pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026921**
Facility Type	**Municipal**	APS ID	**737436**
Major / Minor	**Major**	Authorization ID	**941877**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Greater Hazleton Joint Sewer Authority**	Facility Name	**GHJSA WWTP**
Applicant Address	P.O. Box 651	Facility Address	500 Oscar Thomas Drive
	Hazleton, PA 18201-0651		Hazleton, PA 18201
Applicant Contact	Christopher Carsia	Facility Contact	Christopher Carsia
Applicant Phone	(570) 454-0851 ext 310	Facility Phone	(570) 454-0851 ext 310
Client ID	85678	Site ID	242069
Ch 94 Load Status	Not overloaded	Municipality	West Hazleton Borough
Connection Status	No connection prohibition	County	Luzerne
Date Application Received	August 31, 2012	EPA Waived?	No
Date Application Accepted	September 11, 2012	If No, Reason	Major Facility, Pretreatment, Significant CB Discharge

Purpose of Application: Renewal of NPDES permit to discharge treated sewage.

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge 8.9 MGD of treated sewage to Black Creek, a CWF/MF designated receiving stream in state water plan basin 05-D (Nescopeck Creek). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use.

A Total Maximum Daily Load (TMDL) for the Black Creek, Little Nescopeck Creek and an unnamed tributary to Little Nescopeck Creek watershed was finalized on May 2, 2005. The TMDL addresses the three primary metals associated with acid mine drainage (Iron, Manganese and Aluminum) and pH. Treated sewage is not considered a major contributor of the primary metals to the affected streams, however, monthly monitoring and reporting requirements are included in this permit renewal for these pollutants of concern.

The pH and Fecal Coliform limits are technology-based limits carried over from the previous permit. A technology-based IMAX limitation (10,000 No./100 mL) is added for Fecal Coliform during this permit renewal for the winter months (October - April). A technology-based IMAX limitation (1,000 No./100 mL) is added for Fecal Coliform during this permit renewal for the summer months (May - September) to replace the current "not greater than 1,000 No./100 mL in more than 10% of the samples tested" requirement.

TSS and $CBOD_5$ limitations are technology-based and carried over from the previous permit. WQM 7.0 modeling recommended a 2.75 mg/L summertime average monthly limitation for Ammonia-Nitrogen (see WQM Modeling attachments). The standard 3x multiplier is used to develop the wintertime average monthly limitation of 8.25 mg/L. These limits will take effect three years from the permit effective date. Monitoring and reporting requirements for Ammonia-Nitrogen are carried over from the previous permit until the limits take effect. The monitoring frequency is updated to daily to remain consistent with guidance document 362-0400-001. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA as well as the "measure" tool. Drainage areas were delineated using USGS's StreamStats

Approve	Deny	Signatures	Date
X		*Brian Burden* Brian Burden, E.I.T. / Project Manager	March 22, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	3-23-21

Summary of Review

Interactive Map and elevations were obtained using the elevation profile feature of StreamStats (see Watershed Information attachment).

The previously issued permit did not contain Total Residual Chlorine (TRC) limitations since the WWTP utilizes ultraviolet light for disinfection. The permittee shall report operation of the ultraviolet disinfection system daily using the Daily Effluent Monitoring Form (3800-FM-BCW0435). In the event the facility uses chlorine for cleaning purposes or as a back-up disinfection option, an IMAX water quality-based limitation is added to the permit as calculated by the attached TRC calculation spreadsheet and is to be sampled "daily when discharging" (see requirements under Part C.VIII). The limitation will come into effect three years after the permit effective date. An IMAX limit of 1.6 mg/L as derived from the Department's TRC Calculation Spreadsheet and PA Code 92a.47(a)(8) (which refers to PA Code 92a.48(b)(2)) and is applied to this permit renewal until the water quality-based limitation comes into effect. The permittee may conduct site-specific studies to change the limitation (See Permit Part C.VIII).

As per the Water Quality Assessments performed by Timothy Daley, Water Pollution Biologist II (dated July 1, 2008 and January 7, 2019), the point of first aquatic use related to the Authority's outfall is considered the discharge location on Black Creek. In previous modeling, the point of first use was at the confluence of Nescopeck Creek (downstream of Black Creek) with the Susquehanna River. Previous modeling utilized stream gage results from gage 01540500 (Susquehanna River at Danville, PA) and resulted in a low flow yield (LFY) value of 0.09 cfs/mi^2 (Q_{7-10} = 1,010 cfs, D.A. = 11,220 mi^2). Since the watershed at the point of first use has changed considerably, this gage is no longer representative of the watershed at the point of discharge.

On April 27, 2009, GHJSA requested an amendment to the permit for approval to receive 35,000 gpd of oil and gas drilling wastewater (which was subsequently withdrawn in a letter, dated June 11, 2010, from GHJSA's consultant). A draft permit was prepared that utilized data from stream gage 01538000 (Wapwallopen Creek at Wapwallopen, PA) to develop a LFY for modeling purposes (Q_{7-10} = 5.76 cfs, D.A. = 43.8 mi^2 → LFY = 0.132 cfs/mi^2). Using the USGS StreamStats delineation feature, the watershed characteristics at gage 01538000 and the point of discharge were compared for this permit renewal. It was found that several key watershed characteristics were not compatible (see highlighted fields in Watershed Information attachment), therefore, data from gage 01538000 is not used to develop a LFY for this permit renewal. No other gages within the vicinity were found to have comparable watershed characteristics and/or recent data. The new LFY (0.359 cfs/mi^2) and Q_{7-10} (7.73 cfs) was calculated from the USGS StreamStats interactive map on the receiving stream at the discharge location.

Toxics Management Spreadsheet (TMS) modeling recommended effluent limitations or monitoring requirements for several pollutants. Limitations will come into effect three years after the permit effective date. Note: Limitations and monitoring requirements were recommended for several parameters not detected in the effluent during the Pollutant Group sampling results submitted with the application. Those parameters are identified below, and the permittee may choose to re-sample for them during the draft permit review period at the Department's target QLs (or sufficiently sensitive QLs) found in the current application instructions document.

- **Total Aluminum -** The highest value reported in the pollutant group sampling submitted with the application was 88 µg/L. Since the most stringent WQBEL (based on AFC) is 750 µg/L, and the discharge concentration was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal.

- **Total Cobalt** – The highest value reported in the pollutant group sampling submitted with the application was 6 µg/L. Since the most stringent WQBEL (based on CFC) is 29.7 µg/L, and the discharge concentration was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal.

- **Total Copper** – The highest value reported in the pollutant group sampling submitted with the application was 4 µg/L. Since the most stringent WQBEL (based on AFC) is 14.6 µg/L, and the discharge concentration was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal.

- **Free Available Cyanide** – The highest value reported in the pollutant group sampling submitted with the application was 10 µg/L. Since the most stringent WQBEL (based on CFC) is 8.1 µg/L, limitations are established as follows: Monthly Average – 8.1 µg/L, Daily Maximum – 12.7 µg/L, IMAX – 20.3 µg/L.

- **Dissolved Iron –** The pollutant sampling results were all non-detect, therefore, the QL was utilized to model the discharge (100 µg/L). Since the most stringent WQBEL (based on THH) is 468 µg/L, and the discharge

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concentration was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal. The permittee may choose to resample this parameter at a lower QL during the draft permit review period to remove Part A monitoring requirements in this permit renewal.

- **Total Manganese -** The highest value reported in the pollutant group sampling submitted with the application was 164 µg/L. Since the most stringent WQBEL (based on THH) is 1,561 µg/L, and the discharge concentration was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal.

- **Total Silver -** Sampling results submitted with the 2012 permit application show three results at 1 µg/L with no "<" qualifier. Since the most stringent WQBEL (based on AFC) is 4.08 µg/L, and the QL utilized was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal. The permittee may choose to resample this parameter at a lower QL during the draft permit review period to remove Part A monitoring requirements in this permit renewal.

- **Total Zinc -** The highest value reported in the pollutant group sampling submitted with the application was 36 µg/L. Since the most stringent WQBEL (based on AFC) is 124 µg/L, and the discharge concentration was greater than 10% of the WQBEL value, monthly monitoring requirements are established during this renewal.

- **Hexachlorobutadiene –** The pollutant tested as non-detect in all analyses. Laboratory sheets submitted with the permit application show the pollutant was analyzed utilizing the following three QLs: 10 µg/L, 1 µg/L and 1 µg/L. The Department's current target QL for this parameter is 0.5 µg/L. Since the most stringent WQBEL (based on CRL) is 1.86 µg/L, limitations are established as follows: Monthly Average – 1.86 µg/L, Daily Maximum – 2.90 µg/L, IMAX – 4.64 µg/L. The permittee may choose to resample this parameter at a lower QL during the draft permit review period to remove Part A monitoring requirements in this permit renewal.

