National Pollutant Discharge Elimination System (NPDES) Permit Program

FACT SHEET

Regarding an NPDES Permit to Discharge to Waters of the State of Ohio
for City of Bryan Wastewater Treatment Plant (WWTP)

Public Notice No.: 198947
Public Notice Date: March 29, 2024
Comment Period Ends: April 28, 2024

Ohio EPA Permit No.: 2PD00018*RD
Application No.: OH0020532

Name and Address of Applicant:
City of Bryan
P.O. Box 190
Bryan, OH 43506

Name and Address of Facility Where Discharge Occurs:
City of Bryan WWTP
1521 Evansport Road
Bryan, OH 43506
Williams County

Receiving Water: Prairie Creek/Pigeon Run

Subsequent Stream Network: Lick Creek, Tiffin River, Maumee River, Lake Erie

INTRODUCTION

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations (CFR), Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency (Ohio EPA), as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical, and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act (CWA) and Ohio Water Pollution Control Law (Ohio Revised Code [ORC] 6111). Decisions to award variances to Water Quality Standards (WQS) or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

Antidegradation provisions in Ohio Administrative Code (OAC) Chapter 3745-1 describe the conditions under which water quality may be lowered in surface waters. No antidegradation review was necessary.

Effluent limits based on available treatment technologies are required by Section 301(b) of the CWA. Many of these have already been established by the United States Environmental Protection Agency (U.S. EPA) in the effluent guideline regulations (a.k.a. categorical regulations) for industry categories in 40 CFR Parts 405-499. Technology-based regulations for publicly-owned treatment works are listed in the Secondary Treatment Regulations (40 CFR Part 133). If regulations have not been established for a category of dischargers, the director may establish technology-based limits based on best professional judgment (BPJ).

Ohio EPA reviews the need for water-quality-based limits on a pollutant-by-pollutant basis. Wasteload allocations (WLAs) are used to develop these limits based on the pollutants that have been detected in the discharge, and the receiving water's assimilative capacity. The assimilative capacity depends on the flow in the water receiving the discharge, and the concentration of the pollutant upstream. The greater the upstream flow, and the lower the upstream concentration, the greater the assimilative capacity is. Assimilative capacity may represent dilution (as in allocations for metals), or it may also incorporate the break-down of pollutants in the receiving water (as in allocations for oxygen-demanding materials).

The need for water-quality-based limits is determined by comparing the WLA for a pollutant to a measure of the effluent quality. The measure of effluent quality is called Projected Effluent Quality (PEQ). This is a statistical measure of the average and maximum effluent values for a pollutant. As with any statistical method, the more data that exists for a given pollutant, the more likely that PEQ will match the actual observed data. If there is a small data set for a given pollutant, the highest measured value is multiplied by a statistical factor to obtain a PEQ; for example, if only one sample exists, the factor is 6.2, for two samples - 3.8, for three samples - 3.0. The factors continue to decline as samples sizes increase. These factors are intended to account for effluent variability, but if the pollutant concentrations are fairly constant, these factors may make PEQ appear larger than it would be shown to be if more sample results existed.

SUMMARY OF PERMIT CONDITIONS

The effluent limits and/or monitoring requirements proposed for all parameters are the same as in the current permit, except those listed below.

New effluent limits are proposed for copper because of the reasonable potential to exceed water quality standards. In review of the discharge monitoring report data for copper, it appears that the facility will be able to meet the proposed limit, a compliance schedule is not proposed for the new limit.

Limits and monitoring requirements are proposed to be removed for barium because reasonable potential was not observed.

Limits are proposed to be removed for free cyanide because reasonable potential was not observed. Monitoring is proposed to continue.

Monitoring requirements are proposed to be removed for strontium and methyl bromide because reasonable potential was not observed.

In accordance with Ohio Administrative Code (OAC) 3745-33-07, it has been determined that the effluent from City of Bryan WWTP shows chronic toxicity for *Ceriodaphnia dubia.* Limits of 1.0 TUa and 1.0 TUc are proposed.

Annual chronic toxicity monitoring with the determination of acute endpoints for *Pimephales promelas* is proposed. This satisfies the minimum testing requirements of Ohio Administrative Code (OAC) 3754-33-07(B)(11) and will adequately characterize toxicity in the plant's effluent.

Monitoring for *E. coli* at downstream monitoring station 901 is proposed to change to once every two weeks. The higher frequency over a shorter period will facilitate impairment assessments in the receiving stream.

Monitoring for water temperature, dissolved oxygen, and pH is proposed to be removed from station 801, and dissolved oxygen is proposed to be removed from station 901. These data are not needed for reasonable potential analyses.

Barium and strontium monitoring is being removed from influent monitoring station 601 because the parameters are being removed from outfall 001 monitoring.

Monitoring for phosphorus is proposed at the influent 601 monitoring station so data can be collected to evaluate a local limit.

A schedule of compliance for technical justification of industrial user local limits for several pollutants, including total phosphorus, is proposed in Part I, C of the permit.

In Part II of the permit, special conditions are included that address sanitary sewer overflow (SSO) reporting; operator certification, minimum staffing, and operator of record; whole effluent toxicity (WET) testing; storm water compliance; mercury variance; pretreatment program requirements; phosphorus general permit reference, and outfall signage.

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PROCEDURES FOR PARTICIPATION IN THE FORMULATION OF FINAL DETERMINATIONS

The draft action shall be issued as a final action unless the Director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty days of the date of the Public Notice, any person may request or petition for a public meeting for presentation of evidence, statements, or opinions. The purpose of the public meeting is to obtain additional evidence. Statements concerning the issues raised by the party requesting the meeting are invited. Evidence may be presented by the applicant, the state, and other parties, and following presentation of such evidence other interested persons may present testimony of facts or statements of opinion.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be emailed to HClerk@epa.ohio.gov or mailed to:

Legal Records Section
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted by email to epa.dswcomments@epa.ohio.gov (preferred method) or delivered in person or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

The Ohio EPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews because requests to review files have increased dramatically in recent years. The first 250 pages copied are free. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

For additional information about this fact sheet or the draft permit, contact Michael Donnelly, 419-373-3070, Michael.Donelly@epa.ohio.gov.

INFORMATION REGARDING CERTAIN WATER QUALITY BASED EFFLUENT LIMITS

This draft permit may contain proposed water-quality-based effluent limits (WQBELs) for parameters that **are not** priority pollutants. (See the following link for a list of the priority pollutants: https://epa.ohio.gov/static/Portals/35/pretreatment/Pretreatment_Program_Priority_Pollutant_Detection_Limits.pdf.) In accordance with ORC 6111.03(J)(3), the Director established these WQBELs after considering, to the extent consistent with the Federal Water Pollution Control Act, evidence relating to the technical feasibility and economic reasonableness of removing the polluting properties from those wastes and to evidence relating to conditions calculated to result from that action and their relation to benefits to the people of the state and to

accomplishment of the purposes of this chapter. This determination was made based on data and information available at the time the permit was drafted, which included the contents of the timely submitted NPDES permit renewal application, along with any and all pertinent information available to the Director.

This public notice allows the permittee to provide to the Director for consideration during this public comment period additional site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness for achieving compliance with the proposed final effluent limitations for these parameters. The permittee shall email to epa.dswcomments@epa.ohio.gov (preferred method) or deliver or mail this information to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

Should the applicant need additional time to review, obtain or develop site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness of achieving compliance with these limitations, a written request for any additional time shall be sent to the above address no later than 30 days after the Public Notice Date on Page 1.

Should the applicant determine that compliance with the proposed WQBELs for parameters other than the priority pollutants is technically and/or economically unattainable, the permittee may submit an application for a variance to the applicable WQS used to develop the proposed effluent limitation in accordance with the terms and conditions set forth in OAC 3745-33-07(D). The permittee shall submit this application to the above address no later than 30 days after the Public Notice Date.

Alternately, the applicant may propose the development of site-specific WQS pursuant to OAC 3745-1-39. The permittee shall submit written notification regarding their intent to develop site specific WQS for parameters that are not priority pollutants to the above address no later than 30 days after the Public Notice Date.

LOCATION OF DISCHARGE/RECEIVING WATER USE CLASSIFICATION

The Bryan WWTP discharges to the confluence of Pigeon Run and Prairie Creek. The discharge enters Pigeon Run right before Pigeon Run confluences with Prairie Creek at RM 11.01. Figure 1 shows the approximate location of the facility.

This segment of the Prairie Creek is described by Ohio EPA River Code 04-633, Hydrologic Unit Code: 04100006-04-03, County: Williams County, Ecoregion: Eastern Corn Belt Plain. Prairie Creek is designated for the following uses under Ohio's Water Quality Standards (OAC 3745-1-11): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), and Primary Contact Recreation (PCR).

Pigeon Run is described by Ohio EPA River Code: 04-639, Hydrologic Unit Code: 041000060-04-03, County: Williams, Ecoregion: Eastern Corn Belt Plain. Pigeon Run is designated for the following uses under Ohio's Water Quality Standards (OAC 3745-1-11): Modified Warmwater Habitat (MWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), and Primary Contact Recreation (PCR).

Use designations define the goals and expectations of a waterbody. These goals are set for aquatic life protection, recreation use and water supply use, and are defined in the Ohio WQS (OAC 3745-1-07). The use designations for individual waterbodies are listed in rules -08 through -32 of the Ohio WQS. Once the goals are set, numeric WQS are developed to protect these uses. Different uses have different water quality criteria.

Use designations for aquatic life protection include habitats for coldwater fish and macroinvertebrates, warmwater aquatic life and waters with exceptional communities of warmwater organisms. These uses all meet the goals of the federal CWA. Ohio WQS also include aquatic life use designations for waterbodies which cannot meet the CWA goals because of human-caused conditions that cannot be remedied without causing fundamental changes to land use and widespread economic impact. The dredging and clearing of some small streams to support agricultural or urban drainage is the most common of these conditions. These streams are given Modified Warmwater or Limited Resource Water designations.

