

Application Type	Renewal
Facility Type	Municipal
Major / Minor	Major

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

 Application No.
 PA0080225

 APS ID
 28589

 Authorization ID
 1405378

Applicant and Facility Information

Applicant Name	Washington Township Municipal _ Authority	Facility Name	Washington Township MA WWTTP
Applicant Address	11102 Buchanan Trail East Washington Twp Mun Authority	Facility Address	11102 Buchanan Trail E
	Waynesboro, PA 17268-9503		Waynesboro, PA 17268-8523
Applicant Contact	Sean McFarland	Facility Contact	Sean McFarland
Applicant Phone	(717) 762-3108	Facility Phone	(717) 762-3108
Client ID	83421	Site ID	453656
Ch 94 Load Status	Not Overloaded	Municipality	Washington Township
Connection Status	No Limitations	County	Franklin
Date Application Rece	eived August 3, 2022	EPA Waived?	No
Date Application Acce	pted August 8, 2022	If No, Reason	, DEP Discretion
Purpose of Application	n NPDES Permit Renewal.		

Summary of Review

Washington Township Municipal Authority (WTMA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of the NPDES permit. The permit was last reissued on January 12, 2018 and expired on January 31, 2023.

Based on the review, it is recommended that the permit be drafted.

Sludge use and disposal description and location(s): Sludge is processed onsite and then land applied under PAG083538.

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.

Approve	Deny	Signatures	Date
х		Jinsu Kim Jinsu Kim / Environmental Engineering Specialist	August 14, 2023
х		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	September 11, 2023
х		Maria D. Bebenek Maria D. Bebenek, P.E. / Program Manager	September 11, 2023

Discharge, Receiving	y Wate	rs and Water Supply Info	rmation					
Outfall No. 001			Design Flow (MGD)	1.85				
Latitude 39º 4	3' 34.3	5"	Longitude	-77º 35' 30.49"				
Quad Name Sm	ithburg		Quad Code	2125				
Wastewater Descrip	otion:	Sewage Effluent	-					
Receiving Waters			Stream Code	59291				
NHD Com ID	D Com ID 49469074		RMI	0.94				
Drainage Area	49.6 ו	mi ²	Yield (cfs/mi ²)	0.19375				
Q ₇₋₁₀ Flow (cfs)			Q7-10 Basis	StreamStats				
Elevation (ft)	563		Slope (ft/ft)					
Watershed No.	13-C		Chapter 93 Class.	CWF, MF				
Existing Use	None		Existing Use Qualifier	None				
Exceptions to Use	None		Exceptions to Criteria	None				
Assessment Status		Impaired						
Cause(s) of Impairn	nent	Habitat Alterations						
Source(s) of Impair	ment	Habitat Modification						
TMDL Status		N/A	Name N/A					
Nearest Downstrea	m Publi	ic Water Supply Intake	Brunswick Mayor and Council	, MD				
PWS Waters F	Potoma	c River	Flow at Intake (cfs)					
PWS RMI			Distance from Outfall (mi)					
—								

Drainage Area

A drainage area upstream of the point of discharge is estimated to be 49.6 sq.mi according to USGS StreamStats (<u>https://streamstats.usgs.gov/ss/</u>).

Streamflow

StreamStats produced a Q7-10 of 9.61 cfs at the point of discharge.

East Branch Antietam Creek

Under 25 Pa Code §93.9z, East Branch Antietam Creek (main stem, Vineyard Run to confluence with West Branch) is designated as cold water & migratory fishes. It is not classified as a Class A Trout stream; therefore no Class A Wild Trout Fishery is impacted by this discharge. DEP's 2022 PA Integrated Water Quality Monitoring and Assessment report indicates that East Branch Antietam Creek near the discharge point is currently impaired for habitat alterations as a result of habitat modifications. This impairment is listed in Category 4C, waters impaired for one or more uses, not needing a TMDL because the impairment is not caused by a pollutant. No TMDL has been developed.

Public Water Supply Intake

The fact sheet prepared for the last permit renewal indicates that the nearest downstream public water supply is for Brunswick Mayor and Council located in Brunswick MD. We do not have flow data for the Potomac River at the PWS. The previous protection report indicated that the drainage area at the Hancock MD upstream of Brunswick is 4,073 mi². Because of the distance, dilution with much larger stream, and effluent limits, the discharge will not affect the intake.

	Tre	eatment F	acility Summar	у		
Treatment Facility Nam	e: Washington Township	STP				
WQM Permit No.	Issuance Da	ite	WQM Per	rmit No.	Issu	ance Date
2894402 A-4	September 6, 2	2016	WQG022	280701	Septem	ber 28, 2007
2813401 A-1	March 2, 20	16	2807	401	Marc	ch 2, 2007
2813401	June 5, 201	3	2803405 Ar	nendment	Decem	ber 16, 2003
2812401	November 8, 2	2012	2894402 Amendment		January 25, 2000	
2894402 Amendment	May 9, 201	May 9, 2011		2894402 A-4		ry 23, 2023
	Degree of					Avg Annual
Waste Type	Treatment	Pro	cess Type	Disinfe	ection	Flow (MGD)
	Secondary With		encing Batch			
Sewage	Ammonia Reduction		Reactor	Gas Ch	llorine	1.85
		I		1		r
Hydraulic Capacity	Organic Capacity					Biosolids
(MGD)	(lbs/day)	Lo	ad Status	Biosolids 1	reatment	Use/Disposal
			ing Hydraulic			
1.85	2896	(Dverload	Aerobic D	ligestion	Land Application

WTMA operates a sanitary wastewater treatment plant serving Washington Township (91.2%) and Waynesboro Borough (8.8%). All sewer systems are 100% separated. WTMA utilizes a Sequencing Batch Reactor (SBR) activated sludge treatment process including a screening, grit/grease removal, SBRs (2), chlorine contact tanks (2), post aeration tank and outfall structure. The treatment plant is designed for 1.85 MGD for both annual average and hydraulic design capacity. Sodium bisulfite is used for dechlorination. The facility also has a stormwater outfall receiving stormwater draining from the site (mostly paved/grassy areas); no interior floor drains are tied into the storm sewer system.

Sludge is processed through sludge digesters (4), thickener and sludge holding tank. Solids generated from this facility will be land applied under PAG083538.

According to the application, WTMA serves a number of commercial users that are mostly related to car washing and commercial laundromat. These users are shown below.

				Flow					
Name	Description	Categorical/ SIU	ELG subpart	Process (GPD)	NCCW (GPD)	Sanitary (GPD)	Other (GPD)	Total (GPD)	
AC&T Car Wash/Gas station	Commercial car wash	No	N/A	3125	0	50	0	3175	
J&J Laundromat	Commercial laundromat	No	N/A	2700	0	100	0	2800	
Health Network Labs	Sanitary discharge	No	N/A	0	0	50	0	50	
Roberts Car Wash	Commercial car wash	No	N/A	1410	0	50	0	1460	
Rouzerville Laundry	Commercial laundromat	No	N/A	1170	0	100	0	1270	
Waynesboro Hospital	Hospital	No	N/A	9825	0	4700	0	14525	

Since none of the commercial/industrial contributors are significant or categorical and the average annual design flow of the treatment plant is less than 5.0 MGD, no formal pretreatment program is warranted at this time.

	Compliance History
Summary of DMRs:	A summary of past 12-month DMR data is presented on the next page.
Summary of Inspections:	05/10/2023: Cody Hoy conducted a routine inspection and noted grit removal was not operational which is considered a permit violation. 05/12/2022: Cody Hoy conducted a routine inspection and noted that the facility failed to comply with requirement to conduct semiannual stormwater inspections which is considered a permit violation. 02/24/2021: Brandon Bettinger conducted a routine inspection and noted that no violation was found during the inspection.
Other Comments:	DEP's database shows there are a number of open violations associated with this facility or permittee. A draft permit cover letter will indicate that the permit may not be finalized until all violations are resolved. Since the last permit reissuance, there were a number of permit violations reported. These violations are shown below.

Date	Description	PARAMETER	Results	Limits	Units	SBC
4/25/2018	3 Unauthorized Discharges					
5/30/201	3 Late DMR Submission					
5/23/2018	3 Sample collection less frequent than required	Total Nitrogen (Total Load, Ibs)				
5/23/2018	3 Sample collection less frequent than required	Total Phosphorus (Total Load, lbs)				
5/23/2018	3 Sample collection less frequent than required	Total Kjeldahl Nitrogen				
5/23/2018	3 Sample collection less frequent than required	Biochemical Oxygen Demand (BOD5)				
5/23/2018	3 Sample collection less frequent than required	Total Suspended Solids				
6/22/2018	3 Sample collection less frequent than required	CBOD				
8/27/2018	3 Unauthorized Discharges					
8/27/2018	3 Unauthorized Discharges	Heavy Rainfall				
9/20/2018	3 Unauthorized Discharges	Flash flood event. Blue Ridge summit area received 3" of rain in a 30 minute period.				
9/20/2018	B Effluent Violation	Fecal Coliform	5800	1000	No./100 ml	Instantaneous Maximum
10/26/2018	3 Effluent Violation	Dissolved Oxygen	4.82	5	mg/L	Daily Minimum
2/26/2019	Unauthorized Discharges	We had an overflow event that had very diluted wastewater exit the manhole. See let	t			
4/16/2019	Onauthorized Discharges	WTMA is working with there engineer on finding the cause of this problem. We have b	•			
6/12/2019	Unauthorized Discharges	We had the consecutive days of rainfall which totaled 3.56" of rain. This caused flash fl	c .			
7/23/2019	Effluent Violation	Fecal Coliform	1350	1000	No./100 ml	Instantaneous Maximum
9/11/2020	Effluent Violation	Dissolved Oxygen	4.97	5	mg/L	Daily Minimum
10/20/2020) Effluent Violation	Ammonia-Nitrogen	9.2	4.2	mg/L	Average Monthly
10/20/2020	Effluent Violation	Fecal Coliform	16500	1000	No./100 ml	Instantaneous Maximum
10/20/2020) Effluent Violation	Fecal Coliform	217	200	No./100 ml	Geometric Mean
11/18/2020	Effluent Violation	Ammonia-Nitrogen	16	4.2	mg/L	Average Monthly
11/18/2020) Effluent Violation	Ammonia-Nitrogen	71	64	lbs/day	Average Monthly
7/30/202	Late DMR Submission					
10/4/202	L Late DMR Submission					
9/2/202	Unauthorized Discharges	Due to large rain even caused by hurricane Ida we experienced an overflow at our pum				
9/2/202	L Unauthorized Discharges					
10/26/202	L Effluent Violation	Fecal Coliform	> 2419.6	1000	No./100 ml	Instantaneous Maximum
9/24/202	L Unauthorized Discharges	Due to a large rain event, we experienced an overflow at Blue Ridge Pump Station. We				
1/13/2022	2 Late DMR Submission					
5/10/2022	2 Unauthorized Discharges	Heavy rainfall event 2.56" in less 24 hours. Flash flooding event				
5/10/2022	2 Unauthorized Discharges	Heavy rainfall event 3.99" of rain in a 48 hour period.				
1/20/202	3 Unauthorized Discharges	1.67" of rain in a 4-hour period with 2.65" total rain in the 12-hour period led to a slow (
	2 Unauthorized Discharges	Large rainfall event 2.65" in 12 hours (1.67" in 4 hours).				
	3 Unauthorized Discharges	A blockage, assumed grease, in the 8" sewer main caused a backup which we had unclo)			

Effluent Data

DMR Data for Outfall 001 (from July 1, 2022 to June 30, 2023)

Parameter	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22
Flow (MGD)												
Average Monthly	0.603	0.770	0.780	0.990	0.830	0.940	1.100	0.730	0.650	0.640	0.630	0.740
Flow (MGD)												
Daily Maximum	0.720	1.120	1.220	1.820	0.940	1.180	2.980	0.930	0.770	0.930	0.700	1.090
pH (S.U.)												
Daily Minimum	6.84	6.87	7.0	6.89	6.89	6.88	6.89	6.97	7.02	7.02	7.06	7.04
pH (S.U.)												
Instantaneous												
Maximum	7.34	7.42	7.4	7.39	7.58	7.62	7.37	7.27	7.16	7.2	7.24	7.25
DO (mg/L)												
Daily Minimum	5.87	6.2	6.17	5.54	5.41	6.35	5.82	6.06	5.95	5.78	5.89	5.94
TRC (mg/L)												
Average Monthly	0.11	0.10	0.13	0.12	0.12	0.15	0.15	0.11	0.11	0.09	0.05	< 0.07
TRC (mg/L)												
Instantaneous		0.00	0.00	0.04			0.55	0.00	0.04	0.40	0.00	0.40
Maximum	0.34	0.26	0.22	0.24	0.22	0.28	0.55	0.28	0.21	0.19	0.09	0.18
CBOD5 (lbs/day)	40	10	4.5		47	00	01	4.5	10	40	10	00.0
Average Monthly	< 13	< 16	< 15	< 20	< 17	< 20	< 21	< 15	< 13	< 16	< 13	20.0
CBOD5 (lbs/day)	. 10	. 00	. 17	. 05	. 17	. 00	27.00	10.00	17.00	. 00	10.00	22.0
Weekly Average CBOD5 (mg/L)	< 13	< 22	< 17	< 25	< 17	< 23	27.00	19.00	17.00	< 22	16.00	28.0
Average Monthly	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.5	< 3.1	< 2.4	< 2.4	< 2.8	< 2.6	3.0
CBOD5 (mg/L)	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.5	< 3.1	< 2.4	< 2.4	< 2.0	< 2.0	3.0
Weekly Average	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 3.00	4.70	3.00	3.10	< 3.10	3.00	3.90
BOD5 (lbs/day)	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 3.00	4.70	3.00	5.10	< 3.10	3.00	3.90
Raw Sewage Influent												
Average Monthly	803	725	877	965	1065	1118	721	668	591	600	970	1041
BOD5 (lbs/day)	000	120	011	000	1000	1110	121	000	001	000	010	1011
Raw Sewage Influent												
Daily Maximum	1122	1285	1170	1459	1433	1902	1107	846	837	846	1231	1701
BOD5 (mg/L)												
Raw Sewage Influent												
Average Monthly	151	110	137	117	151	139	107	110	110	108	185	159
TSS (lbs/day)												
Average Monthly	16	15	13	14	16	9	< 38	< 30	< 27	< 34	< 26	< 36
TSS (lbs/day)												
Raw Sewage Influent												
Average Monthly	695	505	484	570	744.00	768	486	1304	1281	818	1071	1039

