Charles River Pollution Control District
Franklin · 1973 · Medway

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George Papadopoulos
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100 (06-4)
Boston, MA 02109-3912
Email: papadopoulos.george@epa.gov

Jennifer Wood
MA Department of Environmental Protection
100 Cambridge Street, Suite 900
Boston, MA 02114
Email: jennifer.wood@mass.gov
Massdep.publiccommentnpdes@mass.gov

RE: Comment on NPDES Draft Permit MA0102598
Charles River Pollution Control District (Water Pollution Abatement Facility - MA0102598) and Co-Permittees (Town of Franklin - MAC012598; Town of Medway - MAC022598; Town of Millis - MAC032598; Town of Bellingham - MAC042598), Medway, MA

Dear Mr. Papadopoulos and Ms. Wood:

The Charles River Pollution Control District (the "District") respectfully submits the enclosed comments on (1) the draft National Pollutant Discharge Elimination System ("NPDES") permits issued by the United States Environmental Protection Agency ("EPA") on December 16, 2024 and Massachusetts Department of Environmental Protection ("MassDEP") on December 20, 2024 (collectively, the "Draft Permit")[1] for the District's Treatment Facility (the "Facility") and (2) the Clean Water Act Section 401 Water Quality Certification for the 2024 Proposed NPDES Draft Permit for the District (the "Water Quality Certification"). The proposed changes in the Draft Permit and Water Quality Certification from the current permit will harm the District's future compliance strategies, capital investments, and overall affordability to its ratepayers without providing any environmental benefit. The District, in conjunction with its consultant, CDM Smith, and its legal counsel, Nutter, McClennen and Fish LLP, is therefore providing detailed comments on the Draft Permit so that a final permit addresses these issues. The District welcomes and appreciates any opportunity to work with EPA and MassDEP to resolve the questions and issues identified in these comments prior to the issuance of a final permit.

Background

The District owns and operates the Facility and an interceptor system, serving approximately 7,600 residents in the Town of Franklin, 2,800 residents in the Town of Medway, 1,250 residents in the Town of Bellingham and 1,400 residents in the Town of Millis. Currently, the Facility is regulated by NPDES Permit No. MA0102598 (issued July 23, 2014). When finalized, the Draft Permit will supersede the 2014 NPDES permit.

The Draft Permit is also issued to four co-permittees: Town of Franklin, Town of Medway, Town of Millis and Town of Bellingham. It is the District's understanding that any support for these comments or additional input from the co-permittees will be provided by the co-permittees in separate comment letters.

[1] To the extent that the MassDEP draft permit issued on December 20, 2024 incorporates by reference the provisions of EPA's draft permit issued on December 16, 2024 (see, e.g., Paragraphs 5 and 6 of MassDEP's draft permit), these comments respond to both draft permits. When a comment refers to an additional requirement of the MassDEP draft permit not included in the EPA draft permit or the Water Quality Certification, such comment specifically notes the applicable provision at issue.

The Charles River Pollution Control District offers the following comments and requests for clarifications:

1. **Removal of the 4.5 million gallon der day ("mgd") summer limit.** Although the Facility is permitted and designed to treat 5.7 mgd, and is provided a 12-month rolling average limit of 5.7 mgd in the 2014 Permit and the Draft Permit, Part I.A.1 continues to include a flow restriction of 4.5 mgd during the summer months (July-September).

   Before 2000, the District's permitted flow was 4.56 mgd, which reflected the then current design capacity of the Facility. However, following coordination and discussions with EPA and MassDEP, the permitted design capacity was increased to 5.7 mgd in 2000. The District requested during the public comment period on the 2000 draft NPDES permit that the design capacity of 5.7 mgd not be used in calculating the dilution factor during the term of that permit and instead use an average summertime flow of 4.5 mgd. The continued use of the 4.5 mgd flow limit in summer months was implemented in the 2000 NPDES permit because the District could not use the full design capacity of 5.7 mgd until at least 2015 (the discussion of the 2000 NPDES permit terms regarding flow can be found in Attachment A in the Response to Public Comment from the District's Draft 2000 NPDES permit starting on page 2 (attached as Exhibit A, hereto)). The upgrades, which were funded in part by State Revolving Fund grants, were completed around 2000, and there is therefore no reason for the lower seasonal limit to continue.

   Section 2.3 of the Draft Permit Fact Sheet states that it is "EPA practice [] to use effluent flow as a reasonable and important worst-case condition in its reasonable potential and WQBEL calculations to ensure compliance with WQSs under CWA § 301(b)(1)(C)." (*see also id.* (". . . EPA may ensure the validity of its 'worst-case' effluent flow assumptions through imposition of permit conditions for effluent flow."). Section 2.3 also relies on 40 C.F.R. § 122.41(e), which requires a permittee to "at all times properly operate and maintain all facilities and systems of treatment and control *** which are installed or used by the permittee to achieve compliance with the conditions of this permit." *In re City of Lowell,* E.A.B., NPDES Appeal No. 19-03, at 156 (June 29, 2020).[2] "Emphasizing that the flow limit is based on the design capacity of the treatment facility, the Region concluded that the flow limit is a condition that is 'appropriate to assure that [the permittee] operates its facility to comply with its permit's technology- and water quality-based effluent limits." *Id.* (quoting Region Response to Comments).[3]

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[2] https://yosemite.epa.gov/OA/EAB_WEB_Docket.nsf/Case~Name/6D63DE203BB980D2852585960069906D/$File/City%20of%20Lowell.pdf

[3] Section 2.3 also cites to CWA § 402(a)(2), 40 CFR § 122.4(a), 122.43 and 122.4(d), which all generally allow for conditions as necessary to comply with the permit and the CWA, without any reasoning as to how they apply to the seasonal limit. The seasonal flow limit is not necessary to meet any discharge limits or assure compliance with the permit or the CWA.

These reasons do not apply to the Draft Permit's 4.5 mgd summer limit. The Facility's capacity is 5.7 mgd and therefore the summer limit is not a "worst-case" condition and has no relationship to the operations and maintenance of the "facilities and systems of treatment and control" needed "to achieve compliance with the conditions of the permit. *See id.* Further, the summer limit is expressly contrary to 40 C.F.R. § 122.45(b)(1), which states that "permit effluent limitations *** shall be calculated based on design flow." 40 C.F.R. § 122.45(b)(1); *In re City of Lowell* at 156. The lower summer limit in the Draft Permit is not based on design flow as required by the regulation.

Section 2.3 of the Draft Permit Fact Sheet also claims that the effluent flow limit is meant "to minimize or prevent infiltration and inflow (I/I) that may result in unauthorized discharges and compromise proper operation and maintenance of the facility." EPA provides no explanation as to how or why it can use a flow limit to affect I/I, nor how a seasonal limit will minimize it.

Further, flow itself is not a pollutant and thus cannot trigger an antidegradation review absent a request to increase pollutants. *Virginia Dept. of Trans. v. EPA*, No. 1:12-CV-775, 2013 WL 53741 (E.D. Va. 2013) Finding that "EPA is not authorized to regulate [stormwater flow] via TMDL" because it is not a pollutant. *See also In re City of Lowell,* at 155. Because the Facility would not increase the load limits, antidegradation review does not apply.

The summer flow limit is also practically infeasible and an unintended restriction on future development, including much needed housing in Massachusetts. The member towns cannot materially limit usage in the summer months; thus, the Draft Permit is effectively imposing a 4.5 mgd limit year-round. This would be a waste of 1.2 mgd of available capacity without any environmental need because of the Facility's ability to meet effluent limits using the full 5.7 mgd design capacity in the reasonable potential calculations. In light of Massachusetts' desperate need for housing development, artificially reducing the District's capacity will also serve to limit the ability of the member towns' ability to permit new development and plan for future development.

Having the flow limit match the plant's 5.7 mgd capacity does not create an antidegradation concern. The Draft Permit already uses the 5.7 mgd design capacity in calculating reasonable potential (See Comment 2 below). And because the dilution factor would decrease with the application of the 5.7 mgd design capacity, the applicable effluent limits for total residual chlorine (TRC) and C-NOEC would then be adjusted in a final permit to reflect the removal of the summer flow limit. There would be no other changes to the limits in the Draft Permit because the load limits for total suspended solids, cBOD and ammonia would not increase because the loading calculations for these pollutants were calculated on the historic capacity (4.56 mgd), which the District is not seeking to increase. Finally, the copper, ammonia, and phosphorus WQBELs would not change because the reasonable potential analysis prepared by EPA in Appendix B of the Fact Sheet uses the 5.7 mgd design flow. The proposed TKN limits would also not change because EPA based the limit on the 1976 WQMP. As shown in **Exhibit B,** which analyzes the proposed effluent limitations using both a 4.5 mgd and 5.7 mgd flow limitation,

there is no antidegradation issue because the effluent and load limits either do not change or can be adjusted, in the case of TRC and C-NOEC. Exhibit B also incorporates the District's requested changes to effluent limitations and monitoring frequencies as described in the comments below.

Request: The summer 4.5 mgd limit should be removed and all reasonable potential and other calculations should be recalculated using the Facility's design capacity of 5.7 mgd as required by 40 C.F.R. § 122.45(b)(1). The effluent and load limitations presented in Exhibit B for the 5.7 mgd design capacity should then be incorporated into the final permit.

