THE NATURAL RESOURCE DAMAGE ASSESSMENT SETTLEMENT

RESTORATION PLAN
AMERICAN CHEMICAL SERVICE, INC.
LAKE COUNTY, INDIANA

November 2003

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

Indiana Department of Environmental Management

Indiana Department of Natural Resources

Released for Public Comment
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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), on behalf of the Department of the Interior, the Indiana Department of Natural Resources (IDNR), and the Indiana Department of Environmental Management (IDEM), to compensate for natural resources injured or lost as a result of the discharge or release of hazardous substances from the American Chemical Service, Inc. Superfund site in Griffith, 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).

Site Background of Incident and Injury

The American Chemical Service, Inc. Superfund site ("ACS site") is located at 420 South Colfax Avenue, in Griffith, Lake County, Indiana. The Site consists of American Chemical Service, Inc. (19 acres), Pazmey Corporation property (formerly Kapica Drum, Inc., now owned by Darija Djurovic; two acres) and the inactive portion of Griffith Municipal Landfill (approx. 15 acres). The ACS site includes all three properties. American Chemical Service, Inc. (ACS) began as a solvent recovery facility in May 1955. ACS ceased solvent reclaiming activities in 1990 after losing interim status under RCRA (Resource Conservation and Recovery Act).

The ACS site is bordered on the east and northeast by Colfax Avenue. The Chesapeake and Ohio railway C & O railway bisects the site in a northwest-southeast direction, between the fenced, on-site area and the off-site area. On the west and northwest, south of the C & O railway, the site is bordered by the abandoned Erie and Lackawanna railway and the active portion of the Griffith Municipal Landfill. North of the C & O railway, the site is bordered on the west by wetland areas. The northern boundary of the site is formed by the Grand Trunk railway.

The site is underlain by unconsolidated glacial deposits approximately 130 feet thick. The deposits have been divided into an upper sand and gravel aquifer, intermittent clay, a lower sand and gravel aquifer, and lower clay till directly overlying Devonian Detroit River and Traverse System Limestones. Using the U.S. EPA's guidelines for ground water classification, both the upper and lower aquifers are currently used or are potentially available for drinking water or other beneficial uses and are therefore considered Class II for the purposes of this remedial action. Both surface water runoff and ground water runoff from the ACS site enter the wetlands. The wetlands are ultimately drained by Turkey Creek, approximately 1 ½ miles south of the site.

Land around the site is used for single family residences and industrial purposes. The nearest residents to the site are located approximately 150 feet east of the off-site area. The nearest potential receptors to potentially contaminated ground water through ingestion and to volatile compound emissions through inhalation are employees of the businesses located approximately 100 feet east, on Colfax Avenue. The nearest potential receptors to the south and west of the site are the employees of the Griffith Municipal Landfill, and occupants of the residential development approximately 800 feet west of the site boundary. The nearest potential receptors to the north are the occupants of the industrial park on Main Street, approximately 1500 feet north of the site boundary.

Ground water contamination has migrated off-site, but has not infiltrated local residential wells used for drinking water. Approximately 70 private wells were identified in the immediate vicinity. Nine upper aquifer wells and 16 lower aquifer wells are located within ½ mile of the site. The well survey conducted during the remedial investigation found upper aquifer waters to be non-potable and used by residents for lawn maintenance or other domestic purposes other than consumption. The upper, residential aquifer wells were not sampled as part of the remedial investigation. Investigative monitoring wells were installed to evaluate upper aquifer contamination. Most of the 16 lower aquifer wells are used for drinking water. Samples were obtained from 10 lower, private aquifer wells during the redial investigation. With the exception of elevated lead levels found in an unused industrial supply well, no contaminants of concern were found in any lower aquifer water supply.

