizens about various aspects of the damage assessment process for the Hudson River. In the section following this table, the results of ELI's interviews about the Hudson River case provide an indication of the success of these efforts and suggest ways for NOAA to improve future NRDA public involvement activities.

## **Table IV: Trustee Efforts to Involve the Public in Hudson River NRDA**

### **October 1997**

Trustees announce pre-assessment screen for public comment through press release and Federal Register notice.

Trustees provide GE with copy of pre-assessment screen.

Trustees establish roughly 16 document repositories throughout New York.

\*

### **July 1998**

Trustees develop a Public Participation Plan Phase I explaining the draft scoping document and detailing how the public will be involved in future NRDA activities.

Trustees mail plan to 1500 residents of the Hudson River valley (using mailing list from EPA).

\*

### **August 1998**

Trustees hold a public participation focus group to identify how best to involve the public in NRDA activities for the Hudson River.

\*

### **September 1998**

Trustees release Draft Scoping Document—the preliminary outline for the Hudson River Natural Resource Damages Assessment Plan.

Trustees mail letter to 1500 citizens alerting them about the Draft Scoping Document.

Trustees hold two-month public comment period on Draft Scoping Document that closed December 11, 1998.

\*

### **October-November 1998**

Trustees hold a series of public meetings to discuss the Draft Scoping Document.

\*

### **June 1999**

Trustees respond to comments from public meetings about the Draft Scoping Document by mailing letter to 1500 citizens.

\*

### **September 1999 - Future**

Trustees currently developing draft natural resource damage assessment plan.

Future public involvement plans include meeting with targeted interest groups in the Hudson River valley and a media campaign with local newspapers.



## **C. Results of ELI Interviews**

ELI conducted interviews with individuals reflecting a range of interests (local homeowners, federal and state agencies, and user groups for example) to identify (1) environmental concerns relating to the Hudson River, (2) the efficacy of trustees' prior public involvement efforts in the Hudson River case, and (3) ways to improve NOAA's future public involvement at NRDA sites. Interviewees included members of environmental advocacy and wildlife conservation groups, local municipal officials, individuals from the recreational community and commercial fishing interests, local business persons, newspaper reporters, academics, and state and federal officials.

ELI used the following public participation objectives as reference points for examining Hudson River trustee efforts to inform and involve citizens:

- ! Identifying and educating affected citizens and citizen groups;
- ! Obtaining informed, representative input; and
- ! Increasing trust among citizens and agency officials.

The interviewees articulated concerns relating to Hudson River contamination and restoration that reflected the wide range of interests they represented. They expressed a number of problems: uncertainty as to how restoration could address public health problems; uncertainty regarding PCB affects on health and wildlife; general concern for restoring the health of the river ecosystem; the impacts of PCBs on subsistence fishing; potential NRDA restoration impacts on agriculture, such as dredging; improving the economy of local communities through river restoration efforts; ensuring restoration activities address PCB impacts both downriver and upriver; and ensuring timely restoration of the river's ecology—as one interviewee said: “People are impatient.”

### ***1. Identifying and Educating Affected Citizens and Interest Groups***

NOAA and co-trustees' typical approach to public involvement during the early stages of the Hudson River NRDA included direct mailings, public meetings, and announcements in the Federal Register and New York's Environmental Notice Bulletin. In addition, the trustees (at DEC's lead) organized a focus group comprising 18 individuals reflecting a range of interests. The purpose of the focus group was to determine how trustees should involve interested citizens in the NRDA. The focus group participants produced a list of preferable locations and times for public meetings on the NRDA.

The early timing of the mailings, public meetings, and focus group demonstrates that the Hudson River trustees were going beyond requirements for public involvement under the CERCLA regulations. In addition, DEC made a concerted effort to identify the range of interests affected by PCB contamination and to include individuals expressing these interests in the focus group. However, the focus group could have provided even more public outreach benefits. By continuing to meet with this pre-established group, trustees could have used these community contacts to

regularly disseminate information to a broader public and involve this group in future NRDA decisions.

Many of the people whom ELI interviewed were vaguely aware of DEC's efforts to restore the Hudson, but they were largely uninformed about specific NRDA activities. For example, many individuals were unaware of and/or uncertain about the roles of NOAA and the FWS in Hudson River restoration efforts, and most were unaware of the differences between EPA remediation efforts and trustee activities. Several interviewees had attended public meetings held by the trustees but still did not understand the trustees' efforts. When asked about "awareness of federal or state agency efforts to assess damages and restore natural resources or lost human uses," interviewees responded:

- ! "I am vaguely aware [of damage assessment efforts] because I work for an environmental group and attended a public meeting, but I still don't understand why NOAA is involved."
- ! "Even though I am somewhat aware of trustee efforts, I feel that most citizens are unaware. NOAA doesn't make its efforts known."
- ! "I am entirely unaware of NOAA and trustee efforts even though I consider myself to be an environmental activist."
- ! "Yes, I've heard about NRDA from public meetings but don't understand various agencies' involvement."
- ! "Yes, I am superficially aware of NRDA efforts because I have received mailings from DEC."
- ! "I am confused about what EPA is doing and what trustees are doing."

## **2. *Obtaining Informed, Representative Input***

As mentioned above, NOAA and co-trustees' primary methods for informing the broader public about restoration efforts on the Hudson River was through direct mailings and public meetings. Public meetings may be an adequate initial step for disseminating very general information about NRDA activities and for gauging the level of community interest in the resources. However, because of their nature, public meetings often do not allow for in-depth substantive learning or question-and-answer periods with agency officials. Typically, citizens who attend these meetings are learning about the NRDA process for the first time, are uninformed about the nuances of the regulatory process, and do not have time during the meeting to gain adequate understanding of a complex process nor to address substantive issues involved in NRDA. Although these public meetings may allow citizens to express their frustrations and raise initial concerns that may or may not relate to the NRDA, they rarely provide for more in-depth explanations and discussions of issues.

Another key point to emphasize is that people who attend public meetings typically do not represent the broader public, and the most concerned and vocal citizens may dominate the meetings. For this reason, NOAA and co-trustees' public meetings could be supplemented with other public involvement activities. For example, implementing a survey to a random sample of the public can impart information about the NRDA process as well as solicit citizens' restoration preferences and concerns. This approach will result in more representative input than can be obtained from a public meeting.

NOAA and co-trustees, however, may feel more comfortable using traditional public participation methods or may not be aware of the range of other methods available. The trustee outreach plan for the Hudson River relied on public meetings as the principal method for informing and involving citizens. When ELI asked NOAA and co-trustee agency officials how they could improve public involvement for the Hudson River NRDA, typical responses included:

- ! "We need to better advertise public meetings."
- ! "We need to get the word out better about meetings."

