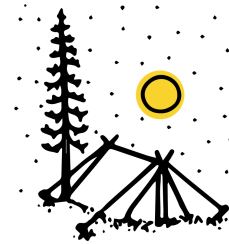




Ohio Environmental Council



Save Ohio Parks
No fracking on public lands

**Comments of the Ohio Environmental Council, Darby Creek Association, Center for Biological Diversity, and Save Ohio Parks
Regarding the Modified NPDES Permit for the Plain City WWTP 4PB00016*KD
Submitted August 1, 2023**

INTRODUCTION

The Ohio Environmental Council, Darby Creek Association, Center for Biological Diversity, and Save Ohio Parks submit these comments to continue the essential efforts to protect the Big Darby and Little Darby Creeks, Ohio's most diverse streams of their size. Our organizations, and our members, have participated diligently in proceedings regarding the Plain City Wastewater Treatment Plant (WWTP), providing input the the State of Ohio and Ohio EPA must not ignore.

Of importance, the permit modification must include an effluent limit and associated reporting requirements for Dissolved Hexavalent Chromium. The permit modification will result in increased loading and must undergo antidegradation review.

Collectively, we appreciate the additional opportunity to engage the agency as it considers the modified permit for the Plain City WWTP. As the Ohio EPA considers our comments—and the comments of individuals and other organizations—we encourage a holistic approach. Each program, project and permit, and each impact, to a

watershed cannot be considered in isolation. As Central Ohio continues to expand rapidly, both in population and in geographic footprint, stream quality will be subject to the risk of degradation and loss of biodiversity. All governmental entities must work toward comprehensive, sustainable, and adequately protective planning.

Previously, some of the undersigned organizations outlined the case for why both creeks should be classified as Outstanding National Resource Waters, given their immense ecological value to Ohio and the United States. We provided the recommendation during the agency's Triennial Review process in early 2023, and we still await the agency's final decision regarding that classification. The information provided during that process is relevant to the review of the Plain City WWTP's permit.

With these preliminary considerations in mind, the undersigned organizations provide the following comments regarding the proposed modifications to the Plain City WWTP NPDES permit. For any immediate questions and clarifications regarding our comments, please contact Chris Tavenor (ctavenor@theoec.org), Associate General Counsel for the Ohio Environmental Council, or John Tetzloff, President, Darby Creek Association (jftetzloff@aol.com).

SUMMARY OF ISSUES

- **Ohio EPA must account for cumulative impacts of wastewater and stormwater upon Big Darby Creek and tributaries.**

The Ohio EPA has not adequately addressed the combined impacts of wastewater and stormwater on Big and Little Darby Creeks and tributaries. It must be demonstrated that what is in place and proposed is adequate and effective for the restoration and protection needed before a permit is issued. This permit would allow stormwater expansion before adequate stormwater protection is demonstrated and in place. This demonstration should include adequate and effective protection of federally listed mussels.

- **Ohio EPA should further expand Section 208 planning and Appendix 9-3 prior to approval and further work on the Plain City WWTP.**

Ohio EPA has stated that the future expansion in Plain City would trigger the need for a revision of the Plain City Section 208 plan. However, we believe that the need for a 208 update has already been triggered by the plan to nearly double the capacity of its WWTP and recent and ongoing expansions of Plain City's boundaries. We ask that the

Agency immediately start discussions of revising the Section 208 plan, and begin to communicate what the Agency would require in that revision.

- **Ohio EPA should support the development and implementation of an Integrated Prioritization System for Big Darby to properly assess the impacts of permits such as the one in question.**

Specifically, Ohio EPA should condition the Plain City WWTP permit on the development of an Integrated Prioritization System for the Big Darby Creek watershed.

- **Ohio EPA should provide additional accounting for the flow reduction from 1.5 mgd to 1.25 mgd.**

Additional information is needed to fully understand both the logic and the impact regarding the decrease in flow reduction.

- **Ohio EPA should include mussel-specific WET testing.**

Solid evidence exists that mussel-specific WET testing would provide the information needed, as encouraged by the U.S. EPA in the last permit review process.

- **Ohio EPA should ensure adequacy and review of the proposed mussel survey.**

For example, third party review of mussel sites could provide additional points and data to ensure at-risk ecosystems are adequately protected. The mussel survey specifications in the proposed modified permit are not adequate to characterize the current condition or future impacts of the Plain City WWTP, stormwater from associated development, or other stresses and sources.

