Chesapeake Bay Program

Wastewater Treatment Workgroup (WWTWG) Meeting Minutes

Thursday, April 24, 2025
10:00 AM to 11:30AM
Meeting Materials

Actions and Decisions

Decision: The WWTWG approved the March 2025 Meeting Minutes.
Decision: The WWTWG confirmed Andrew Malmgren, Lancaster Area Sewer Authority, Ivy Ozmon, HRPDC, and Bob Buglass, WSSC Water, as at-large members for a two-year term.
Decision: The WWTWG approved the proposed recommendations for the use of non-significant WWTP data for Phase 6 CAST and Phase 7 Development.
Action: Please provide any additional data that the Sanitary Sewer Exfiltration Small Group can use to evaluate the effectiveness of the exfiltration estimation method to Joseph Delesantro (jdelesantro@chesapeakebay.net), ORISE Fellow/CBPO. Joseph will share his progress at the next workgroup meeting.
Action: The SSO/Exfiltration Small Group will meet again in late May/Early June. Please complete the scheduling poll sent by Petra Baldwin (Baldwin.Petra@epa.gov), CRC if you would like to attend that meeting. If you would like to join the Small Group, please email Petra to be added.
Action: For jurisdictions that aren't VA and MD, please look at what SSO data is available in your jurisdiction and share it with Jamie Mitchell (jmitchell@hrsd.com), WWTWG Co-Chair and Petra Baldwin (Baldwin.Petra@epa.gov), CRC to help determine how to incorporate SSO loading into the Phase 7 model.
Action: For PA and MD, please continue to work with Justin Carl (justin.carl@alexrenew.com), AlexRenew and Ed Cronin (ecronin@brwncald.com), Brown & Caldwell to answer outstanding questions on CSOs, including how the waste load allocations were set for the original TMDL in your state and whether or not those allocations are sufficient at this time for loads at the treatment plant.

Meeting Minutes

10:00 **Introduction and Announcements** – WWTWG Co-Chairs, Jamie Heisig-Mitchell, HRSD & Justin Carl, AlexRenew

- **Decision:** The WWTWG approved the March 2025 Meeting Minutes.
- The workgroup welcomed Petra Baldwin, the new WWTWG Staffer!
- The workgroup was reminded to send Jackie Pickford (pickford.jacqueline@epa.gov) feedback by May 2nd on the Sewer Service Area Data Review sent by Caroline Kleis on April 14th.
- **Decision:** The WWTWG confirmed Andrew Malmgren, Lancaster Area Sewer Authority, Ivy Ozmon, HRPDC, and Bob Buglass, WSSC Water, as at-large members for a two-year term.

10:15 **Incorporation of Non-Significant WWTPs into CAST-** Auston Smith, EPA

Auston Smith, EPA, provided the WWTWG with an update on how new data on non-significant facilities can be incorporated into CAST for Phase 6 scenarios and for Phase 7 development. This was a recap and update of a presentation given by Gary Shenk, USGS at the March WWTWG Meeting.

- Auston gave an overview of the TMDL's purpose, which was established to achieve water quality standards related to DO, water clarity, and chlorophyll. To achieve this, the Bay Program quantifies nitrogen, phosphorous, and sediment loads in order to estimate the progress made towards achieving the TMDL both at edge of stream and edge of tide levels. The jurisdictions made Watershed Implementation Plans (WIPs) to plan on how to achieve interim targets with changing environmental conditions. Targets are allocated by jurisdictional basins. The 2018 targets have been adjusted to include both the unaccounted additional loads and changing environmental conditions. The primary use of the CBP Watershed Model is to represent anthropogenic changes in load and to set and track reduction goals. Atmospheric deposition is managed by EPA. Other sectors that are monitored within the watershed are: Agriculture, Developed lands, Wastewater, Septic, and Natural lands. Wastewater has been responsible for a massive amount of the nutrient load reductions over time.
- Auston highlighted that spatial and temporal trends are more important than the absolute value for the modeling process, where spatial trends are used to allocate responsibility between jurisdictions and temporal trends are used to track TMDL. In Phase 7 development, having consistency that provides accurate trends is more important than having a more specific, accurate data point. Having good representation of this is significant for today's decision about inclusion of non-significant WWTPs into CAST.
- CBPO has requested in the past progress year (2024), for monitored values from non-significant WWTPs to be submitted if it is convenient and available to do so; this request is encouraged, not mandated. Some jurisdictions and facilities have already submitted this data. Some of the monitored values submitted have varied widely above or below the overall expectation from modeled values.
- Auston posed a key question to the workgroup: How is this consistency maintained when we apply the monitored values that we've been requesting? Variability occurs often due to weather and other factors. How can we make sure that a longer-term trend is shown to help minimize variability in the trend line especially for Phase 7 model development?
- Auston noted that the non-significant WWTPs are not insignificant. Non-significant facilities do represent a large portion of the load that this workgroups helps to handle.
- Auston gave an overview of the decision for use of non-significant WWTP data for the Phase 6 model. Jurisdictions are encouraged to enter monitored values in the current progress year and historical years into the database for non-significant facilities in place of default values. CBPO will not use these data in phase 6 CAST unless the jurisdiction requests it. The data may be used to modify the trend of an existing time series to represent either an average flow change or a technology change. This monitored data would be retained for Phase 7.
- Auston then outlined the use for Phase 7 in order to better represent magnitudes and trends in that facility's historical loads for the entire time series, depending on what data is submitted by jurisdictions. Similar to Phase 6 use, jurisdictions are encouraged to provide data, but it is not necessary. CBPO will not use these data in phase 7 CAST unless the jurisdiction requests it.