In the late 1960's and early 1970's, small batches of chemicals were manufactures at ACS. Specific chemicals manufactured included barium naphtherate, brominated vegetable oil, lacquers and paints, liquid soldering fluid, and polyethylene solutions in polybutene. These early manufacturing operations also included bromination, treating rope with a fungicide, and treating ski cable.

Two on-site incinerators burned still bottoms, non-reclaimable materials generated from the site, and off-site wastes. The first incinerator started operating in 1966, the second in 1969, and burned about two million gallons of industrial waste per year. The incinerators were dismantled in the 1970's. The shells were cut up and scrapped; the burners and blowers remain on-site.

Batch manufacturing was expanded between 1970 and 1975. Additives, lubricants, detergents and soldering flux were manufactured, and an epoxidation plant created a product called a plasticizer. Since 1975, the batch manufacturing and epoxidation plant operations have remained essentially the same.

Kapica Drum, Inc. was sold to Pazmey Corporation in February 1980, which sold to Darija Djurovic in March 1987. Kapica/Pazmey has not operated at this location since 1987. In 1980, a 31-acre parcel of property to the west of the Off-site Contaminant Area was sold to the City of Griffith for an expansion of the city's municipal landfill, ultimately resulting in the illegal filling of on-site wetlands. The Griffith Municipal Landfill became an active sanitary solid waste disposal facility in the 1950's. Solvent recovery operations at ACS continued until 1990, when ACS lost interim status under the Resource Conservation and Recovery Act (RCRA) regulations due to the failure of ACS to obtain required insurance policies. Semi-volatile organic compounds (SVOCs's) such as phenol, isophorone, napthalene, fluorene, phenanthrene, anthracene, bis (2-chloroethyl) ether, and phthalates were used and discarded at the site throughout its history.

Several areas of the ACS property were used for disposal of hazardous substances. The disposal areas

on the ACS site have been consolidated into three identified source areas: 1) the On-site Containment Area; 2) the Still Bottoms Area, Treatment Lagoon #1 and adjacent areas; and 3) the Off-site Contaminant Area and Kapica/Pazmey property. The Off-site Contaminant Area is located on the ACS property and is part of the ACS Site. The area is described as off-site since it is separated from the ACS plant by a fence and railroad tracks. The Off-site Area includes the Off-site Contaminant Area and the Kapica/Pazmey property. The On-site Area includes the On-site Contaminant Area, the Still Bottoms Area, Treatment Lagoon #1, and adjacent area.

Contaminant Site Evaluation

ACS was placed on the National Priorities List (NPL), a roster of the nation's worst hazardous waste sites targeted for cleanup under Superfund authority, in September 1984. Approximately 400 drums containing sludge and semi-solids of unknown types were reportedly disposed of in the On-site Contaminant Area. The Off-site Contaminant Area was utilized principally as a waste disposal area and received wastes that included on-site incinerator ash, general refuse, a tank truck containing solidified paint, and an estimated 20,000 to 30,000 drums that were reportedly punctured prior to disposal. Disposal practices in the Off-site Contaminant Area reportedly ceased in 1975. Hazardous substances were also disposed directly, and as a result of drum washing operations, on the Kapica/Pazmey property. The Still Bottoms Pond and Treatment Lagoon #1 received still bottoms from the solvent recovery process. The pond and lagoon were taken out of service in 1972, drained, and filled with an estimated 3200 drums containing sludge materials.

Approximately 400 special notice letters were sent out in March 1987 to initiate Remedial Investigation/ Feasibility Study (RI/FS) negotiations. A Consent Order to perform an RI/FS was signed by the PRPs in June 1988. Under this Consent Order, Warzyn, Inc., a consultant for the PRPs, performed the RI/FS. The RI began in 1989 and the RI/FS was completed in 1992. A portion of the RI, the ecological assessment, was prepared by the U.S. EPA due to the PRP's inadequate submittals. Additionally, the PRPs refused to develop cleanup standards so proposed human-health risk-based cleanup standards were developed by the U.S. EPA to supplement the FS.

