STATE OF CONNECTICUT
INTEGRATED WATER QUALITY REPORT

Summary of Public Comments and Responses to Comments

July 2019

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street
Hartford, CT 06106-5127
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Katie S. Dykes, Commissioner

BACKGROUND

The Connecticut Department of Energy and Environmental Protection (CT DEEP) published a draft version of the *State of Connecticut Integrated Water Quality Report ("Report")* on May 24, 2019 and accepted comments until June 26, 2019. The *Report* was prepared by DEEP to fulfill requirements of the Federal Clean Water Act under Sections 305(b) and 303(d). The *Report* was posted on the CT DEEP website at https://www.ct.gov/deep/iwqr for view and download by interested parties. Paper copies were also made available on request. Letters noticing the availability of these documents were sent to interested parties including: citizens; conservation organizations; universities; environmental consulting firms; water supply companies; tribal nations; and federal, state, and local officials. Notices were sent via email when possible and printed mailings if electronic communication was not possible with the party. An informational meeting for the general public was held at DEEP Headquarters on June 7, 2019. The notice of the availability of the *Report* as well as the notice of the informational meeting was published in the, Hartford Courant, New Haven Register, Norwich Bulletin, The Day (New London), and Waterbury Republican American,.

During the draft review process, formatting, typographical and grammatical errors were corrected in the *Report* as needed. In this document, comments received during the public process period are summarized with the responses by CT DEEP immediately following each comment. The complete text of these comments is attached as Appendix A.

PUBLIC COMMENTS

Jay Kulowiec, PE Industrial Water/Wastewater Consultancy, LLC

Comment #1: The DRAFT report should be amended with respect to Appendix B-2, specifically the 2005 TMDL Report for the Upper Naugatuck River (Whole Effluent Toxicity WLAs). Updating the WLAs with current discharge flows, updating with newer river chemistry and NPDES discharge chemistry using data collected since the 2005 TMDL. Fourteen (14) years have gone by, a revisiting of the conditions in the river is more than warranted.

Response: The Upper Naugatuck TMDL was established in 2005. CTDEEP has reassessed this section of Naugatuck River every 2 years since development of the TMDL and have evaluated biological data to assess the aquatic life most recently for this reporting cycle., The water quality in the waterbody remains *not supporting* for aquatic life just as was found in the TMDL (see Appendix A-1, 2018 IWQR).

CT DEEP has an approach to prioritizing the development or revision of action plans (which are restoration and protection plans including TMDLs) which is available as the Integrated Water Resource Management (IWRM) on CT DEEP's website: https://www.ct.gov/deep/iwrm. At this time updating the Upper Naugatuck TMDL has not been selected for revision; however, this waterbody may be considered for future action as the IWRM priorities are reviewed this fall. We will take your request to update the TMDL into account as part of that process. In the meantime, the existing TMDL to limit pollution to the waterbody will remain in effect which can be viewed at: www.ct.gov/deep/lib/deep/water/tmdl/tmdl_final/naugtmdl.pdf . No changes were made to the final document.

Judith C. Rondeau, CPESC Assistant Director Niantic River Watershed Coordinator, Coordinator, SE CT Stormwater Collaborative Eastern CT Conservation District

Comment #2: I am commenting on the inclusion of Backwater Brook (CT3300-05_01) in the draft 2018 Integrated Water Quality Report as not supporting for recreation due to the presence of fecal bacteria. It is my belief that the *E. coli* levels documented in Duhamel Pond in 2016 were the result of poor management of domestic waterfowl waste by a resident who lived along the shore of the pond. The homeowner has since moved away, taking the waterfowl with them. (Results of monitoring for E. coli and Total coliform were included with this comment.)

Response: Thank you for sharing your information with the department. After reviewing the submitted data, CT DEEP has changed the assessment of Backwater Brook (CT3300-05_01) from Not Supporting to Insufficient Information for Recreational Use Support in the 2018 Integrated Water Quality Report. CT DEEP will evaluate any quality assured data for the brook and assess per guidance in the CALM in future reporting cycles. The appropriate text and tables were revised to reflect this change in the final document.

Marla Butts, Thompson Wetlands Agent, Town of Thompson, CT

<u>Comment #3:</u> In addition to the waterfowl waste problem mentioned above, the waterfowl problem was exacerbated by another resident constructing a debris pier into Phelps Pond (aka Duhamels Pond) on Town owned property and feeding the waterfowl. This debris pier has since been removed and there is currently no evidence of waterfowl being fed at the Town-owned property abutting Phelps Pond. In my opinion, the high *E. coli* was caused by wildlife influenced by human involvement, that involvement has ceased and natural conditions have returned to acceptable conditions. I will be recommending the Town again sample Backwater Brook during its MS4 outfall sampling as part of its anticipated contract with the Eastern Connecticut Conservation District to verify conditions.