Recreation uses are defined by the depth of the waterbody and the potential for wading or swimming. Uses are defined for bathing waters, swimming/canoeing (Primary Contact Recreation) and wading only (Secondary Contact which are generally waters too shallow for swimming or canoeing).

Water supply uses are defined by the actual or potential use of the waterbody. Public Water Supply designations apply near existing water intakes so that waters are safe to drink with standard treatment. Most other waters are designated for agricultural water supply and industrial water supply.

FACILITY DESCRIPTION

The City of Bryan WWTP was constructed in 1940 and last upgraded in 2018. The average design flow is 3.1 million gallons per day (MGD) and the peak hydraulic capacity is 7.0 MGD. The City of Bryan WWTP serves the City of Bryan, Pulaski Township, and Jefferson Township. The City of Bryan WWTP has the following treatment processes (Figure 2):

- Flow Equalization
- Influent Pumping
- Bar Screen
- Grit Removal
- Primary Sedimentation
- Activated sludge aeration

- Alum Addition
- Secondary Clarification
- U.V. disinfection
- Effluent Pumping

The City of Bryan WWTP has two bypasses. The City of Bryan WWTP reports bypasses at stations 2PD00018003 and 2PD00018004. Station 2PD00018003 is the outfall for the East holding pond (primary settling basin), and station 2PD00018004 is the outfall for the West holding pond. The outfall structures are separated by 20 to 30 feet and discharge into Pigeon Run. The East and West holding ponds (5 million gallon (MG) total capacity) work in parallel and overflow at an equal rate. The intent is to use the holding ponds only in an extreme situation or as a back-up in the event maintenance were to be performed on the 15 MG equalization basin. This will measure the frequency and flow of any bypasses occurring at the holding pond overflow. There have been no reported bypasses for the last five years. The City of Bryan has 100% separated sewers.

The City of Bryan has an approved pretreatment program. The City of Bryan has one categorical user that discharges 0.003 MGD of flow and three significant non-categorical users that discharge a total of 0.117 MGD of flow.

The City of Bryan's potable water comes from ground water from the City's water treatment plant.

The City of Bryan WWTP utilizes the following sewage sludge treatment processes:

- Gravity thickening
- Anaerobic Digestion
- Centrifuge Dewatering
- Heat Treatment
- Polymer Addition

Table 1 shows the last five years of sludge removed from City of Bryan WWTP. Treated sludge is currently being sent to a landfill but has been land applied in previous years.

DESCRIPTION OF EXISTING DISCHARGE

Table 2 presents the effluent violations for City of Bryan WWTP during the previous five years. These violations were not caused by a known process error or upset condition.

Table 3 presents the annual effluent flow rate for City of Bryan WWTP for the previous five years. City of Bryan WWTP has an estimated infiltration/inflow (I/I) rate of 0.125 MGD and performs capacity management, operation, and maintenance (CMOM) to minimize I/I in the system.

No SSOs were reported over the past five years.

No bypasses were reported over the past five years.

Table 4 presents data characterizing the annual total phosphorus load from City of Bryan WWTP during the previous five years.

Table 5 presents chemical specific data compiled from data reported in annual pretreatment reports and data collected by Ohio EPA. Because this data is substantially identical to the application requirements in CFR

122.21(j), the Director has waived the requirement for submittal of supplemental effluent testing data as part of the NPDES renewal application.

Table 6 presents a summary of unaltered Discharge Monitoring Report (DMR). Data are presented for the period July 2018 to August 2023, and current permit limits are provided for comparison.

Table 7 summarizes the chemical specific data for outfall 002 by presenting the average and maximum PEQ values.

Table 8 summarizes the results of acute and chronic Whole Effluent Toxicity (WET) tests of the final effluent, using the water flea (*Ceriodaphnia dubia*) and fathead minnow (*Pimephales promelas*) as test organisms.

ASSESSMENT OF IMPACT ON RECEIVING WATERS

Pursuant to Section 303(d) of the Clean Water Act, each state is required to develop and submit a list to US EPA of its impaired and threatened waters (e.g., stream/river segments, lakes). For each water on the list, the state identifies the pollutant(s) causing the impairment, when known. The Prairie Creek watershed assessment unit, which includes the Prairie Creek in the vicinity of City of Bryan WWTP, is listed as impaired for aquatic life and recreation on Ohio's 303(d) list.

The most recent data available for Prairie Creek is from 2013. Prairie Creek is impaired for aquatic life and recreation due to nutrient enrichment. The City of Bryan WWTP is likely contributing to the impairments in Prairie Creek due to the level of nutrients in the discharge.

The *Biological and Water Quality Study of the Tiffin River and Select Tributaries, 2012-2014* states the following regarding Prairie Creek:

Prairie Creek originates in the ECBP ecoregion and flows southeast through the HELP ecoregion before joining Lick Creek east of Ney. Fish communities in Prairie Creek were assessed at County Rd. C (RM 9.80) and the lower crossing on Flickinger Rd (RM 3.40), both of which were downstream from the Bryan WWTP. The IBI score did not meet the WWH biocriterion at RM 9.8, 1.2 miles below the WWTP. The fish community at RM 9.8 was comprised of over 86% tolerant and 61% pioneering fish taxa, with pollution sensitive taxa comprising less than 1% of the fish community. Benthic chlorophyll-a concentrations of 334 mg/m$_2$ indicate over-enriched conditions which are reflected in the biological communities. Total phosphorus (0.15 mg/L) and nitrate-nitrite (5.96 mg/L) concentrations were also above target levels at this location and provided further evidence of the over-enriched conditions at this location. Sonde data revealed diel DO swings as large as 11 mg/L, indicative of nutrient enrichment. Pervasive siltation and embeddedness, and more generally poor overall habitat quality, also negatively impacted aquatic communities here and likely exacerbated nutrient issues. Flocculent solids and a milky-white color in the water column immediately downstream from the Bryan WWTP outfall were observed during follow-up sampling in the summer of 2014. The flocculent solids have the potential to smother natural substrates and can also negatively influence biological performance. The Bryan WWTP is a likely source contributing to the observed over-enrichment and flocculent bottom deposits observed at RM 9.8.

In September 2023, the *Maumee Watershed Nutrient Total Maximum Daily Load* (TMDL) Report was approved by US EPA. The TMDL was developed to restore full attainment of the designated uses in the Western Basin of Lake Erie, which experience frequent and extensive harmful algal blooms due to nutrient contributions, much of which is delivered by the Maumee River. The TMDL assigned an individual wasteload allocation to Bryan of 770 kg of total phosphorus for the critical season (March through July). Compliance with this individual wasteload allocation will be regulated through the Maumee Watershed Total Phosphorus NPDES General Permit, under which Bryan WWTP has been granted coverage.

The full *Biological and Water Quality Study of the Tiffin River and Select Tributaries, 2012-2014* is available through the Ohio EPA, Division of Surface Water website at: https://epa.ohio.gov/static/Portals/35/documents/2013%20Tiffin%20River%20Basin%20TSD.pdf

The full Integrated Report is available through the Ohio EPA, Division of Surface Water website at: https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/ohio-integrated-water-quality-monitoring-and-assessment-report

The Maumee Watershed Nutrient TMDL is available through the Ohio EPA, Division of Surface Water website at: https://epa.ohio.gov/static/Portals/35/tmdl/MaumeeNutrient/Maumee-Watershed-Nutrient-TMDL-Final.pdf

The Maumee Watershed Total Phosphorus General Permit is available through the Ohio EPA, Division of Surface Water website at: https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/maumee-watershed-total-phosphorus--general-permit

DEVELOPMENT OF WATER-QUALITY-BASED EFFLUENT LIMITS

Determining appropriate effluent concentrations is a multiple-step process in which parameters are identified as likely to be discharged by a facility, evaluated with respect to Ohio water quality criteria, and examined to determine the likelihood that the existing effluent could violate the calculated limits.

Parameter Selection

Effluent data for the City of Bryan WWTP were used to determine what parameters should undergo WLA. The parameters discharged are identified by the data available to Ohio EPA, DMR data submitted by the permittee, compliance sampling data collected by Ohio EPA, and any other data submitted by the permittee, such as priority pollutant scans required by the NPDES application or by pretreatment, or other special conditions in the NPDES permit. The sources of effluent data used in this evaluation are as follows:

Self-monitoring data (DMR)	July 2018 through August 2023
Pretreatment data	2018-2022
Ohio EPA compliance sampling data	2023

Statistical Outliers and Other Non-representative Data

The data were examined and no values were removed from the evaluation.

This data is evaluated statistically, and PEQ values are calculated for each pollutant. Average PEQ (PEQ_{avg}) values represent the 95th percentile of monthly average data, and maximum PEQ (PEQ_{max}) values represent the 95th percentile of all data points (see Table 7). See Modeling Guidance #1 for more information on PEQ calculations, available through the Ohio EPA, Division of Surface Water website at: https://www.epa.ohio.gov/portals/35/guidance/model1.pdf

The PEQ values are used according to Ohio rules to compare to applicable WQS and allowable WLA values for each pollutant evaluated. Initially, PEQ values are compared to the applicable average and maximum WQS. If both PEQ values are less than 25 percent of the applicable WQS, the pollutant does not have the reasonable potential to cause or contribute to exceedances of WQS, and no WLA is done for that parameter. If either PEQ_{avg} or PEQ_{max} is greater than 25 percent of the applicable WQS, a WLA is conducted to determine whether the parameter exhibits reasonable potential and needs to have a limit or if monitoring is required (see Table 10).

Wasteload Allocation

For those parameters that require a WLA, the results are based on the uses assigned to the receiving waterbody in OAC 3745-1. Dischargers are allocated pollutant loadings/concentrations based on the Ohio WQS (OAC 3745-1). Most pollutants are allocated by a mass-balance method because they do not break down in the receiving water. By rule, mixing zones are not authorized for pollutants, such as mercury, which have been designated as bioaccumulative chemicals of concern (BCCs). For BCCs, the WLA is set equal to the respective WQS value.

For free flowing streams, WLAs for both average and maximum criteria are performed using the following general equation:

Discharger WLA = (Downstream Flow x WQS) - (Upstream Flow x Background Concentration).

