



Division of Surface Water Response to Comments

Facility: Plain City WWTP
Permit #: 4PB00016*JD

Agency Contacts for this Project

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Ohio EPA held a public comment period from September 2, 2021 to October 26, 2021 and public hearing on October 19, 2021 regarding receipt of antidegradation application for Plain City WWTP. This document summarizes the comments and questions received during the associated comment period and public hearing.

Ohio EPA reviewed and considered all comments received during the public comment period. The comments and responses are grouped by topic and summarized below.

Comment 1: **A number of commenters were concerned about the urban growth in Plain City, and how the increased impervious area would impact the Big Darby Creek due to increased storm water runoff and non-point source pollution. Commenters believe the antidegradation review for this ND PES permit application should include these associated non-point source impacts. Data was presented demonstrating an inverse link between development and in-stream biodiversity, and also noting it to be a rare occurrence that an exceptional warmwater habitat can be preserved despite development. “Therefore, the antidegradation promise of the CWA cannot be kept without careful management of these non-point source impacts. This antidegradation review must explain, in detail, how the health of the creek will be maintained if this vast area of new residential development is permitted.”**

Response 1: The actual construction of any new development will be subject to the General Permit for Discharges of Storm Water Associated with Construction Activity which contains requirements for groundwater recharge to address concerns of increases in impervious surface and riparian setbacks to address nonpoint runoff. These types of impacts were

specifically considered when the general permit went through antidegradation review during renewal in 2018.

Additionally, Plain City has local Ordinances and sections in their Comprehensive Development Plan that, while not identical to the protections found in Appendix 9-3 of the 208 Plan, do speak to these concerns including conservation of green space requirements. The Director has considered a multitude of factors while considering antidegradation including Plain City's Ordinances, Planning and Zoning Code, Comprehensive Development Plan and the existing protections in the Darby Construction Storm Water Permit.

Comment 2: **Multiple commenters would like Ohio EPA to provide clarity on how storm water permitting will be protective of the high quality habitat that the Big Darby Creek provides.**

Response 2: Please see Response 1.

Comment 3: **Ohio Department of Natural Resources (ODNR) notes there are many species of endangered/threatened flora and fauna in the project area and provides numerous recommendations on how and when to conduct construction. One other commenter asks, "What impact will newly planned discharge of wastewater have on wildlife in the areas surrounding the Big Darby Creek? Has any data demonstrated 'no harm' to endangered species in these areas? What impact will increases in the flow of water from the surrounding areas have on the health of animals in the watershed? Fertilizer, heavy metals and other waste may change the quality of water for wildlife as well as humans."**

Response 3: Ohio EPA does not anticipate that the expanded discharge of wastewater would have a negative impact on the wildlife or threatened and endangered species in the Big Darby Creek. NPDES permits are written to ensure that all water quality standards are met, including water quality standards to protect aquatic life. In addition, during the antidegradation review, the Director determined that the loadings of all regulated pollutants in Plain City's discharge would need to be capped in order to be protective of the Exceptional Warmwater Habitat beneficial use designation, as well as the threatened and endangered species. This means that no additional mass of any regulated pollutant would be

authorized in the NPDES permit. Since the Big Darby Creek is attaining the Exceptional Warmwater Habitat designation under Plain City's existing pollutant load, capping the load is protective of the aquatic life use designation.

- Comment 4: Antidegradation review should also consider impacts to freshwater mussels.**
- **A reduction in species present downstream of the WWTP has already been documented, as has a decline in mussel species and abundance throughout the watershed. Freshwater mussels should be included among the biocriteria that OEPA utilizes in water quality evaluations and antidegradation review, especially given the precarious nature of the survival of many of these species.**
 - **In particular, please demonstrate how Big Darby's five federally listed species will be protected from degradation. These species include clubshell, northern riffleshell, rabbitsfoot, snuffbox, and rayed bean.**
 - **In summer and fall Big Darby regularly experiences extremely low flows. Please explain the impacts this plant expansion would have on pollutant loading during low flows, and consider the critical interstitial pollutant loading in the creek's substrate. Pollutant loading in the water column is not as important to mussel survival and reproduction as pollutant loading within the substrate, where mussels live. Research has shown that substrate loading is often significantly higher than columnar loading (for example, ammonia, a known mussel stressor, is often present at higher levels in the substrate). This pattern is likely exacerbated during low flow when groundwater inputs are reduced. Substrate toxins have been shown to be especially harmful to mussel reproduction since mussel glochidia and juveniles live entirely in the subsurface environment.**
 - **Please demonstrate how this plant expansion will not further curtail mussel reproduction. We have observed a decline in mussel reproduction in the last 10 years. Please demonstrate that this aspect of mussel biology is not further impacted by the proposed wastewater effluent or the increased**

stormwater runoff impacts from resulting developments.

- **Because of this pattern of decline, it is particularly urgent that the OEPA demonstrate that the proposed increase in capacity at the Plain City plant, and the resulting urban runoff and impervious surface, will not further degrade this critical resource.**

Response 4:

Ohio EPA is aware of the freshwater mussel species and populations present in the Big Darby Creek and recognizes and appreciates the comments submitted concerning their continued well-being.

A principal pollutant of concern regarding mussels in the Big Darby Creek is total dissolved solids (TDS), otherwise known as total filterable residue. The Director considered the threatened and endangered species present in Big Darby Creek, as well as all comments received as part of the overall antidegradation evaluation. For Big Darby Creek to maintain attainment of the Exceptional Warmwater Habitat beneficial use designation and to be protective of the threatened and endangered species present, the Director proposes to cap the TDS load at the average load discharged by Plain City WWTP. The corresponding monthly average concentration limit is less than half of what the wasteload allocation would have been using typical modeling procedures.

