POTENTIAL STREAM MITIGATION INFORMATION GATHERING AND PARTNERING MEETING

POSSIBLE LEAVITTSBURG DAM REMOVAL

TRUMBULL COUNTY PLANNING COMMISSION
TRUMBULL COUNTY METRO PARKS
347 North Park Road
Warren, Ohio

Thursday, December 6, 2007
4:15 p.m.

Ohio Department of Transportation
District 4
2088 South Arlington Road
Akron, Ohio 44306
Telephone: (330) 786-3100; 800-603-1054
www.odotdistrict4.org

Purpose of this Meeting:

The purpose of this meeting is to:

- Present and discuss the possibility of dam removal of the Leavittsburg Dam on the Mahoning River with Trumbull County Officials for the purpose of stream mitigation credit for the State of Ohio Department of Transportation (ODOT) and to explore any initial issues commensurate with such a proposed project. The dam is currently owned by the Trumbull County Park Board.

Description:
The Ohio Department of Transportation District 4 is investigating the possible removal of the lowhead dam on the Mahoning River commonly known as the Leavittsburg Dam. The dam, reportedly, primarily consists of a lowhead concrete dam structure placed immediately downstream of an older structure of unknown make-up. The abutments of the dam may remain in place as an educational opportunity for the onsite Park. This possible removal would enhance the flow of the Mahoning River at this location and would aid in the restoration efforts of the river in accordance with the overall Mahoning River Restoration Project underway by the Pittsburgh District of the U.S. Army Corps of Engineers (USACE). The finished product will have the Mahoning River look and act at this location and upstream much as it does where ODOT removed the North River Road and Lover's Lane dams. The river would support more and diversified fish populations and would provide additional recreational benefits to watercraft. The possible dam removal would be pursued as stream mitigation pursuant to a yet unidentified roadway improvement project, and this proposed mitigation would be pursuant to USACE and OEPA stream mitigation requirements.

Stream mitigation is required for transportation improvement projects by means of the Clean Water Act of 1990. ODOT is therefore required to investigate potential stream mitigation sites and to develop relationships with property owners to accomplish this task. The ODOT Office of Environmental Services will take the lead in any future negotiations with the Park Board.

The purpose of the possible dam removal would be to provide adequate stream mitigation for impacts associated with future ODOT projects. The total Mahoning River stream length is 108.3 miles with a drainage area of 1140 mi^2. The Leavittsburg Dam is approximately located at River Mile 46.18 from the confluence with the Beaver River in Lawrence, PA. It is approximately 8 feet in height and has a pool of 9.87 miles. The riparian corridor and adjacent habitats include a 40 foot forested buffer, commercial property, and residential properties. This segment of the Mahoning River is classified as a warm-water habitat and has a Quality Habitat Evaluation Index (QHEI) of 60 and is not in attainment according to OEPA's Biological and Water Quality Study of the Mahoning River, Volume I, (OEPA Technical Report MAS/1995-12-14) dated 5-1-96.

Personnel from the Ohio Department of Transportation Office of Environmental Services (OES) and District 4 Environmental Section would conduct a field review of the proposed project area if it is decided to proceed based on this meeting. The possible dam removal would remove two low-head dams on the Mahoning River. These possible dam removals and river restoration activities would introduce short term impacts to the Mahoning River at the corresponding locations during construction. After restoration would be complete, according to the USACE Pittsburg District, it is anticipated that approximately 10 miles of Mahoning River

reaches upstream of the dams would be created and realized through the mitigative efforts of both dam removals. USACE, OEPA, ODNR and USFWS, Trumbull County Floodplain Administrator and others would be given the opportunity to comment through the National Environmental Policy Act (NEPA) process for the project.

The “No-Build” Alternative would also be considered and evaluated during the NEPA process followed as part of our standard project development process.

Upon review of FEMA mapping, this possible mitigation would be located within the 100 yr floodplain and floodway of the Mahoning River. A Floodplain Coordination e-mail correspondence would be sent to the Trumbull County Floodplain Administrator. Based on our previous efforts and impacts to the floodway through the removal of both the Lover’s Lane and North River Road Dams it is anticipated that ODOT would proceed in a similar fashion procedurally on this proposed project. Based on the impacts to the floodway, it is anticipated that the Trumbull County Floodplain Administrator would request that a Hydrology and Hydraulic Analysis be performed for the possible stream mitigation to determine any potential adverse effects of the possible removal to the floodplain.

For the previous dam removals, ODOT’s analysis concluded that there will be a 0.04 foot reduction in flood height. ODNR replied in a letter on 12-10-04 with their review of the analysis. ODNR stated that ORC 1521.14(C)(2) requires that all State Agencies undertaking activities in flood prone areas to meet the minimum standards of the National Flood Insurance Program (NFIP). ORC 1521.14(D) also requires compliance with any locally adopted floodplain ordinance or resolution. ODNR found the study appears to have been conducted in accordance with standard engineering practice and demonstrates that removal of the dams will not result in increases in flood heights during the occurrence of the base flood discharge and stated the proposed stream mitigation activity appears to comply with the minimum standards of the NFIP and section 1521.14(c)(2) of the ORC. ODNR directed ODOT to obtain floodplain development permits from the City of Warren and Trumbull County, prior to the start of construction. Pursuant to this letter, ODOT submitted the appropriate special flood hazard area development permit application and ODNR letter and all applicable hydrology hydraulic analysis data to the Trumbull County Floodplain Administrator, who in turn, sent a letter dated 12-21-04 indicating that he agreed the proposed action will not conflict with local floodplain resolution, the supplied data is approved and granted the development permit. It is anticipated that the possible removal of the Levittsburg Dam would provide a similar benefit to the surrounding community by lowering the overall flood heights during flooding events, thereby allowing for better protection of property and a reduction of flooding.

