pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

North East Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0061352**
Facility Type	**Municipal**	APS ID	**600908**
Major / Minor	**Minor**	Authorization ID	**1212485**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Delaware Water Gap Municipal Authority Monroe County**	Facility Name	**Delaware Water Gap Wastewater Treatment Plant (WWTP)**
Applicant Address	PO Box 128 Delaware Water Gap, PA 18327-0128	Facility Address	92 Broad Street Delaware Water Gap, PA 18327
Applicant Contact	James Reynolds	Facility Contact	David Scholtz
Applicant Phone	(570) 424-0433	Facility Phone	(570) 629-2981
Client ID	163121	Site ID	4603
Ch 94 Load Status	Not Overloaded	Municipality	Delaware Water Gap Borough
Connection Status	No Limitations	County	Monroe
Date Application Received	January 2, 2018	EPA Waived?	Yes
Date Application Accepted	January 18, 2018	If No, Reason	-

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

This is an NPDES Permit Renewal Application for a POTW to discharge up to 0.176 MGD of Sewage into the Cherry Creek (CWF; Stream code # 4751). The facility received a 2017 ADF of 0.073 MGD; a 2016 ADF of 0.102 MGD; and a 2015 ADF of 0.115 MGD; with April 2017 having a 0.088 MGD highest monthly average flow.

- Authority EIN Number (23-2463857) updated in E-facts per NPDES Permit Renewal Application information (old E-facts information used the Borough's EIN).
- 7/11/2012 DRBC Docket for the water supply system indicated the STP was covered under DRBC Docket No. D-1986-008 CP-1 on March 26, 1986. No updated Docket on DRBC Interactive Maps. DRBC copied on Draft NPDES Permit.
- 4/15/2019 Authority Letter requested clarification regarding an Indirect Discharger (Vertellus) wastewater acceptability (from secondary containment areas). 5/20/2019 DEP Response Letter issued clarifying "process wastewater" definition and applicability to the described wastewater. This wastewater is not subject to the NPDES Permit Part C.I.A standard prohibition against stormwater.
- 5/20/2019 Technical Deficiency Letter was issued (with preliminary WQBELs and Pre-Draft Permit Survey Form). The Authority responded on 6/6/2019 with additional sampling data submitted 7/30/2019.
    - The Authority indicated it could comply with the new DO, Ammonia-N, and TRC limits. **NOTE**: Preliminary Ammonia-N limits were revised due to updated water quality modeling, accounting for high pH stream and incorrect LFY.
    - The Authority indicated it could meet the (less stringent Preliminary) toxics WQBELs by December 6, 2019. The Authority indicated the water supply was the suspect source for copper & lead, with follow-up planned with the water system operator to review the corrosion control program.
    - Additional sampling data provided:

Approve	Deny	Signatures	Date
X		James D. Berger, P.E. / Environmental Engineer	August 12, 2019
X		Amy M. Bellanca, P.E. / Environmental Engineer Manager	

Summary of Review

Constituent	Revised Effluent Sample Table Max (mg/l)	6/6/2019 Sample	6/13/2019 Sample	6/20/19 Sample	6/27/19 Sample
Copper (ug/l)	0.050	31.6	29.4	33.4	35.4
Lead (ug/l)	<0.001	<1.0	<1.0	<1.0	<1.0
Zinc (ug/l)	0.114	114	112	93.5	113
Chlorides (mg/l)	196	187	196	159	151
Bromide (mg/l)	<2.5	<2.5	<1.0	<0.50	<0.50
Sulfate (mg/l)	61.5	47.6	61.2	54.9	48.8
Oil & Grease (mg/l)	<4.8	<4.8	<4.8	<4.8	<4.8

Part C Special Conditions: Changes bolded

- Parts C.I.A, B, & C: Existing Standard conditions (stormwater prohibition; necessary property rights; proper management of residuals) per template.
- Part C.I.D: Existing chlorine minimization condition (to encourage better management of the existing chlorine disinfection.
- Part C.I.E: Existing site-specific condition to address changes in waste or receiving stream.
- Part C.II: Existing Solids Management conditions
- **Part C.III: New Toxics WQBEL (copper limit) per Reasonable Potential Analysis**

