

**Draft Natural Resource Restoration Plan
&
Environmental Assessment
for the
Ashtabula River and Harbor Site**

February 22, 2008

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TRUSTEES: State of Ohio
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Department of the Interior
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Federal Water Pollution Control Act (Clean Water Act) (as amended), 33 U.S.C. § 1251, *et seq.*

Natural Resource Damage Assessment, 43 C.F.R. Part 11

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SECTION 1

INTRODUCTION AND SUMMARY

This Draft Restoration Plan and Environmental Assessment (RP/EA) has been prepared by State and Federal natural resource Trustees to address natural resources injured and ecological services lost due to releases of hazardous substances at the Ashtabula River and Harbor Site (the Site).

The Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601, *et seq.* (CERCLA, or more commonly known as the federal “Superfund” law) and the Federal Water Pollution Control Act, 33 U.S.C. § 1251, *et seq.* (more commonly known as the Clean Water Act or (CWA)) authorize States, Indian Tribes, and certain Federal agencies that have authority to manage or control natural resources, to act as “Trustees” on behalf of the public, to restore, rehabilitate, replace, and/or acquire natural resources equivalent to those injured by hazardous substance releases. The Department of the Interior’s Natural Resource Damage Assessments (NRDA) regulations are set forth at 43 C.F.R Part 11.

The State of Ohio, represented by the Ohio Environmental Protection Agency (Ohio EPA) and the United States Department of the Interior (DOI), represented by the United States Fish and Wildlife Service (USFWS) (collectively, referred to as the Trustee Council) have worked together, in a cooperative process, with Trustee Advisors¹ to determine what is necessary to address natural resource injuries caused by past releases of polychlorinated biphenyls (PCBs) and other hazardous substances at the Site.

The State of Ohio and the United States are considering entering into a negotiated settlement with the Potentially Responsible Parties (PRPs) in which the PRPs would implement various projects to restore, replace, rehabilitate and/or acquire the equivalent of the natural resources injured at the Site, and/or the services those resources provide. This RP/EA is directed solely at the identification of restoration projects intended to compensate the public for injuries to natural resources at the Ashtabula River and Harbor Site². The Fields Brook portion of the Site was settled separately and the “Final Natural Resource Restoration Plan & Environmental Assessment for the Fields Brook Superfund Site” was released in July, 2004.

In summary, the purpose of this Draft RP is to present the Trustees Preferred Alternative to accomplish the goal of restoring, rehabilitating, replacing and/or acquiring the equivalent of those natural resources, and the services those resources provide that have been injured in the Ashtabula River and Harbor. Public comments are being sought on this Draft RP/EA and will be considered and incorporated in the Final RP/EA as appropriate.

¹ The Trustee Council Advisors, per the 1998 Fields Brook Memorandum of Understanding (which includes the Ashtabula River and Harbor), include the United States Department of Justice; the United States Department of the Interior Solicitor’s Office; the United States Department of Commerce, represented by the National Oceanic and Atmospheric Administration; the United States Environmental Protection Agency; the United States Coast Guard; the Ohio Attorney General; and, the Ohio Department of Natural Resources (ODNR).

² The Site is defined as the Ashtabula River from the Upper Turning Basin to the Harbor Mouth.

SECTION 2

PURPOSE AND NEED FOR RESTORATION

2.1 The Ashtabula River and Harbor Site – Summary of Release History

The Ashtabula River is located in northeast Ohio, flowing in a northwesterly direction to its confluence with Lake Erie at the City of Ashtabula, Ohio. The drainage basin covers approximately 355 km². Tributaries include Fields Brook, Hubbard Run, Strongs Brook, and Ashtabula Creek. The City of Ashtabula, with a population of 20,962³, is the only significant urban center in the watershed. The rest of the drainage basin is primarily rural and agricultural. There is concentrated industrial development around Fields Brook and to the east of the River mouth. The Ashtabula Harbor, located at the mouth, is a significant Great Lakes Harbor. Commodities such as limestone, iron, coal and other bulk commodities regularly transit the Harbor. The Ashtabula River, downstream of Fields Brook, is heavily contaminated with hazardous substances including PCBs, polycyclic aromatic hydrocarbons (PAHs) and heavy metals. Sources include industrial facilities located along Fields Brook, as well as historical ship building and scrapping activities, spills and accidents at adjacent rail yards, and activities associated with bulk cargo shipping.

Fields Brook, the source of much of the contamination in the Ashtabula River, is on the National Priorities List (NPL) of uncontrolled hazardous waste sites (Superfund) and is being remediated under that authority. Fields Brook is a small tributary entering the Ashtabula River from the east at approximately river mile 1.8. Manufacturing along Fields Brook, ranging from metal fabrication to chemical production, has occurred since the early 1940s. The decades of manufacturing activity and waste management practices at industrial facilities resulted in the discharge or release of a variety of hazardous substances to Fields Brook, which have migrated downstream, contaminating the Ashtabula River and Harbor Site.

In 1994, as an alternative to the impending designation of the Ashtabula River as an operable unit of the Fields Brook Superfund Site, the Ashtabula River Partnership (Partnership) was formed to facilitate a voluntary cleanup. The Partnership is comprised of more than 50 public and private “partners”. Public Partners include the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), the USFWS, and the Ohio EPA. Private Partners include local industries, several of which have been named PRPs at the Site.

The contaminated portion of the Ashtabula River and Harbor is being remediated using funds provided by some of the RPs at the Fields Brook Superfund Site, the USEPA (Great Lakes Legacy Act), the Ohio EPA, and the USACE. Remedial dredging is underway and completion is expected in 2008.

³ Population is based on 2000 census data.

2.2 Natural Resource Injuries

Injuries to surface water resources, fishery resources, and avian resources have occurred. An estimated 511 acres of the Ashtabula River and Harbor have been contaminated by hazardous substances.

Toxic contaminants have wide ranging effects on aquatic and terrestrial life. Acute (short term) effects may include the death of birds, fish and other animals, and death or low growth rate in plants. Chronic (long term) effects on aquatic life may include shortened lifespan, reproductive problems, lower fertility, and changes in appearance or behavior. Many hazardous substances, including PCBs, are categorized as persistent bioaccumulative toxics (PBTs). They degrade very slowly in the environment, accumulate in living things, and magnify as they move up the food chain. General information on potential effects of the hazardous substances detected can be found in the Agency for Toxic Substances and Disease Registry (ATSDR) fact sheets (www.atsdr.cdc.gov) and the U.S. EPA ECOTOX database (www.epa.gov/ecotox).

Reports on specific injuries at the Site can be found at [Http://www.fws.gov/midwest/AshtabulaNRDA/](http://www.fws.gov/midwest/AshtabulaNRDA/). Additional information on surface water resources injured can be found in Ohio EPA's 2006 biological study of the lower Ashtabula River at http://www.epa.state.oh.us/dsw/document_index/psdindx.html.

2.3 Authority and Legal Requirements

This Draft RP/EA has been prepared jointly by the Ohio EPA and the USFWS. Each of these Agencies is a designated natural resources Trustee under Section 107(f) of CERCLA, 42 U.S.C. § 9607(f), Section 311 of the CWA, 33 U.S.C. § 1321, and other applicable law, including Subpart G of the National Contingency Plan (NCP), 40 C.F.R. §§ 300.600-300.615. As a Trustee, each Agency is authorized to act on behalf of the public to assess natural resource injuries and recover damages for injuries to natural resources and losses of natural resource services attributed to releases of hazardous substances. The Federal Authorized Official (AO) is the DOI official delegated the authority to act on behalf of the Secretary of the Department of the Interior to conduct a natural resource damage assessment and restoration (NRDAR). The AO is the Region 3 Regional Director for the U.S. Fish and Wildlife Service, and represents the interests of the Department, including all affected Bureaus. In accordance with 42 U.S.C. § 9607(f)(2)(B), the Director of Ohio EPA has been designated the natural resource Trustee by the Governor of Ohio pursuant to letter dated July 20, 2007.

