Water Quality Standards Advisory Committee (WQSAC)

MEETING SUMMARY

Thursday, July 8, 2021, 1:30 pm – 3:30 pm
WEB ONLY
~~**NH Department of Environmental Services (NHDES)**~~
~~**29 Hazen Drive, Concord, NH**~~
~~**Rooms 112-114**~~

Attendees

Name	Organization
Allan Palmer	RMAC
Andrea LaMoreaux	NH Lakes Association
Ashley Piper	Pennichuck Water
Boyd Smith	NH Water Works Association
Brian Maloy	Monadnock Paper Mills
Cheri Patterson	NHFG
Chris Perkins	Weston and Sampson
Dan Arsenault	EPA R1
Gregg Comstock	NHDES
Heidi Trimarco	CLF
Jen Perez	City of Dover
John LaFebvre	BAE
John Magee	NHFG
John Tuthill	Working on Waste
Jon Ali	NHDES
Kathy Urffer	Connecticut River Conservancy
Ken Edwardson	NHDES
Mary Butow	NHDES
Matt Wood	NHDES
Melisa Paly	Conservation Law Foundation
Melissa Paly	CLF
Mindi Messmer	Senior Consultant
Rick Levey	VTDEC
Sarita Croce	Town of Merrimack
Ted Diers	NHDES

Agenda

Item	~Time	Subject	Lead by
1.	1:30	Introductions	Ken Edwardson
2.	1:35	Legislative Update – Budget	Ted Diers
3.	1:45	EPA Update	Dan Arsenault
4.	1:55	PFAS – Fish Study Update	Ken Edwardson
5.	2:00	Instream Flow Update/Drought Update	Ted Diers
6.	2:10	Toward Triennial Review - HH Criteria – 2015 304(a) & MCLs	Ken Edwardson
7.	2:40	Toward Triennial Review - ALUS Selenium	Ken Edwardson
8.	2:55	Toward Triennial Review - Coastal Fecal Bacteria Issue	Ted Diers
9.	3:05	Toward Triennial Review - Status	Ken Edwardson
10.	3:10	2020/2022 Assessment cycles	Ken Edwardson
11.	3:20	Other Business • The next two regularly scheduled WQSAC meetings are on 10/14/2021 and 1/13/2022. • Other	Chair

List of Meeting Documents for WQSAC meeting:

1. na

Note: This meeting was only offered as a webinar via MS Teams paired with a dial-in number.

For the companion slides to these notes see the slides in the NHDES document library.

1) Introductions

Although we could see most names in participant list, a roll call was done to let everyone know who was who and their affiliation.

2) Legislative / Budget Update - Ted Diers

(Slide 4)

The budget is expected to be signed by the Governor soon. NHDES maintained what we presented in original budget. $50 Million available for water related projects from the American Rescue Plan Act which will fund some new staff to help manage those dollars. There is possibly $100 million in additional funding coming. NHDES had $500 million worth of projects requested in pre-applications for State Revolving Loan funds.

Bill (SB131) to create voluntary municipal winter maintenance certification program which mirrors the Green Snow-Pro process for private contractors. The bill has passed and should be signed shortly. We will need to write administrative rules regarding how we issue certifications. There will be a session at Salt Symposium for those who want to help write rules. The other focus of the Salt Symposium will be on the use of brine.

Senate Bill 146 had a number of parts, one of which established the coastal program in state statute. New Hampshire has had a program operating for 30-years authorized by federal law. This bill authorizes it under state law. Paul Susca asked why this bill was brought forward. Ted responded, there were questions regarding the federal consistency particularly for energy siting and possible holes in Authority. It also provides a clearer home for grants and appropriations in budgeting.

SB146 also included changes to the fecal coliform standard for tidal waters which will be discussed later in the context of the triennial review.

3) EPA Updates - Dan Arsenault

(Slide 5)

Dan gave the following update;

- Harmful algal bloom implementation document to be finalized this July covering microcystin and cylindrospermopsin.
- Aluminum implementation guidance to be out for public comment end of this summer for the Aluminum criteria that came out in 2018. In general, the new criteria are less stringent and dependent on other variables.
- New chloride/sulfate criteria are expected to be out for public comment this fall.
- Selenium implementation guidance to be out for public comment the end of this summer for the Selenium criteria that came out in 2016.

There were no questions.

