



WATER POLLUTION CONTROL AUTHORITY  
for the City of Bridgeport

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Lauren McBennett Mappa, P.E.  
General Manager

## ATTACHMENT 2

August 5, 2021

Ms. Ann Straut  
Sanitary Engineer III  
Connecticut Department of Energy and Environmental Protection  
Bureau of Water Protection and Land Reuse  
Water Planning and Management Division  
79 Elm Street  
Hartford, CT 06106-5127

Subject: Responses from Water Pollution Control Authority, City of Bridgeport  
To Trumbull's Comments on Facilities Plan and EIE

Dear Ms. Straut:

Attached please find the responses to the Town of Trumbull's comments on both the Facilities Plan and the Environmental Impact Evaluation. To date these are the only outstanding comments for both documents requiring response. If you need anything else, please do not hesitate to contact this office.

Very truly yours,

Lauren McBennett Mappa, PE

cc: Joe Laliberte – CDM Smith Inc.



## Memorandum

**To:** Lauren McBennett Mappa, PE

**From:** Daniel Murphy, PE

**Date:** August 5, 2021

**Subject:** *Responses from Water Pollution Control Authority, City of Bridgeport to Trumbull's Comments on Facilities Plan and Environmental Impact Evaluation*

The Water Pollution Control Authority (WPCA), City of Bridgeport has submitted its Wastewater Treatment Facilities Plan (FP) in accordance with Administrative Order WRMU19001. CDM Smith was retained as a consultant to complete this FP. As part of the requirements of the Connecticut Environmental Policy Act (CEPA), a virtual public scoping meeting was scheduled by Connecticut Department of Energy and Environmental Protection (CTDEEP) and advertised to the public. This public information session was posted by CTDEEP and held on October 29, 2020. Trumbull representative attended this public meeting. CDM Smith presented the recommended plans for upgrading both the East Side and West Side WWTPs and accepted comments and questions on the Facilities Plan Report. Responses to the questions received through the public scoping process were provided in the draft EIE posted to CTDEEP's website on December 22, 2020.

Subsequently, the WPCA hosted their own virtual public meeting which was posted by WPCA in the Connecticut Post on January 3 and held on January 28, 2021. Trumbull representative attended this public meeting. CDM Smith again presented the recommended plans for upgrading both the East Side and West Side WWTPs, along with a focus on addressing comments received during the prior project scoping process.

Following this transparent public outreach, an Environmental Impact Evaluation (EIE) was completed by SLR International Corporation. This report was required by CEPA and also included a comment period. As part of this comment period, Wright-Pierce, on behalf of the Town of Trumbull has submitted comments on both the FP and EIE reports. These comments were directed to Ann Straut from CTDEEP in a letter dated July 22, 2021.

CDM Smith, on behalf of the WPCA, has compiled the questions and comments from Wright-Pierce and provided responses below. The original comments from Wright-Pierce are provided in quotations with regular font. CDM Smith and the WPCA have provided corresponding responses in italic font. The comments and responses are broken into four categories to correspond with the original comment letter from Wright-Pierce.

- Cover Letter (CL)
- Topic I - "Treatment Capacity for Trumbull"

- Topic II – “Secondary Bypass Volumes and Frequencies and Expected CSO Reductions”
- Topic III – “Costs”

Cover Letter Comments (Page 2 of July 22, 2021 Letter)

- **Comment CL-1 (Page 2)**

“The provision of capacity for Trumbull wastewater flows is not based on current projections for growth in the Trumbull sewer system nor consistent with the Bridgeport-Trumbull Intermunicipal Agreement (IMA).”