These responses demonstrate the limitations of NOAA and co-trustees' current definition and implementation of public participation. For example, the public may "not care" about NRDA activities because of trustees' inadequate efforts to (1) inform citizens and (2) demonstrate the connections between restoration actions and citizen concerns, such as public health risks created by PCBs and other contaminants.

NOAA's efforts to inform and involve citizens could involve many formal and informal activities, including phone conversations with concerned citizens, presentations at civic groups or chamber of commerce meetings, and presentations to school children. Trustees could also use outreach mechanisms like public meetings, advisory groups, interviews or briefings with local media, meetings with interest groups, and surveys. Although trustees may already have undertaken some of these public involvement activities, such as informal contact with local environmental groups, in the future Hudson River trustees may want to plan and coordinate better a range of public involvement activities throughout the NRDA process.

### **3. *Increasing Trust Among Citizens and NOAA and Co-Trustees***

Public trust in trustee efforts may be undermined if citizens—even those individuals attending public meetings—are uncertain about the exact nature of NRDA activities and how such activities affect them. A more systematic, ongoing approach to public involvement may remedy this problem, particularly at hazardous waste sites where trustees are often involved over long periods of time. At the earliest stages of trustee involvement, NOAA and co-trustees could develop and implement a NRDA public participation plan that creates opportunities for citizen involvement throughout the NRDA process. Such a comprehensive plan may increase both citizen understanding and subsequent public trust in the agencies conducting injury assessment and restoration. The public participation plan would identify key decisionmaking points where citizen

input is needed and establish criteria for how trustees will make decisions—for example, the criteria trustees will use to decide which restoration projects to implement.

While the Hudson River trustees made early efforts to inform and involve citizens through public meetings, a focus group, and mailings, most of the people whom ELI interviewed were uninformed about the NRDA process and did not understand how this process differs from EPA remediation. Providing information to citizens on a periodic basis may increase citizen understanding and trust in agency restoration efforts. Future trustee efforts to improve public outreach and involvement could include publishing a quarterly print or email newsletter updating interested citizens or establishing a multi-interest advisory group, like the early DEC focus group, that could provide ongoing public participation throughout the damage assessment process. An overwhelming majority of interviewees responded positively when ELI staff asked whether they would be willing to participate in various NOAA outreach activities, such as an advisory group, filling out a mail survey, one-on-one meetings with agency officials, and attending future public meetings. Several interviewees noted, however, a lack of time and funds for attending meetings that were held at distant locations, and the need to structure such meetings to allow for citizen comments and substantive discussions, rather than as general informational meetings.

Interviewees also suggested the following actions to help NOAA reach a broader audience:

- ! meet with local NY fish and game clubs;
- ! meet with local newspaper reporters;
- ! present information at local civic groups, such as rotary, chambers of commerce, and other citizen groups;
- ! establish informational displays or booths at local festivals;
- ! meet with officials of local municipalities and local town councils; and
- ! meet with groups at community and area colleges.

#### **D. Summary**

The Hudson River trustees, in particular DEC, made a concerted effort to identify a range of affected public interests early in the NRDA process. The focus group convened by DEC, whose objective was to identify the best methods for informing a broader public, is a clear example of early identification of affected interests. But following the focus group, trustees relied mainly on sporadic mailings and public meetings, during which only general, "one-way" information about the NRDA process was presented to citizens.

The above methods may be adequate early in a damage assessment. However, it may be useful to supplement these efforts with additional participatory methods during later stages of the NRDA. Citizens may not find NOAA's public outreach adequate if information is only exchanged in one direction: from trustees to citizens. Trustees should be willing to solicit public comment at critical steps in the NRDA process and should explain how public participation will affect the

outcome of NOAA's decisions on restoration. Since the initial writing of this report, trustees are, for example, now actively soliciting information from interest groups about possible restoration projects. These groups include The Nature Conservancy, Scenic Hudson, county-level environmental management councils, boating and recreational angling groups, and other institutions. By asking such interests and organizations to help identify restoration options, trustees will be able both to inform affected citizens about the NRDA process while effectively involving them at critical junctures in the assessment.

The long-term nature of CERCLA cases may require more systematic and periodic trustee outreach to interested citizens. As mentioned earlier, at the earliest stages of trustee involvement, NOAA and co-trustees could develop and implement a public participation plan that identifies opportunities for citizen education and involvement throughout the NRDA process. Such a plan could identify a range of participatory methods. Informational surveys, quarterly newsletter mailings or email updates, and periodic update meetings with key interest groups will help NOAA to develop an interested and informed public. By actively reaching out to citizens through such methods on a regular basis, NOAA and co-trustees may improve public understanding, confidence, and trust in NOAA, DEC, and FWS. Using multiple methods for public participation in the NRDA process—perhaps starting with public meetings and expanding to interest group meetings, a citizens advisory council, an informational survey, or newsletter—will help NOAA to expand public awareness of the NRDA process, ensure informed citizen input during decisionmaking, and help trustees to build a citizen constituency for NOAA's restoration efforts along the Hudson River.

## **VII. General Conclusions – Lessons Learned from Hudson River and Tampa Bay**

This section sets forth conclusions and overarching lessons about effectively educating and involving the public that ELI has learned from the Hudson River and Tampa Bay case studies. These conclusions may be useful for future trustee efforts to inform and involve citizens more effectively in the NRDA process.

### **A. Develop Public Involvement Criteria for NRDA Cases**

NOAA can start identifying characteristics of cases that may require more extensive involvement and outreach efforts to ensure that limited agency resources are used wisely. Some characteristics of a high-priority case might include an active citizenry, organized and active interest groups, a responsible party aggressive in its public relations efforts, a high-volume oil spill or hazardous substance release, a high level of citizen concern over possible public health issues, and long-term trustee involvement in the case. These kinds of characteristics will aid NOAA in determining when and how public participation is more or less appropriate for individual cases and help allocate limited staff and financial resources.

### **B. Clearly Articulate Objectives for Public Involvement**

Prior to any formal public involvement effort, NOAA and co-trustees should first clearly articulate their objectives for involving the public and the information needed from the public. For example, Tampa Bay interviewees were confused about what constituted a good restoration proposal, and several members of the public were angry because the trustees rejected their restoration projects. If the public is provided with clear participation objectives, opportunities that allow for substantive discussions with trustees, and established criteria for agency decisionmaking, trustees will receive more useful citizen comments. If public meetings are the primary method for informing and involving the public, then trustees may want to structure meetings so that citizens have more opportunity to provide substantive comments. For instance, trustees could break public meetings into small groups to discuss particular issues, such as proposed restoration activities or lost uses of the resources.

