

**Ohio EPA Response to Comments**  
**Draft Loading Analysis Plan – Big Darby Creek**  
**November 2020**

The Draft Big Darby Creek Loading Analysis Plan was made available for stakeholder review and comment from October 5, 2020 to November 4, 2020. The Agency received comments from Ohio Scenic Rivers Association (OSRA), Darby Creek Association (DCA), Antoinette Marsh, Barbara Revard, and Don Gregory.

**Comment 1:**     **208 plan expansion:** Ohio EPA should require a 208 plan prescription similar to, and no less stringent than, that which was established in Appendix 9-3 of the 2006 208 plan for the Big Darby Creek watershed. The agency should revisit the 2006 Appendix 9-3 to review its adequacy. The plan should be reviewed for adequacy, improved and expanded to the entire Big Darby Creek watershed. (ORSA and DCA)

Response 1:     Thank you for comments on the Big Darby Creek watershed 208 Plan. These comments are outside the scope of the Big Darby Creek watershed Loading Analysis Plan. The comments have been forwarded to the Ohio EPA Division of Surface Water Central Office 208 Program for consideration.

**Comment 2:**     **Advisory Council support:** We note the related resolution of the Big and Little Darby Creek Scenic River Advisory Council of October 29, 2020, which recommended to the Ohio EPA that “an External Advisory Group or Groups be required as a prerequisite for future extensions of sewer and water service in the Big Darby Creek watershed.” Also, the Advisory Council requested “that the Department of Natural Resources recommend to the Ohio EPA that they support efforts to use the Integrated Priority System (IPS) to model and evaluate water quality outcomes.” (ORSA and DCA)

Response 2:     Thank you for the comments regarding formation of an advisory council. These comments are outside the scope of the Big Darby Creek watershed Loading Analysis Plan. The comments have been forwarded to the Ohio EPA Division of Surface Water Central Office 208 Program for consideration.

**Comment 3:**     **Requiring biological monitoring in permits:** Ohio EPA should include a biological monitoring requirement in the Plain City NPDES permit, and for other NPDES permit holders and stormwater-affected sections of the watershed’s streams, including, but not limited to: Big Darby Creek; Little Darby Creek; Hellbranch Run; and the larger tributaries of Big Darby Creek in the vicinity of Plain City, Marysville, West Jefferson and the US 33 Corridor. (ORSA and DCA)

Response 3:     Thank you for the comments regarding permit monitoring requirements. These comments are outside the scope of the Big Darby Creek watershed Loading Analysis Plan. The comments have been forwarded to the Ohio EPA Division of Surface Water Central Office NPDES Permit Program for consideration.

**Comment 4:**     **Modeling and rare species:** Models and plans must ensure that they provide protection for all rare and sensitive species, including listed fish and mussels. While we appreciate the obligation to reach attainment of stream uses, protection for the Big Darby and tributaries must go beyond this and demonstrate that the biological community is protected, including rare and sensitive species, the assemblage of species that is beyond attainment. (ORSA and DCA)

Response 4:     Thank you for the comment regarding modeling. No new modeling for aquatic life purposes is proposed at this time for the Big Darby Creek Watershed. As detailed in the Loading Analysis

Plan, monitoring shows improvement in the watershed between 2001 and 2014. Continued implementation of the existing TMDL is expected to address the remaining impairments since the Total Maximum Daily Load (TMDL) report is not being modified or replaced.

**Comment 5:** **Modeling based on stream biological responses:** As mentioned above, the Scenic Rivers Advisory Council recommended that Ohio EPA “support efforts to use the IPS model and evaluate water quality outcomes, including impacts to freshwater mussels, of applying Appendix 9-3 prescriptions. The DCA strongly supports modeling that would examine stream biological responses, identify stressors from all sources and causes, and use such a model to guide development, conservation and protection projects. (ORSA and DCA)

**Response 5:** Please see the response to comments 1 and 4 above. Ohio EPA is aware of the IPS model but not application of the model for TMDL projects in Ohio. Perhaps the model could be used locally in project planning or as part of a Nine-Element Nonpoint Source Implementation Strategies (9-Element NPS-IS) plan.

