Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0104167**
Facility Type	**Industrial**	APS ID	**1066295**
Major / Minor	**Minor**	Authorization ID	**1401134**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Erie City Water Authority Erie County**	Facility Name	**Erie City WTP**
Applicant Address	240 W 12th Street	Facility Address	340 W Bayfront Parkway
	Erie, PA 16501-1706		Erie, PA 16507-2004
Applicant Contact	Chad Ellsworth	Facility Contact	Mark Murray
Applicant Phone	(814) 870-8000	Facility Phone	(814) 870-8000
Client ID	43493	Site ID	262466
SIC Code	4941	Municipality	Erie City
SIC Description	Trans. & Utilities - Water Supply	County	Erie
Date Application Received	June 22, 2022	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: NPDES permit renewal for discharge of treated industrial waste.

Summary of Review

1.0 General Discussion

This factsheet supports the renewal of an existing NPDES permit for a discharge of treated industrial wastewater from Erie City Water Authority (Authority) Chestnut Street Water Treatment Plant. The Authority owns and operates the water treatment plant that treats raw water withdrawn from Presque Isle Bay of Lake Erie to supply potable water. The water treatment system consists of coagulation and flocculation(settling) basins and conventional mixed media filters. Chemicals used for water treatment include Aluminum Chloride Hydroxide Sulfate for coagulation and flocculation, Potassium Permanganate for taste/odor control and Chlorine for disinfection. The filters need periodic backwashing to clean the filter media. Filter backwash is discharged to filter backwash tank for settling and separation. Supernatant from the filter backwash tank is decanted to the plant's raw water intake and the remaining treated wastewater is pumped to Erie POTW for final processing or could be discharged if needed. The facility is permitted to discharge 0.8MGD treated wastewater to the Presque Isle Bay, if needed. Sludge and solids from the sedimentation basins is sent to sludge holding tank and pumped to the Erie POTW for final processing. The applicant maintains the NPDES permit in the event the Erie POTW is unable to receive their treated wastewater. The facility is not covered by ELG, but technology-based treatment limits developed by the Department are applicable. See details at technology limits section of the report. The existing permit was issued on December 12, 2017, with effective date of January 1, 2018, and expiration date of December 31, 2022. The permittee submitted a timely renewal application to the Department and has been operating under the terms and conditions in the existing permit pending permit renewal. Topographical map showing discharge location is attached as attachment A and process flow diagram is presented in attachment B.

Approve	Deny	Signatures	Date
X		*J. Pascal Kwedza* J. Pascal Kwedza, P.E. / Environmental Engineer	March 24, 2025
		Adam Olesnanik, P.E. / Environmental Engineer Manager	Okay to Draft JCD 4/3/2025

Summary of Review

1.1 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.

1.2 Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.8
Latitude	42º 8' 1.52"	Longitude	-80º 5' 48.92"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent without ELG		

Receiving Waters	Presque Isle Bay of Lake Erie	Stream Code	62245
NHD Com ID	123926163	RMI	
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.		Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	**Impaired**		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS		
Source(s) of Impairment	UNKNOWN		
TMDL Status		Name	

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

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None.

2.0 Treatment Facility Summary				
Treatment Facility Name: Chestnut St Treatment Plant				
WQM Permit No.	**Issuance Date**			
2590406				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Industrial	Physical (Industrial Waste)	Sedimentation	No Disinfection	0.8
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.8			Concentration	

Changes Since Last Permit Issuance: None.

2.1 Wastewater Treatment System

The wastewater treatment system consists of one backwash tank and one sludge holding tank.

2.2 Summary of DMRs:

No discharge was reported through eDMR system for the facility during the last permit cycle.

2.3 Summary of Inspections:

The facility was last inspected on June 21,2022. No violation was noted during the inspection.

3.0 Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .8
Latitude 42º 8' 1.52" **Longitude** -80º 5' 48.92"
Wastewater Description: IW Process Effluent without ELG

3.1 Technology-Based Limitations

Technology based (BAT/BPT) effluent limits for water treatment plant wastewater discharges are presented in the Department's October 1997 guidance document entitled "Technology-based control requirements for water treatment plant wastes DEP Document number 362-2183-003, 10-01-1997 as follows:

Parameter	Monthly Average (mg/l)	Daily Max (mg/l)
Suspended Solids	30	60
Iron (total)	2	4
Aluminum (total)	4	8
Manganese (total)	1	2
Flow	Monitor	
pH	6-9 at all time	
Total Residual Chlorine*	0.5	1.0

*See TRC section of the report for details

3.2 Total Residual Chlorine (TRC) Limitation

The previous factsheet indicated the existing Total Residual Chlorine (TRC) limits of 0.29 mg/l monthly average and 0.49mg/l IMAX were based on discharge samples from 1995 as Best Available Technology limits. The limit is more stringent than the BAT limit and will remain in the permit for the current permit cycle.

3.3 Water Quality-Based Limitations

No water quality analysis was done during this renewal. The facility discharge infrequently to a lake with high dilution ratio to the discharge. The existing BAT technology limits are adequate and will remain in the permit.

