

Application Type Amendment, Major  
Facility Type Industrial  
Major / Minor Minor

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

Application No. PA0063304 A-2  
APS ID 547365  
Authorization ID 1511823

**Applicant and Facility Information**

Applicant Name	<u>Blythe Township Municipal Authority</u>	Facility Name	<u>Crystal Run Water Treatment Plant</u>
Applicant Address	<u>375 Valley Street</u> <u>New Philadelphia, PA 17959-1218</u>	Facility Address	<u>Rte 901 (no street address)</u> <u>New Philadelphia, PA 17959</u>
Applicant Contact	<u>Justin DeAngelo</u>	Facility Contact	<u>Keith Rokosky</u>
Applicant Phone	<u>(570) 277-6921</u>	Facility Phone	<u>(570) 527-7501</u>
Client ID	<u>83009</u>	Site ID	<u>1532</u>
SIC Code	<u>4941</u>	Municipality	<u>Cass Township</u>
SIC Description	<u>Trans. &amp; Utilities - Water Supply</u>	County	<u>Schuylkill</u>
Date Application Received	<u>November 7, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u>-</u>
Purpose of Application	<u>AMENDMENT OF EXISTING NPDES IW PERMIT.</u>		

**Summary of Review**

This is a Major NPDES Permit Amendment for the 0.042 MGD Minor (without ELG) Individual IW NPDES Permit Crystal Run WTP NPDES No. PA0063304 for modification/elimination of proposed Final WQBELs and change to Final WQBEL effective dates (to be moved to last month of current NPDES Permit Term) based on the submitted Revised Final WQBEL Compliance Report.

**Background:**

- The 0.042 MGD Crystal Run WTP (filtration plant) discharges to West Creek aka Crystal Run (CWF, Stream ID# 2339, impaired due to historic legacy mining impacts and PCBs of unknown source addressed in the Schuylkill River TMDLs).
- Facility receives raw water from the Crystal Run Reservoir to produce potable water, with wastewater effluent discharge back to Crystal Run/West Creek. Finished water is used in backwash cycles, with resultant backwash treated in Clarifier/Thickener tank (settlement only) prior to discharge to Crystal Run (with solids going to sludge drying beds).
  - Potential Chapter 95.2(5) limits: Chapter 95.2(5) states: "When surface waters are used in the industrial plant, the quality of the effluent need not exceed the quality of the raw water supply if the source or supply would normally drain to the point of effluent discharge, unless otherwise required under the act or Federal Act or regulations promulgated thereunder". The raw water supply is the Crystal Run Reservoir (dam on West Creek a.k.a. Crystal Run). The WTP effluent discharge is to West Creek.
  - Crystal Run Reservoir: The Crystal Run Reservoir is a 38-foot high, 450-foot-long earthen embankment water supply dam maintaining a normal pool of 200-acre-feet of water with a maximum pool capacity of 310 acre-feet. It was created by constructing a dam, across the stream. The Dam is permitted under Dam No. D54-015, and is a C1 high hazard dam with Dam Emergency Action Plan with the Dam permit specifying a 0.162 MGD (0.251 CFS) low flow release per DEP Dam Inspection Reports). Being a public water supply

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	January 14, 2025
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Program Manager	1-14-25

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- reservoir, they only have to discharge 0.162 MGD during Q7-10 low flow conditions (with other flow available for the potable water supply).
  - General Raw Water Treatment Process: The Crystal Run WTP is a Robert's Filter Group packaged plant with soda ash for pH adjustment, potassium permanganate as a coagulant, alum for phosphorous reduction, Aqua-Mag used to sequester and coat the distribution piping, and chlorine gas for disinfection. The Robert's Filters utilize approximately 18" anthracite, 8" of sand, and five different layers of stone sizes ranging from ½" - 3" thick. A separate chlorine room is utilized to store and feed the disinfectant from 150 lb. cylinders. The WTP has no treatment unit designed to treat PFAS-family chemicals. No known source of such chemicals within upstream drainage area.
  - Outfall/IMP No. 101: The TRE Influent sample location is at the reservoir.
  - Outfall No. 001: Locational coordinates was updated per application.
- Previous NPDES Permit Amendment: Previous 2/28/2024 NPDES Permit Amendment A-1 had moved final WQBEL effective date to March 1, 2025 per permittee request to allow more time to the permittee to complete a pilot study and any other options (prior to old Final WQBEL effective date). See Draft NPDES Permit Amendment PA0063304-A1 Fact Sheet for Department review of the previously submitted Final WQBEL Compliance Report. The pilot study was completed circa April 2024, but the NPDES Permit Amendment was submitted in November 2024.
- Final NPDES Permit Amendment Timing: Final NPDES Permit Amendment Action must take place prior to 3/1/2025 to prevent antibacksliding prohibition from taking effect (preventing any relief from effective Final WQBELs).
  - In practical terms, minimum 30-day public notice period requirements (Major NPDES Permit Amendment) require a PA Bulletin Notice be published no later than January 25, 2025. As a major NPDES Permit Amendment (subject to mandatory public notice requirements), this requires a Draft NPDES Permit be issued for public comment week of January 13<sup>th</sup>.
  - The next (complete and technically adequate for review) NPDES Permit Renewal Application is due September 1, 2025, with the existing NPDES permit expiring February 28, 2026. In practical terms, any further request for relief from Final WQBELs would have to be addressed in that renewal application (with all necessary supporting data and analysis) at the latest, in order to allow any Final Permit action prior to revised Final WQBEL effective date. (Earlier submittal is strongly recommended to allow time for technical review.)
  - The NPDES Permit Amendment application did not contain:
    - A request that the Department consider a time extension to achieve the final WQBELs under 25 Pa. Code § 95.4 request for the discharge upon the receipt of a request submitted by the permittee using Form No. 3800-FM-BCW0302, if it can be demonstrated that the criteria for a time extension under § 95.4 are met.
    - A detailed feasibility study to determine facility options. The Revised WQBEL Compliance Report made general statements that some options were considered "infeasible" but did not make a technical case for infeasibility.
    - Any site-specific criterion study (SSCS) request under Chapter 93.8d (Development of site-specific water quality criteria).
    - Request for delta limits (i.e. discharge limits tied to influent Crystal Run Reservoir raw water sampling results).
    - Further evaluation of TRE options in event the Department could not concur with the permittee's calculated WQBELs (which they thought resulted in dropping of all limits except Cadmium).
- Application: Public Upload Nos 269907 (revised WQBEL Compliance Report) and 269930 (Major NPDES permit amendment application cross-referencing the revised WQBEL Compliance Report). Application fee was mailed in separately via FedEx.

