

# **404(b)(1) EVALUATION**

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SECTION 404(b)(1) EVALUATION  
DETAILED PROJECT REPORT AND  
ENVIRONMENTAL ASSESSMENT  
POMEROY SECTION 14 EMERGENCY  
STREAMBANK PROTECTION PROJECT  
POMEROY, OH

**I. INTRODUCTION**

As required by Section 404(b)(1) of the Clean Water Act, this evaluation assesses the short- and long-term impacts associated with the discharge of dredged and fill materials into waters of the United States resulting from this project. This evaluation summarizes the detailed impact discussion provided in the Pomeroy Section 14 Emergency Streambank Protection Project Detailed Project Report (DPR) and Environmental Assessment (EA).

**II. PROJECT DESCRIPTION**

A. LOCATION. The Village of Pomeroy is located along the right descending bank of the Ohio River in Meigs County, Ohio. The project location is directly adjacent to the Village between river miles 248 and 251, running along the Ohio River, endangering the main thoroughfare through the town, public infrastructure and utilities.

B. GENERAL DESCRIPTION OF PROJECT PLAN. The project plan proposes to address the failing streambank along the Ohio River that is endangering Ohio State Route (SR) 833 and adjacent utilities. This reach of stream bank is in need of immediate protection due to flood stage erosion, recessional impacts, and retaining wall failure. Approximately 8,000 linear feet (LF) of streambank is located within the project area, of which 3,300 LF is in immediate need of streambank protection.

The Recommended Plan involves various features and risk management measures formulated to ensure stability of the streambank during flood events, some of which would be constructed within jurisdictional waters. This plan includes longitudinal dike erosion protection, stabilization of the lower wall, and a limited stone buttress.

The recommended plan would include clearing and grubbing of vegetation, clearing debris, and excavation of provide suitable placement surfaces for the discontinuous longitudinal dike totaling approximately 3,300 LF in length with dimensions approximately 6 feet high and a crest width of approximately 3 feet and side slopes of 1V:1.5H, which would be placed on the right descending bank of the Ohio River between river miles 248 and 251.

C. PURPOSE AND AUTHORITY. The purpose of the project is to provide a cost-effective means to prevent subsidence of Ohio SR 833 and adjacent utilities. SR 833, also referred to as East Main Street, provides the main source of transportation through the Village which is located directly adjacent to the reach of streambank in need of immediate protection. Since 2013, the streambank erosion and retaining wall collapse have resulted in the displacement of the northbound lane of SR 833. Without treatment, the streambank would continue to undergo flood related erosion and failure, leading to the undercutting and collapse of SR 833. Failure to protect this road would result in loss of access to the only thoroughfare and endanger adjacent utilities and Village infrastructure. As a result, the primary purpose of the study is to identify the sections of the streambank and wall system in immediate need of treatment and to develop a viable treatment solution for the protection of SR 833 and infrastructure.

Section 14 of the Flood Control Act of 1946, as amended, authorizes USACE to study, design and construct emergency streambank and shoreline works to protect public services including (but not limited to) streets, bridges, schools, water and sewer lines, National Register sites, and churches from damage or loss by natural erosion. The Section 14 authority falls under the Continuing Authorities Program (CAP), which focuses on water resource related projects of relatively smaller scope, cost, and complexity. Traditional USACE civil works projects are of wider scope and complexity and require specific authorization by Congress. Certain types of water resource and environmental restoration projects completed under CAP are delegated authority to plan, design, and construct recommendations without specific Congressional authorization.

D. GENERAL DESCRIPTION OF DREDGED OR FILL MATERIAL

1. General Characteristics of Material. Fill material used in construction of the longitudinal dike, lower wall stabilization, and limited stone buttress include clayey soils, well-graded 12 inch top-size blocky durable limestone rock, and grout.
2. Quantity of Material. The following quantities of materials are estimated to be used in construction of the recommended plan.

<b>Fill Type</b>	<b>Estimated Quantity</b>	<b>Temporary or Permanent Fill</b>
Rock (12 inch)	25,600 TN	Permanent
Grout	210 CY	Permanent

3. Source of Material. All materials used will come from a commercial source, the 12 inch stone will be transported by river from a quarry.

E. DESCRIPTION OF THE PROPOSED DISCHARGE SITES

1. Location. Discontinued longitudinal dikes will be placed between river miles 248 and 251, five dikes totaling approximately 3,000 LF along the Ohio River. Two stone buttresses will be constructed totaling approximately 300 LF of shoreline within the project reach.
2. Size. The dikes will be 6 feet high with a basal width of approximately 15 to 30 feet and the stone buttresses will have a basal foundation width of 40 feet.
3. Types of Sites. The work would occur along the right descending bank of the Ohio River along a reach of riverbank which has been previously impacted by prior disturbance including the relic wall. The longitudinal dike and stone buttress will run along the streambank being placed on solid river bottom.

