



**Minutes
Wastewater Treatment Workgroup (WWTWG)
Teleconference
Tuesday, April 5, 2016, 10:00 AM – 12:00 PM**

Summary of Action and Decision Items

DECISION: The WWTWG approved the March meeting minutes.

ACTION: Angela Redwine (VDH) will compile a short memo describing the proposed methods for accounting for large monitored onsite systems in the Phase 6 Model and will present it to the WWTWG in May for decision.

ACTION: The Biosolids Ad Hoc Task Force will share its recommendations with the Wastewater Treatment Workgroup as soon as they have been finalized.

ACTION: Ning will update his slides to reflect the draft status of the QA plans.

ACTION: The WWTWG will receive an update on the status of wastewater QA plans during their May meeting.

ACTION: WWTWG members should download the wastewater treatment plant upgrade template from the April 6th meeting calendar page, fill it out by COB May 6th and send it to Ning Zhou (Zhou.Ning@epa.gov).

ACTION: The WWTWG will discuss potential options for a STAC workshop on new wastewater treatment technology during their May conference call.

Welcome, Introductions, and Announcements—Tanya Spano (Chair)

- Spano: Any corrections or additions to the March minutes?
 - Two spelling corrections were raised.

DECISION: The WWTWG approved the March meeting minutes.

- Ning Zhou (VT, Coordinator) walked through the status of the action items from the March call.
 - Contacts for the point source data project were provided to Megan Thyne, and the first call for the group has been scheduled.
 - 2015 Progress hasn't been finalized yet because of nonpoint source data, so the link is not yet available.
 - I will be discussing the QA/QC plans today. We don't have a template, so we didn't send anything out.
 - I sent email to New York and Delaware, but I have not received feedback from them yet.
- Spano: I am requesting an addition to the agenda to discuss a potential STAC workshop on new wastewater treatment plant technologies.

Large Monitored Onsite Systems – Angela Redwine, VDH and Marcia Degen, VDH

Angela and Marcia led a discussion on large monitored onsite systems, and asked for feedback from the other states about how to report the data and how the large systems should be represented in the Phase 6 Model. The following three questions were the focal point of the conversation:

- 1) What is the appropriate reporting frequency for this data?;
- 2) Will attenuation factors need to be applied, or is data reported as “end of pipe”?;
- 3) How will double-counting of large systems be avoided in the Model?

Discussion:

- Redwine: We have been working to pull together data to get these large monitored onsite systems into the Phase 6 Model, and we are looking for some feedback from this group on a few questions.
- Redwine: What is the appropriate reporting frequency for this data? We were told that annual averages would be sufficient.
 - Dave Schepens (DE DNREC): Delaware would go with annual averages.
 - Zhou: For regular onsite systems we use an annual average. The only difference here is we want to separate these large systems out. Annual averages is plenty of information.
 - Spano: I would ask that the logic behind choosing annual averages is documented. If we have future information in the future that leads us to change our assumptions, we should be able to look back at that documentation and see the rationale.
 - Zhou: An annual average is our minimum requirement. If you have better data that you want to send, that is fine.
 - Dave Montali (WV DEP): Are you talking annual average loads, or concentrations?
 - Redwine: We actually have annual average nitrogen concentrations.
 - Montali: How would that be converted to load? The number of houses on the system might be a way if you don't have flow data.
 - Zhou: Is flow one of the monitoring requirements?
 - Redwine: We have estimated gallons per day. So we could report that as well.
 - Zhou: That is fine, the final input to the model would be the load.
 - Spano: So we have agreed it is concentration and flow needed to calculate the load. Maybe we won't need to wait for the next conference call if we can address these questions offline.
- Redwine: Will attenuation factors need to be applied, or are flow and concentration reported as “end of pipe”? Ning said that we report at end of pipe, prior to the drainfield portion, so we wanted to know how the drainfield attenuation is calculated into the model. Will it be a standard factor?
 - Spano: Do you have a recommendation, Angela? One default seems to be to assume large monitored onsite systems operate differently, but the drainfields they discharge to operate the same way.
 - Zhou: We are still waiting for the recommendation from the attenuation expert panel. Once we have those recommendations, the drainfield portion of the system would be handled in the Model based on the recommendation from the panel.
 - Schepens: We are talking about pressure dosed systems, not spray irrigation at this point correct?
 - Redwine: I would think that is correct.
- Redwine: The last question is how we will avoid double counting of large systems.
 - Zhou: We do need to cut these systems out from the regular septic systems. To enable us to do this we need to know the area. Having the shapefile would be helpful.

