

Subject: West Branch Lackawaxen River Investigation and Evaluation Report

Date: September 26th, 2010

To: John Corkill, President, Creamton Flyfishing Club

File Code: 127-0039

On August 24^h, 2010 I toured a section of the west branch of the Lackawaxen River located near Creamton, Wayne County. This stream evaluation was conducted in response to a technical assistance request that the Wayne Conservation District submitted to the Pennsylvania Association of Conservation Districts, (PACD), office located in Bloomsburg, PA. Those present during the site assessment included: John Corkill, President, Marty Erk, Vice President, Alex Lilje, River Keeper, and Milan Bull, Member; Creamton Flyfishing Club, (CFC); Jamie Knetch, Watershed Specialist, Wayne Conservation District; Owen Hess, Conservation Technician, and John Coleman, Conservation Engineer, (PACD).

Members of the Creamton Flyfishing Club invited PACD to provide insight on the overall condition of the section of the Lackawaxen River system maintained by their organization. The areas of interest that were discussed during the visit included stream channel stability, fish habitat, and riparian buffer health.

The active stream channel is defined as the area below the “bankfull” height of the stream which coincides with the elevation where the stream can access its floodplain. Most of the active stream channel that we observed was indicative of a high degree of stability. The riparian buffer is well established and the dense root zone along the stream banks contributes to the highly stable condition of the stream channel. One area of the stream that was severely impacted by flooding was re-aligned when the adjacent roadway was repaired. A small section of streambank located in this area is experiencing some notable active erosion. The stream may still be adjusting its flow pattern in response to the previous restoration associated with the roadway and the erosion may cease. If this erosion continues or accelerates, it can be easily corrected through a bank stabilization effort. Stabilization options include riprap rock armoring or installation of a modified fish habitat structure comprised of a combination of large rock and logs. The only other impaired section of the stream noted during the day was at the upper end of the watershed near the golf course. A large log jam is directing higher flows during runoff events into the streambank and is causing significant streambank erosion and loss of the adjacent mature riparian buffer. It was decided that the log jam would be dismantled and the material would either be removed from the channel or sized to allow for the stream to transport the material during higher flow events. I believe that members of the flyfishing club may have already initiated action to address the situation.



I was made aware of the efforts of the CFC to enhancing the existing riparian buffer with native plantings. This practice will obviously augment the already healthy vegetative component of this section of the Lackawaxen river system and should be continued. One area we investigated is periodically mowed for access to the river. Allowing the larger shrubs and trees to reintroduce themselves into this area should provide for a better canopy. This could be achieved through natural succession or through a planting effort. 35 to 50 feet as measured back from the top of the stream bank is a recommended minimum distance for re-establishing riparian zones. I assume that other portions of the riparian buffer that we did not visit could also be enhanced with native planting once they were identified. The following internet website provided by the Pennsylvania Department of Conservation of Natural Resources is a very extensive source of information pertaining to riparian buffer management.

<http://www.dcnr.state.pa.us/forestry/wildplant/native.aspx>

Fish habitat within the stream channel can be readily improved by installing habitat structures. I provided Alex Lilje with a copy of the *Habitat Improvement for Trout Streams* publication made available by the Pennsylvania Fish and Boat Commission. There is a wide range of structures identified in the manual that could be used to enhance fish habitat throughout the several miles of river we investigated during our tour. Interested members of the CFC should familiarize themselves with the available structures and identify potential locations within the boundaries of the club property where they could be installed. PACD staff could be available to re-visit the river with the purpose of walking the stream to assist with the structure location and subsequent structure installation. The link to the manual is provided below.

http://www.fishandboat.com/water/streams/habitat_improve_trout.pdf

There was also dialogue pertaining to the presence or absence of fish with particular areas of the river. I do not have any expertise in fish behavior so I cannot provide any input pertaining to this topic. Wayne Conservation District staff may be able to assist you with contacting the appropriate agency that could provide guidance on this issue.

Our site visit encompassed a large section of the west branch of the Lackawaxen River, so if I have omitted anything from this report that the club feels is worth mentioning, please bring it to my attention.

Thank you for allowing me to assist with this conservation endeavor and please contact the Bloomsburg PACD office if any additional information pertaining to this evaluation is required.

John T. Coleman, P.E.
Conservation Engineer, PACD

Cc: Jamie Knetch, Watershed Specialist, Wayne Conservation District