For pollutants that have previously been limited in the Plain City WWTP NPDES permit, the Director has determined that the respective loads of these parameters need to be capped. This means that the draft NPDES permit authorizes no additional mass for ammonia, total suspended solids, phosphorus, and 5-day carbonaceous biochemical oxygen demand (CBOD₅). To double the flow discharged while allowing no increase in these pollutant loads, the corresponding concentration limits must be decreased by 50%, which is reflected in the draft NPDES permit. In addition, Plain City submitted a dissolved oxygen modeling report which demonstrated that the dissolved oxygen water quality standard would be protected even by ammonia concentrations that are higher than the limits proposed in the draft permit.

Lastly, due to the Big Darby Creek's designation as an Outstanding State Water, 70% of the remaining pollutant assimilative capacity was "set aside", in accordance with OAC 3745-1-05(C)(6)(a). Due to the set-aside, wasteload allocations used in the reasonable potential analysis were more restrictive than those that would have been calculated for a typical receiving stream. As a result, the Director has proposed effluent limits in the draft NPDES permit for dissolved hexavalent chromium that, again, are more restrictive than those that would have been calculated for a typical receiving stream. It should be noted that the proposed effluent limits for TDS discussed above are more restrictive than the TDS wasteload allocation after the 70% set-aside.

Please see Response 1 for information regarding storm water impacts.

Comment 5: **ODNR Division of Wildlife (DOW) recommends that impacts to streams, wetlands, and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.**

Response 5: Ohio EPA agrees. Please see Responses 1 and 4.

Comment 6: **Ensure that Big Darby Creek will be restored, such as through a determination that water quality will allow the return to this segment of Big Darby Creek of rare and sensitive species of mussels and fish. Antidegradation and related measures should not just mean that the streams are just protected to meet minimum standards of the Clean Water Act.**

Response 6: Please see Response 4. A detailed antidegradation analysis was conducted and loadings of regulated pollutants are proposed to be capped, resulting in concentration limits being reduced in the draft NPDES permit to levels lower than what would be calculated using typical modeling procedures.

Comment 7: **While we recognize that the loads of certain pollutants named in the permit application are supposed to be reduced by the proposed treatment plant, we remain very concerned about the impacts from these pollutants at levels not known to degrade fish and macroinvertebrate communities and other pollutants in**

the effluent that are not accounted for, such as chemicals within the Total Dissolved Solids category and Pharmaceuticals and Personal Care Products (ACS 2006; Nobles and Zhang 2015), among others, that could have toxic and reproductive impacts to aquatic life.

Response 7: Please see Response 4. No additional mass of regulated pollutants is proposed to be authorized in the NPDES permit. The water quality from the expanded plant would have lower concentrations of pollutants than the discharge from the existing facility.

Ohio EPA has evaluated available literature on pharmaceuticals and personal care products and has determined that those pollutants would likely have a negligible impact on biology.

Comment 8: **Storm water permit conditions are inadequate to protect listed mussels and high stream bioindex scores, especially in small streams.**

- **“Can the EPA provide scientific proof showing the levels of storm water runoff are not degrading the Big Darby and adversely affecting the rare and endangered fish and fresh water mussels?”**
- **Please explain how storm water permitting is effective in protecting mussels and their habitat in the Big Darby Creek.**
- **Because of this pattern of decline, it is particularly urgent that the OEPA demonstrate that the proposed increase in capacity at the Plain City plant, and the resulting urban runoff and impervious surface, will not further degrade this critical resource.**
- **How will you demonstrate that mussels will not be degraded further than they already have been? In particular, please demonstrate how Big Darby’s five federally listed species will not be degraded further (clubshell, northern riffleshell, rabbitsfoot, snuffbox, and rayed bean). All five have previously been found to be living in Plain City or within 15 miles below the Plain City stormwater treatment plant.**
 - **If the answer to the previous question is that the stormwater permit will protect mussels and their habitat, please demonstrate how. The**

current stormwater permit allows extremely large amounts of impervious surface to be constructed in the watershed, on some sites up to 50 or 60 percent, and in some cases 80 percent or more (eg. the West Jefferson Industrial Park). Available research clearly correlates impervious surface with stream degradation generally and mussel populations specifically, so it's not clear how the Darby watershed could be expected to perform differently. We do not believe that the infiltration parameters and stream setback provisions of the permit offset the entirety of the impacts from this level of impervious surface. Please explain how the agency's antidegradation requirements are protective of the species in question 2 if the agency has a differing view.

- **Please explain and demonstrate how the riparian setback and groundwater recharge components of the Big Darby creek general permit for stormwater will be adequate to protect the above federally-listed species of mussels.**

Response 8: Please see Response 1. The construction storm water permit expires April 22, 2023. If there are suggestions regarding what should be included in the construction storm water general permit, please send them to Jason Fyffe, the Storm Water Manager at Jason.fyffe@epa.ohio.gov for consideration during the general permit renewal process.

Comment 9: **What steps has the EPA taken in current evaluation and monitoring of waters including the health of all aquatic species? These are absolutely necessary and long overdue regardless of where the county lines are drawn.**

Response 9: Ohio EPA has a robust biological and water quality assessment department in the Division of Surface Water. In 2018, Ohio EPA released the *Biological and Water Quality Study of the Big Darby Creek Watershed, 2014*. The majority of data collected in the report was gathered in 2014, but some data were collected in 2015. The report states:

All 34 (100%) of the locations evaluated on the Big Darby Creek mainstem were in full attainment of the existing aquatic life use designations. This is an improvement from

the 2001 survey, when 26 of 35 (74.2%) sites were in full attainment of the designated aquatic life use. All but one of the 14 sampling locations (92.9%) on Little Darby Creek were in full attainment, which also was a slight improvement from the 2001 survey, when 13 of 16 (81.3%) sites achieved full attainment. Results for tributaries to Big and Little Darby creeks were more variable, but overall positive. Of the 45 locations situated on 26 tributaries to Big and Little Darby creeks, 35 locations (77.8%) were in full attainment, 5 locations (11.1%) were in partial attainment, and 5 locations (11.1%) were in non-attainment of the existing or recommended aquatic life use designations. The vast majority of these locations and/or stream reaches were sampled both in 2001 and 2014.

