

**U.S. Environmental Protection Agency
Region II
Lawrence Aviation Industries Site
Old Mill Creek**

LANDSCAPE RESTORATION PLAN

Developed By :



United States Environmental Protection Agency
2890 Woodbridge Avenue
Edison, NJ

In Consultation With :



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Background

Lawrence Aviation Industries (LAI) is located in the Village of Port Jefferson, Town of Brookhaven, Suffolk County, New York. Previously a turkey farm, LAI was a manufacturer of titanium sheeting for the aeronautics industry. Throughout the years, LAI practices for disposal of containers and chemicals were found to have caused negative environmental impacts. Drums containing trichloroethylene (TCE), tetrachloroethylene (PCE), and other wastes were allowed to leak onto the ground, making way to the underlying groundwater. The United States Environmental Protection Agency (EPA) continues to conduct work at the LAI Superfund Site, and more information can be found at <http://epaossc.org/lawrenceaviation>

In September 2006, the Record of Decision (ROD) selected groundwater extraction and treatment to address groundwater contamination with the installation of groundwater treatment system. Two have been proposed, with one system located at the facility and one within the plume area near Old Mill Pond.

Beginning in the Fall of 2007 and continuing through the summer of 2008, EPA and it's contractors conducted a groundwater investigation around the LAI Site. Based on June 2008 sampling results, it was determined that a groundwater TCE plume was traveling from the LAI Site to the north towards Port Jefferson Harbor.

In the fall of 2009, EPA authorized the allocation of funding to build a groundwater pump and treat system near Old Mill Pond. The system will assist in drawing contaminated water from the up-gradient LAI Site, as well as prevent contaminated water from leaching into the Old Mill Pond, Old Mill Creek, and Port Jefferson Harbor.



View of the vegetation on the east side of Barnum Avenue prior to removal activities.

In preparation for the construction of the groundwater pump and treatment system, the Village of Port Jefferson (Village) asked EPA to assist in the cleaning of Old Mill Creek. Conceptual designs show treated groundwater discharging into the Old Mill Creek after it has been stripped of contaminants. EPA agreed to remove excessive sediments, debris, and trash thirty feet (30') east of Barnum Avenue Bridge and 30' to the West. In addition, EPA agreed to remove minor debris from the Creek up-stream of Barnum Avenue Bridge to the Old Mill Pond.

Situation

Beginning on May 3, 2010 and continuing to May 13, 2010, EPA conducted sediment and debris removal activities of the Old Mill Creek. Focus was placed on the area surrounding the Barnum Avenue Bridge, including the culvert located under the roadway. Heavy equipment, such as long-reach excavators, vacuum trucks, backhoes, and bobcats, were used to move debris, waste, and sediments out of the Creek. As a result, some

vegetation was disturbed and removed during activities. This Landscape Restoration Plan has been designed to remediate the impacted areas and restore the landscape to a natural and native way. This Plan is being designed for properties owned by the Village of Port Jefferson only. Although landscape restoration activities are being conducted on private properties, they are not included in this Plan.

Objectives

The primary goals of the landscape restoration is to control erosion and improve the appearance of the creek bank and adjacent areas disturbed by the culvert and stream channel clearing activities on the east side of Barnum Avenue. The construction activities required the removal of small trees and underbrush to provide a working platform for excavation equipment. No vegetation of significant value was removed during this operation. The invasive vegetation that was removed for this operation will be replaced with native species that will serve both as an effective erosion control tool while simultaneously improving the aesthetic appearance of the creek banks and areas disturbed during culvert and stream channel cleaning.

Removal of Existing Landscape

On the east side of Barnum Avenue, one (1) Honey Locust tree and a variety of reeds, vines, and brambles were removed from the creek bank. The area cleared of vegetation was approximately 40ft east of the culvert and approximately 45ft up the south bank and onto the level grade. This area was cleared to create a working platform for the excavator that as used to remove the sediment from the creek.



Landscape Design

Three Red Maple (*Acer Rubrum*) trees will be planted parallel to the creek approximately 15 feet from the top of the creek bank. On the north side of the trees a row of small evergreen shrubs will be planted to form a hedge row. The trees and shrubs will be staked as required and their root balls and surrounding soils will be covered with a minimum of 4" of hardwood mulch. A twelve inch wide plastic bed edge border will be installed along the length of the south side of the mulch bed to protect against run off.