### Changes to Previous NPDES Permit Amendment: The NPDES Permit was regenerated.

- Revised Outfall No. 001 Coordinates (Part A.I): The Application provided corrected Outfall No. 001 coordinates that have been incorporated into the permit:
  - Latitude: 40° 41' 51.00"
  - Longitude: -76° 19' 5.00"
- Revised Final WQBEL Effective Date (Part A.I.B and C.II): Moved to February 1, 2026 (last month of existing 5-year NPDES Permit Term) per permittee request. The NPDES Permit expires February 28, 2026. No further extension is allowed by Chapter 92a.51 unless there is a Consent Decree issued by a Court of competent jurisdiction.
- Revised Zinc Final WQBELs (Part A.I): Chapter 95.2(5)-based Final WQBELs supersede previous proposed monthly average Final WQBEL. The regulation states: "When surface waters are used in the industrial plant, the

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quality of the effluent need not exceed the quality of the raw water supply if the source or supply would normally drain to the point of effluent discharge, unless otherwise required under the act or Federal Act or regulations promulgated thereunder”.

- Part A.I (IMP# 101): Monthly influent Total Zinc monitoring data is now required due to Chapter 95.2(5) zinc limit.
- Part A.I.B (Outfall No. 001): The facility provided sufficient Crystal Reservoir influent sampling data to determine such limits are applicable for Total Zinc. The Chapter 95.2(5) average monthly limit is based on the calculated Long Term Average reservoir influent concentration (used as the monthly average limit). TMS calculated the Daily Max/IMAX limits. **NOTE**: The proposed Metal Translator could not be used as it was not calculated per the Part C.II-referenced EPA Technical Guidance (which required a geometric mean, not arithmetic mean).
- **Deleted Acrylamide (Part Part A.I.A and A.I.B) Monitoring/Final WQBELS**: Not required per updated Reasonable Potential Analysis (using Revised WQBEL Compliance Report information). It is assumed that the EDMR-detection levels are ND in the absence of any usage of a polyacrylamide coagulant onsite and absence of lab sheets in the EDMR submittals. In practical terms, the facility indicated it would not pursue usage of a chemical coagulant to treat effluent to reduce metal concentrations at this time. If that changes, the NPDES Permit Part A.III.C.2 (Planned Changes to Waste Streams) notification requirements would apply. Similarly, any proposed chemical additive would be subject to Part C Chemical Additive notification requirements. At that time, the Department would re-evaluate the potential needs for acrylamide WQBELs.
- **Revised Aluminum, Copper, Cadmium and Lead Final WQBELs (Part A.I.B; Part C.II)**: Revised Final WQBELs per updated Reasonable Potential Analysis that incorporated discharge Total Hardness data and updated effluent Long Term Average Monthly Effluent Concentrations (LTAMEC) and daily Coefficient of Variability (from updated TOXCONC Spreadsheet analysis incorporating J values from Revised WQBEL Report and updated lab sheets). See DEP Toxic Management Spreadsheet (TMS) below for recalculated Final WQBELs.
- **Revised Part C.III (WQBELs for Toxic Pollutants)**: Final WQBEL effective date changed to February 1, 2026 (last month of permit term). References to Acrylamide and Total Lead WQBELs deleted as not required by updated Reasonable Potential Analysis. Revised Total Aluminum, Total Cadmium, Total Copper, Total Zinc) Final WQBELs incorporated. Condition left otherwise unchanged to allow for any additional TRE actions prior to Final WQBEL effective dates.
- **Deleted Former Part C.IV (WQBELs below Quantitation Limits)**: Deleted as it applied solely to the deleted Acrylamide permit limits.
- **Renumbered Part C.III (Chemical Additive)**: Condition renumbered.