Discussion:

- Jamie Mitchell: So, what questions do you guys have for him? Again, we're being asked to approve these recommendations for Phase 6 and Phase 7 CAST.
- Olivia Devereaux: I thought I'd share a fun fact while you're reflecting on the language and questions. I remember looking at these data, and I don't have the exact thing in front of me but at one point I looked at it. Not this year, but in previous years, the amount of load coming from the non-significants was as much as the load coming from the significants across the watershed.

And it may not be true anymore, but in that particular year it was true. While there's so many more small facilities, the load does add up across those, even though they are just really in comparison a few significant facilities. So, they're really important to get right. So, just thought I'd offer that because we do tend to think of the non-significants as being just a little bit, and that's true for one of them, but there's so many it adds up.

- Ivy Ozmon: I was just going to say I think the approach is very sound and I'm curious if there are any folks on the call representing a facility where they might have feedback or concerns about the approach, or if this makes total sense to them as well.
- Jamie Mitchell: I think the approach is sound, as you mentioned, Ivy. And it sounded like to me, Auston, that you'll work with the jurisdictions to figure out if anything looks wonky, you'll work through that on a jurisdiction by jurisdiction basis.
- Auston Smith: Yeah, you're exactly right. So, hypothetically for 2025 progress we encourage submissions to be done September through December of this upcoming year. So, as that data is coming through, we'd be reaching out to the point source facility managers to just say 'Hey, has data been submitted? This is what we're seeing.' If monitored values have been submitted for a lot of non-significants, we'd appreciate that flag from your end. And then we would begin to go through to supply an approach or consideration. If you've only submitted monitored values for this most recent year because it's onerous to really go through a lot of historical data and submit those for past years as well. Well, that would certainly govern maybe the approach we would suggest. If you have supplied monitored values for the last five years like 2021 through 2025, maybe that gives us a chance to have a more honed approach on supplying a trendline that could be supplied for that particular time series. Then, for Phase 7, maybe going back even further. So, very much jurisdictions by jurisdiction basis.
- Melissa Kret (in chat): I submit septic BMPs for VDH so not a ton for me to add otherwise.

Decision: The WWTWG approved the proposed recommendations for the use of non-significant WWTP data for Phase 6 CAST and Phase 7 Development. Consensus Continuum Votes: Ivy Ozmon (5), Bel Martinez da Matta (5), Melissa Kret (5), Clifton Bell (5); no WWTWG members verbally or in the chat registered any discontent.

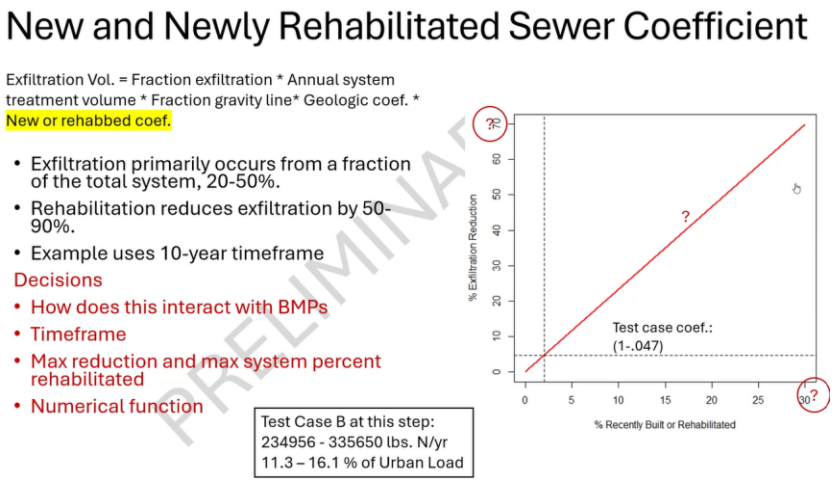
10:45 **Small Group Status Updates –** Various (40 min).