The *Biological and Water Quality Study of the Big Darby Creek Watershed, 2014* is available on Ohio EPA's website at:

<https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/biological-and-water-quality-reports>

More recently, one hundred and ninety-one biological and water quality assessments were conducted as part of Ohio EPA's statewide Large Rivers survey during 2020 and 2021. Two of those assessments were completed within the large rivers segment of Big Darby Creek in 2021 at river miles 3.2 and 13.6. Both sampling stations were shown to be in full attainment of the Exceptional Warmwater Habitat Aquatic Life Use designation.

Comment 10: Please explain and demonstrate how the combination of the wastewater and stormwater permit will be adequate to protect the above federally-listed mussels and their habitat.

- The antidegradation analysis must consider both wastewater and stormwater (up to an area of at least that serviced by a 3 MGD facility), as well as the survival and reproduction of federal and state listed mussels.

Response 10: Please see Responses 1 and 4.

Comment 11: In any antidegradation analysis, please take into account the habitat quality impacts that are in the area, including floodplain fill, gravel/stone quarry levees that

restrict the floodplain and other levees along the floodplain in the area. These habitat modifications are extensive in portions of the Big Darby downstream of US 42.

Response 11: For concerns about flooding, please contact Taylor Brill for concerns within Plain City and Bryan Dhume for concerns about concerns in the unincorporated areas outside of Plain City.

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As part of the stream surveys discussed above, Ohio EPA evaluated the physical habitat in Big Darby Creek through use of the Qualitative Habitat Evaluation Index (QHEI), developed by Ohio EPA for streams and rivers in Ohio. This survey assesses a variety of stream characteristics, such as type and quality of substrates, channel morphology, extent and quality of riparian vegetation, pool, run, and riffle development and quality, and gradient. While this evaluation does not address flooding concerns, habitat quality in Big Darby Creek has been found to fully support the Exceptional Warmwater Habitat aquatic life use designation. It is not anticipated that the proposed expansion would result in habitat alterations that would cause a loss of use.

Comment 12: **Recognizing that climate change may result in lower drought flows in the future, please consider more stressful conditions in any Big Darby Creek flow assumptions.**

Response 12: The stream flows used in wasteload allocations are specified in OAC 3745-2-05 (A). However, in the draft NPDES permit, the mass of pollutants is proposed to be capped which is more restrictive than what would be calculated using typical modeling procedures.

Comment 13: **Building Industry Association (BIA) of Central Ohio states that access to centralized sewer and an accompanying WWTP has always been and continues to**

be the preferred development option for the BIA and its members. The combination of economic growth realities in the region and BIA's commitment to central sewer options lead them to strongly support this application to expand Plain City's treatment capacity.

- Presents data about growth in central Ohio and need for housing, as well as job growth and development in and near Plain City.
- From the BIA's perspective, the question is not what kind of growth will occur, but will growth be served by central sewer, alternative treatment systems, or on-lot septic?

Response 13: Ohio EPA agrees that centralized treatment is preferred.

Comment 14: Furthermore, the BIA is aware that Plain City is addressing inflow and infiltration (I/I) issues with its aging collection system and not relying solely on an expanded plant to handle these issues.

- At a macro level, the Village has a comprehensive plan that encourages natural feature preservation and conservation development requirements. The BIA and its members support smart growth and we feel with the proper conservation development and BMP design that development can occur without degrading the water quality of our streams. It is our understanding that the village needs the permit approved to make the necessary sanitary sewer system improvements to meet the current OEPA discharge requirements.

Response 14: Plain City has committed to completing some I/I work to immediately free up a limited amount of flow capacity. However, to facilitate further development, the wastewater treatment plant would need expanded.

Comment 15: Expanding the Village of Plain City Wastewater Treatment Plant will result in the unlawful take of endangered species. Already, six federally listed mussel species are in decline. Expanding the Plain City Wastewater Treatment Plant will kill, harm, harass, and wound individual mussels, degrade endangered species' habitats, and impair the ability of these species

to survive. These impacts would not occur but for the actions of the agency and the Village of Plain City.

- **The Village of Plain City and Ohio EPA must seek a take permit and develop a Habitat Conservation Plan to ensure the protection of these endangered species.**
- **Big Darby Creek provides critical habitat to five federally listed mussel species and one proposed federally threatened species.**
 - **Elevated ammonia and effluent levels from wastewater plant effluent threatens the health and survival of all six species. Lists the species and provides background.**
- **Expanding the Village of Plain City Wastewater Treatment Plant will result in the unlawful take of endangered species. Already, these six species are in decline, as Ohio EPA affirmed in 2004: “There is ample evidence that mussel fauna in Big Darby is in decline” (Ohio EPA 2004).**
- **Expansion of the Plain City Wastewater Treatment Plant will jeopardize the health of 22 state threatened and endangered mussel species.**

Response 15:

Please see Response 4. Because pollutant loadings are being capped resulting in concentration limits being reduced, it is not anticipated that there will be an impact on threatened and endangered mussels.

Please direct any specific questions or comments on take to US Fish and Wildlife. They have indicated they intend to review the NPDES permit as part of US EPA’s permit review.