2. **Dilution Factor and Design Flow.** As described in the Fact Sheet (Page 18), MassDEP calculated a dilution factor of 1.43 based on the 7Q10 and the July through September flow limit of 4.5 mgd. Assuming that EPA and MassDEP agree with the discussion in Comment 1 above, the dilution factor should be revised to reflect the 5.7 mgd as shown in the below:

$$DF = \frac{Q_s + Q_e}{Q_e} = \frac{1.91\ mgd + 5.7\ mgd}{5.7\ mgd} = 1.34$$

Where Q_s is the 7Q10 flow and Q_e is the design flow. This change would result in the following effluent limits for TRC and C-NOEC. As discussed in Comment 1, copper, ammonia, and phosphorus WQBELs were already calculated in Appendix B of the Fact Sheet using the 5.7 mgd design flow, the TSS, cBOD, and ammonia load limits were calculated based on a 4.56 mgd capacity, and the proposed TKN limits were set based on the 1976 WQMP; these limits would not change with a 5.7 mgd flow limit.

Table 1 Recalculated Effluent Limits for TRC and C-NOEC at a 5.7 mgd Flow Limit

Parameter	Limit at 5.7 mgd	Basis
Chronic TRC	15 µg/L	Chronic criteria * DF = 11 µg/L * 1.34
Acute TRC	25 µg/L	Acute criteria * DF = 19 µg/L * 1.34
C-NOEC	75%	1/DF = 1/1.34

In the alternative, if the summer flow limit of 4.5 mgd is not removed from a final permit, EPA's calculation using 4.5 mgd is the appropriate design flow to use in calculating WQBELs because low flow conditions with flows at 7Q10 only occur during the period where the 4.5 mgd flow limit is in effect. The District reviewed the 7-day average flow for the period of record at the USGS Charles River at Medway, MA gage (01103280, November 1997 through December 2024) and compared the flow against MassDEP's 7Q10 calculation (2.92 cfs at the gage and 2.96 cfs at the outfall location). This comparison (**Table 2**) indicates that 7-day average flows less than or equal to 7Q10 have only occurred during August and September.

Table 2 Comparison of Minimum Daily Mean and Minimum 7-day Average Flow at the USGS Charles River at Medway Gage (01103280, November 1997 through December 2024) and MassDEP's Calculated 7Q10

Month	Minimum Daily Mean	Minimum 7-day Average
January	16.3	18.7
February	33.4	36.4
March	47.2	50.2
April	27.7	32.8
May	16.8	18.1
June	6.5	7.2
July	3.17	3.9
August	1.61	2.0
September	2.06	2.2
October	4.25	3.7
November	7.51	8.1
December	10.2	11.0

Despite this, Appendix B of the Fact Sheet erroneously uses the 5.7 mgd design flow combined with the 7Q10 flow at the outfall location to assess the reasonable potential to exceed water quality criteria.

Request: The District requests that EPA (1) update the dilution factor to reflect the 5.7 mgd design capacity; or (2) if the summer flow limit of 4.5 mgd is not removed, noting that the District disputes this summer flow limit, reassess the reasonable potential using the 4.5 mgd flow, consistent with MassDEP's dilution factor calculation.

3. **Ammonia Limit**. As presented, beginning on page 22 of 48 of the 2024 Fact Sheet, the 2014 NPDES permit for the District currently includes seasonal effluent limits for ammonia from April 1 through October 31. The Draft Permit proposes a new monthly average ammonia limit of 5.6 mg/L November through March, decreases the April limit to 3.5 mg/L (from 10 mg/L) and decreases the May limit to 2.2 mg/L (from 5 mg/L). The Draft Permit includes a two-year compliance schedule during which the District would need to come into compliance with the reduced ammonia effluent limits for the winter season.

   The District reviewed the basis for the more stringent ammonia limitations in the Draft Permit and disagrees that there is reasonable potential to cause or contribute to an excursion of water quality standards for ammonia during the winter months. The new limitations should therefore be removed for at least the following reasons:

   - EPA incorrectly applies the criterion maximum concentration equation for situations where Salmonidae species are present in a warm water fishery;

- EPA's reasonable potential calculation listed in Appendix B of the Fact Sheet contains errors in the effluent concentration for the winter limit;
- The EPA calculation incorrectly applies the *existing* ammonia criteria to assess the need for more stringent ammonia criteria; and
- EPA's reliance on a handful of temperature measurements from a location two miles upstream of the effluent discharge is not a defensible methodology for assessing a chronic criterion.

With these errors corrected there is no reasonable potential to exceed water quality criteria or support the new and reduced effluent limits in the Draft Permit.

Request: The District requests that the Draft Permit be revised to reflect the calculations below and that the winter limits be removed from the final permit. Additional details on the above are provided below:

a. *EPA erroneously applies the ammonia criteria for situations with Salmonidae are present.*

The District's outfall discharges to Charles River Segment MA 72-05, which is classified by MassDEP as a Class B Warm Water Fishery (see Fact Sheet, Page 2 and 314 CMR 4.06, Table 5). The ammonia criteria described in the Massachusetts Water Quality Standards at 314 CMR 4.06, Table 29a, Appendix B indicates that "Salmonidae species are presumed absent in surface waters designated as Warm Waters in 314 CMR 4.00; and in surface waters that are not designated Cold Waters, CFRs, or Cold Water Fishery existing uses, or tributary to such designated Cold Waters, CFRs, or Cold Water Fishery existing uses." Because the segment of the Charles River at the outfall location is designated as a Warm Water Fishery in 314 CMR 4.00, the CMC criterion for situations where Salmonidae species are absent is not scientifically valid. This results in changes to the acute criteria for winter (November through March) and April. The November through March acute criterion should be corrected to **34.3 mg/L** and the April acute criterion should be corrected to **25.1 mg/L**. This change is reflected in the District's calculations presented in **Tables 3 and 4** below.

Request**:** EPA should use the CMC criterion for situations where Salmonidae species are absent consistent with the receiving water's classification.

b. *EPA does not correctly perform the reasonable potential calculation to determine the winter ammonia limit.*

The District reviewed EPA's reasonable potential analysis in Appendix B of the Fact Sheet. This review indicated that EPA's analysis uses an incorrect effluent concentration to establish the reasonable potential to exceed the criteria. When corrected to actual recorded effluent concentrations (see Table 3), there is no reasonable potential to exceed ammonia criteria in the winter, and therefore an effluent limit is not required.

The District cannot reproduce/verify the statistics listed in Appendix B for C_e (11 mg/L for acute and chronic) for ammonia; we note that the *maximum* ammonia concentration recorded in the 5-year period is significantly lower than the concentrations reported in Appendix B (see **Table 3**). As can be seen in Table 3, the measured effluent concentrations indicate that EPA's assumptions for C_e are incorrect and do not represent actual Facility performance. The current permit does not include a numeric effluent limit for ammonia between November and March; the District believes that EPA incorrectly used the reported mass (versus concentration) discharge to establish C_e. .

Table 3 Comparison of EPA's Reported Effluent Concentrations in Appendix B with Actual Effluent Concentrations from Appendix A for the Winter Ammonia Limit

Season	Draft Permit C_e Acute (mg/L)	Draft Permit C_e Chronic (mg/L)	Corrected C_e Acute (mg/L) (95th Percentile)	Corrected C_e Chronic (mg/L) (95th Percentile)
November – March	11.0	11.0	0.63	0.31

The District recalculated the reasonable potential analysis based on the corrected effluent concentrations (C_e) (**Table 4**, changes from the draft permit in **bold red font** – for both 4.5 and 5.7 design limits).

Table 4 Revised Reasonable Potential Analysis for the Winter Ammonia Limit

Qe (mgd)	Ce (mg/L)		Qd (mgd)	Cd (mg/L)		Criteria (mg/L)		Reasonable Potential	
	Acute	Chronic		Acute	Chronic	Acute	Chronic	Acute	Chronic
4.5	**0.63**	**0.31**	**6.41**	**0.47**	**0.25**	**34.3**	4.2	N	**N**
5.7	**0.63**	**0.31**	**7.61**	**0.50**	**0.26**	**34.3**	4.2	N	**N**

Based on this analysis there is no reasonable potential to exceed the winter ammonia limit. Therefore, the more stringent effluent limits imposed in the Draft Permit are not necessary for compliance with Massachusetts water quality criteria. The need for the more stringent ammonia limits at the Facility is not supported by the administrative record and limits therefore would be arbitrary and capricious. The monthly average winter ammonia limit should be removed and replaced with the existing monitor-only requirement.

In addition, the statement in the Fact Sheet that "the [Facility] has had several exceedances of the proposed limit of 5.6 mg/L from November through March during the review period" is incorrect. The maximum daily ammonia concentration during the review period (Appendix A of the Fact Sheet) was 1.06 mg/L. This statement should be deleted because no monthly average winter ammonia limit is required.

Request: EPA should revise its reasonable potential analysis to reflect actual facility data and remove the winter ammonia limits from the Draft Permit.

c. *Applying the existing ammonia effluent limits to recalculate the reasonable potential for April, May, and June – October periods is contrary to EPA regulations.*

The reasonable potential analysis conducted for parameters with an existing WQBEL incorrectly assumes that the effluent concentration is equal to the WQBEL in the current permit. Instead, EPA should have used the existing facility performance to determine if a more stringent effluent limit is required. This impacts the April, May, and June through October analyses, and results in EPA setting a more stringent monthly average WQBEL for the April and May timeframes.

