February 9, 2023 Submitted electronically

Re: DOCKET NO. D-2002-038 CP-4 Nazareth Borough Municipal Authority Wastewater Treatment Plant, Lower Nazareth Township, Northampton County, Pennsylvania

Delaware Riverkeeper Network (DRN) submits this comment on behalf of our 20,000+ members and to serve our mission of defense of the Delaware River Watershed.

The Delaware River Basin Commission (DRBC) issued this docket in response to an application submitted to the DRBC to modify the above referenced existing wastewater treatment plant (WWTP) and its discharge. "The application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*."[1]

The Docket and application state that the WWTP asked to renew its current docket (1.6 mgd WWTP and its discharge) and change from chlorine disinfection to ultraviolet (UV) disinfection.[2]

First, DRN supports the replacement of chlorine disinfection with ultraviolet (UV) disinfection. The change over to a UV system from chlorinated treatment is a standard and much-improved method of disinfection for wastewater facilities. This is due to the extremely high efficacy of disinfection combined with a complete lack of disinfection byproducts and no discharge of additional pollutants to surface waters from the disinfection process.

DRN's concerns arise from several issues, outlined below, which inform our request that DRBC do not approve the Docket as drafted and instead make substantial changes, discussed below:

1. The WWTP discharge location is in Lower Nazareth Township, Northampton County, Pennsylvania with a discharge of treated effluent to Shoeneck Creek, at River Mile 184.1 – 5.9 – 3.2 (Delaware River – Bushkill Creek – Shoeneck Creek) and is located in the drainage area to the Lower Delaware Special Protection Waters (SPW).[3] SPW waters are subject to strict regulations that are meant to protect these waters from degradation. Despite the SPW water classification, the docket allows the WWTP to avoid a new nonpoint source pollution control plan (NPSPCP), which is required for

[1] DRBC draft docket at https://www.nj.gov/drbc/library/documents/dockets/030823/2002-038CP-4draft.pdf
[2] *Id. p. 1*
[3] *Id. p. 1*

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discharges to SPW. "Since this project does not entail additional construction and/or expansion of facilities and service area and there are no new or increased non-point source loads associated with this approval, the NPSPCP requirement (is/is not) applicable at this time. Accordingly, Section C. DECISION conditions C.6 and C.7 has been included in this docket."[4] The Docket continues "The docket holder has submitted evidence that Nazareth Borough, Upper Nazareth Township, Lower Nazareth Township, Palmer Township, and Bushkill Township (the municipalities served by the NBMA WWTP) have adopted stormwater ordinance that satisfy the NPSPCP requirements of the Commission for these municipalities."[5]

The Docket Section C.6 seems to apply to "any new service areas or any new developments", which this application and Docket does not propose. Section 7 is more general in terms of a final review by DRBC's Executive Director before construction but does not mention the NPSPCP. However, under Section C.4 the Docket states, "Prior to project construction, the docket holder shall submit and have approved by the Executive Director of the DRBC, a NPSPCP in accordance with Article 3.10.3A.2.e. of the Commission's *WQR*." DRN requests clarification on precisely which NPSPCP will be required regarding this Docket. Additionally, we ask if DRBC conducted an analysis or quality assessment of the specific municipal stormwater management ordinances in force at each of the contributing townships to assure they provide the level of protection required by the DRBC SPW regulations.

DRN considers nonpoint source pollution and stormwater management to be crucial components of DRBC's SPW program that must be strictly enforced and monitored to ensure that our SPWs are not degraded by nonpoint sources of pollution and that the waterways can meet the DRBC requirement of "no measurable change", meaning no degradation. The improvement of impaired waters where they occur in SPW designated waters is also a DRBC stated goal of SPW regulations.

2. DRN recommends that DRBC impose stricter parameter limits for some effluent pollutants. The phosphorus levels for this continuing Docket and PA NPDES permit should be reduced considering that the Shoeneck Creek is impaired for aquatic life. The stream is already struggling to maintain water quality and aquatic life and needs to be given further protection that will reduce current inputs that are contributing to its impairment. The life and quality of the stream cannot reasonably be expected to absorb continuing harms without further impairment. Furthermore, this WWTP renewal is for six years and the WWTP is not disclosing any plans to improve effluent quality before then.

   DRN also notes that water quality numeric parameters for the discharge would go a long way to providing the needed protections for this stream at this time.