**Revised WQBEL Compliance Report Information**: See Stream section for more information.

- **New Sampling Data**:
  - Six (6) additional metal translator samples were collected from 7/8/24 – 8/13/24. The dissolved metal sampling results from 7/6/22 to 9/6/22 were discarded when calculating the fraction of total vs dissolved metal concentrations for Cadmium, Copper, Lead, & Zinc.
  - Ten (10) discharge hardness samples at the Outfall were collected during this time to allow for valid inputs into the DEP TMS.
  - “J” values were provided for previous sampling data when the concentration could be estimated by the lab (i.e. below DEP TQLs). Corrected tables and lab sheets were supplied to support the J values. This allowed for use of previous sampling data.
- **Table 5 (TRE Influent and Effluent Quality Review), page R-5, results for eleven (11) samples**:
  - Zinc: Influent Reservoir Sampling Results were indicated to have average/max values greater than the Final WQBELs, but with effluent concentrations above both Final WQBELs/Reservoir samples.
  - Aluminum, Copper, Lead: Effluent sampling had exceedances of Final WQBELs for Aluminum, Copper, Lead.
  - Cadmium: Cadmium was indicated to not have any exceedances of Final WQBELs.
  - Acrylamide: All Acrylamide samples were non-detect at the lab-achieved detection levels (0.011 – 0.012 mg/l). The study included 22 samples, including pilot study results.
- **Table 6 (Background/Ambient Water Quality vs DEP Proposed WQBELs, page R-5 for eleven samples**:
  - Cadmium: Ambient max value exceeded Final WQBEL.
  - Lead: Ambient average and max values at or above Final WQBELs.
  - Zinc: Ambient max exceeded Final WQBELs.
  - Aluminum and Copper: Ambient values below Final WQBELs.

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- Hardness: Stream hardness was estimated at 21.41 mg/l average with 93.0 mg/l max (outlier)
- Appendix 4 (WTP Influent and Effluent Water Quality Analysis):

Constituent	Influent Reservoir Arithmetic Average	Influent Reservoir Max
Aluminum	0.243	0.38
Cadmium	0.00016	0.00018
Copper	0.0014	0.00297
Lead	0.00047	0.00097
Zinc	0.033	0.0413
pH	-	-
TSS	-	-
Hardness	-	-

- TRE:
  - Other than alum and potential polyacrylamide coagulant, the TRE found no other chemical additives, treatment chemicals, chemical impurities, cleaning agent, and raw materials were potential sources for Copper, Lead, and Zinc.
  - The TRE Phase 2 (evaluation of treatment technologies and control measures) included the facility's MasterGuard 1133 chemical anionic polymer coagulant pilot study (1/3/2024 – 4/8/2024) and consideration of possible changes in water supply treatment chemicals (i.e. alternatives to Alum such as Ferric Chloride and PAC). Further TRE Phase 2 actions can be triggered if the facility cannot meet the Final WQBEL limits (as updated by this permit amendment). The Pilot Study did not compare influent to effluent concentrations, but calculated average and max from limited sampling data (source and definition not clear) to compare with pilot study results, providing the following ballpark estimates of benefit:
    - Aluminum:
      - 29% reduction from long term average
      - 36% reduction from long term max
    - Lead:
      - 33% reduction from long term average from limited sampling
      - Zero (0) % reduction from long term max from limited sampling
    - Cadmium:
      - Zero (0) % reduction from long term average (0.000016 mg/l)
      - 15% reduction from long term max
    - Copper and Zinc: No benefit in reduction found.
      - Copper LTA was estimated at 0.0029 mg/l. The long-term maximum Copper concentration of 0.0098 mg/l.
      - The current long term average Zinc concentration of 0.041 mg/l. The long-term maximum Zinc concentration of 0.147 mg/l
  - Other TRE Options: The Revised WQBEL Report indicated the permittee felt various options were not feasible (pretreatment, other chemical coagulants, new WWTP units) without supporting data or analysis. The facility also did not appear to consider modification of the Reservoir influent location to take advantage of the Reservoir's settlement characteristics.

**Updated Reasonable Potential Toxic Management Spreadsheet (TMS)**: The updated DEP TMS was limited to the parameters for which the amendment requested relief from Final WQBELs. It incorporated previous DEP assumptions except as noted below.

- Incorrect Q7-10/LFY Assumption: The Revised WQBEL Compliance Report's TMS Spreadsheet did not use the previous DEP TMS input assumptions. It used an incorrect Q7-10/Low Flow Yield (based on mean annual flow, not the regulatory-required Q7-10 low flow) that was a factor of ~64 greater than the upstream Dam's minimum release flow (limiting factor for low flow conditions), which rendered the Report results unusable.
- Incorrectly Calculated Metal Translators: The June 1996 EPA Technical Guidance No. EPA 823-B-96-007 ("The Metal Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion) is referenced in the Part C.II permit condition. The Revised WQBEL Compliance Report's calculated Metal Translators

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could not be used because they were not calculated per the EPA Guidance statistical methodology (Geometric Mean value required plus upper percentile values of the dissolved fraction, not arithmetic averages;). There were unexplained discrepancies between Metal Translator Calculation results for several constituents (i.e. Report-calculated partition metal translator compared to the Report direct calculation metal translator). There were also some other issues that required clarification. However, the data can likely be used in a corrected analysis to develop usable Metal Translators (for future consideration) for Cadmium, Copper, Lead, and Zinc. The Total Aluminum WQBELs are based on Chapter 93 Total Metals water quality criteria (not dissolved metals) rendering a metal translator inapplicable.

- **Terrain Elevations:** The Revised WQBEL elevations conflicted with E-maps and the USGS Terrain Mapper elevations. The USGS Terrain Mapper elevations were used, and a downstream point at 1100 Feet Elevation used in the revised TMS. The exact elevations are relatively unimportant (like RMI values) as long as the TMS inputs are consistent.

Updated TMS: Zinc average monthly effluent limit was superseded by Chapter 95.2(5) limit (0.033 mg/l).

☒ **Recommended WQBELs & Monitoring Requirements**

No. Samples/Month: **4**

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Aluminum	0.42	0.75	1.19	2.15	2.98	mg/L	1.19	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Cadmium	0.00009	0.0001	0.0002	0.0003	0.0006	mg/L	0.0002	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	0.002	0.004	0.007	0.013	0.018	mg/L	0.007	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	0.0004	0.0007	0.001	0.002	0.003	mg/L	0.001	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	0.009	0.013	0.027	0.038	0.038	mg/L	0.027	AFC	Discharge Conc ≥ 50% WQBEL (RP)



CrysalRunTMS2.pdf

Updated TOXCONC Spreadsheet Output: The updated data (J value determinations) allowed for use of additional sampling data points that resulted in more precise LTAMEC and daily COV results that were incorporated into the revised TMS.