Note: Sampling results submitted with the 2012 permit application for Total Lead show three results at 1 µg/L with no "<" qualifier. It's assumed the actual concentrations are below 1 µg/L based on the improbability all three results tested at exactly 1 µg/L. Since the Department's current target QL for Total Lead is currently 1 µg/L, monitoring requirements for this parameter are not required at this time.

The Part C.VI.C condition regarding Toxics Reduction Evaluations (TREs) is added to the permit and applies to each of the toxic pollutants above where limitations and monitoring requirements are to be established. The permittee will have the option to accept the implementation of the limitations or to perform site-specific studies to verify or refine the WQBELs.

To remain consistent with 40 CFR 122.47, milestones are added to Part C.VI requiring the permittee to develop a schedule/plan for meeting the final WQBELs for all new water-quality based effluent limitations in the permit. Although the permittee utilizes ultraviolet radiation for primary means of disinfection, to meet the water quality-based TRC IMAX limitation as calculated by the TRC Calculation Spreadsheet when the permittee is utilizing sodium hypochlorite for backup disinfection or other chlorine products for cleaning purposes, dechlorination may need to be considered.

Weekly influent monitoring for $CBOD_5$ and TSS are added to the permit to determine if the removal percentages meet secondary treatment standards.

To quantify nutrient reduction needs, maximum nutrient loads (cap loads) for each major watershed tributary to the Chesapeake Bay were established. This included allocation of cap loads for Total Nitrogen (TN) and Total Phosphorus (TP) in Pennsylvania for the Potomac and Susquehanna watersheds. Pennsylvania's overall cap loads for TN and TP were further divided into cap loads for point and non-point sources. The method used to allocate the point source portion of the load was developed after DEP conducted an extensive stakeholder process with sewage treatment plants in 2006. The workgroup recommendation made the allocations based on the design annual average daily flow, and concentrations of 6 mg/L TN and 0.8 mg/L TP. Based on this methodology, the allocations for TN and TP for this facility are 216,739 lbs/yr and 27,092 lbs/yr, respectively (effective August 1, 2011). The GHJSA WWTP is considered a Phase 1 facility in the Department's *Phase 2 Watershed Implementation Plan Wastewater Supplement (revised 9/6/2017)*.

In a letter from the Department, dated September 10, 2013, a TN offset of 29,200 lbs/yr and a TP offset of 408 lbs/yr were granted. Twice per week monitoring requirements for Total Kjeldahl Nitrogen, Nitrate+Nitrite-Nitrogen, and Total Phosphorus are applied in this renewal as per EPA requirements. The previously issued permit required 1/week monitoring for each of

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those parameters. Total Nitrogen, Net Total Nitrogen, Total Phosphorus, and Net Total Phosphorus must be reported on a monthly and annual basis.

GHJSA was not required to conduct annual Whole Effluent Toxicity (WET) testing in the previously issued permit. The standard Part C condition, Whole Effluent Toxicity – No Permit Limits, has been added to the permit. WET testing shall be conducted annually during the upcoming permit cycle, at a minimum. The WET Analysis Spreadsheet (see attached) was used to determine that the permittee must generate chronic survival and reproduction data for *Ceriodaphnia dubia*, and chronic survival and growth data for *Pimephales promelas*. The permittee shall perform testing using the following dilution series: 16%, 32%, 64%, 82%, and 100% effluent, with a control, where 64% effluent is the facility-specific Target In-Stream Waste Concentration (TIWC). TMS modeling determined the acute and chronic partial mix factors (PMFs) are both equal to 1.0.

The permit application submitted by GHJSA in 2012 (3800-PM-WSFR0009b, Rev. 4/2011) did not require WET testing results to be submitted with the application. It appears that specific version of the permit renewal application was the correct version for the permittee to use considering the revision date, the application due date and the typical time it takes to thoroughly complete a major sewage permit application. Since the date 40 CFR 122.21(j)(5)(ii)(A) was promulgated (requirement for WET tests to be submitted with the permit application) is not known by the permit reviewer and WET testing requirements likely didn't appear in the permit renewal application used by GHJSA in a timely manner, Part C.VII.B.1 is added to the permit requiring the permittee to submit quarterly WET tests for the first year of renewed permit coverage.

The GHJSA continues operation of the EPA-approved Municipal Industrial Pretreatment Program (MIPP). Six significant users (SIUs) are currently permitted under the MIPP, of which three are considered Categorical Industrial Users (CIUs) by definition. All six MIPP permits expire on December 31, 2021. The CIUs are:

1. Troy Manufacturing, 130 Lions Drive, Valmont Industrial Park, Hazle Township, PA 18202. Subject to 40 CFR Part 439 (Pharmaceutical Manufacturing Point Source Category – Subpart D – Mixing, Compounding and Formulation Subcategory). The facility blends and packages topical, non-prescription analgesic products used for muscle strains and soreness. The facility batch discharges approximately 1,500 gallons of process wash water into the sanitary sewer a few times per month.

2. Henkel US Operations Corporation, 125 Jaycee Drive, West Hazleton, PA 18202. Subject to 40 CFR Part 417 (Soap and Detergent Manufacturing Point Source Category – Subpart P – Liquid Detergents Subcategory). The facility blends and packages liquid detergent and liquid soap household and personal care products. The facility adjusts pH and adds anti-foam to the process water prior to discharge to the sanitary sewer.

3. Environmental Recovery Corporation, 1076 Old Manheim Pike, Lancaster, PA 17601. Subject to 40 CFR Part 437 (Centralized Waste Treatment Point Source Category – Subpart B – Oils Treatment and Recovery Subcategory). The facility pre-treats natural gas compressor station condensate and hauls it for discharge at the WWTP.

As per the latest submitted MIPP (for calendar year 2019), each facility is inspected and sampled at least once per year by the Control Authority. All facilities are required to perform a minimum of one sampling event every six months and submit a sampling results reporting form. Each facility is also required to submit a routine compliance report twice per year. Wastewater discharge limits violations result in additional monitoring/reporting requirements. Local limit parameters are analyzed once every calendar quarter on raw influent, final effluent, and dewatered sludge cake, as required by the previous NPDES permit. Local limit parameters were also analyzed quarterly on domestic wastewater samples from two locations in the collection system, based on an agreement with the EPA. Priority pollutants are analyzed on raw influent, final effluent, and dewatered sludge cake on an annual basis. Since 2014, the Authority has conducted comprehensive hauled waste sampling once every calendar quarter. Review of the pollutant sampling data and GHJSA's general administration of the MIPP results in no need for additional monitoring requirements in this permit.

The 2019 MIPP states the Authority will continue to address the 40 CFR Part 441 Dental Office categorical standards that EPA promulgated in June 2017. As per EPA's website, dental offices discharge mercury present in amalgam used for fillings. Amalgam separators are a practical, affordable and readily available technology for capturing mercury and other metals before they are discharged into sewers that drain to POTWs. Once capture by a separator, mercury can be recycled. EPA expects compliance with this final rule will annually reduce the discharge of mercury by 5.1 tons as well as 5.3 tons of other metals found in dental amalgam to POTWs.

Summary of Review

GHJSA's plan for implementation of the dental office regulations include identifying all dentists' offices in the service area and then sending out an information letter and one-time certification form. Any facility that removes amalgam must install and operate an amalgam separator. The Authority shall ensure all dentists comply with the October 12, 2020 deadline. The standard Part C special condition titled POTW Pretreatment Program Implementation is included in the permit.

In a letter to the Department, dated February 18, 2021, GHJSA requested for the Mill Street Diversion Chamber No. 4 (Outfall 016) be removed from the Authority's NPDES permit. As per the letter: "Following completion of a combined sewer separation project as detailed in the closure report delivered to the Department in December 2018, the sluice gate was closed in the early afternoon on January 4, 2019, and has not been opened since that date. The Authority anticipates completing the work to permanently seal the gate within the next two months, when the weather is not prohibitive."

After removing Outfall 016, 14 permitted combined sewer overflow (CSO) regulators and outfalls in the WWTP collection system remain. The previously issued permit amendment did not include Outfall 007 (Diversion Chamber No. 11 on Roosevelt Street, City of Hazleton). This outfall is added to the CSO list as per GHJSA's 2016 CSO Status Report. The coordinates and location descriptions for several of the CSO outfalls (Part A.I.H) were updated to be in accordance with the 2019 CSO Status Report and current street names. As per the report, approximately 529 million gallons of combined wastewater was discharged from the CSOs during wet weather events in 2019. There was a total of 717 CSO discharge events averaging 48 events per CSO outfall. The WWTP processed approximately 2,835 million gallons of wastewater in 2019, therefore, approximately 16% of the total combined wastewater was discharged through the CSOs and 84% was processed through the WWTP. Of the 529 million gallons discharged through CSOs in 2019, about 51% (267.4 million gallons) was discharged from the three largest CSOs (Outfalls 002, 009 and 011).