NPDES Permit Fact Sheet Washington Township MA WWTP

Parameter	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22
TSS (lbs/day)												
Raw Sewage Influent												
Daily Maximum	1041	1239	813	1270	1217	2016	1103	1836	1514	1699	1350	2102
TSS (lbs/day)												
Weekly Average	37	23	28	16	20.00	11	< 46	< 35	< 28	< 51.00	< 28	< 48
TSS (mg/L)												
Average Monthly	3.0	2.0	2.0	2.0	2.0	1.0	< 5.0	< 5.0	< 5.0	< 6.0	< 5.0	< 5.0
TSS (mg/L)												
Raw Sewage Influent												
Average Monthly	131	78	75	67	105	94	74	217	237	138	205	159
TSS (mg/L)												
Weekly Average	7.0	4.0	4.0	2.0	3.00	2.0	< 7.0	< 5.0	< 5.0	< 10.0	< 5.0	< 7.0
Fecal Coliform												
(No./100 ml)												
Geometric Mean	17	29	14	9	7	7	4	16	6.0	5	14	14
Fecal Coliform												
(No./100 ml)												
Instantaneous												
Maximum	35	727	40	14	15	30	10	64	16	16	148	29
Nitrate-Nitrite (mg/L)												
Average Monthly	< 3.21	< 3.31	< 3.11	< 3.30	< 3.28	< 3.52	4.10	< 4.79	< 4.45	< 3.78	< 4.41	< 4.29
Nitrate-Nitrite (lbs)												
Total Monthly	< 514	< 676	< 593	< 846	< 647	< 874	883	< 873	< 744	< 642	722	< 885
Total Nitrogen (mg/L)												
Average Monthly	< 4.6	< 4.44	< 4.55	< 4.27	< 4.61	< 5.17	5.2	< 6.28	< 5.76	< 5.2	< 5.69	< 5.71
Total Nitrogen (lbs)												
Effluent Net												
Total Monthly	< 736	< 907	< 867	< 1094	< 908	< 1288	1122	< 1145	< 965	< 882	< 931	< 1179
Total Nitrogen (lbs)												
Total Monthly	< 736	< 907	< 867	< 1094	< 908	< 1288	1122	< 1145	< 965	< 882	< 931	< 1179
Total Nitrogen (lbs)												
Effluent Net												
Total Annual										< 13198		
Total Nitrogen (lbs)												
Total Annual										< 13198		
Ammonia (lbs/day)												
Average Monthly	< 0.5	< 0.7	< 0.6	< 0.8	< 0.7	< 0.8	1.00	< 1	< 1	< 0.7	< 0.65	< 0.9
Ammonia (mg/L)										a 4a-		o (=
Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.168	< 0.215	< 0.248	< 0.125	< 0.12	< 0.15
Ammonia (lbs)		~ ~					07			~ (
Total Monthly	< 16	< 21	< 19	< 26	< 20	< 0.8	37	< 41	< 42	< 21	< 20	< 29
Ammonia (lbs)												
Total Annual										< 612		

NPDES Permit Fact Sheet Washington Township MA WWTP

Parameter	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22
TKN (mg/L)												
Average Monthly	1.39	1.13	1.44	1.09	1.33	1.65	1.1	1.49	1.31	< 1.43	< 1.28	1.43
TKN (lbs)												
Total Monthly	222	231	274	286	261	414	240	272	220	< 240	< 209	295
Total Phosphorus												
(mg/L)												
Average Monthly	1.95	1.63	1.09	0.91	0.88	0.83	0.62	1.15	1.5	1.9	2.68	1.88
Total Phosphorus (lbs)												
Effluent Net												
Total Monthly	311	326	198	233	175	207	124	209	244	321	437	< 388
Total Phosphorus (lbs)												
Total Monthly	311	326	198	233	175	207	124	209	244	321	437	388
Total Phosphorus (lbs)												
Effluent Net												
Total Annual										< 3215		
Total Phosphorus (lbs)												
Total Annual										< 3215		
Total Copper (mg/L)												
Average Monthly	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0036	0.0056	0.00600	0.00630	0.00880	0.00760
Total Copper (mg/L)												
Daily Maximum	< 0.005	< 0.005	< 0.005	< 0.006	0.006	< 0.005	0.0042	0.007	0.0069	0.0067	0.012	0.0084
Chronic WET -												
Ceriodaphnia												
Reproduction (TUc)												
Daily Maximum	5.56			5.56			5.56			5.56		

Existing Effluent Limits and Monitoring Requirements

A table below summarizes effluent limits and monitoring requirements specified in the existing permit:

			Effluent L	imitations			Monitoring Re	quirements
Devementer	Mass Units	s (lbs/day) ⁽¹⁾		Concentrat	ions (mg/L)		Minimum ⁽²⁾	Required
Parameter	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
		Report						
Flow (MGD)	Report	Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	xxx	6.0 Daily Min	xxx	xxx	9.0	1/day	Grab
Dissolved Oxygen	XXX	xxx	5.0 Daily Min	xxx	xxx	xxx	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	xxx	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	385	615	XXX	25.0	40.0	50	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	xxx	2/week	24-Hr Composite
Total Suspended Solids	460	690	XXX	30.0	45.0	60	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	xxx	Report	XXX	xxx	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	194	xxx	xxx	12.6	xxx	25.2	2/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	64	xxx	xxx	4.2	xxx	8.4	2/week	24-Hr Composite
Copper, Total	XXX	XXX	XXX	Report	Report Daily Max	ХХХ	1/week	24-Hr Composite
Toxicity, Chronic - Ceriodaphnia Reproduction (TUc)	XXX	XXX	XXX	5.6 Daily Max	XXX	XXX	See Permit	24-Hr Composite

NPDES Permit Fact Sheet Washington Township MA WWTP

			Effluent L	imitations			Monitoring Re	quirements
Parameter	Mass Units	(lbs/day) ⁽¹⁾		Concentrat	tions (mg/L)		Minimum ⁽²⁾	Required
Farameter	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum	Measurement Frequency	Sample Type
								24-Hr
AmmoniaN	Report	Report	XXX	Report	XXX	XXX	2/week	Composite
								24-Hr
KjeldahlN	Report	XXX	XXX	Report	XXX	XXX	2/week	Composite
								24-Hr
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	Composite
Total Nitrogen	Report	Report	XXX	Report	xxx	XXX	1/month	Calculation
¥	•	•		•				24-Hr
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/week	Composite
Net Total Nitrogen	Report	35433 ⁽³⁾	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	4724	XXX	XXX	ххх	XXX	1/month	Calculation

(3) The permittee was approved to used 550 lbs. of TN/year as offset towards compliance for connecting 22 OLDs into their collection system on October 24, 2011. The OLDs were in existence prior to January 1, 2003

Development of Effluent Limitations and Monitoring Requirements

Outfall No.	001		Design Flow (MGD)	1.85
Latitude	39º 43' 34.44	"	Longitude	-77º 35' 34.00"
Wastewater De	escription:	Sewage Effluent	-	

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD ₅	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
CBOD5	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Solids	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
рН	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform				
(5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform				
(5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform				
(10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform				
(10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)

WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's technical guidance no. 391-2000-007 describes the technical methods contained in the model for conducting wasteload allocation analyses and for determining recommended limits for point source discharges. DEP recently updated this model (ver. 1.1) to include new ammonia criteria that has been approved by US EPA as part of the 2017 Triennial Review. The model output indicates no further WQBELs are required and all existing limits are still appropriate. No changes are therefore recommended.

Total Residual Chlorine

Since chlorine is used for disinfection, Total Residual Chlorine (TRC) effluent levels must be regulated. The existing permit contains the BAT TBEL of 0.5 mg/L derived from 25 Pa Code §92a.48(b)(2). DEP's TRC_CALC worksheet is utilized to determine if this existing limit is still appropriate. The worksheet indicated that existing limits of 0.5 mg/L (average monthly) and 1.6 mg/L (IMAX) are still protective of water quality. Therefore, no change is recommended.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet (TMD) to develop appropriate permit requirements for toxic pollutants of concern. TMS output shows WQBELs are needed for Chloroform and monitoring-only requirements for Total Zinc and Dissolved Iron. For Total Copper, DEP's TOXCON worksheet is utilized as ample data have been collected since the last reissuance. The average concentration as well as the daily coefficient of variation from TOXCON worksheet are entered into TMS. The TMS output shows the existing monitoring requirement is still appropriate. Based on the sample results, the facility is able to meet WQBELs for Chloroform. Therefore, it is recommended that WQBELs for chloroform be included in the permit in accordance with 40 CFR 122.44(d)(1)(i).

Best Professional Judgment (BPJ) Limitations

Total Phosphorus

The existing monitoring-only requirements will remain unchanged in the permit. This approach is consistent with DEP's SOP no. BPNPSM-PMT-033.

Dissolved Oxygen

A minimum of 5.0 mg/L for DO is an existing effluent limit derived directly from state water quality criteria found in 25 Pa Code §93.7(a). This effluent limit will remain unchanged in the permit to ensure that the facility continues to achieve compliance with water quality standards. This approach is recommended by DEP's SOP no. BPNPSM-PMT-033 and therefore has been applied to other sewage facilities throughout the state.

Additional Considerations

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Influent BOD & TSS Monitoring

As a result of negotiation with EPA, the existing influent monitoring reporting requirement for TSS and BOD5 will be maintained in the draft permit. This requirement has been consistently assigned to all municipal wastewater treatment facilities.

E. Coli Monitoring Requirement

DEP's SOP no. BCW-PMT-033 recommends a routine monitoring for E. Coli in all new and reissued sewage permits. As a result, a monthly monitoring requirement for E. Coli will be included in the permit given the facility's design flow is greater than 1.0 MGD.

Total Dissolved Solids (TDS)

TDS and its associated solids including Bromide, Chloride, and Sulfate have become statewide pollutants of concern. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

-Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

-Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 μ g/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 MGD or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 μ g/L.

WTMA reported the maximum effluent TDS concentration of 348 mg/L, Bromide of 0.08 mg/L and 1,4-dixane of <5.0 µg/L. Based on this, a routine monitoring of bromide is recommended.

Chesapeake Bay TMDL

In August 2019, DEP finalized Phase 3 Chesapeake Bay Watershed Implementation Plan to provide the plans in place by 2025 to further achieve the nutrient and sediment reduction targets that would ultimately meet U.S EPA's expectations for the Chesapeake Bay TMDL. The Chesapeake Bay TMDL identifies the necessary pollution reductions from major sources of nitrogen, phosphorus and sediment across the Bay jurisdictions and sets pollution limits necessary to meet water quality standards. The Phase 3 WIP is an update to the Pennsylvania's Chesapeake Bay TMDL Strategy (2004), the Chesapeake WIP Phase I (2011) and Phase 2 WIP (2012). The more details on the TMDL are available at www.dep.pa.gov.

NPDES Permit Fact Sheet Washington Township MA WWTP

A Supplement to the Phase 3 WIP which was last updated on December 17, 2019 provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. According to this document, Washington Township MA is a phase 3 significant discharger located within the Chesapeake Bay watershed. The following Cap Loads (annual net nutrient mass effluent limitations) specified in the current Supplement to the Phase 3 WIP will be included in the draft permit:

			Latest				TN Offsets	TP		
			Permit	Permit	Cap Load	TN Cap	Included in	Cap	TN	TP
NPDES			Issuance	Expiration	Compliance	Load	Cap Load	Load	Delivery	Delivery
Permit No.	Phase	Facility	Date	Date	Start Date	(lbs/yr)	(lbs/yr)	(lbs/yr)	Ratio	Ratio
		Washington								
		Township								
PA0080225	3	MA	1/12/2018	1/31/2023	10/1/2013	35,433	-	4,724	0.908	0.725

A list of 22 retired on-lot systems connected to the collection system was submitted and accepted by DEP which resulted approved offsets of 550 lbs/yr (22*25 lbs TN/year/offset). Additional language will be provided in the draft permit indicating the offsets may be applied throughout the compliance year or during the truing period.

Stormwater Requirements

Stormwater discharges from any POTWs (SIC Code 4952) described in 40 CFR § 122.26(b)(14)(ix) require coverage under an NPDES permit. There is currently one (1) stormwater outfall collecting stormwater drained from the property.

Outfall No.	Area Drained (ft ²)	Latitude	Longitude	Description
		39° 43'		Part of chlorine building and
002	3,221	33.6"	-77° 35' 28.2"	post aeration tank area

In general, DEP's standard Part C stormwater requirements and site-specific best management practices (BMPs) are included in the permit for those POTWs. The following standard BMPs for POTWs will be included in Part C of the draft permit:

- 1. Manage sludge in accordance with all applicable permit requirements.
- 2. Store chemicals in secure areas on impervious surfaces away from storm drains.
- 3. For new facilities and upgrades, design wastewater treatment facilities to avoid, to the maximum extent practicable, stormwater commingling with sanitary wastewater, sewage sludge, and biosolids.
- 4. Efficiently use pesticides for weed control; where practicable, use the least toxic herbicide that will achieve pest management objectives. Do not apply during windy conditions.
- 5. Do not wash parts or equipment over impervious surfaces that wash into storm drains.
- 6. Implement infiltration techniques, including infiltration basins, trenches, dry wells, porous pavement, etc., wherever practicable.

Monitoring Frequency and Sample Type

Unless otherwise specified throughout this fact sheet, monitoring frequencies and sample types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Mass Loading Limitations

All effluent mass loading limits will be based on the formula: design flow x concentration limit x conversion factor of 8.34.

Antidegradation Requirements

All effluent limitations and monitoring requirements 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.

Class A Wild Trout Fishery

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

Whole Effluent Toxicity (WET)

For Outfall 001, Acute Chronic WET Testing was completed:

- \boxtimes For the permit renewal application (4 tests).
- Quarterly throughout the permit term.
 - Quarterly throughout the permit term and a TIE/TRE was conducted.

Other:

The dilution series used for the tests was: 100%, 59%, 18%, 9%, and 5%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 18%.

Summary of Four Most Recent Test Results

(NOTE – Enter results into one table, depending on which data analysis method was used).

NOEC/LC50 Data Analysis

Ceriodaphnia Results			ffluent)	Pimephale	s Results (%	Effluent)	
Test Date	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	Pass? *
March 2021	100	100		100	100		Yes
May 2021	100	100		100	100		Yes
August 2021	100	100		100	100		Yes
October 2021	100	100		100	100		Yes

* A "passing" result is that which is greater than or equal to the TIWC value.

Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (NOTE - In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).

Comments: DEP's Whole Effluent Toxicity (WET) Analysis Spreadsheet was utilized for verification purposes (see attachments).

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

Acute Partial Mix Factor (PMFa): 0.674 Chronic Partial Mix Factor (PMFc): 1.0

Determine IWC – Acute (IWCa):

 $(Q_d \times 1.547) / ((Q_{7-10} \times PMFa) + (Q_d \times 1.547))$

[(1.85 MGD x 1.547) / ((9.61 cfs x 0.674) + (1.85 MGD x 1.547))] x 100 = 30%

Is IWCa < 1%? C YES X NO (YES - Acute Tests Required OR NO - Chronic Tests Required)

Type of Test for Permit Renewal: Chronic

2b. Determine Target IWCc (If Chronic Tests Required)

 $(Q_d \times 1.547) / (Q_{7-10} \times PMFc) + (Q_d \times 1.547)$

[(1.85 MGD x 1.547) / ((9.61 cfs x 1.0) + (1.85 MGD x 1.547))] x 100 = 22.95 = 23%

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 62%, 23%, 12%, and 6%.

WET Limits

Has reasonable potential been determined? YES
NO

Will WET limits be established in the permit? \Box YES \boxtimes NO

If WET limits will be established, identify the species and the limit values for the permit (TU).

N/A

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

N/A

Comments: The current permit contains WET limits for ceriodaphnia reproduction as the facility failed one endpoint for ceriodaphnia reproduction and the permit required a quarterly WET testing. For the upcoming permit renewal, since there are no endpoints failure, limits will not be included in the permit and annual WET testing will be required.

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.

			Effluent L	imitations			Monitoring Re	quirements
Parameter	Mass Units	(lbs/day) ⁽¹⁾		Concentrat	ions (mg/L)		Minimum ⁽²⁾	Required
Falameter	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
рН (S.U.)	XXX	XXX	6.0 Daily Min	XXX	XXX	9.0	1/day	Grab
DO	xxx	xxx	5.0 Daily Min	xxx	xxx	xxx	1/day	Grab
TRC	xxx	xxx	XXX	0.5	xxx	1.6	1/day	Grab
CBOD5	385	615	xxx	25.0	40.0	50	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	xxx	2/week	24-Hr Composite
TSS	460	690	XXX	30.0	45.0	60	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	xxx	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	xxx	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	xxx	xxx	xxx	200 Geo Mean	xxx	1000	2/week	Grab
E. Coli (No./100 mL)	xxx	xxx	xxx	xxx	xxx	Report	1/month	Grab
Ammonia Nov 1 - Apr 30	194	xxx	XXX	12.6	xxx	25.2	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	64	xxx	XXX	4.2	XXX	8.4	2/week	24-Hr Composite
Total Copper	Report	Report Daily Max	XXX	Report	Report Daily Max	xxx	2/month	24-Hr Composite

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			Effluent L	imitations			Monitoring Re	quirements
Parameter	Mass Units (Ibs/day) ⁽¹⁾			Concentrat	Minimum ⁽²⁾	Required		
Faranieler	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
		Report			Report			24-Hr
Total Zinc	Report	Daily Max	XXX	Report	Daily Max	XXX	2/month	Composite
		Report			Report			24-Hr
Dissolved Iron	Report	Daily Max	XXX	Report	Daily Max	XXX	2/month	Composite
		0.6			0.0388			24-Hr
Chloroform	0.38	Daily Max	XXX	0.0249	Daily Max	0.0622	2/month	Composite

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.

