Water Quality Standards Advisory Committee (WQSAC)

MEETING SUMMARY

Thursday, January 14, 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
Bill Schroeder	NH Lakes Association
Boyd Smith	NH Water Works Association
Brian Maloy	Monadnock Paper Mills
Dan Arsenault	EPA R1
Don Kretchmer	DK Water Resource Consultants
Gregg Comstock	NHDES
Gretchen Young	City of Dover
Jim Hagy	EPA -Narragansett
Ken Edwardson	NHDES
Matt Wood	NHDES
Melisa Paly	Conservation Law Foundation
Paul Stacey	Footprints in the Water
Rob Robinson	Manchester EPD
Sarita Croce	Town of Merrimack
Scott Decker	NHFG
Senator James Gray	NH Senate
Sherry Young	Rath, Young and Pignatalli
Stephen Roy	NHDES
Ted Diers	NHDES
Toby Stover	EPA R1
Tracy Wood	NHDES
Walt Henderson	NHDES
Wayne Ives	NHDES

Agenda

Item	~Time	Subject	Lead by
1.	1:30	Introductions	Chair
2.	1:35	New Website	Ken Edwardson
8.	1:40	Quick Note – Environmental Monitoring Database Upgrade	Ken Edwardson
4.	1:45	COVID19 – Data impacts	Ken Edwardson
3.	1:50	Legislative Update – Budget	Ted Diers
5.	1:55	EPA Update	Dan Arsenault
6.	2:05	PFAS – Fish Study Update	Ken Edwardson
9.	2:15	Drought	Ken Edwardson
7.	2:20	Antidegradation – Withdrawals	Ken Edwardson/ Gregg Comstock
10.	2:30	What does 2021 look like for WQStds Triennial review process	Ken Edwardson/ Ted Diers
9.	3:15	Other Business • Discussion of chairs • The next two regularly scheduled WQSAC meetings are on 4/8/2021 and 7/8/2021. • Other	Chair
10.	3:30	Adjourn	Chair

List of Meeting Documents for WQSAC meeting:

1. na

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

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

1) Introductions

As everyone could see the attendee list on the screen, no round-table of introductions was made.

2) New Website - Ken Edwardson

(Slides 4-8)

NHDES has a new website with two distinct search options. The first is for the overall site while the second is specific to documents in the so called, document library under "publications". Currently the WQSAC page has meeting agendas and summaries going back to 2010 and full meeting documents (handouts, slide sets...) just back to 2018. Additional historic content will be put up as time permits. Having to make documents ADA compliant is taking time. If there are historic pieces you need, give Ken a call. Once you've had a chance to explore the new site let us know how you find the new format.
There were no questions.

3) Quick Note – Environmental Monitoring Database Upgrade - Ken Edwardson

(Slides 9-10)

Starting January 14, 2021, the Environmental Monitoring Database (EMD) is down both internally and externally to NHDES as staff are making the final step to convert from the Oracle Forms used since 2002 to a .NET format. During the conversion OneStop data uploads will be down and are expected to be operational by January 31, 2021. As the database (DB) used for the 305(b)/303(d) assessments is in the same schema, we will need to stay out of that DB as well. Expect external queries from the assessment mapper to the assessment DB to be poor to unresponsive. As the conversion work is being done by the same staff that maintains and modifies the EMD there is a long list of desired feature upgrades once the new format is in place Ted noted that this effort is years in the making and he was first informed of this needed effort in 2011.
There were no questions.

4) COVID19 – Data impacts - Ken Edwardson

(Slides 11-13)

COVID19 restrictions limited staff's ability to sample in 2020. Additionally, NHDES had just a small fraction of the interns relied upon in a normal summer to conduct sampling and volunteer assistance. On top of that the State lab had staff restrictions and a refocus on COVID19 efforts so they therefore asked NHDES to limit the number of submitted samples. The outlook for 2021 may be a little better however a combination of COVID19 and budgeting will still restrict intern staffing compared to a typical year. As an example, Ken showed the number of results generated from the Volunteer Lake Assessment Program (VLAP) and the Volunteer River Assessment Program (VRAP) in 2020 versus the 10-year average. VLAP was down by roughly a third and VRAP was down by over half the normal number of samples collected.
There were no questions.

