Division of Surface Water
Response to Comments

Project: Ballville Dam Removal
Ohio EPA ID #: 144364

Agency Contacts for this Project

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Ohio EPA held a public hearing and/or comment period on August 21, 2014 regarding the Ballville Dam Removal 401 Water Quality Certification. This document summarizes the comments and questions received at the public hearing and/or during the associated comment period, which ended on August 28, 2014.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

Comment 1: **Many people expressed concern about the amount of phosphorus and other contaminants in the sediment behind the dam and how that would influence Harmful Algal Blooms (HABs) in Lake Erie. Several people requested that additional studies be done to evaluate the sediment.**

Response 1: Currently the Ballville Dam does not act as a perfect barrier to sediment. Some fine grain sediment and the contaminants attached to it, escapes the dam and is washed downstream. Additionally, runoff from throughout the watershed drains

into the river both upstream and downstream of the dam. Removal of the dam will therefore not increase the amount or introduce new sediment; however, the sediment will be redistributed. The natural sediment transport function of a riverine system will be restored.

The phosphorus associated with sediments behind the dam is generally particulate phosphorus, which is adsorbed to the sediment and much less bioavailable to algal blooms than dissolved reactive phosphorus.

Comment 2: **Several comments questioned where the sediment behind the dam would settle after the dam removal. One person requested that the sediment behind the dam be relocated to his farm so that he could prepare the material for re-sale. Another person stated that all the material behind the dam must be dredged prior to dam removal. Other commenters suggested that the sediment, if contaminated, be moved to a confined disposal facility. Additionally, it was suggested that a gate be installed to stop the flow of sediments from the impoundment in case unexpected problems occur during the dam removal.**

Response 2: The sediment will settle throughout the system in the floodplain, in bars, islands, and in the river and bay. Thus, not all of the sediment will flow through the entire length of the river and reach Lake Erie.

The material behind the dam will not be dredged prior to dam removal. Beneficial reuse of the sediment would require additional testing and permitting from Ohio EPA prior to being implemented.

Ohio EPA will not require that the sediment be placed in a confined disposal facility. A sediment analysis conducted in 2007 demonstrated that sediment contamination in the impounded area involves concentrations less than or equal to those in existing Lake Erie sediment. Additionally, the cost and logistics of building a confined disposal facility, dredging behind the dam, and transporting the dredged material to the confined disposal facility would be prohibitive.

Dam removal will begin by notching the dam. This will slowly dewater the impounded area so as to not significantly disturb

the habitat downstream. Breaching of the dam will occur during the low flow period in the river, which will further minimize disturbance downstream. The slow drawdown will also allow time to seed and stabilize areas exposed as the impounded area becomes more channelized, thus some sediment will remain and become vegetated. Some sediment will be carried downstream, but the coarse grained sediment will fill in areas where it is currently absent and serve as fish spawning habitat. Additionally, silt fences will be installed downhill of all the construction areas, including the staging areas, access roads, and temporary disposal areas.

Comment 3: **Multiple people submitted comments regarding the effects of removing the dam on wetlands both upstream and downstream. One person stated that all waterfowl would disappear.**

Response 3: There is a small amount of wetland that will be directly filled (0.67 acres) and the applicant will provide appropriate compensatory mitigation. Once the dam is removed, the natural riverine ecosystem will be restored. The impounded area behind the dam will narrow and therefore the source of hydrology to some of the wetlands behind the dam will be altered. These wetlands may revert to uplands over time; however, these areas will still function as riparian zones regardless of whether they are upland or wetland. Waterfowl and many other organisms will still be able to use the habitat that the riparian zones currently provide.

Comment 4: **One person stated that removing the dam would reduce recreation on the river.**

Response 4: In the short term, access to the construction area will be prohibited during demolition. However, this will be temporary and full access to the area will be allowed after project activities are complete.

In the long term, recreational fishing will be improved because fish will have greater access to habitat.

Additionally, removing the dam will eliminate the safety hazard that the dam currently poses thus making recreation on the river safer.

Comment 5: **Many people were concerned about maintaining an adequate water supply after dam removal. One person stated that there will be less water after the dam is removed. One person stated that a trench would be dug to maintain flow to the water intake.**

Response 5: Ohio EPA's Division of Drinking and Ground Water has reviewed the project plans and has concluded that there is a very low probability that the dam removal portion of the project will adversely affect water quality at a public water system intake.

The amount of water in the river will remain the same regardless of whether the dam is removed or repaired.

Comment 6: **Several comments were received about the total project cost.**

Response 6: Ohio EPA does consider the social, economic, and environmental benefits to be realized through the project, including jobs created and tax revenues generated during the water quality certification application review process. Grant money has been awarded from multiple sources to remove the dam. However, no grant money is available to repair and maintain the dam.

Comment 7: **Several people had questions regarding the impacts on fisheries, especially walleye. Specifically, it was alleged that studies have shown that walleye do not migrate upstream close enough to the dam for dam removal to increase habitat. One person stated that Sandusky River walleye only make up 1% of Lake Erie walleye.**

Response 7: In Ohio EPA's 2009 Biological and Water Quality Study of the Lower Sandusky River Watershed, the reach of the Sandusky River impounded by the Ballville dam was found to have bottom substrates dominated by muck and silt, which negatively affect fish and macroinvertebrate communities. Downstream from the dam, the next two sampling sites were in full attainment of the warm water habitat aquatic life use designation. The report states that free flowing reaches of the Sandusky River generally had good habitat that in turn supported balanced fish and macroinvertebrate communities. Thus, removing the dam will improve habitat upstream, restore the habitat to be free

flowing like other reaches, and subsequently improve fish and macroinvertebrate communities.

In addition, the report states that a previously impounded reach of the Sandusky River has demonstrated full recovery following dam removal. The St. John Dam (approx. river mile 50) was removed in 2003 and in 2009 good to exceptional biological index scores were found. This proves that river restoration can be successful in the Sandusky River.

The Ohio Department of Natural Resources (ODNR) believes that walleye are currently responding to the extent of habitat available to them and once additional habitat is available, the fish will seek it out. Removing the dam will allow fish to have access to the additional habitat as well as allow the passage of coarse grained sediment, which serves as fish spawning habitat. The ODNR will continue to monitor the walleye population and adjust management practices if necessary after the dam is removed.

Comment 8: **We received many comments in favor of removing the dam. Dam removal is supported for the following reasons:**

- **The natural riverine ecosystem will be restored.**
- **The natural sediment transportation functions will be restored. Coarse grained sediment will be able to settle in areas where it is currently absent and will provide fish spawning habitat.**
- **Fish will have access to a greater amount of habitat.**
- **Removing the dam will eliminate a safety hazard.**
- **Funds are available to remove the dam, but are not available to repair the dam.**
- **Dams have been removed in other rivers in Ohio and have successfully restored riverine ecosystems.**

Response 8: Ohio EPA agrees with these comments.

End of Response to Comments