- **Ohio EPA must retain the limit on Dissolved Hexavalent Chromium in the modified permit.**

The Ohio EPA has removed requirements regarding Dissolved Hexavalent Chromium from this modified permit, but questions exist regarding this decision, both pertaining to a water quality based effluent limitation and the determination of projected effluent quality. Ohio EPA should fully explain its decision to remove the Chromium-VI limit and associated reporting requirements from the permit as part of this proposed modification. Ohio EPA must retain the Chromium-VI limit and reporting requirements

in this modification.

- **Ohio EPA must appropriately account for Total Dissolved Solids and Antidegradation in the modified permit.**

We remain very concerned about nitrate, chlorides and Total Dissolved Solids (TDS) impacts on rare mussels related to the discharge. For example, TDS might include Parameter 00940 - Chloride, Total, but there is no limit on this parameter in the permit. Limits on chloride and TDS should be restored now to the permit. We believe that although there is a proposal to reduce the ADDF to 1.25 mgd, Ohio's antidegradation policy must still apply and ensure long-term protection of rare and sensitive species, including but not limited to federally listed mussels.

SPECIFIC COMMENTS

- 1. Ohio EPA must account for cumulative impacts of wastewater and stormwater on Big Darby Creek.**

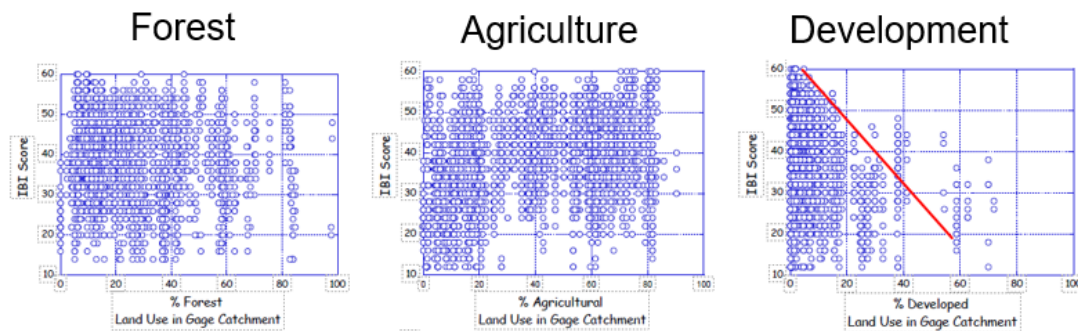
The Ohio EPA has not adequately addressed the combined impacts of wastewater and stormwater on Big and Little Darby Creeks and tributaries. It must be demonstrated that what is in place and proposed is adequate and effective for the restoration and protection needed before a permit is issued. This permit would allow stormwater expansion before adequate stormwater protection is demonstrated and in place. This demonstration should include adequate and effective protection of federally listed mussels.

While we recognize that some elements of Ohio EPA's stormwater permit for the Big Darby watershed are improved over the statewide permit, we remain very concerned that these are still inadequate for protection, due to such issues as high impervious surface still allowed by the permit (~50% or more?) and variances from components such as setbacks distance in the riparian area. Stormwater has a major effect on Ohio stream quality and attainment in developed areas, not to mention species richness and rare and sensitive species survival.

We maintain that each further development parcel and its stormwater adds to stresses to the creeks and degradation. The high bioindex scores that are found in Ohio EPA surveys of Big and Little Darby Creeks are not evidence of adequacy of the stormwater permit, as they are significantly distant from stormwater control measures and could be due to other factors. The Agency has not specifically analyzed the stormwater permit's adequacy or determined stormwater area biological results in

streams. Other efforts and programs, such as agricultural best management practices, land conservation and stream restorations, have taken place at the same time and might be responsible for some ecological lift, such as measured for the fish communities. In contrast, and very significantly, mussel populations and species have declined despite protective measures such as riparian buffers which far exceed those in the stormwater permit. Therefore, while buffers are essential to achieve things like better QHEI scores and riparian habitat conditions they are not an assurance of protection, and this is certainly the case for mussels. Other factors, such as the amount of impervious surface, flow alteration and an extensive mixture of stormwater pollutants (e.g., Bradley et al 2023), might be more correlated or better predictors of mussel and other rare and sensitive species survival.

State and local permit programs and conservation planning must continue to review further progress in improved technical evaluation and protections, including demonstration of such evidence of adequacy of the stormwater permit’s environmental outcomes. We cannot wait until monitoring results clearly demonstrate degradation in the creeks. (See figure below showing the rapid decline of fish IBI scores after limited development). Stormwater impacts are very difficult and very expensive to reverse, and stream quality needs to improve to support rare and sensitive species at risk and that have declined. The approach must be precautionary with a significant margin of safety since impact reversal is unlikely.