Following the updates provided at the March meeting, the CSO and Exfiltration/SSO Small Groups met again in April to continue their efforts. A volunteer from each group will share a brief verbal status update of any work that has occurred in the interim. Additional time is reserved for discussion.

- Sanitary Sewer Exfiltration Data – Joseph Delesantro, EPA ORISE
    - Joseph shared that at the last small group meeting, they discussed feedback on the final/outstanding consideration points for the exfiltration estimation method. There was agreement on most of the points and steps forward were identified to verify that those methods would work with the data.
    - Joseph noted two large, outstanding issues that require further discussion:
        - Dealing with rehabilitated or new sewer lines – Joseph has not gotten feedback on how that is intended to be done. He made a basic proposal in the initial model. It's also a point that had always conceptualized as being optional if that data is too onerous to collect.

- How to account in the model for the attenuation in groundwater/ subsurface of the exfiltrated sanitary sewer load before it hits the receiving streams – The majority of values that we have in the literature on exfiltration are from pipes rather than from streams. It's worth considering adding an attenuation step from the pipe to the stream. At the last meeting, considerations around this idea were discussed, including how this was done for septic. The values were fairly loose in terms of how they were identified, so they were very reliant on judgement. Because sanitary sewers are so much closer to streams than septic systems, there have been some suggestions that we could essentially take the reduction values used for septic and apply them as some proportion to sewers, e.g., half of the reduction that is applied to septic is applied to sewers to account for that groundwater attenuation.

- Joseph reminded workgroup members on the current status of the optional coefficient in the model for dealing with new and newly rehabilitated sewers, which assumes that exfiltration primarily occurs from a fraction of the total system and rehabilitation reduces exfiltration by 50-90%.



- Joseph asked for feedback on the values on the maximum reduction from rehabilitation sewers as well as the shape of the function (i.e. should it be represented as a linear function as it is now).
- Discussion
  - Jamie shared that's a really hard thing to answer, from her perspective, so suggested just go with your initial gut on it being a linear function. As Dave Montali often reminds us, getting something in and then working with it later is always an option.
  - Joseph confirmed that including the percentage rehab is currently conceptualized as being optional given that many people have expressed concerns about being able to collect that data.
  - Bel Martinez de Matta asked if the percentage is statewide or by the sewer system.

        - Joseph confirmed it is by percentage of system, in terms of percentage of pipe length that has been rehabilitated.
        - Joseph stated he will move forward with the data he has and hope to receive more data to test with. Joseph intends to have preliminary results next month for more utilities. Next steps will then be evaluating the method and planning where/when to take it to vote.

Action: Please provide any additional data that the Sanitary Sewer Exfiltration Small Group can use to evaluate the effectiveness of the exfiltration estimation method to Joseph Delesantro (jdelesantro@chesapeakebay.net), ORISE Fellow/CBPO.

- SSO Trend Overview from Maryland - Sophia Grossweiler, MDE
    - Jamie reminded workgroup members that we are trying to determine how to incorporate SSO loading into the Phase 7 model, focusing on chronic SSOs, and trying to figure out what data the jurisdictions have available. It would be helpful moving forward to bring the CAST folks into a meeting to better understand what their needs are for incorporating that data into the model (e.g., what types of information do they need and at what resolution).
    - Sophia shared a presentation originally from May 2024 that was produced as part of an internal investigation to determine SSO trends in Maryland, determine the significance of SSO loads in comparison to WWTP output, conduct SSO load trend analysis at State and finer scales, and provide SSO nutrient loads to CBP.
        - Sophia noted that SSO annual TN load was estimated using a 30 mg/L TN concentration based on assumptions made in a 2017 CBP Wastewater Workgroup study. SSOs are still considered illegal discharges and are not considered in the model at this point. Data for the investigation was from the Maryland Reported Sewer Overflow Database, and ZIP code records were used to aggregate loads.
        - Sophia shared results from the investigation. From 2005 to 2023, they saw downward trends in both SSO and WWTP TN loads. 2018 was a particularly wet year, so they also looked at data in two sections from 2005-2017 and from 2019-2023, and found that the precipitation trends did not explain the SSO trends completely. Spatially, they found higher TN loads in the Cumberland and Balitmore areas. From their investigation all SSO TN loads were <1% of the total WWTP TN load (even in 2018, the wettest year in the last 40 years). SSO loads could cause localized impact, particularly for bacteria.
    - Discussion
        - Jamie posed a few questions for CAST on what types of information are useful – are we looking at 8 digit scales, what kinds of time series are we looking at, and what type of historical record might be needed?
        - Olivia Devereaux shared that, for the model, they always look for data from 1985 through the future. That's the objective, but they know that data is not always