Flows are metered at the WWTP and CSO 003 while flows are estimated for the remaining CSOs using a Microsoft Excel spreadsheet that was developed in 2000. The flows derived from the spreadsheet are based on drainage areas and rainfall records and only represent an approximation of CSO discharges. The accuracy of the estimated flow values is unknown. The report also indicates that comparison of the spreadsheet flow estimates with actual flow metering data collected as part of Gannett Fleming's October 2008 CSO Characterization Report show the need for an updated flow estimate model. As a LTCP milestone, the permittee shall develop a means to measure or model CSO flows in the system more accurately. An updated CSO flow modeling study shall be submitted to DEP within 4 years of the permit effective date (see Part C.III.4.).

Two of the CSOs provide treatment to the combined sewage:

- Outfall 002 (at the WWTP) includes a vortex separator designed to provide primary treatment, solids and floatable disposal and disinfection. The vortex separator was installed in 2012.

- Outfall 003 also includes a vortex separator, which was installed in 2009. The flow meter monitors/records discharge volume, duration and frequency.

The previously issued permit contained milestones and due dates for several CSO projects:

1. **Hydraulic Characterization of the CSO's** *(due 180 days of August 1, 2011).* As per the 2019 CSO Status Report, this was completed in 2008. The Authority continues to utilize the monthly CSO flow estimating spreadsheets, as developed in 2000, and there have been no changes to the flow estimating procedures in these spreadsheets. Initial comparison of these spreadsheet flow estimates with actual flow metering data collected as part of Gannett Fleming's October 2008 CSO Characterization Report indicated that further investigation into the flow estimating procedures may be warranted. The permittee's consultant stated that these flows represent an approximation of CSO discharges, and the accuracy of these estimated flows is unknown. The consultant suggests these flow estimates should not be used for regulatory monitoring or enforcement, planning, or design purposes. As per an email from the applicant's consultant, dated September 10, 2017: "the monthly CSO flow estimating spreadsheets were developed back in the 1990's as part of the Nine Minimum Controls and as an NPDES permit requirement. The Authority has continued to compile these monthly spreadsheets over the years, but they are not used for any specific purpose. Initial comparison of these spreadsheet flow estimates with actual flow metering data collected as part of Gannett Fleming's October 2008 CSO Characterization Report indicated that further investigation into the flow estimating procedures may be warranted. Because of the uncertainty in the spreadsheet results, they are simply maintained as directed by DEP."

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Efforts to develop a more accurate model should be outlined in the updated LTCP.

2. **Determine how to handle and treat wet weather flow at the wastewater treatment plant** *(due 180 days of August 1, 2011).* As per an email from the applicant's consultant, dated September 10, 2017: "The Authority does have wet weather standard operating procedures developed for handling wet weather events at the WWTP. Although the procedures are not written down, they are followed by the certified operators when flows increase. These procedures include:

    a. An actuated valve located along the main interceptor to the head of the plant is controlled through the Authority's SCADA system to activate and open based on the influent metered flow at the WWTP.
        i. If the WWTP influent flow reaches or exceeds a set flow rate (currently set to 16.5 MGD), the actuated valve will begin to open to partially divert flow through CSO No. 002's Storm King grit removal system and disinfection system prior to discharge out Outfall No. 002. Once the actuated valve is opened, sodium hypochlorite disinfection of the CSO No. 002 outfall begins. Dosage is proportional to the Outfall No. 002 flow to ensure adequate disinfection of the discharged effluent.
        ii. The actuated valve continues to open and close to maintain a maximum flow rate of 16.5 MGD through the WWTP.

    b. The WWTP's screening and grit systems are controlled through the Authority's SCADA system to activate and increase their run-time frequency based on the influent metered flow at the WWTP.
        i. If the WWTP influent flow reaches or exceeds a set flow rate (currently set to 11.0 MGD), the screens begin to operate at a higher speed.
        ii. If the WWTP influent flow reaches or exceeds a set flow rate (currently set to 11.0 MGD), the grit system begins to operate continuously. It is normally operated on a timer that runs 1 hour every 4 hours.

    c. An actuated valve located after the trickling filter biotowers is controlled through the Authority's SCADA system to activate and open based on the aeration tank metered flow at the WWTP.
        i. If the aeration tank flow reaches or exceeds a set flow rate (currently set to 8.9 MGD), the actuated valve will begin to open to partially divert flow around the aeration tanks to control washout of the biomass. The diverted flow is reintroduced near the end of the aeration tanks.
        ii. The actuated valve continues to open and close to maintain a maximum flow rate of 8.9 MGD through the aeration tanks.
    d. All SCADA flow set-points are inputted by certified operators and the system can also be run on manual if desired. While unique situations may require operators to adjust set-points and process operations on a case-by-case basis to best operate the facilities, these wet weather procedures are typically followed."

Part C.X is added to the permit requiring the permittee to develop a written High Flow Management Plan within one year of the effective date of the permit.

3. **Diversion Chamber No. 7 Construction – separator with disinfection and meter** *(due January 31, 2008).* This was completed in 2009.

4. **Treatment Plant Diversion Chamber Characterization** *(due 180 days of August 1, 2011).* Vortex separator installed in 2011.

5. **Diversion Chamber No. 12 separation design to be completed by Hazle Township** *(GHJSA expected that Hazle Township would have completed this milestone by February 28, 2013).* Hazle Township performed limited separation, including installation of a new sanitary manhole and sewer main connected directly to the terminus of the Black Creek interceptor; however, an unknown amount of cross connections exist in Hazleton City, which discharge to Diversion Chamber No. 12. A study is proposed by GHJSA to identify these cross connections and eliminate as needed. An LSA Grant was received through Hazle Township on behalf of GHJSA to partially fund the project.

A separation study for Diversion Chamber No. 12 shall be submitted to DEP within 3 years of the permit effective date (see Part C.III.C.4.

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6. **Study of 6-block area tributary to Diversion Chamber No. 6 to be completed by the Borough of West Hazleton** *(GHJSA expected that the Borough of West Hazleton would have completed this milestone by February 28, 2013).* The task was not performed. GHJSA acquired the borough's collection system in 2013. LSA Grant applications were submitted in 2016 and 2017 for a study and construction to separate the sewers in this area, but grant funding was not received.

A separation study for Diversion Chamber No. 6 shall be submitted to DEP within 3 years of the permit effective date.

7. **Diversion Chamber No. 4 elimination study to be completed by the City of Hazleton** *(GHJSA expected that the City of Hazleton would have completed this milestone by February 28, 2013).* The elimination study was completed in 2017. The sewer separation work leading to elimination of the diversion chamber was completed in 2018. As per the February 18, 2021 letter from GHJSA, the project was completed and this CSO outfall has been removed from the NPDES permit.

In a letter to the Department, dated September 29, 2017, GHJSA provided a summary of work completed to date and an updated timeline for remaining tasks with regards to the CSO treatment facility located near Autumn Lane and Ridge Avenue in Hazle Township. Preliminary studies show no stormwater flow from Hazle Township enters the CSO, and work will be concentrated within the combined collection system located in West Hazleton Borough. The task schedule for the project indicated the final report was scheduled to be completed in March 2019. Due to the long delay in the issuance of this permit renewal (application submitted in 2012), the submittal of the final report has been included as a LTCP Milestone in Part C.III.C.4. of the permit.

GHJSA's LTCP was last revised in June 2001. The following list summarizes the Nine Minimum Controls and describes how the permittee's LTCP and latest CSO Status Report address the controls:

1. *Proper operation and regular maintenance programs for the sewer system and the CSOs.*

As per the LTCP, "The Superintendent of the treatment facilities submits a report of CSO overflows occurring during the reporting period. The reports include dates, duration, causes, estimated flows, any maintenance activities associated with the combined collection/conveyance system, and remediation of visually observed downstream effects. These reports are appended to the minutes of the Authority meetings and are available for public review at the Authority office."

2. *Maximum use of the collection system for storage.*

As per the LTCP, "Diversion chamber inventory and inspection activities are utilized as a means of maximizing storage of wet weather flows in the sewer system to the extent practical, which maximizes flows that are treated at the POTW."

While inventory and inspection activities are essential in enabling the identification of serious deficiencies that restrict the use of the system's available storage capacity, there are other aspects of this control measure that should be addressed, such as: tide gate maintenance and repair, adjustment of regulator settings, restrict inflows, localized upstream detention, upgrade/adjustment of pump operations at interceptor lift stations, and removal of other obstructions to flow.

The LTCP mentions technologies that can be used to maximize storage in the collection system, but the LTCP does not include plans to implement those technologies.

