

Application Type Renewal  
Facility Type Industrial  
Major / Minor Minor

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

Application No. PA0058556  
APS ID 1093214  
Authorization ID 1448020

**Applicant and Facility Information**

Applicant Name	<u>Downingtown Municipal Water Authority</u>	Facility Name	<u>Downingtown Municipal WTP</u>
Applicant Address	<u>100 Water Plant Way Downingtown, PA 19335-1951</u>	Facility Address	<u>100 Water Plant Way Downingtown, PA 19335-1951</u>
Applicant Contact	<u>Stephen Sullins</u>	Facility Contact	<u>Stephen Sullins</u>
Applicant Phone	<u>(610) 269-5362</u>	Facility Phone	<u>(610) 269-5362</u>
Client ID	<u>144875</u>	Site ID	<u>240757</u>
SIC Code	<u>4941</u>	Municipality	<u>Downingtown Borough</u>
SIC Description	<u>Trans. &amp; Utilities - Water Supply</u>	County	<u>Chester</u>
Date Application Received	<u>June 28, 2023</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>Permit Renewal.</u>		

**Summary of Review**

The permittee has submitted application for renewal of NPDES permit to discharge 0.466 MGD of treated wastewater from the Water Treatment Plant to unnamed tributary to Beaver Creek through Outfall 001, then to East Branch Brandywine Creek.

The Water Filtration Plant treats up to 2.5 MGD of raw surface water and groundwater. The Raw water from the East Branch Creek is treated at the Downingtown Municipal WTP by oxidation, coagulation, flocculation, settling, adsorption, filtration and disinfection processes. Sludge and liquid residues from the flocculation/inclined plate settlers, adsorption clarifiers and filter units are transferred to a sludge thickening/holding tank. Thickened sludges flow to the sludge drying beds. Filtrate from the sludge drying bed is collected and recycled back to the sludge holding tank. Supernatant from the sludge holding tank flows to onsite stormwater retention basin through an overflow weir into a receiving stream. Approximately 200,000 gpd of average treated wastewater to UNT to Beaver Creek through Outfall 001 and then into East Branch Brandywine Creek.

Effluent limits are based on Best Practicable Control Technology Currently Achievable (BPT) based on DEP Guidance Document 362-2183-003, "Technology-Based Control Requirements for Water Treatment Plant Wastes". For TDS, Delaware River Basin Commission (DRBC) Docket No. D-2006-31 CP-1 includes a limit of 1,000 mg/l at Outfall 001 with sampling frequency of once per month. The limit is based on Section 3.10.4.D.2 of DRBC's Water Quality Regulations. There are no changes to quality of wastewater discharge. There have been no significant changes to the water treatment processes at the plant since last permit renewal. Discharge is generally in compliance with effluent limits of NPDES permit for most of the parameters. There were few violations for Aluminum. Effluent limits for all the parameters will remain same for this permit renewal.

This facility is not included in the "Total Maximum Daily Load of Nutrients and Dissolved Oxygen Under Low-flow Conditions in the Christina River Basin as the facility accounts for less than 1 percent of the loading for TMDL parameters in the East Branch Brandywine sub-watershed and is considered insignificant. Therefore, no limits required for the TMDL parameters.

Approve	Deny	Signatures	Date
X		<i>Ketan Thaker</i> Ketan Thaker / Project Manager	2/9/2024
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	02/10/2024

**Summary of Review**

Act-14 Notification to Downingtown Borough on June 16, 2023.

Act -14 Notification to Chester County Commissioners Office on June 16, 2023.

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.	<u>001</u>	Design Flow (MGD)	<u>.466</u>
Latitude	<u>40° 0' 26.53"</u>	Longitude	<u>-75° 42' 53.49"</u>
Quad Name	_____	Quad Code	<u>1840</u>
Wastewater Description: <u>Water Treatment Effluent, filter backwash, filtrate from sludge thickening/holding tank</u>			
Receiving Waters	<u>Beaver Creek (CWF, MF)</u>	Stream Code	<u>00298</u>
NHD Com ID	<u>26089450</u>	RMI	<u>0.4</u>
Drainage Area	<u>0.28 mi<sup>2</sup></u>	Yield (cfs/mi <sup>2</sup> )	_____
Q <sub>7-10</sub> Flow (cfs)	<u>0.11</u>	Q <sub>7-10</sub> Basis	_____
Elevation (ft)	_____	Slope (ft/ft)	_____
Watershed No.	<u>3-H</u>	Chapter 93 Class.	<u>CWF, MF</u>
Existing Use	_____	Existing Use Qualifier	_____
Exceptions to Use	_____	Exceptions to Criteria	_____
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>CAUSE UNKNOWN, FLOW REGIME MODIFICATION, HABITAT ALTERATIONS</u>		
Source(s) of Impairment	<u>HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION, URBAN</u>		
	<u>RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS</u>		
TMDL Status	<u>Final</u>	Name	<u>Christina River Basin</u>
Background/Ambient Data		Data Source	
pH (SU)	_____	_____	
Temperature (°F)	_____	_____	
Hardness (mg/L)	_____	_____	
Other:	_____	_____	
Nearest Downstream Public Water Supply Intake	<u>Aqua PA Inc.'s Ingrams Mill Plant</u>		
PWS Waters	<u>East Branch Brandywine Creek</u>	Flow at Intake (cfs)	_____
PWS RMI	_____	Distance from Outfall (mi)	<u>4.2</u>