This permitting approach is inconsistent with the Clean Water Act and EPA guidance in the *NPDES Permit Writers Manual* and the *Technical Support Document for Water Quality-based Toxics Control*. NPDES regulations discuss the requirements for determining whether a discharge has a reasonable potential to cause or contribute to an exceedance of water quality standards:

> When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.
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> 33 USC § 122.44(d)(1)(ii)

This concept is also expressed in EPA's guidance. For instance, the *NPDES Permit Writers' Manual* states:

> To establish the critical effluent pollutant concentration from the available data, EPA has recommended considering a concentration that represents something close to the maximum concentration of the pollutant that would be expected over time. In most cases, permit writers have a limited effluent data set and, therefore, would not have a high degree of certainty that the limited data would actually include the maximum potential effluent concentration of the pollutant of concern.
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> NPDES Permit Writers' Manual at 6-17

Thus, characterizing the existing effluent by using the existing WQBEL is contrary to both the regulations and guidance. The District analyzed actual effluent performance and reassessed the reasonable potential to exceed water quality criteria in April, May, and June through October (**Table 5**, changes in **bold red text**).

Table 5 Revised Reasonable Potential Analysis

Period	Qe (mgd)	Ce (mg/L)		Qd (mgd)	Cd (mg/L)		Criteria (mg/L)		Reasonable Potential	
		Acute	Chronic		Acute	Chronic	Acute	Chronic	Acute	Chronic
June - Oct	**4.5**	**1.28**	**0.18**	**6.41**	**0.91**	**0.15**	10.1	1.3	**N**	**N**
April	**4.5**	**1.1**	**0.26**	**6.41**	**0.79**	**0.20**	**25.1**	2.7	**N**	**N**
May	**4.5**	**0.22**	**0.06**	**6.41**	**0.15**	**0.04**	13.8	1.7	**N**	**N**
June - Oct	**5.7**	**1.28**	**0.18**	**7.61**	**0.97**	**0.15**	10.1	1.3	**N**	**N**
April	**5.7**	**1.1**	**0.26**	**7.61**	**0.84**	**0.21**	**25.1**	2.7	**N**	**N**
May	**5.7**	**0.22**	**0.06**	**7.61**	**0.16**	**0.04**	13.8	1.7	**N**	**N**

Based on *actual facility performance*, which accounts for "existing controls" as required in § 122.44(d)(1)(ii), there is no reasonable potential to exceed the new, more stringent criteria calculated by EPA in the Draft Permit. Therefore, setting a more stringent WQBEL based on the existing effluent limitations (for which the basis is not described in the Draft Permit) is arbitrary and capricious.

Request**:** The District requests that the existing April and May WQBELs be retained in the next permit issuance.

d. *EPA's temperature analysis is based on limited data is not appropriate for calculating a chronic criterion*

River Temperature data were obtained from CRWA and collected at the Shaw Street/Elm Street bridge approximately 2 miles upstream of outfall. Limited data were available, and EPA cites 4 data points for April and 5 data points for May between 2019 and 2023. These data are used to calculate the acute and chronic water quality criteria. The Massachusetts Surface Water Quality Criteria define an exposure duration for the chronic criterion; this is described in the Water Quality Standards (314 CMR 4.00) and in the 2022 Consolidated Assessment and Listing Methodology (CALM):

> Unless otherwise noted in Table 29a, the average ambient surface water pollutant concentration over any 1-hour period shall not exceed the criterion maximum concentration (CMC or acute criterion) more than once during any three year period and the ***average ambient surface water pollutant concentration over any 4-day period shall not exceed the criterion continuous concentration (CCC or chronic criterion) more than once during any three year period*** to protect against short- and long-term effects, respectively.
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> CALM at 46, emphasis added

Therefore, it is not appropriate to assume the maximum observed temperature from a limited set of data is applicable for assessing a 4-day average, 1-in-3 year exceedance threshold. Instead, given the limited amount of data, the District recommends using the average of the data collected. This results in an average April temperature of 12.3°C and

an average May temperature of 18.4°C. The updated chronic criteria and effluent limits are presented in **Table 6**.

Table 6 Recalculated Chronic Water Quality Criteria based on Average Temperature

Design Flow (mgd)	Period	Temperature (°C)	pH (SU)	CCC (mg/L)	Calculated Average Monthly Limit (mg/L)
4.5	April	12.3	7.1	3.0	4.2
4.5	May	18.4	7.1	2.0	2.9
5.7	April	12.3	7.1	3.0	3.9
5.7	May	18.4	7.1	2.0	2.7

Request**:** While the District objects to more stringent April and May monthly average ammonia limits due to the lack of a reasonable potential to exceed water quality criteria based on existing controls, if EPA elects to reduce the ammonia limits, we request that EPA use the average temperature to calculate the effluent limits instead of the maximum temperature.

4. **Total Kjeldahl Nitrogen, Nitrate + Nitrite, Total Nitrogen.** In addition to the new ammonia limits cited above, Part I.A.1 and the Fact Sheet, Page 24, require nitrogen sampling, including the addition of a Total Kjeldahl Nitrogen (TKN) limit of 1.7 mg/L and 95 lb/day year-round (based on the 1976 WQMP waste load allocation, a report that is nearly 50 years old and developed prior to the CRPCD facility design and construction), and monitoring requirements for the sum of nitrate plus nitrite and Total Nitrogen. As described below, the basis for the TKN limit is unsubstantiated given current conditions in the Charles River, and the monitoring and reporting requirements are excessive and put an undue cost and burden on the CRPCD staff and laboratory.

   As an initial matter, the District notes that two treatment plants in the watershed (Milford and Medfield) were recently issued new NPDES permits without TKN limits despite being assigned a load allocation in the 1976 WQMP. As described in more detail below, if EPA did not consider TKN limits to be necessary for these treatment plants, and it is shown there is no reasonable potential for a TKN limit, the TKN limit should be removed from the Draft Permit.

   a. *The TKN effluent limitations should be removed because the Draft Permit does not establish a reasonable potential for TKN to exceed water quality criteria.*

      The 2024 Fact Sheet has not demonstrated that there is a reasonable potential to exceed Massachusetts water quality guidance and standards with the District's existing TKN discharge levels. The Fact Sheet correctly states that the 1976 TKN waste load allocation was determined "to ensure that toxic ammonia concentrations would be eliminated from the Charles River." EPA completed a reasonable potential analysis in the 2024 Draft Permit to assess the facility's current impact on the attainment of ammonia criteria downstream of the outfall. This analysis indicates that the ammonia limits provide this protection.

      To this point, as EPA is aware, TKN is equal to ammonia plus organic nitrogen. Thus, a TKN limit can be used in lieu of an ammonia limit to prevent ammonia impairment. Here

however, where appropriate ammonia limits are in place (see discussion above in Comment 3), the TKN limit is redundant and in fact requires the District to meet a lower ammonia discharge in order to achieve the TKN limit. If the ammonia permit limits meet the water quality standard, it is unnecessary to impose more stringent TKN limits in April and May and no limit should be necessary in the winter months. **Table 7** compares the proposed monthly average TKN and ammonia limits in the Draft Permit.

Table 7 Comparison of Ammonia and TKN Limits Proposed in the Draft Permit

Season	Proposed Monthly Average Ammonia	Proposed Monthly Average TKN
(April 1 - April 30)	3.5 mg/L 380 lb/day	1.7 mg/L 95 lb/d
(May 1 - May 31)	2.2 mg/L 190 lb/day	1.7 mg/L 95 lb/d
(June 1 - October 31)	1 mg/L 38 lb/day	1.7 mg/L 95 lb/d
(November 1 - March 31)	5.6 mg/L Report lb/day	1.7 mg/L 95 lb/d

Finally, there has been no demonstration in the 2024 Draft Permit that the organic nitrogen discharged causes or contributes to exceedances of water quality standards. Therefore, establishing the proposed TKN limit is arbitrary and capricious and should be eliminated from the Draft Permit.

Request: The District requests that the numeric TKN limit be removed from the Draft Permit.

b. *The 1976 WQMP is based on speculative information about a WWTP that did not yet exist and relies on outdated information and is not relevant to the current condition of the Charles River*

The TKN limits imposed in the Draft Permit were simply copied from the 1976 WQMP without addressing changes that have occurred in the nearly 50 years since this document was published. The most significant of these changes was the construction of the CRPCD Water Pollution Abatement Facility, which went online in 1980. The conditions that the TKN wasteload allocation were developed to meet are no longer present in the Charles River, but no attempt was made by EPA to evaluate whether the conditions that determined the need for a TKN limit are still present in 2025.

First, the District's WWTP *did not exist* at the time of publication. A portion of the wastewater from the region served by the district was treated at the Franklin STP. The TKN wasteload allocation was developed based on a 1985 flow projection of 6.7 mgd, derived from a 1974 facilities plan. Therefore, a wasteload allocation developed for a *speculative* WWTP (at the time) has no bearing on current conditions at the 5.7 mgd CRPCD WWTP. (see 1976 WQMP at 43)

Prior to the construction of the CRPCD WPAF, water quality conditions in the segment upstream of Mine Brook, where the Franklin STP discharged, were poor: "This is one of the three most severely polluted segments in the Charles River basin. Below the Milford STP are encountered depressed D.O. (minimum less than 1.0 mg/L), toxic ammonia concentrations (as high as 6.9 mg/L as N), extremely high nutrient concentrations (nitrate greater than 2.0 mg/L as N, total phosphorus as high as 5.0 mg/L), and bacterial contamination" (1976 WQMP at 23). The next downstream segment was impacted by the Franklin STP, and also experienced poor water quality ("Pollution of this segment is primarily from the Franklin STP, entering the main stem via Mine Brook. D.O. levels are depressed but remain above 2.0 mg/L. Nitrification occurs in this segment. Nutrient concentrations are high, and algal blooms occur." (1976 WQMP at 23). The segment downstream of Populatic Pond was reported to have better conditions, but there were no point sources to this segment at the time.

