



THE NATURAL RESOURCE DAMAGE ASSESSMENT SETTLEMENT

RESTORATION PLAN WASTE, INC. LANDFILL LA PORTE COUNTY, INDIANA

February, 2002

Department of the Interior
U.S. Fish and Wildlife Service

Indiana Department of Environmental Management

Indiana Department of Natural Resources

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Introduction

This restoration plan is proposed by the Natural Resource Trustees, represented by the U.S. Fish and Wildlife Service (FWS), Indiana Department of Natural Resources (DNR), and the Indiana Department of Environmental Management (DEM), to compensate for natural resources injured or lost as a result of the discharge or release of hazardous substances from the Waste, Inc. Landfill, in Michigan City, Indiana. Implementation of this plan will be conducted by the Natural Resource Trustees under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

Background of Incident and Injury

The Waste, Inc. Landfill ("Site") is located at 1701 East U.S. Highway 12, in Michigan City, LaPorte County, Indiana. The Site which is comprised of Waste, Inc. and Lin-See, Ltd. properties in the northeast quadrant of Section 28, Township 38 North, Range 4 West (see Figure 1). It is bounded by Highway 12 to the northwest, Trail Creek to the east and south, and several private corporations to the north, east and west.

Aerial photos taken in 1939 indicated the area consisted of agricultural lands bisected by lowlands prior to development of the landfill. By 1954, a metal salvage and reclamation facility adjacent and west of the Site had filled most of the wetlands and an abandoned stream meander (Oxbow). A small disposal mound had been formed in the north-central portion of the Site. The amount of discarded material on the Site continued to grow as time passed. From 1965 to 1972 the Site was used as an unpermitted landfill by Dis-Pos-All Services, a division of the Northern Indiana Steel Supply Company (NISSCO). In 1972, NISSCO sold the disposal operation to Waste, Inc., which continued operating the landfill at the Site until August 5, 1982. Between 1965 and 1982, the landfill accepted approximately 128,000 tons of commercial, industrial and hazardous waste, discovered to be contaminated with polychlorinated biphenyls (PCBs), heavy metals, and organic solvents. The landfill was permitted to accept cardboard, wood and paper wastes in 1971. The landfill was unlined and located on sandy surface soil. Liquid wastes drained through this soil, into underground aquifers partially bounded by sub-surface clay layers. The landfill did not have dikes to control and localize runoff, which resulted in runoff being washed into the creek and associated riparian wetlands with overland water flow. In 1994, a 40-foot high mound occupied most of the Site. There were decontamination and storage structures, a fuel pump and its associated underground storage tank, and empty steel drums strewn



Figure 1. Waste, Inc. Landfill, Michigan City, LaPorte County, Indiana.

about the Site (Declaration for the Record of Decision, Waste, Inc. Landfill, United States Environmental Protection Agency, 1994).

Site Evaluation and Remediation

The Environmental Protection Agency (EPA) evaluated the Site using the hazard ranking system, in 1984. The Site received a score of 50.63. Based on this analysis, EPA determined that the Site was a “facility” as defined in CERCLA, 42 U.S.C. Section 9601 (9), and determined that “releases”, as defined in CERCLA, 42 U. S. C. Section 9601(22), of hazardous substances occurred at the Site. The Site was determined to present a potentially “imminent and substantial endangerment to public health, welfare or the environment” and was subsequently listed on the National Priorities List of Superfund sites in 1985.

Remedial Investigation/Feasibility Study (RI/FS), begun under EPA direction in 1987 by several potentially responsible parties identified the types, quantities and locations of contaminants at the Site; evaluated potential on and off-site environmental and public health impacts; and developed alternatives to address the contamination problems. The nature and extent of contamination attributable to the Site was evaluated by sampling and analyzing soil, leachate, storm runoff, groundwater, Trail Creek surface water and Trail Creek sediment (Draft alternative arrays document, 1991, Revision 0).

