

## Harpeth River Watershed Stakeholder Meeting (Virtual)

May 12, 2021

**Welcome** Jenny Dodd (TDEC) (teams intro)  
Scott Gain (facilitator) Re-cap of purpose and context of meeting

### Planned Agenda Items:

- Address remaining questions and concerns about model delivered by EPA in previous meeting. Share experiences with the model so far.
- Evaluate readiness to move forward and begin to talk about scenarios to be modeled to identify potential end points.
- Agree on next steps and timeline for completion.

### Model Discussion:

- Ryan Jackwood (Harpeth Conservancy)- has run base model. Used WRDB. Model seems OK, somewhat slow, needs more time to evaluate.
- Dennis (TDEC) Has run model, but just received adequate computers to appropriately run model. Will also need more time to evaluate.
- Dustin Bambic (Citizen/Paradigm) expressed that model is very complex for the typical interest group and is interested to hear how others are analyzing the output. Is interested in the model but knows that it takes a while to get up to speed.
- Dorie Bolze (Harpeth Conservancy) asked if anyone else is intending to “dive in” to the modeling.
- Tim Wool (EPA) noted that he has not received any feedback since model handoff and training.
- Scott Gain - asked if the City of Franklin has any plans to run the model
- Michelle Hatcher (City of Franklin) they have hired a consultant (Hazen & Sawyer) to run the model, but they have not yet begun that work

### Recap from last meeting:

Characteristics of interest: D.O. Diurnal Swing < 5 mg/l  
D.O. Absolute Criterion > 5 mg/l  
N:P “Balance”  
N:P Criterion from “Natural Conditions Run”  
Free PO4

With which to evaluate: N and PO4 regime for current and “natural” conditions  
N:P ratio for current and “natural” conditions  
D.O. current and “natural” diurnal swing  
Chlorophyll A in relation to N, P, and D.O. Diurnal swing

**General Discussion:**

Ryan (HC) asked about role of hydrology in scenarios and the spatial and temporal constraints on simulations for consideration in TMDLs.

Saya Qualls (Hazen & Sawyer) - model encompasses the whole watershed but the TMDL just addresses the impaired parts – what would this TMDL ultimately cover?

Discussion: Model scenarios will be run for entire basin but will allow for temporal, spatial, and hydrologic perturbations.

Richard Cochran (TDEC) says TMDL may encompass more than impaired area. Testing for TMDLs will focus primarily on current conditions and constraints on management but also be open to hypothetical changes in primary sources and drivers (i.e. changes in land use or waste loading). Stochastic comparisons of scenario ensembles could play into this eventually.

Constituents of interest: General acceptance by the group of the list of constituents identified at Feb 4, 2020 meeting. Tim Wool (EPA) verified that both dissolved PO<sub>4</sub> and TP are simulated by the model.

Model time frame: Runs might include most severe rain events, also perhaps changing climate conditions (temperature), changing land use, changing flow and waste load.

Richard (TDEC) pointed out that the TMDL is expected to deal principally with the current time frame but that this might be revisited and that we must also be thinking about the future.

Discussion: Will the TMDL include a concept of uncertainty or “margin of safety”? Amy Feingold (EPA) stated in the chat that the TMDL must include a Margin of Safety, along with a rationale to be approved by EPA.

Tim Wool (EPA) pointed out that the model report does evaluate sensitivity of parameters but makes no assumptions about the certainty or “safety” in regard to the changes in the system itself.

Discussion: Group indicated some general interest in understanding the effects of uncertainty on conclusions drawn from modeling exercise. Some noted a need for presentation on overall model performance. There was a general sense developing that the meeting participants had not seen a general presentation of the model including what it shows and how well the results can be documented.

Richard (TDEC) offered that TDEC will complete its own evaluation of the model and then prepare a presentation to the group regarding the basic model performance and parameter sensitivity, etc. He noted that TDEC needs time to get new upgraded computers up and running.

It was generally agreed that this should happen before continuing discussion of modeling scenarios for system evaluation.

Jenny (TDEC) then noted that she hoped other organizations who have interest in and experience with the model would continue to work with it in the mean time.

**Future Plans:**

Next Meeting possibly in late July or August (2021) for a presentation by TDEC concerning model performance. Discussions of modeling scenarios would follow.

