

Final Natural Resource Restoration Plan for the
Jack's Creek/Sitkin Smelting Superfund Site,
Mifflin County, Pennsylvania

Prepared by

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

October, 2000

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A. Introduction

In October 1996, the Department of the Interior (Department), as a natural resource trustee, received money for a settlement of a natural resource damage claim with the *de minimus* Responsible Parties (RPs) for the Jack's Creek/Sitkin Smelting National Priorities List (Superfund) Site. We sought this settlement because contamination at this site had degraded habitat and injured trust resources (migratory birds) under our authority. We are required to use the settlement money to compensate for those losses. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which designates natural resource trustees, requires that before the settlement monies can be used for such activities we must develop and adopt a Restoration Plan, and that in doing so, there must be adequate public notice and consideration of all public comment.

We prepared a Draft Natural Resource Restoration Plan (Draft Plan) and published a Notice of Availability of the Draft Plan in the *Federal Register*, and in the Lewistown, Pennsylvania daily publication, *The Sentinel*. A copy of the Draft Plan was also available for review during office hours at the Mifflin County Library in Lewistown. The public comment period was open from July 31 until August 31, 2000, and no public comments were received on our Draft Plan. Therefore, there were no substantive changes made to the Draft Plan and we are issuing this Final Plan.

B. Background

The Jack's Creek/Sitkin Smelting Site is located one-half mile east of the town of Maitland in Mifflin County, Pennsylvania. This 105-acre site is a former non-ferrous metal smelting and precious metal reclamation facility, located partially within the 100-year floodplain of Jack's Creek. The various activities conducted on the site resulted in soils and groundwater contaminated with toxic concentrations of a variety of metals, including cadmium, chromium,

copper, lead, mercury, selenium, silver, and zinc. Due to this contamination, most of the site cannot support vegetation. Soils have eroded off the site and into Jack's Creek. At least 5 acres of wetlands and 37 acres of upland migratory bird habitat have been destroyed or contaminated by site activities.

C. Natural Resources and Impacts to those Resources

Migratory birds are the only Department of the Interior trust natural resource of concern at the Jack's Creek/Sitkin Smelting Site. Tracks and observations revealed that numerous small mammals, shorebirds, and great blue herons are using contaminated ponded-water areas on the site, and other areas are used by deer, rabbits, turtles, frogs, and various bird species such as killdeer, mourning dove, eastern bluebird, and song sparrow. In nearby uncontaminated areas, many species of birds have been heard or observed, including eastern bluebird, purple finch, American goldfinch, American robin, eastern phoebe, common grackle, belted kingfisher, great blue heron, barn swallow, rough-winged swallow, red-tailed hawk, yellow warbler, mallard, mourning dove, wood thrush, ruby-throated hummingbird, gray catbird, northern flicker, American crow, rufous-sided towhee, red-bellied woodpecker, northern cardinal, and killdeer.

Migratory bird habitat has been significantly degraded by heavy metal soil contamination. In fact, most of the site is devoid of any ground cover. The lack of vegetation or a reduction in diversity of vegetation reduces the available food base, cover and nesting habitat for migratory birds. Additionally, these birds are exposed to toxic concentrations of site-related contaminants, especially in the numerous ponded-water and floodplain areas that collected contaminated runoff from the site.

D. Natural Resource Damage Settlement

Although the U.S. Environmental Protection Agency (EPA) will oversee a clean-up at this site, past habitat loss and future injury from remaining contaminants will not be considered under its program. Therefore, we used a variety of methods to determine the amount of compensation required for these past and future losses. Affected habitats included forested wetlands, riparian forested areas, emergent/scrub-shrub wetlands, and uplands. The total value of our claim was based on the costs associated with restoration, rehabilitation, replacement, and/or acquisition of equivalent resources of the above habitats.

As partial compensation, we reached a settlement of \$128,908 with the *de minimus* RPs. This settlement was negotiated in cooperation with the EPA in September 1994 and published in the *Federal Register* in February 1995. The RPs forwarded the \$128,908 to the Department in October 1996. Since that time, interest has accrued, and some funds used for restoration planning have debited the account. The current amount available is approximately \$135,000.

