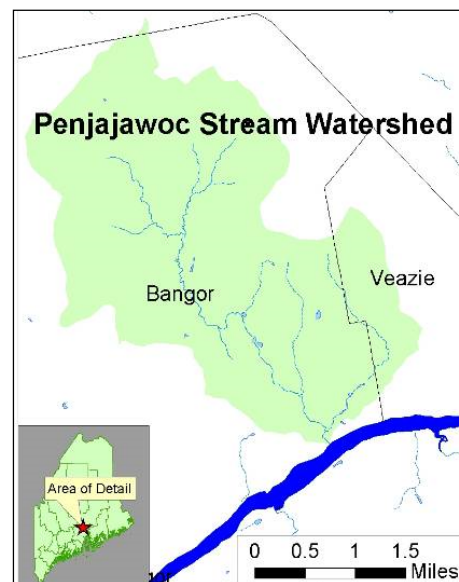


Penjajawoc Stream Watershed LID Retrofit Project

#2012RT05

Waterbody Name: Penjajawoc Stream
Location: Bangor, Penobscot County
Waterbody Status: Urban Impaired Stream
Project Grantee: City of Bangor
Project Duration: February 2012 – October 2013
319 Grant Amount: \$36,620
Local Match: \$36,084



PROBLEM:

The Penjajawoc Stream TMDL (draft) stated that “the most probable cause of aquatic life impairment in Penjajawoc Stream is a combination of unmitigated stormwater and a complex array of pollutants transported by nonpoint-sources and urban stormwater runoff”. The TMDL further recommends that “hot-spot” areas be prioritized for mitigation actions based upon proximity and connectedness to the stream. Swett’s convenience store and service center (Swett’s) is considered a “hot-spot” by DEP since it receives a high volume of automobile traffic, is located close to the stream, and is directly connected to the stream via 200 feet of underground pipe. Swett’s owners estimate they receive 600 vehicles at their business on an average day, which contribute pollutants to nearby Penjajawoc stream.

PROJECT DESCRIPTION:

Stormwater from Swett’s and a portion of Hogan Road will now be treated by a filter-equipped catch basin on Hogan Road. Curbing was also installed along the edge of Swett’s gas pump area to direct stormwater to a second filter-equipped catch basin in the corner of their parking lot. The two hydrocarbon specific filter-equipped catch basins will treat runoff from 33,300 square feet of impervious area. The catch basin filter inserts are a best management practice (BMP) for pollutant removal. As part of the purchase contract, the manufacturer will provide the first three years of inspection and maintenance of the filters. The City of Bangor will maintain the catch basin inserts and replace the filter cartridges as needed after the initial three year contract with the manufacturer expires. Additionally, an eroding ditch along the north side of Sylvan Road was stabilized with geotextile fabric and riprap, thus removing this source of sediment into Penjajawoc stream by eliminating ongoing erosion.



Swett's convenience store and service station, a hotspot in the Penjajawock Stream watershed.

PROJECT OUTCOMES:

- This project captures and filters hydrocarbons and other pollutants from a busy service station and convenience store located along a major arterial roadway. Stormwater treatment was achieved by directing runoff into two catch basins equipped with filters. FABCO Industries, Inc. inserts (filter casings were fitted with cartridges specifically designed to remove hydrocarbons) in drainage structures are a best management practice (BMP) for hydrocarbon removal. The total impervious area receiving treatment is 33,300 square feet.
- Over 400 linear feet of eroding ditch on Sylvan Road was re-shaped and stabilized with riprap eliminating a large source of sedimentation into Penjajawoc Stream. This ditch receives runoff from 32 acres adjacent to Sylvan Road, much of which is impervious.
- Catch basin filter inserts are a relatively new water quality treatment method and the City of Bangor and its contractors became familiar with this method of filtration treatment during this project.
- An estimated 1.74 tons of sediment and 2.5 pounds of hydrocarbons per year will be prevented from going into Penjajawoc Stream.

PROJECT PARTNERS:

Swett's Convenience Store and Service Station

CONTACT INFORMATION:

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Filter-equipped catch basin installed in Swett's parking lot.



Crew installing a filter-equipped catch basin at the entrance to Swett's along Hogan Road.



400 feet of linear ditch stabilized with filter fabric and riprap along Sylvan Road.

Suggested Citation:

Maine Department of Environmental Protection (2014) "Nonpoint Source Management Program 2013 Annual Report," Document # DEPLW-1269. Augusta: MDEP.