3. *Review and modification of pretreatment requirements to assure CSO impacts are minimized.*

The LTCP mentions this control measure, but other aspects need to be addressed, such as: assessing the impact of nondomestic discharges on CSOs (especially for Outfall 002, which is downstream of most of the industrial discharges in the collection system), evaluation of feasible modifications (e.g. prohibition of batch discharges or some sort of detention to prevent discharges during wet weather events), and documentation of actions taken.

4. *Maximization of flow to the WWTP for treatment.*

The LTCP does not address most of the control measures recommended in EPA's Guidance for Nine Minimum Controls (EPA doc. no. 832-B-95-003).

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5. Prohibition of CSOs during dry weather.

As per the LTCP, the permittee utilizes the block testing technique to check for dry weather CSO discharges. The 2019 CSO Status Report indicated no dry weather overflows occurred in 2019. Since dry weather overflows can still occur in the collection system, the updated LTCP shall include specific control measures and a plan for complete elimination of all dry weather overflows.

6. Control of solid and floatable materials in CSOs.

As per the LTCP, "The City, Borough and Township tributary to the Authority's system have active street cleaning, solid waste collection and disposal, and recycling programs to control the amount of solid and floatable materials in the overflows. The Authority has also instituted a program of inspecting various storm sewer inlets throughout the collection systems and recording conditions on a standardized Storm Sewer Inlet Inspection form."

As per the 2019 CSO Status Report, "The Authority has developed a CSO monitoring program. The program includes weekly inspection and cleaning of all diversion chambers, visual monitoring of the receiving streams at each discharge point, indpections of regulators after significant storm events, and response to public notices of overflows."

CSO outfalls 002 and 003 include vortex separators to reduce solids and floatables in the discharged wastewater.

As part of the LTCP, the Authority shall keep records of the weekly visual inspections and be sure to have them available for public and DEP review. GHJSA should include steps to be taken in the event the discharge of solids/floatables becomes an issue at any of their CSO outfalls.

7. Pollution prevention.

As per the LTCP, "The City, Borough and Township tributary to the Authority's system have active street cleaning, solid waste collection and disposal, and recycling programs to control the amount of solid and floatable materials in the overflows. The Authority has also instituted a program of inspecting various storm sewer inlets throughout the collection systems and recording conditions on a standardized Storm Sewer Inlet Inspection form. In addition to the aforementioned pollution prevention measures, the Authority has initiated an advertisement campaign in the local newspaper (Hazleton *Standard-Speaker*). The first advertisement provides public education on the subject of proper recycling of used motor vehicle fluids and counseling against the use of storm sewer inlets as points of disposal. Future topics planned to be published on a quarterly basis include:

- General explanation of the CSO control program,
- Overview of issues pertaining to prohibiting roof drain and sump pump connections to the combined sewer system,
- Description of the ecology of wastewater treatment, and
- Explanation of citizen responsibility for the environment."

As per the 2019 CSO Status Report, "The GHJSA continues to implement a Pollution Prevention Program. This includes a dedicated page on the official Authority website that provides pollution prevention information for public access. The website, www.ghjsa.org, provides information and brochures regarding proper disposal of household hazardous wastes; fats, oils & grease, and lawn wastes/fertilizers. The Authority also continues to implement public education programs, including WWTP tours by students of local schools and universities.

The updated LTCP shall include updates on the measures described above as well as plans for future pollution prevention measures.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.

As per the LTCP, "At the regulary scheduled Authority meetings, monthly public meetings subject to the Commonwealth of Pennsylvania's open meeting "sunshine" law, the Superintendent of the treatment facilities submits a report of CSO overflows occurring during the reporting period. The reports include dates, duration, causes, estimated flows, any maintenance activities associated with the combined collection/conveyance system, and remediation of visually observed downstream effects. These reports are appended to the minutes of the Authority meetings and are available for public review at the Authority office."

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Posting at CSO outfalls is advisable where outfalls are visible and the affected shoreline areas are accessible to the public. Although public notification actions have no direct effect on reducing overflows and pollutant loads from CSO systems, or on minimizing water quality impacts, notifications will diminish the potential risk of adverse public health effects and will also increase public awareness and might increase public support for CSO control programs.

9. *Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.*

As described above, a comprehensive inspection or monitoring program helps meet the objectives of this control measure. The Authority shall include an assessment of the effectiveness of any CSO control measures already implemented in the updated LTCP.

The following list summarizes the nine elements of a LTCP (see EPA doc. EPA 832-B-95-002) and describes how the permittee's LTCP and latest CSO Status Report address the controls:

1. *Continued implementation of the nine minimum controls*

See comments above.

2. *Protection of sensitive areas (recreation areas, public water supply, unique ecological habitat, etc.)*

As per the LTCP: "Due to the mining activities in the study area over the years and other factors, there is no knowledge of any sensitive areas in the Authority's drainage basins."

A brief eMapPA search found several environmental points of interest in the GHJSA collection system area, including: private drinking water wells, public water supply infrastructure and environmental justice areas. Those areas should be addressed in the LTCP update.

3. *Characterization, monitoring and modeling of overflows and assessment of water quality impacts*

See response above regarding the LTCP milestone for *Hydraulic Characterization of the CSO's* as well as the response above for NMC #9.

4. *Evaluation and selection of control alternative - presumptive or demonstrative approach*

The control approach has not been clearly identified in the LTCP and should be addressed in the revised LTCP. A LTCP milestone is added to Part C.III.C.4 for the selection of a control alternative.

5. *Public participation in LTCP plan development and implementation*

The LTCP suggests several public participation ideas. Going forward, any public participation efforts/results should be documented in the CSO Status Reports.

6. *Implementation schedule and financing plan for selected control options*

Future milestones should include this information.

7. *Maximizing treatment at the existing POTW treatment plant*

See response above for NMC #4.

8. *The selected CSO controls should include a post-construction monitoring program plan adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of CSO controls. This water quality compliance monitoring program should include a plan to be approved by the Department that details the monitoring protocols to be followed*

See response above for NMC #9.

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9. *CSO System Operational Plan*

See response above for NMC #1.

In addition to the comments above, several other parts of the LTCP require revisions or updates, including: the number and location of CSOs in the system, the CSO control approach chosen (demonstration vs. presumption) and a plan to reach the goals of the chosen approach, the specific and up-to-date impairments of each receiving water and how GHJSA plans to address the impairments, and an updated implementation schedule. As stated above, the revised LTCP is due within 2 years of the permit effective date. All LTCP-related milestones are included in Part C.III.C.4 of the permit.

There are no current or projected overloads at the treatment plant as per the 2019 Chapter 94 Report. No antidegradation analysis is required since the watershed is not high quality or exceptional value. None of the existing effluent limitations have been made less stringent, therefore, the antibacksliding requirement has been met.

Monitoring frequencies for nutrients (TP, TN, TKN, Nitrate+Nitrite-N) is updated to 2/week as per recommendation from the EPA for other major Chesapeake dischargers. The monitoring frequencies for all other parameters with limitations have been updated to conform with the monitoring frequencies recommended in the Department's Technical Guidance for the Development and Specification of Effluent Limitations (doc. no. 362-0400-001).

Monitoring and reporting requirements are continued in this renewal for stormwater outfalls 101, 102, and 103. Semiannual monitoring and reporting are required for TSS, pH, TKN, Total Iron, and Oil & Grease. Additional stormwater requirements are included in Part C.IX.

The previously issued permit expired on February 28, 2013 and the application for permit renewal was submitted on time. There are no open WPC NPDES violations for this client that would warrant withholding the issuance of this permit.

In December 2017 and before the period of negotiations between DEP's Central Office and the U.S. EPA regarding specific permit language, a draft permit was sent to GHJSA. This draft permit replaces the draft permit sent in December 2017. Comments received during the 2017 draft permit comment period from GHJSA and the U.S. EPA are included below with DEP responses.