The 1976 WQMP indicates that "load allocations for total Kjeldahl nitrogen have been determined to insure that toxic ammonia concentrations will be eliminated from the Charles river". (1976 WQMP at 87). The TKN wasteload allocation would have been developed based on the existing water quality upstream of the discharge: toxic ammonia concentrations and high levels of nitrification contributing to low dissolved oxygen conditions. These conditions have since been improved significantly through the implementation of ammonia and nutrient limitations on upstream dischargers. The current ammonia concentrations upstream of the discharge, as reported in Appendix B, range between 0.055 and 0.1 mg/L – a factor of ten lower than the conditions reported in the 1976 report and well below acute and chronic water quality criteria. The TKN treatment level projected to be required at the CRPCD WWTP in 1976 is simply not necessary to meet water quality standards in the Charles River today, nearly 50 years later.

Finally, the District notes that the TKN wasteload allocation was based off of a projected design flow of 6.7 mgd. EPA cannot rely on a calculation based on flows from 1976 and an incorrect design flow to set a WQBEL. The reasonable potential to exceed water quality criteria must be recalculated based on the current facility design.

Request: The District requests that the 1976 WQMP no longer be used to establish permit limits in the Charles River basin because it relies on outdated water quality conditions and pre-dates the construction of the District's facility.

c. *The nitrogen monitoring requirements are overly burdensome given the lack of evidence of a nitrogen impairment in the Charles River.*

The Fact Sheet also correctly states, "typically phosphorus is the limiting nutrient triggering eutrophication in freshwater ecosystems and nitrogen in marine or estuarine systems." In addition, the Fact Sheet states, "that more data are necessary to determine whether there is reasonable potential for nitrogen discharges from the CRPCD to cause or contribute to violations of the narrative nutrient criteria in the receiving water." As acknowledged, the Charles River watershed is densely populated including many POTWs

and industrial discharges, as well as urban runoff. Although we agree that more data is necessary to understand the nitrogen loads to the watershed, we would contend that monthly sampling of the suite of nitrogen compounds would be sufficient to assess CRPCDs contribution to the overall watershed load and that the permit should be revised to reflect this.

Request: The District requests that nitrogen monitoring be removed from the Draft Permit, or in the alternative, that the frequency be reduced to monthly year round. In addition, the District requests that if the permit is administratively continued after the five-year term expires, that all nitrogen reporting requirements be discontinued as EPA will have collected sufficient data for any future permitting requirements.

5. **Ambient River Sampling for Phosphorus.** Part 1.G.1 of the Draft Permit requires the collection of monthly total phosphorous samples from April through October in even numbered years at a location in the receiving water upstream of the Facility. The Draft Permit requires that the results shall be submitted to EPA and the State and shall be conducted in conformance with an approved Quality Assurance Project Plan (QAPP).

   While a permit may require a permittee to monitor its own discharges, it is the responsibility of the USEPA or MassDEP to collect and analyze baseline in stream water quality – this is NOT the responsibility of the permittee and should not be a cost to ratepayers. This requirement places additional burden on funds and resources of the District, and the Agency oversteps its authority. *See Nat. Res. Def. Council, Inc. v. U.S.E.P.A.*, 859 F.2d 156, 170 (D.C. Cir. 1988) ("EPA can properly take only those actions authorized by the CWA—allowing, prohibiting, or conditioning the pollutant . . . . Just as EPA lacks authority to ban construction of new sources pending permit issuance, so the agency is powerless to impose permit conditions unrelated to the discharge itself.").

   Request: The District requests that the ambient phosphorus requirement be removed from the permit. If the agency requires this sampling by the permittee, a QAPP should not be required, because the District already collects ambient data for the WET testing requirements, and these data are already used by EPA for the reasonable potential analysis calculations. The need for an EPA and MassDEP approved sampling plan and QAPP should be deleted from this permit. In addition, if ambient phosphorus monitoring is required, the described study design seems unnecessarily complex. No rationale is given for sampling only after 72 hours of dry weather. This restriction makes it impossible to schedule sampling resources in advance, and planned sampling may be "rained out" at the last minute. Conducting sampling monthly regardless of weather conditions provides a more comprehensive understanding of the range of phosphorus that can be expected in the water column, which allows for more realistic assessment of water quality.

6. **Per- and polyfluoroalkyl Substances ("PFAS").** Part I.A.1 and Page 31 of the Fact Sheet and Paragraph 9 of the Draft Permit require quarterly sampling of PFAS Analytes (Method 1633) and Adsorbable Organic Fluorine (Method 1621) in the Facility's influent and effluent, measured in ng/L (parts per trillion), as well as quarterly sampling of PFAS Analytes in the sludge, measured in ng/g using Method 1633. Although the District understands the widespread issues associated with PFAS, as the District does not use PFAS compounds and does not itself generate PFAS

impacted wastes, it is concerned with (1) the potential cost for this monitoring and the burden placed upon ratepayers and (2) the potential implication that discharge of PFAS impacted wastewater could constitute a violation of state and federal law.

It is worth noting that wastewater treatment facilities such as the District, which serve the public good through the treatment of wastewater and do not otherwise use or produce PFAS compounds, should be exempt from liability under state and federal law for the ancillary discharge of wastewater impacted by PFAS (for example, liability protections similar to the Water Systems PFAS Liability Act, S. 1430).

The District and other treatment facilities passively receive PFAS through source water and have never participated in or profited from the production or use of PFAS. By imposing the costs for monitoring on the District, the EPA punishes good actors and not the parties responsible for the PFAS contamination, those that profited from the production, or those that use of PFAS in their products. EPA and MassDEP should focus its sampling requirements on manufacturers and users of PFAS and require the same to fund monitoring studies.

a. In regard to cost, the Draft Permit requires quarterly sampling at substantial cost. The District understands that similar sampling at treatment facilities across the United States routinely detects low levels of PFAS compounds in influent and effluent. As the District does not use or produce PFAS compounds while treating and cleaning millions of gallons of waste each year, imposing this additional cost with little to no environmental benefit is unnecessary. There are only a few labs currently certified to do PFAS sampling and the cost of sampling has been reported from $350 to $500 per sample, not including blanks or AOF sampling, or on the order of $6,000 to 10,000 year. Because of the ubiquitous nature of PFAS the collection of samples requires a detailed protocol to avoid sample contamination. Sampling performed to date at treatment facilities around the nation have found PFAS analytes to fall within a relatively narrow range of concentrations for the influent, effluent and biosolids, with limited seasonal variation evident.

   Request: Because of the cost and nature of PFAS sampling, limited availability of labs to perform the testing, and the extremely low detection limits, if the PFAS monitoring requirements are not deleted, the District suggests testing twice per year as a more reasonable request. If after two years of sampling concentrations are relatively consistent, sampling could be moved to once per year. This proposed tiered program would provide good baseline information of PFAS in the system but also limit wasteful and costly sampling and analysis. The permit should be written to allow the reduced sampling overtime. A similar approach has been included in the Capital Region Water's NPDES permit in Harrisburg, PA issued in November 2024.

b. Regarding Adsorbable Organic Fluorine monitoring and reporting, Method 1621 is a draft test method designed to capture all organic fluorine compounds in the wastewater. This method is still under development by EPA's Engineering and Analysis Division (EAD), which indicated it is not approved for CWA compliance monitoring. The multi-laboratory validation study has not yet been performed on this method. Again, it appears that EPA is

using its permitting authority in Massachusetts to test methods and requirements that are not yet instituted across the nation, unfairly burdening Massachusetts' communities.

Request: This proposed requirement should be removed from the permit unless and until an approved method is promulgated and a national criterion is established. In the alternative, if Adsorbable Organic Fluorine monitoring requirements are not deleted, the District suggests testing twice per year as a more reasonable request. If after two years of sampling concentrations are relatively consistent, sampling could be moved to once per year. This proposed tiered program would provide good baseline information of Adsorbable Organic Fluorine in the system but also limit wasteful and costly sampling and analysis.

c. Part 1.E.6 of the permit would require annual PFAS sampling of many types of industrial discharges (not just the three Significant Industrial Users in the current Industrial Pretreatment Program) using Method 1633. Given the size of the service area and the types of services targeted (e.g., car washes) and the ambiguity in the language e.g., "any other known or suspected sources of PFAS" – this will be a burdensome and costly process of sampling and analysis.

   Request: To limit the burden on the District and its industry, the District suggests a reduction in the frequency of sampling if data collected fall within the expected range. In addition, the District requests that the overly broad and vague statement "any other known or suspected sources of PFAS" be removed from the list.

d. Lastly, we note that MA DEP has recently commenced a $1,000,000 program to sample all 114 POTWs across the Commonwealth for PFAS in the influent, effluent and biosolids. This action is, in effect, acknowledgement that this work does fall within the purview of the regulatory agencies. Requiring the District to also perform this work is duplicative and unnecessary.