			Effluent L	imitations			Monitoring Re	Monitoring Requirements	
Parameter	Mass Unit	Mass Units (Ibs/day) ⁽¹⁾		Concentrat	tions (mg/L)		Minimum ⁽²⁾	Required	
Farameter	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum	Measurement Frequency	Sample Type	
Total Nitrogen (lbs)		35433							
Effluent Net	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation	
		Report							
Total Nitrogen (lbs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation	
		Report							
Ammonia (Ibs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation	
Total Phosphorus (lbs)		4724							
Effluent Net	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation	
		Report							
Total Phosphorus (lbs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation	

• In addition, the permittee was approved to use 550 lbs. of TN/year as offset towards compliance for connecting 22 OLDs into their collection system on October 24, 2011. The OLDs were in existence prior to January 1, 2003.

 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

StreamStats

/16/23, 9:00 AM			StreamStats				
StreamStats Re	eport						
Region ID: PA							
Workspace ID: PA	20230816124626589000						
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Parameter Code CARBON DRNAREA PRECIP ROCKDEP STRDEN Cov-Flow Statis Low-Flow Statis Parameter Code DRNAREA PRECIP	Parameter Description Percentage of area of carbonate roc Area that drains to a point on a stree Mean Annual Precipitation Depth to rock Stream Density total length of stree ttics tics Parameters [99.8 Percent (49.5 s Parameter Name Drainage Area Mean Annual Precipitation	am eams divided square miles; Value 49.6 43	Low Flow Reg Units square miles inches	gion 2] s	23.73 49.6 43 5.2 1.53 Min 4.9 35	percent square m inches feet miles per h Limit 3	r square mile Max Limit 1280 50.4
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Parameter Code CARBON DRNAREA PRECIP ROCKDEP STRDEN CAW-Flow Statis Parameter Code DRNAREA PRECIP STRDEN ROCKDEP CARBON Low-Flow Statis	Parameter Description Percentage of area of carbonate roc Area that drains to a point on a stree Mean Annual Precipitation Depth to rock Stream Density total length of stree tics Parameters [99.8 Percent (49.5 s Parameter Name Drainage Area Mean Annual Precipitation Stream Density Depth to Rock Percent Carbonate tics Flow Report [99.8 Percent (49.5 s	am eams divided square miles Value 49.6 43 1.53 5.2 23.73 square miles	Low Flow Reg Units square miles inches miles per sq feet percent) Low Flow Re	gion 2] s uare mile gion 2]	23.73 49.6 43 5.2 1.53 Min 4.9 35 0.5 3.3 0	percent square m inches feet miles per a Limit 3 1 2	Max Limit 1280 50.4 3.1 5.65 99
Parameter Code CARBON DRNAREA PRECIP ROCKDEP STRDEN CAW-Flow Statis Parameter Code DRNAREA PRECIP STRDEN ROCKDEP CARBON Low-Flow Statis PII: Prediction Int	Parameter Description Percentage of area of carbonate roc Area that drains to a point on a stree Mean Annual Precipitation Depth to rock Stream Density total length of stree tics tics Parameters [99.8 Percent (49.5 s Parameter Name Drainage Area Mean Annual Precipitation Stream Density Depth to Rock Percent Carbonate	am eams divided square miles Value 49.6 43 1.53 5.2 23.73 square miles	Low Flow Reg Units square miles inches miles per sq feet percent) Low Flow Re	gion 2] s uare mile gion 2]	23.73 49.6 43 5.2 1.53 Min 4.9 35 0.5 3.3 0	percent square m inches feet miles per a Limit 3 1 2	Max Limit 1280 50.4 3.1 5.65 99
Parameter Code CARBON DRNAREA PRECIP ROCKDEP STRDEN CARBON CARBON Low-Flow Statis Parameter Code DRNAREA PRECIP STRDEN ROCKDEP CARBON Low-Flow Statis PIL: Prediction Int see report)	Parameter Description Percentage of area of carbonate roc Area that drains to a point on a stree Mean Annual Precipitation Depth to rock Stream Density total length of stree tics Parameters [99.8 Percent (49.5 s Parameter Name Drainage Area Mean Annual Precipitation Stream Density Depth to Rock Percent Carbonate tics Flow Report [99.8 Percent (49.5 s	am eams divided square miles) Value 49.6 43 1.53 5.2 23.73 square miles per, ASEp: Av	Low Flow Reg Units square miles inches miles per sq feet percent) Low Flow Re erage Standard	gion 2] s uare mile gion 2] I Error of Pres	23.73 49.6 43 5.2 1.53 Min 4.9 35 0.5 3.3 0 0	percent square m inches feet miles per h Limit 3 1 2	Max Limit 1280 50.4 3.1 5.65 99
Parameter Code CARBON DRNAREA PRECIP ROCKDEP STRDEN CAW-Flow Statis Parameter Code DRNAREA PRECIP STRDEN ROCKDEP CARBON Low-Flow Statis PII: Prediction Int	Parameter Description Percentage of area of carbonate roc Area that drains to a point on a stree Mean Annual Precipitation Depth to rock Stream Density total length of stree ttics ttics Parameters [99.8 Percent (49.5 s Parameter Name Drainage Area Mean Annual Precipitation Stream Density Depth to Rock Percent Carbonate ttics Flow Report [99.8 Percent (49.5 s terval-Lower, Plu: Prediction Interval-Upp	am eams divided square miles) Value 49.6 43 1.53 5.2 23.73 square miles per, ASEp: Av	Low Flow Reg Units square miles inches miles per sq feet percent) Low Flow Re	gion 2] s uare mile gion 2]	23.73 49.6 43 5.2 1.53 Min 4.9 35 0.5 3.3 0 0	percent square m inches feet miles per a Limit 3 1 2	Max Limit 1280 50.4 3.1 5.65 99

8/16/23, 9:00 AM

StreamStats

Statistic 30 Day 2 Year Low Flow	Yalue	Koit,	SE 33	ASEp
7 Day 10 Year Low Flow	9.61	ft^3/s	51	51
30 Day 10 Year Low Flow	10.9	ft^3/s	46	46
90 Day 10 Year Low Flow	13.3	ft^3/s	36	36

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.16.1 StreamStats Services Version: 1.2.22 NSS Services Version: 2.2.1

https://streamstats.usgs.gov/ss/

NPDES Permit Fact Sheet Washington Township MA WWTP

WQM 7.0 ver. 1.1

	SWP Basir			Stre	eam Name		RMI		ation ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdra (mgd	wal	Apply FC
	13C	592	291 EAST	BRANCH	ANTIETAN	I CREEK	0.94	10	563.00	49.60	0.00000		0.00	✓
					St	ream Dat	a							
Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Ten	<u>Tributary</u> 1p pH	Tem	<u>Stream</u> p	pН	
Cond.	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C	5)	(°C))		
27-10 21-10 230-10	0.194	0.00 0.00 0.00	0.00 0.00 0.00	0.000 0.000 0.000	0.000 0.000 0.000	0.0	0.00	0.00) 2	0.00 7.0)0 (0.00	0.00	
					D	ischarge	Data							
			Name	Per	mit Numbe	Disc	Permitte Disc Flow (mgd)	Disc	Res V Fa	Dis erve Tem ctor (°C	ip p	sc H		
		Wash	nington MA	PA	0080225	1.850	0 1.850	0 1.85	500	0.000 2	5.00	7.00		
					Pa	arameter	Data							
			F	aramete	r Name				Stream Conc	Fate Coef				
	_					(m	ng/L) (n	ng/L)	(mg/L)	(1/days)				
			CBOD5				25.00	2.00	0.00	1.50				
			Dissolved	Oxygen			5.00	8.24	0.00	0.00				
			NH3-N				4.20	0.00	0.00	0.70				

Wednesday, August 16, 2023

Version 1.1

Input Data WQM 7.0

	SWP Basir			Stre	am Name		RMI	Eleva (ft))rainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	13C	59	291 EAST	BRANCH	ANTIETA	M CREEK	0.00	0 5	35.00	51.90	0.00000	0.00	
					S	tream Dat	ta						
Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	<u>Ti</u> Temp	<u>ributary</u> pH	Tem	<u>Stream</u> 1p pH	
Cona.	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.194	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.0	00 7.0	00	0.00 0.0	0
Q1-10 Q30-10		0.00 0.00		0.000 0.000	0.000 0.000								

		Dis	charge Da	ta					
Na	me Permit N	lumber	Existing I Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Res	erve T ctor	Disc emp (°C)	Disc pH
			0.0000	0.0000	0.000	0 0	0.000	25.00	7.00
		Par	rameter Da	ıta					
	Parameter Nam		Disc Con			eam onc	Fate Coef		
	Farameter Nam	ie.	(mg/	L) (mg	/L) (n	ng/L)	(1/days)		
СВС	DD5		25	.00 2	2.00	0.00	1.50		
Diss	olved Oxygen		з	.00 8	B.24	0.00	0.00)	
NH3	-N		25	.00 (0.00	0.00	0.70)	
NH3	-N		25	.00 (D.00	0.00	0.70		

Version 1.1

Page 2 of 2

WQM 7.0 D.O.Simulation

13C 59291 EAST BRANCH ANTIETAM CREEK Rill 0.940 Total Discharge Flow (mgd) 1.850 Analysis Temperature (*C) 2.1.147 Analysis pH 7.000 Reach Width (ff) 44.713 1.850 Reach Depth (ff) 0.755 Reach VNRatio 50.212 Analysis pH 7.000 Reach CBOD5 (mg/L) 7.28 Reach Kc (1/days) Reach NH3-N (mg/L) 1.150 Reach NH3-N (mg/L) 0.966 Reach Kn (1/days) 0.765 Reach Travel Time (days) Reach Kr (1/days) Reach NH3-N (mg/L) 14.613 Subreach (mg/L) D.0. (mg/L) 0.156 TravTime (days) CBOD5 (mg/L) NH3-N 0.047 D.0. (mg/L) 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.68 0.047 6.88 0.93 7.68 0.047 6.88 0.92 7.72 0.078 6.22 0.91 7.78 0.093 6.50 0.90 7.88 0.109 6.38 7.88 0.140 6.14 0.87 7.88 0.140 6.14 0.86 7.91		SWP Basin	Stream Code			Stream N	ame	
0.940 1.850 21.147 7.000 Reach Width (ft) Reach Depth (ft) Reach WDRatio Reach Velocity (fps) 44.713 0.755 59.212 0.369 Reach CBOD5 (mg/L) Reach Kc (1/days) Reach NH3-N (mg/L) Reach Kn (1/days) 7.28 1.150 0.96 0.765 Reach DO (mg/L) Reach Kr (1/days) Kr Equation Reach DO Goal (mg/L) 7.499 14.813 Tsivoglou 5 Reach Travel Time (days) Subreach Results (mg/L) D.O. 0.158 TravTime CBOD5 NH3-N D.O. (days) (mg/L) (mg/L) (mg/L) 5 0.016 7.14 0.95 7.57 0.031 7.01 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.88		13C	59291		EAST BR	ANCH ANT	IETAM CREE	к
Reach Width (ft) Reach Depth (ft) Reach WDRatio Reach Velocity (fps) 44.713 0.755 59.212 0.369 Reach CBOD5 (mg/L) Reach Kc (1/days) Reach NH3-N (mg/L) Reach Kn (1/days) 7.28 1.150 0.96 0.765 Reach DO (mg/L) 7.499 14.813 Tsivoglou 5 Reach Travel Time (days) 0.156 Subreach Results Reach (mg/L) 6 0.156 0.156 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.033 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.88		RMI	Total Discharg	e Flow (mgd	l) Anal	lysis Temp	erature (°C)	Analysis pH
44.713 0.755 59.212 0.369 Reach CBOD5 (mg/L) Reach Kc (1/days) Reach NH3-N (mg/L) Reach Kn (1/days) 0.785 7.28 1.150 0.96 0.785 Reach DO (mg/L) 0.785 7.28 1.150 0.96 0.785 Reach CBOD5 (mg/L) 0.785 7.499 14.813 Tsivoglou 5 5 0.156 TravTime CBOD5 (mg/L) 0.016 7.14 0.95 7.57 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.88		0.940	1.8	50		21.14	7	7.000
Reach CBOD5 (mg/L) Reach Kc (1/days) Reach NH3-N (mg/L) Reach Kn (1/days) 0.06 0.785 Reach CDO Goal (mg/L) Reach CDO Goal (mg/L)		Reach Width (ft)	Reach D	epth (ft)		Reach WI	ORatio	Reach Velocity (fps)
7.28 1.150 0.96 0.765 Reach DO (mg/L) Reach Kr (1/days) Kr Equation Reach DO Goal (mg/L) 7.499 14.613 Tsivoglou 5 Reach Travel Time (days) Subreach Results (days) D.O. (mg/L) O.156 0.156 TravTime (days) CBOD5 (mg/L) NH3-N (mg/L) D.O. (mg/L) 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.88		44.713	0.7	55		59.21	2	0.369
Reach DQ (mg/L) 7.499 Reach Kr (1/days) 14.613 Kr Equation Tsivoglou Reach DO Goal (mg/L) 5 Reach Travel Time (days) 0.156 Subreach Results CBOD5 D.O. (mg/L) D.O. (mg/L) 0.156 TravTime (days) CBOD5 (mg/L) NH3-N (mg/L) D.O. (mg/L) 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.88		Reach CBOD5 (mg/L)	Reach Ko	: (1/days)	B	each NH3-	N (mg/L)	Reach Kn (1/days)
Tisked Tibe 14.813 Tsivoglou 5 Reach Travel Time (days) 0.156 TravTime CBOD5 (mg/L) NH3-N (mg/L) D.O. (mg/L) 0.156 0.016 7.14 0.95 7.57 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86		7.28						
Subreach Results 0.156 TravTime CBOD5 NH3-N (mg/L) D.O. (mg/L) 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.88		Reach DO (mg/L)						
0.156 0.156 TravTime CBODS NH3-N D.O. (days) (mg/L) (mg/L) (mg/L) 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88		7.499	14.6	313		Tsivog	lou	5
(days) (mg/L) (mg/L) (mg/L) 0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88	R	each Travel Time (days	<u>5)</u>	Subreact	n Results			
0.016 7.14 0.95 7.57 0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88		0.156						
0.031 7.01 0.94 7.63 0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			(days)	(mg/L)	(mg/L)	(mg/L)		
0.047 6.88 0.93 7.68 0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			0.01	8 7.14	0.95	7.57		
0.062 6.75 0.92 7.72 0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			0.03	1 7.01	0.94	7.63		
0.078 6.62 0.91 7.76 0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			0.04	7 6.88	0.93	7.68		
0.093 6.50 0.90 7.80 0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			0.06	2 6.75	0.92	7.72		
0.109 6.38 0.89 7.83 0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			0.07	8 6.62	0.91	7.76		
0.124 6.26 0.88 7.86 0.140 6.14 0.87 7.88			0.09	3 6.50	0.90	7.80		
0.140 6.14 0.87 7.88			0.10	9 6.38	0.89	7.83		
			0.12	4 6.26	0.88	7.86		
0.156 6.03 0.86 7.91			0.14	0 6.14	0.87	7.88		
			0.15	8 6.03	0.86	7.91		