perfect, so they can develop a trend from a couple of years of data if need be. Whatever geographic scale it can be provided in is great. It's best if it's at a lat/long but if not, then they can do some extrapolation or downscale. This is a load that's not explicitly accounted for in Phase 6 of the model, but they would like to make it an explicit load in Phase 7.

- Joseph Delesantro asked what data is available in different jurisdictions? Or how might we go about taking the available data from MD and representing the rest of the watershed?
- Jessica Rigelman noted that several loads were added in previous years and the process worked with the states and gathered what data was available. They're not looking for necessarily accurate year to year data, although accuracy is better, but more so looking for overall trends.
- Jamie shared that in VA, municipalities with chronic overflow events are under orders to control them. It's akin to me with how we're working to characterize the CSO loads. CSO loads have been under long-term control plans so there has been a reduction over time. Given the work being done on chronic SSOs, you would think there could be a similar downward trend that could be captured in the model. I'm working with Erica Duncan in VA to see what data is available through two different reporting systems in the state.

Action: For jurisdictions that aren't VA and MD, please look at what SSO data is available in your jurisdiction and share it with Jamie Mitchell (jmitchell@hrsd.com), WWTWG Co-Chair and Petra Baldwin (Baldwin.Petra@epa.gov), CRC to help determine how to incorporate SSO loading into the Phase 7 model.

- CSO Data – Justin Carl, AlexRenew & Ed Cronin, Brown & Caldwell
  - Justin shared that they are at the end of their data collection phase. They have data from all states, just looking for clarification from some states (Zach Steckler, PA and Shannon McKenrick, MD).
  - Justin reiterated what they are looking for from remaining states:
    - How the waste load allocations were set for the original TMD and whether they were set based on future or present conditions. For example, in Alexandria they were set based on present conditions not assuming a long-term control plan was in place. DC loads were set based on future conditions under their long-term control plans, since it was done when the WIP was written.
    - Whether or not those allocations are sufficient at this time for loads at the treatment plant.
  - Justin shared that after they have this information from all states, they can start making decisions on how the loads get modeled in the next phase of the model. Dave Montali is already digging into the data in West Virginia.

Action: For PA and MD, please continue to work with Justin Carl (justin.carl@alexrenew.com), AlexRenew and Ed Cronin (ecronin@brwncald.com), Brown & Caldwell to answer outstanding questions on CSOs, including how the waste load allocations were set for the original TMDL in your state and whether or not those allocations are sufficient at this time for loads at the treatment plant.

11:25 **Recap of Actions and Decisions** (5 min)- WWTWG Co-Chair, Jamie Heisig-Mitchell, HRSD

11:30 **Adjourn**

NEXT MEETING: May 20, 2025 (Joint Meeting with Urban Stormwater Workgroup (USWG))

Attendance: *Andrew Malmgren, Bel Martinez da Matt, Shannon McKenrick, Dylan Burgevin, Bob Buglass, Ivy Ozmon, Auston Smith, Olivia Devereux, Jun Fang, Sophia Grossweiler, Joseph Delesantro, Clifton Bell, Moussa Wone, Jessica Rigelman, Petra Baldwin, Meredith Lemke, Jamie Mitchell, Megan Thynge, Helen Golimowski, Melissa Kret, Laura Bendernagel, Justin Carl, Ellen Egen, George Mwangi, George Onyullo*

Acronym List

BMP: Best Management Practice
CAST: Chesapeake Assessment Scenario Tool
CBP: Chesapeake Bay Program
CSO: Combined Sewer Overflow
HRSD: Hampton Roads Sanitation District
EPA: [U.S] Environmental Protection Agency
ORISE: Oak Ridge Institute for Science and Education
SSO: Sanitary Sewer Overflow
TN: Total Nitrogen
WWTWG: Wastewater Treatment Workgroup