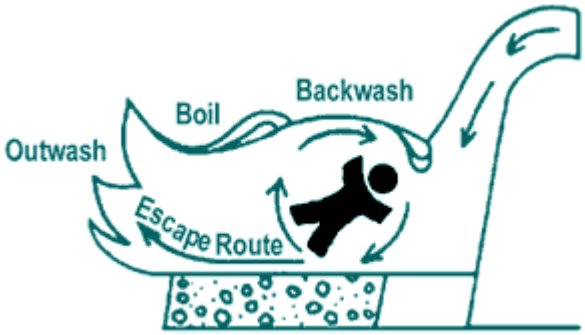
A preliminary review by ODOT of the Mahoning River Dredging Reconnaissance study for the Mahoning River conducted by the USACE Pittsburgh District Office where the USACE determined that there are no contaminated materials which require removal either upstream or downstream of the North River Road Dam gives ODOT preliminarily a comfort level that there is no reason to suspect environmentally regulated substances would be encountered or released within the possible stream mitigation limits or from adjacent properties. Additional studies will be performed to verify this should the possible dam removal move forward. Instream measures would be utilized to minimize migration of suspended sediments generated as part of any construction activities associated with the possible removal. These measures would be put in place prior any to construction and would be left in place until such time as the sediments stabilize after possible construction activities in the river cease.

Another benefit to the community the possible Leavittsburg dam removal would to reduce liability associated with the presence of an older dam based upon the condition of the structure. According to ODNR and Ohio Laws and Rules, the owner of a dam is responsible for ensuring that the dam is maintained and operated in such a way that it does not constitute a hazard to life, health, or property. In other words, a dam owner is legally obligated to maintain the safe condition of the dam. Because a dam that holds back, or has the potential to hold back water, poses a foreseeable risk to persons and property downstream, the owner of the structure is responsible for taking precautionary measures. These measures include periodic inspection, maintenance and monitoring, as well as needed repairs.

In addition, the Chief of the Division of Water has the authority to require the owner of a dam to perform repairs, maintenance, or other remedial measures that the Chief has deemed necessary to safeguard life, health or property. Some of these repairs and remedial measures may require the services of a professional engineer to insure that they are done correctly.

The Dam Safety Engineering Program offers assistance to dam owners who have questions about the condition, or the safe operation of their dam. However, the owner is ultimately responsible for the condition of the dam and for maintaining its safe operating condition.

There are also other safety concerns associated with these types of dams. The proximity of a canoe launching facility to the dam is a safety issue. Per ODNR's website, lowhead dams are deceptively dangerous and merit the name given to them, "drowning machines." Ohio has an abundance of these killers on rivers throughout the state. Over the years, houseboats, fishing vessels, powerboats, sailboats, PWC, and canoes have all fallen victim to lowhead dams. Lowhead dams may range from a 25-foot drop-off to a mere six-inch drop-off. Some dams are very wide and others not wide at all. Interestingly, the characteristics of moving water are the same regardless of the size of the dam. Part of the deception is that most people would associate danger with a dam having a substantive drop and fast-flowing water but fail to realize the danger is as great with a two- or three-foot dam face and a moderate flow of water. The dam design, depth, volume and velocity of water combine to determine the risk to boaters. Water flowing over a drop forms a hole or hydraulic at the base which can trap objects washing over the drop. Backwash or recirculating current is formed below the dam. Once swept over the dam, a person may become trapped and forced underwater, pushed away from the dam, then circulated to the top. The circulating motion then repeats the cycle over and over again as the individual is drawn back against the base of the dam.



ODOT would develop a list of critical partners should this possible dam removal move forward and would be willing to work with these partners through project development.

- Trumbull County Planning Commission –
- Trumbull County Metro Parks – ENTIRE BOARD
- Trumbull County Board of Commissioners
- Warren Township Trustees
- Leavittsburg Downtown Revitalization Committee
- Warren Township Fire Department: 1st Response to Dam Accidents
- Any other water rescue agencies
- Eastgate Regional Council of Governments
- Canoe City
- ODNR Division of Wildlife
- US Fish & Wildlife

Environmental Considerations:
Various environmental studies would be conducted for the project by ODOT and would be shared with the involved agencies/stakeholders.

ODOT would work with stakeholder groups and residents through our normal public involvement process to address any concerns that may exist.

Project Schedule:
No schedule is currently set project for the possible removal of the Leavittsburg dam. However, ODOT may potentially be interested in pursuing this possible removal in 2010 or 2011.

Project Costs:
Based on ODOT's involvement with other dam removal projects throughout the State and a very basic comparison of costs, this possible dam removal may cost between $75,000 and $100,000. The project may be funded with Federal and/or State funding.

Please consider working with ODOT regarding this possible dam removal as it could be mutually beneficial to many agencies and to the community at large. Thank you.