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.176
Latitude	40º 59' 7.64"	Longitude	-75º 8' 38.63"
Quad Name	Stroudsburg	Quad Code	1144 (5.23.4)
Wastewater Description:	Sewage Effluent		

Receiving Waters	Cherry Creek	Stream Code	4751
NHD Com ID	26174906	RMI	-
Drainage Area	20.5 square miles	Yield (cfs/mi^2)	0.0717
Q_{7-10} Flow (cfs)	1.47	Q_{7-10} Basis	USGS PAStreamstats
Elevation (ft)	315 Feet (per application)	Slope (ft/ft)	-
Watershed No.	1-E	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s) **except for Recreational Uses**		
Cause(s) of Impairment	**Pathogens**		
Source(s) of Impairment	**Source Unknown**		
TMDL Status	-	Name	-

Background/Ambient Data:		Data Source:
pH (SU)	**7.86, 8.41 & 7.9**	11/2/2016 Sample ID: 2090730, Sequence No. 504, **7/16/2016 Sample ID: 2067715 Sequence No. 279**, & 3/15/2016 Sample ID: 2028771 Sequence No. 303 (sampling point near Kemmertown Road, ~7.9 miles upstream of facility in HQ reach). Summer is typical low flow time-frame critical for protection of the waters of the Commonwealth.
Temperature (°C)	10.1, 20.3 & 8.6	See above
Hardness (mg/L)	115, 104, & 71	See above. March result consistent with possible Spring rain dilution effect.
Copper (ug/l):	<0.412 (3 samples)	See above
TDS (mg/l)	132, 128, & 96	See above
Alkalinity (mg/l)	93.2, 85.2, & 61.6	See above

Nearest Downstream Public Water Supply Intake		EASTON SUBURBAN WATER AUTH	
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~27 miles

Changes Since Last Permit Issuance:

- **Cherry Creek classified as a Natural Trout Reproduction stream.**
- **Pathogen Impairment (see above).**

Other Comments:

- Upstream reach of Cherry Creek is HQ-CWF.
- Cherry Creek discharges to Brodhead Creek (WWF; Stream Code# 4750; no impairment) which discharges to the Delaware River (WWF; Stream Code# 2; impaired fish consumption due to mercury of unknown source).
- The Authority has a separate DRBC Docket for water withdrawal.
- Delaware Water Gap Borough has a MS4 Permit No. PAG132311.
- STROUD TWP MONROE CTY MS4 Permit No. PAI132265 outfall is shown on E-maps as adjacent to Cherry Creek (upstream of facility).
- **The Broadhead Watershed Association Website (Cherry Creek) states: "The underlying geology is a complex of limestone, shale and siltstone overlain with unconsolidated glacial deposits of silt, sand and gravel in the valley. Because of the limestone formations, Cherry Creek has a much higher pH, alkalinity and total dissolved solids than is found in most Pocono area streams, which generally are acidic with a low mineral content." (Underlining added.) This information supports need to account for higher pH in stream (impacts Ammonia-N toxicity).**
- Facility disinfection will prevent contribution to pathogen impairment. Facility is not expected to be a source for mercury (impacting the downstream Delaware River)

Treatment Facility Summary

Treatment Facility Name: Delaware Water Gap WWTP

WQM Permit No.	Issuance Date	Scope
4585406	1/15/1986	Design, Construction and operation of WWTP, issued to Borough
4585406-T1	6/27/2013	Transfer of WQM Permit to Authority

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Chlorine tablets system with table dechlorination system per NPDES Permit Renewal Application	0.176

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.176	293*	Not Overloaded	Aerobic digesters	Disposal

*2018 Chapter 94 Report claimed 514 lbs BOD5/day organic capacity, but that conflicts with WQM permit.

Changes Since Last Permit Issuance: Facility converted to tablet chlorination/dechlorination. No associated Part II WQM permit found for this plant modification.