<b>Facility:</b> Crystal Run WTP		<b>Reviewer/Permit Engineer:</b>	Berger
<b>NPDES #:</b> PA0063304			
<b>Outfall No:</b> 001			
<b>n (Samples/Month):</b> 4			
Parameter	Distribution Applied	Coefficient of Variation (daily)	Avg. Monthly
Aluminum (mg/L)	Lognormal	0.9115312	2.0408615
Cadmium (mg/L)	Lognormal	#REF!	#REF!
Copper (mg/L)	Lognormal	1.6572517	0.0223610
Lead (mg/L)	Delta-Lognormal	1.5473639	0.0039861
Silver (mg/L)	Delta-Lognormal	#DIV/0!	#DIV/0!
Zinc (mg/L)	Lognormal	0.6446322	0.0891149
Acrylamide (mg/L)	Delta-Lognormal	#NAME?	#REF!
Acrylamide (mg/l)	Delta-Lognormal	#DIV/0!	#DIV/0!
Cadmium (mg/L)	Lognormal	0.3293706	0.0002171

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#### Other Considerations:

- Comparison to 12-months of EDMR data (see Compliance Section EDMR information with bolding of relevant information): The facility would have exceeded the Revised Final WQBELs for Copper and Zinc. Several other (Cadmium; Lead) exceedances were outside the Revised Final WQBEL significant digit range (i.e. might not count as exceedances).
- PFAS: The facility does not have any specialized PFAS treatment stage and there are no known sources within the upstream drainage area. Therefore, PFAS monitoring is not required in this NPDES Permit Amendment.
- Acrylamide: In the absence of any usage of a polyacrylamide chemical for coagulation or other purpose, Acrylamide breakdown products will be absent. The facility would be required to submit a Part A.III.C.2 (Planned Change in Waste Stream) or Part C.III (Chemical Additive) notification prior to any future usage. In that event, the Department would re-evaluate any need for Acrylamide monitoring or limits. The facility reported “non-detect” for the pilot study results (but Report was unclear if the chemical used had a polyacrylamide component).

#### 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)	.042
Latitude	40° 41' 51.31"	Longitude	-76° 19' 3.20"
Quad Name	Minersville	Quad Code	1335 (6.18.1)
Wastewater Description: IW Process Effluent without ELG			
Receiving Waters	West Creek (a.k.a. Crystal Run), CWF	Stream Code	2339
NHD Com ID	25982288	RMI	1.1400
Drainage Area	4.89 (revised location)	Yield (cfs/mi <sup>2</sup> )	0.032
Q <sub>7-10</sub> Flow (cfs)	0.156	Q <sub>7-10</sub> Basis	Reservoir dam low flow release requirement from DEP Dam File (D54-015).
Elevation (ft)	~1180 Feet (USGS Terrain Mapper)	Slope (ft/ft)	-
Watershed No.	3-A	Chapter 93 Class.	CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, POLYCHLORINATED BIPHENYLS (PCBS), SILTATION, SILTATION, SILTATION, SILTATION		
Source(s) of Impairment	ACID MINE DRAINAGE, SOURCE UNKNOWN, SOURCE UNKNOWN, SURFACE MINING, SURFACE MINING, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final, Final, Final	Name	4/7/2007 Schuylkill River PCB TMDL, 4/7/2007 Upper Schuylkill River TMDL (AMD), 3/25/2005 West Branch Schuylkill River Watershed TMDL (AMD)
<u>Background/Ambient Data:</u>		<u>Data Source</u>	
pH (SU)	4.5 – 6.3	2/5/2019 DEP upstream Sample No. 2277598 (above water reservoir). Application noted raw water pH as low as 4.5 SU. The Revised WQBEL Compliance Report assumed 6.3 SU in its TMS analysis.	
Temperature (°F)	-	-	
Hardness (mg/L)	20.1	Previous NPDES Permit Amendment A-1 Fact Sheet calculation for ambient stream (upstream of Outfall No. 001)	
Total Aluminum (ug/l):	503.9	See above.	
Total Zinc (ug/l)	25.2	See above.	
<u>Nearest Downstream Public Water Supply Intake</u>		PA AMER WATER CO GLEN ALSACE DIST	
PWS Waters	Schuylkill River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	>20 miles

Changes Since Last Permit Issuance: Outfall No. 001 location coordinates updated per NPDES Permit Application.

Other Comments:

Revised WQBEL Compliance Report Information:

- **Influent (Reservoir) Sampling data per Revised WQBEL Compliance Report:**

Constituent	Influent Reservoir Arithmetic Average* (mg/l)	Influent Reservoir Max (mg/l)	Comment
Aluminum	0.243	0.38	Below Final WQBELs
Cadmium	0.00016	0.00018	Below Final WQBELs
Copper	0.0014	0.00297	Below Final WQBELs
Lead	0.00047	0.00097	Below Final WQBELs
Zinc	0.033	0.0413	Arithmetic average and max <b>above</b> Final WQBEL

\*Log Normal averages required due to limited data sets, but raw data indicates Zinc Total alone above previous proposed Final WQBELs.