- Spano: We have boundaries for wastewater treatment plants that are assumed to be septic. You are saying to carve out of the septic the footprint for the large monitored onsite systems. So my question to the states is do you have shape files for these systems?
- Schepens: I think shapefiles is the way to go. We would need to submit that to avoid the double counting. Similar to what they do on the central sewer side. If you fall within the polygon you are in the large monitored onsite system and removed from the septic population.
 - Spano: If folks don't have a shapefile, we'll need to know if there is another alternative. Angela, please work to develop a one-pager with the proposed recommended methods we've discussed today so the workgroup can look at it and make a formal decision during our next call.
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ACTION: VDH will compile a short memo describing the proposed methods for accounting for large monitored onsite systems in the Phase 6 Model and will present it to the WWTWG in May for decision.

- Montali: I would suggest the appropriate fallback, if the shapefile is unavailable, would be the population number and the county or land/river segment in which they are located. If you had to do this for just a few facilities, that could be doable.
 - Zhou: I agree with Dave on the population alternative. The reason we use the shapefile is to crosswalk it with census data to estimate the population.
- David Wood (CRC): Something to consider is that some of these systems are for restaurants and schools that are capturing loads from people who are currently accounted for in the septic population data and couldn't be easily pulled out.
 - Redwine: Correct.
 - Zhou: So for large residential systems it is easier. If you can identify commercial systems, we would probably need to apply some sort of factor.
- Redwine: A minor thing is how we define large systems. For us, it is anything over 1,000 gallons per day.
 - Zhou: I think we probably need to categorize it a little further to make sure these systems are also monitored.
- Spano: How long do we have to wrap-up this decision?
 - Zhou: We need to go by the Model calibration schedule if we can. We need to have draft data in the end of July and final by the end of August.
 - Spano: So we need to agree to the protocol before then.
- Ron Furlan (PA DEP): What if a state doesn't have data on large community system? We don't require any data to be collected on them in Pennsylvania. Will there be some default value applied?
 - Zhou: I think that will be up to you. If you can make an appropriate estimate, that is fine, but because they are currently rolled into the septic data, you can just claim you don't have any in this category.

Biosolids Task Force Update – Karl Berger, MWWCOG

Karl updated the WWTWG on the Biosolids Task Force's recommendations for how to handle biosolids data in the Phase 6 Model.

Berger: We have had three calls and we are scheduling one more by the end of the month that would largely wrap up our work. I doubt if we will be able to write up our recommendations by the May

WWTWG meeting, but we could probably have something by June. There is a pretty good set of minutes and presentations posted on the meeting calendar pages, accessible from the WWTWG page.

The major topics we've been dealing with are:

- *Making sure we get the raw data from the states:* The biggest gap to date has been Pennsylvania, but recently we had a participant from PA and they were optimistic about being able to provide data.
- *Defining data gap filling methods:* Everyone has data but no one really has a complete record back to 1985. CBPO would like states to do as much of the gap-filling up front using the rules from the task force or their own knowledge and best judgment.
- *How to fit biosolids into a crop application formula:* We have adapted the ones the Bay Program uses for manure. We will likely have one application scheme for the whole watershed, but the scheme may vary back in time to account for process and legislative changes.
- *Definition of biosolids:* We will focus on biosolids applied to agriculture land. We are excluding application of biosolids applied to forest, extractive and urban lands. One question is whether or not to include septage. The sentiment on the call was to have consistency everywhere as far as including it or not.
- *Phosphorus speciation:* CBP, in addition to reporting total pounds of nutrients, look at the fraction of P that is organic, inorganic, and mineralizable. Those don't really apply biosolids, and we haven't really worked out how that will be treated in the model. Hopefully there is a technical solution to that.

Discussion:

- Spano: You all were tasked with biosolids, and I'm not sure if septage is something that you need to address. I think it might be outside the scope of the task force.
- Montali: When we first took on the task of defining the land application of biosolids, we included WWTP sludge and septage. We had reasonable information for WWTP sludge, but found it was going to be much harder to collect that data for septage. We also came to the conclusion that the amount of septage was so negligible that we decided not to collect it. If the decision was to do something watershed-wide to account for septage, I think that would be extremely difficult.
- Spano: Unless I hear compelling evidence from this workgroup that septage is an issue we have to solve, I'd say that is outside the charge.
 - Berger: I am comfortable with that. The one place to check is Delaware, where septage makes up a large portion of what is applied in the Bay watershed portion of the state.
- Spano: Can you plan to share the recommendations from the task force as soon as you have them?
 - Berger: Yes.

