THE NATURAL RESOURCE DAMAGE ASSESSMENT SETTLEMENT

RESTORATION PLAN
LAKELAND DISPOSAL
KOSCIUSKO COUNTY, INDIANA

October, 2008

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 Lakeland Disposal Landfill, near Claypool in Kosciusko County, 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 Lakeland Disposal Landfill ("Site") is located in Section 12, Township 31, Range 5 East, approximately 2.2 miles northwest of the town of Claypool, in Kosciusko County, Indiana. The Site contains 39 acres, bounded on the west by County Road 450 West, on the south by agricultural fields and Sloan Ditch to the east and north.

Lakeland Disposal operated a 39 acre landfill at this site from 1974 to 1978. Prior to 1974, this site was used for agricultural purposes. The landfill was granted a solid waste management permit in 1975 to operate as a sanitary landfill. During its operation the landfill accepted general refuse and certain specific industrial wastes including: 1) various sludges containing mainly the hydroxides of aluminum, cadmium, chromium, copper, lead, nickel, tin, selenium, and zinc; 2) cyanide, zinc, and chrome plating liquid; 3) paint sludge; 4) sugar contaminated with bromochloromethane; 5) oil and oily waste water; and 6) filter sand contaminated with hydroxides of lead, zinc, copper and chrome. Indiana State Board of Health records indicate that more than 18,000 drums (nearly a million gallons of wastes) were disposed of at this site. During the landfill's operation, numerous violations of permit regulations of improper disposal occurred resulting in runoff and contamination of the adjacent stream.

Site Evaluation and Remediation

The Environmental Protection Agency (EPA) evaluated the Site using the hazard ranking system and 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 1989.

A Remedial Investigation / Feasibility Study (RI/FS) was begun in 1989 by a group of potentially responsible parties (PRP) who had signed a Consent Order with EPA and IDEM in that same year. The Remedial Investigation identified the types, quantities and locations of contaminants at the Site, and evaluated potential on and off-Site environmental and public health impacts. The Feasibility Study 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, Sloan Ditch surface water and sediment.

Soil on Site and downstream of the Site was found to be contaminated with volatile (VOCs) and semi-volatile organic compounds (SVOCs), metals, and cyanide, indicating that leachate had affected off-Site soils. Leachate and wetland sediment samples collected from seeps along Sloan Ditch were contaminated with VOCs, SVOCs, and metals. These results indicated that contaminants were migrating laterally from the landfill and discharging into Sloan Creek. Groundwater samples collected from shallow monitoring wells at the landfill were also found to be contaminated with SVOCs, VOCs and metals. Sloan Ditch sediment samples contained VOCs, SVOCs and metals. Results indicated that hazardous substances had been and were being released from the Site to the surrounding environment.

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 1993. A Unilateral Administrative Order (UAO) was issued pursuant to CERCLA Section 106, in 1994, to the members of the Lakeland Disposal 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; a perimeter cut-off wall in conjunction with an Indiana sub-title D cap; and targeted drum removal. The on-Site remedy was implemented pursuant to the UAO, with EPA and DEM oversight and approval in 2002.

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 Sloan Ditch 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;
- 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 $200,000 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 and the State of Indiana v General Motors Corporation, et al. (Northern District of Indiana, South Bend Division) Civil Action No. 3:07-CV-239.

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

Figure 1. Lakeland Disposal site following remediation.

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, pollutants and contaminants from the Lakeland Disposal Landfill Site. This goal can be achieved through 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 pollutants and their by-products from the Lakeland Disposal site and associated affected off-site areas. This would include restoration of surface and ground water, stream-bed sediments, shoreline 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 Lakeland Disposal 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 Lakeland Site served to isolate and prevent further releases of hazardous materials. Complete remediation of the impacted area was not deemed feasible under CERCLA. 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 feasible due to the direct negative impacts which would result, and the extremely high costs involved.

Alternative #3: The trustees have selected Alternative 3, the restoration of habitats that support injured resources, as the preferred alternative. 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 Lakeland Disposal 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: plugging drainage ditches or subsurface tiles in drained wetlands (only with County Surveyor and Drainage Board approvals); removing exotic species; revegetating the wetland or riparian habitats with

native trees, shrubs, and/or grasses; stabilizing eroding stream banks with vegetation or other materials. Based on the Habitat Equivalency Model utilized to calculate damages for the Lakeland Disposal Site and the negotiated settlement concessions, it is the goal of the Natural Resource Trustees to restore, replace or acquire the equivalent of 50 acres under this plan. Efforts may focus on Indiana owned properties such as Pisgah Marsh or Tri-County Fish and Wildlife Area.

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 Lakeland Disposal 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 by monitoring results.

Schedule and Budget

This project will be initiated in FFY 2009 (SFY 2009) and will be managed cooperatively by the Natural Resource Trustees. A total of $200,000.00 (+ 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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RESTORATION PLAN

Co-Trustee concurrence on the Final Restoration Plan for:
LAKELAND DISPOSAL
Kosciusko County, Indiana

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

_____
John M. Davis
Indiana Department of Natural Resources
Date: _____

_____
Elizabeth Admire
Indiana Department of Environmental Management
Date: _____