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	<u>.sw</u>	<u>/P Basin</u> 13C		<u>um Code</u> 9291		E		Stream NCH AN	Name TIETAM (CREEK		
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow		Depth	Width	W/D Ratio	Velocity	Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-1	0 Flow											
0.940	9.61	0.00	9.61	2.8619	0.00584	.755	44.71	59.21	0.37	0.156	21.15	7.00
Q1-1	0 Flow											
0.940	6.15	0.00	6.15	2.8619	0.00584	NA	NA	NA	0.31	0.187	21.59	7.00
Q30-'	10 Flow	/										
0.940	13.07	0.00	13.07	2.8619	0.00564	NA	NA	NA	0.42	0.136	20.90	7.00

WQM 7.0 Hydrodynamic Outputs

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WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	•
WLA Method	EMPR	Use Inputted W/D Ratio	
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	
Q30-10/Q7-10 Ratio	1.38	Temperature Adjust Kr	•
D.O. Saturation	90.00%	Use Balanced Technology	✓
D.O. Goal	5		

Wednesday, August 16, 2023

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WQM 7.0 Wasteload Allocations

	SWP Basin Stre	eam Code		St	ream Name		
	13C	59291		EAST BRANG	CH ANTIETAN	CREEK	
NH3-N	Acute Allocatio	ns					
RMI	Discharge Name	Baseline e Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.9	40 Washington MA	14.69	8.4	14.69	8.4	0	0
NH3-N	Chronic Allocat	tions					
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.9	40 Washington MA	1.78	4.2	1.78	4.2	0	0
issolv	ed Oxygen Allo	cations					
		(NH2-N	Dissol	red Opropor	

		CBC	DD5	NH	3-N	Dissolve	d Oxygen	Critical	Percent	
RI	MI Discharge Name	Baseline (mg/L)		Baseline (mg/L)	Multiple	Baseline	Multiple		Reduction	
	0.94 Washington MA	25	25	4.2	4.2	5	5	0	0	

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		<u>im Code</u> 9291	EA	<u>Stream Nam</u> ST BRANCH ANTIET	-		
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)
0.940	Washington MA	PA0080225	1.850	CBOD5	25		
				NH3-N	4.2	8.4	
				Dissolved Oxygen			5

WQM 7.0 Effluent Limits

Wednesday, August 16, 2023

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TRC_CALC worksheet

TRC_CALC

1A	В	С	D	Е	F	G
2	TRC EVALU	ATION				
3	Input appropri	ate values in	B4:B8 and E4:E7			
4	49.6	j = Q stream (cfs)	0.5	= CV Daily	
5	1.85	= Q discharg	ge (MGD)		= CV Hourly	
6	30	= no. sample	95	1	= AFC_Partial N	Aix Factor
7	0.3	= Chlorine D	emand of Stream	1	= CFC_Partial M	Nix Factor
8	0	= Chlorine D	emand of Discharge	15	= AFC_Criteria	Compliance Time (min)
9	0.5	= BAT/BPJ V	/alue	720	-	Compliance Time (min)
	0	= % Factor	of Safety (FOS)		=Decay Coeffic	1.7
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc =	5.548	1.3.2.iii	WLA cfc = 5.401
	PENTOXSD TRG		LTAMULT afc =		5.1c	LTAMULT cfc = 0.581
	PENTOXSD TRG	5.1b	LTA_afc=	2.067	5.1d	LTA_cfc = 3.140
14	-					
15	Source	5.46		Limit Calc		
	PENTOXSD TRG PENTOXSD TRG					
18	PENTOXSDIRG	5 5.1g	AVG MON LIMI INST MAX LIMI			BAT/BPJ
10			INST MAX LIMI	i (mg/i) -	1.035	
	WLA afc LTAMULT afc LTA_afc	+ Xd + (AF	FC_tc)) + [(AFC_Yc*Q C_Yc*Qs*Xs/Qd)]*(1-f (cvh^2+1))-2.326*LN(MULT_afc	OS/100)	//	
	WLA_cfc LTAMULT_cfc LTA_cfc	+ Xd + (CF EXP((0.5*LN wla_cfc*LTA	-	=OS/100)))-2.326*L	.N(cvd^2/no_sar	mples+1)^0.5)
	AML MULT AVG MON LIMIT INST MAX LIMIT	MIN(BAT_BF	N((cvd^2/no_samples 2J,MIN(LTA_afc,LTA_c n_limit/AML_MULT)/L	fc)*AML_	MULT)	o_sampies+1))

Page 1

Toxics Management Spreadsheet

Evaluation Type: Major Sewage / Industrial Waste Wastewater Description: Sewage Discharge Characteristics Design Flow (MSD)* Hardness (mg/l)* pH (SU)* Partial Mix Factors (PMFs) Complete N Ormalia 1.85 189 7				Version 1.4										
	ischarg	e Informati	on											
ns	tructions D	lischarge Stream												
a	ility: Wa	shington Township	MA WW	ТР		N	PDES Per	mit No.:	PA0080	225		Outfall	No.: 001	
va	luation Type	Major Sewage	Industr	ial V	laste	W	astewater	Descript	tion: Sev	vage				
_					Discha	rge Ch	aracteris	tics						
D		Hardness (mg/l)*	pH (SU)*		Par	tial Mix Fa	actors (F						
_					AFC	;	CFC	THH		CRL	Q,	-10	0	հ
_	1.00	103												
						0 If I	eft blank	0.5 lf le	ft blank	6	lf left blan	ĸ	1 If lef	t blank
	Disch	arge Pollutant	Units	Max								FOS	Criteri a Mod	Chem Transl
_							2.2							
	<u> </u>	5)				122222 122222	8							******
5	Sulfate (PWS					en e	2							anne
		,			70	1111	306							00000
				<			8							
						0000	8							
						2222	8							
		m		<		1111 19999	200							
		m		<			8							
						222	200							
		hromium		_		inni M	8							
				~		1111	0	0.7725						
p 2	Free Cyanide		µg/L			1414	2							111111
20	<u> </u>						20							199999
ی		n				00000	8							
	<u> </u>			<		000	8							
	<u> </u>						200							
		1		<		111	X C							
		(Phenolics) (PWS)		<		000	222							2222
		m				m	8							
	Total Silver Total Thalliun		µg/L	<	0.3		80							
	Total Thailiun Total Zinc		μg/L μg/L	Ì	46		8							
	Total Molybde	enum	µg/L		2.5	222	88							
	Acrolein		µg/L	<	2	eren.	8							
	Acrylamide Acrylonitrile		μg/L μg/L	<	2	1111	20							
	Benzene		µg/L	<	0.5		8							
	Bromoform		µg/L	<	0.5	2223	22							2000
	Carbon Tetra	chloride	µg/L	<	0.5	10000	0							000000

E	211						1		-	-		
	Chlorobenzene	µg/L	<	0.5	CORRECT			<u> </u>	<u> </u>	<u> </u>		222
	Chlorodibromomethane	µg/L		0.5	00000		-			-		
- H	Chloroethane	µg/L	<	0.5		_		<u> </u>	<u> </u>	<u> </u>		
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5	00000			<u> </u>	<u> </u>	<u> </u>		<u></u>
- H	Chloroform	µg/L		14	1119999	_						111
	Dichlorobromomethane	µg/L		1.8	en sen sen sen sen sen sen sen sen sen s							www.
Ľ	1,1-Dichloroethane	µg/L	<	0.5	122252							9999
	1,2-Dichloroethane	µg/L	<	0.5	innin							nnn
₽Ľ	1,1-Dichloroethylene	µg/L	<	0.5	*****							20.01
Group	1,2-Dichloropropane	µg/L	<	0.5	00000							2023
۶F	1,3-Dichloropropylene	µg/L	<	0.5	00000							2222
- 17	1,4-Dioxane	µg/L	<	5							6	
Ē	Ethylbenzene	µg/L	<	0.5	xxxxxxxx							555
1	Wethyl Bromide	µg/L	<	0.5	1499999							9999
	Wethyl Chloride	µg/L	<	0.5	111111							199
	Wethylene Chloride	µg/L	<	0.5	111111111	<u> </u>	<u> </u>					1999
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5	444444		<u> </u>			<u> </u>		222
	Tetrachloroethylene	µg/L	<	0.5	111111	+	+	<u> </u>	<u> </u>	<u> </u>		112
	Toluene	µg/L	<	0.5	1100000	<u> </u>		<u> </u>	<u> </u>	<u> </u>	1	1.1.1
- H	1,2-trans-Dichloroethylene	µg/L	<	0.5	100000	+	+	<u> </u>	<u> </u>	<u> </u>	6	111
	1.1.1-Trichloroethane	µg/L	<	0.5	111111111	<u> </u>		<u> </u>	<u> </u>	<u> </u>	1	111
	1, 1, 1-Trichloroethane	µg/L	<	0.5	000000	-					1	the
- H			<	0.5	100000	-					-	and a
	Trichloroethylene /inyl Chloride	µg/L	< <	0.5	000000	-	-				-	100
_	2-Chlorophenol	µg/L	<	10	~~~~	<u> </u>		<u> </u>	<u> </u>	<u> </u>		000
- H		µg/L	-	10	**************************************	<u> </u>		<u> </u>	<u> </u>	<u> </u>		
	2,4-Dichlorophenol	µg/L	<		0000000	<u> </u>		<u> </u>	<u> </u>	<u> </u>		
	2,4-Dimethylphenol	µg/L	<	10	11111	_		<u> </u>	<u> </u>	<u> </u>		44
- H	4,6-Dinitro-o-Cresol	µg/L	<	10	1212121212			<u> </u>	<u> </u>	<u> </u>	6	444
à	2,4-Dinitrophenol	µg/L	<	10	11111							111
<u> </u>	2-Nitrophenol	µg/L	<	10	10000							200
	4-Nitrophenol	µg/L	<	10	111111							0000
- E	o-Chloro-m-Cresol	µg/L	<	10	1999999							222
	Pentachlorophenol	µg/L	<	10	49191919191							deleter.
E	Phenol	µg/L	<	10	00000							222
2	2,4,6-Trichlorophenol	µg/L	<	10	144444							202
4	Acenaphthene	µg/L	٨	2.5								202
- 2	Acenaphthylene	µg/L	>	2.5	144444							avy y
- 12	Anthracene	µg/L	<	2.5	11111							
Ē	Benzidine	µg/L	<	2.5	1111111							ŵŵ
Ī	Benzo(a)Anthracene	µg/L	<	2.5	22222							222
Ī	Benzo(a)Pyrene	µg/L	<	2.5	100000							222
- H	3,4-Benzofluoranthene	µg/L	<	2.5	22222							
	Benzo(ghi)Perylene	µg/L	<	2.5	000000	<u> </u>				<u> </u>		
	Benzo(k)Fluoranthene	µg/L	<	2.5		<u> </u>				<u> </u>		1000
	Bis(2-Chloroethoxy)Methane	µg/L	<	5	CERECE	+	+	<u> </u>	<u> </u>	<u> </u>	1 6	iti t
	Bis(2-Chloroethyl)Ether	µg/L	<	5	222222	+		<u> </u>		<u> </u>	1	
	Bis(2-Chloroisopropyl)Ether	µg/L	<	5	000000	-						355
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	5	100000	-					-	222
	4-Bromophenyl Phenyl Ether		<	5	000000	-	-					200
	bromophenyi Phenyi Ether Butyl Benzyl Phthalate	µg/L	~	5	00000							111
		µg/L	< <	5	00000	-					-	10
-	2-Chloronaphthalene	µg/L	-		0000000	-						0.00
_	4-Chlorophenyl Phenyl Ether	µg/L	<	5	10000		-			-		16
	Chrysene	µg/L	<	2.5	00000	-	-					200
	Dibenzo(a,h)Anthrancene	µg/L	<	2.5	00000							000
	1,2-Dichlorobenzene	µg/L	<	0.5	111111	-						20
	1,3-Dichlorobenzene	µg/L	<	0.5	155555							225
	1,4-Dichlorobenzene	µg/L	<	0.5	115511							1m
3	3,3-Dichlorobenzidine	µg/L	<	5	in the second						-	in h
	Diethyl Phthalate	µg/L	<	5	1111111111						6	900
ם] י	Dimethyl Phthalate	µg/L	<	5	00000							202
_	Di-n-Butyl Phthalate	µg/L		5	333335							333
	2,4-Dinitrotoluene	µg/L	<	5	innin						t	ere.
	2,6-Dinitrotoluene	µg/L	<	5	56666							555
	Di-n-Octyl Phthalate	µg/L	<	5								111

Discharge Information

[1,2-Diphenylhydrazine	µg/L	<	5	14444							www
	Fluoranthene	µg/L	<	2.5	000000							2010
	Fluorene	µg/L	<	2.5	000000							0000
ł	Hexachlorobenzene	µg/L	<	5	122222							2222
- H	Hexachlorobutadiene	µg/L	<	0.5	000000							2022
- F	Hexachlorocyclopentadiene	µg/L	<	5	222222		1					2222
- F	Hexachloroethane	µg/L	<	5				<u> </u>		<u> </u>		1999
	Indeno(1,2,3-cd)Pyrene	µg/L	<	2.5				<u> </u>	<u> </u>	<u> </u>		12.20
	Isophorone	µg/L	<	5		+		<u> </u>	<u> </u>	<u> </u>	<u> </u>	1000
	Naphthalene	µg/L	<	0.5		+		 	<u> </u>	<u> </u>	<u> </u>	1444
	Nitrobenzene	µg/L	<	5	222222	+		+	<u> </u>	<u> </u>	<u> </u>	1999
- k	n-Nitrosodimethylamine	µg/L	<	5	000000	+		 	<u> </u>	<u> </u>	<u> </u>	2000
	n-Nitrosodi-n-Propylamine	µg/L	<	5	200000	<u> </u>		 	<u> </u>	<u> </u>	<u> </u>	いない
	n-Nitrosodiphenylamine	µg/L	<	5	1000000000			<u> </u>	<u> </u>	<u> </u>	<u> </u>	artistication artistication
	Phenanthrene	µg/L	Ì	2.5	100000	+		+	<u> </u>	<u> </u>	<u> </u>	1000
- 1			—					<u> </u>	<u> </u>	<u> </u>	<u> </u>	22/2/2/2
	Pyrene	µg/L	<	2.5	000000			<u> </u>	-	<u> </u>	<u> </u>	1000
-	1,2,4-Trichlorobenzene	µg/L	<	0.5	111111	+		<u> </u>	<u> </u>	<u> </u>	<u> </u>	1111
- K	Aldrin	µg/L	<		×55555	_		<u> </u>	<u> </u>	<u> </u>	<u> </u>	1355
- H	alpha-BHC	µg/L	<		11111			-		-		000
- F	beta-BHC	µg/L	<		00000	_						1772
	gamma-BHC	µg/L	<		1999999	_						1999
- 14	delta BHC	µg/L	<		00000							222
- K	Chlordane	µg/L	<		00000	_						222
- L	4,4-DDT	µg/L	<		00000							222
- 6	4,4-DDE	µg/L	<		11111111111111							*5*5*5
	4,4-DDD	µg/L	<		000000							200
	Dieldrin	µg/L	<		22222							222
	alpha-Endosulfan	µg/L	<		ちちちちちちち							elejeje elejeje
	beta-Endosulfan	µg/L	<		00000							200
? İ	Endosulfan Sulfate	µg/L	<									1999
ξİ	Endrin	µg/L	<		111111							6969
	Endrin Aldehyde	µg/L	<		*****							2000
	Heptachlor	µg/L	<		000000							1995
	Heptachlor Epoxide	µg/L	<		111111							1999
	PCB-1016	µg/L	<		141444							1665
- H	PCB-1221	µg/L	<		11111111							12/2/2
- 14	PCB-1232	µg/L	<		1111111							WWW.
	PCB-1242	µg/L	<		000000							1000
	PCB-1242	µg/L	Ì		200000							1995
- k	PCB-1254	µg/L	<		NNNN			-				1000
- K	PCB-1204	µg/L	Ì		00000		-	-				1000
- F	PCBs, Total	_	<		89999999			-				#3#345 #3#345
		µg/L	<		199977			-				1775
	Toxaphene	µg/L	<u> </u>		111111	-	-					12/22
_	2,3,7,8-TCDD	ng/L	<		1999999 2010101010			-				1999
- 6	Gross Alpha	pCi/L			000000			-	-	-		200
	Total Beta	pCi/L	<		100000	_	-	-				100
ţ	Radium 226/228	pCi/L	<		199999	_		-				1555
5 h	Total Strontium	µg/L	<		and a first starting	_	-					1010
	Total Uranium		<		CEREES.	_		-				1999
	Osmotic Pressure	mOs/kg			conn							144
					09999	_						
					444555							
					1414141414							
					cococc							
ľ												
1					000000							
ľ					22222							
ł					1000000							
ł					22222							
ł					1010101010							
		-	-		-	_	-	_	_			-