The purpose of the EA is to consider alternative actions to restore, rehabilitate, replace, and/or acquire the equivalent of any natural resources injured and natural resource services lost as a result of releases of PCBs and other hazardous substances into the Ashtabula River and Harbor Site, pursuant to applicable State and Federal laws and regulations. This document will also serve as the RP for implementing the selected Alternative as required under the NRDA regulations.

The Alternative selected in the RP must be consistent with statutory mandates and regulatory procedures that specify that recovered damages are used to undertake feasible, safe, and cost-effective projects that address injured natural resources, consider actual and anticipated conditions, have a reasonable likelihood of success, and are consistent with applicable laws and policies.

2.4 Overview of Damage Determination

DOI has adopted regulations under CERCLA and the CWA establishing procedures for assessing natural resource damages. The NRDA regulations are codified at 43 C.F.R. Part 11.

As defined in the NRDA regulations, injury is an adverse biological, chemical, or physical effect on natural resources, such as death, decreased population, or lost services (*i.e.*, fishing or hunting opportunities, ecosystem functions). Damages are the estimated value of the injured resources. The objective of the NRDA process is to compensate the public through environmental restoration for injuries to natural resources that have been caused by releases of hazardous substances into the environment. Under Section 107(f)(1) of CERCLA, damage settlements can only be used to restore, rehabilitate, replace, and/or acquire the equivalent of trust resources injured, destroyed, or lost as a result of the release of hazardous substances.

Accordingly, this Draft RP/EA has been developed to evaluate and, ultimately, select restoration projects designed to compensate the public for damages that occurred to natural resources at the Site. The Draft RP/EA is not intended to completely quantify the extent of restoration needed. Implementation of selected restoration projects will occur over a period of time, dependent upon the project type.

The NRDA regulations provide that restoration plans should consider ten factors when evaluating and selecting projects to restore or replace injured natural resources. The following factors will be used to select an Alternative and to compare projects within an Alternative. (See 43 C.F.R. § 11.82)

1. Technical feasibility
2. The relationship of the expected costs of the Alternative to the expected benefits
3. Cost-effectiveness
4. The results of actual or planned response actions
5. The potential for additional injury resulting from the proposed actions
6. The natural recovery period
7. Ability of the resources to recover with or without alternative actions
8. Potential effects of the action on human health and safety
9. Consistency with relevant Federal, State, and Tribal policies
10. Compliance with applicable Federal, State, and Tribal laws

As discussed, the selected Alternative must restore, rehabilitate, replace and/or acquire the equivalent of those natural resources injured by the discharge or release of PCBs and other hazardous substances at the Site. Because the Site is a complex community of invertebrates, fish, wildlife, plants and humans, the Trustees intend to consider as much of the watershed as possible and address areas of potential improvement for the ecosystem as a whole.

Based on the recommendations of the Trustee Council and input from the public, the Authorized Official will select one of the Alternatives and will determine, based on the facts and recommendations contained herein, and public comment, whether this EA is adequate to support a Finding of No Significant Impact (FONSI), or whether an Environmental Impact Statement (EIS) is required.

SECTION 3

RESTORATION ALTERNATIVES

3.1 Alternative A: No Action

The No Action Alternative, required by the National Environmental Policy Act (NEPA), consists of expected conditions under current programs pursued outside the NRDA process. It is the baseline against which other actions can be compared. If this Alternative were implemented, the Trustee Council would not initiate specific actions to restore injured natural resources or compensate the public for ongoing natural resource injuries caused by releases of hazardous substances into the environment. Existing environmental degradation not directly related to hazardous substance releases would continue to occur (land development, shoreline hardening, etc.), and perhaps worsen under Alternative A. The State and Federal agencies would continue to manage, conserve and protect the Ashtabula River and Harbor as outlined in current programs and regulations and within current budget constraints. The public would not be compensated for injuries to natural resources.

3.2 Alternative B: Natural Resource Based Restoration (Preferred Alternative)

CERCLA authorizes trustees to replace and/or acquire natural resources equivalent to those injured by hazardous substance releases, in lieu of or in addition to, directly restoring or rehabilitating the injured natural resource.

Alternative B involves projects that would directly restore and replace injured and lost natural resources, while concurrently providing enhanced ecosystem and public use services to compensate for injuries caused by releases of hazardous substances. Projects within this Alternative could be implemented anywhere in the State of Ohio with a preference for projects in the watershed of the Ashtabula River and Harbor. Alternative B projects are focused on maintaining the important linkages between the physical, chemical and biological properties of the overall ecosystem and the services it provides. These projects include the following: (1)

enhancement and preservation of riparian, flood plain and upland habitat; (2) enhancement, preservation and reestablishment of wetlands; and (3) improvement of aquatic habitat. Each of these categories of projects is expected to improve and enhance the ecosystem to benefit injured natural resources. Concomitantly, these projects would benefit the public by enhancing active and passive outdoor recreational opportunities. These goals would be accomplished through the acquisition, preservation and restoration of contiguous tracts of valuable habitat, where feasible, which would be made available to the public for active and/or passive recreational use. This holistic approach supports the goal of restoring, replacing and rehabilitating injured resources, and enhancing outdoor recreational activities.

The Trustee Council anticipates that ecological priorities for all restoration project categories under Alternative B will be influenced primarily by the following key factors:

- 1) Relationship to injuries (restoration opportunities that address services and values similar to those lost due to the release of hazardous substances are preferred);
- 2) Quality of restoration opportunities (projects with substantial ecological opportunities are preferred);
- 3) Ecological function/hydraulic connectivity (areas in proximity to the Ashtabula River and Harbor are preferred); and,
- 4) Cost and cost-effectiveness (projects with lower cost per restored or replaced services or values are preferred).

Prior to the selection and implementation of any Site specific actions, the Trustees will review the specific projects to determine if they comply with all applicable requirements: NEPA, Historic Preservation Act, Endangered Species Act, Americans With Disabilities Act, etc.

3.2.1 Wetland, Flood Plain, Riparian and Associated Upland Habitat Preservation, Reestablishment or Enhancement Projects

Restoration projects under this Alternative would concentrate on the need to preserve and enhance certain properties adjacent to the Ashtabula River. Protection and restoration of riparian habitat and associated wetlands and ecologically associated uplands would foster and promote increased spawning and nursery habitats, and nesting and foraging opportunities for a wide variety of fish, birds and other wildlife. Such projects will also reduce erosion and resultant sediment loading to the Ashtabula River. Restoration projects described in Alternative B would provide ecological functions similar to, but not necessarily the same as those injured by hazardous substances.

Wetland, flood plain, riparian, and ecologically associated upland protection and enhancement would help replace habitats that have been impaired or destroyed in the Ashtabula River and Harbor area. The Trustee Council will focus its efforts on areas where hydraulic alterations, invasive species, or other modifications have destroyed or impaired former wetlands, flood plain habitat, and/or ecologically associated upland habitats. The Trustee Council's wetland, flood plain, riparian, and upland habitat reestablishment and enhancement strategy would include active restoration projects such as improving existing flood plain, establishing and/or preserving wetlands,

establishing interconnections between surface water and wetlands, and removing invasive plant species. Low impact techniques such as closing off drainage ditches, disrupting (or not repairing) drain tile systems, and reestablishing wetland and flood plain plants and other native vegetation in order to reestablish natural characteristics that have been eliminated would also be utilized, as appropriate. The Trustee Council intends to target restoration of degraded wetland, riparian, and upland habitats located in coastal areas, within flood plains, and adjacent to existing valuable natural areas. Wetland, flood plain, riparian and ecologically associated upland reestablishment and enhancement projects that will improve water quality (including reducing loadings of suspended sediments) and provide habitat for biological resources are preferred. If a specific restoration project uses alternative techniques or involves more development than described in this section, a Site specific NEPA determination would be made.

3.2.1.1 Acquisition of Natural Areas

Alternative B recognizes the significance of preserving the riparian, wetland, flood plain and upland habitat of the Ashtabula River and Harbor area. To achieve this goal, the Trustee Council will focus its efforts on identifying, acquiring and preserving parcels of land with the following attributes: (1) coastal areas; (2) areas with commercial and/or residential development pressure; (3) contiguous parcels; and, (4) areas of high natural quality. Areas with high natural quality or “natural areas” are those parcels of land that significantly contribute to the ecological qualities of the Ashtabula River and Harbor watershed. Once preserved and protected, lost and injured resources are restored, and public recreational activities, both active and passive, improve.