4.0 Other Requirements

4.1 Anti-Backsliding

Not applicable to this discharge

4.2 Antidegradation (93.4):

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

4.3 Class A Wild Trout Fisheries:

No Class A Wild Trout Fisheries are impacted by this discharge.

4.4 303d Listed stream:

The discharge is located on a 303d listed stream segment. It is impaired for fish consumption due to PCBs. The cause is unknown. This discharge does not contribute to the impairment; therefore, no action is warranted at this time

5.0 Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

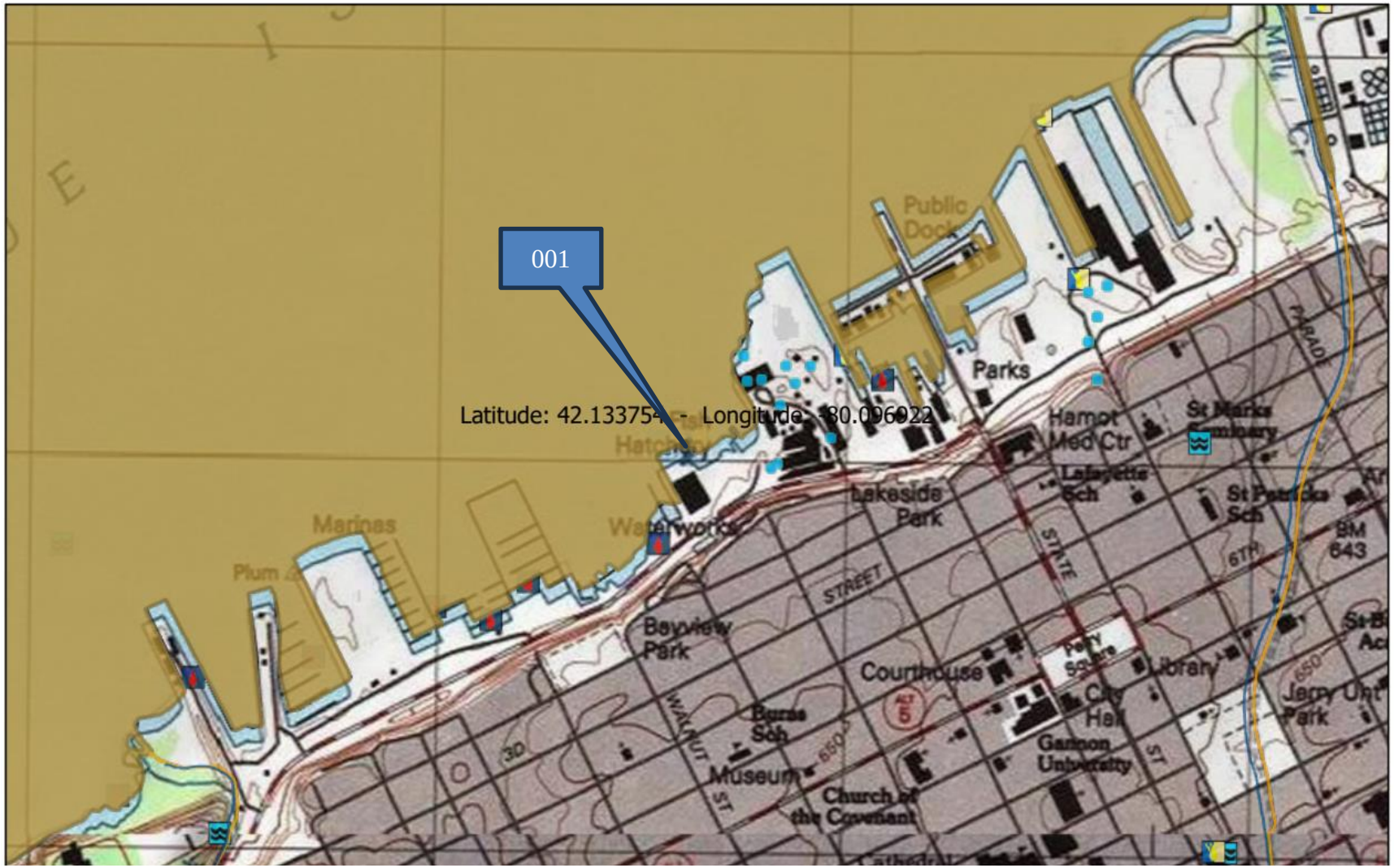
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.29	XXX	0.46	1/day	Grab
TSS	XXX	XXX	XXX	30.0	60.0	75	1/week	8-Hr Composite
Total Aluminum	XXX	XXX	XXX	4.0	8.0	10	1/week	8-Hr Composite
Total Iron	XXX	XXX	XXX	2.0	4.0	6	1/week	8-Hr Composite
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	1/week	8-Hr Composite

Compliance Sampling Location: At outfall 001

6.0 Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☒	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

Attachments

A. Topographical Map



B. Process Flow Diagram