Other Comments:

Hydraulic/Organic Capacity: No existing or projected overloading per 2018 Chapter 94 Report information.

WWTP Description: Pump station; influent bar screen/grinder; two aeration tanks; two clarifiers; chlorine contact tank; aeration cascade; flow meter; dechlorination; outfall.

BOD5 and TSS Minimum Monthly Average Reduction: 2018 Quarterly influent BOD5 and TSS monitoring showed 85% minimum monthly average reduction was met (assuming 1:1.2 CBOD5/BOD5 ratio). Application data also indicates compliance:

Application Influent Concentration Average or Quarterly EDMR	Application Effluent Concentration Average	Average Reduction	Comment
152 mg/l BOD5 (5 samples)	3.8 mg/l CBOD5 (104) (~4.56 mg/l BOD5 using 1:1.2 ratio)	~97% BOD5	**2018 Chapter 94 Report indicated reduction of annual average BOD5 loadings since 2014 with same number of EDUs.***
58 mg/l TSS (5 samples)	7.4 mg/l	87% Reduction	Weak influent.

***2014 Annual Average loading was 159 lbs BOD5/day, Max Monthly Average of 220 lbs BOD5/day at 0.106 MGD ADF flow. The 2018 Annual Average loading was 101 lbs BOD5/day, Max Monthly Average of 131 lbs BOD5/day at 101 MGD ADF flow. The application noted the facility lost several customers (Instrument Specialties, Glenwood resort) when queried about a 2017 loss in annual average daily flows (0.108 MGD in 2016; 0.074 MGD in 2017; and 0.084 MGD in 2018). Facility calibrated its effluent flow-meter in both 2017 and 2018.

Offsite Pump Station: Cherry Valley Road Pumping Station had a 31.7 hour “weekly average run” in 2018. Described as serving 25 homes, with 37.5 GPM submersible grinder type pumps per 2018 Chapter 94 Report.

Sludge: Sludge is disposed at the LCA Pretreatment Facility (Fogleville PA).

Compliance History

DMR Data for Outfall 001 (from April 1, 2018 to March 31, 2019)

Parameter	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18	MAY-18	APR-18
Flow (MGD) Average Monthly	0.080	0.080	0.087	0.082	0.102	0.084	0.088	0.093	0.086	0.092	0.084	0.071
Flow (MGD) Daily Maximum	0.133	0.148	0.181	0.135	0.158	0.134	0.135	0.143	0.129	0.129	0.168	0.109
pH (S.U.) Minimum	6.88	7.0	7.0	7.1	7.0	7.0	6.9	6.9	6.8	6.9	6.7	6.5
pH (S.U.) Maximum	7.96	8.0	7.7	7.9	7.7	7.7	7.6	7.6	7.6	7.6	7.7	7.6
DO (mg/L) Minimum	10.2	10.6	10.0	9	8.7	7.1	6.8	7.4	7.4	7.6	7.9	8.7
TRC (mg/L) Average Monthly	**< 0.03**	**< 0.04**	**< 0.02**	**< 0.02**	**< 0.02**	**< 0.02**	**< 0.02**	**< 0.02**	**< 0.02**	**0.1**	**< 0.02**	**< 0.100**
TRC (mg/L) Instantaneous Maximum	**0.08**	**0.07**	**0.04**	**0.04**	**0.03**	**0.03**	**0.04**	**0.06**	**0.04**	**0.37**	**0.06**	**< 0.100**
CBOD5 (lbs/day) Average Monthly	3.9	2.9	5.2	2	< 4	2	< 2	< 2.0	2.0	2	< 3	3
CBOD5 (lbs/day) Weekly Average	8.2	7.4	7.9	3	18.5	3	3	3.0	2.0	3	4	3
CBOD5 (mg/L) Average Monthly	5.8	< 4.36	7.2	4.8	< 5.8	4.2	< 3.5	< 3.1	3.7	3.2	< 5.1	4.6
CBOD5 (mg/L) Weekly Average	7.38	5.97	10.9	5.49	18.5	5.06	4.3	4.7	4.3	3.4	7.38	6.0
BOD5 (mg/L) Influent Average Monthly	155			130			129			171		
TSS (lbs/day) Average Monthly	< 3	3.40	7.7	4	< 4	< 3	< 3	< 3.0	< 2.0	4.0	< 4	< 3
TSS (lbs/day) Weekly Average	5	6.7	17.5	5	8	< 3	3	< 3.0	< 3.0	5.0	6	< 4
TSS (mg/L) Average Monthly	< 6.0	< 5.10	10.6	7.5	< 6.5	< 5.0	< 5.2	< 5.0	< 5.0	5.3	< 6.3	< 5.0
TSS (mg/L) Influent Average Monthly	66.2			37			51			68.8		

