

Urban Stormwater Workgroup Conference Call

March 8, 2016

10:00AM- 12:00PM

Meeting Minutes

Summary of Action and Decision Items

ACTION: Norm will distribute a poll to USWG members regarding the request from Mr. Quigley (OptiRTC) to consider a method for crediting CMAC technologies.

DECISION: The USWG approved the February meeting minutes.

ACTION: Jeff Sweeney will send Mary Gattis the information for accessing the BMP summary reports that local governments can use to review the data submitted by the states to CBPO.

DECISION: The USWG approved the Phase 6 Relative Land Use Loading Rates for Tree Canopy.

ACTION: Jeff, Norm and Tom will discuss the proposed method for simulating urban fertilizer application. Norm will review the full USGS report and see if USGS has more recent data than 2006 that they could share.

ACTION: USWG should send Peter Claggett any comments on his proposed protocol for reclassifying low vegetation into turf grass, mixed open space, or potential agriculture land uses for the Phase 6 Watershed Model.

Introductions and Announcements

ACTION: Norm will distribute a poll to USWG members regarding the request from Mr. Quigley (OptiRTC) to consider a method for crediting CMAC technologies.

DECISION: The USWG approved the February meeting minutes.

- Street Sweeping panel report was presented to the Watershed Technical Workgroup. There was not consensus approval, so the report will be elevated to the WQGIT on March 28th.
- Impervious disconnections panel has a first draft of their report that is currently being reviewed by the panel members. Over the next few weeks the panel will be working with local reps to do a “reality check” on the recommendations and with the WTWG to iron out the reporting requirements. Expect a report released in the April/May time period.
- Historic Data Cleanup: Submit any cleaned-up historic BMP data by the end of March if you want to see if reflected in the April calibration. There will be another chance to submit historic data prior to the July calibration, and the final deadline for historic data submission is September 1.
- Norm Goulet (NVRC, Chair): Has CBPO been in touch with the local NEIEN managers to let the local governments know that there is still an opportunity to submit additional info?
 - Jeff Sweeney (EPA, CBPO): That is something to talk about with the state representatives. We are reluctant for EPA to reach out to local governments directly. It is really the state agencies responsibility.

- Jaime Bauer (VA DEQ): James Davis-Martin (VA DEQ) and Bill Keeling (VA DEQ) are working on reaching out to the local governments.
- Randy Greer (DE DNREC): We are still looking at errors in the data, but we have a backup plan that I will send to Jeff if we can't figure out the problem.
- Mary Gattis (LGAC): There are concerns throughout the local governments on this, and I think it needs to be addressed. LGAC is concerned about the lack of communication with local government on resolving data errors.
 - Goulet: Maybe Mary and I can work on a memo to distribute to LGAC, and work with some of the states directly to get the word out.
 - Gattis: They meet morning of March 25th and would love to have jurisdiction representatives at those meetings.
- Sweeney: Just a reminder that the whole history of stormwater implementation is available for review on the ftp site. Localities can go in there and look at what the state has reported to CBPO for each county.
 - Gattis: Could you send me the link to that site?

ACTION: Jeff Sweeney will send Mary Gattis the information for accessing the BMP summary reports that local governments can use to review the data submitted by the states to CBPO.

Revised Phase 6 Relative Land Use Loading Rates for Tree Canopy – Rebecca Hanmer (FWG Chair), Justin Hynicka, MD DNR, Olivia Devereux, Devereux Consulting, Attach B.

Justin described updates to the proposed relative loading rates for the Phase 6 tree canopy land uses in response to comments received during and after the February 11th webinar. Olivia reviewed the method for incorporating the Tree Canopy land uses into the set of urban land use loading ratios. The Modeling Workgroup will discuss and consider the loading rates on March 10th; the WQGIT will be asked to consider the loading rates on March 14th.

Discussion:

- Jeremy Hanson (VT, CBPO): Please quickly explain why there isn't a table for relative sediment loading rates.
 - Olivia Devereux (DEC): Sediment loading rates are handled using a different methodology than nitrogen and phosphorus loading rates. Peter Claggett (USGS) uses factors from the RUSLE model run to determine sediment loads.
- Goulet: As far as worrying about speciation and some of the finer details, while those types of concerns do have some validity, they are probably not that big of an issue because we are looking for an average number. The one hang up I still have is with using loading rate information from the National Stormwater Quality Database (NSQD), where the data lump loads from urban lands with tree canopy and without tree canopy. I think the loads in that database are being affected by trees and because of that, we are trying to modify a rate that is already being modified. The numbers Olivia showed are small shifts, but they may be important at the local scale where they have to meet a certain number to achieve a local WIP in a permitted sector. The methodology presented today is a sound methodology and it has been well thought out. My only concern with the method is that we talk about storage of nitrogen and phosphorus

in the wood, it seems a little precise when we are dealing with wide averages across a large watershed. I will not stand in the way of this moving forward. I do not think it has a fatal flaw.