The U.S. EPA's Record of Decision (Sept. 1992) addresses buried drums, buried wastes, contaminated soil and debris, contaminated ground water and contaminated surface water. This contamination represents the principal threat from the ACS site. Buried wastes and contaminated soil and debris present a threat as a continuous contaminant source to ground water, a direct contact threat should future excavation occur, and an inhalation threat from migration of volatile contaminants through existing cover material and possible dispersion of contaminants to the neighboring community. Contaminated ground water presents a threat to potential users through ingestion, dermal contact, and inhalation.

The Remedial Investigation has shown that there are large areas of buried contamination with a wide range of contaminants. Because of the numerous contaminants detected, compounds were grouped together to more easily evaluate contaminant distribution. Total volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and lead were chosen as indicators of the extent of wastes and contaminated soils. There were three major source areas for the three categories of waste (PCBs, VOCs, and lead). The three major contaminant-source areas include the On-site Contaminant Area, the Still Bottoms/Treatment Lagoon #1, and the Off-site Contaminant Area and Kapica/Pazmey property.

On-site Contaminant Area: Contaminants consisted predominantly of organic contaminants without

PCBs (15,000 cubic yards). Additionally, there was a 50' x 50' buried drum area (estimated to contain 400 intact drums), and localized areas of organic contaminants with PCBs (980 cubic yards) and soils contaminated with metals (100 cubic yards).

Still Bottoms/Treatment Lagoon Area: Contaminants consist predominantly of organic contaminants without PCBs (22,000 cubic yards) and randomly distributed buried drums (estimated to contain 3200 partially-filled drums). Organic contaminants with PCBs were not detected in the treatment lagoon area, but were detected in the still bottoms area (1000 cubic yards). Metals were detected in both the still bottoms area and the treatment lagoon (550 cubic yards). In an adjacent area, both organic contaminants without PCBs (3400 cubic yards) and organic compounds with PCBs (300 cubic yards) were detected.

Off-site Area: Contaminants consist predominantly of organic contaminants without PCBs (51,000 cubic yards). Organic contaminants with PCBs (5250 cubic yards) and metals (950 cubic yards) were detected primarily in one area in the northern portion, as well as at a number of small areas in the southern portion. General refuse, an estimated 20,000 to 30,000 drums, and a tank truck partially full of solidified paint were reportedly disposed of in this area.

Kapica/Pazmey Property: Contaminants consist predominantly of organic contaminants without PCBs (7200 cubic yards) and organic contaminants with PCBs (2300 cubic yards) in an area north of the Kapica building. Metal contamination is found in the west (700 cubic yards) and north (200 cubic yards) of the Kapica building.

Ground Water: Organic contaminants without PCBs, including chlorinated ethanes, partially water soluble products from gasoline, oil and/or other hydrocarbon products (e.g., benzene, toluene, xylene) were found in the upper aquifer. Lower aquifer contamination relative to the upper aquifer is limited due to the nature of compounds detected and the extent. Contaminants were not found to extend off-site to lower aquifer wells. No organic contaminants were detected at any lower, private residential aquifer wells. Upper, private residential aquifer wells were not sampled.

Wetland Remediation * *planned and performed by Montgomery Watson (Addison, IL)*

An initial, Phase I Wetlands Investigation (July 1996) indicated that PCBs had migrated into the wetland area west of the ACS plant. Later, a Phase II Wetlands Investigation (Nov. 1996) was conducted to better define the extent of PCB contaminated sediment within and along the drainage channel. The results of both investigations indicated that the PCBs are concentrated along a narrow zone, parallel to the drainage pathway west of the ACS facility. PCBs were concentrated in and limited to the upper foot of sediment in the area. The total volume of PCB impacted sediment was estimated to be 2100 cubic yards.