<u>Response:</u> Please see previous response. The appropriate text and tables were revised to reflect this change in the final document.

Alicea Charamut, Executive Director Rivers Alliance of Connecticut

<u>Comment #4:</u> Increases in river segments that fully support both aquatic life and recreation have leveled off over the past four years. The leveling off of segments fully supporting for recreation is particularly interesting considering the increase in approved TMDLs thanks to a statewide TMDL for bacteria in 2012. The leveling off of the downward trend in segments that are not supporting of Aquatic Life Use Support is particularly concerning when taking into consideration *Figure 1-3 CT DEEP Monitoring Biological Conditions Gradient Value Results Map* which shows a majority of our macroinvertebrate and fish populations under moderate to major stress. Could this leveling off be an inflection point to an upward trend?

<u>Response:</u> Trends are difficult to determine using the assessments for the IWQR. There are a number of variables that change with each report, such as number of segments and the number of valid data points available for each segment, which complicate any trend analysis.

<u>Comment #5:</u> CT DEEP is still in the process of reviewing water quality standards. Perhaps it's time to prioritize the update of temperature criteria.

<u>Response:</u> We have received a similar comment about temperature criteria from the Connecticut River Conservancy as part of the Triennial Review on Connecticut's Water Quality Standards. The Triennial Review process is a more appropriate venue in which to address this comment. CT DEEP has not completed the Triennial Review or made any determinations for standards related to temperature at this time. No changes were made to the final document.

<u>Comment #6:</u> The delisting of CT 4206-00_01 Broad Brook (East Windsor)-01 for Escherichia coli is concerning. Several years of monitoring by the Scantic River Watershed

Association and the University of St. Joseph (Connecticutriver.us) indicate that high values for E coli are still being found in Broad Brook. We would like to see the data supporting this delisting.

Response: Bacteria levels in surface waterbodies are highly variable at any given time and place which may explain the differences in results. CT DEEP has emailed the data to you as requested for your evaluation. We did not consider the data from the Scantic River Watershed Association and the University of S. Joseph because it was not provided to CT DEEP in time for the 2018 assessments. For future assessments, we will include the Scantic River Watershed Association and the University of S. Joseph in our outreach for available data. CT DEEP will gladly incorporate quality assured data into our assessment process. No changes were made to the final document.

Comment #7: ***Table 2-1*****. Designated Use support summaries for rivers, lakes and estuaries – The title of the first column needs to be changed from USE SUPPORT 2016 to USE SUPPORT 2018.**

Response: Thank you for your comment which indicated a typographical error in the draft report. The table in the final document has been revised to reflect the change to 2018.

Comment #8: ***Table 3-2. 4c*** **- Waterbodies impaired for one or more designated uses which is the result of pollution but is not caused by a pollutant. Please find another way to describe this category as the sentence is too confusing.**

Response: The table title was not developed by CT DEEP rather it is defined by USEPA guidance on Integrated Reporting for Section 305b and 303d. Table 3-2 is a compilation of CT impaired waterbodies that are designated to EPA Category 4c and the title reflects the EPA label for Category 4c. This table is intended for causes of impaired water quality that are often physical impacts to CT waters. The category is broad for nonpollutant causes but examples would include reduced flow, channelized structures, and nuisance aquatic plants. More information on Category 4c can be found on pp. 47-48 of the IWQR. No changes were made to the final documents.

Katherine Fiedler, Esq. Legal Fellow Connecticut Fund for the Environment, Inc. Save the Sound

Comment #9: Save the Sound sampling results from 2014-2018 Horseneck Brook-01 (CT7409-00_0 l) has elevated levels of Enterococci (location information and data included). Horseneck Brook-01 is currently listed as unassessed on the Connecticut 2018 305b Assessment Results.

Response: After reviewing CFE/STS data, CTDEEP will update the assessments for Horseneck Brook from Unassessed to Insufficient Information. This designation illustrates that we have received and reviewed data relevant to the segments, but that the data are not sufficient to make a full designated use support determination. In these cases, the data were not the indicator

specified in the Connecticut Water Quality Standards Regulations (i.e. *E. coli*). For future report cycles, CT DEEP will gladly evaluate quality assured data provided the appropriate indicator bacteria is available for the applicable designated use. The appropriate text and tables were revised to reflect this change in the final document.