Additional points: Urban impact is cumulative/additive (not mitigated or “cancelled out” by natural area); decline is very likely after a few percent “development”; above graphs do not specifically measure sensitive or “high quality” fish species (such as using a CIBI score).

Plots of IBI vs forested land covers (left), agricultural land covers (middle) and developed land covers (right). Land cover represents percent in upstream catchments at gage locations; biological data represents any data on the same river within 10 miles of the gage. Line on developed land plot approximates a threshold line drawn by eye. Source: The Development of a Framework for Managing Flows under the Great Lakes Compact: Issues, Concepts, and Tool Development, MBI 2009 Technical Report MBI/2009-1

The figure above provides a comparison of three land use covers in Ohio, using Ohio EPA stream fish data. Note the failure of the data points to show attainment of EWH (50 and above) at higher levels of development in a subwatershed, i.e., in the upper middle and right of the “Development” graph. Note that agricultural watersheds

continue to have high scores even at high percentages of agricultural development. Source: The Development of a Framework for Managing Flows under the Great Lakes Compact: Issues, Concepts, and Tool Development Chris O. Yoder, Research Director Midwest Biodiversity Institute, Edward T. Rankin, Senior Research Associate Ohio University Voinovich School for Leadership & Public Affairs. A Combined Report to: Ohio Environmental Council and The Nature Conservancy.

In the Division of Surface Water's "Response to Comments" of August 2022 for the Plain City WWTP, Permit #: 4PB00016*JD, Response #1, Ohio EPA stated

"We recognize your passion for the Big Darby Creek and share your interests in protecting this valuable ecosystem, and we believe the NPDES permit will protect the quality of the stream."

We strongly disagree that the Plain City WWTP permit, the present general stormwater permit, and the present Appendix 9-3 of the Water Quality Management Plan, are adequate for protecting Big Darby Creek and tributaries. Certainly the Plain City permit by itself would not be adequate, as it would not address nonpoint source stresses such as stormwater and habitat. The protection approach must be made comprehensive and adequate and be based on proven thresholds for development and actual environmental outcomes including protection of rare mussel species, not based on a reliance on administrative measures.

The package and extent of protections must be adequately protective of rare mussel species. These species have been declining. For example, note the absence of northern riffleshell and clubshell mussels in the EnviroScience (2015) mussel watershed survey, and the 2008-2015 effort by Ohio State University, ODNR and the US Fish & Wildlife Service to augment populations by translocating thousands of individual mussels from the Allegheny River to this watershed. Several federal species are shrinking in their distribution in this watershed and could be extirpated from the watershed without adequate protection. We are concerned that this is already a late time to be addressing this threat, making it harder for measures to be adequately effective. Please see the recent report done for ODNR on the decline of mussels in the Little Miami River as an example of a similar problem (Hoggarth 2020).

Potential impacts of this proposal, along with the potential future expansion through another wastewater facility and extensive accompanying stormwater, are too great to be ignored now. Ohio EPA, Plain City, the counties and the public must comprehensively (including but not limited to stormwater, wastewater, habitat, conservation land) and adequately address stresses to the Creek's rare and sensitive species now through planning and restoration and protection measures. Now, before

the permit is issued, is the time to start that planning and analysis, rather than wait until it is too late.

As a specific item, the Ohio EPA Response #30 in the 2022 Response to Comments states:

“The current outfall at Plain City WWTP includes a post-aeration cascade, which serves as an effluent calming structure. The proposed plans include additional cascade capacity to aerate and calm the additional flow.”

This might be referring to the quoted public comments that states “Even if the expanded WWTP is operated competently, it is well-documented that streams degrade as the percentage of impervious surfaces increase in a watershed, even with BMPs in place.” While we have no problem with the effluent’s discharge having “additional cascade capacity,” we think this response misses the key point of the comment’s statement about streams degrading as the percentage of impervious surface increases. This is well-documented, and is not addressed by the effluent discharge’s cascade capacity; it’s a separate issue. A key problem is flow alteration due to stormwater, including potentially less groundwater infiltration than is needed to maintain key species in streams at low flows, especially mussels. Mussels are susceptible to low flows because stream habitat shrinks as streamflow declines, and if stormwater does not allow for adequate flow during low flow periods, stresses will be even greater, leading to losses in numbers and species richness. We are concerned that infiltration to groundwater is not adequate to protect some fish species and mussels during low flows. This is the “flip side” of stream flashiness. Low flows/altered hydrology also can reduce the richness and diversity of some fish species, especially in tributary streams.