7. **Adaptation Planning**. The Adaptive Planning requirements in the draft Permit under paragraph C. Operation and Maintenance of the Treatment and Control Facilities, would require the District and its co-permittees to: (1) Identify vulnerable critical assets at the wastewater treatment plant and in the sewer systems within 24 months; (2) Perform an Adaptive Measures Assessment within 36 months; and Develop an Implementation and Maintenance Schedule within 48 months. The draft permit also proposes regular progress reporting for these activities.

   Although the District believes that Adaptive Management Planning provides important information for the District, the adaptation planning requirements are beyond the appropriate scope for an NPDES permit renewal. Planning for events that may occur decades from the expiration of this Permit uses limited funds with no environmental benefit. *See* 40 C.F.R. § 122.41 (proper operation and maintenance requires sufficient measures "to achieve compliance with the conditions of *this* permit");
   Nat. Res. Def. Council, Inc. v. U.S.E.P.A., 859 F.2d 156, 169 (D.C. Cir. 1988) (overturning "EPA's imposition of non-water quality permit conditions").

For decades, wastewater treatment facility designers and regulatory authorities in New England have used the New England Interstate Water Pollution Control Commission's *Guides for the Design of Wastewater Treatment Works (Technical Report #16, or TR-16)*, as a helpful resource for designing and upgrading existing wastewater treatment plants. Originally developed in 1962, the guide has been updated over the years as technology has progressed. The most recent 2011 edition was revised in 2016 to reflect resiliency and adaptation considerations.

The 2011 edition and all previous editions recommended that treatment plants and pump stations be designed to (1) provide for uninterrupted operation of all units during conditions of a 25-year (4% annual chance) flood and (2) be placed above or protected against the structural, process, and electrical equipment damage that might occur in a 100-year (1% annual change) flood elevation. It was never intended that the treatment facility would be capable of maintaining water quality standards during extreme (> 25-year recurrence) flooding or rainfall events, but that the plant would be protected during a 100-year event so that when the flood waters receded the plant would be resilient and could resume treatment. In addition, the hydraulic design of the facilities were designed to allow peak hourly flows to be passed through the plant with the receiving water at the 25-year flood elevation.

The 2016 revisions to the 2011 edition of TR-16 now recommends new facilities within an existing treatment plant and new wastewater treatment plants should (1) provide for uninterrupted operation of all units during conditions of a 100-year (1% annual chance) flood and (2) be placed above, or protected against, the structural, process, and electrical equipment damage that might occur in an event that results in a water elevation above the 100-year (1% annual chance) flood. Critical equipment should be protected against damage up to a water surface elevation that is 3-ft above the 100-year elevation. Non-critical equipment should be protected against damage up to a water surface elevation that is 2-ft above the 100-year elevation.

The most appropriate time for facilities to assess resiliency concerns is during the facilities planning process for system upgrades when new facilities and existing facilities can be fortified as a part of ongoing improvements.

In addition, the subjective requirements of the planning leaves the permittee open to criticism and claims of non-compliance and to arbitrary and inconsistent enforcement as well as third party challenges. The District has two primary concerns with this proposed adaptive management requirement in the NPDES permit: lack of EPA authority and the singling-out of Massachusetts facilities.

First, the NPDES permit is not the appropriate vehicle to produce this report, and EPA does not have the authority to include Adaptive Planning in an NPDES permit. Although the Facility and its interceptor system are subject to regulation as to discharges, the CWA's NPDES program regulates just that, discharges, not the facility (or facilities) that discharge. *Nat. Res. Def. Council, Inc. v. U.S.E.P.A.*, 859 F.2d 156 (D.C. Cir. 1988) The CWA does not provide EPA with the authority to dictate how a facility addresses floods and major storm events. For example, the CWA included language that provides permittees some level of protection against an "Act of God," however, these permit requirements would eliminate this protection.

Second, Massachusetts remains one of three states not delegated authority to oversee the NPDES program. As such, it appears that EPA, through its primacy, is including Adaptation Planning requirements in Massachusetts permits as a "trial balloon" and is unfairly putting the burden on the District (and other Massachusetts' communities) to vet the requirements and develop solutions for the balance of the country. This is clear in the last sentence of Appendix C which states, "Therefore, EPA will require Adaptation Plans be developed under NPDES permits for all wastewater treatment plants in Massachusetts and New Hampshire." A nationwide approach to adaptive planning for wastewater plants needs to be developed, transparently with appropriate rulemaking and stakeholder input (as it was for water plants).

Request: The District request that Adaptive Planning provisions be removed from the final permit because EPA lacks authority to impose them and a nationwide approach should be developed instead of imposing such provisions on individual permittees through the NPDES program.

8. **Water Quality Certification PFAS Sampling of Significant Industrial Users ("SIUs").** Pursuant to Paragraph (a) of the Water Quality Certification, MassDEP proposes that beginning the first full calendar quarter following 6 months after the effective date of the final version of the Draft Permit, the District must commence annual monitoring of all Significant Industrial Users for PFAS analytes discharging into the Facility using Method 1633.

   Request: The District requests that this be clarified to allow the District to require the sampling be conducted by any SIUs as part of the District's IPP program.

9. **Potential Alternative Permit Conditions - Section 5.7 of Fact Sheet.** EPA notes in Section 5.7 of the Fact Sheet that considered a variety of alternative permit conditions and monitoring requirements in lieu of narrative requirements but did not include such requirements in the Draft Permit as it understands the MassDEP permit would include such narrative requirements. While the District believes that the alternative permit conditions discussed by EPA in Section 5.7 are not appropriate for a NPDES permit, are beyond EPA's authority to impose and would be unduly burdensome in light of the requirements of the Draft Permit, which adequately protect water quality in the Charles River, as MassDEP included narrative requirements in Paragraph 9 of the MassDEP permit and Paragraph (c) of the Water Quality Certification, the alternative permit conditions are therefore unnecessary and should not be included in the Draft Permit.

   Request: The District notes that based on the above, the alternative permit conditions discussed in Section 5.7 of the Fact Sheet are unnecessary and should not be included in the Draft Permit.

10. **Other Minor questions, comments and revisions to information and requirements of the Draft Permit.**

    a. Co-Permittee addresses are incorrect. Correct addressed are as follows:

    Town of Medway
    45B Holliston Street
    Medway, MA 02053

Town of Bellingham
215 Depot Street
Bellingham, MA 02019

b. In numerous locations throughout the permit and fact sheet the term "Water Pollution Abatement Facility" is used incorrectly. The District's legal name is Charles River Pollution Control District. If referring to the plant, wastewater treatment plant or water reclamation facility would be more appropriate.

c. The description of the treatment facility on page 15 of the Fact Sheet (Section 3.1.1) should be replaced as follows:

The Charles River Pollution Control District (CRPCD) is an advanced wastewater treatment plant providing treatment to domestic, commercial, and industrial wastewater.

The plant was expanded and upgraded in 2000 to increase its flow capacity from 4.5 to 5.7 MGD. The upgrade included an anoxic biological selector for filamentous bacteria control, two fine bubble diffused aeration basins to increase the aeration capacity, four 12-cloth disk filters to supplement the existing sand filters, and an upgrade to the plant's electrical system. In 2003, new piping and pumps for the ferric chloride, ferrous sulfate, and lime systems were installed, and a hydrated lime mixing system was installed to replace the quick lime slaking system. In 2014 the District underwent a comprehensive upgrade. This upgrade included replacement of most of the process equipment (pumps, blowers), replaced surface aerator tanks with hyperbolic mixer aerators, converted the traveling bridge sand filters to a 5 micron cloth diamond traveling bridge filter, replaced the existing 10 micron cloths on the disk filter with 5 micron cloths, eliminated the use of chlorine gas, and replaced many failing architectural, HVAC and electrical components including all roofs, doors, and air handling units and a new Supervisory Control and Data Acquisition (SCADA) system. In 2023, the District converted from its hydrated lime system to a calcium carbonate slurry.

The unit processes and equipment at the plant consist of a Parshall flume, two automatic bar racks, four influent pumps (lead/lag/standby/standby), two aerated grit tanks ferric chloride can be added for additional phosphorus control, two primary clarifiers, an anaerobic bioselector, two fine bubble aeration trains, two mixer aerator trains, , four secondary clarifiers, four cloth disk filter basins, and one diamond traveling bridge filter . Solids are captured on the filter cloth and backwashed to the headworks, and the filtered water continues to the chlorine contact chamber. The effluent is disinfected in two chlorine contact chambers (sodium hypochlorite), dechlorinated with sodium bisulfite, passes down effluent cascade steps, and flows 3,375 feet through Outfall 001 to the Charles River.

Ferrous Chloride is added at the headworks for odor control. Calcium Carbonate is added into the returned activated sludge (RAS) for pH control. Ferric Chloride is added into the distribution box upstream of the secondary clarifiers for phosphorus control.

The facility receives approximately 40,000 to 60,000 gallons of septage per day from its co- permittee communities as well as 7 other communities. There are two septage tanks,

which are filled and batch-discharged by gravity into the headworks. The facility checks the pH of each septage delivery.

