



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
PITTSBURGH DISTRICT, CORPS OF ENGINEERS  
WILLIAM S. MOORHEAD FEDERAL BUILDING  
1000 LIBERTY AVENUE  
PITTSBURGH, PA 15222-4186

**RECORD OF DECISION  
LOWER MONONGAHELA RIVER PROJECT  
LOCKS AND DAMS 2, 3, AND 4**

**SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT  
for the  
DISPOSAL OF DREDGED AND EXCAVATED MATERIAL**

**1. INTRODUCTION**

The U.S. Army Corps of Engineers, Pittsburgh District (the District) completed the Lower Monongahela River Navigation System Feasibility Report and Final Environmental Impact Statement (FEIS) in December 1991 recommending a *two for three* plan for navigation improvement.

This plan includes elimination of Locks and Dam 3 at river mile (r.m.) 23.8 near Elizabeth, Pennsylvania (PA); replacement of the fixed crest dam with a gated dam at Locks and Dam 2 at r.m. 11.2 near Braddock, PA; and replacement of the existing locks at Locks and Dam 4 at r.m. 41.5 near Charleroi, PA, with larger 84-foot by 720-foot twin lock chambers. This project will create a new longer Pool 2 (to be known in the future as the Braddock Pool) comprising existing pools 2 and 3 with a new normal pool elevation of 723.7. Removal of Locks and Dam 3, which provides an 8.2-foot lift, will have a net effect of raising the existing navigation pool between Locks and Dam 2 and Locks and Dam 3, comprising 12.6 river miles, by a nominal 5 feet. The existing pool between Locks and Dam 3 and Locks and Dam 4, comprising 17.6 river miles, will be lowered a nominal 3.2 feet. The navigation channel between Locks and Dam 3 and Locks and Dam 4, where the pool is to be lowered 3.2 feet, will be dredged to maintain authorized depths for commercial navigation.

The plan for navigation improvements on the Lower Monongahela River was approved by Congress and authorized in the Water Resource's Development Act of 1992. Based on current design features and associated excavation quantity estimates, approximately 3.4 million cubic yards (c.y.) of riverbed coarse grained sands and gravels, fine grained sediments, rock, and concrete rubble will require excavation, handling, and placement at suitable disposal areas.

The FEIS for the navigation project was filed with the U.S. Environmental Protection Agency (EPA) on January 28, 1992. A notice of filing the FEIS was published by the EPA in the Federal Register on February 7, 1992. The Director of Civil Works signed a Record of Decision on December 17, 1992 documenting and concluding the NEPA compliance process for authorization of the navigation project.

## 2. BACKGROUND

The authorized project feasibility report and FEIS designated two narrow valley sites for fill placement, at Bunola Hollow in Forward Township, and at Coursin Hollow in Lincoln Borough, both in Allegheny County.

Residents that would be relocated, other interested citizens and several resource agencies raised concerns with the use of the two authorized upland sites. Acknowledging and respecting these concerns, the District committed to post-authorization investigation for alternative disposal sites for earth fill material that would avoid these impacts, provided that they were economically favorable and environmentally and socially acceptable.

Twenty-eight upland site alternatives to the two authorized areas were identified in post-authorization studies. Twenty-three sites were eliminated primarily due to very small fill capacities, poor off-road access, or environmental and social concerns. The five remaining sites, comprised of a brownfield restoration project, known as the City Center of Duquesne, in Duquesne, PA (Allegheny County) and owned by the Regional Industrial Development Corporation (RIDC) a Southwestern Pennsylvania Growth Fund (referred to as the Duquesne-RIDC site); Pangburn Hollow (Forward Township, Allegheny County); Victory Hollow and Eldora Hollow (both Carroll Township, Washington County); and Lockview Hollow (Fallowfield Township, Washington County) were included with the two authorized sites for more detailed study. After more detailed study, the Pangburn Hollow, Eldora Hollow, Lockview Hollow sites, as well as the two authorized sites at Bunola Hollow and Coursin Hollow, were eliminated for economic and environmental reasons. An eighth alternative studied was in-river placement within Monongahela River Pools 2 and 3. A ninth alternative investigated in-river placement within Allegheny River Pools 4 and 5.