Toxics Management Spreadsheet Version 1.4, May 2023

Information	
Water	
/ Surface	
Stream /	

pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION Washington Township MA WWTP, NPDES Permit No. PA0080225, Outfall 001

Streau	
Discharge	
istructions	

8

 Statewide Criteria 	 Great Lakes Criteria 	ORSANCO Criteria			
el: 1		Apply Fish	Criteria*	Yes	Yes
No. Reaches to Model:		PWS Withdrawal	(MGD)		
		Close (4.4)	() INI ADDIC		
		N A A A A A A A A A A	na (m) Fu	49.6	51.9
Breeches Creek		Elevation	(U)	563	535
low Breeche		NM10		0.94	0
/ater Name: Yel		Chrom Code	ollean coue	059291	059291
Receiving Surface Water Name: Yellow Bi		- antion	LOCATION	Point of Discharge	End of Reach 1

Q 7-10

Location	DAM	ΓFΥ	Flow (cfs)	(cfs)	D/N	Width	Depth	Velocit	Time	Tributary	٨	Stream	_	Analysis	ŝ
LUCATION		(cfs/mi ²)*	Stream	Tributary	Ratio	ŧ	(#)	y (fps)	(dave)	Hardness	Hd	Hardness*	ч	Hardness	Hd
Point of Discharge	0.94	0.194		anna an						Samme Samme	1112	100	7		
End of Reach 1	0	0.194		Contrain.						Summe	and a				

Qh															
contion	DMI	ΓΕΥ	Flow	Flow (cfs) W/D	M/D	Width	Depth	Velocit	Timo	Tributary	2	Stream	_	Analysis	
FOCGUOII		(cfs/mi ²)	Stream	Tributary	Ratio	(ft) (ft) y (fps)	(#)	y (fps)	(dave)	Hardness pH Hardness pH Hardness	Ηd	Hardness	Hq	Hardness	Hq
Point of Discharge	0.94	and the second s									ann.				
End of Reach 1	0	and all								San Contractor	in the				

Page 4

Stream / Surface Water Information

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Toxics Management Spreadsheet Version 1.4, May 2023

Model Results

Washington Township MA WWTP, NPDES Permit No. PA0080225, Outfall 001

C Limits O Results O Inputs) S PRINT SAVE AS PDF **RETURN TO INPUTS** Results Istructions

Hydrodynamics

Wasteload Allocations

																													Page 5
Analysis pH: 7.00	Comments						Chem Translator of 1 applied			Chem Translator of 0.934 applied	Chem Translator of 0.316 applied	Chem Translator of 0.982 applied		Chem Translator of 0.96 applied			Chem Translator of 0.756 applied		Chem Translator of 0.85 applied	Chem Translator of 0.998 applied		Chem Translator of 0.922 applied	Chem Translator of 0.85 applied		Chem Translator of 0.978 applied				
127.26																													
	WLA (µg/L)	N/A	N/A	N/A	2,449	3,592	1,110	68,570	26,448	8.9	7,172	53.2	310	57.4	N/A	N/A	362	N/A	5.38	1,878	N/A	N/A	18.7	212	480	9.8	2,122	2,090	5,877
Analysis Hardness (mg/l):	WQ Obj (µg/L)	N/A	N/A	N/A	750	1,100	340	21,000	8,100	2.73	2,197	16.3	95.0	17.6	N/A	N/A	111	N/A	1.65	575	N/A	N/A	5.73	65.0	147	3.0	650	640	003±600
Analy	WQC (µg/L)	N/A	N/A	N/A	750	1,100	340	21,000	8,100	2.545	694.111	16	95	16.866	N/A	N/A	83.877	N/A	1.400	574.150	N/A	N/A	4.869	65	143.731	9	650	640	1,800/16/2013800
0.674	Fate Coef	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PMF:	Trib Conc (µg/L)	100000	anna.	and a	00000	and the	anne	Same		anne	Same			anna	anna	<i>anna</i>		ann	ann	anne	man	ann			202222	anna	anno	in the second second	and and a second
5	Stream CV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CCT (min): 15	Stream Conc (µg/L)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFC CCT	Pollutants	Total Dissolved Solids (PWS)	Chloride (PWS)	Sulfate (PWS)	Total Aluminum	Total Antimony	Total Arsenic	Total Barium	Total Boron	Total Cadmium	Total Chromium (III)	Hexavalent Chromium	Total Cobalt	Total Copper	Dissolved Iron	Total Iron	Total Lead	Total Manganese	Total Mercury	Total Nickel	Total Phenols (Phenolics) (PWS)	Total Selenium	Total Silver	Total Thallium	Total Zinc	Acrolein	Acrylonitrile	Benzene	Middel Results Bromoform

			STOCK AND AND AND AND AND AND AND AND AND AND	,	×,000	2000.4		
Chlorobenzene	0	0	6666666	0	1.200	1,200	3,918	
Chlorodibromomethane	0	0	19939999	0	N/A	N/A	N/A	
2-Chlaroethyl Vinyl Ether	0	0	1912-1913-19	0	18,000	18,000	58,774	
Chloroform	0	0	1111111111	0	1,900	1,900	6,204	
Dichlorobromomethane	0	0	121212120	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	48,978	
1,1-Dichloroethylene	0	0		0	7,500	7,500	24,489	
1,2-Dichloropropane	0	0	13131313131313	0	11,000	11,000	35,917	
1.3-Dichloropropylene	0	0	0000000	0	310	310	1,012	
Ethylbenzene	0	0	Carriero	0	2,900	2,900	9,469	
Methyl Bromide	0	0	11111111111	0	550	550	1,796	
Methyl Chloride	0	0	Color Color	•	28,000	28,000	91,426	
Methylene Chloride	0	0	1999-1999	0	12,000	12,000	39,183	
1.1.2.2-Tetrachloroethane	0	0	1260000	0	1.000	1,000	3,265	
Tetrachloroethylene	0	0	19999999	•	700	700	2,286	
Toluene	0	0	1999999	0	1,700	1,700	5,551	
1.2-trans-Dichloroethylene	0	0	2222222222	0	6,800	6,800	22,204	
1.1.1-Trichloroethane	0	0	2010-010-02	•	3.000	3.000	9.796	
1 1 2-Trichloroethane		c	0011000		3 400	3 400	11 102	
Trichloroathulana				, c	2,300	2,300	7 610	
Viewi Oblocido	, c	,	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	, ,	AUA	51/V	NI/V	
			00000000	,		200	000 1	
		•	Call Contractor	•	002	000	870'1	
2,4-Dichlorophenol	0	0	20.000	0	1,700	1,700	5,551	
2,4-Dimethylphenol	0	0	Collector	•	660	660	2,155	
4,6-Dinitro-o-Cresol	0	•	1.0.0.0.00	•	80	80.0	261	
2,4-Dinitrophenol	0	0	0.00000	0	880	660	2,155	
2-Nitrophenol	0	0	Calleraters	0	8,000	8,000	26,122	
4-Nitrophenol	0	0	111111111	0	2.300	2,300	7,510	
p-Chloro-m-Cresol	0	0	Cals Call Call	0	160	160	522	
Pentachlorophenol	0	0	asser	0	8.723	8.72	28.5	
Phenol	0	0	contra	0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	1212200	0	460	460	1,502	
Acenaphthene	0	0	666666	0	83	83.0	271	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0	121222	0	300	300	980	
Benzo(a)Anthracene	0	0	Call Call Color	0	0.5	0.5	1.63	
Benzo(a)Pyrene	0	0	Contration of	0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	allalla	0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	1996-1999	0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	1200000	0	30,000	30,000	97,957	
Bis(2-Chloroisopropyl)Ether	0	0	1200000	0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	Color Color	0	4,500	4,500	14,694	
4-Bromophenyl Phenyl Ether	0	0	Color Color	0	270	270	882	
Butyl Benzyl Phthalate	0	0	666668	0	140	140	457	
2-Chloronaphthalene	0	0	199999	0	N/A	N/A	N/A	
Chrysene	0	0	00000000	0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0	1999-1999	0	N/A	N/A	N/A	
				ļ				

																																	В			ied	ed	ied		ed		= 1	ied
																										Analysis pH: 7.00	Comments						Chem Translator of 1 applied			Chem Translator of 0.901 applied	Chem Translator of 0.86 applied	Chem Translator of 0.962 applied		Chem Translator of 0.96 applied		WQC = 30 day average; PMF = 1	Chem Translator of 0.764 applied
1,143	2,384	N/A	13,061	8,163	359	5,224	3,233	49.0	653	N/A	N/A	32.7	16.3	196	N/A	32,652	457	13,061	55,509	N/A	980	16.3	N/A	424		(mg/l): 120.4	WLA (µg/L)	N/A	N/A	N/A	N/A	960	654	17,885	6,979	1.35	438	45.3	82.9	47.7	N/A	6,543	17.6
350	730	N/A	\vdash	_	110	1,600	066	15.0	200	N/A	N/A	10.0	5.0	60.0		10,000	140	┝		N/A	300	5.0	N/A	130		Analysis Hardness (mg/l):	WQ Obj WI (ua/L)	NA	N/A	N/A	N/A	220	+	+		0.31	100	10.4	19.0	10.9	\vdash		┝
350	730	N/A	4,000	2,500	110	1,600	066	15	200	N/A	N/A	10	5	60	N/A	10,000	140	4,000	17,000	N/A	300	5	N/A	130		Analys	WQC (ua/L)	N/A	N/A	N/A	N/A	220	150	4,100	1,600	0.280	86.287	10	19	10.496	N/A	1,500	3 079
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		-	Fate Coef	0	0	0	0	0	0	0	•	•	0	0	0	0	0	0	c
Stores and	1000 lbr	and the	and and	112 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	all aller	all all a	all all a	1999 Con	1999303	all all all	and the	and the	and all	11111111	1121122	1999993722	all all a form	1999999	1999.992	111111111111	and all and a second	Section 1	and the	all all all	all all all	PMF:	Trib Conc (ua/L)	anna anna		anna		Country		and and and and and and and and and and		anna	alle	anna	and	and a contraction of the second second second second second second second second second second second second se	aller	anna	111111111
0	•	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		045	Stream	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CCT (min): 33.045	Stream Conc (uo/L)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
1,3-Dichlorobenzene	1,4-Dichlorobenzene	3,3-Dichlorobenzidine	Diethyl Phthalate	Dimethyl Phthalate	Di-n-Butyl Phthalate	2,4-Dinitrotoluene	2,6-Dinitrotoluene	1,2-Diphenylhydrazine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)Pyrene	Isophorone	Naphthalene	Nitrobenzene	n-Nitrosodimethylamine	n-Nitrosodi-n-Propylamine	n-Nitrosodiphenylamine	Phenanthrene	Pyrene	1,2,4-Trichlorobenzene		 CFC CC1 	Pollutants	Fotal Dissolved Solids (PWS)	Chloride (PWS)	Sulfate (PWS)	Total Aluminum	Total Antimony	Total Arsenic	Total Barium	Total Boron	Total Cadmium	Total Chromium (III)	Hexavalent Chromium	Total Cobalt	Total Copper	Dissolved Iron	Total Iron	Total Lead

		0 0 0		0 0 0	0.770 60.852 N/A	0.91 61.0 N/A	3.95 266 N/A	Chem Translator of 0.997 applied Chem Translator of 0.997 applied
11	0	•	C.C.C.C.	•	4.600	4.99	21.8	Chem Translator of 0.922 applied
		• •	000000	• •	13 13	N/A 13.0	N/A 58.7	Chem Translator of 1 applied
		0	00000	0	138.266	140	612	Chem Translator of 0.986 applied
	0	0	and the	0	6	3.0	13.1	
	0	0	11000	0	130	130	567	
- 1	•	•	910012	•	130	130	587	
	0	0	S.C.C.C.	0	370	370	1,614	
	0	0	all all	0	580	560	2,443	
	0	0	Fillen.	0	240	240	1,047	
	0	0	12/12/20	0	N/A	N/A	N/A	
		0	2 march	0	3,500	3,500	15,268	
		0	Caller	0	390	390	1,701	
	0	0	CHARDER.	0	N/A	N/A	N/A	
		0	anna anna	0	3,100	3,100	13,523	
		0	20000	0	1,500	1,500	6,543	
	0	0		0	2,200	2,200	9,597	
		0	20020	0	61	61.0	266	
		0	CHORE S	0	580	580	2,530	
	0	0	anan.	0	110	110	480	
	0	0	all all	0	5,500	5,500	23,992	
	0	0	all all	0	2,400	2,400	10,469	
		0	120020	0	210	210	916	
	0	0	C. C. C. C. C.	0	140	140	611	
	0	0	the alter	0	330	330	1,440	
	0	0	constant.	0	1,400	1,400	6,107	
	0	0	Second Second	0	610	610	2,661	
	0	0	Statte.	0	680	680	2,966	
	0	0	and	0	450	450	1,963	
	0	0	all all all all all all all all all all	0	N/A	N/A	N/A	
	0	0	and the second	0	110	110	480	
	0	0		0	340	340	1,483	
	0	0	Ellerer.	0	130	130	567	
	0	0	all all all all all all all all all all	0	16	16.0	69.8	
	0	0	El ante	0	130	130	567	
	0	0	12/12/20	0	1,600	1,600	6,979	
		0	Color Color	•	470	470	2,050	
	0	0	Callerte	0	500	500	2,181	
		0	aller a	0	6.693	6.69	29.2	
	0	0	aller.	0	N/A	N/A	N/A	
	0	0	Contraction of the	0	91	91.0	397	
		0	20000	0	17	17.0	74.2	
		0	111111	•	N/A	N/A	N/A	
		,	1 10 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19					