Primary sludge is pumped to a gravity belt thickener. Secondary sludge flows to the wet well and is pumped to the gravity thickener with polymer added to aid thickening. The 7% solids sludge is held in two sludge tanks and then trucked to the incinerator at the Upper Blackstone Clean Water facility in Millbury, MA. The mass of sludge shipped for incineration in 2023 was 1,744 dry metric tons.

d. Chlorination. The Draft Permit indicates that the District must "minimize the use of chlorine while maintaining adequate bacterial control," the Draft Permit is not clear if this requires chlorination outside of the time period from March 1 – November 30 when bacteria (e. coli) sampling is required. EPA should clarify if chlorination is required in the winter months (December through February).

e. The Draft Permit includes the requirement to report on any interruption or malfunction of the chlorine dosing system. The District questions why this is necessary as it appears irrelevant if sampling shows that bacteria and TRC meet the permit limitations otherwise. EPA should clarify the need for the reporting or delete the requirement.

f. The District requests clarification that the dissolved oxygen sample type be a "grab or meter" as in prior permits to allow for sampling with a portable meter, which is the District's current practice.

g. Due to weather and other potential scheduling issues including the coordination with the 3rd party contract laboratory, the District cannot guarantee that the WET testing will be done during the same week in quarter due to the contract lab's schedule and holidays. Generally, the testing is done around the same time. The District request the language is changed to "during the same month each time of calendar quarters…"

h. The Fact Sheet at page 35 indicates that within 180 days of the Permit's effective date, the District must submit a description of proposed changes to the industrial pretreatment program. However, this requirement is not in the Draft Permit. The District requests that EPA clarify if the above requirement is an obligation of the final permit.

i. Part I. H - Page 28: Submittals to DEP – WET. The District currently submits WET test reports to MassDEP electronically via email. The District will continue electronic submittals unless otherwise directed by MassDEP.

j. Page 19 of fact sheet: 5.1.1. The District notes that there were only 6 exceedances of the 12 month rolling average in the review period. The District requests that EPA update this information and also update the same in the table in Appendix A – Monitoring Data Summary on page A-1.

k. The District requests that in Appendix B of Fact Sheet that EPA carry out decimal points for C_s on ammonia and phosphorus. This will improve the District's ability to understand EPA calculations and rationale.

l. The District understands that each Town will submit their respective electronic reports through CDX and the same will not be included as an attachment to the District's DMR (Part 1, Page 17, #3). EPA and MassDEP should clarify this in the Draft Permit.

The District looks forward to working with EPA and MassDEP on the above issues in order to develop a final permit that is protective of the Charles River while being sustainable for the District, its member towns and ratepayers. Should you have any questions on the above, please call my office at 508-533-6762.

Sincerely,

Elizabeth Taglieri, P.E.
Executive Director

Ecc: Ken Moraff, EPA Region 1 (moraff.ken@epa.gov)
Michael Cobb, EPA Region 1 (cobb.michael@epa.gov)
Lealdon Langley, MassDEP (lealdon.langley@state.ma.us)
Robert Cantoreggi, Franklin Director of Public Works
Peter Pelletier, Medway Director of Public Works
Jesse Riedle, Bellingham Director of Public Works
James F. McKay, Millis Director of Public Works
Matthew Snell, Nutter McClennen & Fish
Jane Madden, CDM Smith

EXHIBIT A -
Response to Public Comment CRPCD 2000 Permit
[Attached]

RESPONSE TO PUBLIC COMMENT

From June 19, 2000 to August 17, 2000 the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MA DEP) solicited Public Comments on a draft NPDES permit, developed pursuant to an application from the Charles River Pollution Control District. After a review of the comments received, EPA has made a final decision to issue the permit authorizing the discharge. The following response to comment describes the changes and briefly describes and responds to the comments on the draft permit. A copy of the final permit may be obtained by writing or calling Betsy Davis, United States Environmental Protection Agency, 1 Congress Street, Suite 1100 (CPE), Boston, Massachusetts 02114-2023; Telephone (617) 918-1576.

A) Comments submitted by the Charles River Watershed Association on July 18, 2000.

Comment #1: Disinfection has been reduced from year-round to seasonal (March 1 to October 31) in all permits. CRWA recognizes that this disinfection schedule reflects an increased period of disinfection, compared to the treatment plants' current NPDES limits. However, CRWA prefers the use of year-round disinfection coupled with adequate dechlorination (as needed), originally proposed in the draft NPDES permits. While recreational use of the river decreases there still are users who boat and fish during, the winter. Additionally miles, of the upper reaches of the Charles violate the Massachusetts Surface Water Quality Standards for fecal coliform during the winter when disinfection is discontinued.

Response: The fecal coliform limits are based on State Water Quality Standards, for Class B water, and MA DEP believes that seasonal disinfection is the best option for these permits. The monitoring period has been extended from March 1 through November 30 in all six permits because of increased activity along the river. The MA DEP recommends year round disinfection when a facility's discharge could impact a public drinking water supply or shellfish beds. Ingestion of contaminated water or shellfish is a public health concern however, neither of these conditions exists for facilities that discharge to the Charles River.

Comment #2: CRWA recommends that all permits have winter, reporting requirements for BOD, TSS, phosphorus, ammonia, fecal coliform, temperature, and dissolved oxygen. This information will be critical as the EPA, Massachusetts Department of Environmental Protection, and CRWA begin preparation of Total Maximum Daily Loads on the Charles River.

Response: All six permits have year round reporting requirements for BOD_5, TSS and dissolved oxygen. Year round ammonia limits are in the draft permits for MCI WWTP, Milford WWTF and Wrentham Developmental Center. The other three facilities did not warrant winter ammonia limits at this time (See Attachment to the fact sheet for ammonia calculation) but are required to report ammonia each month during the cold weather season.

Effluent temperature is not typically required monitoring in municipal wastewater permits, but river temperature and effluent temperature would be routinely monitored as

part of the water quality surveys designed to support TMDL development.

Winter phosphorus monitoring has been added to all six permits because there is the potential for accumulation in impoundments as eutrophication in the receiving water.

The reporting period for fecal coliform is explained in the response to comment #1 from CRWA.

B) Comment submitted by the Charles River Pollution Control District on August 17, 2000.

Comment #1&2: **7QlO Flow Basis: Attachment G:** The District believes the agencies used an inappropriate and inaccurate method to estimate the 7Q 10 flow at the District's outfall. The agencies' method takes the average wastewater flows for July, August and September 1999 from the upstream wastewater treatment plants (Milford, CRPCD, Medfield, Wrentham, and MCI) and compares those summertime values to the historic 7Q 10 flow at the Charles River gauge at Dover. This comparison is inaccurate because under dry or drought conditions when the Charles River at Dover is experiencing 7Q 10 flow, each of those wastewater treatment facilities certainly will be discharging much less than average summertime flows.

The District recommends and requests instead that the agencies estimate the 7Q 10 flow at Medway by comparing the historic Dover 7Q 10 flow condition to the wastewater treatment plant flows that occurred in the low flow week of September 1999, which is when the Charles River actually experienced 7Q 10 conditions at Dover in that year. That comparison is much more accurate and realistic.

Dilution Factor: Attachment F: The agencies propose to calculate the dilution factor by comparing their estimate of the 7Q 10 flow at Medway to the permitted design capacity of the District's treatment facility. That design capacity was recently increased to 5.7 mgd to anticipate expected growth in flow from the District's communities through 2015. That design capacity should not be used in the calculation of the dilution factor during the term of the next permit, however, because of the zero probability over the next four years that flows will occur at the design capacity during 7Q 10 conditions in the river. The District's projections show that the 5.7 mgd design capacity will not be used or needed in the summer months (July through September) during this permit time period.

Instead, the agencies should calculate the dilution factor at 7Q 10 conditions by comparing the correctly calculated 7Q 10 at Medway against an average summertime wastewater flow of 4.5 mgd. The District recommends and requests use of this approach for the following reasons:

The design flow of 5.7 mgd is not projected to be achieved until the year 2015.
The draft permit is for a 4 year period.
A substantial portion of the District's discharge is due to infiltration/inflow (I/I), which will be reduced over time. In addition, I/I flows are low during periods of dry weather flows. The draft permit requires the District to submit

annual reports on its I/I reduction efforts.
The District's discharge averaged only 3.5 mgd in September 1999 when the Charles River at Dover was at 7Q 10 flow.

In addition, the District reviewed data for a ten-year period (October 1989 to September 1999) comparing its wastewater discharge volumes to the Charles River flow at Dover. During this ten-year period, whenever the District's discharge reached 4.5 mgd, the 7-day average Charles River flow at Dover was always at least 160 cfs, or more than ten times the 7Q 10 flow condition (12.2 cfs). Therefore, if the agencies determine to use the 4.5 mgd value to calculate the dilution factor and to limit the permitted flow during summer months (July through September) to 4.5 mgd (monthly average), which the District would accept, the agencies should not impose that flow limitation during the remainder of the year.

The District recommends and requests that the agencies redetermine the whole effluent toxicity test limits in the final permit by using the corrected 7Q 10 flow and dilution factor.

Response: After consideration of the District's request, EPA and MA DEP have recalculated the 7Q10 flow in the draft permit based on the low flow period of August 7, 1999 through August 13, 1999 for the Charles River and the facilities average flow during that week. There were 7Q10 flow conditions at the Dover gage during this period. We have also incorporated a seasonal flow limit for the months of July through September of 4.5 MGD. The copper and TRC limits in the final permit are based on a dilution factor of 4.13.