2. Ohio EPA should further expand Section 208 planning prior to further work on the Plain City WWTP.

We recognize and appreciate that Ohio EPA indicated it would pursue extending “Big Darby Creek protections already required in Franklin County.” Specifically, the suggestion is to extend the protections originally outlined in Appendix 9-3 of the 2006 State Water Quality Management Plan. Our first comment regarding this intention is that it needs to happen immediately, as Plain City expansion is already under way. In addition, Plain City is reviewing its zoning code as we write this.

Secondly, we emphasize that the protections in Appendix 9-3 were just one of the ways in which the jurisdictions of Franklin County met the Agency’s requirements for added protections. The provisions in Appendix 9-3 were created through a

multi-jurisdictional, multi-stakeholder group (the External Advisory Group (EAG)) that was tasked with satisfying four goals set by the Ohio EPA in the 2002 *Water Quality Management Plan Scioto River Basin and Blacklick Creek*. Note that the Agency also put a moratorium on new development until these four criteria were met. Here is the text of that decree:

Unplanned and uncontrolled growth poses a threat to the Big Darby Creek watershed and the unique biodiversity of its aquatic and prairie land ecosystem. It is recognized that some future development of this area will occur. While the City of Columbus will ultimately provide centralized service within a portion of it, as described in Section 5, no service whatsoever shall be provided within the ESDA until the following conditions are met for the area to be served: 1) riparian buffer restrictions are in place; 2) comprehensive storm water management planning has occurred; 3) conservation development restrictions are in place which involve the concept of clustering development to preserve tracts of open space, including farmland; and 4) adequate public facilities, including roadways, exist or are planned to support any proposed development.”(p. 43)

The provisions that ended up in Appendix 9-3 were the EAG’s recommendations resulting from discussions of the group, thereby partially satisfying the requirements of the Ohio EPA moratorium on development. However, the EAG was not set up to accomplish Criteria 2, comprehensive stormwater planning. This Criteria was established by the Agency in recognition of the crucial role played by stormwater as both a vector of pollution and a source that could forever alter the natural flow regime of the watershed. Comprehensive stormwater planning was undertaken by a coalition of all the region’s jurisdictions, which came to be known as the Big Darby Accord. The Agency was of course involved in an advisory role, and the process was organized by an outside contractor. A number of key goals were identified Big Darby Accord Watershed Master Plan in the planning process, including:

- Preserve and protect the biology of the creek system, including the preservation of rare and endangered species.
- Restore parts of the creek and tributaries that were degraded.
- Undertaking the best available scientific modeling to determine a sustainable level of development that the subwatershed could handle without degradation from stormwater and other factors.
- Performing an analysis of the landscape to identify the most environmentally sensitive areas that should be avoided for new development. This resulted in a tiered system of land that identified areas suitable for perpetual conservation, and also areas that were suitable for development.
- The production of a land use map that identified where and what kind of development would occur throughout the subwatershed.
- Identify monitoring goals to ensure that the plan was working over time.
- Establish implementation processes to make sure that the plan would be carried out.

- Respect current zoning to protect the rights of all landowners. (By-right zoning)
- Adopt an Adaptive Management approach so that the plan could be changed.

The planning process in Franklin County resulted in the creation of a master plan, the Big Darby Accord Plan, which was adopted by all jurisdictions in the watershed. Our point in including this history is to emphasize that extending the provisions of Appendix 9-3 into Madison County is insufficient in and of itself. Ohio EPA must also extend the requirement that comprehensive stormwater planning needs to occur before any further development is approved in the Big Darby watershed portion of Madison County. There is no reason why Madison County (and other counties) should be handled any differently than Franklin County.

In summary we strongly urge the Agency to require the same kind of planning objectives that were outlined in Franklin County, especially that comprehensive stormwater planning be completed, with the goal being to protect the biological integrity of the Big Darby Creek and its tributaries. Specifically, an External Advisory Group should be formed. The original trigger for the Agency's involvement in Franklin County was the threat of rapid development. It is incontestable that such a trigger now exists in Madison County and Plain City.

As a final point, we believe there would be value in creating a regional Section 208 plan for the watershed in Madison, Union and Logan Counties. Rapid development is occurring, or threatening to occur, throughout the broader region, and regional collaboration would be preferable for many reasons, most notably to assure that cumulative impacts are considered in modeling efforts. Ten jurisdictions were involved in the Big Darby Accord, so multi-jurisdictional cooperation is not a pipe dream or without precedent.