### **C. Redefine Public Participation**

NOAA officials may need help to expand their definition of public participation from one based on traditional approaches, such as public meetings and Federal Register notices, to include a broader range of public involvement methods. Trustee NRDA efforts are typically led by agency biologists and lawyers—very few of whom have training in public participation. When ELI asked agency officials how citizens could be better involved in NRDA decisions, a typical response included advertising public meetings more effectively. While advertising public meetings is important, there are a range of other participatory methods that NOAA and co-trustees can choose to implement. Trustee representatives may not be aware of the full menu of options, such as citizen advisory groups, individual interviews, newsletters, and general public surveys, which could improve the effectiveness of their public outreach.

If NOAA is committed to achieving the public participation objectives of obtaining informed and representative input from the public, trustees may wish to consider the use of surveys or focus groups to identify citizen knowledge levels and determine which restoration actions are most acceptable to the broader community. Such surveys could be designed to impart general information about the NRDA process, as well as elicit preferences from the public. Using a survey instrument for public comment will ensure representative input and conceivably balance any vocal minority attending public hearings that may be opposed to one particular restoration option.

NOAA and co-trustees may also not fully understand which methods might work best under specific circumstances, or how to implement different public involvement methods. A workshop for agency officials that explores how and when these methods for involving the public are used, as well as media relations training, may prove useful. EPA Region IX offers a course for state and federal agencies titled, "Public Involvement - A Key to Decision Making." This course, or one like it that is tailored for the NRDA process, may be useful for key NOAA personnel, such as those who are often in the field or work on-site at restoration projects and those who have the opportunity to interact frequently with local citizens. Similarly, hiring public involvement coordinators at various NOAA field offices may ensure that adequate and more systematic attention is given to educating citizens and obtaining informed public comments for NRDA sites throughout the country.

#### **D. Identify Affected Citizens and Citizen Groups**

An important and often overlooked first step in public outreach is *understanding the different audiences or constituencies* that exist in a given region. The majority of NOAA's trustee activities are focused on a specific geographic area, such as the Hudson River valley and Tampa Bay. Consequently NOAA will mostly want to involve regional or local groups. But before NOAA and co-trustees attempt to involve citizens in its NRDA decisions, research about the community would be useful. Such research could develop a community profile that includes:

- ! a brief analysis about the affected community or region, such as education and income levels, minority composition, and other relevant demographic information;
- ! the range of citizen knowledge levels, concerns, behaviors, and information sources relating to the particular site or problem;
- ! the types of organized interest groups that may reflect segments of the broader public and that may be able to contribute substantively during the NRDA process; and
- ! the general environmental concerns of the community, including how those concerns may relate to assessment and restoration efforts.

This profile would provide trustees with a more comprehensive understanding of the social and political dynamics at a site. For example, research shows that active public participants are typically well-educated and earn high incomes. A community analysis would help NOAA identify individuals and organizations with knowledge of and influence on relevant environmental issues, historical trends in natural resource uses, economic and aesthetic values of resources, the potential for strong community activism, and potentially other relevant social information. State agency trustees may already have this type of community information, as well as contacts with local and regional interest groups. However, because state agencies often lack adequate financial and staff resources, it may be necessary for NOAA to identify and involve proactively local individuals and organizations in

the NRDA process. NOAA may find some of this social information in previously conducted studies or pre-existing data.

#### **E. Conduct a Systematic Literature Search**

One method of obtaining site-specific social and political information would be to conduct a broad literature search. During the earliest stages of a NRDA (the preassessment phase) trustees often gather relevant on-site data and review journal articles relating to the injured resources to determine whether a full damage assessment is suitable. At this early phase, it may be useful to broaden the literature search to collect systematically basic information about local, regional, or community-based and/or multi-interest environmental restoration and protection efforts. Academic literature, trade and general press, and the Internet may reveal communities and organized groups that are already restoring the affected area, key interest groups or community leaders with whom NOAA and co-trustees may wish to meet, and citizen attitudes toward restoration. Information from such a literature search may also be useful to trustees when identifying and assessing lost use injuries.

#### **F. Learn from Other Agency Public Involvement Efforts**

NOAA and co-trustees may want to examine more closely the operations of other agency outreach and involvement programs, such as the Superfund Community Involvement and Outreach Center (CIOC) of EPA Region II. This program appears to have a well-developed infrastructure for conducting outreach and education at high-priority Superfund sites. EPA headquarters also provides funding for its regional offices to hire consultants/academicians to help develop and implement targeted educational and involvement efforts. NOAA may find that some of these activities are also appropriate for high priority oil spills or CERCLA cases. It may be useful for the director of EPA's Superfund Community Involvement and Outreach Center to brief NOAA and co-trustees on EPA's efforts to inform and involve citizens at hazardous waste sites.

#### **G. Build on Existing Local and Regional Efforts to Involve the Public**

For certain high-priority cases, NOAA may be able to identify and build upon existing local or regional public involvement activities. For example, in both Tampa Bay and Hudson River, there are multi-interest citizen advisory groups for estuary management issues. Similarly, EPA has been doing remediation and public involvement work on the Hudson River since 1990 and has developed an extensive citizen participation framework for involving different local and regional interests. During the very early stages of a damage assessment at a Superfund or oil spill site, NOAA may want to explore the possibility of collaborating with EPA regional staff responsible for public involvement. Pre-existing local or regional multi-interest stakeholder groups also may be useful to NOAA in identifying restoration priorities for a specific geographic area. NOAA should use caution, however, when relying on existing citizen advisory groups to ensure that a range of interests is represented.

#### **H. Meet Periodically with Major Constituency Groups**

Under OPA regulations for Pre-Incident Planning, NOAA may wish to consult key



representatives of various interest groups on a quarterly or half-yearly basis. These meetings could focus on priority states or regions where there is a high incidence of spills or contamination. This effort could take the form of facilitated advisory workshops for invited participants from:

- ! shipping, chemical, oil, and insurance industries and relevant trade associations;
- ! local/regional business associations;
- ! other federal and state agencies/trustees;
- ! local, regional and national environmental, environmental justice, and conservation groups;
- ! user groups—angling, hunting, boating, and wildlife viewing organizations;
- ! academia/scientific communities; and
- ! Congressional staff and/or locally/regionally elected officials.

This kind of consultation could help NOAA to meet several objectives: 1) ensure more time-efficient NRDA in the future; 2) ensure all interests are involved in and consulted on key NRDA decisions; 3) establish ongoing NOAA relationships with these interests; 4) enhance agency image; and 5) build an agency constituency.

