# Wastewater Treatment Workgroup (WWTWG)

Thursday, July 23rd, 2026
10:00 AM – 10:35 AM

Visit the meeting webpage for meeting materials and additional information.

**Purpose:** This is the monthly meeting of the Wastewater Treatment Workgroup (WWTWG). The WWTWG approved the wastewater input assumptions for the Phase 7 E3 Scenario.

## Minutes

**I. Welcome and Announcements**

*Lead: Jamie Heisig-Mitchell, WWTWG Co-Chair*

Jamie welcomed WWTWG members and gave an overview of the meeting's agenda.

**Decisions:**

1. The WWTWG approved the June 2026 WWTWG Meeting Minutes.

**II. CBP Governance and Management Framework**

*Lead: Petra Baldwin, WWTWG Staffer*

Petra shared a brief update on key aspects of the newly revised CBP Governance and Management Framework (GMF), particularly on the new decision-making approach, in advance of the following decisional item. It was also clarified that the current workgroup membership will continue since it adheres to the 9 signatory/6 at-large voting member structure. A GMF 101 webinar will be held Tuesday, July 28th, a recording of which will be posted.

*Materials:* Governance and Management Framework (GMF)

**III. Approval of Phase 7 E3 Scenario Wastewater Inputs**

*Lead: Jamie Heisig-Mitchell, WWTWG Co-Chair*

Jamie walked through the proposed wastewater input assumptions for the Phase 7 E3 Scenario, a draft of which was presented at the June WWTWG meeting for workgroup feedback. It was approved by the WWTWG. Discussion occurred on the BOD concentration, with requests for additional clarification and documentation on its implications in the model.

*Materials:* Phase 7 E3 Scenario Wastewater Inputs Draft

**Decisions:**

1. WWTWG approved via consent the wastewater input assumptions for the Phase 7 E3 Scenario for recommendation to the CWGT.

**Actions:**

1. Alex Gunnerson will follow up with Gopal Bhatt and Lew Linker to get more information to build out documentation and understanding around the BOD concentration and how it is used in the model.
    a. ***Post-meeting note:*** *A summary of responses from the modeling team was shared with WWTWG members on July 28th and WWTWG Co-Chairs recommended keeping the BOD definition at 3 mg/L.*
2. Jamie will present the E3 scenario to the CWGT at their August 24th meeting for feedback. WWTWG may hold a meeting August 27th if feedback is received that requires revisions.

**Discussion:**

- Jamie noted that Charles Bott and James Grandstaff raised questions about the 3 mg/L definition for BOD, with concern that it is not achievable. Jamie noted Clifton Bell was talking with the modeling team to get more information on this, but for now clarified that BOD is not directly used for regulatory management of wastewater utilities. In the Phase 6 model, the BOD information was used to input the point source carbon. There were no BOD allocations or management scenarios in Phase 3 WIPs, and it did not impact permitting. Jamie noted she did not know the ramifications or implications of changing the definition to make it less stringent, especially since it has been in place since 2010.
    - Bel Martinez da Matta, MDE agreed that the issues brought up make sense, but she is not sure the ramifications for making it less stringent. As she understands, we don't use that to set up targets or anything like that.
    - Alex Gunnerson, CBPO Contractor noted Gopal Bhatt may be able to answer questions about the ramifications and offered to reach out. He noted if there was a change to make it less stringent, there would likely need to be extensive justification documented for why that was done.
    - Dave Montali, WVDEP/Tetra Tech noted his understanding is BOD is an ancillary piece of information and potentially involved with speciation of wastewater loads. E3 does not translate to permit limits. Dave also noted these numbers are annual average concentrations.
    - Alex added that planning targets are set only for nitrogen and phosphorus, so BOD isn't really coming into play there. He thinks this is not likely something to be worried about and it is mostly just in CAST for translating to the dynamic watershed model.
    - Dave agreed it would be helpful to follow-up with Gopal.
    - Jamie suggested going ahead with the approval of the E3 scenario today, but noted it will be good to get these answers documented so that for Phase 8 we know better how these things are linked and how to reference them.
    - Jamie added that one concern may be that people might translate this scenario as an achievable limit of technology (LOT) for wastewater.
- Petra noted that the discussion on scenario base year is continuing at the CWGT-level, though points from WWTWG members shared earlier have been documented. No new feedback on base year has been shared since the last meeting.
- Pre-meeting: James Grandstaff's comments shared via email prior to the meeting about BOD are included at the bottom of this document.