After obtaining a U.S. Army Corps of Engineers Section 404 permit equivalency for construction in a wetland, personnel, equipment, and necessary equipment were mobilized, and the site was set-up for remediation. Two separate excavation sites were established based on PCB levels in the sediment, one site with PCB concentrations greater than 50 ppm, and another site with PCB concentrations between 1 ppm and 50 ppm. All vegetation was cleared from the

areas, including any trees which could be easily removed. Ground vegetation, such as weeds and brush not easily separated from the sediment, were disposed of with the sediment. All sediments with PCB concentrations greater than 50 ppm were excavated first, and transported to a TSCA-approved (Toxic Substance Control Act) landfill for disposal. Remaining soils with PCB concentrations between 1 ppm and 50 ppm were excavated and transported to the Off-site Containment area to be capped. Next, the excavation area was again surveyed to verify that the proper volume of sediment was removed. Following verification, the disturbed wetland areas were re-graded and restored with appropriate wetland soils to match the pre-existing grade. The areas were then re-seeded with typical, native wetland species. Finally, all excavation and restoration equipment was decontaminated and removed from the site.

Injury to Trust Resources

The ecological assessment for the ACS site identified two types of ecological habitat: upland and wetland. Based on the semi-quantitative, screening level analysis of ecological risks, upland, wetland and aquatic receptors are likely to be adversely affected by contaminants present in the environmental media with the ACS watershed. The contaminants posing the greatest potential threats are PCBs and lead. There are several potential Federal or State endangered or threatened species present at the site, including the king rail (*Rallus elegans*), a state threatened species.

Hazardous substances were released from the Site for years without being contained or detoxified. The investigation described above clearly indicates 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 indicates that on-site activities have resulted in degradation of water quality, sediment quality, biological resources and overall habitat quality. 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 IDEM addressed the cleanup of the ACS site, but did not completely address the restoration of off-site natural resources that had been injured as a result of on-site activities; or the additional cleanup of PCB contamination in the wetlands in order to reduce future injuries.

Injury to trust resources that resulted from this contamination encompasses the full complement of resources associated with wetland and upland 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 water, groundwater, sediments and air.

The Natural Resource Trustees negotiated a natural resource damage settlement under CERCLA to address injuries to On-site wetland and upland resources that resulted from activities on the Site. The settlement (Consent Decree Case No. 2:00CV430JM) was lodged on July 12, 2000. The settlement provided $300,000.00 to the Natural Resource Trustees to . . . "(1) restore, rehabilitate, replace or acquire the equivalent of the natural resources damaged as a result of the release of hazardous substances at and from the Site; and (2) for reimbursement of the costs incurred by the Natural Resource Trustees in assessing the damages to the natural resources resulting from the release of hazardous materials at and from the Site" (Consent Decree Case No. 2:00CV430JM)). As part of this settlement, $250,000.00 was provided to the Lake Heritage Parks Foundation to assist in the purchase of replacement habitat/conservation areas directly related to the loss of trust resources at the American Chemical Service, Inc. site. Furthermore, the PRPs deposited $50,000.00 in the NRDAR account for the implementation of restoration actions to further compensate for the losses of trust resources. In addition, trustee past assessment costs, up to a maximum of $30,000, were reimbursed by the PRPs.

According to the June 2000 Memorandum of Understanding (MOU), agreed to between IDNR, IDEM, FWS, the Lake County Park and Recreation Board (LCPRB), and the Lake Heritage Parks Foundation (LHPF), coordination and cooperation between the aforementioned agencies are ensured in regard to the implementation of natural resource restoration activities related to the contamination and associated damages accrued at the American Chemical Service, Inc. site. Specifically, the LHPF agrees to receive, manage and expend the $250,000 land acquisition funds in order to purchase the Deep River Headwaters property located 2 miles west of Crown Point, Indiana. The purchase of this property was completed in June 2000. Deep River Headwaters is a 240-acre property that, when restored, will combine diverse habitats ranging from emergent wetlands to forested wetlands to native prairie and oak savannahs. Combined with the adjacent 17.6-acre IDNR property Beaver Dam Wetland Conservation Area, the new 257.6-acre Deep River Headwaters will provide abundant wildlife habitat opportunities, as well as increased water storage and water quality through its improved wetland system.