### **I. Provide Information to Citizens and Interest Groups on a Regular Basis**

Providing information to citizens on a regular basis will increase citizen understanding and trust in agency restoration efforts. Future trustee efforts to improve public outreach and involvement at high priority sites could include publishing a quarterly print or e-mail newsletter updating interested citizens, establishing a multi-interest advisory group that could provide ongoing public input throughout the damage assessment process, or meeting frequently with various interest groups. See Appendix A for a list of public participation methods.

### **J. Evaluate Existing Public Information Materials and Outreach Efforts**

NOAA needs to evaluate how well current public information materials convey information and increase citizen understanding of trustee activities in NRDA cases. Specifically, NOAA should evaluate whether their web site and one-page fact sheets convey appropriate levels of information and reach interested constituents. Before developing new materials or revising existing ones, NOAA could conduct a series of focus groups or implement regional surveys of citizens to identify:

- ! how citizens perceive and understand NRDA activities relating to oil spills or hazardous substance contamination;
- ! the different types and levels of information that citizens find useful;
- ! formats that the public prefer for receiving information, such as e-mail messages, websites, newsletter, local newspaper articles, information presented in a technical format or a more "storytelling" narrative format; and
- ! region-specific public concerns relating to marine natural resources.

Such information will help NOAA develop and tailor outreach materials that will improve citizen awareness of, understanding of, and participation in NRDA cases and address specific public concerns.

# REFERENCES

## **References**

Frederick R. Anderson, *Natural Resource Damages, Superfund and the Courts*, ENVIRONMENTAL AFFAIRS, 16:405, 1989.

S.A. Arnstein, *A Ladder of Citizen Participation*, JOURNAL OF THE AMERICAN INSTITUTE OF PLANNERS, 35(4):216-1969.

Nicholas A. Ashford, *Advisory Committees in OSHA and EPA: Their Use in Regulatory Decisionmaking*, SCIENCE, TECHNOLOGY AND HUMAN VALUES, 9(1):72-81, 1984.

Bridget Barclay, *Hudson River Angler Survey*, Hudson River Sloop Clearwater, Inc., Poughkeepsie, New York, March 1993.

Thomas C. Beierle, *Public Participation in Environmental Decisions: An Evaluation Framework Using Social Goals*, Discussion Paper 9906, Resources for the Future, November 1998.

Thomas C. Beierle and David M. Konisky, *Public Participation in Environmental Planning in the Great Lakes Region*, Discussion Paper 99-50, Resource for the Future, September 1999.

David J. Bjornstad and James R. Kahn, *The Contingent Valuation of Environmental Resources: Methodological Issues and Research Needs*, Edward Elgar Publishing Limited, United Kingdom, 1996.

Dale J. Blahna & Susan Yonts-Shepard, *Public Involvement in Resource Planning: Toward Bridging the Gap Between Policy and Implementation*, 22 PUBLIC INVOLVEMENT IN RESOURCE PLAN, 209, 211, 1989.

Robert H. Boyle, *The Hudson River: A Natural and Unnatural History*, W.W. Norton & Co., New York, 1979.

Barry Breen, *Citizen Suits for Natural Resource Damages: Closing a Gap in Federal Environmental Law*, WAKE FOREST ENVIRONMENTAL LAW REVIEW, 24:851-880, 1989.

Bonnie Burgess and Elana Cohen, *Strategies for Effective Public Involvement in Drinking Water Source Assessment and Protection*, League of Women Voters Education Fund, 1998.

Michael Cardozo, *The Federal Advisory Committee Act in Operation*, 33 ADMIN. L. REV. 4, 1981.

Marion Cox, *Integrating Public Input into Environmental Decisions: How Far Have We Come?*, 2 INTERACT: THE JOURNAL OF PUBLIC PARTICIPATION 35, 36, 1996.

John Cronin and Robert F. Kennedy, Jr., *The Riverkeepers*, Simon & Schuster, New York, 1997.

*Damage Assessment and Restoration Plan/Environmental Assessment for the August 10, 1993 Tampa Bay Oil Spill. Volume I – Ecological Injuries.* Prepared by Florida Department of Environmental Protection, National Oceanic and Atmospheric Administration, and US Department of the Interior. June 1997.

Environmental Law Institute, *Public Participation in Environmental Regulation*, January 1991.

Marcus E. Ethridge, *Procedures for Citizen Involvement in Environmental Policy: An Assessment of Policy Effects*, in CITIZEN PARTICIPATION IN PUBLIC DECISION-MAKING 115, 116 (Frank DeSario & Stuart Langton eds.), 1987.

Daniel J. Fiorino, *Technical and Democratic Values in Risk Analysis*, RISK ANALYSIS, 9(3):293-299, 1989.

Daniel J. Fiorino, *Citizen Participation and Environmental Risk: A Survey of Institutional Mechanisms*, SCIENCE, TECHNOLOGY AND HUMAN VALUES, 15(2):226-243, Spring 1990.

Daniel J. Fiorino, *Environmental Risk and Democratic Process: A Critical Review*, COLUMBIA JOURNAL OF ENVIRONMENTAL LAW, 14:501-547, 1989.

General Services Administration, TWENTY-FIFTH ANNUAL REPORT OF THE PRESIDENT ON FEDERAL ADVISORY COMMITTEES, 1997.

Thomas A. Heberlein, *Some Observations on Alternative Mechanisms for Public Involvement: The Hearing, Public Opinion, The Workshop, and The Quasi-Experiment*, 16 NAT. RESOURCES J. 197, 198, 1976.

Carol A. Jones and Katherine A. Pease, *Restoration-Based Compensation Measures in Natural Resource Liability Statutes*, Contemporary Economic Policy, XV(4):111-122, 1997.

Raymond J. Kopp and V. Kerry Smith, eds. *Valuing Natural Assets: The Economics of Natural Resource Damage Assessments*, Resources for the Future, Washington, DC, 1993.

Frank N. Laird, *Participatory Analysis, Democracy, and Technological Decision-Making*, 18 SCIENCE, TECHNOLOGY & HUMAN VALUES 341, 352, 1993.

Betsy K. Landre and Barbara A. Knuth, *The Role of Agency Goals and Local Context in Great Lakes Water Resources Public Involvement Programs*, ENVIRONMENTAL MANAGEMENT, 17(2):153-165, 1993.

Stuart Langton, *Citizen Participation in America*, Lexington Books, Lexington, MA, 1978.

Kathryn A. McComas and Clifford W. Scherer, *Public Meetings as Public Participation in Risk Management Decisions: The Potential for Risk Amplification*, paper presented at the 1996 Annual Meeting of the Society for Risk Analysis, New Orleans, December 8-1, 1996.

