

# **EMERGENCY REPAIR PROJECT ENVIRONMENTAL ASSESSMENT**

## **September 1, 2009**

**Prepared By:** Environmental and Cultural Resources Section, Planning and Environmental Branch, U.S. Army Corps of Engineers Pittsburgh District

**1. Name of Project:** Sawmill Run Local Flood Protection Project (Sawmill Run LFPP)

**2. Project Authority:** Public Law 84-99, Flood Control and Coastal Emergency Act

**3. Project Location:** Sawmill Run, a tributary of Turtle Creek, Borough of Turtle Creek and Wilkins Township, Allegheny County, Pennsylvania (Braddock Quadrangle). The project is limited to the Sawmill Run LFPP, a Pennsylvania Department of Environmental Protection channel improvement project. Please see attached location map prepared from a portion of the USGS quadrangle (Figure 1).

#### **4. Recommended Project:**

Flooding as a result of a single heavy rain event on June 17, 2009 caused substantial damage to the Sawmill Run LFPP, primarily in the form of damaged concrete sill and apron and stone protection within the stilling basin, sediment build-up in the downstream box channel, sediment build-up in the improved channel in the upstream end of the project, and minor culvert damage. The recommended project will involve removal of sediment that is blocking the box channel, most of which is located in the first 1000 feet of Sawmill Run directly upstream of Thompson Run, and clearing the improved channel of the stilling basin approximately 1000 feet further upstream. The original cross sectional area of the channel will be restored (Figure 2). Sediment material will be disposed of in a properly permitted, commercially available disposal facility. The stilling basin will be repaired, erosion under the apron will be filled, and the concrete sill and apron will be re-established as originally constructed (Figure 2). Minor concrete restoration will also be completed in the box channel downstream from the stilling basin (Figure 2). It is noted that the clearing of the box channel potentially could reveal additional concrete damages in the box channel to be repaired.

The total estimated repair cost is \$470,000 (including engineering and design, supervision and administration, real estate, and contingency). Since this is a non-Federal project, there is a cost share requirement (80% Federal/ 20% Local, excluding costs prior to construction). The total estimated Federal requirement is \$346,400 and the non-Federal requirement is \$86,600. A cooperation agreement will be executed with the Borough of Turtle Creek, the local sponsor, prior to initiation of construction.

#### **5. Alternatives:**

Alternative 1 (recommended plan) will return the project to pre-damage conditions, restoring the design level of protection to the community. This alternative will involve sediment removal and structural repair, thus restoring the hydraulic capacity of the channel and repairing damaged facilities. Alternative 2 is a non-structural relocation alternative. In this case all structures no longer protected by the damaged protection project would be bought by the borough. Approximately 37 residential and four non-residential structures would require purchase. The tenants would then have to be relocated to other locations. Once completed, the land would remain vacant and the need for the project would be eliminated. This alternative, however, would

severely damage the Borough of Turtle Creek. A sizable portion of the Borough would be vacated leaving the Borough with a more limited tax base that is already reduced by loss of industry. The costs for this alternative would be borne entirely by the local project sponsor. The option of pursuing a non-structural alternative was discussed with the Sponsor. Based on the potential consequences and the nature of the existing project with its historic success in preventing flood damage since completion, the Sponsor's preference was to not pursue this alternative.

Under the "No Action" alternative, no Federal action would be taken to correct the problems which resulted from the 17 June 2009 flood. If no Federal action is taken, the project would not provide its designed level of flood protection and 41 structures would be exposed to further damage from even minor flooding. The channel capacity has been substantially limited by the sediment build-up especially in the box channel. The repair work is beyond the capability of the Borough under normal maintenance procedures. Without the proposed emergency repairs the damage to the stilling basin, as well as lesser concrete damage, will continue and may eventually cause failure of the entire project. Therefore, the "No Action" alternative may lead to eventual project failure.

## **6. Environmental Setting:**

The Sawmill Run project is located along Sawmill Run in Borough of Turtle Creek, Allegheny County, Pennsylvania. The project area is highly urbanized and supports a mix of heavy industrial, commercial, and residential structures. The majority of the flood control project utilized concrete slope and bottom paving to create a hydraulically efficient floodway. In these areas no stream bank vegetation is present. The remaining areas were protected by stone riprap/gabion baskets or received no hard bank treatment except for original shaping when the stream channels were widened. In the limited areas where there is no hard armoring, stream bank vegetation was allowed to re-grow after the banks were initially cleared. Within these portions of the flood protection project, the stream bank vegetation is relatively dense. The overstory in these areas is dominated by sycamore, a pioneer species on disturbed river banks, and also contains black willow, green ash, sumac, silver maple, red maple, box elder, and slippery elm. Two regionally prevalent exotic pests, Japanese knotweed and Tree-of-heaven, which out-compete native vegetation on disturbed sites where they commonly form monocultures, are also found growing densely within reaches of Sawmill Run.