*CDM Smith and WPCA met with representatives of Trumbull on February 26, 2020. The primary intent of the meeting was to inform Trumbull of the ongoing FP process and to obtain Trumbull’s projections for sewer extensions/growth.*

*The existing IMA includes a provision allowing Trumbull to discharge a maximum of 4.2 million gallons per day (mgd) of wastewater to the Bridgeport collection system. The 4.2 mgd flow allowance was used as a daily average flow for the FP planning process but is referred to as both a “maximum daily flow” and a “maximum monthly average flow” in the existing IMA.*

*The Facilities Plan evaluated flows through the year 2050, well beyond the timeframe of the existing agreement. As stated in Section 5 of the FP, Trumbull averaged 3.4 mgd of total flow between January 2017 and December 2019. Modeling indicated that the sanitary component of the flow accounts for approximately 1.7 mgd of the total flow, with the other half being inflow and infiltration (I/I).*

*Unless the 4.2 mgd IMA flow limit is exceeded, Trumbull pays sewer fees based on potable water records, which roughly correlate with the sanitary component of the flow, not the total flow treated by the WPCA. Due to stagnant population growth in Trumbull, and the excessive quantity of clean water (I/I) entering Bridgeport’s collection system from Trumbull, the existing 4.2 mgd flow allowance was viewed as a reasonable projection for the next 30 years.*

*Trumbull should perform corrective measures to reduce the quantity of I/I, with or without planned future sewer expansion. Trumbull has agreed to I/I control measures in the existing IMA.*

- **Comment CL-2 (Page 2)**

“A large part of the projected costs is for facilities or facility improvements that are not used by Trumbull or are not occasioned by Trumbull flows.”

*Trumbull’s flow, including the excessive I/I noted above, is conveyed through existing piping in Bridgeport for treatment at both the West Side and East Side WWTPs. For example, during the period of January 2017 to December 2019, the highest monthly average flow from Trumbull was recorded to be 5.1 mgd, which is three times the estimated average wastewater flow of 1.7 mgd. Trumbull exceeded 4.2 mgd monthly average during nine months from January 2017 to December 2019. Trumbull’s excessive I/I displaces combined flows, directly contributing to CSOs in Bridgeport.*



- **Comment CL-3 (Page 2)**

“The estimated costs for the Bridgeport project are understated because they do not include the operation and maintenance for the new facilities.”

*Bridgeport's existing WWTPs need upgrades, as indicated by the Consent Order from CTDEEP. The existing equipment is in constant need of repair and maintenance. The upgraded facilities will be modern and highly automated. The WPCA does not anticipate the need for additional staff at this time and may have less O&M cost than the existing facilities. The O&M costs are largely driven by the contract with the contract operator of the facilities, which was determined by a public bid. The current contract operator agreement expires in 2023 and the WPCA will be publicly bidding the new contract operator agreement within the next two years. O&M costs will be further evaluated during the future design phase and based on the result of the public bid process for the contract operator.*

- **Comment CL-4 (Page 2)**

“The proposed facilities are purported to reduce the extent of the Long Term CSO Control Plan (LTCP) by reducing the CSO volume by about 50%. The costs for the remaining portions of the LTCP are not included and are likely to be significant.”

*Although CSOs were not the main scope of the FP, CDM Smith and the WPCA identified that expanding the wet weather treatment capacity of the WWTPs was a cost-effective method of addressing wet weather flow in the collection system. An update of the CSO LTCP will be prepared and published after the Facilities Plan is approved. It is expected that this update will recommend collection system metering following the construction of both West Side and East Side WWTP upgrades and will evaluate a path forward to address the remaining wet weather flow in the collection system to meet the CSO Consent Decree.*

- **Comment CL-5 (Page 2)**

“The Affordability Assessment excludes new O&M costs and the costs for the later CSO control work.”

*The Bridgeport WPCA's existing O&M costs were assumed to inflate at 2% through the financial analysis period, see Section 8.3 of the FP. See response CL-3.*

*The later CSO work was not within the scope of this FP. The WPCA acknowledges that additional CSO work will be required after the WWTPs are constructed. This will be further evaluated in future LTCP updates. See response CL-4.*

- **Comment CL-6 (Page 2)**

“In the current IMA between Bridgeport and Trumbull, Bridgeport has agreed to support Trumbull in seeking alternative means to treat and dispose of Trumbull's wastewater. The Facility Plan should provide a more detailed cost evaluation of those alternatives to support the IMA.”