Michael S. Moore, *Thinking Outside the Box: A Negotiated Settlement Agreement for the Remediation of the GE/Housatonic River Site Ensures Environmental Health and Economic Prosperity for Pittsfield, Massachusetts*, BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW, 26:549, 1998-1999.

New York State Department of Environmental Conservation, Region III Office, *Hudson River Estuary Management Program, Final Hudson River Estuary Management Plan, July 1996.*

New York State Department of Health, Center for Environmental Health, Health Consultation: 1996 Survey of Hudson River Anglers, CERCLIS No. 980763841, February 1999.

Michelle Nuskievicz, *Twenty Years of the Federal Advisory Committee Act: It's Time for Some Changes*, 65 S. CAL. L. REV. 957, 1992.

Mancur Olson, Jr. *The Logic of Collective Action--Public Goods and the Theory of Groups*, Harvard University Press, Cambridge, MA, 1965.

Lisa M. Pelstring, James Shanahan, and Daniel J. Decker, *Improving Communication and Public Participation in New York State Department of Environmental Conservation Wildlife Management*, Cornell University Human Dimensions Research Unit, December 1999.

James P. Powers, *Reinvigorating Natural Resource Damage Actions Through the Public Trust Doctrine*, NEW YORK UNIVERSITY ENVIRONMENTAL LAW JOURNAL, January 1995.

Paul Slovic, *Perceived Risk, Trust, and Democracy*, RISK ANALYSIS, 13(6):675-682. 1990.

Stephanie Smith, *Federal Advisory Committees: Establishment and Cooperation*, CRS Report for Congress, February 19, 1997.

Tampa Bay National Estuary Program, *Charting the Course for Tampa Bay: The Comprehensive Conservation and Management Plan for Tampa Bay*, December 1996.

John Clayton Thomas, *Public Participation in Public Decisions: New Skills and Strategies for Public Managers*, Jossey-Bass Inc., San Francisco, 1995.

Special report to Congress by the President of the United States, 60th Congress, 2d Session, SENATE Document No. 676, Page 2, February 1909.

Jane Urquhart-Donnelly, Stephanie Fluke, Eugene J. O'Connor, and Gary S. Mauseth. *1993 Tampa Bay Oil Spill: A Tale of Two NRDA's With One Happy Ending*, presented at the Workshop on NRDA Lessons Learned, co-sponsored by the American Petroleum Institute, National Oceanic and Atmospheric Administration, Texas General Land Office, Water Quality Insurance Syndicate, and International Group of P&I Clubs, New Orleans, May 11-12, 2000.

U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Superfund Record of Decision: Hudson River PCBs Site, NY, EPA/ROD/R02-84/004, September 1984.

#### **WEBSITES:**

"ENVIRONMENTAL REVIEW PROCEDURES FOR IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT," Issued 06/03/99; Effective 05/20/99 NOAA Administrative Order on Environmental Review Procedures (NAO 216-6). Available

[www.rdc.noaa.gov/~nao/216-6.html](http://www.rdc.noaa.gov/~nao/216-6.html) April 5, 2000.

Environmental Protection Agency. "EPA's Geographic Information Query System" and "EPA's Query Mapper." Available  
[www.epa.gov/enviro/](http://www.epa.gov/enviro/) April 5, 2000.

Environmental Protection Agency, "EPA Region 2 Superfund Program." page last updated on January 21, 2000. Available  
<http://www.epa.gov/region02/superfnd/superfnd.htm> April 5, 2000.

Hudson River Sloop Clearwater, Inc. (Homepage). Available at  
[www.clearwater.org](http://www.clearwater.org) April 5, 2000.

Library of Congress, "The Evolution of the Conservation Movement." Available  
<http://rs6.loc.gov/ammem/amrvhtml/conshome.html>. April 5, 2000.

Library of Congress "Report of the National Conservation Commission. February, 1909. Special message from the President of the United States transmitting a report of the National Conservation commission" Available  
<http://rs6.loc.gov/ammem/amrvhtml/conshome.html>. April 5, 2000

Tampa Bay Estuary Program. "Tampa Bay Estuary Program: Charting the Course." Available  
[www.tbep.org](http://www.tbep.org) April 5, 2000.

U.S. Census Bureau. "Factfinder Database" Available  
[www.census.gov](http://www.census.gov) April 5, 2000.

## **APPENDIX A**

### **Examples of Public Participation Methods**

## ***Appendix A***

### **Examples of Public Participation Methods**

Below are examples of public outreach and involvement strategies that other state and federal agencies have found useful. Appendix B provides an outline for guidance explaining how some of these techniques may be used throughout NOAA's damage assessment process.

#### **Public Participation Methods**

Personal contacts  
Qualitative interviews  
Citizen advisory committees  
Meeting settings that foster an open exchange  
Presentations by both citizen advisors and public officials at public meetings  
Advisory group members encouraging their constituencies to participate in public events  
Public workshops for planning and decisionmaking  
Informal public meetings  
Focus groups for targeted research, message testing  
Exhibits and/or speeches at community events  
Speakers bureaus of experts willing to represent citizens' concerns at public meetings  
Speaking on the "knife and fork" circuit: e.g. Kiwanas, Lions, etc.  
Factsheets, brochures, flyers, posters to educate the public on the issue  
Easy-to-read and balanced summaries of important agency information  
Strong press relations to generate news stories  
Flyers/inserts in local and weekly newspapers  
Use of public bulletin boards  
Random sample surveys (telephone or mail)  
Volunteer opportunities for citizens and interest groups  
Hot-lines or 1-800 number for citizen questions  
Technical Advisory Group grants for citizens  
Periodic newsletters by mail or email  
Internet web sites

Sources: Burgess and Cohen 1998; Thomas 1995



## **APPENDIX B**

### **Outline for Possible NOAA Guidance on Public Participation in NRDA Cases**

## **Appendix B**

### **Outline for Possible NOAA Guidance on Public Participation in NRDA Cases**

This outline identifies a range of public involvement activities that NOAA and co-trustees could implement at various stages of the NRDA process.

#### **I. Pre-Spill Activities**

Designate a Public Involvement Coordinator in each NOAA regional office to handle on-site outreach, education, and involvement of affected citizens and interest groups.

Public Involvement Coordinator's responsibilities would include maintaining a mailing list and e-mail database of affected interests in each region for high priority cases, acting as a liaison with citizens and interest groups on a periodic basis, developing necessary site-specific and regional NRDA case information for distribution to the public, establishing on-going relationships with local media, and ensuring interest groups' concerns are represented and included in trustee decisionmaking.