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EPA Comments:

1. The fact sheet states that TN and TP offsets were authorized by PADEP in 2013, and are authorized in the proposed permit. Appropriate documentation of these offsets need to be included in the fact sheet.
2. The fact sheet indicates that the previous permit did not require WET testing, so no WET testing was evaluated for the draft permit renewal. Permit applications for existing POTWs are required to include the results from a minimum of four quarterly tests for a year (from the year preceding the permit application), or results from four tests performed at least annually in the four and one half year period prior to the application (40 CFR 122.21(j)(5)(ii)(A)). Since this federal requirement was not met, and no subsequent RP analysis was conducted, we would recommend that the permit include accelerated quarterly WET testing in the first year of the permit. It is EPA's expectation that the results of the quarterly tests would be evaluated by PADEP in order to address the RP assessment that was not conducted during this draft permit development process. The intent of the RP assessment would be to determine the need for WET limits in the permit, if appropriate, through a permit amendment.
3. The draft permit provides a three year compliance schedule for TRC and ammonia-nitrogen. We offer the following comments regarding these two pollutants:
    a. The compliance schedule for TRC does not meet the requirements of 40 CFR 122.47 and will need to be revised. The schedule must contain the actions that the facility will take that will lead to compliance with the final TRC WQBEL, and which would also justify the amount of time afforded in the permit (3 years) to be "as soon as possible". The schedule also allows the permittee to choose *either* to meet the limit in 3 years, or to perform site specific studies. As indicated in the 2007 Hanlon Memo regarding the use of compliance schedules for WQBELs (see attached), a compliance schedule cannot be afforded solely to allow time for the permittee to conduct site specific studies. The TRC schedule will need to be revised, and you may want to consider some of the following options:
        i. You could consider using PADEP's TIE/TRE schedule to meet the calculated TRC limit.
        ii. You could modify the proposed TRC schedule to include specific actions the facility will take to meet the limit in 3 years (or other specified time frame). You would need to modify the language to allow the permittee the option to also conduct site specific studies, but this should not be phrased as an either/or option.
    b. Part A (pages 4 and 5) of the permit provide a three year compliance schedule to meet the new ammonia-nitrogen limit, without a schedule that meets the requirements of 40 CFR 122.47. Per 40 CFR 122.47, compliance shall be required "as soon possible", and if the schedule of compliance exceeds one year from the date of permit issuance, the schedule must include interim requirements and the dates for their achievement. The time between interim dates shall not exceed one year. A compliance schedule for ammonia-nitrogen must be added to the permit to address these requirements.
4. The permit affords a compliance schedule to implement the LTCP. Specifically, the permit uses language such as: "The long term goal of the LTCP requirements…is to achieve compliance with the state water quality standards upon completion of the LTCP implementation.", and includes a "Combined Sewer Overflow Compliance Schedule". However, no discussion is provided in the fact sheet regarding the appropriateness of including such a schedule. EPA's 1994 CSO Policy requires that all Phase II Permits contain WQBELs requiring compliance with, no later than the date allowed under the State's water quality standards, the numeric performance standards for the selected CSO controls. Any such compliance schedule in the permit would, therefore, need to be accompanied by a fact sheet discussion that addresses issues such as:
    a. the ability of the permit to include a schedule for complying with water quality standards no later than the date allowed under the state's water quality standards (for example, if PA's bacteria standards were adopted prior to July 1, 1977, a compliance schedule in the permit would not be appropriate to meet those standards – see the attached 2007 EPA Hanlon Memo regarding Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits); and
    b. how the permit meets PADEP's regulation at 25 Pa Code 92a.51, which limits schedules of compliance to no longer than 5 years unless a court of competent jurisdiction issues an order allowing a longer time for compliance. Since previous permits have already allowed time for compliance with CSO water quality requirements, the time afforded by 92a.51 has already passed.

    Therefore, EPA has attached its proposed changes to the Part C CSO condition to address the compliance schedule concerns. Additional proposed changes include recommendations for the NMC language, clarification of the performance standard language, and inclusion of a specific requirement to implement an approved Post Construction Compliance Monitoring (PCCM) plan. EPA recommends that any CSO activities to be performed in the permit cycle be added directly under the Schedule Activity Description heading.

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DEP Responses to EPA 2018 Comments:

1. A copy of the letter from the Department, dated September 10, 2013, is attached to the fact sheet below.

2. The permit application submitted by GHJSA in 2012 (3800-PM-WSFR0009b, Rev. 4/2011) did not require WET testing results to be submitted with the application. It appears that specific version of the permit renewal application was the correct version for the permittee to use considering the revision date, the application due date and the typical time it takes to thoroughly complete a major sewage permit application. Since the date 40 CFR 122.21(j)(5)(ii)(A) was promulgated (requirement for WET tests to be submitted with the permit application) is not known by the permit reviewer and WET testing requirements likely didn't appear in the permit renewal application used by GHJSA in a timely manner, Part C.VII.B.1 is added to the permit requiring the permittee to submit quarterly WET tests for the first year of renewed permit coverage. Including this requirement ensures a.) four WET results will be reviewable in a relatively timely manner with definitive permit conditions requiring the tests that are in accordance with regulation, b.) WET test failures for any of the accelerated tests will be handled in accordance with current regulation, and c.) other requirements in the renewed permit will not be delayed, including: milestones for GHJSA's LTCP, WQBELs, etc.

3. To remain consistent with 40 CFR 122.47, yearly milestones are added to the permit requiring the permittee to develop a schedule/plan for meeting the final WQBELs for all new water-quality based effluent limitations in the permit. Technology-based IMAX limitations for TRC are included in the permit for the first 3 years of permit coverage as well.

4. The new Part C.III permit language in the permit should resolve the issues presented in this comment. The template language was the result of extensive negotiations between PA DEP and US EPA. However, the template language required some adjustments considering the underdeveloped status of the permittee's current LTCP.

GHJSA Comments:

1. "Point of First Aquatic Use" Designation

According to the accompanying "NPDES Permit Fact Sheet", PADEP has revised the "Point of First Aquatic Use" for the GHJSA WWTP final effluent from the point of confluence of the Nescopeck Creek with the Susquehanna River to the Black Creek at the WWTP outfall based on a PADEP stream survey conducted in 2008. The "Point of First Aquatic Use" determines the stream segment that is utilized in the water quality modeling to develop the discharge limits in the NPDES Permit. This revision has far-reaching consequences to the numeric discharge limits in the effluent limitations table of the draft NPDES Permit, with the addition of numerous new discharge limits and the lowering of some existing discharge limits. We do not believe that this change in stream designation is appropriate for the following reasons:

a. The PADEP 2008 stream survey is almost ten (10) years old and can no longer be considered a valid representation of actual current stream conditions. It is not appropriate to make such drastic changes to numeric discharge limits of the GHJSA WWTP based on

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an outdated study. Given the significant ramifications of this designation on the effluent limitations to the GHJSA WWTP, a current, up-to-date stream survey is warranted. ***We request that the Department's 2008 stream survey not be utilized for designating the "Point of First Aquatic Use" when developing water quality modeling of the GHJSA WWTP NPDES Permit.***

b. The Black Creek and Nescopeck Creek are both listed on the United States Environmental Protection Agency's (USEPA's) 303d list of impaired waterbodies. Further, a Total Maximum Daily Load (TMDL) has been established for the Black Creek and Little Nescopeck watersheds to address three (3) primary metals (Iron, Manganese, and Aluminum) associated with Acid Mine Drainage (AMD). Impairment in the Black Creek and Nescopeck Creek watersheds is well documented and many stream segments do not support macroinvertebrate life. As described in PADEP's May 2005 TMDL Report of the watersheds, the major source of AMD occurs at the Jeddo Tunnel discharge, which flows to the Little Nescopeck Creek, while the Gowen and Derringer deep mine discharges are major sources of AMD to Black Creek.

   Because of the documented AMD impairment downstream of the GHJSA WWTP outfall, it is not appropriate to designate the "Point of First Aquatic Use" at the WWTP outfall. Whether or not aquatic macroinvertebrates are present near the WWTP outfall, the Black Creek is negatively impacted by AMD within several miles downstream of the outfall. There is no rationale to burden the Authority with additional and more stringent discharge limitations based on this revised "Point of First Aquatic Use" designation.

We believe that revising the "Point of First Aquatic Use" from the Susquehanna River to Black Creek is not appropriate and should not be revised when establishing effluent discharge limits in the final NPDES Permit. ***We request that the Department maintain the "Point of First Aquatic Use" at the confluence of the Nescopeck Creek with the Susquehanna River, unless an updated stream survey (that considers downstream AMD conditions) is conducted and demonstrates a revision is warranted.***

2. CBOD and TSS Limitations

The Carbonaceous Biochemical Oxygen Demand (CBOD) and Total Suspended Solids (TSS) limits have been significantly reduced in the Effluent Limits Table on page 2. There is no regulatory basis for any TSS limit lower than 30 mg/L (monthly average). TSS limits are exclusively secondary treatment (technology-based) limits and there is no water quality criterion for TSS nor any other legal or scientific basis for setting a limit lower than 30 mg/L. Additionally, the Fact Sheet provides no regulatory basis for setting the CBOD limit lower than 25 mg/L (monthly average).

As a matter of law (33 U.S.C. § 1342(a)1)(B)), TSS limits cannot be Best Professional Judgment (BPF) limits. Accordingly, the only basis for TSS limits is the secondary treatment standard of 30/45 mg/L (monthly/weekly). We understand that a PADEP Standard Operating Procedure entitled "Establishing Effluent Limitations for Individual Sewage Permits" (SOP

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No. BPNPSM-PMT-033) states that if the stream Q_{7-10} flow to WWTP design flow is greater than 1:3, the stream is considered "effluent dominated" and more stringent discharge limits may apply. The more stringent limits are based on PADEP Guidance Manual ("Policy and Procedure for Evaluating Wastewater Discharges of Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers (391-2000-014)). These SOPs and Guidance Manuals are not legally binding nor do they have any scientific basis. ***Absent any legal or scientific justification, the CBOD and TSS limits must remain at 25/40 and 30/45 as established by regulation.***

As discussed in our comments above regarding "Point of First Aquatic Use" Designation, if the "Point of First Aquatic Use" is maintained at the confluence of the Nescopeck Creek with the Susquehanna River, then the Department's more stringent limits established in the "Policy and Procedure for Evaluating Wastewater Discharges of Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers" Guidance Manual will not apply.