One final note related to the extension of Franklin County protections to Madison County and elsewhere. We have noticed comments in the press by the Building Industry Association (BIA) to the effect that such extension would be onerous. We would like to point out that the BIA was a voting member of the External Advisory Group in Franklin County. All the recommendations sent to the Agency that subsequently became the provisions of Appendix 9-3 *were consensus recommendations*, meaning that every member of the EAG supported them, including the BIA. On several occasions the BIA (and other groups) did not agree to proposed recommendations, and these were not adopted into Appendix 9-3. Thus the BIA agreed to every provision that it is now opposing.

Ultimately, the Ohio EPA should place additional conditions upon the draft modified permit that requires additional planning—whether Section 208 planning or other efforts—designed to account for cumulative stormwater impacts expected as Central Ohio continues to develop. The Ohio EPA has the authority to develop such context-specific conditions for permits; for example, in OAC 3745-39-03 (in the MS4 context):

For any permit issued to a regulated small MS4, the director shall include permit terms and conditions to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) to protect water quality, and to satisfy the appropriate water quality requirements of Chapter 6111. of the Revised Code and the rules adopted thereunder. Terms and conditions that satisfy the requirements of this section shall be expressed in clear, specific, and measurable terms. Such terms and conditions may include narrative, numeric, or other types of requirements (e.g., implementation of specific tasks or BMPs, BMP design requirements, performance requirements, adaptive management requirements, schedules for implementation and maintenance, and frequency of actions). OAC 3745-39-03(C).

Given all of the complex biological and water quality issues at play in the Big Darby Creek watershed, the Ohio EPA should utilize its authority to condition permits in the watershed, like this permit, accordingly.

3. Ohio EPA should support the development and implementation of an Integrated Prioritization System for Big Darby to properly assess the impacts of permits such as the one in question.

Ohio EPA should support the development and implementation of an “Integrated Prioritization System” (IPS) and implement it as a condition directly into the permit itself. An example of IPS for Big Darby would be the one referred April 30, 2023, to recently by the ODNR Scenic Rivers Big Darby Scenic River Advisory Council and sent to the ODNR Director, and that which was recommended June 27, 2023, to Governor DeWine by the Ohio Scenic Rivers Association. We note that one application of an IPS prepared by the Midwest Biodiversity Institute is used in northeast Illinois¹ and another is used in the Metropolitan Sewer District in Hamilton County. It is imperative to note that these examples address Restorability (for impaired waters) and not Susceptibility and Threat (for attaining waters), such as is the case in the Big Darby Creek watershed. An IPS for the Darby would need to address Susceptibility and Threat.

¹ See <https://ldpwatersheds.org/about-us/lower-des-plaines-watershed-group/our-work/ips-model/>;
See https://www.drww.org/wp-content/uploads/2017/09/8.17.17.EB_Yoder_IPS_Model-DRWW.pdf. also

4. Ohio EPA should provide additional accounting for the flow reduction from 1.5 mgd to 1.25 mgd.

The fact sheet for the permit modification states: “The modification would reduce the plant’s authorized average daily flow from 1.5 million gallons per day to 1.25 million gallons per day.”

Please explain how this change in the effluent volume to 1.25 mgd (average daily design flow/ADDF) would be achieved. For example, would it be through reduction of the flow or influent to the plant because of a reduced number of sewer taps? Ohio EPA’s NPDES Fact Sheet does not explain why there would be a lower ADDF. Would the other 0.25 mgd go to the proposed WWTP located to the south near I-70 (or other site) because of a change in plans for wastewater management? We are concerned there would be no actual net environmental improvement from this change; as Ohio EPA has stated, the pollutant loads from the facility would be the same as at 1.5 mgd. *And if the other 0.25 mgd might be treated at another facility, then the stormwater impacts will likely remain.*

5. Ohio EPA unreasonably excluded U.S. EPA-requested mussel-specific WET testing from the underlying permit; mussel-specific WET testing should be included in this modification.

Ohio EPA’s rejection of WET testing for mussels is unreasonable. First, there are acute (96-hour) and chronic (28-day) WET testing methods for mussels which are documented by the American Society for Testing and Measurements. Further, the new 7-day WET testing method referenced in the U.S. EPA’s Comment Letter to the OEPA is robust because (1) the procedure involved is clearly laid out in Wang et al. and (2) the coefficient of variation (“CV”) for the mussel WET testing procedure, though slightly higher than that for *C. Dubia* and fathead minnows, is not outside the range of other approved EPA test methods.