Comment #10: Pemberwick Creek is currently not listed in the Connecticut 2018 305b Assessment Results. Save the Sound sampling results from 2014-2018 demonstrate that water flowing from Pemberwick Creek into the Byram River in the vicinity of the northern extent of Byram River-01 (CT7411-00_0l) has elevated levels of the pathogen indicator bacteria, Enterococci (location information and data included).

Response: Pemberwick Creek is assessed as Pemberwick Brook, Segment CT7411-09_01, in the CT IWQR. The segment is located from the mouth at the confluence with Byram River (segment-01) just downstream of Pemberwick Road crossing, upstream to Indian Spring Pond outlet dam (upstream of Glenville Road crossing), Greenwich. The segment was last listed as unassessed in the 2016 final IWQR for the recreation use. It does not appear in Appendix A-1 Connecticut 305b Assessment Results for Rivers and Streams as it was unassessed for all designated uses in 2018 due to lack of data. After reviewing CFE/STS data, CTDEEP will update the assessments for Pemberwick Brook from Unassessed to Insufficient Information. This designation illustrates that we have received and reviewed data relevant to the segments, but that the data are not sufficient to make a full designated use support determination. In these cases, the data were not the indicator specified in the Connecticut Water Quality Standards Regulations (i.e. *E. coli*). For future report cycles, CT DEEP will gladly evaluate quality assured data provided the appropriate indicator bacteria is available for the applicable designated use. The appropriate text and tables were revised to reflect this change in the final document.

Comment #11: Save the Sound requests ambient water sampling for pathogen indicator bacteria be conducted along Horseneck Brook and Pemberwick Brook as part of the next round of CT section 305(b) assessments.

Response: Unfortunately, due to limited resources, Horseneck Brook and Pemberwick Brook are not currently on CT DEEP's list of priorities and monitoring is not planned to be conducted by CT DEEP in these watersheds in time to be considered for the next IWQR. A review of the CFE/STS EPA Region 2 Approved QAPP dated June 19, 2015 suggests that CFE/STS has the ability to sample for *E. coli* using the Colilert method which is an approved method that would generate usable data for the assessment of freshwater streams in Connecticut. CTDEEP welcomes discussions with CFE/STS to assist you in expanding your current program to sample for *E. coli* so that your data may be utilized in future assessments of Connecticut waters. No changes were made to the final documents.

Comment #12: Save the Sound requests Byram River-02 (CT7411-00_2) be reassessed by CT DEEP, or a delegated group, to confirm the fully supporting designation for recreational use in the next IWQR report. One location on this segment of the river has yielded Enterococci geometric means from 2015-2018 (data and sample location included). Save the Sound samples a different indicator for pathogens in freshwater, but the high Enterococci geometric means demonstrate elevated pathogen indicator bacteria presence in

the waterway that warrants further sampling to confirm the accuracy of the fully supporting designation.

Response: Data collected in 2016-2017 from 4 stations along the Byram River (segment CT7411-00_02) and submitted by another quality assured monitoring group were utilized to assess Segment CT7411-00_02. For your information, the data used to assess Byram River segment 2 has been sent to you by email. Current assessment methodology states that data from the last 2 years from all stations located within a segment be combined and utilized in calculating a geometric mean and determining if greater than 10% of the samples exceed the single sample maximum criteria (see CALM for details; IWQR Chapter 2). As such, Segment CT7411-00_02 was assessed as supporting the recreational use. The data were reviewed to respond to your comments and the current assessment was found to be appropriate. Therefore, CT DEEP has not allocated any of its limited monitoring resources to re-sampling this segment before the next IWQR. For future report cycles, CT DEEP will gladly evaluate quality assured data provided the appropriate indicator bacteria is available for the applicable designated use. No changes were made to the final documents.

Comment #13: Save the Sound hopes that the conditions reported here are used to inform the selection of priority water bodies in the forthcoming Integrated Water Resource Management report. If impaired water bodies, as indicated in the IWQR, are not selected as priorities or for action plan development, we would appreciate a clarification as to how CT DEEP intends to address those impairments. We believe that an overreliance on the availability of partners in an area when determining priority areas will result in significant environmental justice concerns, therefore the water quality itself should drive these determinations. Save the Sound will participate in the public comment process for the IWRM and will reiterate this concern.

