

**Hocking River Basin, Ohio
Monday Creek Sub-Basin
Ecosystem Restoration Project**

**FINAL
FINDING OF NO SIGNIFICANT IMPACT**

1. The Huntington District, in coordination with the Ohio Department of Natural Resources, Mines and Minerals Section, has conducted an Environmental Assessment (DEA) concerning consideration of a number of Acid Mine Drainage (AMD) restoration alternatives including limestone leach beds, slag leach beds, limestone dumping, aerobic wetland complexes, limestone ponds, open limestone channels, low head dams and limestone dosers. Various alternatives were found to effectively reduce acidity and metals entering the ecosystem. More detailed evaluations determined that combinations of the alternative methods were functional in abating the impacts of AMD. These alternatives along with the No Action alternative have been evaluated in detail and the results documented in the feasibility report and in the Environmental Assessment (EA). In addition to evaluating the ecosystem restoration measures for the Monday Creek watershed and the surrounding area, the natural resources that will be impacted by these alternatives have been examined.

The federal action concerning the proposed ecosystem restoration project is congressional authority to study the impacts of previous resource extraction activities in the watershed and determine a solution to minimize these impacts to the aquatic ecosystem.

2. The possible consequences of the project have been studied for environmental, social and economic effects.

3. In evaluation of the project and viable alternatives, the following points were considered pertinent:

a. Environmental Consideration. The Huntington District has taken reasonable measures to assemble and present the foreseeable environmental impacts of the restoration alternative project on aquatic and terrestrial resources, wetlands, air quality, and other natural resources.

There will be an elevation in suspended sediment during the period of construction. This will have a temporary impact on water quality. Construction of the proposed project will impact approximately 962 feet of streams through the construction of access roads, 1,300 ft of Sycamore Branch through the construction of a wetland, and 5,969 ft of streams through the construction of the restoration alternatives. However, overall water quality will be improved due to the construction of the restoration alternatives that will significantly reduce acidity

levels and metal concentrations within the watershed therefore, the proposed project is considered to not significantly impact water quality and fishery resources. Wetlands in the vicinity of the project areas have been avoided; therefore none will be affected. Approximately 67 acres of wetlands will be constructed within the watershed. Best management practices will be fully implemented during construction to minimize water quality impacts.

Impacts to terrestrial habitat will occur during excavation and construction of the proposed project. Due to the abundance of this type of terrestrial habitat in the project area, these impacts are considered minor. All sites will be reseeded with native vegetation of value to wildlife and monitored to guarantee favorable results.

Measures to minimize impacts to the Indiana Bat (*Myotis sodalist*) have been incorporated into the project in coordination with the US Fish and Wildlife Service. The following information is considered important to the summer habitat requirements for the species:

- i. 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.
- ii. Live trees (such as shagbark hickory and oaks) which have exfoliating bark.
- iii. Stream corridors, riparian areas and upland woodlots which provide forage sites.
- iv. Should the proposed sites contain trees or associated habitats exhibiting any of the characteristics listed above, the habitat and surrounding trees be saved wherever possible. If trees must be cut, further coordination with USFWS will occur. Suitable bat roost trees should not be cut between April 15 and September 15.
- v. If desirable trees are present and must be cut, mist net or other surveys may be warranted to determine if bats are present. Any survey will be designed and conducted in coordination with the Endangered Species Coordinator of the Reynoldsville Field Office.

Coordination with U.S. Fish and Wildlife Service will continue throughout construction of the project. No impacts are expected.

The areas are also within the historical range of the Timber rattlesnake (*Crotalus horridus horridus*) which is a state endangered species for which a Federal pre-listing conservation plan exists. If a Timber rattlesnake is encountered during construction of the project, work will immediately be stopped and the Ohio Division of Wildlife will be contacted.

In accordance with established Corps of Engineers Hazardous, Toxic and Radioactive Waste (HTRW) policies (ER 1165-2-132), a Limited Phase I HTRW

assessment has been completed. As a result, no potential sites or impacts were identified.