- Tom Schueler (CSN, Coordinator): I would like to compliment the team for the amount of work done over a short period of time. I see no fatal flaws and would recommend moving it forward.
- Bauer: Can you briefly review how the seasonality of canopy is addressed?
 - Hynicka: The model we used is run at a daily time scale, so during winter months we didn't give any credit for canopy interception. So for 5 months out of the year, you don't get that interception credit.
- Bauer: For interception, was a saturation point factored in for heavy rainfall events?
 - Hynicka: Keeping in mind that this is a relative calculation we are doing, we used a canopy interception of 0.05 inches per storm, which sets the canopy saturation point. There is a point when the rainfall is no longer being stored in the canopy. There are some benefits of through-fall by reducing the flow rate, but we did set a saturation point for these calculations.
- Goulet: The nitrogen and phosphorus values are the same, do the trees and turfgrass process nitrogen and phosphorus exactly the same?
 - Hynicka: No, nitrogen is more mobile than phosphorus, so the actual loading rates of N and P are different in turfgrass. But remember, we are talking about relative loading rates. To put it another way, the 20% value is 20% of two different numbers, so the loads are not the same.
- Ginny Snead (Louis Berger): I don't think there are any fatal flaws. The basis of using the NSQD creates larger margins of error than anything we are discussing in terms of the methods, and it would be great to have more data available to help make these decisions.
 - Goulet: I agree. I would recommend that we say there should be further research.
 - Hynicka: Is that comment specifically about these land uses, or urban lands in general?
 - Snead: Really any time we are using that database.
- Jesse Maines (City of Alexandria): Regarding the assumption about N and P contained in the woody part of trees, do you have greater uptake when leaves come back on in the spring?
 - Hynicka: When I use the value of N and P stored in wood, it is a number relative to what is also stored in leaves and being deposited from the atmosphere. From the total amount stored, 5% of N and P is taken up in the wood. The model does account for the large amount of N and P uptake that is used to build leaves, etc.
- Katherine Antos (EPA, CBPO): So the N and P that end up in the leaves isn't a credit because when the leaves come off they end up back in system anyways?
 - Hynicka: Correct.
- Maines: Then shouldn't there be a credit for a leaf program?
 - Schueler: That was explicitly dealt with by the street sweeping expert panel. While there was some interesting data, they came to consensus that a leaf program would not be eligible for credit because there just wasn't enough to support that credit. One of the panelists has started new research out of Minnesota to investigate this further. When that research is published, we will share it with the workgroup.
- Greg Busch (MDE): Is the final product going to be the memo that has been sent out? Will there be a formal comment and response document to go along with the memo?

- Goulet: The memo, literature review summary, webinar, and responses to comments from the webinar and workgroups will all be part of the package. The BMP panel report is a separate process from this.
- Rebecca Hanmer (FWG): Yes, we will supplement Justin's report with a Q&A document. We will respond to comments in writing.
- Hanson: The panel has been involved throughout the process and the plan is for the BMP to be based on a land use change, so the panel is waiting for this outcome to develop the BMP report. This memo will likely be an appendix to that report as well.
- Goulet: Are there any objections to moving forward with the proposed tree canopy land use relative loading rates?
 - None were raised.

DECISION: The USWG approved the Phase 6 Relative Land Use Loading Rates for Tree Canopy.

Fertilizer Application Rates to Turf Grass in the CBP Environmental Models – Jeff Sweeney, CBPO, Attach D.

Jeff discussed the methods and data used to estimate fertilizer nutrient application rates in the urban sector for the Phase 5.3.2 model and possible updates for Phase 6.

Discussion:

- Goulet: The information seems counterintuitive. The sales of phosphorus are decreasing to the point that we are effectively down to zero in a lot of locations, but the lbs/acre numbers you're showing are increasing over time.
- Schueler: All phosphorus fertilizer bans occurred between 2009 and 2012, so they wouldn't be reflected in this dataset, which ends in 2006. This is associated with the steady increase in turfgrass across the watershed. We can check with USGS to see if they have updates to the data, but do you know how much effort they took to come up with this? And what entity do you suggest take this on?
 - Sweeney: As USGS updates SPARROW, this is what they use for fertilizer application to developed land. So I think a lot of the work will be done for you, you would just need to reach out to get it. It would be good to see what we can get past 2006, and remember, this is for the watershed as a whole.
- Goulet: I guess I am still stuck here. We need a recommendation by the end of the March for the next beta version of the model. The first beta went back to the numbers used in the Phase 5.3.2 model prior to the expert panel recommendations. I don't know if we can dig something up in the next two weeks. I guess the fallback position would be for Phase 6 numbers to be based on actual sales information, but we don't have it.
- Sweeney: I think this is worth considering in the next two weeks. You need to discuss including a change in the rate through time. They have always had that in the agriculture sector, and it makes sense to me for urban as well.
 - Goulet: I think you are probably right. But we also know that turf acres have been increasing and so the loads would increase. I am glad to hear this is being used to inform SPARROW.