As more detailed post-authorization engineering and design studies were conducted pertaining to the project's disposal needs, which changed from those described in the feasibility report and FEIS, additional environmental documentation was required to address those project features that were not addressed in any previous impact review. This documentation was required for compliance with the National Environmental Policy Act (NEPA) and other applicable environmental protection statutes and executive orders. Consequently, the District prepared draft and final Supplemental Environmental Impact Statements (SEIS) in March 1997 and January 1998, respectively, detailing the post-authorization investigations pertaining to the project's disposal needs.

## 3. PROJECT DISPOSAL NEEDS

a. *Dam 2 Construction* - The main sources of excavated materials will be from both "in-the-wet" pre-excavated river bottom material prior to placement of cofferdam cells and "in-the-wet" excavated material prior to placement of "float-in" concrete units for in-the-wet dam construction. Additional concrete rubble material will be produced during removal of the existing dam and modifications to the upper guard wall of the lock. Overburden removal will consist of an organic layer of material on the surface of the river channel, silty, sandy, gravelly, and clayey material, weathered bedrock, and concrete rubble. Approximately 750,000 c.y. of project excavation material will be generated for disposal. This number may decrease as a result of continuing engineering studies investigating "innovative" dam construction methods.

b. *Reconstruction of Locks 4* - The main source of excavated material from the reconstruction of Locks 4 will be from "dry" excavated material after placement and dewatering of the respective cofferdams. The overburden material within this river area consists mainly of silty sands and gravels over a variable layer of clayey sands and gravels that in turn overlie weathered bedrock. Overburden, immediately behind the land wall, consists of silty sandy gravel backfill. Landward of this material is variable random fill and slag. Approximately 1,046,600 c.y. of project excavation will be generated for disposal. This number may decrease as a result of continuing engineering studies investigating "innovative" lock construction methods.

c. *Removal of Locks and Dam 3* - The main sources of project excavation materials will be concrete rubble from removal of the middle and river lock walls, dam, mid-river pier, stone crib fill from cribbing along the river side of the river wall below the dam, granular cell fill from the river wall extension, and sediments removed from the upstream face of the dam. The abutment and a portion of the dam, landwall and upper and lower guide walls will remain for left and right bank stability purposes, respectively. Approximately 70,000 c.y. of solid waste material will be produced from removal of the lock house facilities, which consists of scrap metal, steel piling, building debris, masonry, and deteriorated timber cribbing. This non-hazardous material will be disposed of at a landfill licensed to accept demolition debris.

d. *Dredging of Pool 3* - The main sources of project excavation material will be sediments generated from Pool 3 navigation channel dredging. The dredging is required to maintain the authorized minimum nine foot navigation channel after Dam 3 is removed. The dredged material will be predominantly sand and gravel with some silt, and a thin surface layer of organic material with coal fragments on the river bottom. Approximately 1,442,500 c.y. of dredged material will be generated for disposal.

e. *Criteria for Quality-Based Disposal Decisions* - In accordance with the policies in ER 1165-2-132, a phased approach has been employed to investigate the presence of chemical contaminants in the soils and sediments that must be excavated. This phased approach considers the Project Criteria Standards for Soil based upon the Pennsylvania Statewide Health Standards for soils found in Appendix B-2 of the Pennsylvania Department of Environmental Protection's (PaDEP's) Land Recycling

Program Technical Guidance Manual and the April 1996 version of PaDEP's Dredging Guidelines. Fill from all major project features will be sampled prior to excavation and tested to determine contaminant levels in accordance with the regulations noted above. Locations of all contaminated areas will be identified and delineated based on the sampling results. These areas will be dredged and excavated in a manner to capture all suspected contamination for transportation to a suitable PaDEP-approved/licensed site. Coordination with PaDEP pertaining to the project's disposal needs is an ongoing effort. Sediment characterizations have been accomplished for Dam 2 and Pool 3 dredging projects in coordination with PaDEP and their approval obtained. Additional sediment characterization will be conducted for Locks 4 excavation and coordinated with the PaDEP for approval.

#### 4. RECOMMENDED PLACEMENT PLAN

*a. General* - Post-authorization studies investigated a variety of alternative placement measures outlined in the SEIS so as not to narrowly focus on a single recommended site. This broad flexible approach has enabled the District to more effectively respond as circumstances, requirements, and opportunities have changed over time. The project's total disposal needs are approximately 3.4 million c.y. of material. The recommended placement plan is described below.