**Comment 6:** **CGP targeted sampling:** The Big Darby Creek construction general permit (CGP) was issued on September 12, 2006, and subsequently revised. We encourage that the Big Darby Creek CGP include additional and targeted sampling to assess the status of and changes to water quality since its issuance and subsequent revision. In the 2014 a survey, sampling was limited in the upper Hellbranch Run, for example. We request additional, extensive targeted sampling in the Plain City area to refine any baseline conditions. (ORSA and DCA)

**Response 6:** Thank you for the comments regarding construction storm water. The Big Darby Creek construction general permit was drafted to implement the 2006 TMDL. The comments have been forwarded to the Ohio EPA Division of Surface Water Storm Water Program for consideration in the next round of the construction general permit.

**Comment 7:** **9-Element NPS-IS:** The plan should establish Nine-Element Nonpoint Source Implementation Strategies (9-Element NPS-IS) plans across the watershed to better address agricultural sources and stresses. The plan must address related pollutant contributions and habitat degradation in a more organized and trackable way, specifically including plans to address agricultural sources. As of this writing, we know of no organized agricultural programs in the watershed that would meet the substance of an NPS-IS plan, focus on these types of stresses and track progress. (ORSA and DCA)

**Response 7:** There are currently no approved 9 Element plans for the Big Darby Creek Watershed. A 9 Element plan is a living, strategic planning document that summarizes causes and sources of impairment, established critical areas, identifies quantifiable objectives to address causes and sources of impairment, and describes projects designed to meet those objectives. The development of 9 Element plan (and the projects described within them) is a local, stakeholder driven process. Ohio EPA Division of Surface Water Nonpoint Source Program reviews and approves the 9 Element Plans. Additional information on 9 Element Plans is available on Ohio EPA’s webpage at: [epa.ohio.gov/dsw/nps/index](http://epa.ohio.gov/dsw/nps/index).

**Comment 8:** **Stream restoration:** Ohio EPA should review the status of all of the stream restoration projects that have been undertaken in the Hellbranch Run watershed. In the neighborhood of \$10 million has been spent on these projects, but we have no comprehensive compilation of their status or success. These restorations should be evaluated in relation to attainment of the Warmwater Habitat use designation. (ORSA and DCA)

Response 8: Ohio EPA previously addressed a similar comment in the response to comments prepared for the Big Darby Creek Watershed Biological and Water Quality Report:

The Agency samples pre- and post-conditions for Section 319 grant projects and prepares separate reports for these projects. These reports are also posted on the same webpage as the Biological and Water Quality Reports ([epa.ohio.gov/dsw/document\\_index/psdindx.aspx](http://epa.ohio.gov/dsw/document_index/psdindx.aspx)). The following are links to reports containing information on projects in the Big Darby Creek watershed:

- [epa.ohio.gov/portals/35/documents/319\\_SWIF\\_TSD\\_2011.pdf](http://epa.ohio.gov/portals/35/documents/319_SWIF_TSD_2011.pdf)
- [epa.ohio.gov/Portals/35/documents/319MonitoringReport2012.pdf](http://epa.ohio.gov/Portals/35/documents/319MonitoringReport2012.pdf)
- [epa.ohio.gov/Portals/35/documents/2013\\_319\\_Report%20Final.pdf](http://epa.ohio.gov/Portals/35/documents/2013_319_Report%20Final.pdf)

There is also discussion of the restoration projects in the Big Darby Creek Watershed Biological and Water Quality Report.

**Comment 9:** **Extent of QUAL2K coverage:** The LAP proposes to use the QUAL2K model. We are concerned that the modeling proposed related to maintaining the watershed's streams' health would not adequately address all the impacts of wastewater discharges on such resources as the Big and Little Darby's mussel community and especially the rare and sensitive species. While we support the use of very conservative models backed by regular in-stream monitoring, there already is a dearth of mussels downstream of discharges such as Plain City and West Jefferson. Modeling must ensure listed mussel species survival. Any analysis of wastewater and stormwater proposals must ensure mussel survival, reproduction and recovery of the mussel community and rare and sensitive species in these segments. We are concerned that some species of fish, such as spotted darter, variegate darter and bluebreast darter, are absent upstream of River Mile 37 as shown by Ohio EPA's monitoring in 2014. This includes the area upstream of US 40 and includes the area of Plain City, and over half of the mainstem of Big Darby Creek. (ORSA and DCA)

Response 9: The draft LAP refers to the QUAL2K model that was developed for the existing Total Maximum Daily Load Report (TMDL). Currently, the Agency is not planning on conducting any new modeling efforts in the Big Darby Creek watershed for aquatic life TMDL purposes. Please review the Big Darby Creek Watershed Biological and Water Quality Report for a discussion regarding Big Darby Creek RM 37 and the dam downstream of Rte. 40.