Estimated drainage area at the facility (USGS map)
65 square miles at CRPCD

Dover gage station - 183 square miles at Dover
7Q10 = 12.2 cfs

Contributing low flows (August 7, 1999 through August 13, 1999) from upstream treatment plants

Milford = 3.64 cfs
CRPCD = 5.38 cfs
Medfield = 1.11 cfs
Wrentham Development Center = 0.114 cfs
MCI = 0.569 cfs
Southwood = .0154 cfs
Total = 10.83 cfs

Base flow at Dover gage station
12.20 - 10.83 = 1.37 cfs

Base flow per square mile of drainage area

$1.37/183 = 7.48 * 10^{-3}$

7Q10 = Base flow at CRPCD + Milford flow
$(7.48 * 10^{-3} * 65) + 3.64$ cfs = 0.488 + 3.64 = 4.126 cfs = 4.13 cfs

7Q10 = 4.13 cfs

Charles River Pollution Control District

Treatment Plant Flow for October through June- 5.70 MGD = (5.70mgd * 1.547 cfs/mgd) = 8.82 cfs
Treatment Plant Flow for July through September - 4.5mgd * 1.547cfs/mgd = 6.96 cfs

Receiving water - Charles River
7 day 10 year low flow (7Q10) of the river - 4.13 cfs

Dilution Factor

$$\text{dilution factor} = \frac{7Q10 + \text{design flow}}{\text{design flow}} = \frac{4.13 \text{ cfs} + 6.96 \text{ cfs}}{6.96 \text{ cfs}} = 1.59$$

Dilution Ratio

$$\text{dilution ration} = \frac{7Q10}{\text{treatment plant design flow}} = \frac{4.13 \text{ cfs}}{6.96 \text{cfs}} = 0.59 : 1$$

The permittee is required to conduct four chronic toxicity tests per year, since the dilution ratio is less than 10:1.

Toxicity
The chronic (C-NOEC) whole effluent toxicity limit is calculated using the in stream waste concentration (IWC) of the WWTP effluent. The IWC is the inverse of the dilution.

C-NOEC for July through November

C-NOEC = 1/dilution factor = 1/1.59 = 0.63 = 63%

Total Chlorine Residual (TRC)[1,2]
EPA suggested In stream Chronic Chlorine Criteria is 11.0 ug/l
EPA suggested In stream Acute Chlorine Criteria is 19.0 ug/l

total residual chlorine = dilution factor * acute chlorine criteria
= 1.59 x 19 ug/l
= 30.21 ug/l
= 0.030 mg/l

total residual chlorine = dilution factor * chronic chlorine criteria
= 1.59 * 11 ug/l
= 17.49 ug/l
= 0.017 mg/l

Copper

The copper limit is dependent on the hardness of the receiving water. The hardness used is 60 and is based on data in the toxicity test.

ln 60 = 4.094

chronic copper limit: criterion continuous concentration

$e^{[(0.8545*\ln(60))+(-1.702)]} * 1.59 = 6.03 \times 1.59$
= 9.58 ug/l
= 0.010 mg/l

acute copper limit

$e^{[(0.9422*\ln(60))+(-1.700)]} * 1.59 = 8.65 \times 1.59$
= 13.75 ug/l
= 0.014 mg/l

Comment #3: **Copper Concentration: NPDES Permit p. 3, Fact Sheet p. 4, and Attachment F:** In addition to 7Q 10 flow and the dilution factor, the hardness of the receiving water enters into calculating the permitted effluent limit concentration of copper. The draft permit uses a hardness of 40 mg/l for the river water. This hardness concentration was taken from the District's whole effluent toxicity testing reports, which report on the river hardness upstream of the District's discharge for the entire yearly range of river flows. The District believes it is more accurate to use a hardness concentration for the upstream flows that occur at the times closest to dry weather flow conditions, which are the times that matter. At those low flow times, the river hardness tends to increase, as shown by the following data taken from the same whole effluent toxicity testing reports.

Hardness
District Biomonitoring Toxicity Testing

DATE	Upstream		CRPCD WWTP	
	Flow (cfs)	Hardness (mg/l)	Flow (mgd)	Hardness (mg/l)
July 6, 1998	167	30	5.95	100
October 5, 1998	40.2	44	3.68	93
January 11, 1999	126	37	4.31	64
April 4, 1999	123	37	4.78	62

July 12, 1999	**6.3**	**66**	**3.39**	**128**
October 4, 1999	**46**	**56**	**3.96**	**77**
January 10, 2000	**127**	**33**	**4.42**	**126.3**
April 3, 2000	**145**	**36**	**5.23**	**103.4**

Also, the calculations of hardness in the draft permit do not account for the impact of the District's discharge on the hardness concentration in the river. The hardness of the District's wastewater discharge in the summertime is in the range of 100 to 130 mg/l. When the two flows mix, the hardness of the combined flow will be higher than the hardness of the river upstream. This increase in hardness at the point of discharge means that higher concentrations of copper than calculated in the draft permit certainly would not cause toxicity in the river at 7Q 10 flow conditions.

The District undertook sampling of the river upstream of the wastewater discharge, in the wastewater discharge, and in the river downstream of the treatment facility. This sampling was done to present additional data for this permit. The table below presents the results of the sampling, and demonstrates that the District's discharge tends to increase the hardness in the river downstream of the outfall by an average of 5 mg/l or more:

Hardness
Charles River Sampling

Date	Upstream		CRPCD		Downstream
	Flow (cfs)	Hardness (mg/l)	Flow (mgd)	Hardness (mg/l)	Hardness (mg/l)
July 17, 2000	**20**	**54**	**3.72**	**130**	**59**
July 18, 2000	**23**	**61**	**3.78**	**130**	**59**
July 19, 2000	**23**	**55**	**3.66**	**130**	**70**
July 20, 2000	**20**	**60**	**3.65**	**140**	**69**
July 21, 2000	**20**	**70**	**3.70**	**150**	**74**

The higher hardness in the District's wastewater discharge, as shown in the previous chart, is the result of the addition of greater quantities of lime and iron salts to achieve the proposed 0.2 mg/l total phosphorus limit.

The District recommends and requests that the agencies use a hardness of 70 mg/l for the mixture of the District's wastewater discharge and the upstream river in determining the

copper concentration limit in the final permit.

Further the district recommends and requests that the agencies also redetermine the copper concentration limits in the final permit by using the corrected 7Q10 flow and dilution factors requested above.

Response: Upon review of the data submitted by the District for the week of July 17, 2000 MA DEP and EPA have agreed to recalculate the copper limit using a hardness of. 60. See Response to Comment #3 for copper calculation.

Comment #4: **Mass Loadings: NPDES Permit p.2 and 3:** The concentration limits for CBOD, TSS, and ammonia nitrogen in the draft permit should be eliminated, while keeping the mass loading limits as proposed. These concentration limits derive from a simple calculation of 5.7 mgd permitted design capacity against the allowable mass loading for these parameters. However, the District's wastewater discharge normally will fall well below 5.7 mgd over the four (4) years of the proposed permit. As a consequence, if the District had to meet the proposed concentration limits, the District will not be able to fully utilize the permitted mass loadings. In addition, the District would become subject to criminal and civil penalties due to exceedances of these concentrations for no apparent environmental reason.

The District also notes that an upstream discharge of higher concentrations than has been allowed in the District's discharge for BOD and TSS has been permitted during the winter months.

Response: We agree that mass limits are sufficient to ensure consistency with antidegradation however, concentration limits are necessary to ensure consistency with the waste load allocation and antibacksliding. The limits from the District's permit issued in 1992 were based on a waste load allocation with a flow of 4.54 MGD. The anti-backsliding regulation, 40 CFR 122.44, states that when a permit is renewed or reissued interim effluent limitations , standards or conditions must be as least as stringent as the final effluent limitations, or conditions in the previous permit was based unless circumstances on which the previous permit was based has materially and substantially changed since the time the permit was issued. Therefore the concentration limits form the previous permit are maintained.

C) Comment submitted by the Charles River Pollution Control District on August 21, 2000.

Comment #1: This letter provides a brief supplement to the comments submitted by the District on August 17, 2000.

The first section of those comments addressed the methodology to calculate a 7Q 10 flow in the Charles River at Medway. The District recommended and requested that your agencies compare the flow at the Dover gauge during 7Q 10 conditions to the wastewater flows from the wastewater treatment plants upstream during the same low flow week experienced at Dover in 1999.

The District stands by that recommendation. The District has observed, however, that its comments of August 17 incorrectly identified September as the month during 1999 that experienced 7Q 10 flow at Dover. In fact, the 7Q 10 flow in the Charles River at Dover during 1999 occurred in August. Accordingly, the District recommends and requests that the agencies calculate the 7Q10 flow at Medway by utilizing data from August 1999 rather than the low flow week of September 1999.

Response: See response to comment #1 submitted by the Charles River Pollution Control District on August 17, 2000.