Initially, the property will be owned jointly and equally by the LHPF and IDNR The LHPF may, at its discretion, quit-claim its one-half (½) interest in the property to the LCPRB. Furthermore, the property in question will be subject to a deed restriction under the North American Wetlands Conservation Act (NAWCA). The deed restriction is as follows:

> "In the event that either or both of the grantees cease to exist, then that grantee's interest in this property shall revert to the United States of America under the auspices of the Secretary of the Interior, to be managed by the United States Fish and Wildlife Service."

The property will also, within 90 days after the last signature is affixed to the NRD-only consent decree, have a perpetual conservation easement agreed to by the Parties and in favor of at least one of the trustees. The following provisions shall be met in regard to the conservation

easement:

The land conveyed herein shall be held and used in perpetuity and consistent with CERCLA and other applicable federal and state laws to:

(a) preserve, protect, and restore current or potential habitat for fish and wildlife, including migratory waterfowl;
(b) preserve, protect, and restore current or potential habitat for endangered, threatened, and of special concern species, including, but not limited to, colonial water birds, fish, and certain endangered or threatened plant species;
(c) preserve, protect and restore existing prairie, ground water recharge areas, and wetlands, and;
(d) restore, replace, or acquire the equivalent of any natural resources that have been alleged to have been injured by the release of Hazardous Substances at or from the ACS Site, including but not limited to wetlands and associated fauna and flora, and ground water.

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 have worked to ensure that all proposed and planned projects to this point have met the intent of the categorical exclusion or have fulfilled all NEPA requirements, thereby attaining full NEPA approval.

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 are the sole responsible parties for identification of applicable projects and any necessary restoration procedures. The wetland restoration component of efforts at Deep River Headwaters and Beaver Dam Conservation Area will be carried out by Ducks Unlimited, while the Lake County Parks and Recreation Department will oversee upland vegetative planning. Approval of additional or complimentary 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 American Chemical Service, 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 which address one or more specific injuries, while, at the same time, make 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 American Chemical Service, Inc. site and affected Off-site areas. This would include restoration of surface and ground water, wetland sediments, and upland 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 American Chemical Service, 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: U.S. 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 the additional dredging of affected 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 American Chemical Service, Inc. site. This alternative will focus limited restoration monies on areas where maximum restoration of the equivalent of injured resources can be achieved. As part of the Court ordered settlement, $250,000 was given to purchase the Deep River Headwaters property and the trustees hope to participate in restoration actions at this site with the remaining $50,000. Incidentally, the Deep River Headwaters property has completed its NEPA review under the North American Wetlands Conservation Act process (NAWCA also granted $150,000 to the acquisition of this property). In regard to the Deep River Headwaters property, additionally, the trustees would like to investigate the possibility of restoring a portion of the Biesecker Prairie, located at the intersection of U.S. 41 and U.S. 231 in Lake County, Indiana. Biesecker Prairie is currently a 34-acre prairie remnant with mostly grasslands, but historically included wetlands, which have been filled. The restoration work for Biesecker Prairie proposed here would involve removing fill from the impacted, historical wetlands and using the fill in one of two ways:

1) as fill material for dams, levies and/or retention banks in the restoration at the Deep River Headwaters site;
2) to be sold/given to the Lake County Municipal Landfill as daily cover.

Restoration activities on these two properties may include, but are not limited to: 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. The Deep River Headwaters property received a letter dated February 14, 2003 from the State Historic Preservation Officer stating that the proposed

restoration of Deep River Headwaters property is in compliance with National Historic Preservation Act by the Indiana Department of Natural Resources' Division of Historic Preservation and Archaeology (attached). According to initial damage assessment surveys, 28.09 acres of wetlands were directly impacted at the ACS site. This loss has been adequately accounted for with the wetland rehabilitation and restoration activities at the Deep River Headwaters and adjacent Beaver Dam Wetland Conservation Area, which encompass 257.6 acres.