The Trustee Council will select specific areas for preservation based upon the following criteria: (1) the ecological value of the habitat; (2) the ability to improve the habitat; (3) the ability to preserve the habitat; (4) the geographical and ecological diversity of the parcel; (5) local and regional development plans; (6) the ability to find willing sellers; and, (7) citizens’ concerns and comments. Preservation of properties would be achieved through fee title purchase from willing land owners, subject to an Environmental Covenant and/or through the purchase of Conservation Easements. Those properties that could be preserved in perpetuity will be considered a higher priority than those with a fixed duration. Land acquired will be conveyed to individual State, Federal or local governmental agencies, land trusts, or non-governmental conservation organizations following specific procedures and standards for each entity.

While the primary purpose of the preservation of land is to protect and preserve fish and wildlife habitats, portions of the acquired properties will likely be available to the public for passive and/or active recreational opportunities. The parcels may be available to serve as fishing spots, or for other activities such as wildlife viewing, hiking, or hunting. Acquisition of appropriately selected properties will, in general, contribute to a successful restoration of the Ashtabula River and Harbor, and promote its ecological stability.

3.2.1.2 Invasive Species Removal and Planting of Native Species

Restoration projects under Alternative B may include the replanting and reestablishment of native species on properties acquired through fee title, subject to an Environmental Covenant, and on properties where a Conservation Easement has been secured. Reestablishment efforts

will focus on restoring natural areas that are in a somewhat degraded natural condition. In some instances, the reestablishment of native species may be suggested for properties or portions of properties owned by local Park districts. Native species will be reestablished once non-native species have been removed and eradicated. The removal of non-native species and planting of native species will enhance ecosystem function and, as a result, enhance the ecosystem functions provided to the natural resources and the public.

3.2.1.3 CDM Property

In June 2006, the Trustees provided the Ashtabula Township Park Commission (ATPC) with funds from the Fields Brook Natural Resource Damages settlement to purchase a 37-acre tract of land from the CDM Development Corporation (CDM). The property is subject to an Environmental Covenant, which preserves the property in perpetuity for conservation purposes. Under Alternative B, the Trustees would implement restoration and rehabilitation activities on the property to further enhance its ecosystem services. The restoration could include the following: (1) the reestablishment of a hydrological connection between the wetlands and the Ashtabula River, either directly or through the use of a water control device; (2) the removal of exotic and non-native species on approximately six acres; (3) the reestablishment of native species on six acres of wetlands; (4) the construction of an elevated boardwalk along the upland side of the wetlands; (5) the construction of a canoe launch; and, (6) improvement of the gravel parking lot along 24th Street.

These projects will provide enhanced ecosystem services and improve public access to the River. On the ecological side, the reestablished and connected wetlands will provide spawning and nursery habitat for fish, as well as nesting areas for wetland birds. This will increase and improve the functioning of the ecosystem. The construction of the boardwalk and canoe launch will improve public access and provide opportunities for environmental education through passive recreational use.

3.2.2 *Fishery Resource Enhancement Projects*

The abundance and diversity of fish species that once inhabited the Ashtabula River and Harbor is very different from the fishery currently observed due to anthropogenic effects, including effects of pollutants. Data collected prior to the remediation currently underway in the Ashtabula River indicated that the fish community was impaired, and did not meet the ecoregional biocriteria for Warm Water Habitat in Ohio. The data evidenced that highly pollution-tolerant species were abundant in certain sampling locations on the River.

In light of the data described above, the Trustees have proposed projects designed to achieve healthy, self-sustaining native fish populations in the Ashtabula River and Harbor area. Projects in Alternative B will, therefore, focus on the following: (1) acquisition of tracts of land along the Ashtabula River, which will help to reduce sediment loading, and thereby provide direct benefits to the fishery; (2) establishment of a hydrological connection between the wetlands and the River on the CDM property, which will provide a significant spawning and nursery area for fish; and, (3) restoration of certain existing wetlands, which will provide improved foraging opportunities.

3.3 Alternative C: Augmentation of Human Use Related Natural Resource Services in the Ashtabula Watershed and Adjacent Lake Erie

Alternative C involves projects that would provide services the same as, or similar to, those human use services lost through injuries to natural resources. The projects can be divided into two components: enhancements to the Breakwall Lighthouse and projects that provide fishing access to the Ashtabula River and Harbor and Lake Erie; and, construction of an educational interpretative center at Walnut Beach and other environmental educational opportunities. Alternative C projects would not restore, replace and/or rehabilitate injured or lost natural resources. The Trustee Council expects that priorities for all restoration projects or categories of projects under Alternative C will be influenced primarily by the following key factors:

- 1) Relationship to injuries (restoration opportunities that address services and values similar to those lost due to the release of hazardous substances are preferred);
- 2) Quality of restoration opportunities (projects with substantial ecological opportunities are preferred);
- 3) Ecological function/hydraulic connectivity (areas in proximity to the Ashtabula area and the restoration area are preferred); and,
- 4) Cost and cost-effectiveness (projects with lower cost per restored or replaced services or values are preferred).

Under this Alternative, prior to the selection and implementation of any Site specific actions, the Trustees will review the specific projects to determine if they comply with all applicable requirements: NEPA, Historic Preservation Act, Endangered Species Act, Americans With Disabilities Act, etc.

3.3.1 *Breakwall Lighthouse and Projects that Provide Fishing Access to the Ashtabula River and Harbor, and Lake Erie*

This category of projects would provide human use services the same as, or similar to those lost through natural resource injuries, but would not directly enhance the injured natural resources. Projects within Alternative C would be implemented in the County of Ashtabula, with an emphasis on the adjacent shoreline of Lake Erie. Alternative C projects include the following: (1) improvements to the Breakwall Lighthouse; (2) construction of a walkway to the Breakwall Lighthouse; (3) construction of restroom facilities near the Breakwall Lighthouse; and, (4) construction of a transient boat dock. The cost of these projects has been estimated to be approximately \$8 million. The projects proposed in Alternative C, particularly the walkway and transient boat dock, could provide increased access to the public for active recreational opportunities, including fishing. The combined projects could enhance tourism to the County of Ashtabula. However, none of the proposed projects promote the holistic approach of restoring natural resources, while enhancing outdoor recreational activities.

3.3.2 *Interpretive Educational Center*

The Trustees have received a proposal to construct an Interpretative Educational Center at Walnut Beach. The cost of the proposed Interpretative Educational Center has been estimated to be approximately \$2.25 million. Educational displays at the Center could explain the Lake Erie ecosystem, invasive plant control, fish species, and the Ashtabula River Partnership.

3.4 Alternatives B and C: Criteria and Priorities for Restoration Project Categories

3.4.1 *Technical Feasibility*

Projects that use reliable, proven methods are preferred to those that rely on experimental, untested methods. Other factors that can affect project success, such as validity of assumptions inherent to the project approach, will also be considered by the Trustee Council.

3.4.2 *Benefit Scope*

Restoration projects that provide a broad scope of measurable ecological benefits to a wide geographic area of fish or wildlife population are favored over those that are focused on a limited set of benefits to a limited area or population. Restoration projects with a high ratio of expected ecological benefits to expected cost are preferred. This aspect may be assessed relative to other proposed projects that benefit the same resource. Projects that provide natural resource services through protection, and/or enhancement of the natural resources providing those services are preferred over projects designed solely to provide services. Projects that benefit more than one injured natural resource are expected to be given priority. Wherever possible, natural habitat functions which are self-sustaining and essential to maintain the habitat will be restored, enhanced and/or protected. If projects provide equal benefits, those with minimal operation and maintenance activities will be preferred.