Changes Since Last Permit Issuance: None

Compliance History

DMR Data for Outfall 001 (from November 1, 2022 to October 31, 2023)

Parameter	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22
Flow (MGD) Average Monthly	0.16535 8	0.16078 0	0.22727 2	0.18656 8	0.08902 9	0.06879 6	0.07272 8	0.21425 8	0.23335 7	0.23119 4	0.22320 4	0.22140 9
Flow (MGD) Daily Maximum	0.24325 4	0.24702 8	0.45338 3	0.29777 0	0.26719 6	0.14698 6	0.13486 0	0.28800 0	0.28800 0	0.28800 0	0.28800 0	0.34700 7
pH (S.U.) Instantaneous Minimum	7.47	7.45	7.53	7.31	7.47	7.71	8.0	7.65	7.64	7.72	7.48	7.73
pH (S.U.) Instantaneous Maximum	7.47	7.45	7.53	7.31	7.47	7.71	8.0	7.65	7.64	7.72	7.48	7.73
TRC (mg/L) Average Monthly	0.36	0.14	0.15	0.06	0.16	0.15	< 0.01	0.29	0.30	0.35	0.36	0.11
TRC (mg/L) Daily Maximum	0.36	0.14	0.15	0.06	0.16	0.15	< 0.01	0.29	0.30	0.35	0.69	0.11
TSS (mg/L) Average Monthly	4.0	64.0	4.0	9.6	6.0	< 4.0	< 4.0	4.4	< 4.0	< 4.0	12.4	< 4.0
TSS (mg/L) Daily Maximum	4.0	64.0	4.0	9.6	6.0	< 4.0	< 4.0	4.4	< 4.0	< 4.0	12.4	< 4.0
Total Dissolved Solids (mg/L) Average Monthly	268	284	329	328	311	279	299	279	312	270	262	276
Total Dissolved Solids (mg/L) Daily Maximum	268	284	329	328	311	279	299	279	312	270	262	276
Total Phosphorus (mg/L) Average Monthly	< 0.10	0.10	< 0.10	0.17	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	0.10
Total Phosphorus (mg/L) Daily Maximum	< 0.10	0.10	< 0.10	0.17	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	0.10
Total Aluminum (mg/L) Average Monthly	0.770	8.180	0.284	2.170	0.898	0.325	0.168	0.271	0.147	0.290	2.620	0.229
Total Aluminum (mg/L) Daily Maximum	0.770	8.180	0.284	2.170	0.898	0.325	0.168	0.271	0.147	0.290	2.620	0.229
Total Iron (mg/L) Average Monthly	< 0.100	0.276	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100

**NPDES Permit Fact Sheet  
Downingtown Municipal WTP**

**NPDES Permit No. PA0058556**

Total Iron (mg/L) Daily Maximum	< 0.100	0.276	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Total Manganese (mg/L) Average Monthly	0.023	0.178	0.011	0.079	0.029	0.022	0.030	0.025	0.016	0.032	0.088	0.021
Total Manganese (mg/L) Daily Maximum	0.023	0.178	0.011	0.079	0.029	0.022	0.030	0.025	0.016	0.032	0.088	0.021

**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) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
TRC	XXX	XXX	XXX	0.5	1.0	1.25	1/month	Grab
TSS	XXX	XXX	XXX	30.0	60.0	75	1/month	Grab
Total Dissolved Solids	XXX	XXX	XXX	1000	2000	2500	1/month	Grab
Total Phosphorus	XXX	XXX	XXX	2.0	4.0	XXX	1/month	Grab
Total Aluminum	XXX	XXX	XXX	4.0	8.0	10	1/month	Grab
Total Iron	XXX	XXX	XXX	2.0	4.0	5	1/month	Grab
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	1/month	Grab

Compliance Sampling Location: Outfall 001