

Natural Resource Damage Assessment and Restoration



Abt Associates (Abt) offers natural resource trustees unparalleled expert support in every phase of the natural resource damage assessment and Restoration (NRDAR) process.

Abt Experience and Expertise

- With over 25 years of NRDAR experience, Abt offers natural resource trustees experienced expert support in all aspects of NRDAR. Our staff have worked on **more than 100 NRDAR cases** across the country on behalf of Federal trustees, State trustees, and Native American Tribes. In addition, Abt staff have worked on NRDAR regulations and guidance; provided training to numerous trustee agency staff; and assisted trustees in NRDAR settlement negotiations; and have served as **testifying experts** in NRDAR in federal and state courts.
- Abt offers trustees **in-house technical expertise** in all facets of NRDAR, including experts with advanced degrees in environmental chemistry, hydrology, hydrogeology, geomorphology, toxicology, marine biology, restoration ecology, biometrics/statistics, natural resource economics and valuation, remote sensing and geographic information systems (GIS).

NRDAR Services

For more than 25 years, Abt staff have assisted Federal, State, and Tribal natural resource trustees with scientific, economic, legal, and strategic support on numerous NRDAR cases around the country and in U.S. territories. Our team's experience ranges from expedited assessments at small sites, to major oil spills (including the *Deepwater Horizon* spill), to the largest Superfund sites in the country. We have worked on all aspects of NRDA, from initial preliminary evaluations through multi-year assessments and litigation. We are regularly hired when trustees or trustee councils need new or additional contractor support. Examples of our NRDA experience include:

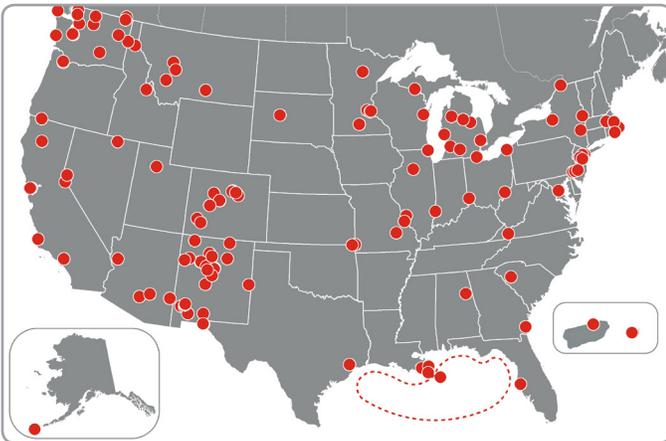
- **Mine waste assessment.** Abt has managed and conducted all aspects of multi-year assessments of natural resource injuries and damages for trustees at some of the largest mining complexes in the U.S., including the Clark Fork River, Montana, and Coeur d'Alene Basin, Idaho.

- **Oil spill assessment.** Abt staff are at the forefront of oil spill fate and transport and injury analysis. Our staff have pioneered methods of detecting and quantifying oil slicks, modeling surface oil mixing, and evaluating lethal and sublethal toxic effects of oil. We assisted Federal and State trustees on numerous spills, including *Deepwater Horizon*, Enbridge pipeline, and two major spills on the Yellowstone River. For *Deepwater Horizon*, Abt led the aquatic and avian toxicity testing programs, and assisted with restoration planning and scaling; technical and strategic support; program support and case management; and preparation of reports for public review and comment.

Abt Associates Offers a Full Range of NRDAR Expertise:

- Emergency response/ephemeral data collection
- Conceptual site model development
- Database review and development
- Data gap analysis
- Preparation of NRDAR documents:
 - Pre-assessment screens
 - Preliminary estimate of damages
 - Assessment plans
 - Field and laboratory sampling and analysis plans
 - Quality assurance project plans
 - Restoration plans
 - Expert reports
 - Monitoring plans
- Cooperative assessment activities
- Implementation of field and laboratory assessment studies
- Fate and transport modeling
- Synthesis of exposure and injury analysis
- Quantification of economic damages
- Liability analysis
- Support to trustees for settlement negotiations
- NRDAR litigation support, including expert witness testimony and preparation of witnesses
- Restoration implementation support and monitoring
- Trustee council management support
- Strategic communication and outreach

- **Smelter assessment.** Abt has quantified natural resource injuries and damages to terrestrial, surface water, and groundwater resources resulting from smelter fallout, slag deposition, and other releases at numerous smelter sites, including Anaconda and East Helena, Montana; Bunker Hill, Idaho; and Tacoma, Washington.
- **Chemical release assessment.** Abt regularly assesses natural resource injuries from releases of chemicals (PCBs, dioxins, radionuclides, complex mixtures), including sites such as Hudson River, NY; Saginaw, Tittabawassee, and Kalamazoo Rivers, Michigan; Fox River/Green Bay, Wisconsin; and the Rocky Mountain Arsenal, Colorado.
- **Groundwater assessment.** Abt staff pioneered methods for assessing natural resource injuries and damages to groundwater resources, leading to successful claims in New Jersey, Montana, Colorado, New Mexico, U.S. Virgin Islands, and many other locations.
- **Equivalency analysis and restoration scaling.** For over 20 years, Abt staff have used habitat equivalency analysis (HEA) and resource equivalency analysis (REA) to quantify restoration required to offset injuries. We have developed and published several peer-reviewed papers on equivalency methods, and we have successfully utilized and defended these methods in litigation.



Abt staff have worked on over 100 NRDA cases throughout the country, including Puerto Rico and the U.S. Virgin Islands.

Excellent Client Ratings

“Primary contractor lead was very attentive and provided exceptional service. Products were of high quality and responsive to trustees’ needs.”

- USFWS; Oil spill NRDAR case

“Abt excelled in meeting the program office’s need for economic and environmental assessment work under this contract.”

- US EPA Office of Water

Abt Team’s Expertise

Our interdisciplinary in-house team of experts understands the technical, legal, and strategic challenges faced by trustees and can provide effective, targeted support. Close to 80% of our technical team has advanced degrees, including about 30% with doctorate degrees. We have expertise in fields such as:

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| Ecology | Restoration planning |
| Toxicology | NEPA analysis |
| Restoration ecology | Project management |
| Hydrology – surface and groundwater | Data management |
| Geochemistry | Public outreach |
| Geomorphology | GIS |
| Resource economics | Remote sensing |
| Survey development | Environmental engineering |

Contact

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Abt Associates is a mission-driven, global leader in research and program implementation in the fields of health, social and environmental policy, and international development. Known for its rigorous approach to solving complex challenges, Abt Associates is regularly ranked as one of the top 20 global research firms and one of the top 40 international development innovators. The company has multiple offices in the U.S. and program offices in more than 60 countries.

