

Conducting Cooperative Natural Resource Damage Assessments in the U.S. : A Case Study of the Chalk Point Oil Spill

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Trustees Natural Resource Damage Assessment (NRDA) Guidelines*

- Under the Oil Pollution Act (OPA) - and some other U.S. laws - the public is to be made whole for the loss of natural resource services from oil spills
- Services are fundamental to determination of interim lost use
- One natural resource may provide an array of different services to humans and other natural resources
- Emphasis on restoration-based damages

* Note: the opinions expressed in this presentation are those of the author's, alone, and do not necessarily represent the official views of the National Oceanic and Atmospheric Administration.



Trustees NRDA Strategy

- Compensation for interim loss of services from time of injury until return to pre-spill baseline and recovery of all assessment costs
- Polluter pays concept - not a penalty
- Cooperative assessment with responsible parties if at all possible
- Expedited/simplified assessment studies where feasible
- Science driven process

What Is A Cooperative Assessment?

- An opportunity to work with the responsible party (RP) on the technical, procedural and legal aspects of a NRDA
- OPA rule requires trustees to invite RP to participate
- Process is defined by all the parties
- Written cooperative agreement can be advantageous
- Negotiated, consensus-based decision-making to the extent possible
- Need a dispute resolution process

Chalk Point Spill: Overview

- April 2000 pipeline rupture at Pepco's Chalk Point electrical generating facility on the Patuxent River, Maryland
- 140,000 gallons (530,000 liters) of a mixture of numbers 2 and 6 fuel oil released from pipeline
- Seventeen linear miles (27.4 km.) of waterways and forty miles (64.4 km.) of shoreline oiled
- Two responsible parties and four natural resource trustees
- Significant interest/scrutiny from local community, environmental groups, politicians and scientists
- "Worst environmental disaster in the history of the State of Maryland" – MD Governor Glendenning



Overview (continued)

- Multiple hearings by State House of Representatives and Senate
- Governor appointed “Oversight Committee”
- Thirty public and scientific meetings held in local area
- Twenty five NRDA-related studies undertaken
- Several print media stories about the NRDA



Cooperative Natural Resource Damage Assessment (NRDA)

- Pepco and ST Services (RPs) signed Memorandum of Agreement to conduct cooperative NRDA with the four trustees shortly after the spill
- RPs agreed to pay all reasonable assessment costs
- Joint Technical Working Groups established – decisions made by consensus, if possible
- Shared scientific studies and experts
- Expedited assessments, where feasible



Injury Assessment

Six categories of injuries

- Wetlands and Shorelines
- Fish and Shellfish
- Benthic Communities
- Birds
- Diamondback Terrapins
- Recreational lost use – including fishing, swimming and boating

Wetlands and Shorelines

- 76 acres (.31 km²) of oiled wetlands (40.5 acres lightly oiled, 12.0 acres moderately oiled, 23.4 acres heavily oiled)
- 10 (.04 km²) acres of oiled beach shoreline
- Recovery of wetland vegetation: 6 months to 10 years; recovery of wetland soils: 6 months to 20 years



Fish and Shellfish

- 2,464 kg lost biomass (about 20 different species, mostly white perch, hogchockers, croakers, blue crabs and oysters)



Benthic Communities

- No evidence of benthic injury in the mainstem Patuxent
- In Swanson Creek, estimated biomass loss of 2,256 kg (AFDW), mostly small bivalves and amphipods.



Birds

- 696 dead birds, including migratory waterfowl, sea gulls, shore and marsh birds --- 553 were ruddy ducks



Terrapins

- 122 adult terrapins
- 10 percent loss of hatchlings in the 2000 cohort



Lost Recreational Use

- 12,704 lost trips with an estimated value of (U.S.) \$343,010
- 112,359 trips with diminished value estimated at (U.S.) \$110,489
- Approximately 125,000 trips adversely affected by the spill with a total estimated value of (U.S.) \$453,500



Restoration Goal

- Provide services of the same type and quality and comparable value and at the same location as those that were lost

Project Selection Criteria

- Likelihood of success
- Will project prevent/avoid additional injury?
- Will the project benefit more than one natural resource and/or service?
- Is the project cost-effective?

Injury Category	Preferred Restoration Alternative	Cost (U.S. \$)
Wetlands		\$754,600
Terrapins and Shorelines	Wetlands (5.66 acres (.023 km. ²)) and Shoreline Enhancement (1 acre (.004 km ²)), Washington Creek	\$207,300
Ruddy Ducks	Acquire and Restore Nesting Habitat	\$589,900
Birds (excluding ruddy ducks)	Create and Seed Oyster Reef Sanctuary(s) (4.69 acres (.019 km ²))	\$705,200
Benthic Communities		
Fish and Shellfish		
Lost Recreational Use	Canoe/Kayak Paddle-In Campsites ADA-Accessible Kayak/Canoe Launch Maxwell Hall NRMA Forest Landing Boat Ramp King's Landing Boardwalk and River Ed. Cedar Haven Fishing Pier Nan's Cove Kayak/Canoe Launch/Pier	\$453,500
Total Cost		\$2,710,500 (2002 \$)

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