

Meeting Minutes
Tuesday, September 29, 2020
Water Quality Management Planning Regulation Amendment
Regulatory Advisory Panel (RAP)
Electronic-only Meeting on GoToWebinar

Members Present: Jamison Brunkow, Tim Castillo, Allison Dienes, James Grandstaff, Ted Henifin, Grace LeRose, Scott Morris, Theresa O'Quinn, Andrew Parker, Chris Pomeroy, Ben Shoemaker, Dickie Thompson, Pat Calvert, and Joe Wood.

Members Absent: Timothy Mitchell, and Frank Harksen.

Other Attendees: Steven Herzog (attending for Frank Harksen), Melanie Davenport, Drew Hammond, Jutta Schneider, John Kennedy, Allan Brockenbrough, Tish Robertson, Gary Graham, Alison Thompson, Clifton Bell, Gopal Bhatt, Patrick Bradley, Robert Burgholzer, Erica Duncan, Patrick Fanning, KC Filippino, Steve Herzog, Lawrence Heyd, Lawrence Hoffman, Gabriel Irigaray, Anna Killius, Adrienne Kotula, Curt Linderman, Lewis Linker, Amanda Marsh, Jeff McBride, Jim Pletl, Erin Reilly, Peggy Sanner, Jian Shen, Kendra, Sveum, Gary Williams.

The meeting convened at 9:13 a.m. and adjourned at 11:23 a.m.

1. **Introductions and Meeting Logistics** [Allan Brockenbrough, DEQ]. Mr. Brockenbrough checked in the RAP members and other on-line attendees present for the electronic meeting and introduced the staff members physically present for the meeting in the DEQ training room. Mr. Brockenbrough presented the final Agenda (Attachment 1) and reviewed how the meeting would proceed.
2. **Industrial Wasteload Allocations** [Allan Brockenbrough, DEQ]. Mr. Brockenbrough reviewed both the specific and broader authorities for developing the regulation. Using the specific authority alone, using the industrial wasteload allocations for closed, soon-to-be-closed, and never-built facilities, sufficient wasteload allocations can be obtained to meet the regulatory requirements. Mr. Brockenbrough also reviewed a change to the proposed Dominion-Chesterfield footnote in the proposed regulation. (See the recording for details of the ensuing discussions and questions.)
3. **Municipal Floating Wasteload Allocations (WLAs)** [Allan Brockenbrough, DEQ]. Mr. Brockenbrough raised the possibility of changing the applicability of the Floating WLAs to facilities ≥ 5 MGD above the fall line and ≥ 3 MGD below the fall line, which then picks up three additional facilities. He also proposed changing the basis for the Hopewell TP WLA from 0.7 mg/l to 0.5 mg/l. He proposed a number of changes to footnotes in 9VAC25-720 including some facilities that had been forgotten in the previous presentation to the RAP on August 25, 2020 and opened the proposals for discussion. (See the recording for details of the ensuing discussions and questions.)
4. **James River Chlorophyll-a** [John Kennedy and Dr. Tish Robertson, DEQ]. Mr. Kennedy and Dr. Robertson presented the latest results from a series of 8 point source nutrient reduction scenarios, which focused on geographic application of total phosphorus (TP) controls and two additional discharge concentrations:
 - Isolating above-the-fall-line and tidal fresh dischargers.

- Two additional intermediate TP levels (0.25 and 0.28 mg/l) to assess effects of slightly less stringent TP reductions (instead of 0.20 mg/l).

Prior to the meeting, the RAP received Attachments 2 and 3, the presentation slides and chlorophyll concentration data (water quality model output), that was used to assess criteria attainment. Ms. Andrea Wortzel had submitted questions to Mr. Kenedy since the last meeting. The answers to those questions were provided to the RAP (Attachment 4). These scenarios were developed to further test the chlorophyll response to TP reductions that appear to be driving criteria attainment in the James tidal fresh region. Results from all 8 scenarios were displayed in a table showing the percentage of attainment or non-attainment, with two scenarios meeting both the geometric seasonal mean and short duration summer criteria:

- Scenario 3B: Tests sensitivity to stringent TP reductions in the Upper Estuary (TF) only; results could be used to assess effects of TP reductions (e.g., TP = 0.2 mg/l) isolating Tidal Fresh facilities (modified VAMWA B+).
- Scenario 3C: Tests sensitivity to TP reductions only basin-wide, results could be used to assess effects of slightly less stringent TP reductions (to 0.25 mg/l instead of 0.20 mg/l) (modified VAMWA B+).
- It was noted that while both scenarios met the criteria, the attainment percentage was marginal (<0.1%) in the upper portion of the James River Tidal Fresh Lower section under both scenarios.

Members of the RAP requested that additional model scenarios be run, to further hone in on the appropriate TP concentration to use for setting waste load allocations and whether or not seasonal application of controls could achieve the criteria. DEQ staff will develop another series of scenarios, further revising Scenarios 3B and 3C, to test if attainment can be achieved with TP reduction over just the summer growing season (extended from May into April and then March), focused on TP loads coming from the above-fall line (AFL) and tidal fresh region (TF) dischargers. In addition, another intermediary TP concentration (0.225 mg/l) will be used, replacing either 0.2 or 0.25 mg/l. The lower estuary inputs from the HRSD facilities will be held at the 2017 Watershed General Permit loads in all scenarios. Every effort will be made by the EPA-CBPO modeling team and Dr. Shen/VIMS to complete these model runs and have DEQ make the attainment assessment before the next RPAP meeting on October 15, 2020. (See the recording for details of this discussion.)