TSS (mg/L) Weekly Average	8.8	5.4	17.8	8.4	12.0	< 5.0	5.6	< 5.0	< 5.0	6.0	8.4	< 5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	< 4	< 3	16	6	< 2	< 2	< 2	< 2	< 5	3	< 4	< 3
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	7	4	240	11	7	3	2	< 2	18	13	18	< 3
Nitrate-Nitrite (mg/L) Average Monthly	26.8			26.9			27.4			33.7		
Total Nitrogen (mg/L) Average Monthly	32.41			30.5			33.3			38.3		
Ammonia (lbs/day) Average Monthly	0.13	0.18	< 0.14	< 0.1	< 4	< 0.10	< 0.1	< 0.10	< 0.10	0.2	< 0.100	< 0.1
Ammonia (mg/L) Average Monthly	**< 0.20**	**< 0.27**	**< 0.20**	**< 0.229**	**< 0.20**	**< 0.20**	**< 0.221**	**< 0.20**	**< 0.20**	**0.21**	**< 0.200**	**< 0.20**
TKN (mg/L) Average Monthly	5.64			3.62			5.89			4.62		
Total Phosphorus (lbs/day) Average Monthly	1.8	1.85	2.0	1	2	2	2	2	3	2	2	2
Total Phosphorus (mg/L) Average Monthly	2.66	2.78	2.7	2.5	2.67	3.06	3.38	3.22	3.8	3.35	3.75	3.2
Total Antimony (mg/L) Average Monthly	< 0.0060			< 0.0060			< 0.0060			0.0060		
Total Copper (mg/L) Average Monthly	**0.0263**			**0.0262**			**0.0262**			**0.0244**		

Compliance History

NPDES Permit Renewal was late. 6/28/2018 Administrative Extension Letter issued. 9/20/2018 NOV issued for late application.

2018 Chapter 94 Report failed to contain NPDES Permit Part B.I.C.4.b indirect discharger volume/concentration information required. It also failed to include a Sewage Sludge Inventory required by NPDES Permit Part B.I.C.4.c and Part C.II.C.

Application data indicated maximum 14,000/100 ml Fecal Coliform exceedance occurred in the past.

Inspection History: Per 8/13/2019 WMS Inspection History Query:

FACILITY NAME	INSP PROGRAM	INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR ID	INSPECTOR	# OF VIOLATIONS
DEL WATER GAP WWTP	WPCNP	2850619	08/20/2018	Administrative/File Review	Violation(s) Noted	00615077	ACKERS, DANIEL	1
DEL WATER GAP WWTP	WPCNP	2674040	12/13/2017	Compliance Evaluation	No Violations Noted	00615077	ACKERS, DANIEL	0
DEL WATER GAP WWTP	WPCNP	2357947	03/11/2015	Compliance Evaluation	No Violations Noted	00462913	INSALACO, SANDRA	0

Open Violations per 8/13/2019 WMS Query (open violations per client number): No open violations found.