ACTION: The Biosolids Ad Hoc Task Force will share its recommendations with the Wastewater Treatment Workgroup as soon as they have been finalized.

- Furlan: How are you handling the sludge that is bagged and given to landscapers for fertilizer? There is no tracking of that.
 - Berger: We are not going to try to track biosolids that wind up in bagged fertilizer. Nutrients that we presume are largely applied in urban settings are outside our purview at this point.
- Furlan: We have data concerning generation and dry tons. We did a breakout of the percentage P and percentage N, but it is not in a format you can use in the Model. We don't have the resources to pull that data and convert it to a format that you all can use. I don't suspect you will get more information than was already provided by Pennsylvania on biosolids.
 - Berger: If there is any Pennsylvania data at all, that would be a help.

- Furlan: We sent something that was just dry tons but I can't imagine that is usable. It didn't have any application information. We are in the process of revising general permits for biosolids, and will reincorporate a P index.
- Spano: Just a reminder that we were asked by the WQGIT to address biosolids. Any other questions for Karl?
 - None were raised.

Wastewater Quality Assurance Plans – Ning Zhou, VT

Ning provided an overview of the QA/QC requirements for wastewater data reported to the Chesapeake Bay Program and lead a discussion on options for jurisdictions who have yet to submit QA/QC plans.

Discussion:

- Zhou: I took the paragraph on my slide directly from the Grant Guidance. There is a link on the slide that has the complete grant guidance. In the past we only received this document from Maryland. Later, because of BMP verification, we received similar plans from other jurisdictions. This document will serve many purposes. It will serve to meet grant requirements, but this document could serve as very good reference or even a training manual for new technical staff. Our QA officer recommended the West Virginia QA plan as a great example, so it is posted on the calendar page.
- Spano: Have any of these been approved and finalized?
 - Zhou: We only have final approval for the Maryland plan because it was done many years ago. New York's is pending, and the versions I have from the other states still have draft marks. We just don't have official final copies yet.
- Spano: Can you update the slide to indicate that they are draft submitted? These are annual plans, so I'd like to be able to see the status of approval.
 - Zhou: This QA plan only needs to be updated when there is a change. They are not necessarily updated every year.
 - Spano: I think there is a difference between drafts where the plan hasn't been submitted, versus a revised plan that is still considered a draft. I think those need to be clarified.
- Zhou: This current plan is only for wastewater data. We haven't started talking about biosolids and large monitored onsite systems yet. Because those other sources are still in the development phase, maybe next year that would be requested.
 - Spano: Biosolids and large monitored onsite systems are not in the Model now, but once they are approved and vetted, if a state reports them, their QA plan has to account for how their data is verified.
- Zhou: I think this is a good time to compile these QA documents, to write things down as you compile the data rather than remembering the methods later.
- Spano: Do you have updates from the other jurisdictions that haven't provided these yet?
 - Zhou: Virginia contacted me with a few questions. I have not heard from D.C. or Delaware.
- Spano: I will follow up with George Onyullo (DOEE) to make sure Blue Plains is consistent with what they are doing. Let's keep this on the agenda to see if we have any updates.

ACTION: Ning will update his slides to reflect the draft status of the QA plans

ACTION: The WWTWG will receive an update on the status of wastewater QA plans during their May meeting.

New Source Data Collection and Cleanup Update – Ning Zhou, VT

Jurisdictions were asked to provide updates on their data collection plan and efforts for the new sources, such as spray irrigation, rapid infiltration and large onsite systems.

Discussion:

- Zhou: I have received submissions from Maryland on spray irrigation, but I don't have anything from other jurisdictions yet. Are there any new updates?
 - Dharmendra Kumar (PA DEP): No updates.
 - Greg Busch (MDE): Last week we sent data for spray irrigation on agriculture and spray irrigation on turf as well as rapid infiltration data going back to 1985. That should be our final data for all of those sources.
 - Montali: We characterized the one legacy historic spray irrigation record in our biosolids data, and we won't be reporting rapid infiltration or large monitored onsite systems.
 - Schepens: We will get everything to you soon.
 - Matt Richardson (VA DEQ): We are going to stick with the one time data evaluation as a default for spray irrigation.
 - Redwine: We are only sending you data on the large monitored onsite systems.
 - Zhou: Please just confirm if you aren't submitting any rapid infiltration data.