Further, the Department's "Establishing Effluent Limitations for Individual Sewage Permit" SOP states "For existing discharges, if the more stringent treatment requirements cannot be achieved, do not apply the standards in DEP Guidance (391-2000-014) unless the receiving stream is impaired and the point source discharge is at least a partial cause of the impairment". The GHJSA WWTP cannot consistently meet the proposed effluent CBOD and TSS discharge limits of 10 mg/L and 10 mg/L, respectively, and the final effluent is not a cause of the impairment. ***Therefore, these limits may not be imposed.***

Finally, Pennsylvania Code Title 25 §95.5(a) states that "for wastes discharged to waters polluted by abandoned coal mine drainage, so that the applicable water quality criteria are not being met and designated water uses are not being achieved to the extent that aquatic communities are essentially excluded, and where the pollution cannot be remedied by controlling known, active discharges…, sewage shall receive secondary treatment".

Lacking any legal or technical basis for any other limit, the Authority requests that the regulatory secondary treatment standard of 30/45 mg/L (monthly/weekly) for TSS, and 25/40 mg/L for CBOD be used in the final NPDES Permit.

3. **Part A. Additional Requirement #1.d, Narrative Limits for foam, color, turbidity**.

   a. **A. Clarification**. The requirements at Additional Requirement #1, item d, (page 9) are ambiguous and require clarification in order to be acceptable. In particular, the Authority is concerned with the liability exposure of the Authority's Certified Operators. Certified Operators are legally required to recognize actual or potential permit violations and report to the Authority any such occurrence, its cause, the process control decisions necessary to correct it, and the probable effect on human health and the environment. 25 Pa. Code, § 302.1201(c). Furthermore, violations of any permit limits are reportable by the Authority to DEP (see also our comment below on this issue). Failure to abide by these regulatory requirements can result in significant financial penalties to both the Authority and

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individual operators. However, since there is no discernible standard of compliance with the narrative limits as stated in the Permit, it is impossible to tell when a violation occurs.

However, the Authority understands that DEP inspectors have been instructed by Central Office that an "observable change" is one that is obvious, objectionable, and significant. With that interpretation of the otherwise ambiguous term "observable, the Authority will accept this permit condition as drafted without objection. If you do not concur with the statements of other Department officials in this regard, please provide a definition of the term "observable change" in sufficient detail that the Authority and its employees can determine when a violation has and has not occurred for these parameters.

b. **B. Reporting** Please confirm that the provisions of Additional Requirement 1 do not trigger the reporting requirements under Part A.III.B. of the permit (page 16). Since the limits are technology-based and not water quality-based, a violation is not reportable under § A.III.B. Thus, if any discharge of foam, [1] color, turbidity, or oil and grease in excess of the standards set forth in Additional Requirement #1 (clarified as discussed above) were to occur, it would be reported with the monthly DMR report. If you disagree with this conclusion, please state the basis of such a disagreement.

4. **Reporting Planned Increases In Pollutants**

Section A.III.C.2(b), unnumbered paragraph following subparagraph (ii) (page 18), provides that if PADEP does not respond to a notice of increased "approved" pollutants within 30 days, the increase is deemed approved. This provision is contradictory to the applicable regulatory requirement at § 92a.24(a), which requires a written response from PADEP. Please confirm that if a planned increase in loading is reported as required by this permit provision, the Authority will not be held liable for a violation if PADEP does not respond to the notice and the Authority proceeds to accept the increased loading .

5. **Reference to Chapter 94**

The same paragraph referenced above appears to state in the last sentence that the overload conditions as stated in Chapter 94 are enforceable as a Permit condition. However, Chapter 94 itself provides specific remedies for conditions constituting a hydraulic or organic overload, and the Authority's WQM permit also requires compliance with these design criteria. It is improper and unacceptable to also make a hydraulic or organic overload under Chapter 94 an NPDES Permit violation under Chapter 92a, subject to enforcement as such by DEP, EPA and citizens. We are aware that this issue has been discussed with other regional offices and that the permit managers have agreed, by including a statement in the Fact Sheet, that this provision is not intended to imply that a hydraulic or organic overload constitutes an

NPDES Permit violation and that the reference is informational only. Please include a comment to that effect in the Fact Sheet for this permit.

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6. **Computation of Hauled Waste Loadings**.

Part A.III.C.3.b, on page 19 of the draft NPDES Permit includes new standard language regarding receipt and reporting of municipal hauled waste. GHJSA accepts domestic wastewater and sewage sludge from haulers comprised of holding tank waste, WWTP sewage sludge, WWTP effluent, portable toilet waste, septage and industrial waste primarily consisting of food processing waste. Since 2014, the Authority has conducted comprehensive hauled waste sampling once every calendar quarter that includes separate sampling of each of the three (3) hauled waste discharge points for conventional pollutants and local limit parameters. The hauled waste loadings are added to the raw influent (collection system) loadings to estimate more representative combined raw influent loadings to the WWTP.

The Hauled Waste Receiving Station consists of two (2) septage receiving screens and grit removal units. The Hauled Waste Receiving Station separates hauled waste into three (3) separate wet wells- hauled septage, hauled sludge, and "other" hauled wastes. Hauled septage is pumped to the Thickeners, where it is co-mingled with Primary Sludge and Waste Activated Sludge. The Thickener solids are then pumped to the Sludge Holding Tank, but the Thickener Supernatant is discharged to the Flocculation Tank. Hauled sludge is pumped to the Sludge Holding Tank. The Sludge Holding Tank contents are dewatered on the Rotary Presses, but the Holding Tank Decant is discharged to the Flocculation Tank. Although the hauled septage and hauled sludge are directed to the solids handling processes, supernatant from these hauled waste streams still end up in the treatment process. All "Other" hauled wastes are pumped directly to the Flocculation Tank. All three (3) hauled waste discharge locations are located downstream of the raw influent composite sampler location such that the impact of hauled waste is not included in the routine collection system raw influent composite samples. All 3 categories of hauled waste are sampled because they all contribute (in some part) to the raw influent loadings to the plant. The following sampling procedures have been implemented to obtain representative hauled waste loadings:

- Grab samples from each truck load discharged are collected and combined into a daily composite sample. A separate composite sample is collected for each of the 3 types of hauled wastes – “hauled septage”, “hauled sludge”, and “other hauled wastes”.
- Because only the supernatant of the hauled septage and hauled sludge is introduced back to the Flocculation Tank, the daily composite samples of these 2 wastestreams needs to be settled, or centrifuged, prior to analysis. These supernatant samples are considered representative of the flow back to the Flocculation Tanks.

A copy of the quarterly BOD characterization summary table from 2014 through 2016 is provided with this letter to demonstrate the sampling methodology and sample results. With this comprehensive hauled waste sampling program, the Authority understands that no additional sampling of hauled municipal wastes is necessary, since the hauled waste loadings to the treatment train are properly characterized utilizing the Authority’s current sampling program.

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7. **Calculation of solids production using incorrect and inapplicable methods**

Sections B.I.C.4.c (page 21) and C.IV.C (page 34) require annual submission of a "Solids Management Inventory" that includes both actual production data and a theoretical calculation using a very simplistic screening tool that appears in the EPA "Composite Correction Program Guidance Manual" ("CCP Manual") mentioned in the last sentence of paragraph IV.C. The Authority has reviewed the CCP Manual and believes that the methodology in that publication is overly simplistic—and therefore inaccurate—since the method is intended only for use as a preliminary screening tool; it is not a reliable method of assessing treatment plant performance and was never intended for that purpose. Moreover, the simplistic method described in the CCP Manual does not take into consideration influent TSS, solids added to the process by hauled waste, added treatment chemicals, and other processes, and thus cannot estimate the actual sludge production of the Authority's treatment plant with any degree of accuracy. The Authority objects to a Permit requirement to submit rough estimates of sludge production known and proved to be erroneous and inaccurate and state that they are the "expected sewage sludge production." This provision should be deleted from the final issued Permit.