3.4.3 *Quantifiable Benefits*

Projects expected to provide quantifiable benefits and likely to achieve success will have a higher priority than projects that do not. Restoration projects should include an evaluation of success and a monitoring component to determine the effectiveness of restoration actions in providing the public with similar services and values to those lost because of releases of hazardous substances into the environment. A timeline outlining the implementation and progression of the restoration project will be used by the Trustee Council to determine completion and success of the project. Overall success of the RP will depend upon success of each restoration project.

3.4.4 *Potential Impact*

Preference will be given to projects that avoid or minimize additional natural resource injury or environmental degradation. The Trustee Council will require that requisite permits are obtained and

comply with applicable regulations. All projects selected for implementation will be expected to comply with applicable and relevant laws, policies and regulations. To assure that Federally and State-listed threatened or endangered species will not be adversely affected, or proposed species are not jeopardized, the Trustee Council will require that the guidelines outlined in Appendix A are followed during implementation of NRD restoration activities.

3.4.5 *Other Project Support*

Preference is expected to be given to projects or aspects of Trustee Council projects that are not already being implemented or have insufficient funding under other programs. Although the Trustee Council may use restoration planning efforts completed by other programs, preference is given to projects that would not otherwise be implemented without NRD restoration funds.

3.4.6 *Voluntary Land Acquisition/Easements*

Preservation of habitats through acquisition of land or Conservation Easements will only be from willing sellers or participants. Landowners are, and will be, under no obligation to sell land to the government agencies or other organizations associated with the Trustee Council. Neighbors adjacent to land purchased for preservation under this RP will retain all of their current rights to their land. Land acquisitions may be conducted by government agencies using settlement moneys, or directly by settling PRPs. The government agencies are required to pay fair market value for land purchased. Fair market value would be determined through established appraisal procedures.

3.4.7 *Tribal Cultural Resources*

The preservation or restoration of specific areas or resources that have appreciable cultural value to Indian tribes are important to the Trustee Council. A search of the Native American Consultant Database maintained by the National Park Service identified no Indian tribes with relevant interest in Ashtabula County.

3.5 Preferred Alternative

The Trustee Council has recommended Alternative B as the Preferred Alternative. The direct provision of human use related natural resource services provided for in Alternative C would be less cost effective and more limited in scope than provision of those services through natural resource protection and enhancement. In order to concentrate funds on restoring resources that were impacted by the release of PCBs and other hazardous substances at the Ashtabula Site, Alternative B is recommended as the Preferred Alternative for this Draft RP/EA. The final decision on the selected Alternative will be made by the State and Federal Authorized Officials based on recommendations from the Trustee Council staff and input from the public.

3.6 Summary of Alternative Actions

Table 1: Comparison of Alternatives A, B & C

Actions	Alternative A No Action	Alternative B Natural Resource Based Restoration (Preferred Action)	Alternative C Augmentation of Human Use Related Natural Resource Services
Restore, rehabilitate, replace and/or acquire the equivalent of natural resources injured from the release of hazardous substances into the environment and services those resources provide	No	Yes	Partial. Limited replacement of services. No restoration of resources.
Rehabilitate wetlands, flood plains, riparian and associated upland habitat	No	Yes	No
Improve aquatic habitat and near-shore habitat	No	Yes	No
Provide for enhancement of abundance and diversity of self-sustaining fish populations	No	Yes	No
Preservation of wetlands, flood plain, riparian and associated upland habitat	No	Yes	No
Improve outdoor recreational opportunities/enhance public awareness	No	Yes	Yes

SECTION 4

AFFECTED ENVIRONMENT

The terrestrial, wetland, and aquatic habitats of the Ashtabula EA area support a wide diversity of birds, fish, and mammals, including many rare, threatened, and endangered species. The health of the ecosystem and the quality of its habitats are vital to the invertebrates, plants, fish, and wildlife of the area. Public uses and enjoyment of these resources also depend on the health and quality of the Ashtabula EA area.

4.1 Physical Characteristics

The restoration area is located in northeastern Ohio in Ashtabula County, 55 miles east of Cleveland. The Ashtabula River drainage basin covers approximately 355 Km² with the River

entering the Central Basin of Lake Erie at the City of Ashtabula. South of the City of Ashtabula land use is a mixture of agriculture and forest. Immediately south of the City of Ashtabula, in the Ashtabula River Gulf area, is the 405 acre Indian Trails Park owned and operated by the Ashtabula Township Parks Commission. The Park encompasses four miles of the Ashtabula River creating a unique park setting characterized by scenic vistas and aquatic life, adjacent flood plain, upland hardwood forests, wetlands, sensitive wildflowers and wildlife habitat. The bedrock in the area slopes towards Lake Erie and varies in depth from 0-60 feet. The predominant soils in the area are silt and clay. This area is impermeable glacial till. The climate of the restoration area is seasonal and continental, with an average July high air temperature of 82.4 degrees Fahrenheit, and an average January low air temperature of 17.6 degrees Fahrenheit. Annual precipitation is approximately 36.6 inches.

4.2 Biological Environment

4.2.1 *Habitat/Vegetation*

Upstream of the City of Ashtabula, habitat consists of a mixture of agricultural lands and forest dominated by maple (*Acer sp.*), black cherry (*Prunus serotina*), ash (*Fraxinus sp.*), and oak (*Quercus sp.*) trees. “High quality” natural forest (primarily comprised of native species) exists on the east valley wall of the Ashtabula River just south of the mouth of Fields Brook. Non-native species, including garlic mustard (*Allaria petiolata*) and Japanese honeysuckle (*Lonicera japonica*) exist as the under-story vegetation in the forest south of Fields Brook (around Riverside Marina). West of the Ashtabula River mouth (near Walnut Beach) there is an important sand dune system. The sand dunes, dominated by beach grass, have been cited by a Cleveland Museum of Natural History Curator as one of the finest beach grass dunes in Ohio (Ashtabula River Partnership 2001).

4.2.2 *Listed, Proposed, and Candidate Species*

The Ashtabula Site falls within range of the Indiana bat, piping plover, and clubshell mussel, Federally-listed endangered species. An endangered species is any species that is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered in the foreseeable future. A candidate species is a species for which the USFWS has sufficient information on their biological status and threats to propose listing them as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

The Federally-listed species discussed above are potentially present in the restoration area boundaries for both Alternative B and C. The following sections provide additional information on Federally-listed species.

4.2.2.1 Birds

Piping plover (*Charadrius melodus*) habitat includes sand or pebble beaches with sparse vegetation along the shore of Lake Erie. The piping plover was designated as endangered in the Great Lakes watershed in December 1985. The decline in piping plover populations has been

linked to natural and human caused factors such as high water levels, eroding beaches, and commercial and residential beach front. Critical habitat for the piping plover was designated in 2001 at Headlands Dune in neighboring Lake County and Sheldon Marsh in north central Ohio's Erie County. Critical habitat is an area that is essential for the conservation of a threatened or endangered species that may require special management and protection.

A bald eagle (*Haliaeetus leucocephalus*) nest has been documented in southern Ashtabula County at Rock Creek. Bald eagles build large stick nests lined with soft materials such as grass, leaves, and Spanish moss. Nests are used for several years by the same pair of eagles, with the birds adding materials each year. The bald eagle was designated as endangered in the lower 48 states in March of 1967 due to declining populations resulting from chemical usage, shooting and persecution of individual birds, and the loss of nesting habitat due to development along the coast and near inland rivers and waterways. After years of protection, decrease in chemical usage in the United States, and education against shooting eagles, there has been an increase in eagle populations. The bald eagle was reclassified as threatened in 1995. In 2007, the bald eagle was de-listed, but is protected under various Federal statutes.

4.2.2.2 Mammals

The Indiana bat (*Myotis sodalis*) was designated as endangered throughout its range in March of 1967. Limestone caves are used for winter hibernation. The decline of this species has been attributed mainly to human disruption and commercialization of roosting caves. During the summer months, the bats roost in trees which have exfoliating bark, and dead or live trees with split tree trunks and/or branches, and cavities (that may be used as maternity or male roost areas). Stream corridors, riparian areas, and upland woodlots provide forage sites.