In its Reply to Comments for the previous version of the Plain City WWTP NPDES permit, the Ohio EPA dismissed the U.S. EPA’s suggestion that the permit require mussel-specific WET testing. Ohio EPA’s reasoning was that the mussel-specific WET testing is not reliable enough to include in a NPDES permit. Ohio EPA should explain this reasoning in more detail, given all of the following:

- ASTM- and U.S. EPA-approved mussel-specific WET testing methods exist;
- the 7-day method referenced in the U.S. EPA’s comment has acceptable reliability;
- the CV for IC25 calculations under the 7-day method falls within the range of approved EPA methods; and

- the method was successfully deployed in an interlaboratory study.

Given these facts, Ohio EPA's to exclude mussel WET testing from the permit was unreasonable and the agency's decision may have been against the plain language of 40 CFR § 122.44(d)(ii): "the permitting authority shall use procedures which account for the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity)." The Ohio EPA should therefore further explain its reasoning for rejecting mussel-specific WET testing.

6. Ohio EPA must improve the mussel survey included in the permit.

The proposed permit modification of June 13, 2023, 4PB00016*KD, states:

2. Survey of Mussel Populations

The permittee shall conduct a survey of mussel populations in the receiving stream as expeditiously as possible but not later than the dates in the following schedule:

- a. No later than October 1, 2023, the permittee shall submit to Ohio EPA Central District Office for review and acceptance a plan of study for conducting a survey of mussel populations in the receiving stream. The plan shall be based on the "Ohio Mussel Survey Protocol" (Ohio Department of Natural Resources, 2020). The permittee shall consult with the United States Fish and Wildlife Service and the Ohio Department of Natural Resources in development of the plan. (Event Code 22099)
- b. No later than October 1, 2024, the permittee shall complete the mussel survey in the receiving stream. The permittee shall notify Ohio EPA Central District Office within ten (10) days of completing the survey. (Event Code 21599)
- c. No later than January 1, 2025, the permittee shall submit a report to Ohio EPA Central District Office detailing the findings of the mussel survey. Specifically, the report shall provide the species, number, and location of any federally-listed mussel species identified during the survey. (Event Code 61099)

While the proposed permit includes a survey of mussel populations, the conditions related to this survey need to be improved for the survey to be useful. We request review by OEC and DCA prior to a final survey plan, adequate survey extent and appropriate locations, inclusion of eDNA sampling, comparison to previous surveys and fish host locations, third party review of the report draft and public access to the data and final report. Details are below.

Third party review of mussel sites could provide additional points and data to ensure at-risk ecosystems are adequately protected - The mussel survey specifications in the

modified permit are not adequate to characterize the current condition or future impacts of the Plain City WWTP, stormwater from associated development, or other stresses and sources. Because mussels, including but not limited to federally listed species, are a fundamental part of the Big Darby Creek's status, such as related to its Outstanding State Resource Water and National and State Scenic River status, it is essential to ensure that rare and other mussels are protected.

Before a survey plan is finalized, the Ohio Environmental Council, Darby Creek Association, and other interested parties should have the opportunity to review and provide input on the number and location of mussel survey sites, providing a collaborative approach to ecosystem monitoring and protection. The mussel survey sites should extend upstream and also downstream at several appropriate locations at least to the area below the Darby Dan Farm dam and in Battelle Darby Metro Park. There should be an adequate number of sites to fully characterize impacts, stresses and sources of stress. Too few survey sites will not determine the mussel community current condition or potential future impact of the WWTP's discharge or associated development and other stresses. The latest watershed mussel survey (EnviroScience 2015) did not adequately survey mussel sites in the Plain City section of Big Darby Creek and downstream.

It has recently been demonstrated that environmental DNA (eDNA) is a tool that can assist in surveying and determining biodiversity. eDNA is now more commonly used in detecting the presence of mussels and other species in an aquatic environment (e.g., Klymus et al 2017; Klymus et al 2020; Preece et al 2020). Because the rare mussel species are already at low numbers and can be difficult to find by conventional surveys (e.g., note their absence or low numbers in EnviroScience (2015)), eDNA samples should be taken to supplement a survey.

The report requirements should be modified to include all mussels recorded and data collected, not just that for federally listed species. It appears that proposed permit condition 2.c. above limits the report to the "species, number, and location of any federally-listed mussel species identified during the survey." We would expect inclusion of all species for the report to be useful.