Heavy equipment was used in removing sediments and debris along Old Mill Creek.

Sod will be installed between the mulch bed and the existing brick walkway with a locally grown shade tolerant grass species. Prior to sod placement, screened top soil will be placed on the disturbed area and raked into the existing soil.

For the most immediate and effective erosion control on the creek bank we will apply a bio-degradable erosion matting to the exposed soil from the waterline to approximately two feet beyond the top edge of the bank. This matting will be held in place by six inch steel staples installed on 18" centers. Two options are proposed for the creek bank.

Option 1 will have the matting over-seeded with shade tolerant native marsh grass mix. This will allow for a more natural look with local reeds eventually taking over the area. Option 2 is to have rip rap (concrete blocks) placed along the creek bank. This will prevent and limit the amount of phragmites and other grasses and reeds from growing along the bank.

EPA is meeting with Village representatives to determine an option.

There are currently no plans for the Northern bank as it was not disturbed during the culvert cleaning operations. The Western side of Barnum Ave is addressed in a separate restoration plan.

Sidewalk Replacement

Heavy equipment was utilized to remove debris and sediment from the Old Mill Creek. It was necessary for this equipment, which included a bobcat, long-reach excavator, and backhoe, to move over curbing and sidewalks. Engineering controls were placed on and around the curbs and sidewalks to prevent damage to the structures. Unfortunately, two slabs of sidewalk located on the east side of Barnum Avenue near the bridge were damaged. EPA will remove the damaged portion of the sidewalk and properly replace them.



Erosion mat placed on the bank of Old Mill Creek.