• **Ambient Stream (upstream of Outfall No. 001) Data from Revised WQBEL Compliance Report:**

Constituent	Ambient Upstream Arithmetic Average*	Ambient Upstream Max	Comment
Aluminum	0.41	1.47	Below Final WQBEL
Cadmium	0.0002	0.00054	<b>Max above Final WQBEL</b>
Copper	0.0021	0.0049	Below Final WQBEL
Lead	0.001	0.0030	<b>At or above Final WQBEL</b>
Zinc	0.023	0.054	<b>Max above Final WQBEL</b>
Stream Hardness	21.41 (Downstream average was 18.69 mg/l, 16 samples ranging from 8.4 – 32.6 mg/l)	93.0	<b>Did not use log-normal calculated LTA Total Hardness Max Max is outlier (downstream value at 18.8 mg/l same day).</b>

\*Log Normal averages required due to limited data sets, but raw data indicates Zinc Total alone above previous proposed Final WQBELs.

**Ambient Stream Total Hardness Calculation (from previous Fact Sheet):**

Date	Total Hardness Stream above Outfall, i.e. "x" (mg/l)	Total Hardness Downstream of Outfall for comparison purposes only (mg/l)	$Y = \ln(x)$	$Y - u$	$(Y - u)^2$
7/6/2022	9.61	19.7	2.2628	-0.6382	0.4072
7/19/2022	16.5	25.1	2.8033	-0.0241	0.00058
8/3/2022	93	48.8	4.5325	1.7054	2.9073
8/17/2022	39.7	14.9	3.6813	0.8539	0.7291
9/6/2022	7.43	32	2.0055	-0.8219	0.6755
9/21/2022	36.2	20	3.5890	0.7616	0.5800
10/5/2022	9.05	10.7	2.2027	-0.6247	0.3902
10/12/2022	38.8	27.1	3.6584	0.831	0.6905
11/2/2022	7.89	17.3	2.0655	-0.7619	0.5804
11/9/2022	9.11	21.1	2.2093	-0.6181	0.3820
<b>Total</b>	-	-	29.0103	-	7.3427

- Number of Samples (k): 9 because outlier (93 mg/l) discarded as inconsistent with downstream same-day sample result.
- Arithmetic Mean of x: 17.4 mg/l (range of 9.05 – 39.7 mg/l)
- Uy = Estimated Mean (log normal): 2.7197 for k = 9
- Vy = Estimated Variance (log normal): 0.5544 for k – 1 (8)
- Estimated Standard Deviation (log normal): 0.9709



- Estimated Coefficient of Variation (log normal): 0.3421
- **Ex = Mean (Daily Average, normal) = Exp (Uy + variance/2) = Exp (2.7197 + 0.5544/2) = Exp(2.9969): 20.02 mg/l (used in updated TMS for ambient stream concentration)**

**Discharge Total Hardness Calculation:** Calculated per DEP Technical Guidance Policy-required statistical methodology:

Date	Total Hardness Stream above Outfall, i.e. "x" (mg/l)	-	Y = ln(x)	Y - u	(Y - u) <sup>2</sup>
7/10/2024	10.3	-	2.3321	0.0197	0.0003
7/18/2024	9.68	-	2.2700	-0.0424	0.0017
7/24/2024	9.58	-	2.2596	-0.0528	0.0027
8/1/2024	10.9	-	2.3025	-0.0099	0.00009
8/7/2024	10.5	-	2.3513	0.0389	0.0015
8/13/2024	10.9	-	2.3025	-0.0099	0.00009
8/21/2024	9.79	-	2.2813	-0.0311	0.0009
8/29/2024	10.3	-	2.3321	0.0197	0.0003
9/3/2024	10.5	-	2.3513	0.0389	0.0015
9/11/2024	10.4	-	2.3418	0.0294	0.0008
<b>Total</b>	<b>102.85</b>	-	<b>23.1245</b>	-	<b>~0.0099</b>

- Number of Samples (k): 10.
- Arithmetic Mean of x: 10.285 (range of 9.58 – 10.9) mg/l
- Uy = Estimated Mean (log normal): 2.3124 for k = 10
- Vy = Estimated Variance (log normal): 0.0011 for k – 1 (9)
- Estimated Standard Deviation (log normal):
- Estimated Coefficient of Variation (log normal): 0.3421
- **Ex = Mean (Daily Average, normal) = Exp (Uy + variance/2) = Exp (2.3124 + 0.0011/2) = Exp(2.3129): 10.10 mg/l (used in updated TMS for discharge).**

**Zinc Influent Reservoir Concentration:**

Date	Total Zinc, i.e. "x" (ug/l)	-	Y = ln(x)	Y - Uy	(Y - Uy) <sup>2</sup>
3/7/2022	29.0	-	3.3672	-0.1227	0.0150
4/5/2022	29.5	-	3.3843	-0.1056	0.0111
5/3/2022	39.7	-	3.6813	0.1914	0.0366
6/8/2022	41.3	-	3.7208	0.2309	0.0533
7/6/2022	37.7	-	3.6296	0.1397	0.0195
8/3/2022	32.1	-	3.4688	-0.0211	0.0004
9/6/2022	27.7	-	3.3214	-0.1685	0.0283
10/5/2022	32.2	-	3.4719	-0.018	0.0003
11/2/2022	29.9	-	3.3978	-0.0921	0.0084
12/7/2022	31.7	-	3.4563	-0.0336	0.0011
<b>Total</b>	<b>330.8</b>	-	<b>34.8994</b>	-	<b>0.174</b>

Arithmetic Mean (ten samples): 33.08 ug/l (range of 29.0 – 41.3 ug/l)