Updates and other business

- Attenuation Panel Update: This has been long-delayed, but we are still waiting for SPARROW model analysis and are hoping to work out a solution this month. If that happens, we can include it in the panel's final report, which we are hoping to have finished by July. If nothing happens in the next month or two, we will need to skip the SPARROW information.
- Boat discharge and pumpout panel: First call was held about a week ago. We will have the charge and membership distributed in the coming weeks for formal approval. Open stakeholder session will be held shortly thereafter.
- 2017 Milestone Review: Based on 2015 Progress results, the wastewater sector made major progress and hit the 2025 TMDL WIP II targets as a sector. So EPA would like to get that good story out, and have requested information on the major facility upgrades. To serve that purpose, I put together a spreadsheet, so if you could please fill out the status columns on the right, it would be a big help. We really want to see upgrades related specifically to the TMDL. This will be part of the EPA comments on the 2017 milestone reviews.
 - Spano: My interpretation in terms of completing the upgrade is the construction. Is the data intended to capture when the plants will finish the construction that will allow them to implement ENR? Some plants may still be upgrading their physical tankage to meet increased flow in the future, but right now they have additional tankage and might be able to achieve ENR levels right now.
 - Montali: In our WIP we talk about complete construction to allow you to meet ENR goals. Seems the important thing to track is whether they have been updated to allow compliance with waste load allocations as they build out.
 - Spano: I think it is important to be able to capture the fact that some plants have been able to make incremental changes to continue to achieve above and beyond ultimate TMDL limits. Maybe there could be another cell to help fully show the story.
 - Zhou: I can add one more column for further upgrade. Here we are really looking for the major upgrades that have a major effect on current performance.

- Montali: Maybe the comment column could be used for that. I'm afraid there are too many nuances to fit them all into the template. The comment column could be used to mention the facility is in compliance with waste load allocations and minor upgrades will be used to meet future growth.
- Montali: Is the effluent column referring to the average effluent N on which the design is based?
 - Zhou: Yes
- Montali: How detailed should the treatment process column be?
 - Zhou: Not very. If you can specify the type of treatment train that would help. Whatever you can capture that would be valuable.

ACTION: WWTWG members should download the wastewater treatment plant upgrade template from the April 6th meeting calendar page, fill it out by COB May 6th and send it to Ning Zhou (Zhou.Ning@epa.gov).

Wastewater Treatment Plant Technology STAC Workshop

- Spano: It has been several years since we had a wastewater technology workshop, and there have been a lot of developments as far as new processes and emerging technologies. The time seems right to consider doing another workshop and I would like to pursue doing it. Do other states see the need to look at new processes?
 - Busch: I am not sure what it would entail, but I think it would be interesting to get a state of the science. I would need to ask around the office and think about what that would look like.
 - Zhou: I think that is a good idea. It would be a good time to let experts in the wastewater treatment field look at the limit of technology again.
 - Montali: I agree it would be good to have a STAC workshop, but when we frame it up we ought to be talking about what is economically feasible and the size of plants, etc.

ACTION: The WWTWG will discuss potential options for a STAC workshop on new wastewater treatment technology during their May conference call.

Adjourned

Next conference call:

May 3, 2016

List of Call Participants

Name	Affiliation
Tanya Spano (Chair)	Metropolitan Washington Council of Governments
Ning Zhou (Coordinator)	VT, CBPO
David Wood (Staff)	CRC, CBPO
Dave Schepens	DE DNREC
Bryan Ashby	DE DNREC
Ron Graber	DE DNREC
Greg Busch	MDE
Lana Sindler	MWCOG
Nasser Ameen	MWCOG
Karl Berger	MWCOG

Ron Furlan	PA DEP	
Dharmendra Kumar	PA DEP	
Matt Richardson	VA DEQ	
Allan Brockenbrough	VA DEQ	
Angela Redwine	VDH	
Sue Kriebel	Virginia Beach	
Megan Browning	WV DEP	
Dave Montali	WV DEP	