- Post-meeting: A summary of the email exchange with the modeling team about BOD is included at the bottom of this document.

## IV. Adjourn

**Next Meeting:** August 27th, 2026 (TBD depending on CWGT Aug 24th feedback on E3 scenario.)

**Attendees:**

- Jamie Heisig-Mitchell (WWTWG Co-Chair)
- Justin Carl, AlexRenew (WWTWG Co-Chair)
- Petra Baldwin (WWTWG Staffer)
- Jeremy Hanson (WWTWG Coordinator)
- Kevin Bronson, DNREC
- Bel Martinez da Matta, MDE
- Cassie Davis, NYS DEC
- Cass Klingaman, NYS DEC
- Erica Duncan, VADEQ
- Joseph Bryan, VADEQ
- Dave Montali, WVDEP/Tetra Tech
- Norah Carlos, CBC
- Marel King, CBC
- Dana Hales, EPA
- Ivy Ozmon, HRPDC
- Jun Fang, DC Water
- Andrew Malmgren, LASA
- Alex Gunnerson, CBPO Contractor
- Joseph Delesantro, CBPO Contractor
- Jess Rigelman, CBPO Contractor
- Megan Thynge, EPA CBPO
- Sushanth Gupta, MWCOG

**Comments received via email on July 15th, 2026 from James Grandstaff, Henrico Water (WWTWG at-large voting member):**

My comments are specific to "Concentration Sig Municipal Plants" BOD = 3 mg/L:

- IF we cannot remove the BOD parameter (see below) from the discussion/table, then this should be stated (more accurately and correctly) as "CBOD" – RE VPDES Permits/DEQ, EPA etc.
- A final effluent CBOD/BOD limitation of 3 mg/L is VERY problematic from a math perspective to comply with. The approved method detection limit is 2 mg/L. Additionally, EPA (and everyone else in the business) considers the accuracy of this test to have an inherent relative standard deviation of +/- 9.3% or higher. I think the math speaks for itself.
- I think we can all agree that TSS and CBOD/BOD limitations are to regulate organic carbon loads to ensure attainment with in-stream dissolved oxygen water quality standards.

I think we all recognize TSS and CBOD/BOD have a well understood and well documented (almost linear) relationship. Please consider that where there is TP concentration limitation is $\leq$ 0.3 mg/L and a TSS concentration limitation is $\leq$ 5 mg/L, BOD = 3 is not necessary and only sets up our municipal WWTP for failure to comply.

I share from experience, case studies etc. we see CBOD = 3 mg/L just from a test interference caused by the degradation of composite sample tubing (TSS was 0.1 mg/L and TP was 0.2 mg/L). Here at Henrico, we have to use the most stable sample tubing available on the market and we have to change this tubing out 2x/week to ensure compliance with CBOD = 5 mg/L (monthly average). I am not complaining, just providing another reason why CBOD/BOD = 3 mg/L is problematic and unnecessary when TSS < 5 mg/L and TP = 0.1 mg/L.

**Summary of email exchange with the CBP modeling team to answer questions about BOD:**

- The modelers confirmed that, as in the existing TMDL, there are no plans to set BOD5 planning targets or allocations, or otherwise use the E3 BOD5 definition for NPDES permitting purposes. This will be documented.
- They clarified that the E3 BOD5 definition does affect modeling of how wastewater TN is partitioned between species, and so raising BOD5 would slightly increase bioavailable TN in the E3 scenario.
- The effect is small by Bay total loading standards. For example, Lew states that "Going from the current P6 BOD 3 mg/l for significant WWTPs in the E3 to 5 mg/l would increase the N load to the Bay by ~ 300,000 pounds TN - about 0.15% relative to a ~200M TN WIP3 load."
- Hence the modelers' view is that this is a policy issue, not something that would have a large impact on the modeling or predictions of attainment.