Uy = Log normal mean (k = 10): 3.4899

Variance (log normal), k – 1 (9): 0.0193

Standard Deviation (log normal): 0.8197

**Ex = Mean (Daily Average, normal) = Exp (Uy + variance/2) = Exp (3.4899 + 0.0096) = Exp(3.4995): 33.09 ug/l**

**Zinc Stream Concentration (upstream of Outfall No. 001):** From previous Fact Sheet.

Date	Total Zinc, i.e. "x" (ug/l)	Total Zinc (for comparison purposes only)	Y = ln(x)	Y - Uy	(Y - Uy) <sup>2</sup>
7/6/2022	28.0	13.3	3.3322	0.4395	0.1931
7/19/2022	24.2	22.7	3.1863	0.2936	0.0862
8/3/2022	5.16	13.3	1.6409	-1.2518	1.5670
8/17/2022	5.20	14.1	1.6486	-1.2441	1.5477
9/6/2022	31.0	30.0	3.4339	0.5412	0.2928
9/21/2022	54.4	31.2	3.9963	1.1036	1.2179
10/5/2022	24.2	27.2	3.1863	0.2936	0.0862
10/12/2022	7.39	13.7	2.0001	-0.8926	0.7967
11/2/2022	26.9	21.7	3.2921	0.3994	0.1595
11/9/2022	24.8	18.1	3.2108	0.3181	0.1011
<b>Total</b>	231.25	205.3	28.9275	-	6.0682

Arithmetic Mean (ten samples): 23.12 ug/l (range of 7.39 – 54.4 ug/l)

Uy = Log normal mean (k = 10): 2.8927

Variance (log normal), k – 1 (9): 0.6720

Standard Deviation (log normal): 0.8197

**E(x) = Mean (Daily Average): 25.246 ug/l**

Compliance History

DMR Data for Outfall 001 (from December 1, 2023 to November 30, 2024) – bolding to flag important data for this review.

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
Flow (MGD) Average Monthly	0.03220 397	0.39035 89	0.03684 645	0.03814 544	0.02475 483	0.02341 955	0.021	0.018	0.027	0.016	0.016	0.026
Flow (MGD) Daily Maximum	0.04078 366	0.05622 318	0.04616 202	0.06316 02	0.03694 122	0.05766 342	0.027	0.027	0.11	0.025	0.048	0.19
pH (S.U.) Instantaneous Minimum	6.7	6.4	6.6	6.4	6.7	6.6	6.6	6.3	6.3	6.3	5.8	6.5
pH (S.U.) Instantaneous Maximum	7.0	7.3	7.0	6.8	6.9	6.8	6.7	6.7	6.9	6.3	6.8	6.8
TRC (mg/L) Average Monthly	0.06	0.05	0.05	0.04	0.05	0.05	0.04	0.05	0.05	0.04	0.04	0.03
TRC (mg/L) Instantaneous Maximum	0.16	0.13	0.07	0.07	0.10	0.07	0.05	0.07	0.07	0.06	0.13	0.05
TSS (lbs/day) Average Monthly	< 0.9	< 2.0	< 1.0	< 0.7	< 0.6	< 1.0	< 2.0	< 0.4	< 0.4	< 0.3	< 0.5	< 0.2
TSS (mg/L) Average Monthly	< 3.5	< 5.0	< 3.0	< 3.0	< 3.5	< 3.0	< 14.0	< 3.0	< 3.0	< 3.5	< 3.0	< 3.0
TSS (mg/L) Daily Maximum	4.0	7.0	3.0	3.0	4.0	< 3.0	25.0	< 3.0	< 3.0	4.0	< 3.0	3.0
Total Dissolved Solids (lbs/day) Average Monthly	5.0	5.0	4.0	5.0	9.0	4.0	6.0	9.0	7.0	4.0	3.0	2.0
Total Dissolved Solids (mg/L) Average Monthly	22.0	14.0	14	22.0	60	22.0	36.0	64.0	54.0	48.0	28.0	30.0
Total Dissolved Solids (mg/L) Daily Maximum	22.0	14.0	14	22.0	60	22.0	36.0	64.0	54.0	48.0	28.0	30.0
Total Aluminum (lbs/day) Average Monthly	0.06	0.2	0.1	0.1	0.04	0.1	0.06	0.07	0.03	0.04	0.09	0.01
Total Aluminum (lbs/day) Daily Maximum	0.07	0.2	0.1	0.2	0.05	0.2	0.06	0.08	0.03	0.05	0.1	0.02