E. Proposed Restoration

1. Solicitation of Restoration Projects

In May 1997, we began the restoration planning effort, with a primary focus on identifying potential projects in the Jack's Creek watershed. We published ads in two local newspapers, *The Sentinel* and *The County Observer*, suggesting that landowners who were interested in improving habitat for birds contact us. We also made several presentations and requested project ideas from the Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission, Pennsylvania Department of Environmental Protection, Pennsylvania Department of Conservation and Natural Resources, The Nature Conservancy, Chesapeake Bay Foundation, Juniata Clean Water Partnership, Mid-State Resource Conservation and Development Council, Southern Alleghenies Conservancy, Mifflin and Juniata County Conservation Districts, and several other County and Township officials. Over the past two years we have discussed potential projects with over 20 land owners, and have visited at least 12 potential project sites.

2. Goals of the Restoration Project

The primary goal for the restoration project is to compensate for natural resources which were lost. Since the settlement resulted from injury to migratory birds and their habitats, the restoration plan is focused on restoring migratory bird habitat. Restoration refers to actions taken to restore, rehabilitate, replace, and/or acquire the equivalent resources and the related services lost to the public. It is our policy to consider restoration projects in the following priority order:

1. Restoration of in-kind natural resources at the same location, if cleanup or remediation will be sufficient to prevent future contaminant problems for an on-site restoration;
2. Restoration or replacement of in-kind natural resources in the vicinity of the loss;
3. Acquisition of similar resources in the vicinity of the loss.

Two broad categories of restoration actions are in-kind and out-of-kind restoration. In-kind means that the work focuses on resources comparable to those that were lost. Out-of-kind means that the work focuses on resources different than those that were lost. Out-of-kind restoration projects are given less priority than in-kind restoration projects. Acquisition entails substituting an injured resource with another resource that provides the same or substantially similar services. We will not select a project that requires acquisition of land for federal management unless we determine that other restoration options are not possible.

3. Specific Projects Considered

We are required to assess a “reasonable number” of possible restoration projects. A project may consist of a single action or a set of actions which may be undertaken. In our initial review, we identified the following screening criteria as desired characteristics for potential projects: 1) the restored or acquired habitats are similar in type to the habitats impacted; 2) the project is in the same watershed as the impacted habitats; and, 3) the project provides long-term or perpetual benefits to migratory birds and other fish and wildlife resources. We have identified the following specific potential projects:

a. No Action Alternative

Federal regulations require us as a natural resource trustee to consider this option. Under the No Action Alternative, no restoration, rehabilitation, replacement, or acquisition actions would occur. We would rely entirely on the natural recovery of the resources from the injuries sustained.

b. Restoration of In-Kind Natural Resources at the Same Location

The Jack’s Creek/Sitkin Smelting Site is located within a small industrial/commercial setting within a larger rural area. Approximately half of the site is currently, and will continue as, a scrap metal collection and recycling facility. Although the EPA-selected remedy will greatly reduce ecological risk, any on-site restoration project would have to be evaluated in terms of producing actual benefits to migratory birds.

c. Restoration or Replacement of In-Kind Natural Resources in the Vicinity of the Loss

Several potential projects entailing restoration or replacement of in-kind natural resources in the vicinity of the loss were identified. Many of those projects were wetland and/or upland habitat restoration projects located on private lands. Because most of the identified projects failed one or more of the screening criteria established in Section E.3 of this plan, only one project is considered.

1. Elsesser Farm Wetland Restoration

The Elsesser Farm, located on Elsesser Lane, is an undeveloped area comprised mostly of open fields, old fields, sparse woodland, and it is currently pastured by approximately 50 head of cattle. An unnamed tributary to Meadow Run meanders through the property. The unnamed tributary is currently degraded due to bank erosion and siltation as a result of cattle grazing and wading in the stream. This tributary is classified as a

cold water fishery and contains native brook trout. Meadow Run joins Jack's Creek approximately two miles south of the Elsesser farm and approximately one mile upstream of the Jack's Creek/Sitkin Smelting Site. The project would restore approximately 3.5 acres of wetlands, a meandering riparian corridor of approximately 400 feet, and approximately 3 acres of uplands. Specifically, the project will provide restoration of approximately 2 acres of emergent wetlands, 1 acre of scrub-shrub wetlands, and approximately 0.5 acre of forested wetlands. Most of the area to be restored is currently pastured. Soil types are mostly fine silty loams and poorly drained. Excavations in the proposed restoration area showed that 2 to 4 feet of clay loam are available to establish a water-confining barrier for the wetland project. The upland habitat restoration will involve eradication of invasive multiflora rose and planting of native warm season grasses to buffer the restored wetlands. Approximately one-half of the upland restoration area is currently pastured.