#### **II. Pre-Assessment Phase**

Coordinator identifies affected interests (for example, boaters, anglers, coastal property owners) and begins collecting names and addresses of affected citizens and interest groups for mailing/e-mail lists. Coordinator conducts literature and data search to collect additional relevant information about local user groups, demographics, and environmental and conservation organizations.

Working with emergency response agencies, coordinator provides the public with information about any emergency restoration actions and provides general information about the NRDA process immediately after the spill.

Coordinator begins meeting with local and regional media contacts—newspapers, radio, and television—to explain NRDA process and goals and develop a media contact list.

If a decision is made to proceed with a full NRDA, coordinator develops an Education and Public Involvement Plan for trustee approval that details public participation methods and trustee outreach responsibilities throughout the NRDA process.

Coordinator uses a range of involvement methods—such as mailings, media briefings and conferences, interest group meetings, individual interviews, and public meetings—to inform and involve affected citizens and interests and help agency officials identify lost use and natural resources injuries.

Coordinator holds additional meetings with key interest groups and media representatives to begin soliciting restoration ideas based on injuries identified during the Preassessment Screen.

Coordinator schedules initial public meetings at convenient time (late afternoon/early evening) to announce pre-assessment decision.

Trustees and coordinator determine whether case is critical enough to merit establishing a citizens advisory group.

Trustees and coordinator determine whether case requires implementing a random sample "informational" public survey that explains the NRDA process and solicits lost-use and restoration preference information. Alternatively, coordinator implements qualitative interviews with affected interests to explain the damage assessment process and solicit input. Considerations for a survey could include (1) a vocal minority that is unrepresentative of larger public, (2) a particularly controversial case, and/or (3) the case is expected to continue for several years.

### **III. Assessment Phase**

#### **A. Before Development of Draft DARP**

Coordinator and trustee representatives (continue to) meet with interest/user groups to solicit restoration ideas for lost-use and ecological injuries.

If NRDA case and NOAA involvement is expected to last for several years, coordinator begins developing a quarterly e-mail or regular mail newsletter for citizens and interest groups to update them about settlement efforts, NRDA activities, past groups with whom trustees met, and future opportunities for public involvement.

Coordinator starts identifying groups, schools, and/or individuals that may wish to participate in restoration projects.

Coordinator develops and publishes insert or flyer in prominent section of local and weekly newspapers providing brief description of NRDA process and opportunities and need for public involvement to identify restoration priorities.

Coordinator continues to meet one-on-one with local and regional media to explain NRDA effort.

#### **B. Once draft DARP is released**

Coordinator develops and mails concise summary of Draft DARP in lay terminology to mailing list of interested citizens and media, announces trustee availability to meet with affected individuals or groups, and announces that copies of the draft DARP is available upon request. Designated public involvement coordinator acts as the official contact for public questions and concerns.

Coordinator announces summary and Draft DARP in newsletter and announces trustee availability to meet with affected individuals/groups. Coordinator schedules meetings with affected citizens and interest/user groups.

Coordinator sends press release to and/or meets with local and regional media.

C. After finalizing DARP

Coordinator announces final DARP in newsletter and provides summary of document to citizens and media. Coordinator explains how public comments affected final DARP and why, as well as brief overview of injuries and restoration projects.

Coordinator meets with affected citizens and interests to explain how their comments affected final DARP, giving specific examples.

Coordinator schedules press event and/or meets with key press contacts to review final DARP.

**IV. Post-Assessment Phase**

Coordinator continues mailing periodic newsletters to update public and media about NRDA activities, restoration efforts, and accomplishments.

Coordinator works with groups or individuals interested in helping with restoration projects.

Coordinator holds media event/celebration after a major restoration accomplishment with responsible parties, participating interest/user groups, citizens, local officials and trustees.

## **APPENDIX C**

### **ELI's Two Interview Protocols for Agency and Non-Agency Officials**

***Appendix C***  
**ELI's Two Interview Protocols for Agency and Non-Agency Officials**

**Interview Protocol for Agency Officials**

1. Name, position, contact information.
2. Please describe your position and role relating to the [Tampa Bay/Hudson River] case? (your history and number of years involved in NRDA effort and capacity)
3. Please provide a description of the public participation activities that you are aware of relating to [Tampa Bay/Hudson River] NRDA efforts. Are you aware of any of the following?
  - (a) public meetings
  - (b) press interviews (developing media contacts/ensuring media coverage)
  - (c) individual interviews with citizens or citizen groups
  - (d) meetings with other interest groups
  - (e) focus groups
  - (f) Other public education efforts?
4. What sorts of stakeholders/individuals have been involved in these public participation efforts?
5. Can you identify the reasons or objectives for these public involvement activities?
6. What kind of impacts do you think the public has had on the NRDA process through these efforts? Examples?
7. Please outline the key interests or groups of citizens/stakeholders you think should be involved in either the ecological or lost-use assessments and restorations efforts?
8. What sorts of barriers exist for effectively involving citizens/the public in NRDA activities? In your opinion, have any of the following been significant factors?
  - (a) limited agency resources and time,
  - (b) legal barriers, such as requirements for public hearings, etc.
  - (c) trustee reluctance to involve citizens
  - (d) political barriers
  - (e) others
9. How do you think different audiences or the public could be better involved in NRDA activities?
10. What are the key areas of public participation that need to be improved, if any?

## **Interview Protocol for Non-Agency Individuals**

Hello, my name is XX from the Environmental Law Institute, a non-profit environmental policy and research organization based in Washington D.C. I would like to ask you a few questions about your awareness of and participation in activities related to [1993 Tampa Bay oil spill/ Hudson River contamination]. The National Oceanic and Atmospheric Administration, the agency responsible for assessing injuries from [the Tampa Bay oil spill/ Hudson River contamination] and developing restoration plans, has asked ELI to help identify public participation opportunities to better involve citizens in the damage assessment and restoration process. The results of this study will help to improve citizen understanding and participation in natural resource damage assessments. The interview will take approximately 10-20 minutes. May I ask you some questions about the [Tampa Bay oil spill/Hudson River contamination]?

1. Please explain your connection/concerns/interests relating to [Tampa Bay/Hudson River]. For example:

Are you

- a) involved in an environmental advocacy group?
- b) a member of an environmental conservation organization?
- c) involved in local politics (represent the county or local municipality)?
- d) an official for a local or state agency (County Board of Health, Public Works Department, State Department of Health)?
- e) a recreational boater?
- f) a recreational angler?
- g) involved in a local business (commercial fishing, hotel, restaurant, marina)?
- h) other?

### **Awareness of Agency NRDA Efforts**

2. Were/are you aware of any Federal or state agency efforts to assess damages and restore natural resources or lost-human uses from the [Tampa Bay oil spill/Hudson River contamination]?