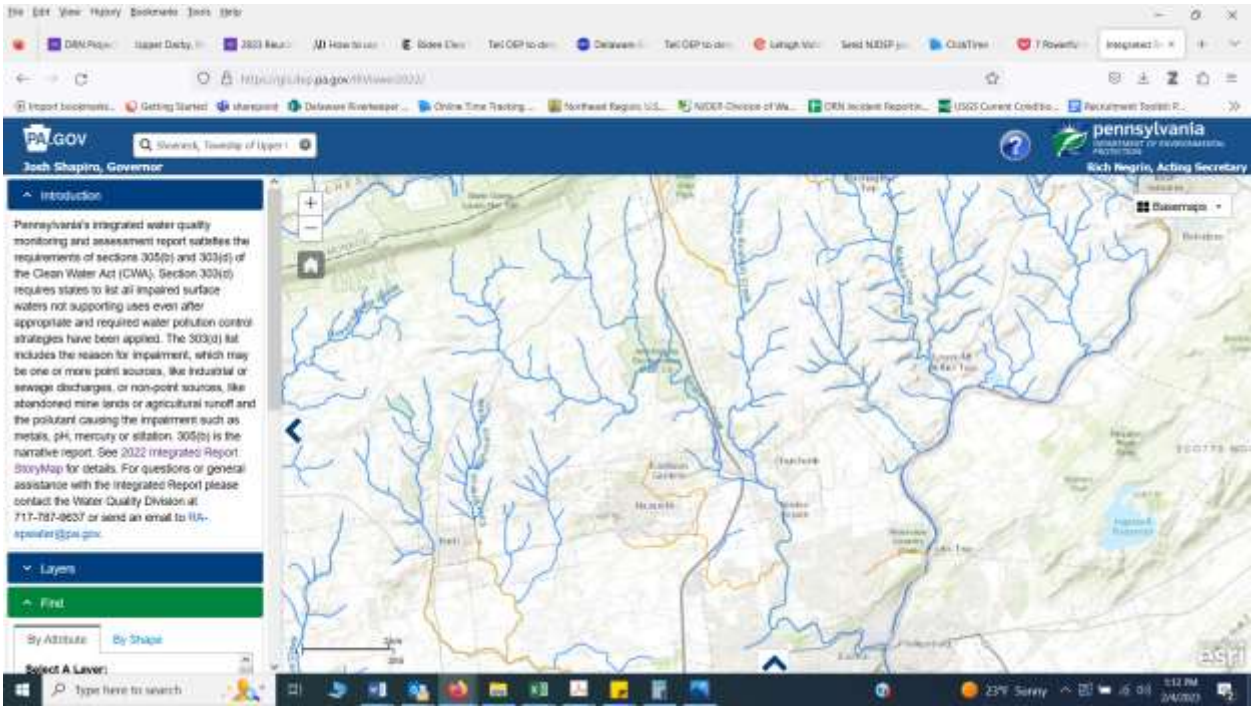
   DRN points out that bacteria levels in the discharge permit are not protective to aquatic life outside of the swimming season. Aquatic life in the stream is a key environmental and ecological feature that SPW and the NPDES permitting system is supposed to protect. Bacteria levels should be reduced to meet this goal. Since UV treatment is being installed, the WWTP should be able to meet stricter bacteria standards and should be required to do so in the DRBC Docket.

[4] *Id. p. 4*
[5] *Ibid.*

Regarding monitoring, DRN recommends the monthly reading be replaced with a weekly reading or daily reading, especially for parameters associated with aquatic life where these use impairments are noted. This includes nutrients, dissolved oxygen, and TSS.

DMRs for the WWTP over recent years show compliance with the Final Effluent Total Phosphorus 00665 28.8 41.4 lbs/day (Average Monthly). However, DRN points out that this allowance is very high and should be reduced. New technologies to limit phosphorus are available. Nitrogen parameters should also be reduced and more monitoring should be required throughout all times of year for nitrogen, not just the May – Oct 31 season. The Final Effluent Total Nitrogen 00600 27.9 72.1 lbs/day (Average Monthly) is a high level to allow in this permit.