Discharger WLAs are divided by the discharge flow so that the allocations are expressed as concentrations. The applicable waterbody uses for this facility's discharge and the associated stream design flows are as follows:

Aquatic life (Warmwater Habitat)		
Toxics (metals, organics, etc.)	Average	Annual 7Q10
	Maximum	Annual 1Q10
Ammonia	Average	Summer 30Q10
		Winter 30Q10
Wildlife		Annual 90Q10
Agricultural Water Supply		Harmonic mean flow
Human Health (nondrinking)		Harmonic mean flow

Allocations are developed using a percentage of stream design flow as specified in Table 11, and allocations cannot exceed the Inside Mixing Zone Maximum (IMZM) criteria.

The data used in the WLA are listed in Table 10 and Table 11. The WLA results to maintain all applicable criteria are presented in Table 12.

Whole Effluent Toxicity Wasteload Allocation

Whole effluent toxicity (WET) is the total toxic effect of an effluent on aquatic life measured directly with a toxicity test. Acute WET measures short term effects of the effluent while chronic WET measures longer term and potentially more subtle effects of the effluent. Numeric WQS for WET are listed in the Ohio WQS [OAC 3745-1-44]. This rule lists numeric values of 0.3 TUa and 1.0 TUc. WLAs are calculated using these criteria.

There are two separate reasonable potential procedures in Ohio - one for the Lake Erie watershed and one for the Ohio River watershed. Dischargers in the Ohio River watershed are assessed using OAC 3745-33-07(B). Dischargers in the Lake Erie watershed are assessed in accordance with the "Great Lakes Water Quality Initiative Implementation Procedures" contained in 40 CFR Part 132, Appendix F, Procedure 6.

The WLA calculations for WET are similar to those for aquatic life criteria - using the chronic toxicity unit (TUc) and 7Q10 flow for the average and the acute toxicity unit (TUa) and 1Q10 flow for the maximum. WET WLAs are based on meeting the values of 0.3 TUa and 1.0 TUc downstream of the discharge and include any available dilution. These values are the levels of effluent toxicity that should not cause instream toxicity during critical low-flow conditions. WLAs for acute toxicity are capped at 1.0 TUa unless the discharger demonstrates that an Area-of-Initial-Mixing (AIM) exists under OAC 3745-1-06, or that one of the factors in OAC 3745-33-07(B)(5)-(9) allows a higher TUa limit to be granted. For the purposes of establishing WET limitations, the

values of 1.0 TUa and 1.0 TUc are the most restrictive limitations that can be applied in NPDES permits [OAC 3745-33-07(B)(10)].

For City of Bryan WWTP, the WLA values for outfall 002 are 0.3 TUa and 1.01 TUc.

The chronic toxicity unit (TUc) is defined as 100 divided by the estimate of the effluent concentration which causes a 25% reduction in growth or reproduction of test organisms (IC25):

$$TUc = 100/IC25$$

This equation applies outside the mixing zone for warmwater, modified warmwater, exceptional warmwater, coldwater, and seasonal salmonid use designations except when the following equation is more restrictive (Ceriodaphnia dubia only):

TUc = 100/geometric mean of No Observed Effect Concentration and Lowest Observed Effect Concentration

The acute toxicity unit (TUa) is defined as 100 divided by the concentration in water having 50% chance of causing death to aquatic life (LC50) for the most sensitive test species:

$$TUa = 100/LC50$$

This equation applies outside the mixing zone for all designated waters. Based on the above, a value of 1.0 TUa is the lowest value that can be calculated using the equation. TUa values between 0.2 and 1.0 are based on an interpolation of toxic effects where an LC50 cannot be identified.

When the acute WLA is less than 1.0 TUa, it may be defined as a ratio of the stream dilution to the effluent flow:

Acute Dilution Ratio (downstream flow to discharger flow)	Allowable Effluent Toxicity (percent effects in 100% effluent)
up to 2 to 1	30
greater than 2 to 1 but less than 2.7 to 1	40
2.7 to 1 to 3.3 to 1	50

$$\text{Acute Dilution Ratio} = \frac{1Q10 + [\text{WWTP flow rate}]}{[\text{WWTP flow rate}]} = \frac{0.15 \text{ cfs} + 4.7964 \text{ cfs}}{4.7964 \text{ cfs}} = 1.03$$

The acute WLA for City of Bryan WWTP can be expressed as 30 percent mortality in 100 percent effluent based on the dilution ratio of 1.03 to 1. If the acute dilution ratio is less than 3.3 to 1.0, and there is evidence that effluent values between 0.3 TUa and 1.0 TUa cause or contribute to violations of WQS, the permittee may be required to investigate and remediate toxicity in this range.

REASONABLE POTENTIAL/EFFLUENT LIMITS/MANAGEMENT DECISIONS

After appropriate effluent limits are calculated, the reasonable potential of the discharger to violate the WQS must be determined. Each parameter is examined and placed in a defined "group". Parameters that do not have a WQS or do not require a WLA based on the initial screening are assigned to either group 1 or 2. For the allocated parameters, the preliminary effluent limits (PEL) based on the most restrictive average and maximum WLAs are selected from Table 12. The average PEL (PEL_{avg}) is compared to the average PEQ (PEQ_{avg}) from Table 7, and the PEL_{max} is compared to the PEQ_{max}. Based on the calculated percentage of the allocated value

[(PEQ_{avg} ÷ PEL_{avg}) X 100, or (PEQ_{max} ÷ PEL_{max}) X 100)], the parameters are assigned to group 3, 4, or 5. The groupings are listed in Table 13.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Table 14 presents the final effluent limits and monitoring requirements proposed for City of Bryan WWTP outfall 002 and the basis for their recommendation. Unless otherwise indicated, the monitoring frequencies proposed in the permit are continued from the existing permit.

Dissolved Oxygen, Total Suspended Solids, Ammonia, and 5-Day Carbonaceous Biochemical Oxygen Demand
The limits proposed for dissolved oxygen, total suspended solids, ammonia, and 5-day carbonaceous biochemical oxygen demand (CBOD5) are all based on plant design criteria. The TSS and CBOD5 limits are more stringent than the Secondary Treatment Standards in 40 CFR Part 133. The current ammonia limits have been evaluated using the WLA procedures and are protective of WQS for ammonia toxicity. The current dissolved oxygen limit is protective of WQS.

Oil and Grease, pH, and *Escherichia coli*
Limits proposed for oil and grease, pH, and *Escherichia coli* are based on WQS (OAC 3745-1-35 and 37). Primary contact recreation *E. coli* standards apply to Prairie Creek.

Copper
The Ohio EPA risk assessment (Table 13) places copper in group 5. This placement, as well as the data in Table 6 and Table 7, indicates that the reasonable potential to exceed WQS exists and limits are necessary to protect water quality. For this parameter, the PEQ is between 75 and 100 percent of the WLA and certain conditions exist that increase the risk to the environment. Pollutants that meet this requirement must have permit limits under OAC 3745-33-07(A)(1). The thirty-day average limits and daily maximum limits for concentration and loading are based on aquatic life criteria. In review of the discharge monitoring report data for copper, it appears that the facility will be able to meet the proposed limit, a compliance schedule is not proposed for the new limit.

Total Filterable Residue and Selenium
The Ohio EPA risk assessment (Table 13) places total filterable residue and selenium in group 4. This placement, as well as the data in Table 6 and Table 7, support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC 3745-33-07(A)(2).

Cadmium, Chromium, Dissolved Hexavalent Chromium, Free Cyanide, Lead, Nickel, Silver, and Zinc
The Ohio EPA risk assessment (Table 13) places cadmium, chromium, dissolved hexavalent chromium, free cyanide, lead, nickel, silver, and zinc in groups 2 and 3. This placement, as well as the data in Table 6 and Table 7, support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring is proposed to document that these pollutants continue to remain at low levels. Limits for free cyanide are proposed to be removed.

Antimony, Arsenic, Barium, Bis(2-ethylhexyl)phthalate, Carbon disulfide, Chlorodibromomethane, Chloroform, 1,4-Dichlorobenzene, Dichlorobromomethane, Methyl bromide, Methyl chloride, Methylene chloride, Methyl ethyl ketone, and Toluene
The Ohio EPA risk assessment (Table 13) places antimony, arsenic, barium, carbon disulfide, chlorodibromomethane, chloroform, 1,4-dichlorobenzene, dichlorobromomethane, methyl bromide, methyl chloride, methylene chloride, methyl ethyl ketone, toluene, and bis(2-ethylhexyl)phthalate in groups 2 and 3. This placement, as well as the data in Table 6 and Table 7, support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality.

No new monitoring is proposed. Monitoring and limits for barium is proposed to be removed. Monitoring for strontium and methyl bromide is proposed to be removed. Information gathered as part of the industrial pretreatment program will provide effluent data for these parameters for use in future reasonable potential analysis.

Flow and Temperature
Monitoring for these parameters is proposed to continue in order to evaluate the performance of the treatment plant.

Nitrate + Nitrite and Total Kjeldahl Nitrogen
The *2022 Ohio Integrated Water Quality Monitoring and Assessment Report* (Ohio EPA) lists the Prairie Creek watershed as impaired for aquatic life. Organic enrichment is listed as a cause, and point sources are listed among the "sources". Considering this information and the fact that municipal WWTPs discharge a nutrient load to the Creek, monthly monitoring for nitrate + nitrite and total Kjeldahl nitrogen is proposed based on best technical judgment. Monitoring for phosphorus and nitrate + nitrite at the upstream and downstream stations also is proposed to continue. The purpose of the monitoring is to maintain a nutrient data set for use in the future total maximum daily load (TMDL) study.

Dissolved Orthophosphate and Total Phosphorus
Phosphorus is limited based on provisions of OAC 3745-33-06(C). Monitoring for dissolved orthophosphate (as P) and total phosphorus is required by ORC 6111.03. This monitoring will further develop nutrient datasets that are used in stream and watershed assessments and studies. Because Ohio EPA monitoring, as well as other in-stream monitoring, for dissolved orthophosphate is taken by grab sample, grab samples are proposed for orthophosphate to maintain consistent data. The grab samples must be filtered within 15 minutes of collection using a 0.45-micron filter. The filtered sample must be analyzed within 48 hours.