*The WPCA acknowledges that the IMA includes language that the WPCA will not hinder Trumbull's potential exit from the Bridgeport system. The IMA also states that the WPCA will reasonably assist the Trumbull WPCA with permits/licenses needed to effectuate a connection to another sewer system. Any expenditure by the WPCA of Bridgeport is to be reimbursed by Trumbull. This FP was an evaluation of Bridgeport's wastewater facilities, and the scope developed by the WPCA and CDM Smith did not include evaluation of Trumbull's options for disconnection from the Bridgeport collection system.*

## **Topic I – Treatment Capacity for Trumbull (Page 3 of July 22, 2021 Letter)**

- **Comment I-1 (Page 3)**

“EIE page 9. The EIE notes that the FP considers “the potential maximization of the sewage from Trumbull under the current contract....and the potential development of a sanitary sewer system in Monroe.” Currently, Trumbull is not considering such a connection for Monroe”

*The WPCA acknowledges that Trumbull has noted they are not currently considering a connection for Monroe. Monroe has expressed sewer interest in the past, even forming their own WPCA. The FP planning period extended to 2050, and any potential future flows needed to be accounted for, including a potential future connection for Monroe. The WPCA is proactively considering the future interests of the region and believes this connection could occur sometime in the next 30 years. Therefore, Monroe was included in future projections. The WPCA agrees that any future connection from Monroe would need to be negotiated with both Trumbull and Bridgeport.*

- **Comment I-2 (Page 3)**

“EIE page 45. The EIE states that the existing facilities have capacity for accept Trumbull flows at 4.2 mgd on an average daily basis.”

*Noted.*

- **Comment I-3 (Page 3)**

“FP page 5-1. The discussion of the Bridgeport-Trumbull IMA requires elaboration. The 2016 IMA and related discussions have treated the 4.2-mgd wastewater flow from Trumbull as both an annual average and as a monthly maximum. This long-recognized discrepancy should be corrected in the IMA, and the Facility Plan should reflect that correction.”

*See response to comment CL-1. WPCA agrees that the average daily and peak flow allocations for Trumbull should be clarified in the IMA in the future.*

- **Comment I-4 (Page 3)**

“FP page 5-43. The section on Trumbull’s flows and future sewer plans apparently reflects discussion between CDM Smith and the Town’s Department of Planning and Zoning. The Trumbull WPCA was not consulted on its plans for extensions of the Trumbull sewer system. The Trumbull WPCA will provide Bridgeport with a summary of its current plans for sewer expansion accompanied by estimates of sanitary flow rates and I/I amount.”

*The WPCA reached out to representatives from Trumbull for a meeting with the primary objective to discuss the FP process and to obtain Trumbull’s projections for sewer extensions/growth. Two meetings occurred on February 26, 2020 at Trumbull Town Hall with Bridgeport WPCA, CDM Smith and Trumbull Officials (George Estrada and Rob Librandi in attendance respectively). A second meeting occurred virtually on April 28, 2021 with Bridgeport WPCA, CDM Smith, Wright Pierce and Trumbull Officials in attendance.*

- **Comment I-5 (Page 3)**

“FP page 5-43. The section on Monroe’s sewer plans estimates a future wastewater flow of 0.36 mgd from Monroe, including both sanitary flow and I/I. The only practical way for that potential flow to reach the Bridgeport sewer system is through a connection to the Trumbull system. Currently, Trumbull is not considering such a connection for Monroe.”