Ratcheting down the phosphorous and nitrogen would reduce nutrients that can impact the stream's aquatic life use. As we know, high nutrients can lead to plummets in dissolved oxygen via algae blooms. Removing this risk for this struggling stream is very important to ensure this stream improves rather than limps along with all the same inputs from the WWTP (and other pollution sources, all of which are not controlled by a TMDL but should be) for another 6 years.

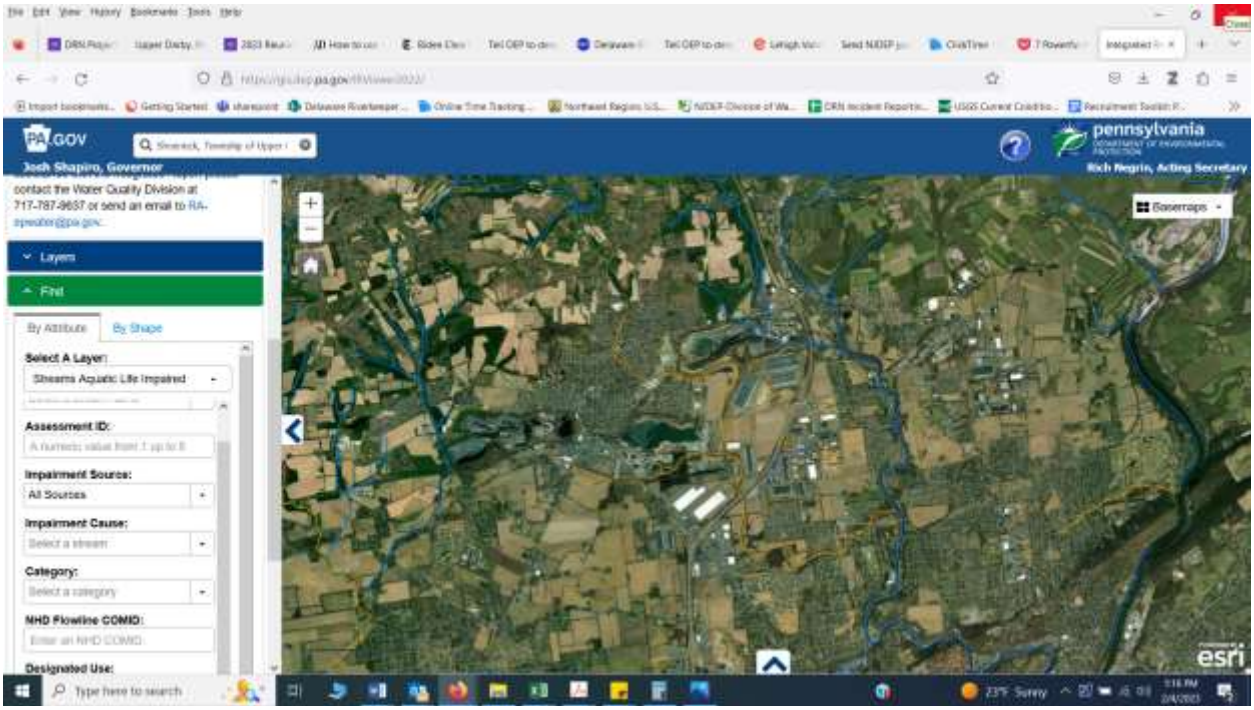


Regarding the pollution inputs into the stream, it is instructive to examine the Shoeneck Creek and its connected streams and the conditions that surround the streams (See screen shot above). The screenshot of DEP's map illustrates that all of Shoeneck Creek looks impaired and seems to show that the only other stretch of Bushkill Creek that is impaired is up near the Wind Gap area.

The Shoeneck Creek is listed as "impaired" for:

Aquatic Life Use
Recreation (Bacteria)
Fish Consumption (toxins in fish)[6]

DRN notes that the headwaters of Shoeneck are very urbanized, as shown in the screenshot of the map below. With the heavy urbanization and industrialization of this watershed, ratcheting down on the WWTP impacts is critical and is an important opportunity, which DRBC should not ignore. For example, the Goose Creek in highly urbanized West Chester PA area is now utilizing cutting edge technology at a WWTP to greatly reduce the phosphorus levels entering the stream. The technology is available and should be utilized here.