In September 2023, the *Maumee Watershed Nutrient Total Maximum Daily Load* (TMDL) Report was approved by US EPA. The TMDL was developed to restore full attainment of the designated uses in the Western Basin of Lake Erie, which experience frequent and extensive harmful algal blooms due to nutrient contributions, much of which is delivered by the Maumee River. The TMDL assigned an individual wasteload allocation to Bryan of 770 kg of total phosphorus for the critical season (March through July). Compliance with this individual wasteload allocation will be regulated through the Maumee Watershed Total Phosphorus NPDES General Permit, under which Bryan WWTP has been granted coverage.

Mercury
The Ohio EPA risk assessment places mercury in group 5. This placement indicates that the reasonable potential to exceed WQS exists and limits are necessary to protect water quality. For this parameter, the PEQ is greater than 100 percent of the WLA. Pollutants that meet this requirement must have permit limits under OAC 3745-33-07(A)(1).

The City of Bryan WWTP permit was renewed in 2008 to include a mercury variance, and variance-based limits for mercury. Based on the monitoring results from July 2018 to September 2023, and the new application information, the City of Bryan WWTP has determined that the facility will not meet the 30-day average permit limit of 1.3 ng/l. However, the effluent data shows that the permittee can meet the mercury annual average value of 12 ng/l. The permittee's application has also demonstrated to the satisfaction of Ohio EPA that there is no readily apparent means of complying with the WQBEL without constructing prohibitively expensive end-of-pipe controls for mercury. Based upon these demonstrations, the City of Bryan WWTP is eligible for renewal of the mercury variance under OAC 3745-1-38(H).

City of Bryan WWTP submitted information supporting the renewal of the variance. The calculation of the PEQ_{avg} value from 2018 to 2023 compared to the PEQ_{avg} calculated at the time the original variance was issued

shows a reduction from 7.4 ng/L to 2.7 ng/L. The Pollutant Minimization Program (PMP) schedule developed from the original variance continues to be implemented, and further reductions in mercury may be possible.

Ohio EPA has reviewed the mercury variance application and has determined that it meets the requirements of the OAC. A condition in Part II of the NPDES permit lists the provisions of the mercury variance, and includes the following requirements:

- A variance-based monthly average effluent limit of 2.7 ng/L, which was developed from sampling data submitted by the permittee;
- A requirement that the permittee make reasonable progress to meet the WQBEL for mercury by implementing the plan of study, which has been developed as part of the PMP;
- Low-level mercury monitoring of the plant's influent and effluent;
- A requirement that the annual average mercury effluent concentration is less than or equal to 12 ng/l as specified in the plan of study;
- A summary of the elements of the plan of study;
- A requirement to submit an annual report on implementation of the PMP; and
- A requirement for submittal of a certification stating that all permit conditions related to implementing the plan of study and the PMP have been satisfied, and whether compliance with the monthly average WQBEL for mercury has been achieved.

Whole Effluent Toxicity Reasonable Potential

Evaluating the acute and chronic toxicity results for *Ceriodaphnia dubia* in Table 9, and Attachment 1, under the provisions of 40 CFR Part 132, Appendix F, Procedure 6, gives a chronic PEQ of 1.65 TU_c. Reasonable potential for toxicity is demonstrated since this value exceeds the WLA value 1.01 TU_c. Consistent with Procedure 6 and OAC 3745-33-07(B), a monthly average limit of 1.0 TU_c and a daily maximum limit of 1.0 TU_a are proposed.

The acute and chronic toxicity results for *Pimephales promelas* in Table 8 show that there have been no detections of toxicity. Under the provisions of 40 CFR Part 132, Appendix F, Procedure 6, no PEQ values can be calculated. Reasonable potential for toxicity is not demonstrated. While this indicates that the plant's effluent does not currently pose a toxicity problem, annual toxicity testing is proposed consistent with the minimum monitoring requirements at OAC 3754-33-07(B)(11). The proposed monitoring will adequately characterize toxicity in the plant's effluent.

Additional Monitoring Requirements

Monitoring for *E. coli* at downstream monitoring station 901 is proposed to change to once every two weeks. The higher frequency over a shorter period will facilitate impairment assessments in the receiving stream.

Barium and strontium are being removed from influent monitoring station 601 because the parameters are being removed from outfall 001 monitoring.

Monitoring for phosphorus is proposed at the influent 601 monitoring station so data can be collected to evaluate a local limit.

Monitoring for water temperature, dissolved oxygen, and pH is proposed to be removed from station 801, and dissolved oxygen is proposed to be removed from station 901. These data are not needed for reasonable potential analyses.

Additional monitoring requirements proposed at the final effluent, influent and upstream/downstream stations are included for all facilities in Ohio and vary according to the type and size of the discharge. In addition to permit compliance, this data is used to assist in the evaluation of effluent quality and treatment plant performance and for designing plant improvements and conducting future stream studies.

Sludge
Limits and monitoring requirements proposed for the disposal of sewage sludge by the following management practices are based on OAC 3745-40: land application, removal to sanitary landfill or transfer to another facility with an NPDES permit.

OTHER REQUIREMENTS

Compliance Schedule
Pretreatment Local Limits Review - An 18-month compliance schedule is proposed for the City to submit a technical justification for either revising its local industrial user limits or retaining its existing local limits. The evaluation includes total phosphorus. If revisions to local limits are required, the City must also submit a pretreatment program modification request. Details are in Part I, C of the permit.

In addition to the standard requirement to develop and submit a technical local limit justification report, the permittee shall also determine whether the development and implementation of local limits for total phosphorus will help the POTW achieve a monthly average effluent concentration target of 0.5 mg/L. This target is not an effluent limit but permittees should evaluate whether reductions in headworks loading would enable the facility to further reduce total phosphorus loading to the receiving stream and, ultimately, Lake Erie. Local limits for total phosphorus may not be appropriate in all cases and justification can be made for not instituting local limits. Examples include, but are not limited to, (1) if the permittee has maintained a monthly average effluent concentration at or below 0.5 mg/L for the previous 12 months or (2) if industrial loads are not a primary factor contributing to effluent concentrations above 0.5 mg/L. Justification for the permittee's determination must be submitted to Ohio EPA regardless of whether local limits are deemed appropriate or not. Details are in Part I.C of the permit.

Sanitary Sewer Overflow Reporting
Provisions for reporting SSOs are again proposed in this permit. These provisions include: the reporting of the system-wide number of SSO occurrences on monthly operating reports; telephone notification of Ohio EPA and the local health department, and 5-day follow up written reports for certain high risk SSOs; and preparation of an annual report that is submitted to Ohio EPA and made available to the public. Many of these provisions were already required under the "Noncompliance Notification", "Records Retention", and "Facility Operation and Quality Control" general conditions in Part III of Ohio NPDES permits.

Operator Certification and Operator of Record
Operator certification requirements have been included in Part II of the permit in accordance with rules effective on August 15, 2018 (OAC 3745-7). These rules require the City of Bryan WWTP to have a Class III wastewater treatment plant operator in charge of the sewage treatment plant operations discharging through outfall 002. These rules also require the permittee to designate one or more operator of record to oversee the technical operation of the treatment works and sewerage system.

Outfall Signage

Part II of the permit includes requirements for the permittee to place and maintain a sign at each outfall to the Pigeon Run and Prairie Creek providing information about the discharge. Signage at outfalls is required pursuant to OAC 3745-33-08(A).

Part III
Part III of the permit details standard conditions that include monitoring, reporting requirements, compliance responsibilities, and general requirements.

Storm Water Compliance
To comply with industrial storm water regulations, the permittee requested coverage under the industrial storm water general permit. Permit 2GR00552*GG became effective on 7/1/2022. No later than 90 days after the effective date of the renewed general permit, the permittee must request renewed coverage under the industrial storm water general permit or make other provisions to comply with the industrial storm water regulations.