4.2.2.3 Aquatic organisms

The clubshell mussel (*Pleurobema clava*) was designated as endangered throughout its entire range in January of 1993. Impacts to this species include runoff and channelization, domestic and commercial pollution, in-stream sand and gravel mining, impoundment, and zebra/quagga mussel infestation. These mussels occur in small rivers and streams in clean sweep sand and gravel. They have been found to bury themselves in clean, loose sand to a depth of 2-4 inches. The fish host species for the larvae is the striped shiner. This mussel was last observed in southern Ashtabula County, Wayne Township, in the Pymatuning Creek watershed by ODNR in August of 1993.

4.2.2.4 Reptiles

The eastern massasauga (*Sistrurus catenatus*) was elevated to Federal Candidate status in 1999. Destruction and modification of habitat is the main threat to this species. The massasauga is a small to medium-sized snake that inhabits various wetland types as well as dry, well-drained sandy uplands. This snake has been previously documented in Ashtabula County (2003 is the latest observation recorded by ODNR in the County).

4.2.2.5 State-Listed Species

In addition to Federally-listed endangered and threatened species, the state of Ohio Department of Natural Resources Division of Natural Areas and Preserves maintains a database of rare plants and animals. The following general listing categories are used: (1) *endangered* - a native species or subspecies threatened with extirpation from the State: this danger may result from one or more causes, such as habitat loss, pollution, predation, interspecific competition or disease; (2) *threatened* - a species or subspecies whose survival in Ohio is not in immediate jeopardy, but to which a threat exists: continued or increased stress will result in its becoming endangered; and, (3) *species of concern* - a species or subspecies which might become threatened in Ohio under continued or increased stress, or a species or subspecies for which there is some concern but for which information is insufficient to permit an adequate status evaluation. In Ashtabula County, there are 32 endangered, 34 threatened, and 13 species of special concern. Section 4.2.3 discusses some of these and other Ohio species. The Ohio Natural Heritage Database includes the following state threatened and endangered fish, wildlife, and plants that could be found in the Ashtabula River watershed: barn owl (*Tyto alba*), burbot (*Lota lota*), Great Lakes crayfish (*Orconectes propinquus*), mourning warbler (*Oporornis philadelphia*), sora (*Porzana carolina*), spotted turtle (*Clemmys guttata*), Virginia rail (*Rallus limicola*), American beach grass (*Ammophila brviligulata*), sea rocket (*Cakile edentula*), and inland beach pea (*Lathyrus japonicus*).

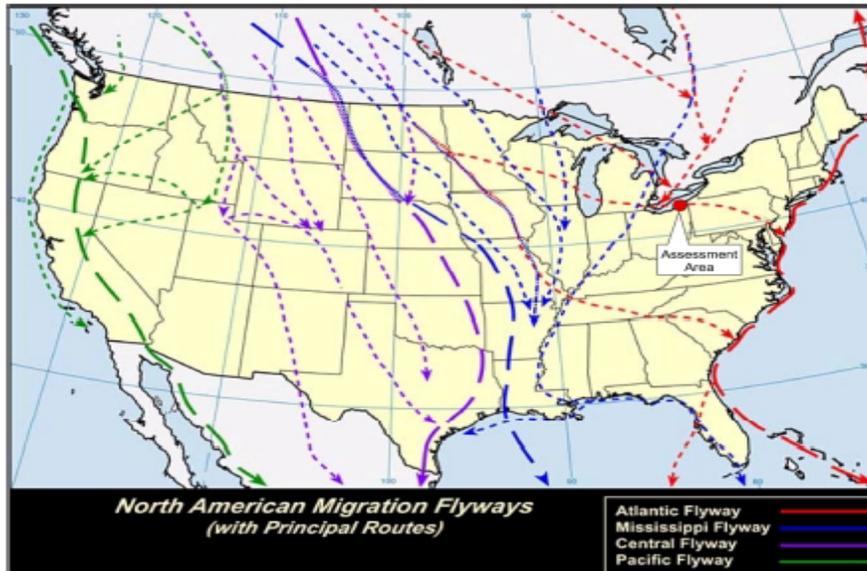
4.2.3 *Other Fish and Wildlife Species*

The following section provides a general list of fish and wildlife found in the Ashtabula area. Additional species may be found. The Ashtabula River and Harbor contain a variety of habitats and a diverse assemblage of fish and wildlife species, which have been exposed to and/or injured by hazardous substances. The Ashtabula Harbor is located on both the Atlantic and the Mississippi flyways, with over three million ducks and geese using this corridor (see Figure 4). Many migratory bird species nest on the outer breakwalls and wetlands near the river. These include, but are not limited to, the osprey (*Pandion haliaetus*), wood duck (*Aix sponsa*), Canada goose (*Branta canadensis*), common merganser (*Mergus merganser*), great blue heron (*Ardea herodias*), cliff swallow (*Hirundo pyrrhonta*), tree swallow (*Tachycineta bicolor*), Caspian tern (*Sterna caspia*), Forster's tern (*Sterna forsteri*), common tern (*Sterna hirundo*), mallard (*Anas platyrhynchos*), black duck (*Anas rubripes*), lesser scaup (*Aythya affinis*), and kingfisher (*Ceryle alcyon*). Numerous additional species of migratory neotropical songbirds inhabit the area seasonally. Bobcat (*Lynx rufus*) and black bear (*Ursus americanus*), both State-listed species, were documented in Ashtabula County in 2000. Smaller mammals likely to use the Ashtabula area include opossum (*Didelphis virginiana*), eastern cottontail rabbit (*Sylvilagus floridanus*), eastern chipmunk (*Tamias striatus*), woodchuck (*Marmota monax*), eastern gray squirrel (*Sciurus gireus*), red fox (*Vulpes fulva*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*).

Fish species in, or seasonally using the Ashtabula River and Harbor include, but are not limited to, least brook lamprey (*Lampetra aepyptera*), northern bigeye chub (*Notropis amblops*), rosyface shiner (*Notropis rubellus*), mimic shiner (*Notropis volucellus*), spottail shiner (*Notropis hudsonius*), emerald shiner (*Notropis atherinoides*), black redhorse (*Moxostoma duquesnei*),

silver redhorse (*Moxostoma anisurum*), white sucker (*Catostomus commersoni*), rainbow darter (*Etheostoma caeruleum*), Johnny darter (*Etheostoma nigrum*), log perch (*Percina caprodes*), walleye (*Stizostedion vitreum*), yellow perch (*Perca flavescens*), white bass (*Morone chrysops*), smallmouth bass (*Micropterus dolomieu*), pumpkinseed (*Lepomis gibbosus*), white crappie (*Pomoxis annularis*), common carp (*Cyprinus carpio*), brown bullhead (*Ictalurus nebulosus*), alewife (*Alosa pseudoharangus*), rainbow smelt (*Osmerus mordax*), freshwater drum (*Aplodinotus grunniens*), lake sturgeon (*Acipenser fulvescens*), coho salmon (*Oncorhynchus kisutch*) and Chinook salmon (*Oncorhynchus tshawytscha*). Rainbow smelt (*Osmerus mordax*), rainbow trout (*Oncorhynchus mykiss*), coho salmon (*Oncorhynchus kisutch*) and Chinook salmon (*Oncorhynchus tshawytscha*) are anadromous fish species. Great Lakes populations of lake trout (*Salvelinus namaycush*), yellow perch (*Perca flavescens*), lake sturgeon (*Acipenser fulvescens*), walleye (*Stizostedion vitreum*), and forage fish are nationally significant fish stocks pursuant to the Great Lakes Fish and Wildlife Restoration Act. Four fish species of Special Concern in Ohio have been listed in the Ashtabula River lacustruary. These are the Great Lakes muskellunge, blacknose shiner, lake sturgeon, and the northern brook lamprey. In addition, a variety of reptile and amphibian species are potentially present at Ashtabula, including snapping turtle (*Chelydra serpentina*), green frog (*Rana clamitans*), and eastern milk snake (*Lampropeltis triangulum*) (U.S. FWS 2001).