+	0 0	00		00	0.1 N/A	0.1 N/A	0.44 N/A	
\vdash	0	0	102201	0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	•		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	aareaa	0	6,000	6,000	26,173	
Bis(2-Chloroisopropyl)Ether	0	•	e e e e e e e e e e e e e e e e e e e	0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	accests	0	910	910	3,970	
4-Bromophenyl Phenyl Ether	0	0	alla a de la	0	54	54.0	236	
Butyl Benzyl Phthalate	0	0	aaaaaa	0	35	35.0	153	
2-Chloronaphthalene	0	0	202222	0	N/A	N/A	W/N	
	0	0	SCHOOL S	0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0	all all all	0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0	000000	0	160	160	698	
1,3-Dichlorobenzene	0	0	1000000	0	69	69.0	301	
1,4-Dichlorobenzene	0	0	000000	0	150	150	654	
3,3-Dichlorobenzidine	0	0	annon	0	N/A	N/A	N/A	
	0	0	Same.	0	800	800	3,490	
Dimethyl Phthalate	0	0	CHENCER S	0	500	500	2,181	
Di-n-Butyl Phthalate	0	0	0000000	0	21	21.0	91.6	
	0	•		0	320	320	1,396	
2,6-Dinitrotoluene	0	0	20000	0	200	200	872	
1,2-Diphenylhydrazine	0	0	man	0	e	3.0	13.1	
	0	0	1.000000	0	40	40.0	174	
	0	0	aaroota	0	N/A	N/A	N/A	
Hexachlorobenzene	0	0	0.000.000	0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0	aaraa	0	2	2.0	8.72	
Hexachlorocyclopentadiene	0	0	aarala	0	-	1.0	4.36	
Hexachloroethane	0	0	alesselle.	0	12	12.0	52.3	
Indeno(1,2,3-cd)Pyrene	0	0	0000000	0	N/A	N/A	N/A	
	0	0	annan	0	2,100	2,100	9,161	
	0	•	000000	0	43	43.0	188	
	0	0	1111111	0	810	810	3,533	
n-Nitrosodimethylamine	0	•	000000	0	3,400	3,400	14,831	
n-Nitrosodi-n-Propylamine	0	0	202202	0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0	age of the	0	59	59.0	257	
	0	0	S. C. L. C. C.	0	-	1.0	4.36	
	0	0	aaraa	0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0	aaabb	0	26	26.0	113	
			accento.					
CCT (CCT (min): 33.04	145	PMF:	-	Ana	Analysis Hardness (mg/l):	ss (mg/l):	N/A Analysis pH: N/A
	Stream Conc (110/1.)	Stream	Trib Conc	Fate	WQC	WQ Obj	WLA (µg/L)	Comments
Total Discoluard Solids (DWS)		; -	100000000		100000	1-18-11	M/A	
(011)			6666666		000,000	000'000	202	
					250 000	250 000	MILL N	

Total Aluminum	0	0	P. C. C. C. C.	D	A/A	N/A	N/A	
Total Antimony	0	0	Preselle.	0	5.6	5.6	24.4	
Total Arsenic	0	0	a contra	0	10	10.0	43.6	
Total Barium	0	0		•	2,400	2,400	10,469	
Total Boron	0	0	all all	0	3,100	3,100	13,523	
Total Cadmium	0	0	all all all	0	N/A	N/A	N/A	
Total Chromium (III)	0	0	annan.	0	N/A	N/A	N/A	
Hexavalent Chromium	0	0	100000	0	N/A	N/A	N/A	
Total Cobalt	0	0		•	N/A	N/A	N/A	
Total Copper	0	0	20000	0	N/A	N/A	N/A	
Dissolved Iron	0	0	12100000	•	300	300	1,309	
Total Iron	0	0	and and and and and and and and and and	0	N/A	N/A	N/A	
Total Lead		0	20000	•	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	4,362	
Total Mercury	0	0	10000	•	0.050	0.05	0.22	
Total Nickel	0	0	Cloud	0	610	610	2,661	
Total Phenols (Phenolics) (PWS)	0	0	all all a	0	5	5.0	N/A	
Total Selenium	0	0	Summer.	0	A/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0	2022	0	0.24	0.24	1.05	
Total Zinc	0	0	12/00/12	0	N/A	N/A	N/A	
Acrolein	0	0	and the	0	m	3.0	13.1	
Acrylanitrile	0	0	120000	0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0	200000	0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		•	N/A	N/A	N/A	
Chlorobenzene	0	0	diana.	0	100	100.0	436	
Chlorodibromomethane	0	0	120000	•	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	A/A	N/A	N/A	
Chloraform	0	0	Contraction of the	0	5.7	5.7	24.9	
Dichlorobromomethane	0	0	Sugar.	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	121212	0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0	2560160	0	33	33.0	144	
1,2-Dichloropropane	0	0	1210122	0	N/A	N/A	V/V	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0	SUGGES	0	68	68.0	297	
Methyl Bromide	0	0	created	0	100	100.0	436	
Methyl Chloride	0	0	anar.	0	N/A	N/A	N/A	
Methylene Chloride	0	0	13113313	0	N/A	N/A	A/A	
1,1,2,2-Tetrachloroethane	0	0	12121212	0	N/A	N/A	N/A	
Tetrachloroethylene	0	0	acord	0	N/A	N/A	N/A	
Toluene	0	0	SPERIES.	0	57	57.0	249	
1,2-trans-Dichloroethylene	0	0	ana	0	100	100.0	436	
1,1,1-Trichloroethane	0	0	and the	0	10,000	10,000	43,622	
1,1,2-Trichloroethane	0	0	di alla alla alla alla alla alla alla al	0	N/A	N/A	N/A	
Trichloroethylene	0	0	12/12/12	0	N/A	N/A	N/A	

2-Chlorophenol	•	•		•	30	30.0	131	
2.4-Dichlorophenol		•	C.C.C.C.	•	10	10.0	43.6	
2.4-Dimethylphenol	0	•	0000	•	100	100.0	436	
4,6-Dinitro-o-Cresol	0	•	COLORED	0	2	2.0	8.72	
2,4-Dinitrophenol	0	0	di contest	0	10	10.0	43.6	
2-Nitrophenol	0	0	all all all all all all all all all all	0	N/A	N/A	N/A	
4-Nitrophenol	0	0	12111212	0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0	1312252	0	N/A	N/A	N/A	
Pentachlorophenol	0	0	63022	0	N/A	N/A	N/A	
Phenol	0	0	100000	0	4,000	4,000	17,449	
2,4,6-Trichlorophenol	0	0	Collidades.	0	N/A	N/A	N/A	
Acenaphthene	0	0	120022	0	70	70.0	305	
Anthracene	0	0	200200	0	300	300	1,309	
Benzidine	0	0	Sugar.	0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0	1 and the	0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0	Colleger.	0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	Colores de	0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	1211222	0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	872	
Bis(2-Ethylhexyl)Phthalate	0	0	12/12/21	0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0	Sugar.	0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0	1210212	0	0.1	0.1	0.44	
2-Chloronaphthalene	0	0	1290292	0	800	800	3,490	
Chrysene	0	0	all all all all all all all all all all	0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	•	acores	0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0	ana sa	0	1,000	1,000	4,362	
1,3-Dichlorobenzene	0	0	Contraction of the second	0	7	7.0	30.5	
1,4-Dichlorobenzene	0	0	the all the	0	300	300	1,309	
3,3-Dichlorobenzidine	0	0	access	0	N/A	N/A	N/A	
Diethyl Phthalate	0	0	S.C.M.B.	0	600	600	2,617	
Dimethyl Phthalate	0	0	counter	0	2,000	2,000	8,724	
Di-n-Butyl Phthalate	0	0	656062	0	20	20.0	87.2	
2,4-Dinitratoluene	0	0	all all all a	0	N/A	N/A	N/A	
2,6-Dinitratoluene	0	0	accented.	0	N/A	N/A	N/A	
1.2-Diphenylhydrazine	0	0	5623E3	0	N/A	N/A	N/A	
Fluoranthene	0	0	conce	0	20	20.0	87.2	
Fluorene	0	0	and	0	50	50.0	218	
Hexachlorobenzene	0	0	aller	0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0	12121212	0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0	College Starte	0	4	4.0	17.4	
Hexachloroethane	0	0	Ellerte	0	N/A	N/A	N/A	
Indeno(1,2,3-od)Pyrene	0	0	and and a second	0	N/A	N/A	N/A	
Isophorone	0	0	and and and and and and and and and and	0	34	34.0	148	
Naphthalene	0	0	all all all all all all all all all all	0	N/A	N/A	N/A	
Nitrobenzene	0	0	20000	0	10	10.0	43.6	

Π									Γ																																			Page 12
						Analosis nH: N/A	-	Comments																																				
						N/A	L'AL																																					
A/N	N/A	N/A	87.2	0.31		ss (ma/l)-	-fußin) oo	WLA (µg/L)	N/A	AVA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NVA	N/A	NVA	N/A	NVA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NVA	N/A	1.19	11.5	138	7.91	N/A	15.8	N/A	N/A	18.8	196	N/A
N/A	N/A	N/A	20.0	0.07		Analvsis Hardness (mo/l)-		WQ Obj (µg/L)	N/A	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.06	0.58	7.0	0.4	N/A	0.8	N/A	N/A	0.95	9.9	/2020/A
N/A	N/A	N/A	20	0.07		Ana		WQC (µg/L)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.06	0.58	7	0.4	N/A	0.8	N/A	N/A	0.95	9.6	N/As/16/2020/VA
0	0	0	•	•	Π	F		Fate Coef	•	•	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0	0	0
	Satters	22222	anna		and the	PMF.		Trib Conc (µg/L)	Stano.		anna	and and a second	anno	ann		and				ann	anna	and	conno	auna	Ullelle	and a	anne	eu eu eu eu eu eu eu eu eu eu eu eu eu e	aller		anna	anne a	ann	aaaa		anna anna	anna a	and and a second	and and and and and and and and and and	HELLER.		and a	ann a	anna
0	0	0	0	0		88	3	Stream CV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	•	0		CCT (min)- 18.488		Stream (Conc (µg/L)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
n-Nitrosodi-n-Propylamine	n-Nitrosodiphenylamine	Phenanthrene	Pyrene	1,2,4-Trichlorobenzene		1. CPI		Pollutants	Total Dissolved Solids (PWS)	Chloride (PWS)	Sulfate (PWS)	Total Aluminum	Total Antimony	Total Arsenic	Total Barium	Total Boron	Total Cadmium	Total Chromium (III)	Hexavalent Chromium	Total Cobalt	Total Copper	Dissolved Iron	Total Iron	Total Lead	Total Manganese	Total Mercury	Total Nickel	Total Phenols (Phenolics) (PWS)	Total Selenium	Total Silver	Total Thallium	Total Zinc	Acrolein	Acrylonitrile	Benzene	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chlorodibromomethane	2-Chloroethyl Vinyl Ether	Chloroform	Dichlorobromomethane	1,2-Dichloroethane	ddel Results1-Dichloroethylene

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0 0 0 0.001 0.013 0.04 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 <t< th=""><th>e</th><th></th><th></th><th></th><th>, , , , , , , , , , , , , , , , , , ,</th><th>0.27 0.27 0.27 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2</th><th>0.27 N/A N/A N/A 0.2 0.2 0.2 0.0 0.05 0.05 0.0 0.05 0.0 0.05 0.0 0.0</th><th>5.34 N/A N/A N/A N/A 198 3.96 3.96 3.96 10.9 11.9 11.9 11.9 0.4 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A</th><th></th></t<>	e				, , , , , , , , , , , , , , , , , , ,	0.27 0.27 0.27 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	0.27 N/A N/A N/A 0.2 0.2 0.2 0.0 0.05 0.05 0.0 0.05 0.0 0.05 0.0 0.0	5.34 N/A N/A N/A N/A 198 3.96 3.96 3.96 10.9 11.9 11.9 11.9 0.4 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <t< td=""><td>Benzo(a)Anthracene 0 Benzo(a)Pyrene 0 3.4-Benzofluoranthene 0</td><td>++</td><td></td><td>000</td><td>000</td><td>0.001</td><td>0.001</td><td>0.02</td><td></td></t<>	Benzo(a)Anthracene 0 Benzo(a)Pyrene 0 3.4-Benzofluoranthene 0	++		000	000	0.001	0.001	0.02	
0 0 0 0.03 0.03 0.03 0 0 0 0 0.03 0.03 0.03 0 0 0 0 0 0.32 0.03 0.03 0 0 0 0 0 0.32 0.32 0.33 0 0 0 0 0 0 0.32 0.32 0 0 0 0 0 0.32 0.32 0.32 0 0 0 0 0 0.32 0.32 0.32 0 0 0 0 0 0.12 0.12 0.12 0 0 0 0 0 0.12 0.12 0.12 0 0 0 0 0.12 0.12 0.12 0 0 0 0 0 0.12 0.001 0.001 0 0 0 0 0 0.14 0.0		+		300		0.01	0.01	0.2	
0 0 0.32 0.32 0.32 0 0 0 N/A N/A N/A 0 0 0 0 0.12 0.12 0 0 0 0 0.001 0.001 0 0 0 0 0 0.12 0.12 0 0 0 0 0 0.001 1 0 0 0 0 0 0.001 1 0 0 0 0 0 0.001 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 </td <td></td> <td>+</td> <td></td> <td>000</td> <td></td> <td>0.03 N/A</td> <td>0.03 N/A</td> <td>0.59 N/A</td> <td></td>		+		000		0.03 N/A	0.03 N/A	0.59 N/A	
0 0 0 N/A N/A 0 0 0 0 N/A N/A 0 0 0 0 0 N/A N/A 0 0 0 0 0 1/A N/A 0 0 0 0 0 1/A N/A 0 0 0 0 0 1/2 0.12 0 0 0 0 0 0.001 1 0 0 0 1/A 1/A 1/A	$\left \right $	H			0	0.32	0.32	6.33	
0 0 0 N/A N/A N/A 0 0 0 0 1/A N/A N/A 0 0 0 0 0 0 1/A N/A 0 0 0 0 0 0.12 0.12 0 0 0 0 0 0 0.001 0.0001 1 0 0 0 0 1/A 1/A 1 1 0 0 0 0 0 1/A 1 1 0 0 0 0 1/A 1 1 1 0 0 0 0 0 1 1 1 1 0 0 0 0 0 1		$\left \right $			0	N/A	N/A	N/A	
0 0 0 N/A N/A N/A 0 0 0 0 0 0.12 0.12 0 0 0 0 0 0.12 0.12 0.12 0 0 0 0 0 0.001 0.001 0 0 0 0 0 1/A 1/A 1/A 0 0 0 1/A 1/A 1/A		H			。	N/A	N/A	N/A	
0 0 0 0.12 0.12 0 0 0 0 0.001 0.12 0 0 0 0 0.001 0.001 0 0 0 0 0.001 0.001 0 0 0 0 0.001 0.001 0 0 0 0 N/A N/A 0 0 0 N/A N/A 0 0 0 0.05 0.05 0 0 0 0.05 0.05		$\left \right $	2222	3	0	N/A	N/A	N/A	
0 0 0.0001 0.0001 0 0 0 0.0001 0.0001 0 0 0 0 0.0001 0 0 0 0 0.0001 0 0 0 0 N/A N/A 0 0 0 0 0 N/A 0 0 0 0 0.05 0.05 0 0 0 0.05 0.05 0.05				2		0.12	0.12	2.37	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Dibenzo(a,h)Anthrancene 0	╞	2000	S		0.0001	0.0001	0.002	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	+	╀	1000	1520	, ,	N/A	N/A	A/N	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	+	+	10000	20	,	WIN	MUN	W/M	
0 0 0.05 0.05 0.05 0.05 0.05 0.05 0.05		+	1999	200	•	N/A	N/A	N/A	
0 0 0.05 0.05 0.05 0.05 0.05 0.05 0.05	1,4-Dichlorobenzene 0		Sel all	220	0	N/A	N/A	N/A	
0 0 NIA NIA		╞	C.C.C.	8		0.05	0.05	0.99	
		╀		2000	, ,	VIN	VIN	NI/A	
		+	2000	3	,	A/A	N/A	A/A	
		+	Sec. Carlo	life a	0	A/A	N/A	N/A	

0.99	0.99	0.59	N/A	N/A	0.002	0.2	N/A	1.98	0.02	N/A	N/A	N/A	0.014	0.099	65.3	N/A	N/A	N/A	
0.05	0.05	0.03	N/A	N/A	0.00008	0.01	N/A	0.1	0.001	N/A	N/A	N/A	0.0007	0.005	3.3	N/A	N/A	N/A	
0.05	0.05	0.03	N/A	N/A	0.00008	0.01	N/A	0.1	0.001	N/A	N/A	N/A	0.0007	0.005	3.3	N/A	N/A	N/A	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ellere	enene	20000	ELLER P	anna	Eller Contraction	100000	SUSSE		00000	500000	aanaa		Summe		anna a	Elener	aunus.	Sector 10	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2,4-Dinitrotoluene	2,6-Dinitrotoluene	1,2-Diphenylhydrazine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)Pyrene	Isophorone	Naphthalene	Nitrobenzene	n-Nitrosodimethylamine	n-Nitrosodi-n-Propylamine	n-Nitrosodiphenylamine	Phenanthrene	Pyrene	1,2,4-Trichlorobenzene	