Figure 1. Location of The City of Bryan WWTP

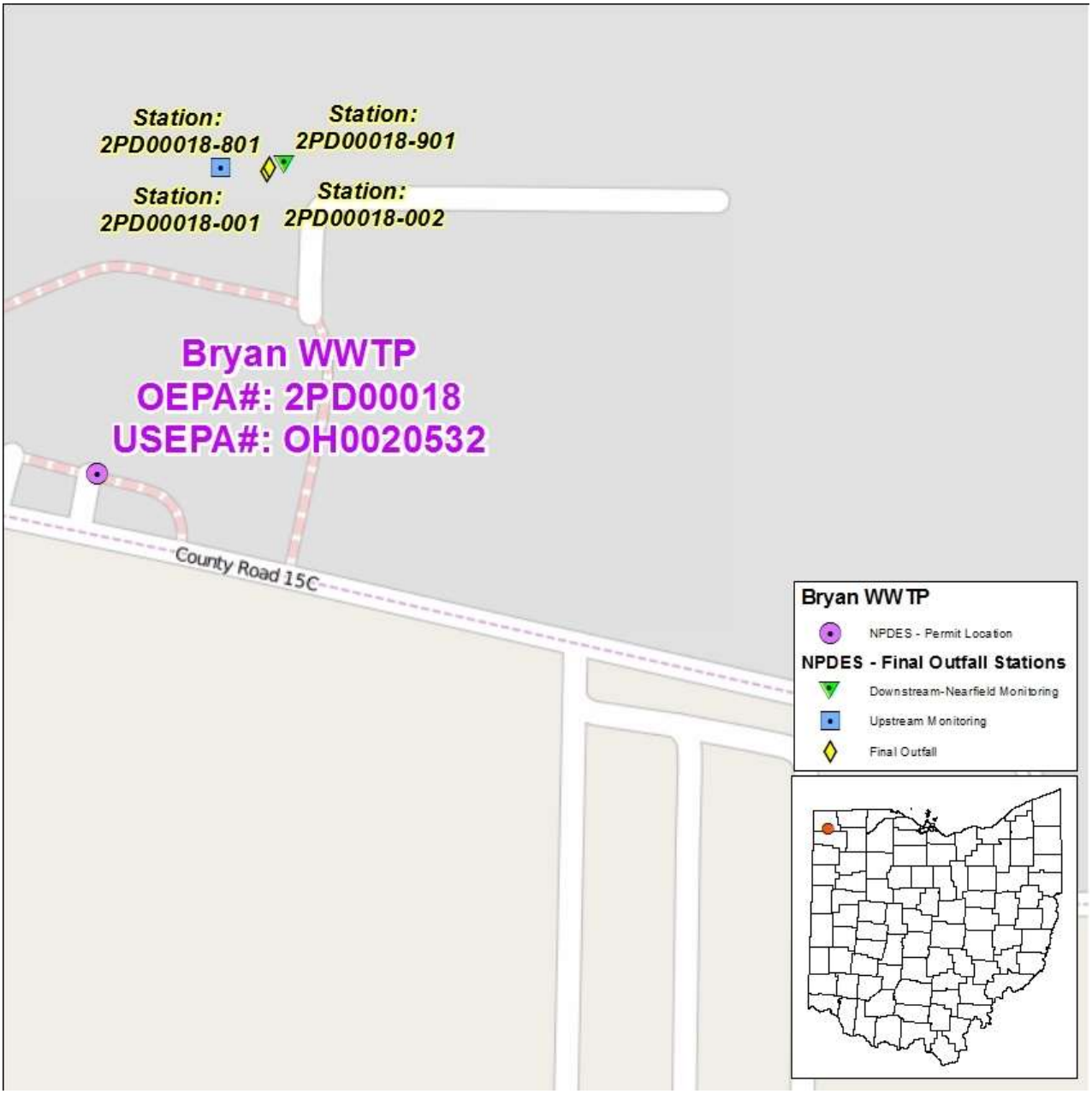

Figure 2. Diagram of Wastewater Treatment System

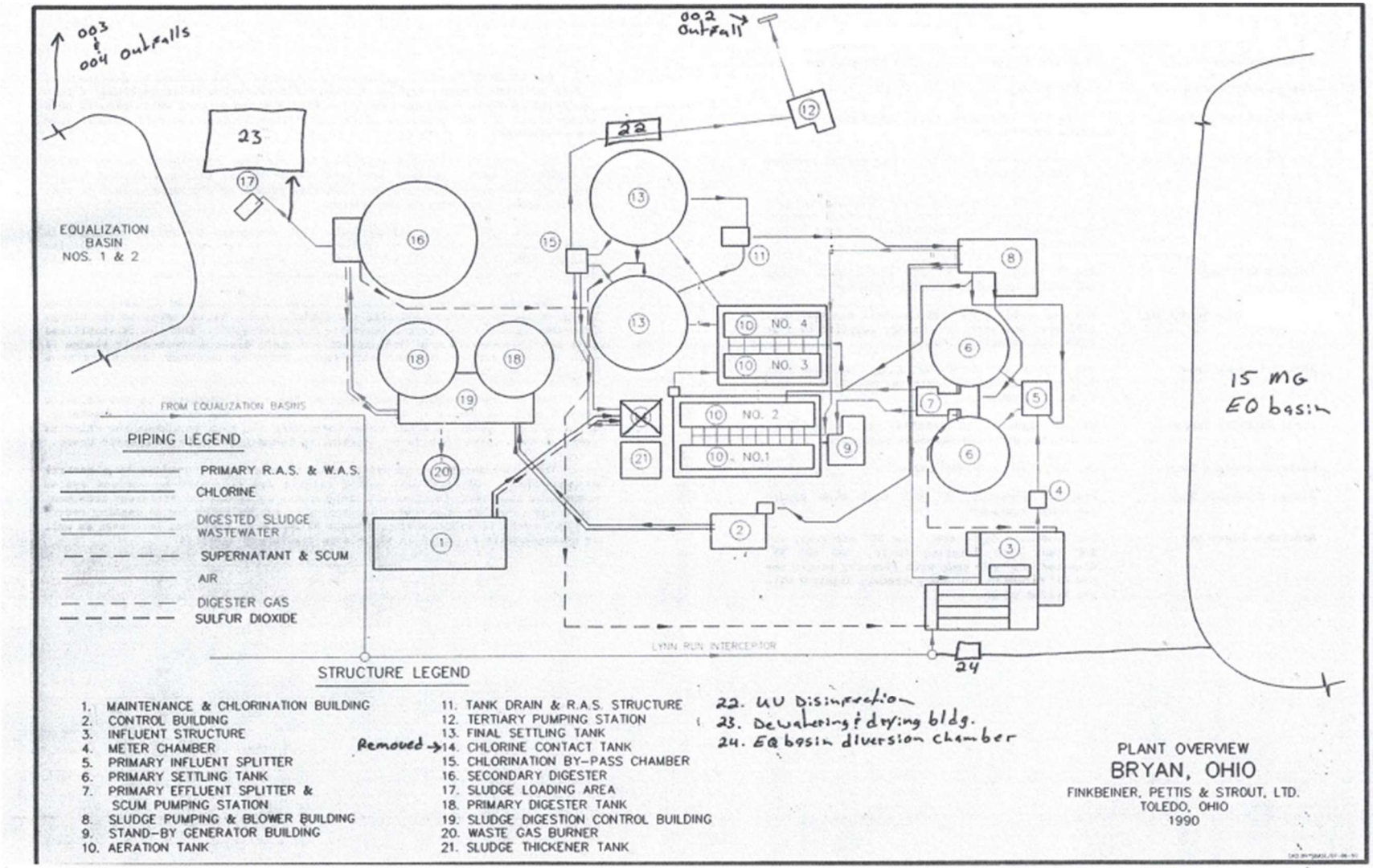

Table 1. Sewage Sludge Removal

Year	Dry Tons Removed
2018	229
2019	236
2020	199
2021	229
2022	253

Table 2. Effluent Violations for Outfall 002

PARAMETER	2018[a]	2019	2020	2021	2022	2023[b]
Barium, Total Recoverable	0	0	1	0	2	1
Mercury, Total (Low Level)	0	0	2	0	0	0
Nitrogen, Ammonia (NH3)	0	0	1	0	0	0
Total	0	0	4	0	2	1

[a] data set starts 7/1/2018
[b] data set ends 8/31/2023

Table 3. Average Annual Effluent Flow Rates

Flow Rate (Million Gallons per Day)					
Year	# obs	Average	Median	95th Percentile	Maximum
2018[a]	184	1.5	1.2	3.3	5.4
2019	365	2.0	1.5	4.9	5.8
2020	361	1.6	1.3	4.7	6.3
2021	365	1.6	1.2	4.5	6.0
2022	365	1.6	1.2	4.2	6.4
2023[b]	243	1.7	1.3	5.0	6.2

[a] data set starts 7/1/2018
[b] data set ends 8/31/2023

Table 4. Calculated Annual Total Phosphorus Loadings

Year	Median Phosphorus (mg/L)	Median Flow (MGD)	Median Loading (kg/day)
2018[a]	0.35	1.2	1.6
2019	0.28	1.5	1.4
2020	0.44	1.3	2.2
2021	0.29	1.2	1.3
2022	0.26	1.2	1.2
2023[b]	0.17	1.3	0.8

[a] = data set begins on 7/1/18
[b] = data set ends on 8/31/23
MGD = million gallons per day

Table 5. Effluent Characterization Using Pretreatment Data and Ohio EPA Data

PARAMETER	Ohio EPA	Ohio EPA	PT	PT	PT	PT	PT
	3/21/2023	4/18/2023	9/18/2018	9/3/2019	8/4/2020	8/10/2021	8/2/2022
Arsenic	0.388	0.376	AA (3)	AA (4)	AA (8)	AA (8)	AA (4)
Cadmium	0.0536	0.0327	AA (0.1)	AA (0.2)	AA (1)	AA (1)	AA (0.2)
Chromium	0.236	0.46	AA (0.2)	AA (0.3)	AA (4)	0.4	3
Copper	8.38	7.38	13	11	13	13	26
Lead	0.675	0.565	AA (2)	AA (2)	AA (5)	AA (5)	AA (2)
Nickel	2.07	5.36	10	AA (4)	AA (4)	4	5
Selenium	0.706	0.731	AA (3)	AA (3)	AA (8)	3	5
Silver	0.0204	AA (0.0104)	AA (0.4)	AA (0.6)	AA (4)	AA (4)	AA (1)
Barium	180	194	NT	NT	NT	NT	NT
Zinc	24.6	19.7	43	19	18	24	30
Ammonia (mg/L)	0.178	0.082	NT	NT	NT	NT	NT
Nitrate + Nitrite (mg/L)	8.31	11.2	NT	NT	NT	NT	NT
Acetone	1.14	284	NT	NT	NT	NT	NT
Bis(2-ethylhexyl) phthalate (DEHP)	1.97	1.77	AA (0.8)	AA (0.7)	AA (5)	AA (5)	AA (1.7)
Butyl benzene	0.439	AA (0.291)	NT	NT	NT	NT	NT
Tert-Butylbenzene	0.411	AA (0.207)	NT	NT	NT	NT	NT
Carbon disulfide	0.308	AA (0.292)	NT	NT	NT	NT	NT
Chlorodibromomethane	0.555	AA (0.15)	AA (1)	AA (0.3)	AA (1)	AA (1)	AA (0.1)
Chloroform	1.09	0.636	AA (0.3)	AA (0.3)	AA (1)	0.43	0.6
4-Chlorotoluene	0.444	AA (0.247)	NT	NT	NT	NT	NT
1,4 -Dichlorobenzene	0.431	AA (0.277)	AA (0.5)	AA (0.3)	AA (5)	AA (1)	AA (0.2)
Dichlorobromomethane	0.497	AA (0.236)	AA (0.3)	AA (0.3)	AA (1)	AA (1)	AA (0.1)
Dichlorodifluoromethane	0.42	AA (0.303)	NT	NT	NT	NT	NT
Iodomethane	0.56	0.599	NT	NT	NT	NT	NT
Methyl bromide	AA (0.246)	1.03	AA (0.3)	AA (0.4)	AA (1)	AA (1)	AA (0.2)
Methyl chloride	0.357	AA (0.079)	AA (0.4)	AA (0.4)	AA (1)	AA (1)	AA (0.2)
Methyl ethyl ketone	0.571	AA (0.511)	NT	NT	NT	NT	NT
Methylene chloride	0.427	AA (0.303)	AA (0.2)	AA (0.4)	AA (2)	0.33	AA (0.1)
n-Propylbenzene	0.476	AA (0.289)	NT	NT	NT	NT	NT
Toluene	AA (0.234)	AA (0.234)	AA (0.2)	AA (1)	AA (1)	0.23	AA (0.1)
1,2,4-Trichlorobenzene	0.44	AA (0.235)	AA (0.6)	AA (0.4)	AA (5)	AA (5)	AA (0.9)