The report should include narrative and tabular comparisons to the species and data recorded previously in the survey area (the survey sites and all sites between) from all recorded sources (e.g., The Ohio State University Museum of Biological Diversity, EnviroScience, Ohio EPA, ODOT, etc). The Midwest Biodiversity Institute has assembled a consolidated set of mussel and fish data for central Ohio in the Scioto River basin.

The survey should compare mussel species at these sites to known fish host presence (such as, but not limited to, fish species present at the nearest Ohio EPA monitoring site from Ohio EPA surveys since at least 2001, and OSUM records). This is important because of mussel/fish host relationships and the limited/reduced number of fish species upstream of the Darby Dan Farm dam at RM 37.2 (e.g., see Ohio EPA 2018 and Rankin 2022).

The draft study plan and results report should be reviewed by a third party (i.e., a university, government agency, or non-affiliated consultant) before the study plan and report are provided as final. The study plan must determine if the sites selected are appropriately located to determine mussel presence. Finally, the full report and data should be made available to the public including for comment.

7. The permit modification must retain and include a Dissolved Hexavalent Chromium limit and associated reporting requirements.

While the reduction from 1.5 MGD to 1.25 MGD outflow, the ratio of PEQ to PEL is still in the range that triggers limitation requirements. Accordingly, the regulations that OEPA identified in the current permit as a basis for limitations of chromium-VI are still relevant, and the fact that the modified permit does not include a Chromium-VI limit is an error.

Ohio EPA should fully explain its decision to remove the Chromium-VI limit and associated reporting requirements from the permit as part of this proposed modification. Ohio EPA must retain the Chromium-VI limit and reporting requirements in this modification.

Regarding Water Quality Based Effluent Limitation for dissolved hexavalent chromium:

OAC 3745-02-06 requires that NPDES permits include either Water Quality Based Effluent Limitations or monitoring requirements for pollutants based on “the reasonable potential of that pollutant to cause or contribute to an excursion of any applicable water quality standard.” Under OAC 3745-02-06(B), the reasonable potential analysis first requires the Ohio EPA to determine the ratio between the Projected Effluent Quality and the calculated Preliminary Effluent Limitation. If this ratio is between 0.75 and 1, then the Ohio EPA must consider the four additional conditions listed in OAC-3745-02-06(B)(1)(i-iv). The first additional condition is the “Total Load” condition, and is met when the ratio of the total load of pollutant in the receiving water to the total loading capacity is greater than 0.75. If the PEQ/PEL ratio

exceeds 0.75 for a given pollutant and one of the additional conditions is met, that pollutant is classified as a Group 5 pollutant, and an effluent limitation must be imposed, pursuant to OAC 3745-33-07.

In the prior version of the Plain City WWTP NPDES Permit, Ohio EPA had determined in this way that dissolved hexavalent chromium, or chromium-VI, was a group 5 pollutant under the 1.5 MGD scenario. Specifically, it found that the PEQ/PEL ratio was between 0.75 and 1, and that the Total Load condition was satisfied. Accordingly, it included a limit for chromium-VI in the NPDES permit.

The fact sheet for the modified permit under the 1.25 MGD scenario shows that both the average and maximum PEQ/PEL ratios are still between 0.75 and 1. However, the Ohio EPA's determination for this modification is that chromium-VI is a group 4 pollutant. Ohio EPA's determination appears to be in error, and/or suggests that Ohio EPA may have determined that the "Total Load" condition was not met under the 1.25 MGD scenario. However, these calculations were omitted from the fact sheet for the modified permit. Ohio EPA should publish all of its applicable calculations along with explanation(s) for its determinations. In particular, Ohio EPA should publish its calculation of the chromium-VI loading capacity for Big Darby, and specify "the numeric criteria applied in determination of the PEL" of which that loading capacity is protective, referencing OAC 3745-2-06(B)(1)(b)(i)(b).

Ohio EPA should fully explain its decision to remove the Chromium-VI limit and associated reporting requirements from the permit as part of this proposed modification. Ohio EPA must retain the Chromium-VI limit and reporting requirements in this modification.

8. Ohio EPA must conduct Antidegradation review for this modification.

Net increase in pollution will result from this permit modification and Ohio EPA must conduct an associated antidegradation review. This modification eliminates the Dissolved Hexavalent Chromium limit from the current permit. The loading of Dissolved Hexavalent Chromium will increase under this modification. Antidegradation review is required.

In addition, we remain very concerned about nitrate, chlorides and Total Dissolved Solids (TDS) impacts on rare mussels related to the discharge. For example, TDS might include Parameter 00940 - Chloride, Total, but there is no limit on this parameter in the permit. Limits on chloride should be included in the permit.