A spring is located on the property that feeds an extensive scrub-shrub alder wetland that will not be impacted as part of this restoration effort. This wetland is not currently pastured, although cattle do graze to it's edge and are limiting natural succession of the surrounding cover types. A small, u-shaped dike (2 to 3 feet high and approximately 600 feet long) will be constructed in the pasture to impound surface water and the existing spring may be used as an alternative water supply for the restored wetland, if needed. Preliminary estimates show that the watershed drainage area is sufficient to maintain hydrology in the restored wetland; however, the occasional use of a small amount of spring water may be needed. The spring runs at a constant rate year-round, and it is used for drinking water, irrigation, and other uses when groundwater levels are low. If needed, use of supplemental spring water will be facilitated either by gravity flow or pumping a short distance through a one inch line. The project will be designed with two spillway functions. The primary spillway will consist of a 6-8 inch HDPE outlet pipe placed at the proper elevation to maintain wetland hydrology. The emergency spillway will consist of a 5-6 foot wide stone outlet constructed at one side of the dike approximately 1 foot below the top of dike.

It is anticipated that nearby wetland vegetation will serve as an excellent seed source for the restored wetland, and once the hydrology is restored, volunteer growth of native wetland species will dominate. Considering the existing contours and seed source (the adjacent alder wetland), the restored wetland will result in a mix of emergent and scrub-shrub wetlands, with some open water habitat. However, wetland vegetation will be planted to ensure adequate vegetative cover and provide some

diversity. Plantings will include a variety of herbaceous, shrub, and tree species that are native to the area. The stream corridor will be planted with wetland shrub and tree species to restore a forested riparian corridor that will provide many benefits (e.g., decreased temperature and siltation, and increased habitat value and use by fish and wildlife). The project will include dike seeding and will establish an upland buffer to protect the restored wetlands. Additionally, several acres of uplands will be cleared of multiflora rose and planted with warm season grasses to benefit grassland species. The project will also include construction of a permanent cattle watering location and rerouting some electric fence to eliminate the bank erosion and other adverse effects of the grazing cattle. Cattle will not have access to any of the restored areas. Bird nest boxes and structures will be placed in all restored areas to increase migratory bird productivity. The restored areas will be perpetually protected with a conservation easement held by the Central Pennsylvania Conservancy. Public access will be allowed by permission of the landowner, but limited to ensure that the habitat values of the property are maintained.

The goal of this restoration project is to restore a heavily grazed pasture to a functional wetland that will provide increased values related to wetland services (e.g., flood storage, sediment retention, filtration capability, groundwater recharge, benthic organism, fish and wildlife habitat). Additional project benefits will likely include improved water quality in the unnamed tributary, and increased overall habitat quality for fish and wildlife resources within the restoration area. To evaluate project success, the Service will initiate monitoring of various endpoints before construction and annually for 5 years post-construction. Wetland endpoints to be monitored may include vegetation types, diversity and abundance, routine water quality parameters, benthic invertebrate diversity, water elevation, fish and wildlife use, and sediment/organic matter retention and accumulation. The meandering tributary will be monitored using the EPA rapid bioassessment protocols at established locations, and will include physical, chemical, biological and habitat-based assessments. Finally, the upland vegetation will be documented, and monitoring endpoints such as types, diversity, abundance, and wildlife use will be included in the assessment. Performance criteria for planted stock will be to maintain at least 75% survival by the third growing season. Performance criteria for the eradication of multiflora rose from the restoration site will be to eliminate 80% of existing rose clumps by the third growing season, and to maintain no more than 20% of the original number throughout the life of the project.

The restoration site will be maintained in accordance with the site maintenance plan and implemented via use of a stewardship fund. The

current landowner has expressed interest in implementing the maintenance plan and it will be drafted upon construction completion. Provisions included in the maintenance plan will be to provide corrective actions if the above performance criteria are not met, and to maintain the spillway functions throughout the life of the project. Additional maintenance provisions may include routine dike inspections and minor repairs, nuisance wildlife control, cleaning of bird nest boxes, and water level manipulation for the benefit of migratory birds.