AA = not-detected (analytical method detection limit)
NT = not tested

Table 6. Effluent Characterization Using Self-Monitoring Data

Parameter	Unit	Current Limits		# Obs	Percentiles		Data Range
		30 Day	Daily		50th	95th	
Water Temperature	°C	Monitoring Only		1887	16	23	6 - 25
Dissolved Oxygen - Summer	mg/L	--	7.0[m]	982	8.31	7.5**	7.07 - 10
Dissolved Oxygen - Winter	mg/L	--	6.0[m]	906	9.25	7.77**	6.58 - 12.1
Total Suspended Solids - Summer	kg/day	176	270[w]	391	28.5	128	3.11 - 309
Total Suspended Solids - Summer	mg/L	15	23[w]	393	6	16	1 - 46
Total Suspended Solids - Winter	kg/day	352	528[w]	366	39.7	172	8.06 - 287
Total Suspended Solids - Winter	mg/L	30	45[w]	366	7	15	2 - 28
Oil and Grease	mg/L	--	10	124	< 1	< 1	0 - 5.8
Nitrogen, Ammonia - Summer	kg/day	14	21[w]	486	.422	4.94	.0598 - 44.5
Nitrogen, Ammonia - Summer	mg/L	1.2	1.8[w]	488	.09	.88	.017 - 3.03
Nitrogen, Ammonia - Winter	kg/day	53	80[w]	444	.508	28.9	.0655 - 133
Nitrogen, Ammonia - Winter	mg/L	4.5	6.8[w]	444	.0835	3.44	.0127 - 7.33
Nitrogen Kjeldahl, Total	mg/L	Monitoring Only		62	< .6	2.77	0 - 5.8
Nitrite Plus Nitrate, Total	mg/L	Monitoring Only		62	13.9	23.3	3.73 - 31.1
Phosphorus, Total	kg/day	11.7	17.6[w]	248	1.58	4.31	.297 - 8.23
Phosphorus, Total	mg/L	1.0	1.5[w]	248	.29	.717	.06 - 1.07
Orthophosphate, Dissolved	mg/L	Monitoring Only		223	.09	.369	0 - .79
Cyanide, Free	mg/L	Monitoring Only		2	--	--	< .002
Selenium, TR	µg/L	Monitoring Only		54	--	--	< 3
Barium, TR	kg/day	2.59	24.2	73	.95	2.34	.427 - 2.87
Barium, TR	µg/L	220	2060	73	187	255	102 - 266
Nickel, TR	µg/L	Monitoring Only		21	< .8	6	0 - 10
Silver, TR	µg/L	Monitoring Only		21	--	--	< .6
Strontium, TR	µg/L	Monitoring Only		54	3560	4610	1550 - 4880
Zinc, TR	µg/L	Monitoring Only		21	26	38	12 - 58

Parameter	Unit	Current Limits		# Obs	Percentiles		Data Range
		30 Day	Daily		50th	95th	
Cadmium, TR	µg/L	Monitoring Only		21	--	--	< .2
Lead, TR	µg/L	Monitoring Only		21	--	--	< 2
Chromium, TR	µg/L	Monitoring Only		21	< .2	< .2	0 - .4
Copper, TR	µg/L	Monitoring Only		62	12	21.9	6 - 110
Chromium, Dissolved Hexavalent	µg/L	Monitoring Only		21	--	--	< 2
Fecal Coliform	#/100 mL	1000	2000[w]	24	18	155	10 - 240
E. coli - 2019-2023	#/100 mL	126	284[w]	338	13	81.2	13 - 280
E. coli - 2018-2018	#/100 mL	161	362[w]	48	13	138	13 - 300
Methyl Bromide	µg/L	Monitoring Only		19	< .3	.06	0 - .6
Flow Rate	MGD	Monitoring Only		1883	1.26	4.67	.377 - 6.39
Chlorine, Total Residual	mg/L	--	0.017	123	.01	.01	.01 - .01
Mercury, Total	kg/day	0.000037	0.0199	68	.00000497	.0000316	0 - .000337
Mercury, Total	ng/L	3.1	1700	68	.976	3.15	0 - 17.2
Cyanide, Free (Low-Level)	kg/day	0.0611	0.27	54	--	--	< .000132
Cyanide, Free (Low-Level)	µg/L	5.2	23	54	--	--	< .4
Acute Toxicity, *Ceriodaphnia dubia* - June and Aug	TUa	--	1.0	12	--	--	< .2
Acute Toxicity, *Ceriodaphnia dubia* - Quarterly	TUa	Monitoring Only		1	--	--	< .2
Chronic Toxicity, *Ceriodaphnia dubia* - June and Aug	TUc	1.0	--	12	< 1	.675	0 - 1.5
Chronic Toxicity, *Ceriodaphnia dubia* - Quarterly	TUc	Monitoring Only		1	--	--	< 1
Acute Toxicity, *Pimephales promelas*	TUa	Monitoring Only		7	--	--	< .2
Chronic Toxicity, *Pimephales promelas*	TUc	Monitoring Only		6	--	--	< 1
pH, Maximum	S.U.	--	9.0	1888	7.49	7.8	6.93 - 8.27
pH, Minimum	S.U.	--	6.5[m]	1888	7.45	7.13*	6.61 - 8.27

Parameter	Unit	Current Limits		# Obs	Percentiles		Data Range
		30 Day	Daily		50th	95th	
Residue, Total Filterable	mg/L	Monitoring Only		62	914	1060	496 - 1120
CBOD 5 day - Summer	kg/day	118		176[w]	374	18.1	63.7
CBOD 5 day - Summer	mg/L	10		15[w]	376	4	7
CBOD 5 day - Winter	kg/day	293	469[w]	364	28.4	102	5.16 - 119
CBOD 5 day - Winter	mg/L	25	40[w]	364	5	10	2 - 12

* = For minimum pH, 5th percentile shown in place of 50th percentile.
** = For dissolved oxygen, 5th percentile shown in place of 95th percentile.
[m] = minimum
[w] = weekly average.
TR = total recoverable

Table 7. Projected Effluent Quality for Outfall 002

Parameter	Units	Number of Samples	Number > MDL	PEQ Average	PEQ Maximum
Ammonia (Summer)	mg/L	334	334	0.3	0.67
Ammonia (Winter)	mg/L	215	215	1.1	2.1
Antimony	µg/L	5	0	--	--
Arsenic - TR	µg/L	2	2	1.1	1.5
Barium	µg/L	75	75	230	284
Bis(2-ethylhexyl)phthalate	µg/L	5	2	3.3	4.5
n-Butylbenzene	µg/L	2	1	1.2	1.7
tert-Butylbenzene	µg/L	2	1	1.1	1.6
Cadmium - TR	µg/L	8	2	0.14	0.19
Carbon disulfide	µg/L	2	1	0.85	1.2
Chlorodibromomethane	µg/L	4	1	1.1	1.4
Chloroform (Trichloromethane)	µg/L	7	4	1.6	2.2
Chromium - TR	µg/L	25	5	2.8	3.9
Hexavalent Chromium (Dissolved)	µg/L	21	0	--	--
Copper - TR	µg/L	67	67	20.1	27.9
Cyanide - free	µg/L	54	0	--	--
1,4-Dichlorobenzene	µg/L	4	1	0.82	1.1
Dichlorobromomethane	µg/L	5	1	0.83	1.1
Dichlorodifluoromethane	µg/L	2	1	1.2	1.6
Lead - TR	µg/L	2	2	1.9	2.7
Mercury	ng/L	68	52	2.7	4.3
Methyl bromide (Bromomethane)	µg/L	25	2	0.98	1.3
Methyl chloride (Chloromethane)	µg/L	5	1	0.67	0.92
Methyl ethyl ketone	µg/L	2	1	1.7	2.2
Methylene chloride (Dichloromethane)	µg/L	5	1	0.72	0.98
Nickel - TR	µg/L	27	12	7.2	11.9
Nitrate-N + Nitrite-N	mg/L	64	64	22.1	32.1
Selenium - TR	µg/L	30	3	2.6	3.6
Silver	µg/L	2	1	0.057	0.078
Strontium	µg/L	54	54	4606	5996
Toluene	µg/L	5	1	0.39	0.54
Total Filterable Residue	mg/L	62	62	1053	1261
Zinc - TR	µg/L	28	28	37.4	51.7

MDL = analytical method detection limit
PEQ = projected effluent quality
* Per OAC 3745-2-04(E)(3), ammonia PEQ is based on data collected during the following months:
Summer – June through September
Winter – December through February

TR = total recoverable

Table 8. Summary of Acute and Chronic Toxicity Results

Date	*Ceriodaphnia dubia*		*Pimephales promelas*	
	Acute (Tu_a)	**Chronic (Tu_c)**	**Acute (Tu_a)**	**Chronic (Tu_c)**
8/14/2018	AA (0.2)	AA (1.0)	AA (0.2)	AA (1.0)
6/17/2019	AA (0.2)	AA (1)	NT	NT
8/20/2019	AA (0.2)	AA (1)	AA (0.2)	AA (1)
6/8/2020	AA (0.2)	1.5	NT	NT
6/22/2020	AA (0.2)	AA (1)	NT	NT
8/3/2020	AA (0.2)	AA (1)	AA (0.2)	AA (1)
6/14/2021	AA (0.2)	AA (1.0)	NT	NT
8/2/2021	AA (0.2)	AA (1.0)	AA (0.2)	AE ()
8/31/2021	NT	NT	AA (0.2)	AA (1.0)
6/21/2022	AA (0.2)	AA (1.0)	NT	NT
8/9/2022	AA (0.2)	AA (1.0)	AA (1.0)	AA (0.2)
6/26/2023	AA (0.2)	AA (1.0)	NT	NT
8/8/2023	AA (0.2)	AA (1.0)	AA (0.2)	AA (1.0)