Permit: PA0061352
Client ID: 163121
Client: All

Open Violations: 0

No data was found using the criteria entered. Please revise your choices and try again.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .176
Latitude 40º 59' 7.00" **Longitude** -75º 8' 36.00"
Wastewater Description: Sewage Effluent

Permit Limits and Monitoring Requirements:

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
CBOD5	**36.6** Lbs/d **58.7** Lbs/d 25.0 40.0 50.0	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing Technology limit (Chapter 92a.47) supported by water quality modeling. **Mass loading recalculated and adjusted (previously 37 and 59 lb/d) with new significant digit**. Application indicated 18.7 mg/l daily max and 3.8 mg/l average (104 samples).
TSS	44**.0** Lbs/d 66**.0** Lbs/d 30.0 45.0 60.0	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing Technology limit (Chapter 92a.47). **Significant digit added.** Application indicated 44.6 mg/l daily max and 7.4 mg/l average (104 samples).
pH	6.0 – 9.0 SU	**IMIN** - IMAX	Existing Technology limit (Chapter 92a.47). Application indicated 6.3 – 7.9 SU range (730 samples).
Dissolved Oxygen (DO)	**4.0**	**IMIN**	**New WQBEL and statewide BPJ limit, effective immediately as Application data indicates the facility has been meeting the new limit.** Application indicated 5.2 mg/l daily minimum and 8.0 mg/l average (730 samples).
Fecal Coliform	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing year-round WQBEL. Application indicated **14,000/100 ml max** with 21/100 ml average (104 samples).
Total Residual Chlorine (TRC)	**0.50** **1.63**	**Monthly Average** **IMAX**	**New WQBEL in effect immediately as application data indicates the facility can meet this limit. Previous Regional POTW BAT limits (1.0 mg/l monthly average; 2.3 mg/l IMAX) is no longer valid due to change in chlorine disinfection system (now chlorine tablet with dechlorination tablet system).** Application indicated 1.5 mg/l maximum and 0.3 mg/l average (730 samples). See EDMR data above showing compliance with new limits.
Ammonia-Nitrogen (May 1 - Oct 31)	Report Lbs/d **Report Lb/d** **10.9** **Report** **21.9**	Monthly Average **Daily Max** Monthly Average **Daily Max** **IMAX**	**Revised monthly average WQBEL with new IMAX limit (using standard multiplier) per water quality modeling accounting for stream pH. Application data indicates they can meet the new limits immediately.** Application indicated 5.7 mg/l daily max and 0.66 mg/l average (104 samples).

Ammonia-Nitrogen (Nov 1 - Apr 30)	Report Lb/d **Report Lb/d** Report **Report**	Monthly Average **Daily Max** Monthly Average **Daily Max**	Existing monitoring requirement. See above.
Total Phosphorus	Report Lb/d Report Lb/d Report Report	Quarterly Average Daily Max Quarterly Average Daily Max	Existing monitoring requirement (Chapter 92a.61). Application data indicated 4.0 mg/l max and 2.85 mg/l average (104 samples).
Total Nitrogen (Nitrate-Nitrite-N + TKN measured in same sample)	Report Lb/d Report Lb/d Report Report	Quarterly Average Daily Max Quarterly Average Daily Max	Existing monitoring requirement (Chapter 92a.61). Application indicated 38.3 mg/l max and 27.9 mg/l average (24 samples).
TKN	Report Lb/d Report Lb/d Report Report	Quarterly Average Daily Max Quarterly Average Daily Max	See above. Application indicated 14.5 mg/l max and 5.19 mg/l average (24 samples).
Nitrate-Nitrite-N	Report Lb/d Report Lb/d Report Report	Quarterly Average Daily Max Quarterly Average Daily Max	See above. Application indicated 34.1 mg/l max and 24.1 mg/l average (24 samples).
Total Dissolved Solids (TDS)	**Report Lb/d** **Report Lb/d** **Report** **Report**	**Quarterly Average** **Daily Max** **Quarterly Average** **Daily Max**	**New Quarterly monitoring will be required in this permit term (Chapter 92a.61).** **Application indicated: TDS: 800 mg/l max, 598 mg/l average (24 samples), i.e. they were monitoring monthly.**
Chlorides, Sulfates	Not Needed	-	Not needed per Reasonable Potential Analysis. Application data indicated: Chlorides: 196 max and 168 mg/l average (5 samples) Sulfates: 61.5 mg/l max and 54.8 mg/l average (5 samples)
Bromide	**Report Lb/d** **Report Lb/d** **Report** **Report**	**Quarterly Average** **Daily Max** **Quarterly Average** **Daily Max**	**New Quarterly Monitoring needed per Reasonable Potential Analysis (Chapter 92a.61).** **Application data indicated: <2.50 mg/l (5 samples).**
Copper	**Report Lb/d** **Report Lb/d** **0.059** **0.109** **0.118**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New limit due to Reasonable Potential, effective in three years, <u>with interim monitoring</u>. Standard sewage multiplier for IMAX limit.** **Application indicated 0.050 mg/l max and 0.024 mg/l average (27 samples).** **TOXCONC LTAMEC of 0.058 mg/l.**
Lead	Not needed	-	Not needed per Reasonable Potential Analysis. Application indicated daily max of <0.0010 mg/l lead (4 samples)
Zinc	Not needed	-	Not needed per Reasonable Potential Analysis. Application indicated 0.114 mg/l max and 0.108 mg/l average (4 sample)
Antimony	Not needed	-	Not needed per Reasonable Potential Analysis. Application indicated 0.006 mg/l max and <0.0040 mg/l average (22 samples).
BOD5 Minimum Reduction	**85%**	**Minimum Monthly Average**	**Existing Part A.I and Chapter 92a.47 POTW requirement. Reporting now required.**
TSS Minimum Reduction	**85%**	**Minimum Monthly**	**See above.**