Soil on Site and downstream of the Site was found to be contaminated with volatile (VOCs) and semi-

volatile organic compounds (SVOCs), PCBs, metals, and cyanide, indicating that leachate had affected off-site soils. Groundwater and leachate samples collected from seeps along Trail Creek were contaminated with VOCs, SVOCs, metals, and cyanide. These results indicated that contaminants were migrating laterally from the landfill and discharging into Trail Creek. Short-term chronic bioassay tests indicated that LC50 for fathead minnows (*Pimephales promelas*) occurred at 11.7% leachate concentration. Groundwater samples collected from shallow monitoring wells along the northern and western borders of the landfill were also found to be contaminated with PCBs, SVOCs, VOCs and metals. Trail Creek sediment samples contained VOCs, cyanide, metals, one pesticide, and phthalates, while surface waters contained one phthalate and several metals. Concentrations of metals, VOCs and SVOCs detected in sediments adjacent to and downstream of the Site were higher than upstream samples. Results indicated that hazardous substances had been and were being released from the Site to the surrounding environment (Draft alternative arrays document, 1991, Revision 0).

After consideration of the results of the RI/FS, the EPA issued a Record of Decision, specifying the selected remedial alternative for the Site, in 1994. A Unilateral Administrative Order (UAO) was issued pursuant to CERCLA Section 106, in 1995, to the members of the Waste Inc. Remedial Design/Remedial Action Group and other waste generators requiring the design, installation, operation, and maintenance of the selected remedy. The selected remedy included institutional controls; groundwater and leachate collection; treatment and disposal systems; extraction wells to collect contaminated groundwater at the Site boundary; a sub-title D cap; gas collection and disposal systems; exploration of storm sewer impacts; removal of an underground tank; and posting of fish consumption advisory signs (EPA Record of Decision, 1994). The on-site remedy was implemented pursuant to the UAO, with EPA and DEM oversight and approval (Consent Decree in the matter of United States, et al. v Indiana Department of Correction, et al. (N.D. Ind.) 3:99CV0336RM).

Injury to Trust Resources

Hazardous substances were released from the Site for years without being contained or detoxified. The investigation described above clearly indicate that trust resources were injured as a result of activities that occurred on the Site. In particular, the detection of Site-related hazardous substances in off-site soil, groundwater, surface water and sediments, and the toxicity of Site discharge to aquatic organisms indicate that on-site activities have resulted in degradation of water quality, sediment quality, biological resources and overall habitat quality of Trail Creek habitats. Continued chronic adverse effects can be expected for aquatic resources due to the long-term presence of site-related contaminants in the environment. Remedial actions required by EPA and DEM addressed the clean-up of the Site, but did not address the restoration of off-site natural resources that had been injured as a result of on-site activities. Thus, contaminants remain in the associated off-site wetland, in-stream and riparian habitats even after remedial actions were completed.

Injury to trust resources resulting from this contamination encompasses the full complement of resources associated with riparian habitats. The habitats injured as a result of these discharges provided food, shelter, breeding areas, and other essential services for the survival of trust wildlife resources. State and Federal trust resources injured or potentially injured include the following:

- fish;
- invertebrates;
- birds, including waterfowl, shorebirds, raptors, and others;
- amphibians and reptiles;



Figure 2. Waste, Inc. site following remediation. Original property boundaries included for reference only. (Photo source - US Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center, National Digital Orthophoto Program, Ft. Worth, Texas).

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- mammals;
 - aquatic and terrestrial plants;
 - surface waters, groundwater, sediments and air.

The Natural Resource Trustees of the State of Indiana undertook a civil natural resource damage action under CERCLA to address injuries to on-site wetland and riparian resources that resulted from activities on the Site. The civil action was settled through Consent Decree Case No. 3:99CV0336RM, filed on June 11, 1999. The settlement provided \$597,500.00 to the Natural Resource Trustees to . . . “be used solely for restoring, replacing or acquiring the equivalent of the damaged natural resources” (Consent Decree in the matter of United States, et al. v Indiana Department of Correction, et al. (N.D. Ind.) 3:99CV0336RM, VI. 7).