The estimated total cost of the Elsesser Farm wetland restoration project is approximately \$100,000. This includes project planning, administration and oversight (\$15,000); design, supplies, construction and monitoring (\$60,000); title search, surveys, purchase of the property conservation easements and associated fees (\$20,000), and establishment of a stewardship fund for long-term maintenance (\$5,000).

d. Acquisition of Similar Resources in the Vicinity of the Loss

Two such projects have been identified. These projects are the County Farm Park and State Game Lands Acquisition.

1. County Farm Park

The proposed County Farm Park would be located off of the Green Avenue extension in Lewistown, on an approximate 150-acre parcel of land currently owned by Mifflin County. The County Farm Park is located about 4.5 miles downstream from the Jack's Creek/Sitkin Smelting Site. According to information supplied by the proposed group of developers, the group maintains an option to purchase the property, pending resolution of on-site sewage issues. The property is proposed for development into a combined commercial, service-related, and single family residential neighborhood. Approximately 20 acres of the parcel is devoted to a natural area with plans for a jogging trail. Preliminary plans also suggest that an environmental center may be established on this property.

We met with the developers and walked the site on August 27, 1999. That meeting and site visit revealed that a wetland restoration project on the 20-acre natural area was not feasible. However, because plans are very preliminary, we discussed a variety of upland restoration options that could be considered. The 20-acre natural area is comprised of about equal acreage that is currently farmed, idle fields, and early successional woodlands. We discussed potential coordination with the local Mifflin County School District to develop educational programs to increase the

environmental awareness of residents and students. There are sufficient areas to restore native habitat and create food plots to benefit migratory birds, and nest boxes could be erected to increase productivity. If the site is ultimately purchased by the proposed developers, they would consider either selling a portion of this property or granting a permanent conservation easement.

2. State Game Lands Acquisition

The Pennsylvania Game Commission owns several thousand acres of land within the Jack's Creek watershed that it administers and manages as part of the State Game Lands system. The vast majority of this property is heavily forested, mountainous terrain. We coordinated closely with the State land manager to identify potential acreage for purchase within the Jack's Creek watershed. The Game Commission agreed to take title to any lands purchased as part of this restoration plan, provided that the properties are adjacent to existing State Game Lands.

4. Evaluation and Comparison of Projects

As a natural resource trustee, we are required to evaluate each of the restoration projects based on all relevant considerations, including the following factors: technical feasibility; the relationship of the expected costs of the proposed actions to the expected benefits; cost-effectiveness; the results of any actual or planned response actions; the potential for additional injury resulting from the proposed actions, including long-term and indirect impacts; the natural recovery period of the injured resources; the ability of the resources to recover with or without alternative actions; the potential effects of the action on human health and safety; consistency with relevant federal, State, and tribal policies; and compliance with applicable federal, State, and tribal laws. We must also give consideration to its ability to secure protection of the restoration site. The following is our evaluation of the specific projects described above:

a. No Action Alternative

Under the No Action Alternative, injuries to natural resources would be uncompensated. Because the wetlands at the Jack's Creek/Sitkin Smelting Site have been filled and/or contaminated, and the upland migratory bird habitat has been destroyed, the No Action Alternative would not replace natural resource losses. Furthermore, no environmental benefits would be realized from the settlement received, and we would not fulfill our obligations as a natural resource trustee under CERCLA. For these reasons, this option will not be further evaluated.

b. Restoration of In-Kind Natural Resources at the Same Location

Approximately half of the site is operated as a scrap metal collection and recycling facility, with limited public access. Because of the ongoing operations and the planned remedial activity on-site, the areas available for migratory bird habitat enhancement are very limited, and any projects would likely have marginal success. Although the EPA-selected remedy will greatly reduce ecological risk, some level of residual risk to site wildlife may remain on-site. Finally, a firm schedule of when the EPA clean-up will be completed is uncertain, and we must move forward with this restoration plan to meet Departmental requirements. Because of the above reasons, on-site restoration is not feasible and this option will not be further evaluated.

c. Restoration or Replacement of In-Kind Natural Resources in the Vicinity of the Loss

1. Elsesser Farm Wetland Restoration

The Elsesser farm wetland restoration project would result in the restoration of approximately 3.5 acres of wetlands, a meandering riparian corridor, and approximately 3 acres of upland habitat. Specifically, the project will provide restoration of approximately 2 acres of emergent wetlands, 1 acre of scrub-shrub wetlands, and approximately 0.5 acre of forested wetlands. The upland restoration would involve eradication of the invasive multiflora rose and planting of native warm season grasses to benefit the many migratory bird species using this site. The project will restore all of the types of habitats degraded by the Jack's Creek/Sitkin Smelting Site and will fully compensate for the proportion of the lost services and injuries to migratory birds that this settlement covers.