**Comment 10:** **Listed species protection in the Plain City area:** We note that two federally endangered mussel species, the clubshell (*Pleurobema clava*) and rayed bean (*Villosa fabalis*), recently (2002) have been documented in the Plain City area as part of an ODOT survey, and could be affected by stresses such as increased urban stormwater discharges. There are 22 state and federally-listed mussel species that have been recorded in the Big Darby Creek watershed, including five federally listed species and one recently proposed species, the round hickorynut (*Obovaria subrotunda*). (ORSA and DCA)

Response 10: Thank you for the comments regarding construction storm water. These comments are outside the scope of the Big Darby Creek watershed Loading Analysis Plan. The comments have been forwarded to the Ohio EPA Division of Surface Water Storm Water Program for consideration.

**Comment 11:** **Greater development pressure threatens this state and federal scenic river at a time when it is most needed; by both recreationists and wildlife seeking sanctuary from the demands of modern urban life. Neither may fully appreciate the grave threats to the Darby watershed, but our OEPA and our state government should.**

Your report cites some progress that has been made in the last decade or two in mitigating certain discrete problems in the watershed. And while there has been positive progress on some fronts, including that driven by:

- **Madison County Farmland Preservation zoning**
- **Big Darby Accord**
- **Riparian protection through land acquisition by Metro Parks, Appalachian Ohio Alliance and similar groups**
- **Tying wastewater discharge in to existing WWTP facilities**

Many important threats to aquatic life remain, or have increased, including many problems that have intensified since 2014, such as:

- **Increasing sediment from subdivisions and other development**
- **Increasing phosphorous from modern farming practices**
- **Groundwater concerns on the old RANCO site**
- **Excessive agricultural dewatering of the lower Big Darby**
- **Operations and effluents of the Plain City WWTP**

Some of these problems may well be to blame for the diminishing mussel population on the creek, increased turbidity and other adverse impacts. All of these problems require vigilance and renewed protection efforts. We will not get another chance to get this right. (Don Gregory)

Response 11: Ohio EPA has a strong appreciation of the value of the Big Darby Creek watershed, including Little Darby Creek. Ohio EPA has a history of over 20 years of analysis and actions taken to protect the unique aquatic life in this watershed. It is important to note that Ohio EPA is limited in the scope of our authority by the laws that authorize our activity, and that not all problems or threats fall within Ohio EPA's purview. For example, agricultural activity does not fall under the scope of Ohio EPA's authority. We are authorized to monitor, report on, and calculate loadings from Nonpoint Source pollution sources, but often we do not have direct authority over them.

Ohio EPA does have direct, regulatory authority over wastewater treatment plants. As mentioned, it appears Plain City has had operational issues in the past. Ohio EPA has evaluated the situation and believes that Plain City has resolved the problems with their discharge in early 2020 by hiring Madison County to be responsible for plant operation.

Ground water concerns at the old Ranco facility are governed by the ongoing RCRA Corrective Action. This is a regulatory structure put in place to ensure that there is a control mechanism for any problems that may arise. The endpoint of the Corrective Action is to protect human health and the environment.

**Comment 12: Concern has been expressed about the proposed and potential increased wastewater loads and concurrent stormwater impacts in several rapidly developing parts of the watershed, specifically in and around the Village of Plain City and Hilliard. There was not any area, watershed or analysis to Village of Plain City Wastewater Treatment Plant 208 Facilities Plan, Prime Project No. 2OH01WD-17005-03 (Plain City's 208 plan) that included the impact to the Big Darby Creek incorporating the changes and the impacts downstream of Village of Plain City. (Antoinette Marsh and Barbara Revard)**

Response 12: Plain City submitted a plan for future growth to Ohio EPA in June of 2020. This plan is quite different from the plan that was submitted by Columbus in 2018 and then withdrawn in 2019. Ohio EPA is reviewing this plan and will provide comments to Plain City for consideration. Any expanded wastewater discharges are subject to evaluation under the antidegradation rule (OAC

3745-1-05) which provides for protection of existing uses. The 208 plan lies outside the scope of the LAP.