Further requirements of restoration at the ACS site include an upland groundwater recharge restriction. Losses to ground water quality and availability associated with the heavy contamination of the ACS site have been estimated at 29,000 gallons. Accordingly, this plan will address the recharge of ground water at the Deep River Headwaters/Beaver Dam site. Specifically, the southeast corner of the restored Deep River Headwaters wetland system will be targeted for ground water recharge. Passive recharge will also be accomplished from the surrounding wetland and protected upland areas. Lake County, in conjunction with IDNR, will hold a perpetual conservation easement on the new property, further guaranteeing that water quality standards will be met.

Implementation of this restoration plan will involve cooperative efforts with Indiana Department of Natural Resources, Divisions of Fish and Wildlife and Nature Preserves, Lake County Parks and Recreation Department, and other conservation organizations with a stake in these two properties.

Monitoring Restoration Effectiveness

Monitoring the implementation of this restoration plan will be done by the Natural Resource Trustees or their designated representatives. 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 2004 (SFY 2003) and will be managed cooperatively by the Natural Resource Trustees. A total of $50,000.00 (+ 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 the 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 implement 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.

Project Contacts

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NATURAL RESOURCE DAMAGE ASSESSMENT SETTLEMENT
RESTORATION PLAN

Co-Trustee concurrence on the Final Restoration Plan for:
American Chemical Service, Inc. ~~Landfill~~
~~La Porte~~ Co., Indiana
Lake

Scott E. Pruitt
U.S. Fish and Wildlife Service
Date: 4/19/04

John Davis
Indiana Department of Natural Resources
Date: 6-24-04

Elizabeth Admire
Indiana Department of Environmental Management
Date: 4/29/04

Restoration Plan Addendum – Response to Comments

Comment #1: *The NRDA Restoration Plan references removing fill from a wetland area at the Biesecker Prairie State Nature Preserve and possibly using it* "...as fill material for dams, levies and/or retention banks in the restoration at the Deep River Headwaters site." *All fill materials used at Deep River Headwaters will consist of overburden from the site and will be incorporated into the restoration when completed, therefore fill from the Biesecker site will have to be deposited elsewhere.*

Response #1: Any and all materials taken from the Biesecker Prairie Nature Preserve during the process of restoring a historical wetland at that site will be deposited elsewhere, possibly as daily cover at a Lake County landfill.

Comment #2: *Both the ACS site (Turkey Creek) and the Deep River Headwaters property (Beaver Dam Ditch/Deep River) are within the Lake Michigan watershed. It is my understanding that when remediating environmental damages under the Comprehensive Environmental Response, Compensation and Liability Act, said remediation should occur as close to the impacted area as possible. Though the Biesecker Nature Preserve and the Deep River Headwaters properties are both the same relative distance from the ACS site, the Biesecker Nature Preserve lies within the Kankakee watershed.*

Response #2: When at all reasonable and practical, it is favorable to perform restoration activities as close as possible to the impacted site. However, in the absence of quality restoration projects within the impacted site's watershed, or with the presence of ecologically favorable projects outside the watershed boundaries, it is allowable to perform restoration work at a *relative* proximity to the impacted site. The NRDA regulations (w/in CERCLA) do not designate that restoration activities occur exclusively within the impacted watershed.