Figure 4: North American Migration Flyways – Atlantic flyway through Ashtabula County, Ohio (map modified from <http://birdnature.com/allflyways.html>)



4.3 Land Use

The Ashtabula area is comprised of a mix of agricultural, residential, industrial, and undeveloped land. Approximately 75% of land use in Ashtabula County is agricultural/rural. Less than ten percent was residential in 1980, with the City of Ashtabula the only major urbanized area. Aerial photos comparing overall land use in the Fields Brook and Ashtabula River area between 1938 and 1994 is presented in Appendix B.

4.4 Cultural Resources

Historically, along the banks of the Ashtabula River, there were large conical mounds in which human skeletons were found. The mounds have since been destroyed (Ashtabula River Partnership 2001). As of November 1, 2003, the County of Ashtabula contains 36 properties listed on the National Register of Historic Places, of which nine are in the City of Ashtabula.

4.5 Local Socioeconomic Conditions

According to the U.S. Census Bureau, Ashtabula County and the City of Ashtabula had 102,728 and 20,962 people respectively in 2000. The City of Ashtabula is the only major urban center in the watershed. There are several parks in the City of Ashtabula area. Agriculture and rural areas can be found throughout the remainder of the drainage basin. Ashtabula Harbor is located at the mouth of the Ashtabula River on the south shore of Lake Erie, and is an important commercial harbor on Lake Erie. Land use in the Harbor area includes industrial, commercial, residential, park, public use, and marina. Commodities such as iron ore, coal, other bulk commodities, and general cargo transit the Harbor. Approximately 4.0 million tons of ore and 6.0 million tons of coal are transported per year (Ashtabula River Partnership 2001).

SECTION 5

ENVIRONMENTAL CONSEQUENCES

5.1 Alternative A: No Action

5.1.1 *Habitat Impacts*

Under Alternative A, no habitat would be restored, enhanced, or preserved beyond what the Trustees are currently doing within mandates, policies and restricted budgets. Loss of habitat due to development and other sources of environmental degradation not related to hazardous substance releases is expected to continue to occur. The public would not be compensated for injuries to natural resources from the releases of hazardous substances into the environment.

5.1.2 *Biological Impacts*

Fish and wildlife harmed by releases of hazardous substances into the environment would not be restored, rehabilitated, replaced and/or the equivalent acquired. Populations of fish and wildlife species that rely on wetlands for spawning and nurseries would not increase sufficiently to compensate for past losses.

5.1.3 *Listed, Proposed, and Candidate Species*

Negative impacts to listed species would not be reduced under this Alternative.

5.1.4 Cultural Resources

No cultural resources have been identified.

5.1.5 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 Federal Register 7629 (1994)), directs Federal agencies to incorporate environmental justice in their decision making process. Federal agencies are directed to identify and address as appropriate, any disproportionately high and adverse environmental effects of their programs, policies and activities on minority or low-income populations.

Under the No Action Alternative, wildlife viewing and environmental education opportunities would not improve through enhancement projects. While affluent individuals can afford travel and pay for alternatives, low-income individuals are less capable of doing so.

5.1.6 Socioeconomic Impacts

This Alternative would not result in any positive indirect impacts on the local economy. This Alternative would not result in additional lands that could provide increased recreational opportunities and related economic development in the area.

5.1.7 Cumulative Impacts

If this Alternative was implemented, the cumulative impacts would be adverse to the environment. The exclusive reliance on regulations and policies do not necessarily provide for long term preservation of valuable wetland and upland habitats. The upper watershed of the Ashtabula River includes many different habitats, such as flood plain forests, dry upland forests, and hemlock ravines. Numerous palustrine emergent and forested wetland areas are located throughout the Ashtabula area, including Ashtabula Township. Deep open water fisheries exist inside and outside the stone breakwaters of Ashtabula Harbor. Birds use the shoreline along Ashtabula Harbor as Lake Erie migration corridor habitat. Impacts to these and other resources would continue due to historical and on-going development. No fishery resource enhancement projects would be implemented under the No Action Alternative, thus further impacting the fishery. The loss and degradation of coastal and riparian wetlands would contribute to the continued instability of the fish community in the Ashtabula River and Harbor. The continued loss of habitat could also adversely affect migratory birds that use the area for resting grounds, and nesting area for those species that remain for the nesting season.

5.2 Alternative B: Natural Resource Based Restoration (Preferred Alternative)

5.2.1 Habitat Impacts

Preserving, restoring or enhancing riparian, wetland, flood plain and upland habitats improves ecological functions that are essential for many fish and wildlife species. In addition, habitat

restoration and preservation also improve public use and enjoyment of these resources. Benefits of aquatic and near-shore habitat improvements or enhancement would include improved water quality, reduced sediment loadings, restored habitat for fish and wildlife species, and increased ecological productivity. Improving the quality of vegetation and habitat for fish and birds would provide similar, though not the same ecological functions as those injured by hazardous substances. These and other long-term benefits outweigh any adverse impacts associated with specific habitat restoration or enhancement methods.

Under Alternative B, there would be minimal short-term impacts to habitat due to the manipulation of soil required to complete wetland and aquatic habitat restoration and enhancement projects. Some permanent impacts could occur if habitat is destroyed to construct trails, boat ramps, or other public use facilities. However, these same projects would also be directed to control and monitor human impacts on those resources.

5.2.2 *Biological Impacts*

The restoration alternatives would benefit many different species of fish and wildlife found in the area. Preservation, reestablishment and enhancement of wetland, flood plain, riparian, associated upland and aquatic habitats would benefit such species as waterfowl, rails, terns, songbirds, osprey, mink, beaver, and northern pike. Fishery resource enhancement projects would directly benefit species such as the black redhorse, rock bass, and smallmouth bass leading to the development of a balanced, healthy fish community. Through the habitat quality improvement projects there would be an increase in shallow waters and beds of submergent and emergent vegetation providing habitat for migrating waterfowl, feeding areas for shorebirds, waterbirds and many species of fish found in the area. There would be minimal negative impacts to biological resources from human disturbance in relation to use of preserved areas and natural resource based public use projects. The public use projects would also protect and potentially minimize human disturbance to fish and wildlife by controlling human impacts on those resources.

5.2.3 *Listed, Proposed, and Candidate Species*

Federal and State-listed or endangered species would receive further protection and aid in the recovery of the species if this Alternative was implemented. Wetland, flood plain, riparian, associated upland and aquatic habitat preservation would most likely benefit bald eagles, eastern massasaugas, and Indiana bats. Protective measures (Appendix A) would be taken during implementation of any projects. Adherence to the restrictions should provide for no adverse effects on the listed species.

5.2.3.1 Birds

Bald eagle nesting and prey species could be directly or indirectly reestablished, enhanced, or preserved through the restoration alternatives. Alternative B could include protection or acquisition of habitat needed by the piping plover for nesting.

5.2.3.2 Mammals

The Indiana bat may use stream corridors or uplands restored or acquired under Alternative B. State-listed endangered species such as the black bear or the bobcat may use lands restored or acquired under Alternative B.

5.2.3.3 Reptiles

Populations of the federal candidate species eastern massasauga snake, and the State-listed (threatened) spotted turtle (*Chlemmys guttata*), have been affected by habitat fragmentation and encroachment throughout their range. These species may benefit from projects involving restoration of habitats such as wetlands and associated uplands.

5.2.3.4 Aquatic organisms

The least brook lamprey, rosyface shiner, big eye chub, mimic shiner, and black redhorse are pollution sensitive State-listed declining species, which are found in the Ashtabula River. The Ashtabula River is one of the last rivers in Ohio that supports a strong population of big eye chub. Protection of riparian forests and aquatic resources will help maintain the presence of these species. The clubshell mussel and other mussel species (i.e. State-threatened black sandshell (*Ligumia recta*)) require clean waterways. Mussel populations may return to surrounding waterways once aquatic and near-shore habitat restoration projects improve overall water quality in the area.