3. DRN requests clarification of why the applicant checked "no" in the application form to PADEP included in the permit application to DRBC for question #10 "Is this project for the beneficial use of biosolids for land application within Pennsylvania?"[7] This conflicts with the DRBC Docket information that states, "Wasted sludge will continue to be land applied for disposal in accordance with the NPDES Permit No. PA0041742".[8]

   DRN is very concerned about the application of sewage sludge ("biosolids") from this WWTP to land in this region, specifically to land in subwatersheds of the Bushkill Creek. We understand that sewage sludge from this facility is being applied now on fields, although we do not know where the company that is hauling the sludge is applying them. We also know that sewage sludge (Class B

[6] https://www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/IntegratedWatersReport/Pages/2022-Integrated-Water-Quality-Report.aspx

[7] Application to PADEP page 5 of 7, DRBC application PDF page 82.
[8] DRBC draft docket at https://www.nj.gov/drbc/library/documents/dockets/030823/2002-038CP-4draft.pdf page 2.

Biosolids) is planned to be applied to other fields that flow to a tributary of the Bushkill Creek (the "Hower Property" in Plainfield Twp., Northampton County, PA).

Streams that contribute flow and run off to the Bushkill Creek watershed where sewage sludge/biosolids are applied receive the nutrients and other toxic contaminants contained in the applied sludge from this WWTP, which further threatens the high water quality of the Bushkill Creek and its tributaries and further degrades impaired waters.

The allowable levels of phosphorous and nitrogen in the DRBC draft Docket are all the more important because of the lack of close monitoring of sewage sludge/biosolids land application activities statewide. Until we are certain that the sludge/biosolids from the WWTP will not endanger the Bushkill Creek tributaries, DRN opposes the application of the biosolids from the WWTP to any portion of the Bushkill Creek Watershed.

DRN realizes that DRBC is not reviewing or approving the separate NPDES permit that authorizes the current application of sewage sludge from the WWTP but it is mentioned in the Docket so it appears to be of interest to DRBC how the sludge from this facility is being handled and disposed. Overall, the disconnect between the NPDES permits for WWTPs that produce the sewage sludge that is applied as biosolids on the Commonwealth's land and the NPDES permits for the application of sewage sludge/biosolids is an environmental problem that leads ultimately to degradation of our streams and can negatively impact the quality and aquatic life in DRBC's SPW waterways. DRBC could remedy this disconnect by examining the full cycle of sewage and sludge from the WWTP and, if applied to land, require robust monitoring of pollutants, NPSPCPs that reflect sewage sludge/biosolids application to land, and tightened parameters in the WWTP discharge permit.

4. Finally, we request that PFAS be added to the DRBC Docket list of parameters to be monitored for and removed from this WWTP's effluent since we know that PFAS occur in treated effluent from wastewater facilities, including from sewage treatment plants, and is found in sewage sludge and biosolids.[9]

   PFAS exposure through various media is linked to serious health effects including but not limited to cancers, high blood pressure, ulcerative colitis, pre-eclampsia and development effects on the fetus, infants and young children. Once released, PFAS then make their way into groundwater, surface water, air, soil, wildlife, including fish and other aquatic life, and into food. The chemicals are discharged with effluent, escape to the air, are deposited in soils and vegetation by sewage sludge and run off with stormwater into streams. These pollution pathways spread highly toxic PFAS compounds into our environment and water ways, our drinking water, and our ecosystems, endangering public health and the environment, as documented by PADEP in recent studies and reports underpinning the adoption of statewide maximum contaminant levels for PFOA and PFOS, two of the most prevalent PFAS compounds in Pennsylvania. DRN requests that PFAS be added by DRBC as a parameter that must be monitored for and removed when found.

[9] Lindstrom, A.B. Strynar, M.J., Delinsky, A.D., Nakayama, S.F., McMillan, L., Lieblo, E.L., Neill, M., & Thomas, L. (2011). Application of WWTP Biosolids and Resulting Perfluorinated Compound Contamination of Surface and Well Water in Decatur, Alabama, USA. *Environ. Sci. Technol.*, 2011, 45 (19), pp 8015–8021. Retrieved from https://pubs.acs.org/doi/abs/10.1021/es1039425

Thank you for the opportunity to comment on DOCKET NO. D-2002-038 CP-4 Nazareth Borough Municipal Authority Wastewater Treatment Plant, Lower Nazareth Township, Northampton County, Pennsylvania. We request that the draft Docket not be approved as proposed.

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