Comment #3: *As the Project Officer for the Indiana Grand Kankakee Marsh Restoration Project, a NAWCA partnership within the Kankakee River Basin, I have had the opportunity to be involved with countless restoration projects throughout the past ten years. Our Phase III NAWCA grant will be completed by October 1st of this year. To date, we have acquired, restored and enhanced over 18,000 acres of wetlands and associated uplands within the Kankakee watershed. We do have some funds remaining from our Phase III grant that might be appropriately used for restoration purposes at the Biesecker Prairie Nature Preserve should our partnership concur.*
Given the extensive scope of restoration proposed for the Deep River Headwaters we would hope to maximize any and all funding resources available. Kankakee NAWCA funds may be used (with steering committee concurrence) at the Biesecker Prairie Nature Preserve but cannot be used at the Deep River Headwaters because the property lies in the Lake Michigan watershed.

Response #3: All funding sources for restoration activity at Biesecker Prairie Nature Preserve will be pursued, including the possibility of using Phase III NAWCA grant

money. It is the goal of the Trustees to maximize restoration activities at both the Biesecker Prairie Nature Preserve and the Deep River Headwaters.

Comment #4: *First of all, we were very disappointed when the Deep River Headwaters was bought instead of the CSX property. The CSX property was more appropriate because it was right by ACS, it had good natural area, and was adjacent to the Oak Ridge Prairie, a 700-acre defacto nature preserve with many threatened and endangered species (over 20 plants and 10 wildlife on DNR's list) and over 500 native plant species, over 70 nesting bird species.*

Response #4: The opportunity to comment on this particular settlement was associated with the lodging of the Consent Decree in July 2000 during a thirty-day comment period established by the United States Department of Justice. The settlement regarding ACS is no longer open for comment. Having said that, the Natural Resource Trustees in this case tried very hard to negotiate the purchase of the CSX property, but the PRP's who owned the parcel would not agree to part with the entire land tract. In the end, the Trustees agreed that the purchase and restoration of Deep River Headwaters, a 240-acre parcel adjacent to a 17.6-acre IDNR property named Beaver Dam Wetland Conservation Area, was more beneficial to natural resources and conservation.

Comment #5: *Secondly, we have observed that the Lake County Parks and Recreation is not a good steward of its natural areas. We spent 1994 and 1995 successfully fighting the Park Department's disastrous development plans for Oak Ridge Prairie which would have involved every natural area and rare species habitat.*

Response #5: We both encourage the continued support and demand for proper natural resource stewardship and applaud past successes in this regard. We would like to point out that a portion of the ACS settlement money is allocated for restoration activities, including invasive species control. We foresee greater stewardship opportunities for Lake County Parks and Recreation with the Deep River Headwaters site. In fact, IDNR arranged to be co-owner of this property and, as a co-Trustee for Natural Resources, will ensure proper stewardship of the property as outlined in the Consent Decree and the MOU (between Trustees and Lake County partners). This will include implementation of a required conservation easement on the entire property.

Comment #6: *The 240 acres of Deep River Headwaters is pleasant enough with its rolling topography on silt loam and its little section of former oak savanna. However, its restoration potential to become a bona fide natural area (as defined by Swink and Wilhelm in* Plants of the Chicago Region *as a place with floristic quality index of at least 35) is very low. The few native plant species are on a hillside by the oak savanna that has garlic mustard. Hopefully, there are some box turtles there and some prairie and wetland bird and wildlife species will be established as the farmland is turned into prairie and wetland habitat. Some of the wetland in the north part is a former dump, but has a pond with fairly clean water and submersed plant life.*

Response #6: The Deep River Headwaters was not purchased to be developed (or become) a "bona fide natural area". The area was purchased to compensate for injured natural resources at the ACS Superfund site; i.e., habitat, including wetlands and ground water resources. Initially, because of restraints and high costs, funding at Deep River Headwaters was focused on the purchase and the reestablishment of wetlands on the property. The second phase will be focused on restoration, including invasive species control. We believe that as restoration activities continue, we will see an increase in both habitat quality and wildlife presence.