		Average	

Comments:

- Reporting requirements updated to reflect current EDMR requirements (instantaneous minimum for grab sampling; updated fecal coliform units).
- Daily max reporting now required (no additional sampling required).
- **Due to new copper limits, 24-hour composite sampling will be required to gather data to determine if limits can be modified per Part C.II (WQBELs for Toxic). 8-hour composite sampling is subject to biasing. Other sampling adjusted for consistency.**

Internal Monitoring Point/Outfall No. 101 (Influent Sampling Location at headworks): **This new IMP has been created to clearly distinguish influent from effluent sampling, and to allow reporting of Chapter 94 Report-required monthly BOD5 influent loadings. IMP/Outfall No. 101 coordinates based on Outfall No. 001 latitude & longitude.**

Reasonable Potential Analysis: See attached Toxic Screening Spreadsheet, TOXCONC (copper and antimony), and PENTOXSD water quality modeling (as required and to calculate WQBELs for informational purposes). PENTOXSD incorporated the TOXCONC LTAMEC and COV, plus high stream pH value.

- Antimony: Monitoring is no longer required.
- **Copper: Permit limit required (with LTAMEC/COV used in water quality modeling).**
- Lead: Resampling at DEP Target QLs indicated no need for monitoring or limits.
- **Total Dissolved Solids (TDS)**: Due to no PWS surface water intake before Easton (on the Delaware River), only quarterly monitoring will be required in this permit term.
- **Bromide**: Quarterly monitoring requirement. **NOTE**: Due to insensitive ND analytical level (<2.50 mg/l), monitoring relief might be possible in future.
- **Other Toxics**: The POTW has two "regulated industrial dischargers" per 2018 Chapter 94 Report (Frank Martz Coach Company and Vertellus which is identified as a chemical processor in the NPDES Permit Renewal Application), with additional Vertellus-related information in the NPDES Permit Renewal Application, and April 17, 2019 Authority Letter (question regarding Vertellus discharge).
    - 2018 Chapter 94 Report information regarding Vertellus DWG, LLC, Authority IPP Permit No. 13-001A, Expiration Date 9/18/2018: The Chapter 94 Report identified the indirect discharger waste-stream as 3,000 GPD "treated process related stormwater" issued to "Vertellus Health and Specialty Products, LLC" and transferred to "Vertellus LLC". **The NPDES Permit Part B.I.C.4-required indirect discharger concentration and flow data was not found in the 2018 Chapter 94 Report**.
        - Applicable ELG: Subject to 40 CFR 414.111 Subpart K (Indirect Point Sources) per Authority Industrial Wastewater Discharge Permit per Authority Industrial Wastewater Discharge Permit. The Authority Industrial Wastewater Discharger permit requires sampling and analysis of the constituents (2/year) and more limited batch sampling. Facility limitations (including 414.110 Subpart K Indirect Discharger Point Source) limits and sampling requirements were included in the Authority permit.
        - Authority Industrial Wastewater Discharge Permit Description of Wastestream: **The Department should recommend that they more accurately describe the wastewater in future Authority Discharger permits due to apparent confusion regarding wastewater versus stormwater.**
            - Signature Page: "treated process related stormwater".
            - Section 1 Part 1.A:
                - "industrial related stormwater".
                - "It is understood that all process wastes and rinse waters are trucked off-site for proper disposal and not contained in this discharge".
            - Section 1 Part 1.B:
                - "Industrial wastewater is produced from the capture of industrial process related stormwater from the process containment areas of the facility. This wastewater will also include blowdown from cooling tower/chiller units and boilers. Non-contact heating and cooling waters, water treatment chemicals and water softener backwash may also be discharged to this wastestream. All wastewater will be collected."
                - "All other wastestreams including domestic wastestreams are considered dilute wastestreams and shall not enter the pretreatment system. The discharge from