Recommended WQBELs & Monitoring Requirements

4 No. Samples/Month:

	Mass	Mass Limits		Concentration Limits	tion Limits				
Pollutants	AML	MDL	AMI	MDI	IMAX	Units	Governing	WQBEL	Comments
	(lbs/day)	(lbs/day)		1			WQBEL	Basis	
Total Copper	Report	Report	Report	Report	Report	mg/L	0.047	AFC	Discharge Conc > 10% WQBEL (no RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	1,309	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	308	AFC	Discharge Conc > 10% WQBEL (no RP)
Chloraform	0.38	0.6	24.9	38.8	62.2	µg/L	24.9	THH	Discharge Conc ≥ 50% WQBEL (RP)

Other Pollutants without Limits or Monitoring >

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	1,570	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
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Total Barium Total Beryllium	10,469 N/A	hg/L N/A	Discharge Conc ≤ 10% WQBEL No WQS
Total Boron	6,979	hg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	1.35	μg/L	Discharge Conc < TQL
Total Chromium (III)	438	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	34.1	µg/L	Discharge Conc < TQL
Total Copait Total Cuspide	87.0	hg/L	Discharge Conc < LGL
Total Iron	6.543	no/L	Discharge Conc ≤ 10% WOBEL
Total Lead	17.6	hg/L	Discharge Cono < TQL
Total Manganese	4,362	hg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.22	hg/L	Discharge Conc < TQL
Total Nickel	266	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		hg/L	Discharge Conc < TQL
Total Selenium	21.8	hg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	12.0	hg/L	Discharge Conc < TQL
Total Thallium	1.05	hg/L	Discharge Conc < TQL
Total Molybdenum	A/A	N/A	No WQS
Acrolein	6.28	µg/L	Discharge Conc < TQL
Acrylonitrile	1.19	µg/L	Discharge Conc < TQL
Benzene	11.5	hg/L	Discharge Conc < TQL
Bromoform	138	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	7.91	hg/L	Discharge Conc < TQL
Chlorobenzene	436	µg/L	Discharge Conc < TQL
Chlorodibromomethane	15.8	hg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	15,268	hg/L	Discharge Conc < TQL
Dichlorobromomethane	18.8	hg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1.2-Dichloroethane	196	hg/L	Discharge Conc < TQL
1,1-Dichloroethylene	144	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	17.8	hg/L	Discharge Conc < TQL
1.3-Dichloropropylene	5.34	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	297	hg/L	Discharge Conc < TQL
Methyl Bromide	436	hg/L	Discharge Cono < TQL
Methyl Chloride	23,992	µg/Г	Discharge Conc < TQL
Methylene Chloride	396	hg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	3.96	hg/L	Discharge Conc < TQL
Tetrachloroethylene	198	µв/Г	Discharge Conc < TQL
Toluene	249	hg/L	Discharge Conc < TQL
1.2-trans-Dichloroethylene	436	µ8/L	Discharge Conc < TQL
1,1,1-Trichloroethane	2,661	hg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	10.9	µg/L	Discharge Conc < TQL
Trichloroethylene	11.9	hg/L	Discharge Conc < TQL
Vinyl Chloride	0.4	hg/L	Discharge Conc < TQL

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µg/L Discharge Conc < TQL	µg/L Discharge Conc < TQL	µg/L Discharge Cono < TQL	<pre>µg/L Discharge Conc < TQL</pre>	µg/L Discharge Cono < TQL	<pre>µg/L Discharge Conc < TQL</pre>	µg/L Discharge Conc < TQL	µg/L Discharge Conc < TQL		<pre>µg/L Discharge Conc < TQL</pre>	µg/L Discharge Conc < TQL	N/A No WQS	<pre>µg/L Discharge Conc < TQL</pre>	<pre>µg/L Discharge Conc < TQL</pre>	<pre>µg/L Discharge Conc < TQL</pre>	µg/L Discharge Cono < TQL	<pre>µg/L Discharge Conc < TQL</pre>		pg/L Discharge Conc < TQL		<pre>µg/L Discharge Conc < TQL</pre>					N/A No WQS	µg/L Discharge Conc < TQL	µg/L Discharge Conc < TQL	µg/L Discharge Conc < TQL	µg/L Discharge Conc < TQL	<pre>µg/L Discharge Conc < TQL</pre>	µg/L Discharge Conc < TQL		µg/L Discharge Conc < TQL	Disc	µg/L Discharge Conc < TQL	µg/L Discharge Conc < TQL	N/A No WQS	µg/L Discharge Conc < TQL	<pre>µg/L Discharge Conc < TQL</pre>	µg/L Discharge Conc < TQL	<pre>µg/L Discharge Conc < TQL</pre>	┞	pg/L Discharge Conc < TQL	μg/L Discharge Cono < TQL μg/L Discharge Cono < TQL
-		_	43.6	6,979	_	335	0.59	17,449		74.2	N/A	1,309		0.02	0.002	0.02	N/A	0.2	N/A	0.59	872	6.33	\vdash	0.44					30.5	654	0.99	2.617	2,181		0.99	0.99		0.59		218	0.002	0.2		╞

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Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL	Discharge Conc < TQL			
hg/L	µg/L	hg/L	hg/L	hg/L	hg/L	hg/L	hg/L	µg/L		_	
148	188	43.6	0.014	0.099	65.3	4.36	87.2	0.31			
	Naphthalene	Nitrobenzene	n-Nitrosodimethylamine	n-Nitrosodi-n-Propylamine	n-Nitrosodiphenylamine	Phenanthrene	Pyrene	1.2,4-Trichlorobenzene			

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Model Results

TOXCON Results for Copper

		Reviewer/Permit Engineer:	Jinsu Kim
Facility:	Washington Township I	MAWWTP	
NPDES #:	PA0080225		
Outfall No:	001		
n (Samples/Month):	4		
Parameter	Distribution Applied	Coefficient of Variation (daily)	Avg. Monthly
Total Copper (mg/L)	Delta-Lognormal	0.7725272	0.0221379

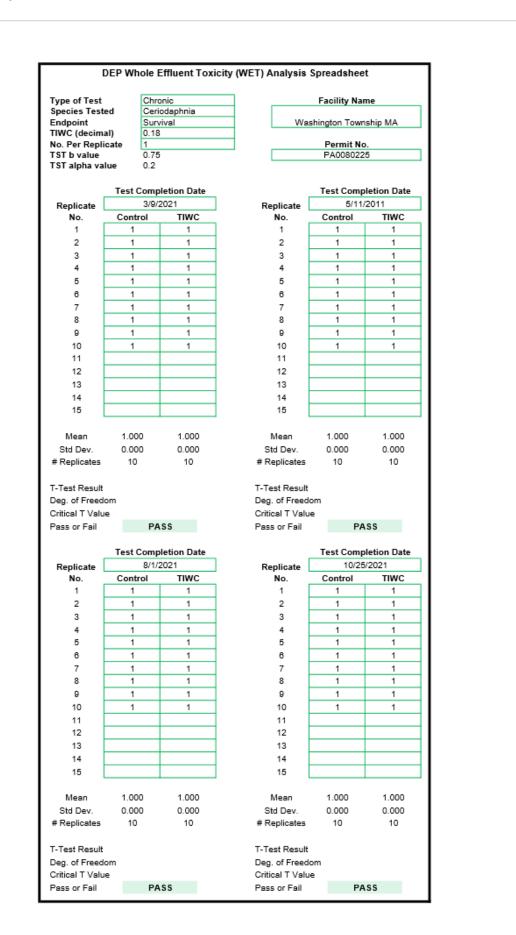
TOXCON Output

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WET Analysis Worksheet

Type of Test		Chronic		Facility Name					
Species Tes	ted	Pimephales							
Endpoint TIWC (decimal) No. Per Replicate TST b value		Survival 0.18 10 0.75			Washington Township MA Permit No. PA0080225				
TST alpha va	alue	0.25							
	Test C	omn	etion Date		Tect	Test Completion Date			
D	Testo	3/9/2		1		5/11/2021			
Replicate No.	Contr		TIWC	Replicate No.	Con		TIWC		
1	10		10	1 1	10		10		
2	10		10	2	10	-	10		
3	10		10	3	10	-	10		
4	10		10	4	10		10		
	10		10		1	J	10		
5	L			5					
6	L			6					
7				7					
8				8					
9				9					
10				10					
11				11					
12				12					
13				13					
14		-		14					
15				15					
-		_		•					
Mean	10.00	0	10.000	Mean	10.0	000	10.000		
Std Dev.	0.000			in the diff	10.0				
	0.000		0.000	Std Dev	0.0	00	0.000		
# Replicates	4	0	0.000 4	Std Dev. # Replicate			0.000 4		
# Replicates	4	0							
# Replicates T-Test Result		5			es 4				
	t	J		# Replicate	es 4 ult				
T-Test Result	lom	J		# Replicate T-Test Res	edom				
T-Test Result Deg. of Freed	lom	PA	4	# Replicate T-Test Res Deg. of Fre	es 4 ult edom	•			
T-Test Result Deg. of Freed Critical T Valu	lom	-	4	# Replicate T-Test Res Deg. of Fre Critical T Va	es 4 ult edom alue	•	4		
T-Test Result Deg. of Freed Critical T Valu	lom Je	PA	4	# Replicate T-Test Res Deg. of Fre Critical T Va	ıs 4 ult edom alue I	PA	4		
T-Test Result Deg. of Freed Critical T Valu	iom ue Test C	PA	4 SS etion Date	# Replicate T-Test Res Deg. of Fre Critical T Va	es 4 ult edom alue I Test	PA	4		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail	iom ue Test C	PA: Compl 8/17/2	4 SS etion Date	# Replicate T-Test Res Deg. of Fre Critical T Vi Pass or Fai	es 4 ult edom alue I Test	PA Comp 10/26	4 NSS Detion Date		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate	lom ue Test C	PA: Compl 8/17/2	4 SS letion Date 2021	# Replicate T-Test Res Deg. of Fre Critical T Vi Pass or Fai Replicate	es 4 edom alue I Test	PA Comp 10/26 trol	4 ASS Detion Date		
F-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No.	iom ue Test C	PA: Compl 8/17/2	4 SS letion Date 2021 TIWC	# Replicate T-Test Res Deg. of Fre Critical T V Pass or Fai Replicate No.	es 4 edom alue I Test	PA Comp 10/26 trol	4 NSS V2021 TIWC		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1	tom ue Test C Contr	PA: Compl 8/17/2	4 SS 2021 TIWC 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai Pass or Fai Replicate No. 1	edom alue Test Con	PA Comp 10/26 trol	4 NSS Deletion Date W2021 TIWC 10		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V: Pass or Fai No. 1 2 3	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
r-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4	Test C	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10	# Replicate T-Test Resi Deg. of Fre Critical T V: Pass or Fai No. 1 2 3 4	ult edom alue I Con 9 10	PA Comp 10/26 trol	4 SS V2021 TIWC 10 10		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Resi Deg. of Fre Critical T V/ Pass or Fai No. 1 2 3 4 5	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Resi Deg. of Fre Critical T V/ Pass or Fai Replicate No. 1 2 3 4 5 6	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
r-Test Result Deg. of Freed Critical T Value Pass or Fail Replicate No. 1 2 3 4 5 6 7	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V Pass or Fai Replicate No. 1 2 3 4 5 6 7	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai No. 1 2 3 4 5 6 7 8 9 10	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai No. 1 2 3 4 5 6 7 8 9 10	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
r-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai No. 1 2 3 4 5 6 7 8 9 10 11	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai No. 1 2 3 4 5 6 7 8 9 10 11 12	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Value Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 12 13	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Resi Deg. of Fre Critical T V: Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Value Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 12 13 14	Test C Contr 9 10 10	PA: Compl 8/17/2	4 ss 2021 TIWC 10 10 10 10	# Replicate T-Test Resi Deg. of Fre Critical T V: Pass or Fai No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14	ult edom alue Test Con 9 10	PA Comp 10/26 trol	4 SS 2021 TIWC 10 10 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Test C Contr 9 10 10 10	PAS Compl 8/17/2 ol	4 ss 2021 TIWC 10 10 10 9	# Replicate T-Test Resi Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Image: second	P/ Comp 10/26 trol 0 0 0 0	4		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean	Test C Contr 9 10 10 10 10 10 9 	PA: 2000	4 ss etion Date 2021 TIWC 10 10 10 9 9 9 9 9.750	# Replicate T-Test Resi Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean	s 4	PA Comp 10/22 trol 0 0 0 0 0 0 0 0 0 0 0 0 0	4 SS Detion Date 2021 TIWC 10 9 9 0 0 0 0 0 0 0 0 0 0 0		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev.	P.756 0.500	PA: 2000	4 ss etion Date 2021 TIWC 10 10 10 9 9 9 9 9.750 0.500	# Replicate T-Test Res Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev.	45 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	PA Comp 10/25 trol 0 0 0 0 0 0 0 0 0 0 0 0 0	4 SS Detion Date V2021 TIWC 10 9 9 9 9 9 9 9 9 9 9 9 9 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean	P.756 0.500	PA: 2000	4 ss etion Date 2021 TIWC 10 10 10 9 9 9 9 9.750	# Replicate T-Test Resi Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean	45 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	PA Comp 10/25 trol 0 0 0 0 0 0 0 0 0 0 0 0 0	4 SS Detion Date 2021 TIWC 10 9 9 0 0 0 0 0 0 0 0 0 0 0		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicates	Part C Contr 9 10 10 10 10 10 10 10 10 10 10	PA: Compl 8/17/2 ol 	4 ss 2021 TIWC 10 10 10 9 9 9 9 9 9 9 0.500 4	# Replicate T-Test Resi Deg. of Fre Critical T V: Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicate	s 4 uit edom alue Test Con 9 10 10 10 10 10 10 10 10 10 10	PA Comp 10/20 trol 0 0 0 0 0 0 0 0 0 0 0 0 0	4 ASS V2021 TIWC 10 10 9 9 9 		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 14 15 Mean Std Dev. # Replicates	Part C Contr 9 10 10 10 10 10 10 10 10 10 10	PA: Compl 8/17/2 ol 0 0 0 0 0 0 0 0 0 0 0	4 ss etion Date 2021 TIWC 10 10 10 9 9 9 9.750 0.500 4 114	# Replicate T-Test Resi Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicate T-Test Resi	s 4 uit edom alue 1 Test Con 9 10 10 10 10 10 10 10 10 10 10	PA Comp 10/26 trol 0 0 0 0 0 0 0 0 0 0 0 0 0	4 SSS 2021 TIWC 10 10 9 9 9 9 9 9 9 9 9 9 9 9 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicates T-Test Result Deg. of Freed	Som Jee Test C Contr 9 10 10 10 10 10 10 10 10 10 10 10 10 10	PA: compl 8/17/2 ol 0 0 0 0 6.73 5	4 ss etion Date 2021 TIWC 10 10 10 10 9 9 9 9 9 9 750 0.500 4 314	# Replicate T-Test Resi Deg. of Fre Critical T V: Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicate T-Test Resi	edom 4 edom alue I I I I I I I I I I I II II III III III IIII IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	P/P 10/26 trol 0 0 0 0 50 50 00 5.3	4 SS Detion Date 0/2021 TIWC 10 10 9 9 9 9 9 9 9 9 9 9 9 9 9		
T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 14 15 Mean Std Dev. # Replicates	Som Jee Test C Contr 9 10 10 10 10 10 10 10 10 10 10 10 10 10	PA: Compl 8/17/2 ol 0 0 0 0 0 0 0 0 0 0 0	4 ss etion Date 2021 TIWC 10 10 10 9 9 9 9 9 9 9 9 9 9 9 9 10 10 10 10 10 10 10 10 10 10	# Replicate T-Test Resi Deg. of Fre Critical T V. Pass or Fai Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicate T-Test Resi	It It edom alue It It	P/P Comp 10/26 trol 0 0 0 0 50 000 5.3 0.7	4 SSS 2021 TIWC 10 10 9 9 9 9 9 9 9 9 9 9 9 9 9		