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<b>Total Aluminum (mg/L)</b> <b>Average Monthly</b>	0.265	0.600	0.305	0.460	0.230	0.410	0.355	0.450	0.295	0.385	0.595	0.305
<b>Total Aluminum (mg/L)</b> <b>Daily Maximum</b>	0.270	0.670	0.400	0.760	0.240	0.430	0.380	0.530	0.320	0.450	0.730	0.430
Total Antimony (lbs/day) Average Monthly	< 0.001	< 0.002	< 0.001	< 0.001	< 0.0007	< 0.001	< 0.0007	< 0.0004	< 0.0004	< 0.0004	< 0.0008	< 0.0003
Total Antimony (lbs/day) Daily Maximum	< 0.001	< 0.002	< 0.001	< 0.001	< 0.0007	< 0.002	< 0.0008	< 0.0005	< 0.0004	< 0.0004	< 0.001	< 0.0003
Total Antimony (ug/L) Average Monthly	< 0.004	< 0.005	< 0.003	< 0.004	< 0.004	< 0.004	< 0.004	< 0.003	< 0.003	< 0.004	< 0.005	< 0.005
Total Antimony (ug/L) Daily Maximum	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005	< 0.005	< 0.005	< 0.003	< 0.003	< 0.005	< 0.005	< 0.005
Total Arsenic (lbs/day) Average Monthly	< 0.0009	< 0.002	< 0.0006	< 0.0008	< 0.0006	< 0.001	< 0.0006	< 0.0003	< 0.0002	< 0.0003	< 0.0008	< 0.0003
Total Arsenic (lbs/day) Daily Maximum	< 0.001	< 0.002	< 0.0007	< 0.001	< 0.0007	< 0.002	< 0.0008	< 0.0003	< 0.0003	< 0.0004	< 0.001	< 0.0003
Total Arsenic (ug/L) Average Monthly	< 0.004	< 0.005	< 0.002	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.002	< 0.003	< 0.005	< 0.0005
Total Arsenic (ug/L) Daily Maximum	< 0.005	< 0.005	< 0.002	< 0.005	< 0.005	< 0.005	< 0.005	< 0.002	< 0.002	< 0.005	< 0.005	< 0.005
Total Cadmium (lbs/day) Average Monthly	< 0.00004	< 0.00007	0.00003	< 0.00003	< 0.00003	0.0001	0.00003	0.00002	< 0.00003	< 0.00002	< 0.00002	< 0.00001
Total Cadmium (lbs/day) Daily Maximum	< 0.00005	< 0.00007	0.00003	< 0.00005	0.00003	0.0002	0.00003	0.00002	< 0.00003	< 0.00002	< 0.00002	< 0.00001
<b>Total Cadmium (mg/L)</b> <b>Average Monthly</b>	< 0.00017	< 0.0002	0.0001	< 0.00014	< 0.00017	<b>0.00027</b>	0.00018	0.00018	<b>&lt; 0.00021</b>	< 0.0002	< 0.0002	< 0.0002
<b>Total Cadmium (mg/L)</b> <b>Daily Maximum</b>	< 0.0002	< 0.0002	0.0001	< 0.0002	< 0.0002	<b>0.00038</b>	0.00018	0.00018	< 0.00021	< 0.0002	< 0.0002	< 0.0002
Hexavalent Chromium (lbs/day) Average Monthly	< 0.00006	< 0.00009	< 0.00008	< 0.00006	< 0.00005	< 0.00008	< 0.00001	< 0.00001	< 0.00001	< 0.000009	< 0.000007	< 0.000002
Hexavalent Chromium (lbs/day) Daily Maximum	< 0.00006	< 0.00009	< 0.00008	< 0.00006	< 0.00006	0.0001	< 0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.000009	0.000003
Hexavalent Chromium (ug/L) Average Monthly	< 0.00025	< 0.00025	< 0.00025	< 0.00025	< 0.00025	< 0.00025	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00004	< 0.005

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Hexavalent Chromium (ug/L) Daily Maximum	< 0.00025	< 0.00025	< 0.00025	< 0.00025	< 0.00025	0.00025	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00004	< 0.005
Total Cobalt (lbs/day) Average Monthly	< 0.0007	< 0.002	0.001	0.001	< 0.0008	0.002	0.001	0.0009	0.0006	0.0006	0.0009	< 0.0003
Total Cobalt (lbs/day) Daily Maximum	< 0.001	< 0.002	0.001	0.001	0.0009	0.004	0.001	0.001	0.0008	0.0008	0.001	< 0.0003
Total Cobalt (ug/L) Average Monthly	< 0.003	< 0.005	0.004	0.005	< 0.005	0.007	0.006	0.006	0.006	0.006	0.006	< 0.005
Total Cobalt (ug/L) Daily Maximum	< 0.005	< 0.005	0.004	0.005	< 0.005	0.008	0.006	0.006	0.006	0.007	0.007	< 0.005
Total Copper (lbs/day) Average Monthly	0.008	0.04	0.0005	0.003	< 0.006	< 0.008	0.01	0.006	0.0004	0.002	< 0.001	0.006
Total Copper (lbs/day) Daily Maximum	0.02	0.06	0.0005	0.006	0.01	0.01	0.01	0.006	0.0004	0.002	< 0.001	0.006
<b>Total Copper (mg/L) Average Monthly</b>	<b>0.03382</b>	<b>0.1051</b>	0.00158	<b>0.0127</b>	<b>&lt; 0.0272</b>	<b>&lt; 0.0357</b>	<b>0.0663</b>	<b>0.0446</b>	0.00323	<b>0.0283</b>	<b>&lt; 0.01</b>	<b>0.091</b>
<b>Total Copper (mg/L) Daily Maximum</b>	<b>0.0659</b>	<b>0.153</b>	0.00164	<b>0.0234</b>	<b>0.0444</b>	<b>0.0614</b>	<b>0.0663</b>	<b>0.0446</b>	0.00323	<b>0.0283</b>	<b>&lt; 0.01</b>	<b>0.091</b>
Total Iron (lbs/day) Average Monthly	0.04	0.2	0.2	0.1	0.08	0.2	0.03	0.03	0.005	0.02	0.03	0.04
Total Iron (lbs/day) Daily Maximum	0.05	0.2	0.2	0.1	0.1	0.4	0.04	0.05	0.005	0.03	0.03	0.08
Total Iron (mg/L) Average Monthly	0.150	0.445	0.550	0.400	0.375	0.510	0.200	0.205	0.040	0.215	0.180	0.630
Total Iron (mg/L) Daily Maximum	0.200	0.540	0.570	0.610	0.570	0.750	0.270	0.300	0.040	0.280	0.230	1.130
Total Lead (lbs/day) Average Monthly	< 0.0001	< 0.0003	0.00004	< 0.0001	< 0.0001	0.0007	0.00006	0.00003	0.00002	< 0.00008	< 0.0001	0.00009
Total Lead (lbs/day) Daily Maximum	< 0.0002	< 0.0004	0.00004	< 0.0002	< 0.0001	0.001	0.00006	0.00003	0.00002	< 0.00008	< 0.0001	0.00009
<b>Total Lead (mg/L) Average Monthly</b>	<b>&lt; 0.0006</b>	<b>&lt; 0.001</b>	<b>0.00012</b>	<b>&lt; 0.00053</b>	<b>&lt; 0.00067</b>	<b>0.00157</b>	0.00038	0.00026	0.00019	<b>&lt; 0.001</b>	<b>&lt; 0.001</b>	<b>0.00129</b>
<b>Total Lead (mg/L) Daily Maximum</b>	<b>&lt; 0.001</b>	<b>&lt; 0.001</b>	0.00013	<b>&lt; 0.001</b>	<b>&lt; 0.001</b>	<b>0.00276</b>	0.00038	<b>0.00026</b>	0.00019	<b>&lt; 0.001</b>	<b>&lt; 0.001</b>	0.00129
Total Manganese (lbs/day) Average Monthly	0.08	0.1	0.2	0.09	0.5	0.4	0.03	0.05	0.04	0.02	0.08	0.02
Total Manganese (lbs/day) Daily Maximum	0.09	0.2	0.2	0.1	0.07	0.7	0.05	0.05	0.05	0.03	0.08	0.02
Total Manganese (mg/L) Average Monthly	0.340	0.435	0.570	0.375	0.260	0.940	0.160	0.315	0.350	0.250	0.575	0.275