Comment 16:

Expansion of the Plain City Wastewater Treatment Plant will degrade the health of Big Darby Creek, a National Scenic River, State Scenic River, Outstanding State Waters Stream, and an Outstanding National Resource Water candidate with 37 rare and endangered species.

- **The Clean Water Act requires the state to ensure that its streams do not degrade, and this wastewater plant expansion would cause the immediate and long-term degradation of Big Darby Creek. Ohio EPA clearly has the authority and the obligation to protect the entire Big Darby Creek watershed.**

- **When Big Darby downstream of the Plain City facility failed to meet Clean Water Act goals in 2004, Ohio EPA noted: "The Plain City WWTP was the main cause of degradation and partial biological attainment in this segment of stream. Nutrient concentrations immediately downstream of the outfall were always greater than the background median and often very high. Concentrations of suspended solids, nitrate and nitrite, TKN, and total phosphorus remained elevated over two miles downstream and were likely due to the residual effects of the Plain City WWTP discharge" (2004).**
- **Expanding the Plain City Wastewater Treatment Plant will lead to further impairment of Big Darby and exacerbate the declines in species already observed downstream of the facility. The stream provides critical habitat for 37 state and federally listed mussel and fish species, most of which are already declining.**
- **I want to make two points tonight, and DCA will follow up with more comprehensive written comments. The first point is that Big Darby's highest and most important "use" is its role as habitat for some of the rarest and most sensitive aquatic animals native to the United States. Roughly 39 species native to the watershed are on federal and state watch lists. This biodiversity has led to the stream's designation as a National Scenic River, and the biological importance of the stream has been reiterated time and again by federal, state and local governments, and by a myriad of conservation groups and academic institutions.**

Response 16: Please see Response 4. No additional mass of regulated pollutants is proposed to be authorized in the NPDES permit, resulting in lower concentration limits in the draft NPDES permit. The water quality from the expanded plant would have lower concentrations of pollutants than the discharge from the existing facility. Ohio EPA is both committed to and legally required to ensure that the NPDES permit for Plain City does not result in a loss of use in Big Darby Creek.

Comment 17: In 2017, the Village hired a professional firm working with a Comprehensive Plan Steering Committee (which I

served on) to survey the citizens on the needs and desires they had for foreseeable future. The survey produced more than a thousand responses or 25% of the population. Our citizens understood the need for investing in the infrastructure to preserve one of the key natural resources that meanders through the Village-the Big Darby. The survey became the cornerstone of the new Comprehensive Plan that was developed and adopted by the Village in 2018.

- The Comprehensive Plan is the culmination of the community desires and values embedded with realistic data about potential growth, the impacts and current conditions. A feasibility study was also performed by an independent professional firm at the time and it looked at the possibility of regionalizing our infrastructure with neighboring communities. It provided some eye-opening estimates of the true costs for shifting our water and wastewater infrastructure outside the Village. The study clearly pointed to the advantages of Plain City continuing to produce and distribute its own water. It also highlighted the need for treatment enhancements and upgrades and expansion to the wastewater treatment plant to meet existing and predicted future needs while maintaining operation and control of these services within Plain City. This would allow Plain City to modestly grow at a pace that is defined by Plain City and preserve the type of community we desire. Plans were also included for additional green space and decreasing residential densities to allow focus on conservation development practices.
- In recent years our community has financially supported making improvements to both the water and wastewater treatment plant through an additional income tax. These directed resources have enabled the village to create a Capital Improvement Committee and direct funds to reduce stormwater inflow and infiltration (I&I) issues throughout the historic streets, and reducing stormwater impacts on the wastewater plant on the Darby watershed. In addition, the Village has invested in mapping the location of the Village infrastructure assets to aid in

operations, maintenance and replacement using GIS.

- Over the past Century, Plain City has, and continues to, produce it's own water from two wells. It doesn't rely on others to provide this valuable resource on a day to day basis. This self-sufficiency and independence allows the growth to be directed by Plain City at a modest pace. It also helps manage a reasonable growth foot print for establishing future incorporated boundaries of the community. Along with the revenue generated from the income tax, Plain City also can sell it's water to support future debt service to grow and improve it's infrastructure such as the new treatment plant expansion.
- I hope you consider the value of a community taking charge of it's own infrastructure to provide quality services to it's residents, position itself to reasonably grow to meet near future needs of adjoining neighbors and properties and provide the necessary protection of one of it's most valuable and longtime assets the Big Darby.
- The purpose of this email is to express M/I Homes of Central Ohio's support for the above referenced application.
 - These people will need to be able to find a place to live and the best way to do that is to ensure adequate central sewer infrastructure is available for environmentally friendly growth. Allowing Plain City to expand their WWTP will allow exactly that – housing that is coming one way or another to develop on central sewer as opposed to septic and well.
 - Additionally, Plain City's current WWTP has issues and is not in compliance and allowing this application to move forward will help remedy existing issues.
 - Plain City's comprehensive plan and recent approval of relatively low density projects demonstrates their ability to be mindful of the region and promote smart growth.
 - Madison County Future, Inc. the economic development organization for Madison County and its communities, supports the Village as it requests approval from the OEPA.