EXHIBIT B
CRPCD Permit Limits -Tables - 5.7 mgd & 4.5 mgd Calculations
[Attached]

CRPCD Permit Limits
5.7 mgd Calculations

Effluent Characteristic	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Rolling Average Effluent Flow	5.7 MGD	---	---	Continuous	Recorder
$CBOD_5$ (May 1 - October 31)	7 mg/L 265 lb/day	10 mg/L 380 lb/day	Report mg/L	3/Week	Composite
$CBOD_5$ (November 1 - April 30)	15 mg/L 570 lb/day	25 mg/L 950 lb/day	Report mg/L	3/Week	Composite
$CBOD_5$ Removal	≥ 85 %	---	---	1/Month	Calculation
TSS (May 1 - October 31)	7 mg/L 265 lb/day	10 mg/L 380 lb/day	Report mg/L	3/Week	Composite
TSS (November 1 - April 30)	15 mg/L 570 lb/day	25 mg/L 950 lb/day	Report mg/L	3/Week	Composite
TSS Removal	≥ 85 %	---	---	1/Month	Calculation
pH Range	6.5 - 8.3 S.U.			1/Day	Grab
Total Residual Chlorine (March 1 - November 30)	15 ug/L [compliance level 30 ug/L]	---	25 ug/L [compliance level 30 ug/L]	2/Day	Grab
Escherichia coli (March 1 - November 30)	126 cfu/100 mL	---	409 cfu/100 mL	3/Week	Grab
Total Copper	13 ug/L	---	23 ug/L	1/Month	Composite
Dissolved Oxygen (April 1- October 31)	≥6.0 mg/L			1/Day	Grab/Meter
Ammonia (April 1 - April 30)	10 mg/L 380 lb/day	15 mg/L 570 lb/day	20 mg/L	1/Month	Composite
Ammonia (May 1 - May 31)	5 mg/L 190 lb/day	7.5 mg/L 285 lb/day	10 mg/L	3/Week	Composite
Ammonia (June 1 - October 31)	1 mg/L 38 lb/day	1.5 mg/L 57 lb/day	2 mg/L	3/Week	Composite
Ammonia (November 1 - March 31)	Report mg/L Report lb/day	--- ---	Report mg/L Report lb/day	1/Month	Composite
Total Kjeldahl Nitrogen	---	---	Report mg/L	1/Month	Composite
Nitrate + Nitrite	---	---	Report mg/L	1/Month	Composite
Total Nitrogen	---	---	Report mg/L	1/Month	Calculation
Total Phosphorus April 1 - October 31 November 1 - March 31	 0.1 mg/L 0.3 mg/L	 --- ---	 --- ---	 3/Week 1/Month	 Composite Composite
PFAS Analytes	---	---	Report ng/L	2/Year	Grab

Effluent Requirement	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Whole Effluent Toxicity (WET)					
LC50	---	---	>100%	1/Quarter	Composite
C-NOEC	---	---	>75%	1/Quarter	Composite
Hardness	---	---	Report mg/L	1/Quarter	Composite
Ammonia Nitrogen	---	---	Report mg/L	1/Quarter	Composite
Total Aluminum	---	---	Report mg/L	1/Quarter	Composite
Total Cadmium	---	---	Report mg/L	1/Quarter	Composite
Total Copper	---	---	Report mg/L	1/Quarter	Composite
Total Nickel	---	---	Report mg/L	1/Quarter	Composite
Total Lead	---	---	Report mg/L	1/Quarter	Composite
Total Zinc	---	---	Report mg/L	1/Quarter	Composite
Total Organic Carbon	---	---	Report mg/L	1/Quarter	Composite

Ambient Characteristics	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Hardness	---	---	Report mg/L	1/Quarter	Grab
Ammonia Nitrogen	---	---	Report mg/L	1/Quarter	Grab
Total Aluminum	---	---	Report mg/L	1/Quarter	Grab
Total Cadmium	---	---	Report mg/L	1/Quarter	Grab
Total Copper	---	---	Report mg/L	1/Quarter	Grab
Total Nickel	---	---	Report mg/L	1/Quarter	Grab
Total Lead	---	---	Report mg/L	1/Quarter	Grab
Total Zinc	---	---	Report mg/L	1/Quarter	Grab
Total Organic Carbon	---	---	Report mg/L	1/Quarter	Grab
Dissolved Organic Carbon	---	---	Report mg/L	1/Quarter	Grab
pH	---	---	Report S.U.	1/Quarter	Grab
Temperature	---	---	Report °C	1/Quarter	Grab
Total Phosphorus (April 1 - October 31)	---	---	Report mg/L	1/Month	Grab

Influent Characteristics	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
CBOD5	Report mg/L	---	---	2/Month	Composite
TSS	Report mg/L	---	---	2/Month	Composite
PFAS Analytes	---	---	Report ng/L	2/Year	Grab

Sludge Characteristics	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
PFAS Analytes	---	---	Report ng/g	2/Year	Grab

Notes:
Frequency of PFAS Analytes monitoring in influent, effluent and biosolids shall be reduced to 1/year after two years.

CRPCD Permit Limits
4.5 mgd Calculations

Effluent Characteristic	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Rolling Average Effluent Flow	5.7 MGD	---	---	Continuous	Recorder
Effluent Flow July - September October - June	 4.5 MGD Report MGD	 --- ---	 Report MGD Report MGD	 Continuous Continuous	 Recorder Recorder
$CBOD_5$ (May 1 - October 31)	7 mg/L 265 lb/day	10 mg/L 380 lb/day	Report mg/L	3/Week	Composite
$CBOD_5$ (November 1 - April 30)	15 mg/L 570 lb/day	25 mg/L 950 lb/day	Report mg/L	3/Week	Composite
$CBOD_5$ Removal	≥ 85 %	---	---	1/Month	Calculation
TSS (May 1 - October 31)	7 mg/L 265 lb/day	10 mg/L 380 lb/day	Report mg/L	3/Week	Composite
TSS (November 1 - April 30)	15 mg/L 570 lb/day	25 mg/L 950 lb/day	Report mg/L	3/Week	Composite
TSS Removal	≥ 85 %	---	---	1/Month	Calculation
pH Range	6.5 - 8.3 S.U.			1/Day	Grab
Total Residual Chlorine (March 1 - November 30)	16 ug/L [compliance level 30 ug/L]	---	27 ug/L [compliance level 30 ug/L]	2/Day	Grab
Escherichia coli (March 1 - November 30)	126 cfu/100 mL	---	409 cfu/100 mL	3/Week	Grab
Total Copper	13 ug/L	---	23 ug/L	1/Month	Composite
Dissolved Oxygen (April 1- October 31)	≥6.0 mg/L			1/Day	Grab/Meter
Ammonia (April 1 - April 30)	10 mg/L 380 lb/day	15 mg/L 570 lb/day	20 mg/L	1/Month	Composite
Ammonia (May 1 - May 31)	5 mg/L 190 lb/day	7.5 mg/L 285 lb/day	10 mg/L	3/Week	Composite
Ammonia (June 1 - October 31)	1 mg/L 38 lb/day	1.5 mg/L 57 lb/day	2 mg/L	3/Week	Composite
Ammonia (November 1 - March 31)	Report mg/L Report lb/day	--- ---	Report mg/L Report lb/day	1/Month	Composite
Total Kjeldahl Nitrogen	---	---	Report mg/L	1/Month	Composite
Nitrate + Nitrite	---	---	Report mg/L	1/Month	Composite
Total Nitrogen	---	---	Report mg/L	1/Month	Calculation
Total Phosphorus April 1 - October 31 November 1 - March 31	 0.1 mg/L 0.3 mg/L	 --- ---	 --- ---	 3/Week 1/Month	 Composite Composite
PFAS Analytes	---	---	Report ng/L	2/year	Grab

Effluent Requirement	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Whole Effluent Toxicity (WET)					
LC50	---	---	>100%	1/Quarter	Composite
C-NOEC	---	---	>70%	1/Quarter	Composite
Hardness	---	---	Report mg/L	1/Quarter	Composite
Ammonia Nitrogen	---	---	Report mg/L	1/Quarter	Composite
Total Aluminum	---	---	Report mg/L	1/Quarter	Composite
Total Cadmium	---	---	Report mg/L	1/Quarter	Composite
Total Copper	---	---	Report mg/L	1/Quarter	Composite
Total Nickel	---	---	Report mg/L	1/Quarter	Composite
Total Lead	---	---	Report mg/L	1/Quarter	Composite
Total Zinc	---	---	Report mg/L	1/Quarter	Composite
Total Organic Carbon	---	---	Report mg/L	1/Quarter	Composite

Ambient Characteristics	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Hardness	---	---	Report mg/L	1/Quarter	Grab
Ammonia Nitrogen	---	---	Report mg/L	1/Quarter	Grab
Total Aluminum	---	---	Report mg/L	1/Quarter	Grab
Total Cadmium	---	---	Report mg/L	1/Quarter	Grab
Total Copper	---	---	Report mg/L	1/Quarter	Grab
Total Nickel	---	---	Report mg/L	1/Quarter	Grab
Total Lead	---	---	Report mg/L	1/Quarter	Grab
Total Zinc	---	---	Report mg/L	1/Quarter	Grab
Total Organic Carbon	---	---	Report mg/L	1/Quarter	Grab
Dissolved Organic Carbon	---	---	Report mg/L	1/Quarter	Grab
pH	---	---	Report S.U.	1/Quarter	Grab
Temperature	---	---	Report °C	1/Quarter	Grab
Total Phosphorus (April 1 - October 31)	---	---	Report mg/L	1/Month	Grab

Influent Characteristics	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
CBOD5	Report mg/L	---	---	2/Month	Composite
TSS	Report mg/L	---	---	2/Month	Composite
PFAS Analytes	---	---	Report ng/L	2/year	Grab

Sludge Characteristics	Effluent Limitation			Montoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
PFAS Analytes	---	---	Report ng/g	2/year	Grab

Notes:
Frequency of PFAS Analytes monitoring in influent, effluent and biosolids shall be reduced to 1/year after two years.