these non-regulated wastestreams shall combine with the regulated wastestreams at a point downstream of the discharge sampling point."

- **Vertellus NPDES Renewal Application Data**: 0.00192 MGD average wastewater flows from a "chemical processor". Every batch is tested prior to discharge to POTW per Renewal Application. 2015-2017 Batch sampling data for COD, BOD5, Zinc, and pH provided. Average values for batches directed to POTW for treatment:
  - **COD**: 41.6 mg/l (20 mg/l – 112 mg/l range)
  - **BOD5**: 4.3 mg/l (2 mg/l – 12.1 mg/l range)
  - **Zinc**: 0.254 mg/l (0.087 mg/l – 0.588 mg/l range)
  - **pH**: 9.18 SU (8.71 SU – 9.73 SU range)
  - **Other 40 CFR 414.110 Subpart K Indirect Discharger Point Source ELG Constituents**: Application data indicates the Vertellus wastewater has had detectable concentrations of Barium (0.145 mg/l), 2,4-Dimethylphenol (12 ug/l), methylene chloride (3 ug/l), Arsenic (0.00510 mg/l), Chromium (0.00760 mg/l). The maximum 3,000 GPD Authority-authorized flow is only ~4.2% of lowest 2018 monthly average flow (71,000 GPD). In the absence of any known plant interference and Authority Operator oversight, the facility is presumed to be able to manage these flows.
- **April 17, 2019 Authority Letter**: The Authority asked for clarification regarding this waste-stream due to stormwater component from the chemical facility's secondary containment areas. The wastewater was described as originating "chemical processing area" containment areas, then directed to a large Holding Tank (Tank J1) where pH is adjusted, with the neutralized water going into one of two Holding Tanks (Tanks J66 and J67). Process wastewater is limited to boiler blow-down, cooling tower blow-down, and water softer backwash. Once full, contents of the Holding Tanks are sampled and tested for COD, BOD, pH, and Total Zinc. Completed test results are reviewed by the POTW certified operator who then issues approval for discharge of the tank, and sets the maximum rate of discharge. In regard to the Authority's questions:
  - **Chapter 92a.2 "Process Wastewater" definition**: "Water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product."
    - Any precipitation received within an industrial secondary containment area is exposed to industrial pollutants (becoming regulated as a process wastewater) unless facility-specific/discharge-specific information rebuts this presumption (such as IW Stormwater NPDES Permit requirements for discharge from an oil tank secondary containment area where specific requirements must be met). Process wastewater can be discharged to your Treatment Plant.
    - The DEP Industrial Wastewater NPDES Permit Application Instructions provide additional guidance on wastewater classification:
      - Process Wastewater: Process wastewater includes any type of discharge which is covered by an Effluent Limitation Guideline (ELG) regulation published by EPA (see 40 CFR Parts 405 – 471). Process wastewater does not normally include sanitary wastewater and non-contact cooling water (NCCW), unless such wastewaters are covered by an ELG regulation.
      - Non-Process Wastewater: Wastewater from a facility that is not process water. This generally includes NCCW, boiler blowdown, test waters, laboratory wastes, housekeeping wastes, or other groundwater or surface waters not used during manufacturing or processing.
      - Groundwater: Water that is the result of a groundwater remediation activity. This category may also include contaminated seeps or springs that originate from groundwater.
  - **Chapter 92a.2 "Stormwater" definition (also found in NPDES Permit Part A.II)**: "Runoff from precipitation, snow melt runoff and surface runoff and drainage." Please note that the purpose of secondary containment is to prevent runoff and drainage.
  - **Chapter 92a.2 "Stormwater discharge associated with industrial activity" (also found in NPDES Permit Part A.II)**: "The discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, and as defined in 40 CFR 122.26(b)(14) (i)—(ix) and (xi)." Please note that it is the purpose of secondary containment to prevent runoff and prevent run-on from being contaminated.
  - **Existing NPDES Permit Part C.I.A (Stormwater Prohibition) Language**: "No storm water from pavements, area ways, roofs, foundation drains or other sources shall be directly admitted to the