# Screen Shots of the Teams chat:

**Harpeth River Watershed Stakeholder Meeting** Chat Files Meeting Notes +

Regan McGahen joined the meeting.

April 8, 2021

Regan McGahen named the meeting to Harpeth River Watershed Stakeholder Meeting.

Sherry Wang and 16 others were invited to the meeting.

Today

Meeting ended 0s 8:44 AM

Meeting started 8:50 AM

Amy Shaw (AquAeTer) (Guest) was invited to the meeting.

Scott Gain (Guest) was invited to the meeting.

Bruce, Mary (WS) (Guest) was invited to the meeting.

Stacy Crouch/Berry's Chapel Utility (Guest) was invited to the meeting.

Paul Davis (Guest) was invited to the meeting.

Wool, Tim (Guest) was invited to the meeting.

Pannell, Zane (Guest) was invited to the meeting.

Bouma, Stacey (Guest) was invited to the meeting.

Qualls, Saya A (Guest) was invited to the meeting.

Mike Cramer (Guest) was invited to the meeting.

Jim Redwine (Guest) was invited to the meeting.

Weiskerger, Chelsea (Guest) was invited to the meeting.

Michelle Hatcher (Guest) was invited to the meeting.

Davis, John (Guest) was invited to the meeting.

York, Catherine (Guest) was invited to the meeting.

Mark Hilty (Guest) was invited to the meeting.

Hunt, Michael (WS) (Guest) was invited to the meeting.

Chelsea Bowling (Guest) was invited to the meeting.

rwjackwood (Guest) was invited to the meeting.

Agrawal, Benjamin (Guest) was invited to the meeting.

Jimmy R. Smith was invited to the meeting.

Feingold, Amy (Guest) was invited to the meeting.

Fernandez, Glenn (Guest) was invited to the meeting.

Dorie Bolze- Harpeth Conservancy (Guest) was invited to the meeting.

Bruce Meyer (Guest) was invited to the meeting.

Scott Heflinger (Guest) was invited to the meeting.

Mark Hilty (Guest) no longer has access to the chat.

Sherry Wang (Guest) was invited to the meeting.

Mark Hilty (Guest) was invited to the meeting.

Dustin Bambic (Guest) was invited to the meeting.

Nick Tatum (Guest) was invited to the meeting.

Jed Grubbs (Guest) was invited to the meeting.

**SQ** Qualls, Saya A (Guest) 9:11 AM  
Nick Tatum from WADC is having trouble trying to join the meeting 👍 1

**NT** Nick Tatum (Guest) 9:21 AM 👍 1  
Regan I'm in.


Michelle Hatcher (Guest) no longer has access to the chat.


9:29 AM  
D.O. Diurnal Swing < 5 mg/l  
D.O. Absolute Criterion > 5 mg/l  
N:P "Balance"  
N:P Criterion form "Natural Conditions Run"  
Free PO4

Michelle Hatcher (Guest) was invited to the meeting.


Michelle Hatcher (Guest) no longer has access to the chat.


Michelle Hatcher (Guest) was invited to the meeting.


**DB** Dustin Bambic (Guest) 9:31 AM  1  
Bye everyone, sorry I could only join for a bit but wanted to stay in loop as possible. I think a great starting point would be to understand the simulated baseline = (1) where WASP is predicting excursions from the DO/nutrient criteria and (2) the magnitude and duration of those excursions.


 Dustin Bambic (Guest) no longer has access to the chat.

9:31 AM  
Steps:  
1. Complete and distribute model:  
Hydrology  
N  
P  
D.O  
PO4  
Chlorophyll A  
With which to evaluate:  
N and PO4 regime for current and "natural" conditions  
N:P ratio for current and "natural" conditions  
D.O. current and "natural" diurnal swing  
Chlorophyll A in relation to N, P, and D.O. Diurnal swing  
...among others

 Dustin Bambic (Guest) was invited to the meeting.

 Dustin Bambic (Guest) no longer has access to the chat.

 Daniel, Zack (Guest) was invited to the meeting.

**SQ** Qualls, Saya A (Guest) 9:33 AM  1  
can scott send his notes out to the group?

9:34 AM

Once we have the notes for this meeting compiled, they will be posted to the website. 😊

<https://www.tn.gov/environment/program-areas/wr-water-resources/watershed-stewardship/tennessee-s-total-maximum-daily-load--tmdl--program/wr-ws-harpeth-river-watershed-tmdl-development.html>


Including the notes he just mentioned.