- The proposed expansion of the treatment plant addresses both current and future needs of the Village. Added capacity will accommodate new growth that will generate new revenues to address these issues. Moreover, adding capacity and future rate payers will ensure that the Village can keep utilities at or close to current levels.
- The Village remains proactive with managing development opportunities, especially in environmentally sensitive areas around the Big Darby Creek. The Village's comprehensive plan calls for the Village to protect sensitive environmental areas as growth occurs. The Village is also committed to environmental protection; the current application before the OEPA requests approval of a plant expansion under anti-degradation parameters, meaning that the plant's operation will stay within existing discharge parameters for a variety of measures.
- The current proposal is being made after many years of discussions and numerous attempts at other options, including more regional solutions. The Village's proposal allows for smart, reasonable growth while respecting sensitive environmental areas.
- Plain City One LLC is the owner of approximately 100 +/- acres at 10522 US 42 in Plain City. The property was purchased in 2005. Obtaining the current zoning took many years and the Final Development Plan for my project, a single family residential development named Oak Grove, was approved on November 23, 2020. Shortly after receiving the approval, I learned that Plain City was close to the maximum capacity for its present Wastewater Treatment Facility. This has resulted in the project being stalled despite the pent-up demand for residential housing in the Plain City area. As such, I am very supportive of the approval for Plain City to expand the existing facility.
- Central Ohio is significantly underserved for new residential construction relative to the growth in population of the region, causing residential prices in purchased homes and rental units to

grow rapidly, well beyond the general costs of living. Allowing the expansion will help alleviate this imbalance.

- If Plain City is not able to expand its Wastewater Treatment Facility, it will require that residential development be pushed further away from where jobs are and will cause environmental challenges in air pollution due to the longer commutes to work.
- (Storm water comment about it being protective) Some parties have stated their concerns about expansion of the Wastewater Plant causing possible degradation of the stormwater runoff into the Darby watershed. The OEPA has repeatedly reviewed and revised the standards in the Darby watershed to ensure that will not occur. The present standards are the strictest in Ohio and are more beneficial to the Darby than the present mostly unregulated farm uses. My intent is to fully comply with these standards.
- The proposed permit application is for the present and future needs of Plain City. The Village needs to invest significant funds in the existing plant regardless of the expansion of the plant and needs the revenue from the expansion to help pay for those updates. By adding capacity, Plain City will allow the users to keep utility rates at current levels.
- The Village is already actively addressing inflow and infiltration issues with the existing aging collection system.

Response 17: As part of the antidegradation analysis, the Director considered the societal needs for growth along with anticipated impacts on water quality and how to best manage those impacts.

Comment 18: We believe that for antidegradation purposes Big Darby Creek clearly qualifies as an Outstanding National Resource Water. Specifically, it was named a National Scenic River based on its biological resources (especially five federally listed species and an unusually high density of mussels species), it continues to be habitat for those federally listed species, it was targeted as a augmentation site for translocated federally endangered species (northern riffleshell and clubshell)

from the Allegheny in the last decade, and it has been targeted by respected national organizations such as The Nature Conservancy and American Rivers as a waterbody of national significance. If OEPA is not using the Outstanding National Resource Water standard to review this permit application, please explain why.

Response 18: Ohio EPA has categorized the Big Darby Creek as an Outstanding State Water based on exceptional ecological values. There are currently no waters in the State of Ohio that are categorized as an Outstanding National Resource Water. Per OAC 3745-01-05 (E)(2), at least once every three years, the Director shall, in consultation with the Director of the Department of Natural Resources, consider available information on water bodies in Ohio and determine appropriate high quality water categorizations. This comment has been passed on to our Water Quality Standards Program.

Comment 19: **Is the WWTP functioning efficiency to its reasonable operational capacities so as to use the lowest possible volume of discharge and lowest concentration of harmful effluents to the Big Darby Creek, or is the WWTP not functioning effectively and to achieve compliance level standards, the volume of water discharge must increase to lower the concentration values to acceptable limits?**

I would request that the Ohio EPA review the discharge records from the Village of Plain City to determine how the water treatment plant is currently performing and its efficiency regarding the cBOD5, Ammonia-nitrogen, suspended solids, phosphorus, dissolved solids, pH, flow rate, and trace metals. Has the flow rates increased in the last five years? Has the concentrations of monitored levels increased in the last five years? Has the monthly average loading limitation in kilograms per day increased in the last five years? Is there data/evidence to suggest this plant experiencing ongoing operational problems? Has the Village exceeded any threshold values for the required monitoring such that if there is an increased volume of water then the concentration values will decrease and the WWTP would then be within compliance levels.

Response 19: The Village of Plain City experienced a period of non-compliance during 2019 and 2020. In response to Notices of Violation issued by Ohio EPA the Village retained Madison County to operate the Village's Wastewater Treatment Plant. Since that time, the plant has discharged in compliance with its NPDES permit with one exception in 2021. There are no current outstanding Notices of Violation.

The design for the expanded wastewater treatment plant includes design elements like tertiary filtration which should improve treatment and result in reduced concentrations of pollutants being discharged.

Comment 20: has the Ohio EPA undertaken a review of the residential and businesses that are within ¼ mile of the Big Darby Creek and are at elevations that would be subject to flooding should the Big Darby Creek experience a high-water event? How would the increase in volume from 0.75 MGD to 1.5 MGD (and at peak discharge of 5.1 MGD) change the overall volume and water level of the Big Darby Creek as it flows southward through Ohio? How would the increase in the Big Darby Creek impact the watershed and surface drainage systems that currently protect, homes, businesses, roads, buildings, bridges, and land from flooding? Does this proposed increase in water discharge pose a threat to cause failure to currently functioning and safe septic systems that are used by residential and business operations within the watershed region. Does this increase in water pose a threat to current well water serving individuals within close proximity of the Big Darby Creek. Essentially, if the Big Darby Creek volume cannot adequately contain and discharge the volume of water then water begins to back up into the watershed and established drain ditches that then backup onto roads, into properties, and adjacent to septic fields. Contaminates from the roads, properties, etc that would otherwise not make their way directly into the waters of the Big Darby Creek now have a significant risk to do so. The ramifications could result in degradation of water quality to the Big Darby Creek. As stated by Mr. Ishmael during the Public Hearing, flooding currently occurs on Amity Pike. I have seen road closures due to high water events and flooding from the Big Darby Creek's inability to handle a given volume of water after precipitation or snow melt. Thus, with increased water

discharge will flooding occur more frequently and expand into new zones not previously impacted?