sanitary sewers associated with the herein approved discharge". This language does not apply to process wastewater.

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.6

Facility: Delaware Water Gap WWTP
Analysis Hardness (mg/L): 100
Stream Flow, Q_{7-10} (cfs): 1.47
NPDES Permit No.: PA0061352
Discharge Flow (MGD): 0.176
Outfall: 001
Analysis pH (SU): 7.723

Parameter	Maximum Concentration in Application or DMRs (µg/L)		Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Total Dissolved Solids		800000	500000	Yes		
Chloride		196000	250000	No		
Bromide	<	2500	N/A	No		Monitor
Sulfate		61500	250000	No		
1,4-Dioxane			N/A			
Total Antimony		4.2429	5.6	No	35.831	
Total Copper		58.0513	9.33	Yes	59.691	Establish Limits
Total Lead	<	1	3.18	No (Value < QL)		
Total Zinc		114	119.8	No		

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01E	4751	CHERRY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.480	Del Wat Gap TP	PA0061352	0.176	CBOD5	25		
				NH3-N	7.96	15.92	
				Dissolved Oxygen			4

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin	Stream Code:	Stream Name:
01E	4751	CHERRY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)
0.48	Del Wat Gap TP	PA0061352	0.1760

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent WQBEL (µg/L)	Most Stringent WQBEL Criterion
ANTIMONY	4.243	INPUT	7.282	35.831	THH
COPPER	58.051	INPUT	106.641	59.691	CFC

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin	Stream Code:	Stream Name:
01E	4751	CHERRY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)
0.48	Del Wat Gap TP	PA0061352	0.1760

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent WQBEL (µg/L)	Most Stringent WQBEL Criterion
ANTIMONY	35.831	THH	61.495	35.831	THH
COPPER	59.691	CFC	109.652	59.691	CFC

Assumed high concentration to generate daily max limit.

Reviewer/Permit Engineer: Berger

Facility: Delaware Water Gap WWTP
NPDES #: PA0061352
Outfall No: 001
n (Samples/Month): 4

Parameter	Distribution Applied	Coefficient of Variation (daily)	Avg. Monthly
Copper (mg/l)	Delta-Lognormal	1.0559939	0.0580513
Antimony (mg/l)	Delta-Lognormal	0.7104669	0.0042429

TRC_CALC

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Delaware Water Gap WWTP

1.47	= Q stream (cfs)	0.5	= CV Daily
0.176	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 1.741	1.3.2.iii	WLA cfc = 1.690
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.649	5.1d	LTA_cfc = 0.983

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	