AA = non-detection; analytical method detection limit of 0.2 TU_a, 1.0 TU_c
AE = test not valid
NT = not tested
TU_a = acute toxicity unit
TU_c = chronic toxicity unit

Table 9. Use Attainment Table

Location	STORET (RM)[a]	DRAIN. (MI²)	IBI	MIwb[b]	ICI[c]	QHEI	Status[d]	Causes	Sources
Prairie Creek (04-609-001)					*WWH Existing (ECBP & HELP)*				
Eastern Corn Belt Plains Ecoregion									
Dst. Bryan WWTP adj. County Rd. C	P07S13 (9.80)	9.8H	28*	N/A	P*	35.75	**NON**	Nutrient Enrichment, Flocculent Bottom Deposits	Bryan WWTP
Huron/Erie Lake Plains Ecoregion									
Northeast of Ney @ Flickinger Rd. (lower crossing)	P07W12 (3.40)	26.0W	29NS	8.36	38	64.0	**FULL**		

Source: *Biological and Water Quality Study of the Tiffin River and Select Tributaries, 2012-2014*

* - Indicates significant departure from applicable biocriteria (>4 IBI or ICI units, or >0.5 MIwb units). Underlined scores are in the Poor or Very Poor range.
WWH = warmwater habitat
H - Headwater site.
W - Wading site.
NS - Nonsignificant departure from biocriteria (<4 IBI or ICI units, or <0.5 MIwb units).
[a] - River Mile (RM) represents the Point of Record (POR) for the station, not the actual sampling RM.
[b] - MIwb is not applicable to headwater streams with drainage areas < 20 mi^2.
[c] - A narrative evaluation of the qualitative sample based on attributes such as EPT taxa richness, number of sensitive taxa, and community composition was used when quantitative data was not available or considered unreliable. VP=Very Poor, P=Poor, LF=Low Fair, F=Fair, MG=Marginally Good, G=Good, VG=Very Good, E=Exceptional
[d] - Attainment is given for the proposed status when a change is recommended

Table 10. Water Quality Criteria in the Study Area

Parameter	Units	Outside Mixing Zone Criteria					Inside Mixing Zone Maximum
		Average				Maximum	
		Wildlife	Human Health	Agri-culture	Aquatic Life	Aquatic Life	
Ammonia (Summer)	mg/L	--	--	--	1.5	--	--
Ammonia (Winter)	mg/L	--	--	--	4.5	--	--
Antimony	µg/L	--	780	--	190	900	1800
Arsenic - TR	µg/L	--	580	100	150	340	680
Barium	µg/L	--	160000	--	1800	7700	15000
Bis(2-ethylhexyl)phthalate	µg/L	--	32[c]	--	8.4	1100	2100
n-Butylbenzene	µg/L	--	--	--	--	--	--
tert-Butylbenzene	µg/L	--	--	--	--	--	--
Cadmium - TR	µg/L	--	730	50	6.2	17	34
Carbon disulfide	µg/L	--	--	--	15	130	260
Chlorodibromomethane	µg/L	--	150	--	320	2900	5800
Chloroform (Trichloromethane)	µg/L	--	1700[c]	--	140	1300	2600
Chromium - TR	µg/L	--	14000	100	230	4700	9500
Hexavalent Chromium (Dissolved)	µg/L	--	14000	--	11	16	31
Copper - TR	µg/L	--	64000	500	26	43	85
Cyanide - free	µg/L	--	48000	--	5.2	22	44
1,4-Dichlorobenzene	µg/L	--	240[c]	--	9.4	57	110
Dichlorobromomethane	µg/L	--	180[c]	--	340	3100	6200
Dichlorodifluoromethane	µg/L	--	--	--	--	--	--
Dissolved Solids	mg/L	--	--	--	1500	--	--
Lead - TR	µg/L	--	--	100	29	550	1100
Mercury	ng/L	1.3	3.1	10000	910	1700	1700
Methyl bromide (Bromomethane)	µg/L	--	2600	--	16	38	75
Methyl chloride (Chloromethane)	µg/L	--	7300[c]	--	--	--	--
Methyl ethyl ketone	µg/L	--	--	--	22000	200000	400000
Methylene chloride (Dichloromethane)	µg/L	--	2600[c]	--	1900	11000	22000
Nickel - TR	µg/L	--	43000	200	140	1300	2500
Nitrate-N + Nitrite-N	mg/L	--	--	100	--	--	--
Selenium - TR	µg/L	--	3100	50	5	62	120
Silver	µg/L	--	11000	--	1.3	12	24
Strontium	µg/L	--	1400000	--	97000	250000	510000
Toluene	µg/L	--	51000	--	62	560	1100
Zinc - TR	µg/L	--	35000	25000	330	330	650

[c] = carcinogen
TR = total recoverable

Table 11. Instream Conditions and Discharger Flow

Parameter	Units	Season	Value	Basis
Stream Flows				
1Q10	cfs	annual	0.15	USGS gage 04185000; 1990 to 2023
7Q10	cfs	annual	0.17	USGS gage 04185000; 1990 to 2023
30Q10	cfs	summer	0.23	USGS gage 04185000; 1990 to 2023
		winter	0.71	USGS gage 04185000; 1990 to 2023
90Q10	cfs	annual	0.36	USGS gage 04185000; 1990 to 2023
Harmonic Mean	cfs	annual	1.28	USGS gage 04185000; 1990 to 2023
Mixing Assumption	%	average	25	
		maximum	100	
Hardness, OMZ	mg/L	annual	326	901 Station & P07S13, median, n=13
Hardness, IMZ	mg/L	annual	326	901 Station & P07S13, median, n=13
pH	S.U.	summer	7.8	901 station; 75th percentile; n=22
		winter	7.7	901 station; 75th percentile n=17
Temperature	ºC	summer	23	901 station; 75th percentile; n=22
		winter	13	901 station; 75th percentile; n=17
Bryan WWTP flow	cfs	annual	4.7964	Average Daily Design Flow
Background Water Quality				
Ammonia (Summer)	mg/L		0.039	EDMR; 2018-2023; n=23; 0<MDL; 801 station
Ammonia (Winter)	mg/L		0.063	EDMR; 2018-2023; n=15; 0<MDL; 801 station
Antimony	µg/L		0	No representative data available.
Arsenic - TR	µg/L		0.649	OEPA; 2014 & 2023; n=3; 1<MDL; Station P07W16
Barium	µg/L		156	OEPA; 2014 & 2023; n=3; 0<MDL; Station P07W16
Bis(2-ethylhexyl)phthalate	µg/L		0	No representative data available.
n-Butylbenzene	µg/L		0	No representative data available.
tert-Butylbenzene	µg/L		0	No representative data available.
Cadmium - TR	µg/L		0.0527	OEPA; 2014 & 2023; n=3; 0<MDL; Station P07W16
Carbon disulfide	µg/L		0	No representative data available.
Chlorodibromomethane	µg/L		0	No representative data available.
Chloroform (Trichloromethane)	µg/L		0	No representative data available.
Chromium - TR	µg/L		0	OEPA; 2014 & 2023; n=3; 3<MDL; Station P07W16
Hexavalent Chromium (Dissolved)	µg/L		0	No representative data available.

Parameter	Units	Season	Value	Basis
Copper - TR	µg/L		8.42	OEPA; 2014 & 2023; n=3; 3<MDL; Station P07W16
Cyanide - free	µg/L		0	No representative data available.
1,4-Dichlorobenzene	µg/L		0	No representative data available.
Dichlorobromomethane	µg/L		0	No representative data available.
Dichlorodifluoromethane	µg/L		0	No representative data available.
Dissolved Solids	mg/L		516	OEPA; 2014; n=1; 0<MDL; Station P07W16
Lead - TR	µg/L		0.48	OEPA; 2014 & 2023; n=3; 1<MDL; Station P07W16
Mercury	ng/L		0	No representative data available.
Methyl bromide (Bromomethane)	µg/L		0	No representative data available.
Methyl chloride (Chloromethane)	µg/L		0	No representative data available.
Methyl ethyl ketone	µg/L		0	No representative data available.
Methylene chloride (Dichloromethane)	µg/L		0	No representative data available.
Nickel - TR	µg/L		1.12	OEPA; 2014 & 2023; n=3; 1<MDL; Station P07W16
Nitrate-N + Nitrite-N	mg/L		1.39	EDMR; 2018-2023; n=57; 4<MDL; 801 station
Selenium - TR	µg/L		0.95	OEPA; 2014 & 2023; n=3; 1<MDL; Station P07W16
Silver	µg/L		0	No representative data available.
Strontium	µg/L		2980	OEPA; 2014 & 2023; n=3; 0<MDL; Station P07W16
Toluene	µg/L		0	No representative data available.
Zinc - TR	µg/L		8.97	OEPA; 2014 & 2023; n=3; 2<MDL; Station P07W16

MDL = analytical method detection limit
n = number of samples
NPDES = National Pollutant Discharge Elimination System
Ohio EPA = Ohio Environmental Protection Agency
TR = total recoverable
WWTP = wastewater treatment plant

Table 12. Summary of Effluent Limits to Maintain Applicable Water Quality Criteria