4. Types of Habitat. Aquatic, riverine habitat would be impacted by placement of the fill material.

5. Timing and Duration of Discharge. The recommended plan is anticipated to be completed in approximately eight months. All discharge and fill would occur during this time. Work will be completed during low to normal flow conditions and periods of high flow would be avoided.

F. DESCRIPTION OF DISPOSAL METHOD. The stone protection will be placed along the streambank, implementing the longitudinal dikes and stone buttresses. Work will be conducted from the river using appropriate barges and work vessels. Next the grout will be situated where needed in the transitional zones, mostly above normal pool. Some filter fabric will be used during this process so no contaminants enter the waterway.

### **III. FACTUAL DETERMINATIONS**

#### **A. PHYSICAL SUBSTRATE DETERMINATIONS**

1. Substrate Elevation and Slope. Top of bedrock at the project site has been encountered at approximately 530 to 525 feet elevation with normal pool level being at elevation 538 feet msl.
2. Sediment Type. The riverbottom is primarily comprised of sand, silt, gravel, and cobble.
3. Dredged/Fill Material Movement. No excavation or dredging would occur from this action therefore, any movement of fill material would be insignificant.
4. Physical Effects on Benthos. Minimal impacts to aquatic resources would be limited to the construction period and would be minimal and temporary in nature.
5. Other Effects. No other effects are expected.
6. Actions Taken to Minimize Impacts. The footprint of the treatment has been minimized to the streambank in direct immediate need of stabilization. Work would be accomplished during flow conditions which minimize impacts to the aquatic environment including timing the discharge to avoid higher flow conditions. Additionally, during construction of the recommended plan, the USACE would implement a sediment and erosion control plan to minimize downstream impacts from sedimentation.

#### **B. WATER CIRCULATION, FLUCTUATION, CHEMICAL, AND PHYSICAL DETERMINATIONS**

1. Water. Placement of the fill material could re-suspend streambed material during the construction. However, the potential to increase suspended material would be considered short term and minimal.
  - a. Salinity. No impacts anticipated.
  - b. Water Chemistry. No impacts anticipated.
  - c. Clarity. No impacts anticipated.
  - d. Color. No impacts anticipated.
  - e. Odor. No impacts anticipated.
  - f. Taste. No impacts anticipated.
  - g. Dissolved gas levels. No impacts anticipated.
  - h. Nutrients. No introduction of nutrients is expected from placement of fill material.
  - i. Eutrophication. No eutrophication is anticipated.
  - j. Current pattern and circulation. No impacts anticipated.
  - k. Velocity. No impacts anticipated from the recommended plan.
  - l. Stratification. No impacts anticipated.
  - m. Hydrologic regime. No impacts anticipated.
  - n. Normal water level fluctuation. The discharge of fill material would not directly impact normal water fluctuation in the Ohio River.
  - o. Salinity gradients. No effect.
  - p. Actions Taken to Minimize Impacts. The footprint of fill materials has been minimized to avoid potential adverse effects. Best management practices (BMP) would be utilized to minimize impacts.

C. SUSPENDED PARTICULATE/ TURBIDITY DETERMINATIONS

1. An elevation in suspended sediments during construction would be expected, but would subside following the completion of construction.
  - a. Light penetration. Short-term reductions in light penetration are likely to occur

during construction. These reductions in light penetration are anticipated to be short term and localized to the area adjacent to construction operations.

b. Dissolved oxygen (DO). During construction there could be increased turbidity which could cause temporary localized decreases in DO.

c. Toxic metals and organisms. No toxic metals or organisms would be discharged during placement of fill material.

d. Pathogens. While coliform and enterococci bacteria may be present in project waters, project construction would not affect this condition.

e. Aesthetics. Area aesthetics would be temporarily impacted during the construction phase of the proposed project but will have minimal impact on the Village and communities across the Ohio River from the project.

f. Pesticides. No toxic metals or organisms would be discharged during placement of fill material.

g. Effects on biota. Impacts would occur during construction due to placement of stone, however these impacts would be minimal and temporary.

h. Suspension/filter feeders. Larval and juvenile forms of suspension and filter feeding organisms may be affected on a localized, temporary, and minimal basis.

i. Sight feeders. No significant effects. These organisms are generally highly mobile and would avoid or escape areas of turbidity during fill placement.

j. Actions taken to minimize impacts. The footprint of fill materials has been minimized to avoid potential adverse effects. BMPs would be utilized to minimize the impacts of discharged material into the Ohio River.