Response:

The selection of the waterbodies for current development of Action Plans was based on water quality priorities, identified by CTDEEP and the public. It was not solely dependent on the presence of watershed partners. That being said, working with partner organizations is important, especially for non-point source pollution sources because it is typically through those partnerships that the actions needed to restore or protect water quality occur. One of the aspects of identifying where to develop a plan includes a consideration of whether or not that plan can/will be implemented. Increasing the likelihood that a plan will be implemented increases the likelihood that water quality will be restored or protected. At this point in our programs, we are developing new approaches to addressing the water quality challenges identified as priorities by the public. Having successful examples of these new approaches also relies on having partners. Once the demonstration has been made for a new approach, it is easier to bring that approach to areas where active partner organizations might not exist.

Please be assured that Action Plans will be developed for all impaired waters as required by the Clean Water Act. Those plans may be TMDLs or other alternative approaches. CTDEEP, through a public process, has identified waterbodies where action plans will be developed within the next few years. Action plans will be also be developed for all other impaired waterbodies but the development of those plans will occur at a later date. Plans will be

developed for all waters in need of such plan whether or not there are partner organizations within the watershed.

We are developing a public meeting regarding IWRM which will be scheduled for Fall 2019. Please sign up for the Water Quality ListServ so that you can receive notification of this public meeting. Send an email to listsrv@list.ct.gov, please leave the subject line blank and in the body of the message type: Subscribe DEEP_WQPlanning YourFirstName YourLastName. CTDEEP welcomes CFE/STS participation in the next public comment period on the Integrated Water Resource Management. No changes were made to the final documents.

Comment #14: The table describing miles assessed, not assessed and tracked should include an additional column enumerating total miles of stream reach in the state.

Response: The total miles of streams can be found in that table at the bottom within the footnotes (Table 2.1, p. 35). The total miles is estimated at 5,830 but the total does not change based on the factors in the table. No changes were made to the final documents.

Comment #15: We understand that there is an impaired water body predictor model utilizing impervious surface and concomitant development density utilized as a prioritization tool. Areas where the impaired waterbody predictor model results in unpredicted impairments/stressors should be enumerated to highlight the uncertainty in the model or Akaike information criterion (AIC). Of note, is the forested triangle between I-91, the Connecticut River, and the coast which shows high stressor levels despite abundant forest cover.

Response: The unpredicted areas in Figure 1-4 represent large rivers, and they are unpredicted because the model is not appropriate for large nonwadeable rivers/streams. The model is applicable to 1st–4th order wadeable streams and rivers in the state, which comprises 94% of the stream kilometers in Connecticut and has historically been the focus of the state biomonitoring program. Caution should be applied to use these models for locations outside of these ranges of watershed condition. CT DEEP will gladly have a conversation with CFE/STS to further discuss any questions they have on the model. No changes were made to the final documents.

Comment #16: We recommend that updates to the IWQR clearly outline the changes in the document from prior versions, also, that the appendices be named according to their contents when listed on the webpage.

Response: Throughout the document some sections describe changes from other cycles. Appendix B-5 summarizes the changes for impaired waters. However, beginning with the 2020 IWQR, CT DEEP will add a component to the report to better summarize changes in the report between cycles. Also, CT DEEP agrees with the comment to rename the appendices CT DEEP will gladly have a conversation with CFE/STS to further discuss the details that should be included in a summary. The changes to the appendices names were made to the CTDEEP website, but no changes were made to the final document.

Comment #17: Save the Sound requests a timeline for when the state will be able to upload current and backlogged water quality data into the federal data storage platform.

Response: CT DEEP is currently working on a project to upgrade/migrate our current databases to a new format. An important requirement of the new system will be to submit all data to the federal data storage platform which is EPA's Water Quality Exchange (WQX). WQX is the mechanism to submit data to EPA and the Water Quality Portal (WQP) is the mechanism to retrieve the data from EPA. It is anticipated that the CT data will be available in WQX by 2020. No changes were made to the final documents.

APPENDIX A. Original Comments on the 2018 draft Integrated Water Quality Report.

Commenters

Jay Kulowiec, PE Industrial Water/Wastewater Consultancy, LLC

Judith C. Rondeau, CPESC Assistant Director Niantic River Watershed Coordinator, Coordinator, SE CT Stormwater Collaborative Eastern CT Conservation District

Marla Butts, Thompson Wetlands Agent, Town of Thompson, CT

Alicea Charamut, Executive Director Rivers Alliance of Connecticut

Katherine Fiedler, Esq. Legal Fellow Connecticut Fund for the Environment, Inc. Save the Sound