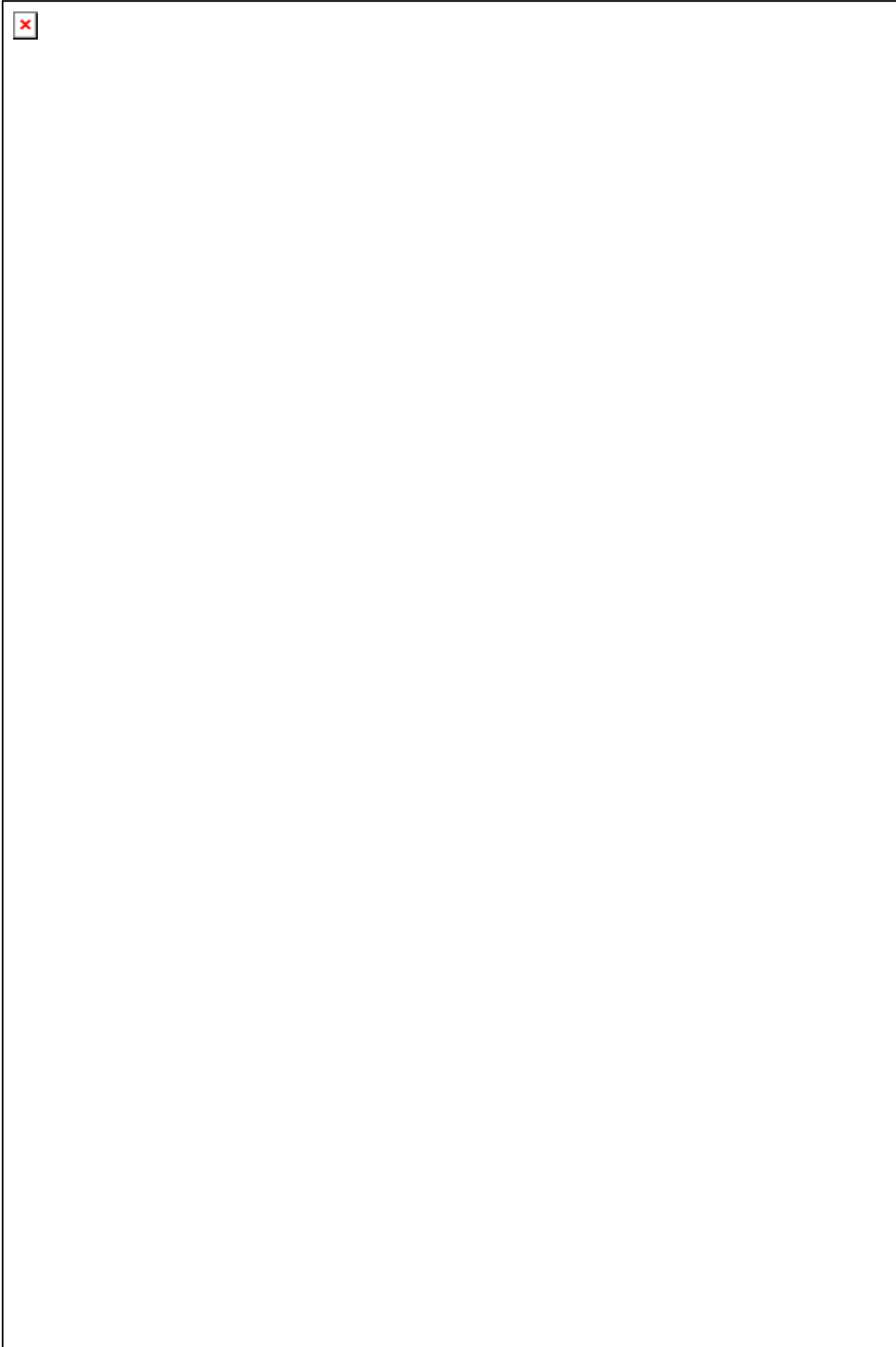
Conclusion

As a result of culvert and Old Mill Creek cleaning activities, a minor amount of vegetation was disturbed or removed from Village owned property. The proposed Landscape Restoration Plan will provide erosion control of the Old Mill Creek bank as well as provide an aesthetic view of the area. The design utilizes only native species of vegetation, requiring a minimum amount of maintenance, and allowing natural cycles to occur.

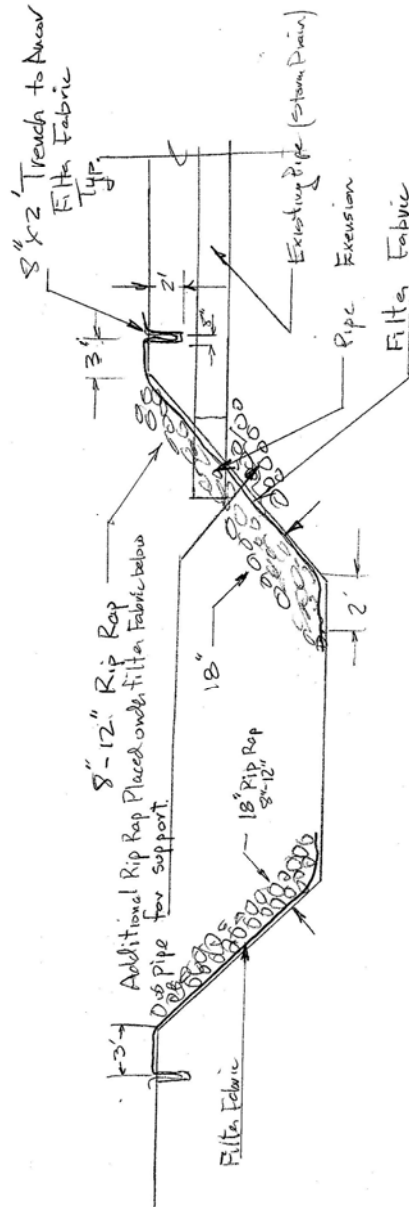
On May 12, 2010 EPA met with Village representatives and personnel from Cashin Associates to discuss Landscape Restoration activities. EPA was notified of future uses and the potential for redevelopment along Old Mill Creek. The future plans detail a specific theme along the Creek, eliminating Option 2 proposed above. EPA was notified that more natural landscape would keep the theme of the Old Mill Creek. Option 1 has been selected, however, EPA will work with Cashin and Village representatives on determining which specific vegetation should be planted.

This project is estimated to take five days from commencement to completion. Work hours will be from 8:00 am to 5:30 pm. Flagmen, when necessary, will be provided as a safety precaution to the worker, pedestrian, and vehicular traffic. Road closures are not expected to occur during this time.

Proposed Landscape Restoration Design Option 1



Proposed Landscape Restoration Design Option 2



X-Section @ Downstream of Bridge
Not to Scale

STADLER
No. 937 R11E
Engineer's Computation Pad

Note : Although represented in the above diagram as having rip rap placed on the northern creek bank, this may not occur.