5) Legislative / Budget Update - Ted Diers

(Slides 14-15)

The 2022-23 budget is in last stages of its process and it will be challenging. NHDES did need to cut from 2021 budget. Overall, revenue is down, particularly from the rooms and meals taxes. The Governor's office is to submit their 2022-23 budget to the legislature in February and then House and Senate will work on it, hopefully reaching agreement by June 30, 2021.
As far as the legislative process, hearings have started in a hybrid (live/virtual) format. The Senate is combining bills into omnibus bills with the more controversial bills kept as stand-alone bills. NHDES has not put forth much as far as bills, focusing on only things that are absolutely critical. There are few water quality related bills we know about thus far: municipal voluntary salt cert program and a fecal bacteria bill (discussed later in the meeting).
There were no questions.

6) EPA Updates - Dan Arsenault

(Slides 16-17)
Dan gave an update hitting on the following;

- An EPA Action for the water quality standard 2016 triennial review (often referred to as 2015 by NHDES as it started in 2015) is under review. There are still some questions regarding human health (HH) criteria as well as pesticides (tributyltin (TBT), diazinon, and nonylphenol) for the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS).
- EPA HQ is revisiting the chloride criteria. The current criteria were developed in 1998. Since then, new toxicity and ion interactions data have become available. New criteria may combine chloride and sulfate or they may remain separate. The plan is to have a draft out for comment in 2021.
- PFAS/PFOS – No changes in the plan. Looking to develop HH criteria for 2021/2022.
- Lake nutrient criteria – Public noticed in the summer of 2020. About 70 comments were received and the criteria document has not been finalized. Not sure when it will come out. EPA HQ is working on an implementation technical support document (TSD).

There were no questions.

7) PFAS – Fish Study Update – Ken Edwardson

(Slides 18-23)
In the fall, Weston (contractor) sampled 14 lakes for NHDES. Twelve of the lakes covered the larger lakes of southern New Hampshire (NH) while 2-lakes were considered "reference" based on existing water quality and forested landscape. At each lake, 3-samples were collected from the water column, 1-sediment sample and the fillets of 2-fish species (5 composited per species). Ken covered the water quality parameters evaluated and that covered 36 PFAS compounds. The 2-target fish were upper trophic classes that are commonly caught and were common throughout the state for comparability. In a few lakes, species substitutions were made when the primary targets (largemouth bass and yellow perch) could not be collected. NHDES is waiting on the final report and electronic data for upload to the EMD. Once NHDES has the data we will likely produce a data report and will be working with the NHDES Environmental Health Bureau to conduct a tissue screening level evaluation. Once NHDES gets the Weston report, we should be able to share it (Bill Schroeder asked).

8) Drought – Ken Edwardson

(Slides 24-29)

As we moved into the drought conditions of 2020 leadership wanted a summary of how rivers are doing. While we had a tool that looked at a days' worth (June 15, 2020 was shown) of flow percentiles at every river gage in NH as compared to the last 30 years of that months' flow nothing was in place to summarizes all of the days of 2020 across the whole State in a digestible manner. We generated a tool that compared 37 "minimally regulated" gages in NH across 7-regions to the last 30 years of that days' flow to get a full view of how the States river flow percentile were trending. For the meeting we first looked at 2011 as a "normal" year. In 2011, a cold winter brought most of the States rivers below their daily median flows until a State-wide melt at the beginning of March increased flow everywhere. July/August showed low flow percentiles in parts of the State while other regions were at their daily medians. Comparatively, there was little snowpack in the winter of 2019/20 resulting in minimal spring runoff. There were then several month-long severely to extremely dry periods that impacted the whole State, not just specific region as seen in 2011. The outlook for 2021 is not very good, in part due to the very low snowpack in the State.
There were no questions.