- **Has Ohio EPA sought the input from the Madison County Engineering Department, Franklin County Engineering Department, and other counties that the Big Darby flows through about flooding, water drainage, road and bridge safety related to the potential increase in WWTP water discharge? Increase growth, increased hardscape surfaces is increasing the volume in a given period of time to water drainage into the Big Darby Creek. The large portions of agricultural lands that use to slow the water drainage have been replaced with development thereby increasing the volume of water in a given period of time. Reviewing the development that is occurring in western Franklin County should be considered as part of the water model/water shed modeling when considering the impact of the proposed WWTP increase in volume of discharge.**
- **Ohio is experiencing fewer frost days per year (Ohio State University Extension) meaning snow and frozen ground will not hold as much water as in prior decades. Again, this raises a concern about the Big Darby Creek and its capacity as part of the watershed drainage area. Much discussion was placed on average daily flow. However, at the Public Hearing, the peak proposed flow was not listed in the information. In the proposed NPDE Renewal application it is listed at 5.1 million gallons per day. The Ohio EPA needs to model that volume during a high water event and determine what adverse events will occur to the downstream residents and communities. Attached is the current FEMA National Flood Hazard maps for just south of the Village of Plain City. The current Flood Hazard extends over the top of the Plain City Georgesville Road in one location and quite nearly so in some places. How will the increase volume of discharge change FEMA's mapping, indirectly impacting insurance and property values? This comes back to the interplay between the technical, social, economic, and environmental aspects of the project.**
- **My questions center around the thought process for the expansion of water that may come from an**

increase in the release of water into the Darby Creek. Considering the increase in use of crop field drainage into ditches and creeks which eventually add to the flow of water in the Darby, how much water will this natural creek tolerate without causing flooding of the surrounding homes and farms. Over the past 7 years, the amounts of water traversing these ditches have increased somewhat during the rainy season. So much so that flooding of property and likely more importantly roads near these ditches. In the past several years, Amity Pike was under water making travel to homes difficult. With increased release of wastewater, it would be important to understand how this may impact landowners, their tenants and others in the areas around the Big Darby. It might be important to review the current amounts of water released in the Darby prior to expanding this release. Does the Ohio EPA have data to provide to the public specifically addressing this added release?

- What impact will this newly planned release have on the environment either within the state of Ohio or possibly waters down stream from this? How will Darbyville be impacted by this added water? One must only watch the news in the fall and winter to understand how the flow of water and the back-up of this flow downstream has on small communities. While these may not be densely populated parts of Ohio, flooding may have an impact upon these families and their properties.
- Considering the current and planned development in Franklin, Madison and counties further downstream of this development what does the EPA and engineering experts provide to assure the public there is limited problems with doubling the discharge from Plain City? Will the proposed peak flow (5.1 million gallons per day) exceed the current capacity?
- ODNR Division of Water Resources: The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.
<http://water.ohiodnr.gov/portals/soilwater/pdf/floo>

dplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

Response 20: Flooding is typically outside the scope of the NPDES permit. Please see Response 11. It is not anticipated that the proposed expansion would result in habitat alterations that would cause a loss of use. Ohio EPA notes that Plain City's water treatment plant currently withdraws water from the groundwater that recharges Big Darby Creek for use by the community. The Plain City sewer system then collects that used water for treatment at the WWTP and discharges it back into the Big Darby Creek watershed.

Comment 21: **When one considers available options for wastewater treatment it is multi-factorial. What is the reasoning as to why wastewater cannot be handled by the City of Dublin? Cost? Feasibility? At the Public Hearing, an alternative "regional" wastewater treatment plant was raised. What are the considerations regarding this as an alternative?**

Response 21: Delivery of Plain City wastewater to other NPDES-permitted entities was evaluated as part of the Non-Degradation Alternative required by the Antidegradation review. The higher cost and prolonged timeline for implementation, as well as significant increases in water and sewer rates for Plain City residents, resulted in the elimination of alternatives from consideration. Moreover, the Director has determined that a capacity expansion can be feasibly implemented while protecting the beneficial use attainment status, albeit with capped loads and more restrictive concentration limits, which are proposed in the draft NPDES permit.

Different alternatives for wastewater treatment are also evaluated in the Facilities Plan update that has been submitted to Ohio EPA by Plain City. The current status of the Facilities Plan update is that Ohio EPA sent a letter to Plain City with questions and suggestions and is waiting for an updated Plan to review. The public will have the opportunity to comment on the Facilities Plan update prior to it being incorporated into the Statewide Water Quality Management Plan (208 Plan). Issues raised during the hearing are most relevant to development scenarios that involve potential future expansions.

Comment 22: During the Public Hearing in the presentation materials, I did not see the specific term, “total maximum daily load (TMDL).” This is a term that creates a legal obligation for the Ohio EPA and would alert the public to additional literature that should be reviewed as part of the public review process. Has the Ohio EPA set a capacity ceiling for the Big Darby Creek from the Village’s WWTP, if so, what is the margin of safety and the reserve? What is the TMDL of the Big Darby Creek? Does it differ along its confluence? Also, has the Ohio EPA considered other contributions to the TMDL of the Big Darby Creek and how the TMDL will be divided among the sources? What happens when flooding occurs (as it does now) and potentially could more frequently, are these nutrients considered when protecting the Big Darby Creek’s water quality? Decreased water quality and changes in water volume will adversely impact critically listed mussels (as raised at the Public Hearing).