Comment #7: *We are concerned that Lake County Parks will think of some "compatible" development for Deep River Headwaters such as a bike trail with a 23 foot wide impact zone (as in their Oak Savanna Trail project through the black soil railroad prairie), disc golf, picnic areas, etc. What development of this site is allowed with the "perpetual conservation easement further guaranteeing that water quality standards will be met"?*

Response #7: The development ideas and types that were described are not compatible with the requirements of a perpetual conservation easement, which by agreement of all parties will be placed on the Deep River Headwaters site.

Comment #8: *We are also concerned that Lake County Parks is unqualified and unable to "preserve, protect and restore current or potential habitat for fish and wildlife, endangered species, prairie, groundwater recharge areas, wetlands..." We can see this property with its degraded oak savanna overtaken by garlic mustard and its wetland choked with hybrid cattail and Phragmites, as is happening with the Howkinson property Lake County Parks just got (but won't let the public into) in Cedar Lake.*

Response #8: We have the utmost confidence that with the inclusion of IDNR as co-owner of this site, as well as the input of the Natural Resource Trustees in general, that this site will be managed properly and effectively. Initial funding was focused exclusively on the purchase of Deep River Headwaters and wetland development, with no allocation for on-site restoration and exotic control.

Comment #9: *The Ducks Unlimited wetland work is much appreciated. We suggest early control of the alien Phragmites, purple loosestrife, hybrid cattail (all cattails seem to be hybrids in the area now) and reed canary grass. We suggest an effort to get more native vegetation around the duck ponds.*
We are concerned that "moist soil management" vegetation manipulation to try to get high seed producing annuals such as barnyard grass (Echinocloa crus-galli) for duck food leads to unstable vegetation, prone to invasion by alien species. It might be much better in the long run to make the effort to plant native species and fence the geese out while they get established. Obviously, the effort to get native species established is not worth while if no effort will be expended to maintain them in the future as one stray Phragmites can take over in a few years.

Response #9: The Conservation Easement will involve certain management requirements for Deep River Headwaters, including guidelines for native vegetation planting and control of invasive, exotic species. IDNR and Lake County Parks and Recreation will work together to ensure that the intent of the Conservation Easement is realized.

Comment #10: *We sure hope the "trustees will oversee and implement this restoration plan" very closely because the land steward chosen by the trustees has a bad record.*

Response #10: It is always the goal of the trustees to monitor restoration very closely, thereby ensuring its appropriateness and effectiveness in the long run.

Comment #11: *Regarding Alternative #3, we like the idea of doing wetland restoration at DNR's Biesecker Prairie, which we fell has a much better chance of being managed properly.*

Response #11: We feel that Biesecker Prairie has excellent restoration potential and will go along way in meeting ACS restoration goals, namely to restore, enhance or replace natural resources damaged due to negligent activities at the ACS site.

Comment #12: *Regarding the Deep River Headwaters restoration proposal, the Lake County Parks and Recreation Department's record of natural-area neglect during recent years needs to be brought to your attention. LCPD has a dismal record of stewarding its existing properties, whether they are dedicated preserves like the Shell property in Hammond or de facto areas that LCPD refuses to acknowledge as quality natural sites, like Oak Ridge Prairie in Griffith. This neglect is not the result of incidental failures LCPD can correct through diligence and work. The problems are endemic, systemic, and render LCPD a terrible choice to "preserve, protect and restore" this or any site.*

Response #12: As per the above response, IDNR has agreed to be a co-owner of this property, and therefore will evoke certain management responsibilities to ensure quality stewardship of the property in question.

Comment #13: *The previous commenter went on to explain certain historical and contemporary problems they see in Lake County Park and Recreation's management techniques and attitudes in regard to natural resources in the area.*

Response #13: We would refer commenter to the aforementioned response describing Indiana Department of Natural Resource's partnership role in the management of Deep River Headwaters. Furthermore, it is not the goal of the Trustees to financially support a project that will either fail through design problems or management techniques. The Trustees have faith that the management cooperation between LCPD and IDNR will be a successful venture.