9) Antidegradation - Withdrawals – Ken Edwardson/Gregg Comstock

(Slides 30-38)
Ken's slides thoroughly covered why the Pennichuck East Utility was seeking a water withdrawal from Webster Stream before moving on the antidegradation graphic and how NHDES applied the antidegradation framework to monthly flow percentiles. The Applicant was looking to conduct a "non-significant" withdrawal (<20% remaining assimilative capacity used). While a fixed 75th percentile monthly flow percentile was used in calculating the monthly total assimilative capacity, 3 different lower monthly flow percentiles were applied based on the percent of planned withdrawal compared to those lower monthly flow percentiles. Daily operations are permitted to withdraw based on the daily flow in the stream as compared to the Tier 1 cutoff. To estimate the "natural" flow percentiles by month, NHDES regressed the Webster Stream flows measured from January 29, 2019 to April 28, 2020 against the flows in the Soucook River and then used that regression to generate a 1990-2020 flow dataset for Webster Stream. Based on the Webster Stream flows measured from January 29, 2019 to April 28, 2020, NHDES estimated how much water the Applicant could have withdrawn on a daily and monthly basis which in that time period topped out at 8% of stream flow. A similar set of calculations was recently done for the planned Bellamy River withdrawal by the City of Dover.

Ted added that the idea is that instead of some arbitrary cutoff, this is the next best thing to a full instream flow study because it accounts for existing flow. The graphs really show that more can be taken than first thought while still protecting the biota. The approach allows for more water to be withdrawn but still is protective and can be operated in real time. Additionally, the approach will result in diversity of flows, which is good (natural flow paradigm). Users will need to manage much more regularly on a minimum of a daily basis.
There were no questions.

10) What does 2021 look like for WQStds/Triennial review process - Ken Edwardson/Ted Diers
(Slides 39-45)
Ken showed an overview diagram of the triennial review process from the EPA WQS handbook. While it short, as you get into the process it is quite lengthy. There are 4 district phases; pre-rulemaking, State rulemaking first stage (finalize initial proposal, public comments and hearing, final rule proposal), State rulemaking second stage (Joint Legislative Committee on Rules) and then the Clean Water Act Submittal

– EPA review and approval. Ken showed approximate timeframes assuming everything goes well. The next slides went into the details of the four distinct phases. There are requirements for and multiple opportunities for public input.

As the WQSAC is essentially always in a state of pre-rulemaking, the presentation then turned a series of mini-presentations on the topics NHDES will need to work on to get to the point of the initial proposal in the State rulemaking first stage.
There were no questions.

10a) Human Health Criteria Updates – Ken Edwardson
(Slides 46-47)
Ken outlined the 304(a) guidance changes regarding human health criteria that made while NH was in our last triennial review. In short, EPA updated water quality criteria for 94 chemicals to protect human health. The updates were based on updated exposure inputs of body weight, drinking water consumption rates and fish consumption rates. Rather than the bioconcentration factors that just account for aquatic life uptake of toxics from the water column, EPA relied on bioaccumulation factors with account for aquatic life uptake of toxics from the water column as well as from food and sediment. Finally, EPA applied updated toxicity values, reference dose and cancer slope factors. NHDES will likely propose adopting the 94-human health criteria. Most WWTF don't discharge these so should be fairly benign with regard to impacts.
There were no questions.

10b) Harmful Algae Blooms – Ken Edwardson
(Slides 48-50)
In May 2019, EPA published 304(a) recreational recommended criteria for two toxins produced by cyanobacteria; microcystin (8 ug/L) and cylindrospemopsin (15 ug/L). However, there are limitations to the criteria as there were limitations to how EPA calculated the recommended criteria. EPA only consider direct ingestion of the toxin in water and did not include inhalation or dermal contact. Further, the recommendations are based on just gastrointestinal illness, not on dermal or metal issues. Finally, it is important to note that the criteria cover just two toxins and we know that the species of cyanobacteria seen in NH waters are capable of producing at least 8-toxins. A detailed presentation of the 2019 304(a) recommendations was given at the July 25, 2019 WQSAC meeting. These new 304(a) recreational recommended criteria will need to be addressed in the triennial review.
There were no questions.