- Sweeney: The method USGS used to get from sales data to use data is published and peer reviewed, so it is just a matter of getting the data. With this method you would project forward using the slope line until you get more data, and then you would adjust the slope.
- Marel King (CBC): I like this concept but I am concerned about the availability of data. I would think the trend line would look very different after the fertilizer bans took affect after 2010. I would be very cautious about extrapolating this particular line out to present conditions. I am happy to help ask the questions about getting more data.
 - Sweeney: Another approach is you could take 2006 and project no additional growth until you have more data. That is a reliable method if your gut is saying the trend line has changed. The downside is that if the trend doesn't go down as much as expected, when the real data comes in you could get a big load jump.
- King: I would hope we could do this for both nitrogen and phosphorus.
- Schueler: Do you have a sense of how this method stacks up with application rates simulated in Phase 5.3.2?
 - Sweeney: Here they are considerably lower, but you really shouldn't compare the old model to the new model because so many other things are changing. The change over time is more important than the absolute number here.
- Goulet: I guess at this point, I would say Jeff and I need to talk offline with Tom. I would like to look at the full USGS report and see if we can get some updated data over the next couple of weeks. If we can't come up with anything that looks reasonable, the WQGIT will have to keep moving forward with the method from beta 1, or provide their own recommendation.
 - Sweeney: Remember that at this point you don't need the best answer, you need a better answer than what is in there now. Once you have gotten comfortable with this method, you need to make the determination if this is better.
- Jill Whitcomb (PA DEP): The concept of translating sales data to use data is a good one and I concur with the other points. I agree that the new data needs to be there because of the phosphorus bans.
- Heather Gewandter (City of Rockville): Is there an understanding of how successful the ban has actually been? That is the other important piece of this if we can't get the actual sales data.
 - Schueler: I think it is required by law, but I am not sure how much verification the states have done in the market place. When the expert panel met, all three major fertilizer companies said they had voluntarily withdrawn phosphorus from the fertilizer. The presumption is they did take it out but we don't have that verification data. I think we are in a situation where we accept some version of this approach. The implication is that this will change your numbers. We can't predict the magnitude, but I think the methodology is solid.
- Kate Bennet (Fairfax Co.): Do we have an understanding of the states' challenges with collecting the data?
 - Schueler: I don't know. We have asked them 6 or 7 times for the data. Most only collect data by pounds, not by nitrogen or phosphorus content. I think some are trying, but we haven't heard from other states on their efforts.
- Goulet: Are there concerns with further pursuing Jeff's proposed approach?
 - None were raised

ACTION: Jeff, Norm and Tom will discuss the proposed method for simulating urban fertilizer application. Norm will review the full USGS report and see if USGS has more recent data than 2006 that they could share.

Turf Grass and Open Space Definitions – Peter Claggett, USGS, CBPO, Attach C.

Peter discussed the protocol for reclassifying low vegetation (herbaceous) into turf grass, open space, or potential agriculture and the related rationale and ramifications.

Discussion:

- Schueler: I think the approach makes sense and I support it. I think landfills should be considered impervious. They are incredibly compacted and from a loading standpoint they behave as though impervious. All the others make sense to me.
- P. Claggett: For some things we have to make judgement calls. Using the slides I showed as a guide, we will have to put these land uses somewhere. Throughout the next 6 months, special cases will come up and we will need to put them somewhere right away. We are really trying to get a sense of how altered are these lands are.
- Gattis: How will you go about assigning percentages?
 - Claggett: MDE volunteered to do that for us. A lot are in the NAVTEC database to map consistently. They will go through and look with more detail.

ACTION: USWG should send Peter Claggett any comments on his proposed protocol for reclassifying low vegetation into turf grass, mixed open space, or potential agriculture land uses for the Phase 6 Watershed Model.

Adjourned

List of Call Participants

Member	Affiliation
Norm Goulet (Chair)	NVRC
Tom Schueler (Coordinator)	CSN
David Wood (Staff)	CRC
Cecilia Lane	CSN
Nathan Forand	Baltimore Co.
Ted Brown	Biohabitats
Frank Rodgers	Cacapon Institute
Marel King	CBC
Jesse Maines	City of Alexandria
Ruth Hocker	City of Lancaster
Heather Gewandter	City of Rockville
Neely Law	CWP
Bill Stack	CWP
Olivia Devereux	DEC
Randy Greer	DE DNREC
Elaine Webb	DE DNREC

Julienne Bautista	DOEE
Alisha Goldstein	DOEE
Katherine Antos	EPA, CBPO
Jeff Sweeney	EPA, CBPO
Liz Ottinger	EPA, R3
Kate Bennet	Fairfax Co.
Rebecca Hanmer	FWG
Mary Gattis	LGAC
Ginny Snead	Louis Berger
Justin Hynicka	MD DNR
Christina Lyerly	MDE
Greg Busch	MDE
Ken Murin	PA DEP
Jen Orr	PA DEP
Jeff McKay	PennDOT
Julie Mawhorter	USFS
Sally Claggett	USFS
Peter Claggett	USGS
Jaime Bauer	VA DEQ
Chris Swanson	VDOT
Jeremy Hanson	VT, CBPO
Sebastian Donner	WV DEP