#### D. CONTAMINATION DETERMINATIONS

The risk of contamination of waters resulting from the placement of fill material into waters located within the project area is low. Filling operations associated with this project are not expected to significantly affect the water chemistry of waters within the project area, filter fabrics will be placed where necessary to further avoid any contaminants into the water.

E. AQUATIC ECOSYSTEM AND ORGANISM DETERMINATIONS

1. Effects on Plankton. Any existing plankton in the immediate area of the construction operation may be minimally impacted due to potential increase in turbidity levels. The impacts would be localized and short- term.
2. Effects on Benthos. Minimal impacts to aquatic resources would be limited to the construction period and would be minimal and temporary in nature.
3. Effects on Nekton. Any existing nekton in the construction area would not be impacted due to the mobility of the aquatic animals.
4. Effects on Aquatic Food Web. No real impacts are anticipated to the food web by the proposed action.
5. Effects on Special Aquatic Sites. The Ohio River is listed as impaired and there are no special aquatic sites within the project area.
  - a. Wetlands. No wetland are located within the project area.
  - b. Mudflats. No mudflats are located in the project area.
  - c. Vegetated shallows. No vegetated shallows are located in the project area.
  - d. Coral reefs. Not applicable.
  - e. Riffle and pool complexes. The project location is all within the Robert C. Byrd pool.
6. Threatened and endangered species. No effect are anticipated to any federally listed aquatic species and no critical habitat exists within the project area. In addition, no federally listed mussels are located within the project area.
7. Other wildlife. No wildlife aside from the aquatic species discussed in earlier sections would be directly impacted by fill placement.
8. Actions to minimize impacts. The footprint of the fill has been minimized to the maximum extent practicable and BMPs would be implement to further reduce potential impacts to the aquatic environment.

F. PROPOSED DISPOSAL SITE DETERMINATIONS

1. Mixing Zone Determinations. No water quality criteria would be exceeded by

the placement of fill material as all material would be free of toxic pollutants.

2. Determinations of Compliance with Applicable Water Quality Standards. Only temporary short-term impacts to water quality in the form of increased turbidity are anticipated as a direct result of fill placement. These impacts include temporary and minimal increases in suspended solids and increases in turbidity levels which would occur during placement.

3. Potential Effects on Human Use Characteristics.

a. Municipal and private water supply. No effects.

b. Recreational and commercial fisheries. No significant effects.

c. Water-related recreation. There will be no fill placed within the navigation channel therefore no impact on any recreational or commercial navigation would occur.

d. Aesthetics. Area aesthetics would be temporarily impacted during the construction phase of the proposed project but will have minimal impact on the Village and communities across the Ohio River from the project.

e. Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. None are located in the project area.

#### G. DETERMINATION OF CUMULATIVE EFFECTS ON THE AQUATIC ECOSYSTEM

The impacts caused by the placement of fill would be minor and temporary in nature. In addition BMPs will be put in place thus minimizing impacts to the aquatic ecosystem, the cumulative impact of the placement of fill would not be expected to be greater than those discussed in earlier sections of this evaluation.

#### H. DETERMINATION OF SECONDARY EFFECTS ON THE AQUATIC ECOSYSTEM

No secondary effects are anticipated.

### **IV. FINDING OF COMPLIANCE OR NONCOMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE**

A. No significant adaptations of the Section 404(b)(1) guidelines were made relative to this evaluation.

B. There would be no significant impact to the environment. With a minimal footprint

for the project all potential impacts have been avoided or minimized. However a 401 Water Quality Certification under the Clean Water Act will be acquired before any fill material is placed within the Ohio River.

C. The planned deposition of fill material would not violate applicable State Water Quality Standards (Ohio Revised Code Chapter 3745-1 of Administrative Code, Requirements Governing Water Quality Standards for Ohio).

D. Further, the planned fill action would not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

E. No endangered species or their critical habitat will be adversely impacted by the planned action.

F. Appropriate steps to minimize potential adverse impacts of the fill action on aquatic systems have been incorporated. Along with minimizing the footprint of the fill to the maximum extent practicable.

G. The proposed deposition of fill material would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites.

H. On the basis of the Section 404(b)(1) guidelines, the proposed sites for the discharge of fill material are specified as complying with the requirements of these guidelines.