4) PFAS – Fish Study Update – Ken Edwardson

(Slide 6)
Fortunately, NHDES asked for the portions of the fish not used in analysis to be stored for transport back to NHDES. At this time, fish have been shipped to a second lab that we hope will achieve lower and more consistent detection limits (DL). The original lab was not achieving low enough DLs and the DLs varied making any cross-lake comparison troublesome. New data from the second lab is expected in a couple of weeks. A report will then be prepared.

Rick from Vermont DEC asked for the name of the lab that NHDES originally submitted the fish tissue to and if there were any issues with fish being shipped back and forth frozen? Ken replied that Eurofins was the initial lab and the fish are now with SGS AYXS. Regarding storage, it is Ken's understanding that fish can be stored up to a year in deep freeze without affecting results.

Rick said Vermont just got a contract to do fish tissue analyses and has a goal to test 10 sites each year. He is not sure if they will do analyze single fish or composite fish analysis. They do plan paired PFAS in water column and fish tissue. They will be targeting the Lake Memphremagog watershed this year. He also noted that EPA is doing the lake probabilistic assessment next year and 50 random sites next year for state intensification. This seems like a good opportunity to get a probabilistic assessment on PFAS. Vermont currently has no plans to sample for PFAS in sediment.

5) Instream Flow Update/Drought Update – Ted Diers

(Slides 7-9)
This is the second dry summer in a row. There are water management plans (WMPS) in place for the Lamprey and Souhegan Rivers. In accordance with the WMP, warnings have been issued on the Lamprey River to begin implementing water conservation. Some of this occurred in spring when we don't really have management protocols. A few days ago we were close to making a release from Pawtuckaway Lake to the Lamprey River but held off due to the coming rain which may result in 3-inches in the next 48 hours.

The Cold River will soon be releasing protected instream flow (PISF) numbers in next few months. Also finalizing field work to develop PISF numbers for Warner River. Gomez and Sullivan did both rivers. The Ashuelot River will begin being studied this fall (Normandeau Assoc.).

Despite recent rain our groundwater reserves are still low, showing that droughts can compound on each other when they last this long. In terms of river flows, it's worse in the North Country and the rain coming in the next few days will be lighter there.

There were no questions.

6) Toward Triennial Review - HH Criteria – 2015 304(a) & MCLs – Ken Edwardson

(Slides 10-31)

Ken started with what drove the changes to the final criteria in EPA's 2015 304(a) human health criteria (HHC) updates. While there were new studies incorporated for the 94 pollutants, much of the changes

were driven by the updates to the base assumptions. The detailed discussion of the 94 pollutants started with a no change grouping as the Env-Wq 1700 criteria updates, all increases, were part of the last triennial review covering 26 – Water & Fish Consumption and 24 – Fish Consumption criteria. The next group was another no change group as the Env-Wq 1700 criteria are based on pre-existing/unchanged organoleptic thresholds which are more stringent for 7 – Water & Fish Consumption and 10 – Fish Consumption criteria. The first change group covered criteria that are entirely new to EPA's 304(a) values covering 1 – Water & Fish Consumption and 4 – Fish Consumption criteria. The largest grouping covered 304(a) values that decreased for 6 – Water & Fish Consumption and 54-Fish Consumption criteria

John McGee commented that 2,4 D is used to control invasive plants and asked if NHDES was planning on testing fish tissue once there is a HHC for it? Ken responded that the values shown are for water column not fish tissue so they are not directly applicable. You could use equations to back calculate to theoretical acceptable fish tissue concentration but the criteria are based on water concentration. Amy Smagula, NHDES Exotics program manager, may have some water column data. Ted said the department does not have a plan or money to conduct comprehensive fish tissue sampling, but we wish we did.

John Tuttle asked about additional resources links in the slides regarding the 2015 updates. Ken replied that they will be in the pdf of the slide deck and published to the WQSAC in roughly a week. While Ken was talking, Matt put the links in the chat.

Dan A. – In the chart of fish consumption and water consumption, the red bars are the 2015 304(a). If there is a more stringent MCL what would govern? Ken replied that the MCL, if more stringent, would apply within 20 miles upstream of a public water supply (PWS) intake. Just the future state-wide values are shown.

Ken asked Dan that since Massachusetts is going through the Fish and Wildlife Service (FWS) consultation process, could EPA provide us with any guidance on pollutants identified by FWS as a concern, to help with our triennial review approval. Dan A said they do not consult with FWS on HHC; they only consult on aquatic life use criteria.