During the period of construction, there may be local and minor deterioration of air quality from fugitive dust and emissions from equipment. However, *de minimis* levels of direct emissions of a criteria pollutant or its precursors will not be exceeded, as determined pursuant to Section 176 of the Clean Air Act, as amended.

b. Economic and Social Consideration. No adverse economic or social impacts are foreseen as a result of the proposed project. Construction of the ecosystem restoration project will have positive impacts on the economic and recreation resources within the project area by improving water quality, and subsequently habitat conditions in the watershed. Archaeological and historic surveys and investigations were conducted for the area and coordinated with the Ohio State Historic Preservation Office. Implementation of the preferred alternative will have no adverse impact upon cultural resources. The proposed project will have no effect on minority and low-income populations, and therefore is in compliance with Executive Order 12898.

c. Alternative Considerations. The Proposed Action alternative (Plan Combination 6) would have construction of project features in each of the eight subwatersheds affected by AMD. Features such as dissipating streams, stream blockages and subsidences would be constructed to prevent surface water from flowing into underground mine workings, thus significantly reducing the generation of AMD in the Monday Creek watershed and in adjacent watersheds. The AMD restoration sites would best contribute to the ecological restoration objective to restore Monday Creek ecosystem by treating the AMD at the source prior to its entering the aquatic ecosystem. This would allow the existing pockets of diverse fish and macroinvertebrate populations to repopulate areas currently impacted by AND, thus restoring both the structural and functional components of the ecosystem to a less degraded state. The Recommended Plan is expected to result in significant benefits to the aquatic ecosystem from headwaters to Monday Creek’s confluence with the Hocking River.

The plan includes the following features:

Table 5-1. Plan Combination 6

<u>Plan</u>	<u>Location</u>	<u>Description</u>
A	Jobs Hollow	1 doser, 3 SLB* and 1 OLC*
B	Dixie Run	1 SLB, 2 OLC and 1 LLB*
C	Rock Run	3 LHD* and 1 wetland
D	Lost Run	30 sites + 16 spoil blocks and 12 subsidences features
F	Monkey Hollow	1 doser + 9 spoil blocks and 6 subsidences features
H	Snake Hollow	1 SLB, 4 OLC and 4 LLB

J	Snow Fork	6 SLB, 19 OLC, 20 LLB, 8 dissipating streams, 9 spoil blocks, 7 subsidences, and 2 wetlands
L	Coe Hollow	2 SLB, 1 OLC, 4 LLB, 3 dissipating streams and 1 Subsidence feature

*SLB – slag leach bed; LLB – limestone leach bed; OLC open limestone channel; LHD – low head dam

Currently, the project consists of 178 total restoration structures located within the following eight subwatersheds locations: Jobs Hollow, Dixie Hollow, Rock Run, Monkey Hollow, Lost Run, Snake Hollow, Coe Hollow and Snow Fork (which is comprised of Salem Hollow, Sycamore Hollow, Spencer Hollow, Brush Fork, Long Hollow, Whitmore Cemetery and Orbiston). The locations of these subwatersheds may be found on Map 4-5 in Section 4 of the Feasibility Report.

Proposed structures include open limestone channels, low head dams, limestone leach beds, slag leach beds, aerobic wetlands and dosers. Other forms of construction activities involve the closure of stream-capturing subsidences, re-routing dissipating streams and breaching or removing spoil blocks. The No Action Plan would allow the continuation of degraded habitat conditions without Federal, state or local intervention.

d. Public Interest Consideration. Compliance with the National Environmental Policy Act and the Fish and Wildlife Coordination Act was achieved through the Environmental Assessment.

4. I find this ecosystem restoration project to be in accordance with current authorization and so described in the Environmental Assessment. The project is consistent with national policy, statutes and administrative directives. This determination is based on an analysis and evaluation of the project and the alternative courses of action. In conclusion, I find the proposed project will not have significant adverse effects on the quality of the human or natural environment.

7.25.05
Date

For  *LTC*

William E. Bulen
Colonel, Corps of Engineers
District Engineer