10c) Aluminum – Ken Edwardson
(Slides 51-54)
In December 2018, EPA published 304(a) recreational recommended criteria for Aluminum in freshwaters. Whereas the older criteria that currently exists in Env-Wq 1700 are fixed chronic and acute values based on acid soluble aluminum, the new 304(a) guidance is based on total recoverable aluminum and varies based on pH, hardness and dissolved organic carbon. Three methods are available to calculate applicable criteria; an Excel spreadsheet, R code, or a series of lookup tables in the criteria document's appendix. For most purposes, the Excel spreadsheet is the easiest. Ken provided a graphic of the current fixed chronic and acute values based on acid soluble aluminum compared to the range of chronic and acute 2018 304(a) criteria based on

sites that have pH, total hardness, and dissolved organic carbon (DOC) data for input. Generally, the new criteria appear higher, however that is total recoverable aluminum not the acid soluble aluminum fraction so individual results may vary. At this time, NHDES anticipates that we would adopt the 2018 criteria by reference. Site specific data would be preferred (that is we would treat as we do the existing hardness dependent metals) and we will be working to determine protective default values where site specific data does not exist.
There were no questions.

10d) PFAS MCLs into Env-Wq 1700 – Ken Edwardson

(Slides 55-58)
As the MCLs for 4-PFAS chemicals (PFOA, PFOS, PFHxS and PFNA) are now the official drinking water MCLs, they could be adopted into Env-Wq 1700 as the criteria for the Protection of Human Health - Water & Fish Ingestion at all locations 20 miles upstream of drinking water intakes. In the current Env-Wq 1700, there are 17-chemicals that have MCLs that are lower than NH's current Water & Fish Ingestion criteria and in 5-cases, the MCL is lower because a current Water & Fish Ingestion criteria does not exist, as is the case for the 4-PFAS. NHDES could include PFAS in the Env-Wq 1700 MCL table (Env-Wq 1703-2A).
There were no questions.

10e) Variances – Ken Edwardson

(Slides 59-66)
Variances (covered in 40 CFR Part 131.14) have been brought up in passing a few times over the last few years and here we took a deeper dive. A WQS variance is time limited and may be adopted for a permittee(s) or water body/waterbody segment(s), but only applies to the permittee(s) or water body/waterbody segment(s) specified in the WQS variance. As a variance requires a submission to EPA for approval to become part of the State's water quality standards, or disapproval and therefore not part of the State's water quality standards, the Clean Water Act (CWA) does not require enabling language in the State's water quality standards before a variance is submitted for approval or disapproval. That said, the State may want enabling language in the State's water quality standards for full transparency. In operation, the variance says that only something less than the full support of the designated use and criteria is attainable for a limited time period and that only applies to a specific permittee or waterbody impacted. The presentation went on to compare variances to site-specific criteria (the full designated use is protected at some different criteria level) and compliance schedules (written into permits). Finally, we looked at 305(b)/303(d) assessments and total maximum daily load (TMDL) studies, for both the underlying standard, not the variance, is used. Overall, there do not seem to be many instances where going through a whole rulemaking process is worthwhile with the possible exception of 40 CFR Part 131.14(b)(2)(i)(A)(2) which relates to "actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities…". This sub-presentation concluded by stating that in the triennial review NHDES would potentially add the following language, "Variances shall be in accordance with 40 CFR Part 131.14" to provide full transparency.
There were no questions.