8. **Monitoring for TDS, Total Sulfate, Chloride, and Bromide**

New once per week "monitor-only" requirements have been incorporated into the Effluent Limits Table on page 2 of the draft NPDES Permit for Total Dissolved Solids (TDS), Total Sulfate, Chloride, and Bromide. These requirements appear to have been developed as a result of the "Toxics Screening Analysis" that the Department conducted as part of the renewal process. There does not appear to be any rationale, however, for these monitor-only requirements. The reported TDS final effluent sampling data submitted by the Authority with the NPDES Permit renewal application do not appear to necessitate the monitoring requirement and no monitoring data were even provided by GHJSA for Sulfate, Chloride, or Bromide. The Department has no reason to believe that once per week monitoring is necessary or required. We request the opportunity for GHJSA to conduct additional sampling of Total Sulfate, Chloride, and Bromide in its final effluent over the next several months for PADEP's consideration prior to issuing the final NPDES Permit. This sampling can be conducted along with the sampling for Total Cobalt and Free Cyanide discussed in Comment No. 9.

9. **Monitoring Frequency for TMDL Parameters (Aluminum, Iron, and Manganese)**

New "monitor-only" requirements have been incorporated into the Effluent Limits Table on page 2 of the draft NPDES Permit for Total Aluminum, Total Iron, and Total Manganese. The accompanying "NPDES Permit Fact Sheet" states that these requirements are a result of a Total Maximum Daily Load (TMDL) for the Black Creek, which was finalized in May 2005. The TMDL addresses the three (3) primary metals associated with acid mine drainage (Aluminum, Iron, and Manganese), as well as pH. The NPDES Permit Fact Sheet acknowledges that treated sewage is not considered a major contributor of these metals, but monitoring and reporting requirements are incorporated regardless.

While we understand the desire for monitoring of the Authority's final effluent for these parameters as part of the TMDL implementation, once per week sampling is clearly excessive. The loadings from a municipal wastewater treatment should be fairly consistent for these parameters and will only be a small fraction of the established TMDLs for the watershed. ***Therefore, we request that the monitoring frequency for these parameters be adjusted in the final NPDES Permit from once per week to once per quarter.*** This revision will align the new monitoring with the routine quarterly local limit analyses under the Authority's Industrial Pretreatment Program, which includes other metals and organics.

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10. Total Cobalt and Free Cyanide Limits

The Effluent Limits Table on page 5 of the draft NPDES includes new Total Cobalt and Free Cyanide discharge limits. Reviewing the final effluent Total Cobalt sampling results provided in the 2012 NPDES Permit renewal application, it appears that two (2) of the three (3) results were analyzed at a detection limit of 20 µg/L and reported as non-detect. The final effluent sampling results are summarized in *Table 1*.

Table 1. Final Effluent Total Cobalt Sampling

Date	Total Cobalt, mg/L
6/12/12	< 0.020
7/5/12	0.0036
7/11/12	< 0.020

We do not believe that these data support a decision to impose effluent limits. To determine if limits are needed, GHJSA will conduct additional sampling of Total Cobalt in its final effluent (using a detection level of 0.001 mg/L or as low as the laboratory can achieve) over the next several months for PADEP's consideration prior to issuing the final NPDES Permit. ***The Authority requests that the Department allow time to collect twice per month sampling for Total Cobalt over a three (3) month period and the Department consider these additional results when evaluating the need for a Total Cobalt limit in the final NPDES Permit.***

Additionally, based on past experience, the Authority is aware that the Department's Free Cyanide test method is subject to false positives due to interference by certain organic chemicals that are known to be present in the wastewater. The Authority will conduct chemical testing to determine if the Free Cyanide results reported may be due in part to interference during the same three (3) month period discussed above.

Additionally, we request that the Department re-run its PENTOXSD water quality model for these two (2) parameters using the "Point of First Aquatic Use" at the confluence of the Nescopeck Creek with the Susquehanna River rather than the Black Creek at the WWTP Outfall as described in Comment No. 1.

11. CSO Long Term Control Plan Schedule

a. Part C.II.G. on page 31 of the draft NPDES Permit requires the submittal of an updated Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) within 180 days (6 months) of the NPDES Permit effective date. The Authority's current LTCP was developed in July 2001 and approved by the Department in May 2003. While the Authority has continued to implement the approved LTCP, it is most likely in need of significant revisions. Additionally, the Department outlined very specific items in the "NDPES Permit Fact Sheet" to be addressed in the updated LTCP. In order to adequately address these items, the Authority will need more than 6 months to update the LTCP. ***The Authority requests that the requirement in Part C.I.G to update the LTCP set a compliance due date within 24 months (2 years) of the NPDES Permit effective date.***

b. Part C.II.F. on page 31 provides conditions upon which the Department might modify, revoke or reissue the permit, labeled as "Reopener" provisions. It appears that the Department has stepped outside the bounds of regulatory authority to allow for it to reopen the permit under scenarios not provided for nor contemplated in any federal or state regulation. ***The Authority requests that the Department state the legal basis for this permit provision, or remove conditions F. 1., 2. and 3 altogether.***

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12. Whole Effluent Toxicity (WET) Testing

Part C.VI, B. 2 and 3 on page 38 of the draft NPDES Permit provides deadlines for submittal of WET Test results to the Department. The time periods for reporting WET test results to PADEP and initiating a re-test if necessary ("45 days from test completion") are problematic and require interpretation to be acceptable. Since the laboratory may take weeks to finalize the test results, perform the statistical analysis, and complete internal QA protocols before drafting, printing, proofing and mailing the final report to the Authority, the Authority may find itself with only a day or two between receipt of a report and the time limit for meeting one or the other of these requirements; an impossible situation to be in. Other PADEP Permit Writers have agreed that the Permittee should not be subject to a Permit violation for a late report from the laboratory. These other Permit Writers have agreed that the response period stated in these paragraphs should start when the Permittee receives the test results from the lab, not when the test is completed. We are enclosing three (3) copies of information regarding this reasonable interpretation by other PADEP offices (two via a change in Permit language, and the other via an interpretation stated on the record in the Fact Sheet) and request that the Authority be treated in the same rational manner.

DEP Responses to GHJSA 2018 Comments:

1. In 2019, another POFU determination was completed by PA DEP on Black Creek at the discharge location. All aspects of GHJSA's 2018 comment are addressed as follows:

   The Department's Point of First Use (POFU) Determination, dated January 7, 2019, shows the point of first aquatic use should be at the discharge location. The following wording is taken directly from the POFU memo, completed by Timothy L. Daley, Aquatic Biologist – DEP NERO:

   "Although still under stress and biologically impaired, it is evident that Black Creek has shown significant recovery compared to the severely impaired conditions documented in the past. Fish and macroinvertebrate communities have both re-established throughout its length, likely due to improvements in the sewage systems, abandoned mine reclamation projects, and possible reduction of mine pool toxicity over time. Since 2006, between 6 and 18 macroinvertebrate taxa have been found at every station sampled, which collectively account for as many as 35 different taxa, including mayflies, caddisflies, and stoneflies. This includes 17 different taxa found upstream of the Hazleton WWTP. Ten species of fish have also been documented in the creek, including wild brook trout, with five species found upstream of the Hazleton WWTP.

   The point of first use for the Hazleton WWTP should be considered at the discharge location, and water quality should be protected according to applicable regulations. Black Creek has shown significant improvement over the past several decades and will likely continue to improve with attention to sewer overflows, discharge quality, and the future implementation of abandoned mining projects in the watershed."

2. The limitations for $CBOD_5$ and TSS have been reverted to the previously established limitations from the most recently issued NPDES permit for GHJSA. $CBOD_5$: Monthly Average – 25.0 mg/L, Weekly Average – 40.0 mg/L, IMAX – 50.0 mg/L. TSS: Monthly Average – 30.0 mg/L, Weekly Average – 45.0 mg/L, IMAX – 60.0 mg/L. The guidance document utilized in the 2017 draft permit to update the $CBOD_5$ and TSS limitations was determined to not be applicable to this existing discharger.

3. DEP concurs an observable change in the color, taste, odor, or turbidity of the receiving water is one that's obvious, objectionable, and significant. In general, when the permittee observes such a change in the receiving waters, and the change noticed instream may represent a deteriorating condition, the permittee must notify DEP immediately in accordance with Part A III.C.4. For example, if an operator observes an obvious discoloration in the receiving water at the point of discharge, compared to upstream, that was not observable the prior day, it may be an indication of an increased concentration of pollutants in the discharge. Such observations should be reported to DEP immediately, regardless of whether the operator is aware of the source(s) of the pollutants, so that an investigation can occur and, if necessary, notification to downstream users may occur.

Summary of Review

4. When DEP does not reply to notification of a planned increase in the loading of an approved pollutant, as defined in the permit, within 30 days, DEP's latest issued permit template permit language constitutes a written approval. The following statement is used in the permit language at Part A III.C.2.b to address the possibility that DEP does not respond to notice of a planned increase of approved pollutants, thus allowing the existing permit to serve as authorization for the increase: "The acceptance of increased loading of approved pollutants may not result in an exceedance of ELGs or effluent limitations, may not result in a hydraulic or organic overload condition as defined in 25 Pa. Code § 94.1, and may not cause exceedances of the applicable water quality standards in the receiving stream." DEP will determine the nature and scope of any enforcement for failure to comply with this provision based on site-specific circumstances.