**Comment 13:** My principal concern relates to the volume of water increases and the capacity of the Big Darby to handle the shear volume at any one time. Periodic flooding already occurs due to lack of capacity south of the Village of Plain City. Additional or more frequent flooding means areas meant for slower water run off along with soil percolation and vegetation filtration will now experience a larger volume water overflow, more frequently and potentially with larger amounts and concentrations of organic material that will enter the BigBidg (sic)Big Darby Creek. Moreover, the sheer volume of discharge in the Plain City's 208 plan is "unreasonable drainage." I am enclosing OSU Extension Agriculture and Resource Law bulletin that provides the Ohio common law doctrine on drainage. Essentially the Village of Plain City is changing the Big Darby Creek natural flow by changing the amount of water volume at a point source and the current channel's ability to handle the proposed water discharge. (Antoinette Marsh)

Response 13: Ohio EPA's authority over waters of the State is related to the quality of the water, not necessarily the quantity of water. Water quantity is typically addressed by local government. That said, Ohio EPA does directly regulate storm water discharges from development, and in order to protect the channel from the above-mentioned degradation, various Best Management Practices (BMPs) are included as post-construction controls as part of the Construction General Permit. In addition to the normal BMPs that are required in the CGP, there are specific, additional requirements for construction activity that take place in the Big Darby Creek watershed. To date, these additional requirements have seemed to convey appropriate protection to the unique aquatic life in the Big Darby Creek watershed. We have referred your comment to our Ohio EPA Division of Surface Water Storm Water Program to determine if further adjustments to the CGP may be necessary.

**Comment 14:** Has the USDA Water and Soil Conservation or the Madison County Engineers commented on the Plain City's 208 plan or the Ohio EPA's Draft Loading Analysis Plan? These two need to be read together and with some reflection on the current state of affairs for the Big Darby Creek and its watershed. (Antoinette Marsh)

Response 14: The Madison County Engineers and both the Madison County NRCS and Soil and Water Conservation District were notified of the Draft Loading Analysis Plan.

**Comment 15:** The increase of hardscape - driveways, additional streets and sidewalks - have known effects on river quality. According to research by America's Rivers, the proposed amount of future development in this region will push the percentage of impervious surface runoff well beyond what a river needs to remain vital and healthy. Over the past several years the Darby has flooded much more often, and one has to wonder if the nearby addition of a subdivision upstream and the addition of impervious surfaces built there, have forced that change. More water draining quickly into the Darby, when before development it would have been slowed as it drained through fields. (Barbara Revard)

Response 15: Ohio EPA's NPDES Construction Storm Water General Permit includes several special protections for Big Darby Creek, including riparian setbacks, greater volume of retention, and ground water recharge requirements. Ohio EPA believes these additional requirements will aid in protecting the Big Darby Creek watershed.

**Comment 16:** The Big Darby Creek is recognized as a National Scenic River and is regarded as one of the most biologically diverse aquatic ecosystems in the midwest. Scientists have long recognized the Big Darby for its outstanding diversity of freshwater mussels in all of North America.

Freshwater mussels are not only an indicator of a healthy water system, they are “ecosystem engineers” who change their watery habitat to make it suitable for their needs, and for other organisms. Simply the feeding habits of mussels “cleans” the water by removing bacteria and fungi attached to organic particles the mussels have removed from the water. Large beds of mussels act as a “garden” that attracts fish to feed on the insect larvae and algae attached to the mussels shell. A healthy bed of freshwater mussels anchors themselves onto the stream bed, which can stabilize the stream bottom during flooding.

And mussels are but only one of the multitude of animal species that rely upon the Big Darby. My family has been privileged to live on the banks of the Big Darby for the past 16 years. Avid birders, we have tallied over 100 species of birds for our property list. Notably, these include nesting Prothonotary Warblers, Red-headed Woodpeckers, Great Horned Owls, Wood Thrush and just to the south of our property, a rookery of Great Blue Herons with over 18 active nests observed in the summer of 2020.

We have been fortunate to watch red foxes, beaver and river otters along “our” stretch of the Big Darby, and we are just one family watching wildlife and the beauty of this gem of a river in central Ohio. (Barbara Revard)

Response 16: Thank you for the comment.

**End of Response to Comments**