10f) Bacteria – Ted Diers

(Slides 67-71)
The current water quality standards statute (RSA 485-A:8) and rule (Env-Wq 1700) say that in tidal waters discharges must meet the National Shellfish Sanitation Program (NSSP) at the end of WWTF pipe. WWTF sampling requirements in their permits are per the EPA approved Colilert method which is easy and all WWTFs can do that onsite quickly. However, the Colilert method is not an NSSP approved method, although there is a letter from FDA saying they are okay with the Colilert method. The NSSP approved method is the "5-Tube decimal test" but only the State DHHS lab can do the "5-Tube decimal test" per the NSSP protocols. This mean that even while just the Colilert is required sampling in a WWTF permit, WWTFs are not technically meeting the current water quality standards as those require meeting the NSSP rules. The quick results of the Colilert are helpful, especially if near shellfish area and if all WWTF had to do the "5-Tube decimal test" there would be delays due to sample transport and the DHHS lab would not be able to keep up with the workload. NHDES is working diligently to fix statute to allow for flexibility. Ted went into the possible options to remedy the dilemma which includes new language for NH's water quality standards, providing an exemption for seacoast WWTFs or getting NSSP to approve Colilert. Dan noted that some have been trying for 15 years to get NSSP to approve Colilert and as groundwork has been laid, it may be worth exploring. Gretchen Young asked if this would affect illicit discharge detection (IDDE) work for the for NPDES MS4 permit. **Ted said we will check [**Appendix G of the 2017 permit to requires approved EPA test methods under 40 CFR Part 136 in instances when discharging to an impaired water]**.** Dan Arsenault noted that 40 CFR 136 (NPDES test procedures) only specifies one method, whereas each one of the methods in NSSP method has maximum bacteria limit associated.

10g) Dissolved Oxygen – Ken Edwardson/Ted Diers

(Slides 72-76)
Ken's presentation started with a refresher on the dissolved oxygen (DO) topics and presentations that have been given over the last few years. While the DO discussions started broadly, they quickly focused in on the marine environment and discussions on the percent saturation criteria. Much ground has been covered in those discussions at they were summarized as the following major considerations that will need to be made if NH were to modify its marine dissolved oxygen criteria.

- All 304(a) guidance and available science
- Criteria that provide a descriptive level of protection consistent with NH designated uses
- Criteria that provide a descriptive level of protection consistent with existing NH DO WQStds
- Criteria that lets aquatic life do more than survive
- Criteria that addresses avoidance
- Other states/regions
    - Chesapeake approach
    - Delaware process
    - Massachusetts process and possible outcomes
- State Species of Concern (Alewife, Am. Eel, Herring, Shad*, Smelt*)
- Endangered and Threatened species
    - Sturgeon
- Essence of NMFS ESA discussions
- Existing data on dissolved oxygen condition
- Reference condition approaches
- Weighting the impacts of science gaps

        - Missing DO requirements for NH species and life stages
        - Implications of VP approach being all lab studies
        - Problems with lab studies from VP approach – pH adjustment inconsistent with the natural world
        - Uncertainty in the VP approach
        - ESA Species life stage DO requirement gaps
        - Relationships in DO needs between life stages
    - Assessment Methods and Compliance. [As it stands, we have places where DO drops below 5 ppm for brief periods but don't call them impaired.]
    - Other

Ted continued that this is way more complicated than what we envisioned at the start. Saturation discussions emphasized the complexity. The downside is that once we propose something else, if EPA doesn't approve, they will have to promulgate and EPA will also need to consider this extensive set of considerations. We have to weigh the risks before we really dive into changing the criteria.

Sherry Young what is the next step. Ted – We will begin drafting what this will look like over the next year. This will be part of the triennial review so people will have opportunities to comment on any part of our water quality standards.

10h) Flows for nutrient permitting – Ken Edwardson/Ted Diers

(Slides 77-82)
Ken started with a refresher on the flows for nutrient permitting topics and presentations that have been given over the last few years. Discussion started with presentations by EPA on permit calculation methods and alternative approaches given by Clifton Bell. The next series of presentations were given by NHDES and covered what NH's phosphorus conditions look like over a range of flows and as compared to the region and nation, flow statistics in NH waters, current permitted loads, what other permitting approaches might look like in NH waters and discussion of a possible framework for permit guidance. Those discussions were summarized as the following major considerations that will need to be addressed as NH moves forward with this flows for nutrient permitting topic.