Parameter	Units	Outside Mixing Zone Criteria					Inside Mixing Zone Maximum
		Average				Maximum Aquatic Life	
		Wildlife	Human Health	Agri-culture	Aquatic Life		
Ammonia (Summer)	mg/L	--	--	--	1.57	--	--
Ammonia (Winter)	mg/L	--	--	--	5.16	--	--
Antimony	µg/L	--	832	--	192	928	1800
Arsenic - TR	µg/L	--	619	107	151	351	680
Barium	µg/L	--	170664	--	1815	7936	15000
Bis(2-ethylhexyl)phthalate	µg/L	--	34	--	8.5	1134	2100
n-Butylbenzene	µg/L	--	--	--	--	--	--
tert-Butylbenzene	µg/L	--	--	--	--	--	--
Cadmium - TR	µg/L	--	779	53	6.3	18	34
Carbon disulfide	µg/L	--	--	--	15	134	260
Chlorodibromomethane	µg/L	--	160	--	323	2991	5800
Chloroform (Trichloromethane)	µg/L	--	1813	--	141	1341	2600
Chromium - TR	µg/L	--	14934	107	232	4847	9500
Hexavalent Chromium (Dissolved)	µg/L	--	14934	--	11	17	31
Copper - TR	µg/L	--	68269	533	26	44	85
Cyanide - free	µg/L	--	51202	--	5.2	23	44
1,4-Dichlorobenzene	µg/L	--	256	--	9.5	59	110
Dichlorobromomethane	µg/L	--	192	--	343	3197	6200
Dichlorodifluoromethane	µg/L	--	--	--	--	--	--
Dissolved Solids	mg/L	--	--	--	1509	--	--
Lead - TR	µg/L	--	--	107	29	567	1100
Mercury	ng/L	1.3	3.1	10000	910	1700	3400
Methyl bromide (Bromomethane)	µg/L	--	2773	--	16	39	75
Methyl chloride (Chloromethane)	µg/L	--	7787	--	--	--	--
Methyl ethyl ketone	µg/L	--	--	--	22195	206255	400000
Methylene chloride (Dichloromethane)	µg/L	--	2773	--	1917	11344	22000
Nickel - TR	µg/L	--	45869	213	141	1341	2500
Nitrate-N + Nitrite-N	mg/L	--	--	107	--	--	--
Selenium - TR	µg/L	--	3307	53	5	64	120
Silver	µg/L	--	11734	--	1.3	12	24
Strontium	µg/L	--	1493205	--	97833	257725	510000
Toluene	µg/L	--	54403	--	63	578	1100
Zinc - TR	µg/L	--	37334	26667	333	340	650

[A] Allocation must not exceed the Inside Mixing Zone Maximum

[B] Bioaccumulative Chemical of Concern (BCC); no mixing zone allowed after 11/15/2010, WQS must be met at end-of-pipe, unless requirements for an exception are met as listed in OAC 3745-2-05(A)(2)(e)(ii)

TR = total recoverable

Table 13. Parameter Assessment

Group 1: Due to a lack of criteria, the following parameters could not be evaluated at this time.

n-Butylbenzene	tert-Butylbenzene	Dichlorodifluoromethane

Group 2: PEQ < 25 percent of WQS or all data below minimum detection limit.
WLA not required. No limit recommended; monitoring optional.

Antimony	Arsenic - TR	Barium
Cadmium - TR	Carbon disulfide	Chlorodibromomethane
Chloroform (Trichloromethane)	Chromium - TR	Hexavalent Chromium (Dissolved)
Cyanide - free	1,4-Dichlorobenzene	Dichlorobromomethane
	Methyl bromide	Methyl chloride
Lead - TR	(Bromomethane)	(Chloromethane)
	Methylene chloride	
Methyl ethyl ketone	(Dichloromethane)	Nickel - TR
Nitrate-N + Nitrite-N	Silver	Strontium
Toluene	Zinc - TR	

Group 3: PEQmax < 50 percent of maximum PEL and PEQavg < 50 percent of average PEL.
No limit recommended; monitoring optional.

Bis(2-ethylhexyl)phthalate

Group 4: PEQmax >= 50 percent, but < 100 percent of the maximum PEL or
PEQavg >= 50 percent, but < 100 percent of the average PEL. Monitoring is appropriate.

Selenium - TR –Total Filterable Residue

Group 5: Maximum PEQ >= 100 percent of the maximum PEL or average PEQ >= 100 percent of the average PEL, or either the average or maximum PEQ is between 75 and 100 percent of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.

Limits to Protect Numeric Water Quality Criteria

		Recommended Effluent Limits	
Parameter	*Units*	*Average*	*Maximum*
Copper - TR	µg/L	26	44
Mercury	ng/L	1.3	1700

PEL = preliminary effluent limit
PEQ = projected effluent quality
TR = total recoverable
WLA = wasteload allocation
WQS = water quality standard

Table 14. Final Effluent Limits for Outfall 002

Parameter	Units	Concentration		Loading (kg/day)[a]		Basis[b]
		Daily Maximum	30 Day Average	Daily Maximum	30 Day Average	
Water Temperature	°C	- - - - - - - - - - Monitor - - - - - - - - - - -				M[c]
Dissolved Oxygen (Summer)	mg/L	7.0[m]	--	--	--	PD
Dissolved Oxygen (Winter)	mg/L	6.0[m]				PD
TSS (summer)	mg/L	23[d]	15	270[d]	176	PD
TSS (winter)	mg/L	45[d]	30	528[d]	352	PD
Oil & Grease	mg/L	10	--	--	--	WQS
Ammonia (summer)	mg/L	1.8 [d]	1.2	21 [d]	14	PD
Ammonia (winter)	mg/L	6.8 [d]	4.5	80 [d]	53	PD
Total Kjeldahl Nitrogen	mg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M/BTJ
Nitrate plus Nitrite	mg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M/BTJ
Phosphorus	mg/L	1.5[d]	1.0	17.6[d]	11.7	PTS
Orthophosphate	mg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				PMR
Selenium	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				RP
Nickel	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M
Zinc	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M
Cadmium	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M
Lead	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M
Chromium	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M
Copper	µg/L	44	26	0.52	0.31	RP/WLA
Dissolved Hexavalent Chromium	µg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				M
E. coli	#/100 mL	284 [d]	126	--	--	WQS
Flow Rate	MGD	- - - - - - - - - - Monitor - - - - - - - - - - -				M[c]
Mercury	ng/L	1700	2.7	0.02	0.000032	VAR
Free Cyanide	µg/L	- - - - - - - - - - Monitor - - - - - - -				M
Acute Toxicity, *Ceriodaphnia dubia*	TUa	1.0	--	--	--	WET
Chronic Toxicity, *Ceriodaphnia dubia*	TUc	--	1.0	--	--	WET
Acute Toxicity, *Pimephales promelas*	TUa	- - - - - - - - - - Monitor - - - - - - - - - - -				WET
Chronic Toxicity, *Pimephales promelas*	TUc	- - - - - - - - - - Monitor - - - - - - - - - - -				WET
Total Filterable Residue	mg/L	- - - - - - - - - - Monitor - - - - - - - - - - -				RP
pH, maximum	SU	9.0	--	--	--	WQS
pH, minimum	SU	6.5[m]	--	--	--	WQS
CBOD5 (summer)	mg/L	15[d]	10	176[d]	118	PD
CBOD5 (winter)	mg/L	40[d]	25	469[d]	293	PD

[a] Effluent loadings based on average design discharge flow of 3.1 MGD.

[b] Definitions:
BTJ = Best Technical Judgement
M = Division of Surface Water NPDES Permit Guidance 1: Monitoring frequency requirements for Sanitary Discharges
PD = Plant Design (OAC 3745-33-05(E))

PMR = Phosphorus monitoring requirements (ORC 6111.03)
PTS = Phosphorus Treatment Standards (OAC 3745-33-06 (C))
RP = Reasonable Potential for requiring water quality-based effluent limits and monitoring requirements in permits (OAC 3745-33-07(A))
WQS = Ohio Water Quality Standards (OAC 3745-1)
VAR = Variance from a WQS (Mercury variance (OAC 3745-1-38(J)))
WET = Requiring water quality-based effluent limits and monitoring requirements for whole effluent toxicity in NPDES permits [40 CFR Part 132, Appendix F, Procedure 6 and OAC 3745-33-07(B)]
WLA = Wasteload Allocation procedures (OAC 3745-2)

[c] Monitoring of flow and other indicator parameters is specified to assist in the evaluation of effluent quality and treatment plant performance.
[d] 7 day average limit.
[m] minimum limit

Attachment 1. Whole Effluent Toxicity Reasonable Potential Analysis

	Water Flea (*Ceriodaphnia dubia*)		Fathead Minnow (*Pimephales promelas*)	
	Acute	**Chronic**	**Acute**	**Chronic**
WLA (TU)	0.3	1.01	0.3	1.01
Total # of Tests	12	12	7	7
Maximum Value (TU)	--	1.5	--	--
Coefficient of Variation[1] (standard deviation/mean) [Where # tests > 10]	--	0.14	--	--
Multiplying Factors[2]	--	1.1	--	--
PEQ (Maximum Value x Multiplying Factor)	--	1.65	--	--
Reasonable Potential Demonstrated? (Yes/No) (Yes if PEQ > WLA)	No	Yes	No	No

[1] 40 CFR Part 132, Appendix F, Paragraph D(3)
[2] 40 CFR Part 132, Appendix F, Table F6-1

Addendum 1. Acronyms

ABS	Anti-backsliding
BPJ	Best professional judgment
CFR	Code of Federal Regulations
CMOM	Capacity Management, Operation, and Maintenance
CONSWLA	Conservative substance wasteload allocation
CSO	Combined sewer overflow
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DMT	Dissolved metal translator
IMZM	Inside mixing zone maximum
LTCP	Long-term Control Plan
MDL	Analytical method detection limit
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
OAC	Ohio Administrative Code
Ohio EPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
ORSANCO	Ohio River Valley Water Sanitation Commission
PEL	Preliminary effluent limit
PEQ	Projected effluent quality
PMP	Pollution Minimization Program
PPE	Plant performance evaluation
SSO	Sanitary sewer overflow
TMDL	Total Daily Maximum Load
TRE	Toxicity reduction evaluation
TU	Toxicity unit
U.S. EPA	United States Environmental Protection Agency
WET	Whole effluent toxicity
WLA	Wasteload allocation
WPCF	Water Pollution Control Facility
WQBEL	Water-quality-based effluent limit
WQS	Water Quality Standards
WWTP	Wastewater Treatment Plant