The presentation then moved onto the updates for the MCLs as they are brought into Env-Wq 1700 with a refresher on Note l regarding locations within 20 miles upstream of water supply surface water intakes. Ken noted that while much of the base information used is the same, the key difference between 304(a) HHC and MCLs is that HHC are for lifetime exposure while MCLs consider effects on sensitive populations (i.e., children, etc.). Ken then stepped through the MCL categories and how they would or would not be brought into Env-Wq 1700;

- Radionucleides,
- Average annual radionuclides,
- Inorganic chemicals,
- Volatile Organic Chemicals,
- Synthetic Organic Chemicals,
- Disinfection Byproducts (should they be included? Chat with drinking water some more),
- Maximum Residual Disinfection Levels,

- Certain Treatment Chemicals (MCL expressed as dosage – not sure how they would be included in Env-Wq 1700. PWS just report they did not exceed the dose shown) and
- PFAS

Ted asked if we have map of WWTFs located 20 miles upstream of PWS intakes. Ken said we have not yet made one and would need internal discussion as this may show PWS. As a fall back we could provide list of WWTF within 20 miles of PWS intake. Dan A said their Drinking Water folks may already have that map and will check. Ken noted that while NHDES does not provide a list of all class A water – which is essentially a PWS location list - EPA's list of class A waters from 1991 is outdated and has errors.

7) Toward Triennial Review - ALUS Selenium – Ken Edwardson

(Slides 32-42)

In 2016 EPA released new 304a criteria to protect freshwater aquatic life from elevated selenium concentrations. The main threat to aquatic life from selenium is through the food chain bioaccumulation resulting is larval deformities or mortality and juvenile growth and mortality. Whereas the existing Env-Wq 1700 criteria are strictly for the water column, the new criteria follow hierarchal primacy of eggs/ovaries, then tissue, then monthly average water column concentration and finally an intermittent criteria derived from the monthly average water column concentration criteria and the fraction of the month. Ken showed the concentrations of the new criteria compared to the existing Env-Wq 1700 (slightly lower for the water column) and highlighted that the new criteria are a sum of all of the dissolved fractions (total dissolved). Overall, we do not expect much selenium in our waters due to New Hampshire's' geology and industries. Accordingly, after 5-years of sampling the river trend stations in the early 1990's NHDES stopped sampling as there was only one low level detection in 78 samples. The most common place selenium has been detected is in the Ore Hill Mile Brook where there is an ongoing mine remediation project. Updating the criteria is not expected to have any impact on existing NPDES Remediation General Permits (RGPs) or WWTF permits. Ken then showed draft text expected to be added to as a new, rather lengthy, note "v" to Env-Wq Table 1703-1.

There were no questions.

8) Toward Triennial Review - Coastal Fecal Bacteria Issue – Ted Diers

(Slide 43)

Ted showed the text of Senate Bill 146 part IV which set new fecal coliform standard for shellfish waters that meets EPA guidelines and allows us to use the Colilert by iDEX methods which are easier and quicker. The new criteria are awaiting the Governor's signature. Once signed, NHDES will submit the updated RSA as a water quality standard to EPA for approval. Once approved it can be used in federal permits (eg. NPDES). In the meantime, we are looking to get the methods approved under the National Shellfish Sanitation Program (NSSP) and collecting paired data at the WWTFs. More to come in the future. You can watch our video (Colilert by iDEX) once finalized and posted to the NHDES YouTube channel.

There were no questions.

9) Toward Triennial Review - Status – Ken Edwardson

(Slides 44-45)

Ken showed a slide from the January 2021 meeting with the expected schedule toward the formal triennial review. We are on schedule. Ken also noted a few ways for interested parties to stay up-to-date.

There were no questions.

10) 2020/2022 Assessment cycles – Ken Edwardson

(Slides 46-53)
Ken presented on the why and how NHDES will be providing a combined 2020 and 2022 assessment cycle under the Clean Water Act's (CWA) Sections 305(b) and 303(d). In short, because 2022 is the 50th anniversary of the CWA, EPA would like all States to be up-to-date on their 305(b) and 303(d) both in terms of approvals and in electronic reporting. To that end, after receiving guidance from EPA, NHDES submitted a request for a combined 2020/22 cycle and received approval for a combined cycle from EPA in April 2021. Owing to the timing of the 2020 cycle and limited data collected in 2020 due to COVID19 restrictions, there would be little additional data to make an independent 2022 assessment. Combined with all of the underlying database structural changes happening at NHDES, the combined 2020/22 cycle will allow NHDES to do proper testing, build and test needed enhancements and be ready to get the 2024 assessment completed on schedule. The assessment staff are currently working with EPA to get several cycles uploaded to EPA's Assessment, Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) system which will be focus of CWA outreach for the 50th anniversary through the How's My Waterway website. The How's My Waterway website currently displays New Hampshire's 2012 assessments.