Restoration Project Administration

The Natural Resource Trustees will oversee and implement this restoration plan and ensure that restoration projects meet natural resource damage assessment (NRDA) requirements. Categorical exclusion from National Environmental Protection Act (NEPA) procedures is provided for actions implemented by the FWS for natural resource damage assessment restoration plans that result in a negligible change in the use of affected areas (516 DM 6 Appendix 1). The Natural Resource Trustees will work to ensure that projects either meet the intent of the categorical exclusion or fulfill NEPA requirements.

For any restoration projects considered, the potential for project activities to affect cultural resources such as prehistoric and historic resources, Native American human remains, and cultural objects will be determined early in project planning. To this end, the procedures in 36 CFR 800 implementing Section 106 of the National Historic Preservation Act, requirements of the Native American Graves Protection and Repatriation Act, and policies and standards specified in the Fish and Wildlife Service Manual 614 FW 1-5 will be achieved.

Settlement funds will be administered by the Natural Resource Trustees according to the proposed budget and the “U.S. Department of Interior Departmental Accounting Manual” (National Capital Region General Services Administration, 1995) and “Accounting and Uniform Compliance Guidelines Manual for State Agencies” (State Board of Accounts, 2000).

Project Coordination

The Natural Resource Trustees collectively will be responsible for overall project coordination and support, and will work to ensure that projects meet the NRDA requirements and fulfill the goals of this restoration plan. The trustees will be responsible for identification of applicable projects, landowner contact, easement development, and any other necessary restoration procedures. Private or other public organizations may assist in the proposal of projects, sites, and/or the acquisition of and deed restrictions for the proposed site(s). Approval of restoration projects, sites, activities, and fund allocation will be through unanimous agreement by the Natural Resource Trustees.

Goal and Objectives of Restoration

The goal of this restoration plan is to address the resource injuries resulting from the releases of hazardous substances from the Waste, Inc. site. This goal can be achieved for losses of injured natural resources through restoration, replacement or acquisition of the equivalent of injured natural resources.

Restoration Alternative Development and Evaluation

A reasonable range of restoration alternatives to address one or more specific injuries while making the environment and the public whole were considered, including the natural recovery/no action alternative, as well as the primary and compensatory restoration alternatives. For each alternative, consideration will be given to costs, benefits, likelihood of success, and effects on public health and safety.

The following are three alternatives the trustees identified to meet the requirements of the NRDA laws, as well as fulfill the goal and objectives of this Restoration Plan.

1. **No further action**: This alternative would provide for no action to be taken to restore resources injured by the hazardous substance releases from the Site except through natural recovery and would provide no action to compensate the public for the interim losses to natural resources from the time of the incident until recovery is achieved or for the uncertainty associated with the results of natural recovery.
2. **Primary restoration of the impacted area**: This alternative would provide for efforts to remove the remaining hazardous substances and their by-products from the Waste, Inc. site and affected off-site areas. This would include restoration of surface and ground water, stream-bed sediments, stream bank soils, and riparian habitat.

3. Restoration of resources impacted by the Site or that will serve as compensation for injured resources through acquisition, rehabilitation and protection of equivalent resources: This alternative would restore the injured resources and the services they provided by increasing the occurrence of and/or enhancing or restoring habitats that will support these resources.

Summary of Environmental Consequences by Alternative

Alternative #1: The goal of this restoration plan is to address the resource injuries resulting from the releases of hazardous substances from the Waste, Inc. site. This alternative does not allow for restoration, replacement, or acquisition of equivalent resources injured in this spill. Without restoration, compensation for injury to natural resources would not occur.

Alternative #2: US EPA and IDEM's CERCLA remedial actions undertaken at the Site served to isolate and prevent further releases of hazardous materials. Complete remediation of the impacted area was not deemed feasible under CERCLA. Additional removal actions would include extensive soil and sediment removal, and would involve dredging affected riparian and in-stream wetlands. These actions would cause direct destruction of aquatic life and their habitats. Thus, complete remediation of the area affected by contamination is not considered feasible due to the direct negative impacts which would result, the extremely high costs involved, and would involve a second cleanup by Trustees. Under CERCLA, Trustee claims are to address residual injury following remedial action.