5.2.3.5 Plants

Although there are no known Federally-listed plant species, there are many State-listed plant species within Ashtabula Township and Ashtabula County. Per the Ohio Department of Natural Resources Natural Heritage database, there are 26 State-listed endangered and 30 State-listed threatened plant species in Ashtabula County. These species include American beach grass (*Ammophila brviligulata*), deer's tongue arrowhead (*Sagittaria rigida*), inland beach pea (*Lathyrus japonicus*), northern blue-eyed grass (*Sisyrinchium montanum*), Schweinitz' umbrella sedge (*Cyperus schwein-itzii*), and sea rocket (*Cakile edentula*). Wafer ash (*Ptelea trifoliata*) is a dune shrub found along Lake Erie that is otherwise rarely found east of Cleveland. The giant swallowtail butterfly is often found in association with the wafer ash.

5.2.4 Cultural Resources

Projects covered under this document such as plugging drainage ditches, breaking tile systems, stabilizing stream banks, acquiring wetlands, and development for public uses or other eventual development on acquired lands have the potential to affect properties meeting the criteria for the National Register of Historic Places and other cultural resources. The Trustees are in the process of determining specific areas for wetland restorations, stream bank stabilization, and land acquisition. When these project areas have been determined, and prior to making final decisions about these projects, the Field Supervisor, Reynoldsburg Ecological Field Office, will initiate

consultation with the Ohio State Historic Preservation Officer and, with the assistance of the FWS Regional Historic Preservation Officer, will complete the Section 106 process as described in 36 Code of Federal Regulations Part 800.

5.2.5 *Environmental Justice*

Wetland, flood plain, riparian and upland preservation would involve transactions with willing landowners. No minority or low-income populations would be displaced or negatively affected in any way. While the primary purpose of the restoration of this land is for fish and wildlife, portions of the acquired properties may be used by the public for active and passive natural resource based recreational and educational activities, such as fishing and/or wildlife viewing. Aquatic habitat improvement would also enhance recreational opportunities in and around the Ashtabula River and Harbor.

5.2.6 *Socioeconomic Impacts*

The overall quality of life for the surrounding communities would improve with the restoration of the area. Protection of wetlands, riparian, flood plains and uplands would provide wildlife viewing, fishing and hunting, and help create positive economic impacts on the local economy. Aquatic habitat improvements or enhancements would provide more opportunities for public enjoyment of natural resources.

Land acquisition procedures would involve transactions with willing sellers who would be paid fair market value. There would be little or no impact on the market price or on landowners in the area who choose not to sell. There would be minimum effects on the local economy and tax base because the areas identified for preservation are currently undeveloped.

5.2.7 *Elements Common to All Impacts*

Other impairments to the ecosystem such as pollution associated with development would continue to affect the area where restoration projects would be implemented. These additional sources of impact may also inhibit the ability of the natural resources to fully recover or may negatively impact other restoration projects undertaken by the Trustee Council.

5.2.8 *Cumulative Impacts*

Cumulative impacts from habitat restoration or enhancement implemented under Alternative B would positively affect the region as a whole. Despite the existence of laws and regulations designed to minimize wetland and aquatic habitat losses and impacts, threats to wetlands and aquatic habitat from indirect impacts, cumulative small scale impacts, or surrounding land use changes still exist. Partnering with various State and Federal programs (EPA's Section 319 Clean Water Act State Grants, National Coastal Wetlands Conservation Grants, etc.) that already contribute to improving the health of the ecosystems and watersheds will aid in restoring more habitats and increasing fish and wildlife populations.

Migratory birds would benefit from this Alternative because there would be more undisturbed areas for spring and fall migration resting and feeding stopovers, as well as nesting habitat for other bird species. This Alternative would contribute to the stabilization of fish communities by implementing appropriate fishery resource projects such as restoring fish spawning and nursery habitats.

5.3 Alternative C: Augmentation of Human Use Related Natural Resource Services in the Ashtabula Watershed and Adjacent Lake Erie

5.3.1 *Habitat Impacts*

Under this Alternative there would be no improvement of habitats for fish and wildlife. Construction of structures to improve human access may actually result in habitat loss and subsequent losses in biological productivity.

5.3.2 *Biological Impacts*

Under this Alternative biological productivity would not be increased, and fish, birds, and other wildlife would not benefit. The potential loss of habitat may likely result in decreases in biological productivity and increased ecosystem fragmentation.

5.3.3 *Listed, Proposed, and Candidate Species*

No benefits would be derived by listed, proposed, or candidate species.

5.3.4 *Cultural Resources*

Projects covered under this document have the potential to affect properties meeting the criteria for the National Register of Historic Places and other cultural resources. With the exception of the CDM Property, specific project sites have not been determined. When these project areas have been determined, and prior to making final decisions about these projects, the Field Supervisor, Reynoldsburg Ecological Field Office, will initiate consultation with the Ohio State Historic Preservation Officer and, with the assistance of the FWS Regional Historic Preservation Officer, will complete the Section 106 process as described in 36 Code of Federal Regulations Part 800.

5.3.5 *Environmental Justice*

Land acquisitions and other activities would involve transactions with willing landowners. No minority or low-income populations would be displaced or negatively affected in any way. Provision of fishing piers and other structures could improve access for lower income individuals.

5.3.6 Socioeconomic Impacts

The overall quality of life for the surrounding communities would improve with the restoration of the area. Augmentation of human use related services would help create positive economic impacts on the local economy.

5.4 Summary of Environmental Consequences for Each Alternative

Table 2: Comparison of Alternative A, B & C Environmental Consequences

Attributes	Alternative A No Action	Alternative B Natural Resource Based Restoration (Preferred Alternative)	Alternative C Augmentation of Human Use Related Natural Resource Services
Wetlands	Expected continued net loss of habitat	Increase of wetland habitat	Expected continued net loss of habitat
Uplands associated with wetlands	Expected continued net loss of habitat	Increase of upland habitat associated with wetlands	Expected continued net loss of habitat
Aquatic and near-shore habitat	Expected continued degradation and loss of habitat	Increase of aquatic habitat	Expected continued degradation and loss of habitat
Fish resources	Expected populations would remain unbalanced for a greater length of time	Expected increase diversity of fish community and populations	Populations would remain unbalanced for a greater length of time
Wildlife resources	Expected continued harm and decrease of numbers	Expected increase in populations	Expected continued harm and decrease of numbers
Listed threatened or endangered species	Expected negative impacts would continue	Expected to provide further recovery of species in the area	Expected negative impacts would continue
Cultural resources	N/A	Adverse impacts are possible	Adverse impacts are possible
Surface water	Expected to remain degraded due to sediment and nutrient loading and historic pollution in sediment	Expected increase in surface water quality	Expected to remain degraded due to sediment and nutrient loading and historic pollution in sediment
Environmental justice issues	No opportunities for increased quality of life	Expected increased quality of life in Ashtabula Township/County	Expected increased quality of life in Ashtabula Township/County
Socioeconomic issues	Expected local economy would remain the same or decrease due to continued injury without restoration	Local economy could potentially increase due to restoration	Local economy could potentially increase due to restoration
Recreational use Environmental education and resource enjoyment	No enhancement or increase of low impact recreational opportunities or environmental education	Increase opportunities for wildlife/bird viewing, fishing as well as enhancement of understanding of the ecosystem	Increased opportunities for fishing
Cumulative impacts	Potential decrease in populations of migratory birds, continued degraded fishery and continued loss of wetland and associated upland habitat in the EA area	Expected increase populations of migratory birds and greater diversity in the fish community; some ecosystem functions are to be restored or compensated	Potential decrease in populations of migratory birds, continued degraded fishery and continued loss of wetland and associated upland habitat in the area

SECTION 6

CONSULTATION AND COORDINATION WITH THE PUBLIC AND OTHERS

6.1 National Historic Preservation Act Compliance

The USFWS' Project Leader for Reynoldsburg Ecological Services will provide the State Historic Preservation Officers with this Draft RP/EA as part of the public review and comment process.

6.2 Endangered Species Act Compliance

This Draft RP/EA complies with Section 7 of the Endangered Species Act (ESA) of 1973 as amended, 16 U.S.C. § 1531, *et seq.*, and its implementing regulation (50 C.F.R. 402) (Appendix A).

6.3 Public Participation

Public review of the Draft RP/EA is an integral component of the assessment and restoration planning process. Through the public review process, the Trustees will be seeking public comment on the actions proposed to restore injured natural resources or replace lost resource services.