The project would involve the flooding of heavily pastured uplands and a limited amount of old field cover types, with permanent conversion to wetlands. This would result in some long-term impacts to the existing upland vegetation; however, much of the upland habitat loss will be offset by riparian buffer zone plantings, removal of multiflora rose, and the native warm season grass plantings. The project will result in increased habitat value for migratory birds in both wetlands and uplands. A stewardship fund will be established to ensure proper maintenance and management of all restored areas for the benefit of migratory birds. In addition to the increased habitat value and use by migratory birds, other project benefits include permanent protection via easement holding by the Central Pennsylvania Conservancy, increased public use, and improved water quality in the stream. Water quality improvements anticipated are

decreased siltation, decreased nutrient loading, and decreased water temperature as a result of stabilizing stream banks, planting vegetation, and minimizing cattle access.

The project is technically feasible and cost-effective. Implementation of the project will not result in any significant injuries to fish and wildlife resources or their habitats. The project will not adversely affect endangered species or sensitive areas. The proposed project will have negligible impacts on the human environment as only minor land use change is anticipated, and is consistent with relevant federal and State laws and policies.

d. Acquisition of Similar Resources in the Vicinity of the Loss

1. County Farm Park

Use of the settlement to construct an environmental center and jogging trail at the County Farm Park, as proposed by the probable developers, is not appropriate as it will not address the impacts from the Jack's Creek/Sitkin Smelting Site. We are required to focus on lost services. A major portion of our damage claim was based on the contamination of several acres of freshwater wetlands and the associated direct injury to migratory birds using those wetlands. Additional soil contamination in upland areas of the Jack's Creek/Sitkin Site resulted in a reduction in the quantity and quality of habitat available for birds and other wildlife. As the purpose of the natural resource damage assessment and restoration is to restore lost services, it is important that the restoration project compensate for both wetland and upland migratory bird habitat losses.

We explored several upland restoration options during an August 27, 1999, meeting with the proposed developers. The conceptual plans for the County Farm development specify that most of the land will be occupied by residences and businesses, thereby limiting restoration options. Additionally, a firm commitment for any of the previously discussed upland restoration and educational efforts is currently unavailable. For the above reasons, this project will not be further evaluated.

2. State Game Lands Acquisition

Despite continued coordination/cooperation with the local land manager, no available parcel was identified for acquisition that met the screening criteria outlined in Section E.3 of this plan, and was also located adjacent to existing State Game Lands. Therefore, this project

will not be further evaluated.

5. Preferred Project

Based on the evaluation and comparison of projects, we have selected the Elsesser Wetland Restoration Project as the Preferred Project. This represents our proposal for action to restore natural resources, and make the environment and public “whole” from the loss of such resources due to activities attributable to the settling *de minimus* parties at the Jack’s Creek/Sitkin Smelting Site. Because up to \$35,000 may remain in the settlement account at the completion of the preferred project, we will continue to coordinate with partners and landowners in the Jack’s Creek watershed to identify and evaluate any additional projects that would further enhance our obligations as a natural resource trustee. It is our intention to identify stream bank fencing projects within the watershed that would benefit migratory birds and implement them with the remaining settlement funds.

These projects will be conducted in partnership with our Partners for Fish and Wildlife Program, with secured 15-to 30-year landowner agreement to ensure protection equal to the life of the fencing project.

F. Compliance with the National Environmental Policy Act (NEPA)

The *Final Revised Procedures* for the U.S. Fish and Wildlife Service for implementing NEPA, published in the *Federal Register* on January 16, 1997, provide a categorical exclusion for natural resource damage assessment restoration plans prepared under CERCLA when only minor or negligible change in the use of the affected areas is planned. Categorical exclusions are classes of actions which do not individually or cumulatively have a significant effect on the human environment.

The Elsesser Wetland Restoration Project will result in only a minor change in the use of the project area, mostly directed toward increasing the natural resource habitat value, and will not have a significant effect on the human environment. Accordingly, this Natural Resource Restoration Plan qualifies for a categorical exclusion under NEPA. We have prepared an Environmental Action Statement documenting this determination.