Alternative #3: Replacement and/or restoration of habitats that support injured resources is the preferred alternative of the Trustees. This alternative was selected because it best meets the goal of the restoration plan: to address the resource injuries resulting from the releases of hazardous substances, pollutants and contaminants from the Waste, Inc. site. This alternative will focus limited restoration monies on areas where maximum restoration, replacement or acquisition of the equivalent of injured resources can be achieved.

Restoration Process

Acquisition and necessary restoration of bottomland, riparian and wetland habitats will be accomplished using accepted, standard methods. Restoration activities may include, but are not limited to: purchase by acquiring fee title and/or permanent easement and if necessary the reestablishment of hydrology in drained wetlands; removing exotic species; revegetating wetland or riparian habitats with native trees, shrubs, and/or grasses; and/or stabilizing eroding stream banks with vegetation or other materials. As individual restoration projects are identified or proposed to the Trustees, those projects will be submitted for review of compliance with National Historic Preservation Act by the Indiana Department of Natural Resources' Division of Historic Preservation and Archaeology (IDNR) and approval by the State Historic Preservation Officer. Based on the Habitat Equivalency Model utilized to calculate damages for the Waste, Inc. site, approximately 72 acre-equivalents of habitat must be restored, replaced or acquired to achieve the components of the claim and restoration goals of this plan.

Implementation of this restoration plan will involve cooperative efforts with voluntary private or public participants who own lands that provide ecological services equivalent to those injured by the Waste, Inc. site. When cooperative projects are undertaken, the trustees will include agreements with the landowners or land management entities to maintain the natural integrity of the sites receiving

restoration for an agreed time period. These agreements may take the form of contracts with the Trustee Agency(ies), perpetual easements, participation in defined programs, or acquisition. If lands are acquired, they will be deeded to the State, other public land management entities, or private land management entities with appropriate easements or deed restrictions.

Monitoring Restoration Effectiveness

Monitoring the implementation of this restoration plan will be done by the Natural Resource Trustees or their designated representatives. Location of property for acquisition or protection through easement or deed restriction and/or sites where restoration can be accomplished will be the first step in implementation. On sites where restoration activities will be completed, design of site plans, site preparation, establishment of hydrology (if required) and vegetation, and maintenance requirements will be considered. A monitoring plan developed for each restoration site may include: data to be collected, sample sizes, sampling schedule and duration, analysis techniques, and performance criteria. The Natural Resource Trustees or their designated representatives will determine if corrective action is indicated after review of monitoring results.

Schedule and Budget

This project will be initiated in FFY 2002 (SFY 2001) and will be managed cooperatively by the Natural Resource Trustees. A total of \$597,200.00 (+ interest) is available for restoration implementation. The Natural Resource Trustees will attempt to keep administrative costs associated with implementation of this Restoration Plan and monitoring of restoration sites to minimum required. It is anticipated that most administrative costs will be covered by interest earned on principal in the restoration fund. The trustees will continue to develop restoration projects until settlement funds have been utilized.

Final Report

At the completion of the project, a final report documenting the implementation of this restoration plan will be prepared. Photos, digital maps with appropriate location and metadata, field plans for restoration activities, and key documents such as agreements, deeds, easements, etc. will be included in the report.

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NATURAL RESOURCE DAMAGE ASSESSMENT SETTLEMENT
RESTORATION PLAN

Co-Trustee concurrence on the Final Restoration Plan for:
Waste, Inc. Landfill
La Porte Co., Indiana

Scott E. Pruitt
U.S. Fish and Wildlife Service
Date: _____

Carrie Doehrmann
Indiana Department of Natural Resources
Date: _____

Elizabeth Admire
Indiana Department of Environmental Management
Date: _____