11) Other Business

(Slide 54)

The next two regularly scheduled WQSAC meetings are on 10/14/2021 and 1/13/2022. Maybe we will be in person. As of this week, the conference rooms we have customarily used were still occupied by the National Guard.

There were no questions.

12) Adjourn

The meeting was adjourned at approximately 3:05 pm.

List of Potential Future WQSAC meeting topics: A running list of potential future WQSAC meeting topics and their status (presented in no particular order) is attached.

List of Potential Future WQSAC Meeting Topics and Status Last Updated 01/19/2021		
Topic	**Description**	**Status**
PFOA & PFOS Criteria in Env-Wq 1700	In October, 2016, NH adopted emergency rules to establish an ambient groundwater drinking water standard of 70 ppt for PFOA & PFOS. The emergency rule lasts 180 days. There are currently no criteria for PFOA or PFOS in Env-Wq 1700 for the protection of aquatic life or human health (added by NHDES in Sept 2017)	07/2018 • SB 309 – NHDES to make plan for WQStds. 12/2018 • Toxicologist and health risk assessor hired. 04/11/2019 WQSAC meeting • NHDES – Update 07/25/2019 WQSAC meeting • NHDES – Update Presentation 12/6/2019 WQSAC meeting • NHDES – Draft Report Pres. 12/30/2019 • NHDES – Report submitted to legislature 01/14/2021 WQSAC meeting • NHDES-MCL Brief in context of triennial review 07/08/2021 WQSAC meeting • NHDES-More detailed MCL Brief in context of triennial review
Acute and Chronic Toxicity definitions (Env-Wq 1702.02 and 1702.10)	Should the definitions be more broad? (from July 2016 comments on IP[1] by OOE[2]**Error! Bookmark not defined.**).	
Nuisance species (Env-Wq 1702.33 and 1703.03(c)(1)d)	Should nuisance species be better defined because it's too subjective? Should it include a list of "invasive" plants? How do you determine if a waterbody is degraded by development or if it's due to the natural lake aging process? (from July 2016 comments on IP by NHFG[3])	
Designated Uses (Env-Wq 1702.16 and 1703.01)	How should conflicts between designated uses be resolved (e.g., aquatic life (which depend on plants for habitat) and boating or swimming (which can be adversely impacted by too many plants)? (from July 2016 comments on IP by NHFG).	

[1] IP means Initial Proposal;
[2] OOE means Osprey Owl Environmental, Inc.
[3] NHFG means New Hampshire Fish and Game Department

List of Potential Future WQSAC Meeting Topics and Status Last Updated 01/19/2021		
Topic	**Description**	**Status**
Dissolved Oxygen Criteria (RSA 485-A:8 II, IIa., Env-Wq 1703.07)	In 2017, RSA 485-A:8, II was revised and 485-A:8, IIa., was added that requires DES Commissioner to adopt rules relative to DO water quality standards in a manner that is consistent with EPA guidance on fresh and tidal DO water criteria published pursuant to section 304(a) of the CWA, and other relevant scientific information. (from July 2016 comments on IP by GBMC [4] and others)	In progress. Subcommittee formed and first meeting held 10/13/16. 10/13/2016 • NHDES-Current Crit., History, Other NE States, Issues, Start 02/09/2017 • Pennsylvania Apprch. 04/13/2017 • NHDES-Why D.O. • NHDES-D.O. and temp. • NHF&G-FW Fish/Life stages • NHDES-EPA 1986 FW Crit. Doc. 09/08/2017 • SB127- a) D.O.%Sat. removed, b) NHDES to adopt D.O. criteria 10/12/2017 • EPA-Glen Thursby – Va. Prov. Apprch. 02/2018 – NHDES DO data to EPA 01/11/2018 WQSAC meeting • NHDES-Update. NHFG to generate species info. 04/12/18 WQSAC meeting • NHDES-Update 10/11/2018 • NHDES-Update 12/2018 – Marine Fish Info; NHFG to NHDES to EPA 04/11/2019 • NHDES-Marine Discussion 07/25/2019 WQSAC meeting • NHDES-Status of EPA work update 12/6/2019 • EPA presentation on GBE data and VPA larval recruitment 12/2019 • Legislation in process changing "dissolved oxygen concentration" to "dissolved oxygen" 4/9/2020 • NHDES-Attainment goal level. Conc & %Sat equivalency. Baseline criteria. 01/14/2021 WQSAC meeting • NHDES-Brief in context of triennial review