*b. Primary Upland Site - Victory Hollow Site* - The post-authorization study identified the Victory Hollow site as the primary upland area to satisfy the project's fill placement requirements for several reasons: (1) the site has sufficient capacity to accept all of the project's disposal material and not adversely affect construction schedules provided secondary placement areas would not become available for use, (2) the site is a partially reclaimed strip-mined area, (3) approximately 50 percent of the site is a barren slag spoil area that currently adversely impacts ground and surface water quality, (4) the river off-loading area is adjacent to the disposal area negating the need to use public infrastructure to access the site, and (5) an existing perennial stream and wooded hillside forming the western boundary of the site offer a buffer zone between placement activities and the adjacent community of Victory Hills. All fill material would be transported to the Victory Hollow off-loading area by barge and either hauled by truck or conveyor system to the fill placement area.

*c. Secondary Placement Site - Duquesne-RIDC "Brownfield Restoration" Site*  
The main secondary placement alternative for fill material generated from the Dam 2 project is the Duquesne-RIDC site. Section 366 of the WRDA of 1996 authorizes the government to "...make available to the Southwestern Pennsylvania Growth Fund (a regional industrial development corporation) at no additional cost to the United States, dredged and excavated material resulting from construction of the new gated dam at Braddock, Pennsylvania, ... , to support environmental restoration of the former United States Steel Duquesne Works brownfield site...". The RIDC has coordinated all environmental site assessment requirements with and obtained approval for use of the site from the PaDEP. The District and RIDC have coordinated all legal aspects regarding use

of the site and have agreed to a mutually acceptable placement strategy for incorporation into the plans and specifications for the new Dam 2 construction contract .

*d. Secondary Placement Site - In-River Placement, Monongahela and Allegheny Rivers* - Other secondary placement alternatives include in-river placement, which would be used for suitable fill dredged from the navigation channel of existing Pool 3. Suitable fill material would be placed in deep holes identified in the Monongahela and Allegheny Rivers.

The estimated capacities for Monongahela Pools 2 and 3 are 400,000 and 300,000 c.y., respectively. Monongahela River Pool 4 was also investigated for possible placement of fill, however, no material could be placed within this pool due to adverse impacts to the 100-year flood profile. The placement would occur from open hopper barges and clam shell bucket; dump scour barges are also a possibility. Final contour grading of the deep holes would be to the approximate existing natural riverbed.

The resource agencies expressed an interest in the placement of fill material in Allegheny River Pools 4 and 5 to improve aquatic habitat. Years of commercial sand and gravel dredging have created deep anaerobic holes within these pools. The estimated capacity of Allegheny River Pools 4 and 5 has been preliminarily assessed at 30,000 and 90,000 c.y., respectively, without adversely impacting the 100-year flood profile. Additional hydraulic investigations are being conducted that could possibly increase the quantities of fill materials that could be safely placed in these pools. The anticipated placement would be from open hopper barges and clam shell bucket. Final contour grading of the deep holes would be to elevations 710 and 720 for Pools 4 and 5, respectively. This action will improve the deep anaerobic holes within these pools.

*e. Conclusions - Recommended Placement Plan* - The recommended plan comprised of utilizing Victory Hollow, Duquesne-RIDC, and in-river placement will minimize potential economic, environmental, and social impacts while maximizing environmental enhancements and the value of each placement site. Fill at the Victory Hollow Site would result in the beneficial effect of revegetating areas of exposed slag and sparse vegetation that presently have little wildlife value. Also, surface and ground water improvements are anticipated from capping of the exposed slag area. Fill placed at the Duquesne-RIDC site will have the direct benefit of supporting environmental reclamation of a brownfield site. Indirect benefits will result by reducing the amount of material placed at the Victory Hollow site and the associated impacts. In-river fill placement in the Monongahela and Allegheny Rivers will also result in reducing impacts to the Victory Hollow site. Additional environmental value will be created by improving aquatic habitat within the Allegheny River. In-river placement will further reduce the quantity of dredged material to be placed in the designated upland areas.

## **5. ENVIRONMENTAL STATUS**

The District has completed the SEIS for the disposal of dredged and excavated material in compliance with the National Environmental Policy Act and other appropriate Federal statutes and Executive Orders. The SEIS addressed the following impacts for the material to be disposed at the Victory Hollow and Duquesne-RIDC sites, and in-river placement in the Monongahela and Allegheny Rivers: water quality; terrestrial and aquatic habitat; fish and wildlife resources; wetlands; floodplains; endangered and threatened species; cultural resources; prime farmland; air quality; scenic rivers; socio-economic resources; and environmental site assessment issues.