The stream bottom consists of gravel, rock, sand, and large bars of accumulated sediment deposited by the June 2009 flooding. This stream has been identified by Allegheny County as being impacted by the presence of untreated sewage that further depresses an aquatic ecosystem previously degraded by the construction of the Sawmill Run project. Sewage enters the stream from combined sewer overflows that are commonly found in Allegheny County. The typical cloudy, bluish/grey color of sewage contamination was observed in Sawmill Run, as well as Turtle Creek, during the site visit on 10 July 2009.

Although some pollution-tolerant species of fish are found in Turtle Creek downstream of the flood protection project, the Pennsylvania Fish and Boat Commission classifies lower Turtle Creek (which includes the project area) as impaired water due to urban runoff, acid mine drainage, and stream bank modifications. Any benthic organisms present would be those extremely tolerant of pollution, such as sludge worms and midges. Due to the lack of in-stream cover, the removal of riffle and pool complexes, modified channel banks, and poor water quality, the aquatic habitat of Turtle Creek and its tributaries within the project area are severely degraded and will remain so for the foreseeable future.

## 7. Environmental Effects of the Proposed Action:

| <b>Environmental Parameter</b>         | <b>No Effect</b> | <b>Minimal Effect</b> | <b>Significant Effect</b> | <b>Basis for Determination</b>  |
|--|------------------|-----------------------|---------------------------|---|
| Land Use and Socio Economic Conditions | ✓                |                       |                           | The current land use pattern will not be affected by this project. The socio economic conditions may actually improve with the completion of the emergency repairs. It was determined through site investigations that approximately 37 residential structures and four non-residential structures are at risk from the storm damage. U.S. Census data lists the project area as low income.  |
| Vegetation and Wildlife Habitat        |                  | ✓                     |                           | Some clearing of vegetation will result from this project in order to complete construction activities from the banks where necessary. It was observed through site visits that the majority of vegetation in the project area is one of two invasive species (Japanese Knotweed and Tree-of-Heaven), making any affect minimal. The U.S. Fish and Wildlife Service stated in a letter that this project is not expected to have significant impacts on fish, wildlife, or habitats of Federal concern. |
| Water Quality and Fisheries            |                  | ✓                     |                           | A permit for work in the channel will be obtained from the PA Department of Environmental Protection. The U.S. Fish and Wildlife Service stated in a letter that this project is not expected to have significant impacts on fish, wildlife, or habitats of Federal concern.  |
| Floodplains                            | ✓                |                       |                           | The project is located within the floodplain, however all work will be in areas already disturbed during the initial construction of the local flood protection project.  |
| Noise, Recreation, and Aesthetics      | ✓                |                       |                           | There should be no significant increase in noise in the urbanized project setting. Aesthetics may actually increase with the removal of debris and sediment bars from the Sawmill Run LFPP.   |
| Endangered Species                     | ✓                |                       |                           | The PA Fish and Boat Commission stated that no adverse impacts are expected from the proposed project concerning fish, reptiles, amphibians, and aquatic invertebrates. The PA Game Commission also anticipated no impacts to birds or mammals. Likewise, the U.S. Fish and Wildlife Service  |

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|                                       |                  |                       |                           | responded in a letter that no Federally listed or proposed threatened or endangered species will be impacted by the project (See attached letters).   |
| Historic and Archaeological Resources | ✓                |                       |                           | The PA State Historic Preservation Officer has concurred that the proposed activity should have no effect on any historic or cultural resources that may be present within the project area (See attached).   |
| Traffic and Public Safety             | ✓                |                       |                           | The restoration of the LFPP will increase public safety by decreasing the incidents of property damage and loss of life.  |
| Wetlands                              | ✓                |                       |                           | A review of the National Wetlands Inventory revealed no wetlands near the project area.   |
| Hazardous and Toxic Waste             | ✓                |                       |                           | The drainage to Sawmill Run is primarily residential or wooded hillsides. The Borough has no information to indicate that hazardous or toxic waste would be formed in the vicinity of the project. Sediment removed will be transported to a properly permitted, commercially available landfill and tested during construction according to the landfill requirements. |

## **8. Coordination**

The District coordinated with several resource agencies including the PA Fish and Boat Commission, PA Game Commission, PA State Historic Preservation Officer, and the U.S. Fish and Wildlife Service. All of these agencies have confirmed that no impacts are expected from the proposed emergency repairs to the Sawmill Run Local Flood Protection Project. A PA Natural Diversity Inventory Environmental Review (copy attached) was also conducted and further confirmed the findings of the resource agencies. The EA fully complies with the regulations for implementing the procedural provisions of the National Environmental Policy Act as set forth in the Council on Environmental Quality Regulations Part 1500 through 1508. There are no unresolved environmental issues, and the proposed project is in full compliance with all applicable Federal, state, and local laws and regulations.

**Draft Finding of No Significant Impact**  
**Emergency Repair Project**  
**Sawmill Run Local Flood Protection Project**  
**Turtle Creek Borough, Allegheny County, PA**

This Finding of No Significant Impact is not a stand alone document but rather it both includes and is a part of the Environmental Assessment for the Emergency Repair Project, Sawmill Run Local Flood Protection Project, Turtle Creek, Allegheny County, Pennsylvania, dated September 2009.