- Nationally – Ecoregional TP 25th percentile ranges from 10-128 ug/L.
    - Most of NH is in the 10 ug/L ecoregion.
    - SE NH is in the 31 ug/L ecoregion.
- From more detailed NH data, river TP medians 6 ug/L to 25 ug/L correlating well with population.
- ~5% of NH river miles are downstream of a WWTF discharge.
- In river systems without WWTF effluent TP concentrations do not increase as flows decrease (median 12 ug/L).
- TP is significantly different in rivers that have nutrient related impairments (median = 19 ug/L) than rivers without nutrient related impairments (12 ug/L).
- Nutrient related issues do not "suddenly" occur at 7Q10 flow but rather develop over time.
- EPA calculates discharge reasonable potential based on design flow, 95th percentile or maximum effluent TP, and median upstream TP.
- EPA using the 7Q10 flow and an instream TP target of 100 ug/L in NH.
- EPA - If flows higher than 7Q10 are used, then downstream target is likely to be lower than 100 ug /L.

- EPA - Facilities with existing TP permit limits cannot have less stringent limits due to federal "anti-backsliding" regulations.
- NPDES is a preventative program.
- Permit limits are not equal to nutrient criteria.
- TP Targets around the country are in keeping with natural ecoregional concentrations.
- Non-7Q10 based NE Neighbor thresholds range from 9 – 33 ug/L at Summer Low Median Monthly Flow to 14Q10.
- The ratio of August median flow to 7Q10 is roughly 4:1 but quite variable.
- Flow is less than or equal to the August median flow ~ 17% of the year (62-days) and ~ 0.5% (2-days) for the 7Q10 flow.
- August TP downstream of the 23 WWTFs that have permitted loads is predicted to result in a median of 29 ug/L (range 15-48 ug/L) at August median flows (assumes background of 13 ug/L).
- NHDES has not made a final decision regarding target TPs. Ambient data and literature indicates range of ~ 9 ug/L to ~ 50 ug/L
- A tiered framework may be possible.
- Different targets/methodologies are an option now under the WQStds, without a new framework. [Might be simple mass balance at one site and more detailed monitoring/modeling at others. No need to change standards now for framework. Current WQS also allow for site specific criteria.

Ted continued that NHDES needs to consider the best way forward. Overall the analysis shows that the 7Q10 and 100 ug/L approach seems to work pretty well. If other analyses are done, some WWTFs may get more stringent effluent limits. We will have more conversations with WQSAC and legislature. It is starting to get clearer.

Sherry Young what is the next step, same as DO? Ted – Yes same steps as for DO. Right now some permittees are getting different numbers per EPA than what the State would approve. We will begin drafting what this will look like over the next year. This will be part of the triennial review so people will have opportunities to comment.

Paul Stacey asked what the New England neighbor nutrient thresholds were related to? Ken responded that it was a mix of response variables but he did not recall the details off the top of his head but that information was in the 10/11/2018 presentation.

10i) Other – Ken Edwardson

(Slides 83-84)
Ken touched on our understanding that EPA has identified a few minor deficiencies identified during their review of the 2015 water quality standards submittal.
Ted added that we expect EPAs comments soon.

10-Summary) Ted Diers

Ted summarized the triennial review section of the meeting reiterating that this is a big lift and there are a lot of moving parts that are going to be challenging. We are going to do our best to move this forward.

11) Other Business

(Slide 85)

Discussion of chairs

Chair term expired in 2019. Alternative chair expired in 2020. As a non-formal body, do we even need chairs? Please send us your opinions on that.

> Oops: Looking back at the April 9, 2020 meeting notes we now see that the topic was previously covered. From those notes;
>
> > *"Based on a recent review of the Wetlands process the WQSAC is currently in fairly safe waters. When the WQSAC was formed years ago it had formal members. It has changed over time in part based on AGO comments and now anyone can come and participate, but we retained the chairs to help facilitate. The question going forward is do we still need chairs from outside NHDES and who nominates them if we have no formal members?*
> >
> > *Consensus seems to be that Ted and Ken do most of the leading so the WQSAC doesn't really need a chair. If anyone feels particular strongly to maintain a chair, please contact Ted and Ken."*
>
> Since that time, no additional comments were received.

The next two regularly scheduled WQSAC meetings are on 4/8/2021 and 7/8/2021.

These next meetings will probably be focused on the with the triennial review process to get to an initial proposal. We will use those dates in that context to go over drafts and take comments.

Other

None.

12) Adjourn

Ted – Thank you and follow up with emails or calls.

The meeting was adjourned at approximately 3:35 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
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
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