*Please see response to Comment I-1.*

## **Topic II –Secondary Bypass Volumes and Frequencies and Expected CSO Reductions (Page 4 of July 22, 2021 Letter)**

- **Comment II-1 (Page 4)**

“EIE pages 7 and 8. Tables 1-2 and 1-4 show annual average bypass frequencies of 27 per year at the West Side plant and 11 per year at the East Side plant, and the associated text states that both plants are undersized. The text on page 8 indicates that the CSO volume (1-yr, 24-hr storm) is estimated to be 49.8 million gallons.”

*Noted.*

- **Comment II-2 (Page 4)**

“EIE pages 14 and 18. The text states that the proposed improvements will provide full control of 7 of 19 CSOs on the west side and 3 of 6 outfall on the east side.”

*This is correct, however the “full control” noted in this comment is CSO control to the 1-year, 24-hour storm as required by CTDEEP’s CSO Consent Order.*



- **Comment II-3 (Page 4)**

“EIE page 20. The graph shows how the CSO volume is expected to decrease from about 50 million gallons to about 22 million gallons with the implementation of the expanded facilities. There is no explanation on the basis for the further decline in CSO volume from about 22 million gallons in 2030 to about 2 million gallons in 2040.”

*As stated in previous responses, the FP recommendations take advantage of the existing conveyance capacity of Bridgeport’s collection system to address wet weather flow by increasing the wet weather treatment capacity of both the WWTPs. Specific CSO project planning beyond the completion of both WWTP construction upgrades was not included in scope of this FP. This gradual reduction of CSO shown in the graph beyond the construction of both WWTP upgrades is estimated to meet the current CSO Consent Decree deadline of December 31, 2039.*

- **Comment II-4 (Page 4)**

“FP Page 5-45. Table 5.4-1 summarizes the expected increases over time of average daily, maximum daily and peak hourly flows at the West Side plant. The last column contains estimates of those flows for the recommended plan to expand the West Side plant to have a wet-weather capacity of 200 mgd. We would expect that the wet weather peak flow would extend for longer than one hour, and it would certainly impact the maximum-day flow when it occurs.”

“Notwithstanding the above, this table shows an increase in that peak flow from 98.3 mgd (2050 conditions without the wet-weather expansion) to 200 mgd with the expansion. This represents an increase of over 100%. It is our understanding that this increase is explicitly aimed at reducing the scope and cost of the CSO Long-Term Control Plan (LTCP).”

*The FP recommendations include maintaining and rehabilitating the existing aeration tanks at the West Side WWTP, which can handle a maximum of 58 mgd flowing through them. Currently when this 58 mgd is exceeded during wet weather events, flow is bypassed around the aeration tanks, and receives only primary treatment and disinfection. Under existing conditions any flow in excess of about 80 mgd must be prevented from entering the West Side WWTP to avoid tank flooding and protect critical processes.*

*The expansion to 200 mgd for wet weather flow allows any flow between 80 mgd and 200 mgd to receive primary treatment and disinfection. This greatly reduces the volume of untreated wet weather discharge to Long Island Sound.*

- **Comment II-5 (Page 4)**

“FP Page 5-50. Table 5.4-8 summarizes the expected increases over time of average daily, maximum daily and peak hourly flows at the East Side plant. We have the same comment as above about the peak hour and maximum daily flows. This table shows an increase in that peak flow from 30.4 mgd (2050 conditions without the wet-weather expansion) to 80 mgd with the expansion. This represents an increase of over 160%. It is our understanding that

this increase will sharply reduce the expected annual volume of CSOs on the east side (Figure 5.4-2), and no eastside CSO control was included in the LTCP.”

*Similar to Response II-4 regarding the West Side WWTP, the East Side WWTP has a maximum capacity of 24 mgd for its secondary treatment system (aeration tanks). Flow beyond the 24 mgd limit of the secondary system and the approximately 35 mgd total capacity of the WWTP receives primary treatment and disinfection only.*

*Increasing wet weather treatment at the East Side WWTP to 80 mgd allows for wet weather flows between 35 and 80 mgd to receive primary treatment and disinfection. This expansion reduces untreated wet weather discharges on the East Side significantly.*

- **Comment II-6 (Page 4)**

“FP Page 9-112. Figure 9.6-2 shows how CSO volumes are expected to decline from about 50 million gallons per year to about 22 million gallons per year once the two plants are expanded with additional wet-weather capacity. Further significant declines are shown from 22 million gallons per year in 2030 to about 2 million gallons per year in 2040.”