D	EP Whole	Effluent Toxic	city (WET) Analysis	Spreadshee	t		
ype of Test pecies Teste		ironic mephales	-	Facility Na	me		
Endpoint TIWC (decimal)		owth 18	Washington Township MA				
lo. Per Replic ST b value	ate 10		Permit No. PA0080225				
ST alpha val							
		pletion Date	1	Test Completion Date 5/11/2021			
Replicate No.	Control	TIWC	Replicate No.	Control	TIWC		
1	0.332	0.371	1	0.358	0.342		
2	0.322	0.365	2	0.365	0.326		
3	0.34	0.388	3	0.387	0.349		
4	0.325	0.368	4	0.339	0.348		
5			5				
6			6				
7			7				
8			8				
9			9				
10			10				
11			11				
12			12				
13			13				
14			14				
15			15				
Mean	0.330	0.373	Mean	0.362	0.341		
Std Dev.	0.008	0.010	Std Dev.	0.020	0.011		
old bev.							
	4	4	# Replicates	4	4		
				4	4		
Replicates	4				4		
Replicates Test Result	4	4	# Replicates T-Test Result	7.6	-		
Replicates Test Result eg. of Freedo	4 21 m	4 .0845 5	# Replicates T-Test Result Deg. of Freedo	7.6 om	134		
Replicates Test Result eg. of Freedo ritical T Value	4 21 m 2	4 .0845 5 .7267	# Replicates T-Test Result Deg. of Freed Critical T Valu	7.6 om 4	134 5 287		
Replicates -Test Result eg. of Freedo ritical T Value	4 21 m 2	4 .0845 5	# Replicates T-Test Result Deg. of Freedo	7.6 om 4	134		
Replicates Test Result eg. of Freedo ritical T Value	4 21 m = 0 F	4 .0845 5 .7267	# Replicates T-Test Result Deg. of Freed Critical T Valu	7.6 om = PA	134 5 287		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail	7.6 om e 0.7 PA Test Comp	134 5 267 ASS		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail	4 21 21 21 2 2 3 4 7 7 7 8/1	4 .0845 5 .7267 ASS ppletion Date	# Replicates T-Test Result Deg. of Freed Critical T Valu	7.6 om e 0.7 PA Test Comp 10/28	134 5 287 NSS		
Replicates Test Result eg. of Freedo itical T Value ass or Fail Replicate	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 2ASS mpletion Date 7/2021	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate	7.6 om e 0.7 PA Test Comp	134 5 287 ASS Detion Date		
Replicates Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1	4 21 2 2 3 3 4 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7 7 7	4 .0845 5 .7267 PASS pletion Date 7/2021 TIWC 0.448	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218	134 5 287 ASS Detion Date W2021 TIWC 0.307		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS peletion Date 7/2021 TIWC 0.448 0.409	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1 2 3 4	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS peletion Date 7/2021 TIWC 0.448 0.409	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1 2 3 4 5 6	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates -Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result eg. of Freedo itical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freedu Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freedu Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates -Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freedu Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freedu Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
 Replicates Test Result leg. of Freedo initical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 	4 21 20 20 20 20 20 20 20 20 20 20 20 20 20	4 .0845 5 .7267 ASS heletion Date 7/2021 TIWC 0.448 0.409 0.471	# Replicates T-Test Result Deg. of Freedu Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14	7.6 om e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27	134 5 287 SS 2010 Date 2021 TIWC 0.307 0.287 0.281		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	4 21 2 3 3 3 4 3 4 3 4 3 3 4 3 3 3 6 3 3 7 8 0.409	4 .0845 5 .7267 ASS	# Replicates T-Test Result Deg. of Freedu Critical T Value Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	7.6 om 4 e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27 0.249	134 5 287 85 2021 TIWC 0.307 0.287 0.281 0.279		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev.	4 21 2 3 3 3 4 3 4 3 4 5 4 5 4 5 4 5 4 5 5 4 5 5 5 5	4 .0845 5 .7267 .ASS	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean	7.6 om 4 e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27 0.249	134 5 287 85 2021 TIWC 0.307 0.287 0.281 0.279		
 Replicates Test Result leg. of Freedo critical T Value lass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean 	4 21 2 2 3 3 4 2 3 4 3 3 4 2 3 3 4 3 3 4 3 3 4 2 3 3 4 3 3 4	4 .0845 5 .7267 .A S S	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev.	7.6 om 4 e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27 0.249 0.249 0.249 0.256 0.029 4	134 5 287 SS 201 TIWC 0.307 0.287 0.281 0.279		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. Replicates Test Result	4 21 2 2 0 3 4 2 0 3 8 4 0 3 7 6 0.384 0.438 0.376 0.409 0.409 0.409 0.409 0.409 0.409 0.409 0.409 0.397 0.033 4 7	4 1.0845 5 7.267 ASS 1.026 1.026 4 1.024 1	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicates T-Test Result	7.6 om 4 e 0.7 PA Test Comp 10/26 Control 0.218 0.285 0.27 0.249 0.249 0.249 0.249 0.256 0.029 4 7.6	134 5 287 SS Detion Date 2021 TIWC 0.307 0.287 0.281 0.279 0.213 0.2		
Replicates Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. Replicates	4 21 2 2 3 3 4 2 3 4 3 4 4 2 4 3 4 2 4 2 4 3 4 2 4 2	4 1.0845 5 7.267 ASS 1.0267 ASS 1.0201 1.020 0.448 0.409 0.471 0.429 0.471 0.429 0.429 0.429 0.421 0.439 0.026 4 1.000 0.43 1.000 0.43 1.0	# Replicates T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicates	7.6 om 4 e 0.7 Test Comp 10/26 Control 0.218 0.285 0.27 0.249 0.249 0.256 0.29 4 7.6 om 4	134 5 287 SS Detion Date 2021 TIWC 0.307 0.287 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.281 0.279 0.279 0.281 0.279 0.013 4		



5	EP Whole I		city (WET) Analysis	spreadshee	я .			
ype of Test	Chr			Facility Na	me			
Species Tested Endpoint		iodaphnia roduction	Wa					
IWC (decima			Washington Township MA					
lo. Per Replic	ate 1			Permit No.				
ST b value	0.75	5		PA008022	25			
ST alpha val	ue 0.2							
	Test Comp	pletion Date		Test Completion Date				
Replicate	3/9/	2021	Replicate	5/11/2021				
No.	Control	TIWC	No.	Control	TIWC			
1	41	26	1	34	44			
2	20	40	2	35	32			
3	38	42	3	36	34			
4	32	35	4	34	40			
5	35	36	5	34	38			
6	33	36	6	33	40			
7	38	26	7	26	36			
8	34	38	8	26	28			
9	32	34	9	32	36			
10	26	32	10	35	36			
11			11					
12			12					
13			13					
14			14		<u> </u>			
15			15					
Mean	32.900	34.500	Mean	32.500	36.400			
Std Dev.	6.136	5.318	Std Dev.	3.598	4.502			
					10			
Replicates	10	10	# Replicates	10	10			
Replicates	10	10	# Replicates	10	10			
-		10	# Replicates T-Test Result		2450			
-Test Result	4.4			7.2				
-Test Result leg. of Freedo	4.4 om 1	178	T-Test Result	7.2 om /	2450			
-Test Result eg. of Freedo ritical T Value	4.4 om 1 e 0.8	178	T-Test Result Deg. of Freed	7.2 om -	2450			
-Test Result leg. of Freedo critical T Value	4.4 om 1 = 0.8 P#	178 17 6833 ASS	T-Test Result Deg. of Freed Critical T Valu	7.2 om 0.8 P/	2450 15 38862 ASS			
-Test Result eg. of Freedo ritical T Value ass or Fail	4.4 e 0.8 PA Test Comp	178 17 8833 NSS	T-Test Result Deg. of Freed Critical T Valu	om 7.2 e 0.8 P/ Test Comp	2450 15 3682 ASS Deletion Date			
Test Result eg. of Freedo ritical T Value ass or Fail Replicate	4.4 om 1 e 0.8 PA Test Comp 8/17	178 17 833 855 9letion Date /2021	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate	7.2 om 0.8 PA Test Comp 10/25	2450 15 18882 ASS Detion Date 5/2026			
Test Result eg. of Freedo itical T Value ass or Fail Replicate No.	4.4 om 1 e 0.8 PA Test Comp 8/17. Control	178 17 833 ASS Detion Date /2021 TIWC	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No.	7.2 om 0.8 PA Test Comp 10/28 Control	2450 15 3682 ASS 5/2026 TIWC			
Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1	4.4 om 1 e 0.8 PA Test Comp 8/17. Control 28	178 7 833 855 9letion Date /2021 TIWC 28	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1	7.2 om 0.8 PA Test Comp 10/28 Control 18	2450 15 3682 ASS 5/2026 TIWC 38			
Test Result ag. of Freedo itical T Value ass or Fail Replicate No. 1 2	4.4 om 1 e 0.8 PA Test Comp 8/17. Control 28 25	178 7 833 855 20etion Date /2021 TIWC 28 26	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2	7.2 om / e 0.8 P/ Test Comp 10/28 Control 18 36	2450 15 3862 ASS 5/2026 TIWC 36 33			
Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3	4.4 om 1 e 0.8 PA Test Comp 8/17. Control 28 25 24	178 7 833 855 20etion Date /2021 TIWC 28 26 28 26 28	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3	7.2 om 0.8 PA Test Comp 10/28 Control 18 38 38	2450 15 3882 ASS 5/2026 TIWC 36 33 32			
Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4	4.4 om 1 e 0.8 PA Test Comp 8/17. Control 28 25 24 25 24 25	178 7 833 855 20etion Date /2021 TIWC 28 26 28 26 28 35	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4	7.2 om 0.8 P/ Test Comp 10/28 Control 18 36 36 43	2450 15 3882 ASS 5/2026 TIWC 38 33 32 35			
Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5	4.4 om 1 e 0.8 PA Test Comp 8/17. Control 28 25 24 25 24 25 24	178 7 833 855 20etion Date /2021 TIWC 28 26 28 26 28 35 26	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5	7.2 om 0.8 P/ Test Comp 10/28 Control 18 36 36 43 39	2450 15 3882 ASS 5/2026 TIWC 38 33 32 35 38			
Test Result eg. of Freedo ritical T Value ass or Fail Replicate No. 1 2 3 4 5 6	4.4 om 1 e 0.8 PA Test Comp 8/17. Control 28 25 24 25 24 25 24 25 24 25 24 28	178 7 833 SS Deletion Date /2021 TIWC 28 26 28 35 26 28 35 26 28	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6	7.2 om 0.8 P/ Test Comp 10/28 Control 18 36 36 43 39 28	2450 15 3682 ASS Deletion Date 5/2026 TIWC 36 33 32 35 38 41			
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-Test Result Deg. of Freedo Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicates	4,4 om 1 e 0.8 PA Test Comp 8/17. Control 28 25 24 25 24 25 24 25 24 25 24 25 24 28 20 16 24 28 20 16 24 22 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 17. Control 28 29 24 25 24 26 24 26 24 26 24 26 24 26 24 26 24 26 24 26 24 26 24 26 26 24 26 24 26 24 26 24 26 26 24 26 26 24 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 26 24 26 24 26 24 26 26 24 28 26 24 26 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 24 28 26 24 24 28 26 24 24 28 26 24 28 26 24 28 26 24 28 26 24 28 20 16 24 28 26 24 28 20 16 24 28 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 16 24 28 20 10 24 28 20 10 24 24 22 20 10 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 24	178 17 178 17 1833 1855 20 2021 TIWC 28 26 28 30 26 28 30 26 32 31 	T-Test Result Deg. of Freed Critical T Valu Pass or Fail Replicate No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Mean Std Dev. # Replicates	7.2 om 0.8 P/ Test Comp 10/21 Control 18 36 43 39 28 11 34 39 28 11 34 39 28 11 34 31 40 31.600 10.124 10 4.3 om 2.6 31.600	2450 15 3682 ASS Deletion Date 5/2026 TIWC 36 33 32 35 38 41 34 45 28 38 41 34 45 28 38 41 34 45 28 38 41 34 45 28 38 41 34 45 28 38 41 34 45 28 38 41 38 38 41 34 45 28 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 41 38 38 38 41 38 38 41 38 38 41 38 38 41 38 38 38 38 38 38 38 38 38 38			

WET Summary and Evaluation										
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Facility Name Permit No.	Washington Township MA WWTP PA0080225									
Permit No. Design Flow (MGD)	PA0080225 1.85									
Q ₇₋₁₀ Flow (cfs)	9.61									
PMFa	0.674									
PMFc	1									
	,									
			Test Result							
		Test Date	Test Date	Test Date	Test Date					
Species	Endpoint	3/9/21	5/11/21	8/17/21	10/26/21					
Pimephales	Survival	PASS	PASS	PASS	PASS					
	,		T . D .							
		T- (D-(s (Pass/Fail)	T					
		Test Date	Test Date	Test Date	Test Date					
Species	Endpoint	3/9/21	5/11/21	8/17/21	10/26/21					
Pimephales	Growth	PASS	PASS	PASS	PASS					
	Test Results (Pass/Fail)									
		Test Date	Test Result	Test Date	Test Date					
	Enderstand	3/9/21	5/11/11	8/1/21	10/25/21					
Spacias					10/23/21					
Species	Endpoint									
Species Ceriodaphnia	Survival	PASS	PASS	PASS	PASS					
			PASS	PASS						
		PASS	PASS Test Results	PASS s (Pass/Fail)	PASS					
Ceriodaphnia	Survival	PASS Test Date	PASS	PASS	PASS Test Date					
Ceriodaphnia Species	Survival Endpoint	PASS Test Date 3/9/21	PASS Test Result Test Date 5/11/21	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia	Survival	PASS Test Date	PASS Test Result Test Date	PASS s (Pass/Fail) Test Date	PASS Test Date					
Ceriodaphnia Species	Survival Endpoint Reproduction	PASS Test Date 3/9/21	PASS Test Result Test Date 5/11/21	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia	Survival Endpoint Reproduction	PASS Test Date 3/9/21	PASS Test Result Test Date 5/11/21	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia	Survival Endpoint Reproduction I? NO	PASS Test Date 3/9/21	PASS Test Result Test Date 5/11/21	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia Reasonable Potentia	Survival Endpoint Reproduction I? NO tions Chronic	PASS Test Date 3/9/21 PASS	PASS Test Result Test Date 5/11/21	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia Reasonable Potentia Permit Recommenda Test Type TIWC	Survival Endpoint Reproduction I? NO tions Chronic 23	PASS Test Date 3/9/21 PASS	PASS Test Results Test Date 5/11/21 PASS	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia Reasonable Potentia <u>Permit Recommenda</u> Test Type	Survival Endpoint Reproduction I? NO tions Chronic 23 6, 12,	PASS Test Date 3/9/21 PASS	PASS Test Results Test Date 5/11/21 PASS	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia Reasonable Potentia Reasonable Potentia Test Type TIWC Dilution Series Permit Limit	Survival Endpoint Reproduction I? NO tions Chronic 23	PASS Test Date 3/9/21 PASS	PASS Test Results Test Date 5/11/21 PASS	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					
Ceriodaphnia Species Ceriodaphnia Reasonable Potentia Permit Recommenda Test Type TIWC Dilution Series	Survival Endpoint Reproduction I? NO tions Chronic 23 6, 12,	PASS Test Date 3/9/21 PASS	PASS Test Results Test Date 5/11/21 PASS	PASS s (Pass/Fail) Test Date 8/17/21	PASS Test Date 10/25/26					