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Total Manganese (mg/L) Daily Maximum	0.360	0.500	0.590	0.480	0.290	1.460	0.320	0.360	0.430	0.260	0.760	0.330
Total Zinc (lbs/day) Average Monthly	0.03	0.1	0.006	< 0.005	0.04	0.03	0.03	0.03	0.006	0.007	0.005	0.01
Total Zinc (lbs/day) Daily Maximum	0.06	0.1	0.007	0.009	0.07	0.04	0.03	0.03	0.006	0.007	0.005	0.01
<b>Total Zinc (mg/L) Average Monthly</b>	<b>0.137</b>	<b>0.31</b>	0.0181	< 0.0206	<b>0.1602</b>	<b>0.1321</b>	<b>0.203</b>	<b>0.197</b>	<b>0.0487</b>	<b>0.0871</b>	<b>0.0475</b>	<b>0.207</b>
<b>Total Zinc (mg/L) Daily Maximum</b>	<b>0.244</b>	<b>0.369</b>	0.0205	0.0382	<b>0.294</b>	<b>0.224</b>	<b>0.203</b>	<b>0.197</b>	0.0487	<b>0.0871</b>	0.0475	<b>0.207</b>
Acrylamide (lbs/day) Average Monthly	< 0.005	< 0.008	< 0.007	< 0.005	< 0.004	< 0.007	0.004	0.003	< 0.001	< 0.001	< 0.001	< 0.00002
Acrylamide (lbs/day) Daily Maximum	< 0.005	< 0.008	< 0.007	< 0.005	< 0.005	< 0.01	0.004	0.003	< 0.001	< 0.001	< 0.001	< 0.00003
<b>Acrylamide (mg/L) Average Monthly</b>	<b>&lt; 0.021</b>	<b>&lt; 0.022</b>	<b>&lt; 0.021</b>	<b>&lt; 0.022</b>	<b>&lt; 0.022</b>	<b>&lt; 0.021</b>	<b>0.022</b>	<b>0.021</b>	<b>&lt; 0.011</b>	<b>&lt; 0.012</b>	<b>&lt; 0.012</b>	<b>&lt; 0.0004</b>
<b>Acrylamide (mg/L) Daily Maximum</b>	<b>&lt; 0.021</b>	<b>&lt; 0.022</b>	<b>&lt; 0.021</b>	<b>&lt; 0.022</b>	<b>&lt; 0.022</b>	<b>&lt; 0.021</b>	<b>0.022</b>	<b>0.021</b>	<b>&lt; 0.011</b>	<b>&lt; 0.012</b>	<b>&lt; 0.012</b>	<b>&lt; 0.0004</b>

**DMR Data for Outfall 101 (from December 1, 2023 to November 30, 2024)**

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
Flow (MGD) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Flow (MGD) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
pH (S.U.) Intake   Instantaneous Minimum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
pH (S.U.) Intake   Instantaneous Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Antimony (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG

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Total Antimony (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Antimony (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Antimony (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Arsenic (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Arsenic (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Arsenic (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Arsenic (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cadmium (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cadmium (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cadmium (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cadmium (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Hexavalent Chromium (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Hexavalent Chromium (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG

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Hexavalent Chromium (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Hexavalent Chromium (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cobalt (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cobalt (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cobalt (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Cobalt (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Copper (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Copper (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Copper (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Copper (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Lead (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Lead (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Lead (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Lead (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG



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Total Nickel (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Nickel (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Nickel (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Nickel (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Silver (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Silver (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Silver (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Silver (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Zinc (lbs/day) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Zinc (lbs/day) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Zinc (mg/L) Intake   Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Zinc (mg/L) Intake   Daily Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG

Compliance History

**Client Compliance History:** One (1) open violation (Safe Drinking Water) per 1/13/2025 WMS query:

CLIENT	PF KIND	INSP PROGRAM	PROGRAM SPECIFIC ID	INSP ID	VIOLATION ID	VIOLATION DATE	VIOLATION CODE
BLYTHE TWP MUNI AUTH	Community	Safe Drinking Water	3540017	3676668	8171894	01/17/2024	C1A