“What will cause that additional 2030-to-2040 decline? Is it the implementation of the remaining LTCP projects (West Side) and yet-unplanned CSO improvements on the east side? If so, what are the costs of those measures.”

*See Comment Response II-3.*

### **Topic III –Costs (Page 5 of July 22<sup>nd</sup>, 2021 Letter)**

- **Comment III-1 (Page 5)**

“EIE page 3. The City of Bridgeport WPCA submitted a report to the CT DEEP in 2011 entitled, Long Term CSO Control Plan (LTCP) and it was approved in 2018. The projected project cost for recommended plan was anticipated to be \$385 million; this value is currently estimated in the EIE at \$496 million.”

*The 2011 CSO LTCP estimated costs of \$385M were presented in 2010 dollars. The difference in estimated costs from \$385M in the 2011 CSO LTCP to \$496M in the FP is for escalation from 2010 to 2020.*

- **Comment III-2 (Page 5)**

“EIE page 47. It is noted that a “new LTCP is likely to be necessary .... to properly control the remaining CSOs.....”. This indicates that the current recommendations do not address all the CSOs and that future project work is required; the timing and cost impact to the users is unknown.”

*See response to Comment CL-4.*



- **Comment III-3 (Page 5)**

“FP Page 5-46. Figure 5.4-1 depicts the expected reduction in annual CSO volume associated with various increases in the wet-weather design flows at the West Side plant. At 200 mgd, the CSO volume reduction is shown to be 22.9 million gallons or about one-half the current CSO volume. Given that significant amounts of CSO flow would remain (21.5 mgd), what reduction in the LTCP costs does this represent?”

*See Section 7.4 of the FP. It is expected that increasing the size of the West Side WWTP to 200 mgd can reduce approximately half of the wet weather issue on the West Side for approximately 27% of the total cost of the 2011 LTCP with escalation. The reduction in project schedule and value of money inflated over time also provide additional savings.*

- **Comment III-4 (Page 5)**

“FP Page 7-158. The Facility Plan updates the 2010 cost of the LTCP to \$496 million in 2020 dollars. If the LTCP did not consider CSO control on the east side, how much would an expanded LTCP (including both west and east sides) cost?”

The cost to increase the West Side wet-weather capacity to 200 mgd is \$135 million, including collection system improvements. The cost to increase the East Side wet-weather capacity to 80mgd is \$50 million including collection system improvements. The sum of these two new costs is \$185 million, or 37% of the updated LTCP west-side costs and represents the costs to “gain the full CSO benefit”.

Is the \$185 million figure the amount that Bridgeport believes will be eligible for 50% state grant? How much of the LTCP costs will remain after implementation of the recommended improvements at the two plants?”

*The 2010 LTCP did not provide recommendations for the East Side. Planning of specific CSO projects to achieve full 1-year control was not included in the scope of this FP. An updated LTCP will be required to determine the cost of an expanded LTCP, including the East Side.*

*The \$185 million figure noted above is unrelated to the amount that will be determined to be eligible for 50% grant. The amount eligible for various CTDEEP Clean Water Fund (CWF) grant percentages will be determined by CTDEEP at a later date. See response CL-4 regarding future LTCP costs.*

- **Comment III-5 (Page 5)**

“FP Page 8-4. Table 8.2-1 shows significant savings for the 200/80 alternative compared with the 90/40 alternative. If the larger expansions costs more, is the implied savings related to the phasing? Or does the 90/40 option include the LTCP, while the 200/80 cost does not contain any LTCP costs (even if some CSO measures are still needed)? This matter is of major financial consequence to Trumbull and to the average user and should be clarified.”