We believe that although there is a proposal to reduce the ADDF to 1.25 mgd, Ohio's antidegradation policy must still apply and ensure long-term protection of rare and sensitive species, including but not limited to federally listed mussels. The Ohio EPA's 2023 Fact Sheet states "No antidegradation review was necessary," but we strongly believe that degradation, especially with both wastewater and the stormwater this WWTP will enable, are more than enough to lead to degradation and the permanent loss of species. Under an increase in flow to 1.25 mgd, the wastewater would constitute as much as 80% of low flows, and rare federally-listed mussel species are missing from almost all sites with significant upstream development in the central Scioto River basin. For a comparable problem, we encourage the Ohio EPA to review Michael Hoggarth's recent survey of the Little Miami River, conducted for ODNR. Federally-listed mussels were almost entirely absent or at least undetected, and mussels in general have significantly declined, even as wastewater plant permit compliance has improved.

CONCLUSION

We appreciate the Ohio EPA's June 13, 2023 statement about extending Appendix 9-3 to Madison County. Because of potential extensive development and resultant stormwater, any extension of Appendix 9-3 (and related improvements) should include Union and Logan Counties also (see above). The signatories of these comments strongly support expanding Appendix 9-3's coverage, but also strongly support that the other counties be included because of ongoing or proposed development in those counties. In the case of Union County, part of Plain City is in Union County, and nearby developments have been expanding near US 42 north of Plain City in the Sugar Run/Big Darby Creek without adequate planning.

We emphasize the importance of being comprehensive in the coverage of potential impacts again, and especially stormwater, and how Ohio EPA is not being comprehensive in their analysis of the impacts of the huge expansion in development that the proposed permit modification would support, along with the projected expansion allowed by the proposed Mid-Ohio Utility District wastewater plant in Madison County.²

Highly relevant to this proposed permit modification are the attached January 30, 2023, comments from the OEC, DCA, and CBD on the "Draft General Permit - OHC000006, Draft general permit for stormwater." These comments remain relevant

²

See <https://epa.ohio.gov/about/media-center/news/informational-meeting-planned-on-proposed-plain-city-wastewater-treatment-plant-permit-modification>

and we submit them again for consideration as important to this permit and the resultant development and stormwater that would be generated if the permit is issued. Of particular concern is the ongoing decline in Big and Little Darby's freshwater mussel fauna, including declines in all federally listed species, and the Agency's lack of a plan to reverse this decline.

We also resubmit and attach the OEC/DCA/CBD "Comments on the Ohio EPA Draft 2023 Program Management Plan Project Priority and Intended Projects List for PY 2023 12/15/2022" of January 18, 2023, concerning Madison County, Plain City and Logan County projects totaling approximately \$171 million. Approximately \$127 million of this construction was proposed for Madison County and Plain City. Also included in those comments is the MBI Technical Report MBI/2022-7-8 of July 8, 2022, "Ecological Risk Assessment of the Proposed Expanded Effluent Discharge from the Plain City WWTP." Please include these above sets of comments as part of our comments on the proposed modified permit of June 13, 2023. We believe these earlier comments are still relevant to the wastewater permit and the development and stormwater the wastewater permit would enable.

The permit modification must include an effluent limit and associated reporting requirements for Dissolved Hexavalent Chromium. The permit modification will result in increased loading and must undergo antidegradation review.

Respectfully submitted,

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ATTACHMENTS

1. January 30, 2023 Comments from OEC/DCA/CBD, “Draft General Permit - OHC000006. Draft general permit for stormwater.” These comments remain relevant and we submit them again for consideration as relevant to this permit and the development and stormwater that would be generated. “These comments of the Darby Creek Association (DCA), the Ohio Environmental Council (OEC) and the Center for Biological Diversity (CBD) address the proposed renewal of the Ohio EPA statewide stormwater Draft General Permit - OHC000006, scheduled to take effect in April 2023. Our comments focus on the Big Darby Creek watershed, addressed in Appendix I.”
2. January 18, 2023 OEC/DCA/CBD re: PMP/FONSI comments to Ohio EPA, DEFA: Comments on the Ohio EPA Draft 2023 Program Management Plan Project Priority and Intended Projects List for PY 2023 12/15/2022 Madison County, Plain City and Logan County projects <https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/financial-assistance/wpclf>
3. Ohio Scenic Rivers Association letter to Governor DeWine regarding IPS.