Response 22: The U.S. EPA-approved TMDL for Big Darby Creek includes information on how allowable phosphorus loading was calculated and allocated. The TMDL is available on Ohio EPA’s website here:
<https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/scioto-river-watershed>

The TMDL assigned an annual wasteload allocation of 725 kg/yr to Plain City WWTP. The monthly average load limit in the current NPDES permit of 1.99 kg/day is consistent with the TMDL allocation. In the draft NPDES permit, the Director has proposed to continue that limit following the expansion, effectively capping the Plain City WWTP phosphorus load. To maintain this load while doubling the design flow, the monthly average concentration limit is proposed to be reduced by half from 0.70 mg/L in the existing permit to 0.35 mg/L in the draft permit. Because the draft NPDES permit does not authorize additional phosphorus load to be discharged to Big Darby Creek, Ohio EPA does not anticipate that phosphorus concentrations will negatively impact aquatic life.

Comment 23: Ohio EPA should not approve an expansion of the Plain City Wastewater Treatment Plant application without establishing that there first is an approved Clean Water

Act Section 208 plan for the area that complies with ORC 6111.03(J).

- **Such a plan should ensure that not only antidegradation is met, but also that the Big Darby Creek's rare and sensitive species of aquatic life, including mussels, are permanently protected, with a strong margin of safety.**
- **Ohio EPA is aware that the facility would serve an expanded unincorporated area, and an approval would be a conflict with the State of Ohio's 2006 Section 208 plan. To our knowledge, there is no approved Section 208 plan for this area addressing the expansion of the wastewater treatment plant and its service area, including into unincorporated areas of the county.**
- **Approving the plant expansion with knowledge that the facility will serve presently unincorporated areas of Madison County amounts to a conflict with the approved 2006 Section 208 plan. Therefore, we ask that Ohio EPA proceed accordingly with the Clean Water Act's Section 208 plan procedure that is established under Ohio Revised Code (ORC) Section 6111.03(J):**
- **An application for a permit or renewal thereof shall be denied if... the Director determines that the proposed discharge or source would conflict with an areawide waste treatment management plan adopted in accordance with section 208 of the Federal Water Pollution Control Act;**
- **Regarding the submission of new planning work by Plain City has recently submitted new planning work to establish a facility planning area that includes unincorporated land in Madison County. Ohio EPA needs to finalize the review of this submission, ensure any needed communications with appropriate Madison County government officials and if appropriate, revise the State's 208 plan prior to approval of Plain City's wastewater discharge permit. Without this step the issuance of the Plain City NPDES permit would violate ORC Section 6111.03(J)(2)(b).**

Response 23:

The expansion of the Plain City WWTP from 0.75 MGD to 1.5 MGD is necessary to accommodate imminent and foreseeable growth within Plain City's existing corporate boundary. Expanding to 1.5 MGD at this time is prudent

given the economy of scale realized by doubling the plant capacity. Because the expansion would allow growth to occur largely within Plain City's corporate limits, the 208 Plan does not need to be revised at this time. Ohio EPA agrees that the 208 Plan would need revised prior to any additional expansions.

There would be real challenges and practical limitations associated with Plain City WWTP expanding greater than 1.5 MGD. If Plain City WWTP were to expand further, the monthly average phosphorus limit would need to be reduced to be consistent with the approved TMDL, which would be challenging to for the WWTP to consistently meet. Reduced total dissolved solids and ammonia concentration limits could potentially also pose a challenge at higher WWTP design flows.

The 208 Plan is not intended to regulate annexation. Rather, the 208 Plan acknowledges that annexation can and will occur and recognizes the home rule authority of municipalities to provide service within their corporate boundaries.

- Comment 24:** **The Agency should deny the renewal of the Plain City NPDES permit renewal under ORC Section 6111.03(J). It in part states that: “(2) An application for a permit or renewal thereof shall be denied if any of the following applies: (b) The director determines that the proposed discharge or source would conflict with an areawide waste treatment management plan adopted in accordance with section 208 of the Federal Water Pollution Control Act”;**
- **As it now stands, Plain City's proposed plant expansion proposes a greatly expanded service area that would serve and develop large areas of presently unincorporated areas of Madison County. This is in conflict with the currently approved Section 208 plan.**
 - **The State Water Quality Management plan dated 2006, and approved by Region V in accordance with Section 208, includes prescriptions based upon countywide wastewater planning prepared and approved by the Madison County Commissioners in 2005. These were subsequently put in the 2006 (see Appendix 9-1, page 75).**

- **The plan stipulates that no central sewer service be available in the unincorporated areas of the County until such time that defined Facility Planning Areas for Management Agencies (municipal governments) are included in the 208 plan.**
- **From Appendix 9-1 – page 75: The County and six municipal entities are established in this State 208 Plan as appropriate management agencies for sewer and wastewater planning and providing this service within Madison County. However, the inclusion of the specifically defined facility planning areas for the six municipal community systems will require a formal resolutions or letters of support from each municipal government.**

Response 24:

It is not anticipated for Plain City to annex large unincorporated areas as part of the proposed expansion, therefore an update to the 208 Plan is not required prior to authorization of the increased design flow in the NPDES permit. Please see Response 23.

Although the 208 Plan stipulates that no central sewer service be available in the unincorporated areas of the County until such time that defined Facility Planning Areas for Management Areas are included in the 208 Plan, this does not apply once a parcel has been annexed.