3. If yes, how did you find out about such efforts? A newspaper article, word-of-mouth, etc?

### **Awareness of Agency Public Participation Activities**

4. Were/are you aware of any opportunities to comment on or get involved in agency efforts to assess natural resource damages and lost human uses (ex. swimming, fishing) from the [Tampa Bay oil spill/Hudson River contamination] and develop restoration plans?

5. If yes, how did you find out about these opportunities?

6. Did you participate in these opportunities?

7. If yes, how were you involved? For instance, did you attend any meetings or talk/meet with any agency officials, etc?

8. If no, why not?

### **Participation in Future NRDA Efforts**

9. Do you have any ideas/thoughts as to how these agencies could better involve citizens like you in their efforts to assess damages and restore natural resources and lost human uses of those resources?

10. Would you be willing to participate in an advisory group with these agencies?

11. Would you be willing to meet one-on-one with agency officials?

12. Would you attend public meetings?

13. Would you be interested in receiving information through the mail?

14. What would be the best way for these agencies to get information to you about their efforts to assess damages and lost human uses and restore natural resources?



## **APPENDIX D**

### **Example of Newspaper Clip and Press Release about the Tampa Bay Oil Spill**

# Appendix D

## Example of Newspaper Clip about the Tampa Bay Oil Spill

### Spill from 1B

money to do everything we wanted," Treasure Island Mayor Leon Abbudico said.

The \$2.5-billion, part of an \$8-million settlement between the state and the three shipping companies involved in the spill, will be divided based on the number of days each beach was fouled, said Maurano Malvern, the Florida Department of Environmental Protection attorney on the case.

A list of prioritized projects will be ready in a few weeks, Malvern said at a news conference Thursday to announce the settlement.

The legal battle to collect the money from the companies responsible for the spill has dragged on since the Aug. 10, 1993, crash.

Early that morning, the *Ocean 255* barge was passing the *B-125* barge heading into port in the shipping channel near Port De Soto Park. On a bend in the channel, the outboard *Salva 37*, carrying a load of phosphate, appeared. The *Salva 37* swung across the bows of the oil-laden barges, resulting in a fiery collision.

About 22,000 gallons of jet fuel seeped from the *Ocean 255*, while 330,000 gallons of crude diesel oil flowed from the *B-125*.

The company responsible for the *B-125*, Boulevard Transportation Co. Inc., and the insurer of the barges, the West of England Ship Owners Mutual Assurance Association, have paid most of the \$75-million cleanup bill to date.

Now the three shipping companies will continue a battle in federal court to determine who was at fault in the crash and who gets stuck with the final bill.

Meanwhile, the largest chunk of the \$5-million settlement for spill damages will go to the United States and Florida governments. They will receive \$4.9 million for cleanup expenses and environmental projects.

"In the end, the costs to the taxpayers have been completely reimbursed," said Craig O'Connor, an attorney for the National Oceanic and Atmospheric Administration.

Locally, \$998,000 also will be spent on beach recontourment, \$100,000 for sea turtle protection efforts and \$18,000 for seabird hospitals.

Government biologists used formulas to determine stragulas. For instance, they figured 368 birds died or were injured. They doubted the number to assist for birds that drowned offshore. Then they estimated that it cost \$18,000 to treat the birds.

"Of course, we would want more money," said Lee Fox of the Pinellas Seabird Rehabilitation Center on Tierra Verde. "But I think that's a realistic figure. It puts a finality to the spill, and now we can get on with our lives."

### Tampa Bay oil spill projects.

As part of the settlement with state and environmental agencies, the shipping companies involved in the 1993 Tampa Bay Oil Spill will fund environmental projects in these areas:



1. Cross Bayou Biologicals determined about 2.9 acres of damaged mangroves should be replaced after the spill. As compensation, the companies have acquired a 10.76-acre parcel that includes a 4.4-acre mangrove forest. The remainder will be restored to a mangrove and salt marsh habitat. The land will be deeded to Pinellas County to complement nearby parkland.

2. Turtle Cay Point Biologicals determined about 2,200 square feet of salt marsh were oiled and died, although 16 times that was affected. The companies agree to plant 1.5 acres of marsh grass along Boca Grande Bay.

3. Little Bird and Roostery Key: Smooth cordgrass will also be planted in shoreline areas near the mangrove forests on these two islands in John's Pass.

4. Silver Islands: An oyster reef here was dying and crumbling, jeopardizing the island. An emergency restoration was started in July 1995 and completed in Sept. 1996. The island was hand cleared to remove tar. Now oyster shells were placed on the island for stability. The companies already have paid for it, but they have not released the cost.

Source: Florida Department of Environmental Protection

Additionally, the companies have rejuvenated a dying oyster bed on Silver Island and will complete projects on two islands in John's Pass.

They will create a 10.76-acre wetland habitat in Cross Bayou off Park Street in central Pinellas, which will be given to the county to complement a 300-acre preservation area. The companies formed a holding corporation to buy the parcel in 1997 for about \$172,000.

The public will have a 90-day period to comment on the settlement, which must be approved by a state and federal judge.

## Beach cities discuss plans for spill funds

■ One mayor fears there is not enough money for all restoration plans.

By CHRISTINA HEADRICK  
Times Staff Writer

ST. PETERSBURG — About \$2 billion from a settlement in the 1993 Tampa Bay oil spill will be used to improve beaches where crude oil once washed ashore in gloopy masses.

Now local officials are asking: How much will we get?

"I hope they give the money to the cities that got the brunt of the spill," Madeira Beach Mayor Tom De Cesare said Thursday.

Town of Indian Shores to St. Pete Beach want the money as compensation for the oily night on their 1993 tourist season. Madeira Beach asked for \$1.9 million to buy land for a waterfront park, St. Pete Beach dreams of fishing pier and a boat ramp; North Redington Beach wants money for a beach pavilion with parking.

"It doesn't sound like they got enough

PHOTOS BY SPILL 5/8



**NEWS** from the National Oceanic and Atmospheric Administration, U.S. Department of the Interior,  
and Florida Department of Environmental Protection

---

Contact: **Matt Stout, NOAA**  
(202) 482-6090  
**Kristine Roselius, Fla.**  
(850) 488-1073  
**Tom MacKenzie, Interior**  
(404) 679-7291

**FOR IMMEDIATE RELEASE**  
1/28/99

### **Settlement to Clear Way for Restoration Projects in Tampa Bay**

The state of Florida, the federal government and several corporations have agreed to a more than \$8.0 million settlement to fund restoration projects for natural resources damaged in a 1993 oil spill in Tampa Bay. An 11-acre degraded mangrove system will be improved, two acres of salt marsh will be replanted, and millions of dollars for other natural resource restoration work will be paid by those responsible for the oil spill, the Commerce Department's National Oceanic and Atmospheric Administration, the Department of Interior, and the Florida Department of Environmental Protection said today.