5. **Next Steps** [Allan Brockenbrough. DEQ]. Mr. Brockenbrough will make a few more tweaks to the to the regulation for the floating WLAs, consider a “bridge” to accommodate the HRSD SWIFT upgrade schedule, and will get some input from VAMWA for additional modeling. The next meeting will be on the morning of October 15th.

A [recording of the meeting](#) is available for review on-line.

Attachments:

1. Final Meeting 8 Agenda.
2. James River TP Reduction Scenarios by Region.
3. Alternatives Analysis 8-24-20.
4. John Kennedy Answers to Andrea Wortzel Questions

Attachment 1

9VAC25-720

Water Quality Management Planning Regulation
Regulatory Advisory Panel (RAP) Meeting No. 8

Agenda

Meeting No. 8 – September 29, 2020, 9:00 a.m.

Meeting Logistics

Introductions

James River chlorophyll-a

Industrial Wasteload Allocations

Municipal Floating Wasteload Allocations

Next Steps

Attachment 2

James River TP Reduction Scenarios by Region

This file is too large to fit in the Minutes.
Please contact the following person for a copy of the file:

Gary Graham, DEQ Regulatory Analyst
gary.graham@deq.virginia.gov
(804) 698-4103

Attachment 3

Modified Chlorophyll a Scenarios Spreadsheet 9-24-20

This file is too large and too complex to fit in the Minutes.
Please contact the following person for a copy of the file:

Gary Graham, DEQ Regulatory Analyst
gary.graham@deq.virginia.gov
(804) 698-4103

Attachment 4

John Kennedy Answers to Andrea Wortzel Questions

From: Graham, Gary

Sent: Friday, September 25, 2020 7:56 AM

To: LeRose, Grace A. - DPU; Fanning, Patrick Joseph; Theresa O'Quinn; Allison Deines; Ashley Tatge; Tim Castillo; Wendy Eikenberry; Morris, Scott; McBride, Jeffrey; Benjamin Shoemaker; Cheryl St. Amant; Frank Harksen; Herzog, Steven P.; Dickie Thompson; Jerry Byerly; Mitchell, Timothy Greg Poff; Grandstaff, James; Duncan, Erica; Ted Henifin; Pletl, Jim; Chris Pomeroy; Parker, Andrew; Andrea Wortzel; Joseph Wood; Peggy Sanner; Jameson Brunkow; Anna Killius; Pat Calvert - VCN; Phillip Musegaas.

Cc: Brockenbrough Allan; Alison Thompson; Andrew Hammond; Austen Stevens; John Kennedy; Linker, Lewis; Davenport Melanie; Jian Shen; Tish Robertson; Robert Burgholzer.

Subject: RE: Nutrient RAP: Question for John Kennedy

RAP Members;

John Kennedy asked me to distribute his response to a question by Andrea Wortzel:

To: WQMP RAP Members

Please see the information below from our Office of Water Supply staff, in response to this question posed by **Andrea Wortzel**, the alternate RAP representative for VMA:

I attended a presentation put on by the VWP program, and they shared some modeling work they had done for some different climate change scenarios. Their scenarios included both wetter and drier events. Is the agency using the same climate change scenarios across the regulatory programs, or are the scenarios used by the Bay program different than those used by the VWP program? I know that VIMS is involved in the modeling of both.

DEQ-OWS Response:

- OWS based our simulations of climate change impacts on the scenarios presented in the "CBP 2019 Climate Change Documentation" (CBP2019).
 - The Chesapeake Bay Program (CBP) evaluated 31 climate change models based on the RCP 4.5 (see **NOTE** below) emissions scenario.
 - Four ensemble scenarios were created based on percentiles of temperature and precipitation responses.
 - The CBP used the 50th% (median) scenario to analyze changes to flow, nutrients and sediment responses in section "4.8.4 Changes for the Major Basins" (p. 101).
 - CBP developed the 10th% and 90th% to "define the range of uncertainty in projected future", presented in section "4.8.6 Uncertainty Quantification" (CBP2019, p. 105).
- OWS uses the 10th, 50th, and 90th percentile scenarios to evaluate the potential for cumulative impacts from changing climate and increasing demands on water supply and other beneficial uses.

- The results from analysis of these scenarios demonstrated a range of stream flow conditions, with the 10th % being "dry", the 50th % "median", and the 90th % "wet".
- Water supply systems are particularly sensitive to short duration critical drought conditions. The 10th% (dry) is therefore particularly important in evaluating the potential for what such critical drought conditions may look like in the future.
- **NOTE:** The IPCC has adopted the term "Representative Concentration Pathway" (RCP), to represent ranges of potential future global greenhouse gas emissions. RCP 4.5 is near the mid-point on the continuum from RCP 2.6 to RCP 8.5, with RCP 2.6 being the lowest future CO2 concentration, and 8.5 being the highest future CO2 concentration.

John Kennedy

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