The SEIS includes a Clean Water Act (CWA), Section 404(b)(1) Evaluation which addresses the placing of fill material into waters of the United States associated with the project's disposal needs. Pennsylvania State Water Quality Certification under Section 401 of the CWA is pending PaDEP review and approval. This is not perceived as a problem because the PaDEP, the Pennsylvania Fish and Boat Commission, and other resource agencies encouraged the District to use in-river disposal in both the Monongahela and Allegheny Rivers.

Under the provisions of the National Historic Preservation Act, the District has executed a Programmatic Memorandum of Agreement (PMOA) with the Pennsylvania State Historic Preservation Office (PaSHPO) and the Advisory Council on Historic Preservation (ACHP) that obligates it to conduct all necessary and appropriate archeological and historical resources investigations. The District has completed investigations of the potential for cultural resources at the Victory Hollow site. Cultural resources investigations have also been completed at the Duquesne-RIDC disposal area and truck transportation route. Reports from these investigations concluded that no significant cultural resources were found and recommended that no further cultural resources investigations be conducted at either the Victory Hollow or Duquesne-RIDC site. A cultural resources investigation is nearing completion for the Victory Hollow off-loading area and will be coordinated with PaSHPO in the near future in compliance with the PMOA. Preliminary findings indicate that no significant cultural resources were found at the Victory Hollow off-loading area.

Phase I Environmental Site Assessments (ESA) to investigate for hazardous, toxic, and radiological wastes have been conducted for lands involved with activities covered in the SEIS. The Phase I ESA for the Victory Hollow disposal and off-loading areas concluded that there is no potential for contamination at the sites and that no Phase II studies are necessary. The Phase I ESA for lands associated with the Dam 2 work areas and truck transportation route to the Duquesne-RIDC site concluded that Phase II studies are not required.

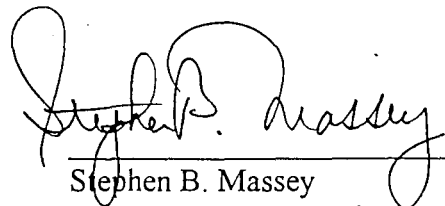
## **6. COORDINATION AND PUBLIC COMMENT**

During preparation of the Draft SEIS, the Pittsburgh District coordinated with appropriate Federal and state agencies, local governmental entities, and local interest groups. All of these entities were included on the project mailing list to receive a copy of the Draft SEIS and invited to provide written and/or oral comments to the District during the 60-day public review period, which closed on June 13, 1997. Copies of the Draft SEIS were also made available for public inspection in ten public libraries throughout the project area. In addition, Congressman Frank Mascara hosted a public information gathering workshop on May 22, 1997 in the Carroll Township Social Center for the constituents of his Congressional District. Following this workshop and the public review period, a number of concerns were raised. These concerns are primarily categorized into four areas: disposal site location, pollution (odor, noise and dust), toxic materials, and water quality. All of these concerns have been addressed in the Final SEIS. The Final SEIS was distributed to all appropriate Federal and state agencies, local governmental entities and interest groups and concerned citizens who received the Draft SEIS. The Final SEIS was also made available for public inspection in the ten regional public libraries. The U.S. Environmental Protection Agency officially posted the Final SEIS in the Federal Register on January 23, 1998. No adverse comments were received during the review period for the Final SEIS. Therefore, having addressed all comments in a responsible manner and committed to acting upon and monitoring all provisions agreed to in the Final SEIS, the District Engineer's signature on this Record of Decision will document and conclude the NEPA compliance process.

## 7. CONCLUSIONS

After having carefully evaluated and balanced all beneficial and detrimental aspects relating to implementing the proposed fill, transportation, and placement activities associated with meeting the Lower Monongahela River Navigation Project, Locks and Dams 2, 3, and 4, Disposal of Dredged and Excavated Material needs which total approximately 3.4 million c.y. of fill, including the use of the Victory Hollow site, the Duquesne-RIDC site, and in-river placement in the Allegheny and Monongahela Rivers, described in the Final SEIS, I have determined that the public interest will be served by implementation of these recommended fill activities at Federal expense. All practicable means to avoid or minimize environmental harm from the recommended plan have been adopted. Moreover, I have determined that this major Federal action is economically justified and in the public interest recognizing the environmental value that will be created by utilizing the dredged and excavated material in ways that maximize sustainable enhancements to the environment.

16 April 1998  
Date

  
Stephen B. Massey  
Colonel, Corps of Engineers  
District Engineer