[4] GBMC means Great Bay Municipal Coalition

List of Potential Future WQSAC Meeting Topics and Status Last Updated 01/19/2021		
Topic	**Description**	**Status**
Tidal nutrient related assessment procedures (Env-Wq 1703.14)	Do the nutrient related assessment procedures for tidal waters for dissolved oxygen, chlorophyll a, water clarity, macrophytes, epiphytes and eelgrass need to be revisited? (from July 2016 comments on IP by GBMC).	
EPA Human Health Criteria methodology and assumptions (Env-Wq 1703.21, Table 1703-1)	Are the risk factors, body weight, drinking water intake rates, bioaccumulation factors used by EPA to develop 304(a) recommended human health criteria appropriate? Should DES adopt the EPA 304(a) recommended criteria for 94 chemicals finalized in 2015? (from July 2016 comments on IP by OOE).	01/14/2021 WQSAC meeting • NHDES-Brief in context of triennial review 07/08/2021 WQSAC meeting • NHDES-Deep dive into the criteria changes due to the 2015 304(a) updates.
Chloride Criteria – (Env-Wq 1703.21, Table 1703-1)	Should chloride criteria be revised? Note - EPA disapproved Missouri's proposal to adopt Iowa's criteria in 2015 (not scientifically defensible and may not be protective based on recent toxicity tests using mussels).	01/14/2021 WQSAC meeting • EPA notes that draft revised 304(a) may be out this year for comment.
Aluminum Criteria – (Env-Wq 1703.21, Table 1703-1)	EPA issued draft freshwater criteria for aluminum in July 2017. The comment period closed 9/26/17. Should DES adopt the revised criteria once it is finalized? (from DES, 9/7/16).	12/2018 - EPA provided V2 01/14/2021 WQSAC meeting • NHDES-Presentation
Assimilative Capacity (Env-Wq 1705.01)	Should the 10% reserve for future growth be maintained? (from July 2016 comments on IP by City of Rochester).	

List of Potential Future WQSAC Meeting Topics and Status Last Updated 01/19/2021		
Topic	**Description**	**Status**
River flows for calculation of permit limits (Env-Wq 1705.02)	Should the 7Q10 river flow be used to calculate nutrient related permit limits or should a seasonal flow be used? (from July 2016 comments on IP by City of Rochester).	In progress. 09/08/2017 • SB127-Nutrient limits based on flow > 7Q10 10/12/2017 • Topic was introduced at WQSAC meeting. 01/11/2018 WQSAC meeting • NHDES-Background • EPA-Permit Calcs • Clifton Bell-Alternatives 04/12/2018 • NHDES-Recap & Applying other States to a NH permit site 10/11/2018 • NHDES-Alternative scenarios 04/11/2019 WQSAC meeting • NHDES-Update 07/25/2019 WQSAC meeting • NHDES-Presentation 01/14/2021 WQSAC meeting • NHDES-Brief in context of triennial review
Bacteria: Seasonal (versus year-round) disinfection of WWTF effluent	Current regulations require year-round disinfection of WWTF effluent. Some other NE states do not require disinfection during the winter months. Should NH WWTFs be allowed to do the same? Would require rule change and likely a statute change.	
Cyanobacteria Toxins 304(a)	In May 2019 EPA published its final microcystin and cylindrospemopsin 304(a) criteria to protect recreational uses of waters.	07/25/2019 WQSAC meeting • NHDES-Presentation 01/14/2021 WQSAC meeting • NHDES-Brief in context of triennial review
Presentation	NHDES Monitoring Strategy	
Presentation	Pollutant Tracking and Accounting Pilot Program (PTAPP) being developed for the coast	
Presentation	Trends of Mercury in Fish Tissue	
Presentation	River Order used in the Shoreland Protection Act	
Variances	Should NHDES add variances to the WQStds per 40CFR131.14?	01/14/2021 WQSAC meeting • NHDES-Presentation