After having carefully evaluated all beneficial and detrimental aspects of the recommended emergency repair project and its alternatives, including required regulatory agency input, I have reasonably concluded that the recommended plan (section 4. of the EA) does not constitute a major Federal action significantly affecting the quality of the human environment because in accordance with 40 C.F.R. § 1508.13 this action will not cause any significant, long term adverse effects to aquatic or terrestrial habitat, will not affect wetlands, will not adversely impact socio-economic conditions, public health, recreation, aesthetics, air quality or noise. Consequently, the preparation of an environmental impact statement under the National Environmental Policy Act for this project is not warranted.

The public interest will best be served by completing the emergency repair project as described in the environmental assessment. The proposed work is in compliance with all applicable Federal, state and local laws and regulations. There are no unresolved issues regarding environmental compliance and coordination, and there are no unresolved environmental issues associated with this project. This document will be mailed to all concerned resource agencies, the Borough, and public libraries in the area, and will be posted on the Pittsburgh District's website.

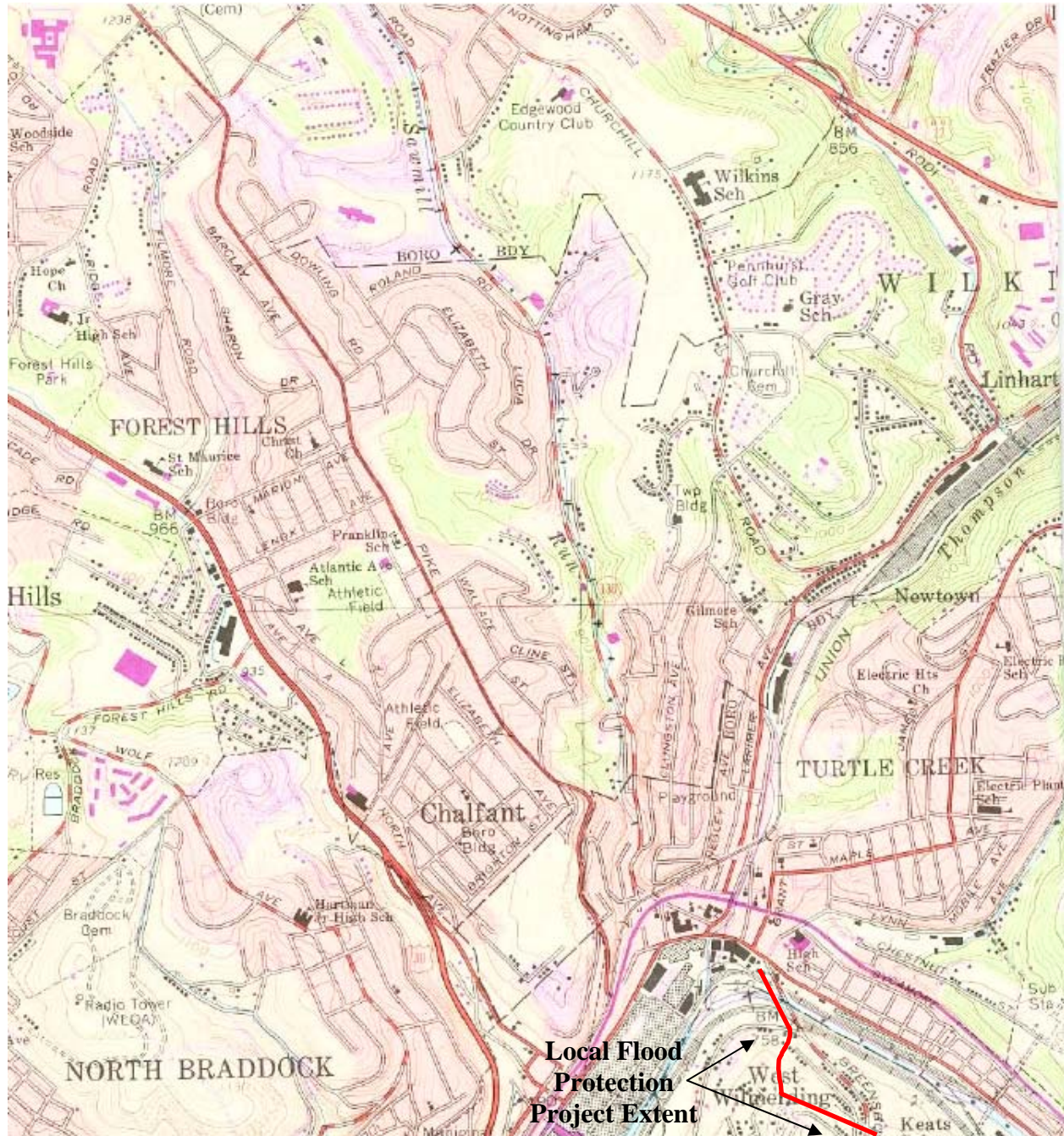
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Date

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Michael P. Crall  
Colonel, Corps of Engineers  
District Engineer

# APPENDIX



**Figure 1.** Enlarged image taken from USGS 7.5 minute Braddock Quadrangle. The red line indicates the location of the Sawmill Run Local Flood Protection Project.