   In addition, Part A and Part B of the permit language cannot be revised.

5. See Comment 4 response above.

6. The frequency of monitoring hauled-in wastes is not specified in the permit. A facility receiving hauled-in municipal wastes should conduct monitoring at a frequency that will provide the permittee with confidence that the values reported on the "Hauled-In Municipal Wastes" Supplemental DMR form are representative of the wastes received. The permittee should consider the nature and source of wastes in determining sampling frequency. For example, permittees should consider sampling a new source of wastes upon acceptance for an initial characterization and then periodically sample thereafter. Even if an influent composite sampler is located downstream of the point of entry of hauled-in wastes, such that organic loads are adequately monitored for Chapter 94 purposes, permittees are nonetheless responsible for reporting characteristics of the waste.

7. See the updated Part C.V.C wording below, in **bold**:

   By March 31 of each year, the permittee shall submit a "Sewage Sludge Management Inventory" that summarizes the amount of sewage sludge and/or biosolids produced and wasted during the calendar year from the system. The "Sewage Sludge Management Inventory" may be submitted with the Municipal Wasteload Management Report required by Chapter 94. This summary shall include the expected sewage sludge production (estimated using the methodology described in the U.S. EPA handbook, "Improving POTW Performance Using the Composite Correction Approach" (EPA-625/6-84-008)), compared with the actual amount disposed during the year. Sludge quantities shall be expressed as dry weight in addition to gallons or other appropriate units. **Note: Other methods may be used to estimate the expected sewage sludge production if a written explanation of the methodology used is attached to the report.**

8. Monitoring for TDS, Total Sulfate, Chloride and Bromide are not required in the updated permit.

9. Toxics Management Spreadsheet modeling results show the reported concentrations for Total Aluminum, *Dissolved* Iron and Total Manganese were all greater than 10% of the WQBEL value but did not show reasonable potential for establishing limitations in the permit. The Department's Technical Guidance for the Development and Specification of Effluent Limitations (doc. no. 362-0400-001) recommends weekly sampling for toxic pollutants with limitations. Monitoring frequencies for these parameters are updated to 1/month compared to the 1/week frequency in the 2017 draft permit. Note: both Total Iron and Dissolved Iron are to be sampled 1/month.

10. On December 18, 2018, DEP received additional sampling results for both Total Cobalt and Free Available Cyanide. Please refer to the TMS spreadsheet modeling results for both parameters described above. Monthly monitoring requirements for Total Cobalt and weekly monitoring requirements/limitations for Free Available Cyanide are included in the permit.

11. For a.), the 2-year compliance schedule for submitting a revised LTCP is granted. For b.), the extensive negotiations between PA DEP and US EPA resulted in the specific CSO template language found in Part C of this permit. GHJSA may offer additional comments on this permit language in the draft permit comment period.

Summary of Review

12. Part C.VII.B.3 has been revised to state:

"A complete WET test report shall be submitted to the DEP regional office that issued the permit within 45 days of receiving test results from the testing laboratory. A complete WET test report submission shall include the information contained in paragraph H, below. The permittee shall continue annual WET monitoring, at a minimum, during the permit renewal review period and during any period of administrative extension of this permit."

Part C.VII.B.4 has been revised to state:

"If a test failure is determined for any endpoint during annual monitoring, the permittee shall initiate a re-test for the species with the failure within 45 days of receiving test results from the testing laboratory. All endpoints for the species shall be evaluated in the re-test. The results of the re-test shall be submitted to the DEP regional office that issued the permit."

Toxics Management Spreadsheet.pdf
WQM 1.pdf
WQM 2.pdf
WQM 3.pdf
WQM 4.pdf
WQM 5.pdf
WQM 6.pdf
Watershed Information.pdf
WET Dilution Series.pdf
Offset Letter.pdf
TRC Calculation.pdf

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	8.9
Latitude	40º 58' 14"	Longitude	-76º 1' 28"
Quad Name	Conyngham	Quad Code	1137
Wastewater Description:	Sewage Effluent		

Receiving Waters	Black Creek	Stream Code	28109
NHD Com ID	65639959	RMI	14.63
Drainage Area	21.5 mi^2	Yield (cfs/mi^2)	0.359
Q_{7-10} Flow (cfs)	7.73	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1419.8	Slope (ft/ft)	0.0091
Watershed No.	5-D	Chapter 93 Class.	CWF/MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH, Flow Alterations, Suspended Solids		
Source(s) of Impairment	Abandoned Mine Drainage, Combined Sewer Overflow		
TMDL Status	Final	Name	Black Creek, Little Nescopeck Creek, and UNT Little Nescopeck Creek Watershed TMDL

Background/Ambient Data		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake	Danville Municipal Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	1123
PWS RMI	122.5	Distance from Outfall (mi)	~46

Changes Since Last Permit Issuance: Point of first use is now at Outfall 001.

Treatment Facility Summary

Treatment Facility Name: Greater Hazleton Joint Sewer Authority WWTP

WQM Permit No.	Issuance Date
4087404	4/22/1987

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Design Flow (MGD)
Sewage	Secondary	Activated Sludge	Ultraviolet Radiation	8.9

Hydraulic Design Capacity (MGD)	Organic Design Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
13.35	18,743	Not Overloaded	Thickening, Dewatering	Landfill

Other Comments: WQM permit 4017402 was issued on 10/23/2017 for the installation of a biosolids incinerator and the installation of a centrifuge to replace one of the three rotary presses at the WWTP.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 8.9
Latitude 40º 58' 14" **Longitude** -76º 1' 26"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/L)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40.0	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	60.0	IMAX	-	-
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 mL	Geo Mean	-	92a.47(a)(4)
	1,000 / 100 mL	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 mL			92a.47(a)(5)
	10,000 / 100 mL			92a.47(a)(5)
Total Residual Chlorine	1.6	IMAX	-	-

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (See PENTOX attachment) determined the following parameters were candidates for limitations: Hexachlorobutadiene, Free Available Cyanide.

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model/Basis
Total Residual Chlorine	0.29	IMAX	2021 TRC Spreadsheet
Ammonia-Nitrogen (5/1 – 10/31)	2.75	Average Monthly	2021 WQM 7.0
	5.5	IMAX	
	204 (lbs/day)	Average Monthly	
Ammonia-Nitrogen (11/1 – 4/30)	8.25	Average Monthly	2021 WQM 7.0
	16.5	IMAX	
	612 (lbs/day)	Average Monthly	
Hexachlorobutadiene	1.86	Average Monthly	2021 Toxics Management Spreadsheet
	2.90	Daily Maximum	
	4.64	IMAX	
	0.13 (lbs/day)	Average Monthly	
Free Available Cyanide (µg/L)	8.1	Average Monthly	2021 Toxics Management Spreadsheet
	12.7	Daily Maximum	
	20.3	IMAX	
	0.60 (lbs/day)	Average Monthly	
Net Total Nitrogen (lbs)	216,739	Total Annual	Chesapeake Bay TMDL
Net Total Phosphorus (lbs)	27,092	Total Annual	Chesapeake Bay TMDL

Comments: Limits for Ammonia-N, Free Available Cyanide, Hexachlorobutadiene and Total Residual Chlorine come into effect three years after the permit effective date.

Whole Effluent Toxicity (WET)

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

Acute Partial Mix Factor (PMFa): **1.0** Chronic Partial Mix Factor (PMFc): **1.0**

1. Determine IWC – Acute (IWCa):

$(Q_d \times 1.547) / ((Q_{7\text{-}10} \times PMFa) + (Q_d \times 1.547))$

[(8.9 MGD x 1.547) / ((7.73 cfs x 1.0) + (8.9 MGD x 1.547))] x 100 = **64%**

Is IWCa < 1%? ☐ **YES** ☒ **NO** → **Chronic tests required**

If the discharge is to the tidal portion of the Delaware River, indicate how the type of test was determined:

N/A

Type of Test for Permit Renewal: **Chronic**

2a. Determine Target IWCa (If Acute Tests Required)

TIWCa = IWCa / 0.3 = **% ← N/A**

2b. Determine Target IWCc (If Chronic Tests Required)

$(Q_d \times 1.547) / (Q_{7\text{-}10} \times PMFc) + (Q_d \times 1.547)$

[(8.9 MGD x 1.547) / ((7.73 cfs x 1.0) + (8.9 MGD x 1.547))] x 100 = **64%**

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 82%, 64%, 32%, and 16%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

If WET limits will be established, identify the species and the limit values for the permit (TU).

N/A

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

N/A