*Table 8.2-1 is intended to be a summary of spending under each program. Adhering to the schedules in both the original Consent Orders would have required completion of both WWTPs simultaneously by 2026 and control of all CSOs to the 1-year level by the end of 2039. This spending program was determined to be unaffordable; therefore, a staggered schedule of the preferred plan from FP Section 7 was considered.*

*The savings for the larger WWTP expansions is related to more cost effectively addressing wet weather flow from the collection system through wet weather treatment at the WWTPs; therefore, reducing the scope of future CSO projects in the collection system to address the remaining wet weather flow. See response CL-4 regarding future LTCP costs.*

- **Comment III-6 (Page 5)**

“FP Page 9-109. Table 9.5-4 summarizes the expected grant eligibility of the improvements at the two plants. What is the estimated eligibility by grant category; that is, how much of the project is eligible for 50% grants?”

*CTDEEP will determine the CWF grant percentages. It is anticipated that a large portion of the WWTP upgrade will receive 50% grant funding, while other portions will receive lower (30% or 20%) grant percentages. For affordability considerations, a conservative 30% “blended” grant amount was used as an expected grant eligibility for the entire project.*

- **Comment III-7 (Page 6)**

“EIE pages 14 and 18. The text states that the proposed improvements will cost \$403 to \$443 million. It should be noted that these costs do not include remaining CSO work.”

*Noted.*

- **Comment III-8 (Page 6)**

“FP Page 8-1. One of the assumptions in this analysis is that “only sewer and stormwater related costs are included”. Do the planned expenditures include costs for improvements to the City’s stormwater system that are unrelated to CSOs?”

*While the United States Environmental Protection Agency (USEPA) affordability analysis guidelines allow for stormwater infrastructure costs to be included, no costs for improvements related to the City’s separated stormwater system have been included.*

- **Comment III-9 (Page 6)**

“FP Page 8-9. It is stated that O&M costs and miscellaneous revenues are assumed to remain the same as the baseline projection. There must be significant additional O&M expenses associated with pumping power, electrical costs for disinfection and additional sludge handling. These costs add to the user fee and impact the affordability assessment.”

*See responses to Comments CL-3 and CL-5.*

- **Comment III-10 (Page 6)**

“EIE page 47. The text states that debt service costs of the project are “expected to be distributed across the customer base and will be cumulative to the costs already paid by customers for sewer service”.

*Noted.*

- **Comment III-11 (Page 6)**

“FP Page 8-18. For the 200/80 alternative, the Residential Indicator is shown to peak at 1.96 of MHI in FY 2030. The calculations leading up to this indicator exclude the costs of the remaining CSO measures on the west side of the City (the remaining LTCP costs), and the added O&M costs for the new facilities.”

*The costs of the remaining CSO measures are not currently known and are not within the scope of the FP. The WPCA does not expect to make significant investment in CSO reduction beyond what is included in the FP until the completion of both WWTP upgrades (approximately 2030). By this time, additional LTCP updates will be completed and the WPCA will have a better idea of the cost and timing of future CSO projects. The cost and impact to the residential indicator will be reevaluated at that time. Regarding O&M costs, see responses CL-3 and CL-5.*

- **Comment III-12 (Page 6)**

“FP Section 8. Trumbull and Bridgeport have agreed that Trumbull will cease its discharge to the Bridgeport system by 2029. Other things being equal, that will reduce the Bridgeport revenues by about 17%, increase the user charges by about 20%, and increase the Residential Factor by about 20%. This scenario should be included in the Section 8 materials.”

*WPCA recognizes that the term of the current IMA expires in 2026, with a 3-year extension until 2029. The WPCA also recognizes that Trumbull is currently evaluating other options for its wastewater discharge but is not aware of a firm plan for the removal of Trumbull flow. The impact on sewer rates with the reduction in wastewater flow from Trumbull, or any sewer customer, was not evaluated as part of the FP.*