Comment 25:

Because Madison County is now clearly a rapidly developing area, DCA has requested that the OEPA place a moratorium on new development not already approved, and that the agency create an External Advisory Group to develop recommendations for multijurisdictional comprehensive stormwater planning prior to that moratorium being lifted, as the agency required in the Franklin County portion of the watershed. We believe that it is not enough to simply ask Plain City and other Madison County jurisdictions to copy the recommendations from appendix 9-3 of the 208 plan covering the Franklin County portions of the watershed. We believe that the Madison County jurisdictions must make a determination of the carrying capacity of the watershed to absorb the impacts of new development, and then must develop a land use map showing where development should occur so that this threshold is not exceeded. We recognize that OEPA

cannot dictate the details of such planning; however, as shown in Franklin County, OEPA can use the 208 Plan process and antidegradation provision of the Clean Water Act to deny WTP permits upgrades if and until adequate protections are in place. If the agency decides against this strategy, please explain why.

- Related to [the above question], we believe that if OEPA does not duplicate its predevelopment requirements in Madison County this will represent fundamentally unfair treatment of the Franklin County jurisdictions. Moreover, we believe such an approach would threaten the progress made in Franklin County. We point out that the jurisdictions in Franklin County, and other local entities such as Metro Parks and DCA have spent millions of dollars and countless hours in the protection of Darby. Please explain how differing treatment of Madison County would be fair to Franklin County jurisdictions and other stakeholders.
- Has Ohio EPA sought the input from the Madison County Engineering Department, Franklin County Engineering Department, and other counties that the Big Darby flows through about flooding, water drainage, road and bridge safety related to the potential increase in WWTP water discharge? Increase growth, increased hardscape surfaces is increasing the volume in a given period of time to water drainage into the Big Darby Creek. The large portions of agricultural lands that use to slow the water drainage have been replaced with development thereby increasing the volume of water in a given period of time. Reviewing the development that is occurring in western Franklin County should be considered as part of the water model/water shed modeling when considering the impact of the proposed WWTP increase in volume of discharge.
- While OEPA does not traditionally do "land use planning," the agency does have important tools to encourage and inform land use planning, and it has used these tools to good effect in the watershed in the recent past. In 2002 the agency placed a moratorium on new development in the Franklin County portion of the watershed and convened an External Advisory Group to

consider, among other things, comprehensive stormwater management for new development. This step proved to be highly successful: it ultimately gave Franklin County jurisdictions breathing room to create their own multijurisdictional land use plan based on the estimated carrying capacity of that portion of the watershed. This plan, the historic Big Darby Accord, is arguably the single most important protective step taken to preserve Bid Darby to date, and it was accomplished in large measure through OEP A leadership and guidance.

- The Big Darby Accord Watershed Master Plan has provided absolutely critical framework for managing growth in Hilliard, and without it, it would be absolutely devastating to the watershed and The Big Darby Creek. The Ohio EPA needs to have a plan in place for all jurisdictions, regardless of which side of the creek the county line is drawn on. The environment and aquatic life should not have to pay the price for humans poor planning or lack of enacting the full powers of protection from the Clean Water Act and the Ohio EPA.
- As a component of the Water Quality management Plan/208 plan, Ohio EPA should establish that Madison County jurisdictions must make a determination of the carrying capacity of the watershed to avoid impacts of new development, and develop a land use map showing where development should occur that minimizes impacts, and demonstrate through modeling based on biological impacts that is adequate to ensure that a carrying capacity or threshold for sensitive species protection is never exceeded.
- Planning needs to be conducted in a way similar to, or exceeding, what has been done with the Darby Accord in the western part of Franklin County. It makes no sense to have prepared needed safeguards for the Big Darby as they did for one section of the Big Darby in Franklin County in order that it had adequate protection and not protect a contiguous part of the stream just because it across political boundaries and is expedient to do so for political reasons. Work should be done, with all appropriate entities, to

build the safeguards needed. To bypass the Section 208 plan requirement and ignore the needed protections this stream needs to maintain a level of high biological diversity would be unconscionable.

- **In our view there is no logical, legal, or moral reason why OEPA should treat Madison County different than Franklin County. In fact it is a matter of fairness to the Franklin County jurisdictions that Madison County go through the same process they did. Franklin County has invested enormous time and resources in protecting the watershed, at OEPA's urging and with OEPA's guidance, and they have a right to expect that their work will not be undone by a careless approach to new development upstream in Madison County. Therefore, DCA requests that prior to approval of this and future expansions of the Plain City treatment plant OEP A convene an EAG that asks Madison County jurisdictions to agree on measures to manage stormwater, and that the Director sign off on the adequacy of the measures that emerge from that process.**

Response 25:

Ohio EPA agrees that there is a need to comprehensively plan for future expansion in the watershed. It is advisable for management agencies and stakeholders within the watershed to cooperatively hold larger discussions and Ohio EPA looks forward to being a part of that conversation.

Plain City has local Ordinances and sections in their Comprehensive Development Plan that while not identical to the protections found in Appendix 9-3 of the 208 Plan, do speak to storm water concerns, including conservation of green space requirements.

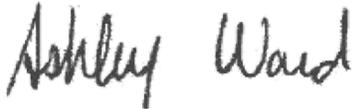
Ohio EPA cannot place a moratorium on development. The previous moratorium mentioned in the comment was not put in place by Ohio EPA; it was put in place by Columbus and Franklin County. Ohio EPA is supportive of an external workgroup forming to hold larger discussions on these issues.

Ohio EPA has not reached out to any County Engineering Department and does not typically regulate flooding as part of NPDES permits. It is not anticipated that the proposed

expansion would result in habitat alterations that would cause a loss of use. Please see Response 11 for information on who to contact about flooding concerns.

End of Response to Comments

Sincerely,

Handwritten signature of Ashley Ward in black ink.

Ashley Ward, P.E.
NPDES, 208 Manager
Division of Surface Water

cc: John Owen
David Brumbaugh
Erin Sherer
Mike Gallaway
permit file 4PB00016*JD