**JR** Jim Redwine (Guest) 9:45 AM  
Where do temporal changes in discharges, such as anticipated expansions by the Water Authority of Dickson County and City of Franklin figure in?


 Mekayle Houghton (Guest) was invited to the meeting.

**MB** Bruce, Mary (WS) (Guest) 9:53 AM  
I think it would be helpful to know how the parameters that we selected are represented currently. Could someone review what the model said and as Dustin said whether there were excursions in DO/nutrients?

9:58 AM

Waiting for a break to jump in and ask this question for you! 😊  1

**JR** Jim Redwine (Guest) 9:59 AM  
Will the TMDL discuss / lay out the rationale for the selected "margin of safety"? What input will stakeholders have in discussing the factors and weight given to each?

 Pannell, Zane (Guest) no longer has access to the chat.

 Amy Shaw (AquAeTer) (Guest) no longer has access to the chat.

**AF** Feingold, Amy (Guest) 10:03 AM  
The TMDL must include a MOS and explain the rationale behind it in order to be approvable by EPA.

**MB** Bruce, Mary (WS) (Guest) 10:05 AM  
Will current and past efforts that stakeholders have already made in pollution reductions be taken into account when deciding WLA's

**JR** Jim Redwine (Guest) 10:05 AM  
Looking forward to the discussion,

**GF** Fernandez, Glenn (Guest) 10:06 AM  
for tdec and stakeholders, is the model delivered by epa calibrated well for existing conditions so can be used to explore scenarios?

**MB** Bruce, Mary (WS) (Guest) 10:16 AM  
That would be great, Jenny. Thank you.



rwjackwood (Guest) 10:16 AM

Are there scenarios that we all should be focusing on or that TDEC is going to prioritize?



Hunt, Michael (WS) (Guest) no longer has access to the chat.



Fernandez, Glenn (Guest) 10:21 AM

again, before worrying about scenarios, we need to decide whether the model is properly setup and calibrated for existing conditions



Qualls, Saya A (Guest) 10:30 AM

stepping away for a minute



Jim Redwine (Guest) 10:31 AM

I think we have to keep in mind that the goal of the TMDL is to get the impaired river segment off the 303(d) list, or it does not meet the statutory / regulatory objective.



Daniel, Zack (Guest) no longer has access to the chat.



Qualls, Saya A (Guest) 10:32 AM

back



Bruce Meyer (Guest) no longer has access to the chat.



Bruce Meyer (Guest) was invited to the meeting.



rwjackwood (Guest) 10:36 AM

Yup, that is the plan to keep running scenarios in the coming months



Mark Hilty (Guest) no longer has access to the chat.



Dorie Bolze- Harpeth Conservancy (Guest) 10:39 AM

Franklin has a major study underway by Hazen on studying 8MGD sewer increase which includes land application, possible discharge upstream of the drinking water intake, etc.

Are they any other point sources planning an increase

Thank you everyone. Scott for facilitating and TDEC and EPA!



Mekayle Houghton (Guest) 10:42 AM

thanks all



Bruce, Mary (WS) (Guest) 10:43 AM  
Thank you!



Bruce Meyer (Guest) no longer has access to the chat.



Michelle Hatcher (Guest) no longer has access to the chat.



Bouma, Stacey (Guest) no longer has access to the chat.



Stacy Crouch/Berry's Chapel Utility (Guest) no longer has access to the chat.



Wool, Tim (Guest) no longer has access to the chat.



Dorie Bolze- Harpeth Conservancy (Guest) no longer has access to the chat.



Jim Redwine (Guest) no longer has access to the chat.



Sherry Wang (Guest) no longer has access to the chat.



Scott Heflinger (Guest) no longer has access to the chat.



Feingold, Amy (Guest) no longer has access to the chat.



Chelsea Bowling (Guest) no longer has access to the chat.



York, Catherine (Guest) no longer has access to the chat.



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Paul Davis (Guest) no longer has access to the chat.



Fernandez, Glenn (Guest) no longer has access to the chat.



Mekayle Houghton (Guest) no longer has access to the chat.



Jed Grubbs (Guest) no longer has access to the chat.



Mike Cramer (Guest) no longer has access to the chat.



Meeting ended 2h 6m 10:56 AM