The Draft RP/EA will be available for review and comment by the public. A public meeting will be held to present the restoration actions proposed to compensate the public for injuries to those natural resources covered herein. Notice of the meeting date and time will be published in the local newspaper.

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SECTION 9

REFERENCES CITED

1. Ashtabula River Partnership. 2001. Preliminary Final Comprehensive Management Plan.
2. Fields Brook Consent Decree. 1999. *United States v. GenCorp, Inc. et al.*, Case no. 5:89-CV-1866, U.S. District Court, N.D. Ohio, E.D. (2 Consent Decrees) July 7, 1999.
3. U.S. Fish and Wildlife Service. Sept. 1987. Preliminary Natural Resource Survey, Fields Brook Site, Ashtabula County, Ohio.
4. U.S. Fish and Wildlife Service. 2001. Pre-Assessment Screen for the Ashtabula River and Harbor

APPENDIX A

USFWS Intra-Service Section 7 Biological Evaluation Form

Intra-Service Section 7 Biological Evaluation Form
Region 3

Originating Person: David De Vault Date Submitted: 11/14/2007

Telephone Number: 612-713-5340

I. Service Program and Geographic Area or Station Name:

U.S. Fish and Wildlife Service, Reynoldsburg, OH Field Office

NRDA: Ashtabula River and Harbor Environmental Assessment and Restoration Plan

II. Flexible Funding Program (e.g. Joint Venture, etc) if applicable:

Restoration based settlement for NRDA claims for injuries to natural resources at the Ashtabula River and Harbor site.

III. Species/Critical Habitat:

Indiana bat (*Myotis sodalis*) E

Clubshell mussel (*Pleurobema clava*) E

Piping plover (*Charadrius melodus*) E

Eastern massasauga (*Sistrurus catenatus catenatus*) C

Bald eagle (*Haliaeetus leucocephalus*) (protected under Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act)

IV. Location: Location of the project including County, State and TSR (township, section & range):
Ashtabula River, Ashtabula County, OH.

V. Project Description: Describe proposed project or action or, if referencing other documents (e.g. the Grant Proposal), prepare an executive summary (attach additional pages as needed):

This is a settlement of claims brought by U.S. FWS and Ohio EPA for injuries to natural resources in and around the Ashtabula River and Harbor resulting from unpermitted releases of hazardous substances. The project will consist of acquisition, restoration, and protection of riparian and wetland habitat in the Ashtabula River watershed. Properties will be acquired from willing sellers and transferred to local public entities. Restoration will include controlling exotic species, planting native species and, possibly, restoring hydraulic connections of historically connected wetlands with the Ashtabula River. All acquired properties will be protected by Environmental Covenants. Specific project plans are not available at this time.

VI. Determination of Effects:

(A) Description of Effects: Describe the effects of the action(s) on the species and critical habitats listed in item III. For each section 7 determination made below, attach an explanation of such determination for all applicable species or critical habitat. Documentation should justify your determination.

A number of federally listed threatened or endangered and candidate species would receive further protection if the proposed action is implemented. Wetland, associated upland and aquatic habitat preservation would most likely benefit the bald eagle, Indiana bat, piping plover, and eastern massasauga. The clubshell mussel does not occur within this watershed, therefore this project will have no effect on this species.

Projects implemented through the Restoration Plan and Environmental Assessment are not likely to adversely affect federally listed species and critical habitat and are not likely to jeopardize candidate species because: 1) there will be coordination with the U.S. Fish and Wildlife Service prior to implementing any on-the-ground work; 2) avoidance measures (below) will be implemented to eliminate any potential adverse effects; and 3) if the restoration plan is changed or avoidance measures cannot be adhered to for a particular project, the U.S. Fish and Wildlife Service will be coordinated with prior to conducting further work.

Avoidance of Adverse Effects to Listed Species

To assure that listed species will not be adversely affected, or proposed species are not jeopardized, the Trustees will require the following guidelines to be observed as restoration projects are implemented.

Indiana bat- Indiana bat habitat generally includes:

- (1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
- (2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
- (3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

Substantial tree cutting and impacts to suitable habitat will be avoided and minimized. If suitable habitat, as described above, is proposed to be cleared, coordination with the U.S. Fish and Wildlife Service will be implemented. The Trustees will consider restoration activities subject to U.S. Fish and Wildlife Service guidelines and further Section 7 consultation, including formal consultation on occupied sites.

Piping plover- Plover habitat includes sand or pebble beaches with sparse vegetation along the shore of Lake Erie. Restoration projects on sites occupied, or that contain suitable habitat for this species will be coordinated with the U.S. Fish and Wildlife Service and will include provisions not to degrade essential habitat. The Trustees will consider restoration activities subject to U.S. Fish and Wildlife Service guidelines and further Section 7 consultation, including formal consultation on occupied sites.

Bald eagle- Any project within Kingsville or Rock Creek Townships will be coordinated with the U.S. Fish and Wildlife Service to ensure that no disturbance will take place during critical periods a half mile from any known nesting sites. The Trustees will consider restoration activities subject to U.S. Fish and Wildlife Service guidelines and further Section 7 consultation, including formal consultation on occupied sites.

Eastern massasauga- The massasauga is often found in or near wet areas, including wetlands, wet prairie, or nearby woodland or shrub edge habitat. This often includes dry goldenrod meadows with a mosaic of early successional woody species such as dogwood or multiflora rose. Wet habitat and nearby dry edges are utilized by the snakes, especially during the spring and fall. Dry upland areas up to 1.5 miles away are utilized during the summer, if available. In occupied sites, restoration projects must avoid actions that favor vegetation succession from open to closed canopy, modify or destroy any upland or wetland connections between wetlands, or drain, flood or otherwise modify hydrology permanently or seasonally.

The above discussion of avoiding adverse effects applies to restoration project sites where listed, proposed, or candidate species are known to occur, or where it is necessary to assume they are present. On these sites actions that adhere to the above restrictions should not adversely affect listed species. To comply with Endangered Species Act section 7(a) and to determine whether listed and proposed species may be affected, project specific review must occur. On sites where surveys or other current information provides certainty that federally listed species are not present, actions that are determined to have no effect on listed species may proceed without additional section 7 contact with appropriate U.S. Fish and Wildlife Service Ecological Services Field Offices. Projects on occupied sites that are determined to benefit listed species, that is, not likely to adversely affect species, need field office concurrence. Early coordination with the Reynoldsburg, OH Field Office

is advisable where any uncertainty exists.

(B) Determination: Determine the anticipated effects of the proposed project on species and critical habitats listed in item III. Check all applicable boxes and list the species associated with each determination.

Response requested

"No Effect" This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. List species applicable to this determination (or attach a list): Clubshell mussel

Concurrence
(optional)

"May Affect but Not Likely to Adversely Affect species/critical habitat" This determination is appropriate when the proposed project is not likely to adversely impact individuals of listed species or designated critical habitat of such species. List species applicable to this determination (or attach a list): Indiana bat, piping plover, eastern massasauga, bald eagle

Concurrence

"May Affect and Likely to Adversely Affect species/critical habitat" This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species or designated critical habitat of such species. List species applicable to this determination (or attach a list):

Formal
Consultation

"Not Likely to Jeopardize candidate or proposed species/critical habitat" This determination is appropriate when the proposed project is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. List species applicable to this determination (or attach a list):

Concurrence
Informal Conference
optional

"Likely to Jeopardize candidate or proposed species/critical habitat" This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. List species applicable to this determination (or attach a list):

Formal Conference

[Signature] 11/26/07
Signature Date
[Supervisor at originating station]

Reviewing Ecological Services Office Evaluation (check all that apply):

A. **Concurrence** **Nonconcurrence** _____
Explanation for nonconcurrence:

B. Formal consultation required _____
List species or critical habitat unit

C. Conference required _____
List species or critical habitat unit

[Signature]
Signature [Reviewing ES Office Supervisor]

Date 11/26/2007

Name of Reviewing ES Office

Reynoldsburg, OH

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JSzymanski\19 June 2002