State and federal officials worked closely with those responsible for the spill to forge a settlement under which the Bouchard Transportation Company Inc., Maritrans General Partner Inc., and Tsacaba Shipping Co. Inc. will carry out the mangrove and salt marsh restoration projects. In addition, the responsible parties will pay \$3.1 million for natural resource restoration plus another \$4.9 million for resolution of all other government claims. They have also agreed to forego a claim against the state of Florida for cleanup costs over the limitation amount, alleged to exceed \$40 million.

The natural resource trustees in the case are the Florida Department of Environmental Protection, the National Oceanic and Atmospheric Administration, and the U.S. Department of the Interior. The terms of the settlement are detailed in consent decrees filed in state and federal courts on Thursday, Jan. 28. After a 30-day public review and comment period, the courts will be asked to approve the settlements if no significant issues arise.

"This settlement for Tampa Bay achieves the goal of restoring natural resources," said Terry Garcia, assistant secretary for oceans and atmosphere at the Department of Commerce. "The settlement resulted from tremendous and unprecedented cooperation between the federal trustees, the state of Florida, and the vessel owners and insurers."

(more)

The oil spill occurred Aug. 10, 1993, when an outbound freighter, the M/V Balsa 37, struck two inbound barges, the T/B Ocean 255 and T/B B155, at the mouth of Tampa Bay. The collision resulted in the discharge of approximately 330,000 gallons of heavy fuel oil and 32,000 gallons of a mixture of other fuels into lower Tampa Bay. The spilled oil remained offshore for four days before oiling about 13 miles of beaches in Pinellas County. It injured birds, sea turtles, mangrove habitats and other natural resources in Boca Ciega and lower Tampa Bay, and disrupted the use of area beaches and waterways.

The responsible parties will conduct two environmental restoration projects in Boca Ciega Bay at their own expense, in addition to making the monetary payments outlined in the settlement. State and federal trustees will oversee implementation of these projects. The \$3.1 million for other restoration work is earmarked as follows:

- \$2.5 million for the loss of recreational uses of beaches closed by the spill. NOAA and Florida DEP will develop a plan to be implemented with these funds;
- \$398,000 to replace beach sand lost as a result of cleanup actions, including \$200,000 for previously incurred expenses for a beach renourishment project that replaced sand removed during the cleanup;
- some \$133,000 for water quality improvement projects to benefit Boca Ciega or lower Tampa Bay, such as the creation or improvement of coastal wetlands;
- \$100,000 for sea turtle nest monitoring, protection or population recovery efforts in Pinellas County; and
- almost \$15,000 to enhance bird recovery or rehabilitation capabilities in the spill area.

The remainder of the settlement will reimburse the governments for spill response and damage assessment costs.

"This settlement will allow for the restoration of impacted resources, without the expenditure of public funds," said Florida Department of Environmental Protection Secretary Kirby Green. "The agreement promotes our vision for a healthier environment for Florida. I am pleased that the shipping companies, Department of Interior, NOAA and Florida's Department of Environmental Protection were able to work together to craft this agreement."

"We are pleased that this settlement will allow us to implement restoration projects geared towards threatened and endangered sea turtles, and benefit migratory birds in southwest Florida," said U.S. Fish and Wildlife Service Southeast Regional Director Sam D. Hamilton. "The Service looks forward to continuing cooperative efforts to support the recovery of threatened and endangered sea turtles in the Tampa Bay area. The funding for bird recovery and rehabilitation efforts will expedite the recovery, rehabilitation, and release of healthy birds back into migrant bird communities following future oil spills."

## **APPENDIX E**

### **Example of Newspaper Clip about the Hudson River NRDA**

Appendix E  
Example of Newspaper Clip about the Hudson River NRDA

# Fishing atop list of a river's losses

Panel gets input as it prepares legal action on damage to the Hudson

By DENA GAPPIELLO  
Staff writer

The loss of recreational fishing caused by PCB contamination of the Hudson River is likely to be the most significant portion of a natural resource damages claim against General Electric Co. and other parties responsible for the river's pollution, officials preparing the legal action said Wednesday.

"We know that (modern industry) has reduced recreational fishing," said Steven Sanford, who heads the state Department of Environmental Conservation's Natural Resource Damages Unit. The unit is one of three agencies — the other two are federal — that comprise the Hudson River Natural Resource Trustee Council.

Environmentalists who met with members of the council in Arbor Hill Wednesday night cautioned them to not forget the subsistence fishing that occurs along the Hudson River in their assessment of damages. The council will also assess the impact of PCBs on boating, habitats and other wildlife. But it will not seek damages for the effect of the toxic chemical on human health.

Both state and privately conducted angler surveys have found that people from low-income and minority groups still consume fish from the Hudson, despite an "eat none" advisory for women of child-bearing age and children for all fish species. The advisories vary for men depending on the section of river.

"If you look at fishing only from the recreational point of view you cannot retain the protein that has been lost from low-income and minority communities (who rely on Hudson River fish for their protein source)," said Andy Mele, acting executive director of Poughkeepsie-based Hudson River Sloop Co-operative. He suggested an ur-

ban agricultural initiative, including community gardens and fish farms, as a possible restoration project under the claim.

The meeting Wednesday night was the fifth the council has scheduled with groups interested in the fate of the Hudson River. The idea is to gather input on how best to restore the natural resource. After an earlier meeting with Albany-based Environmental Advocates, the group is considering proposing a project to bring back trout fishing to the Owl Kill.

"When we present our claim, whether in settlement negotiations or in court, it will be in dollars, but those dollars will be used for restoration," said Sanford.

The claim, which is expected to be filed sometime after the federal Environmental Protection Agency's June 2001 decision on the river's cleanup, is being prepared under a provision of federal Superfund law. Other natural resource damages claims are in the works for Oneida Lake and the St. Lawrence River.

GE legally discharged millions of pounds of polychlorinated biphenyls, or PCBs, into the Hudson River over four decades from its Fort Edward and Hudson Falls capacitor plants. The company has said since 1997 — when Governor George Pataki announced that the state would join the council — that the claim will result in "a long and lengthy legal battle."

On Wednesday, a company spokesman said that it was too early to collect input on the river's restoration, considering that both EPA and GE findings show that wildlife populations are "robust and diverse."

"Seeking restoration projects is wildly premature, seeing that they have not even begun their scientific task," said GE spokesman Mark Behan. "They have given up all pretense of scientific objectivity and have already prejudged the fate of the case."