The DRAFT report should be amended with respect to Appendix B-2, specifically the 2005 TMDL Report for the Upper Naugatuck River (Whole Effluent Toxicity WLAs) as follows:
- Update the WLA allocations based upon current discharge flows from the affected NPDES discharges
-Update based upon the river chemistry and NPDES discharge chemistry data collected since the 2005 report publication
Fourteen(14) years have gone by, a revisiting of the conditions in the river is more than warranted

--
Jay Kulowiec, PE

Hi Erik,

Please accept this email as official comment from ECCD for the draft 2018 Integrated Water Quality Report. I am commenting on the inclusion of Backwater Brook (CT3300-05_01) in the draft 2018 Integrated Water Quality Report as not supporting for recreation due to the presence of fecal bacteria. I have attached a spreadsheet containing the water quality data collected by ECCD in 2015, data collected by The Last Green Valley Volunteer Water Quality Monitoring Program in 2016, wet weather water quality data collected by ECCD in 2018 for the Town of Thompson during MS4 data collection and a Google Earth image depicting the sampling sites and pertinent local features.

In 2015, ECCD collected E. coli data from Backwater Brook at two locations, BWB-01 and BWB-02. BWB-01 was located in the stream channel of Backwater Brook approximately 100 feet downstream of the outlet of Duhamel Pond (an impoundment of Backwater Brook). BWB-02 was located approximately 100 ft upstream of Duhamel Pond, in a section of stream channel downstream of a beaver pond and dam. The geometric mean of E. coli data collected at BWB-01 in 2015 was 135 cfu. The geomean of E. coli data collected at BWB-02 was 32 cfu.

ECCD also collected a single E. coli sample at the outlet of a culverted section of Backwater Brook near the shore of the French River. The purpose of this sample was to determine if the storm drainage system at the Thompson Public Library was tied into the Backwater Brook culvert, and if the storm drain was contributing fecal bacteria to the stream. This was prompted by a strong odor noted by the sampling team emanating from a catch basin. It was subsequently determined that the storm drain system was not connected to the culverted section of Backwater Brook.

In 2016, volunteers from TLGV collected additional E. coli data from Backwater Brook; however, they selected a sampling site in Duhamel Pond approximately 15-20 ft upstream of the pond outlet. The 2016 geomean was 1,260 cfu.

In 2018, ECCD collected a single wet weather E. coli sample from Backwater Brook at ECCD sampling site BWB-01. The result was 5 cfu.

It is my belief that the E. coli levels documented in Duhamel Pond in 2016 were the result of poor management of domestic waterfowl waste by a resident who lived along the shore of the pond. I was informed that the owner spread the waste on the ground near the shore to stop pond water from flowing onto the property during high water periods. I was also told that the homeowner moved away in 2017, taking the waterfowl along. The single wet weather sample collected in 2018 indicates that this poor waterfowl waste management may have been the cause of the E. coli levels documented in 2016 and that, with the removal of the waterfowl, fecal bacteria levels have returned to natural background levels, as data collected upstream of the pond in 2015 indicate background fecal bacteria levels in the stream as it entered the pond were quite low.

Respectfully submitted,

Judy Rondeau

Judith C. Rondeau, CPESC
Assistant Director
Niantic River Watershed Coordinator

Coordinator, SE CT Stormwater Collaborative

Eastern CT Conservation District

Hi Eric,

Please accept this email as my comment and opposition to the inclusion of Backwater Brook as an impaired water as identified in the draft 2018 Integrated Water Quality Report. My comments are in furtherance of the comments provided by Judy Rondeau to you via email on June 19, 2019. Judy noted a waterfowl waste problem created by the owner of 6 School Street in 2015-16 and in 2017 the owner moved and the problem abated.

Concurrently, in 2015 the waterfowl problem was exacerbated by a resident at 110 Main Street constructing a debris pier into Phelps Pond (aka Duhamels Pond) on Town owned property (see attached photos IMG_0750 and IMG_0752) and feeding the waterfowl. The First Selectman sent a letter to the individual believed to have built the pier to stop doing changes to town owned property (see attached PDF of letter sent) and Department of Public Works staff subsequently removed the debris pier (see attached photo IMG_0824). Alterations to Town property ceased.

To verify that the waterfowl issued had been resolved the Town contracted with the Eastern Connecticut Conservation District to include sampling of Backwater Brook near the pond as part of the Town's sampling of outfalls to impaired waters required by the MS4 permit. As Judy reports, *E. coli* levels are not unacceptable . Additionally, based on my inspection today there is no evidence of waterfowl being fed at the Town-owned property abutting Phelps Pond.

In my opinion, the high *E. coli* was caused by wildlife influenced by human involvement, that involvement has ceased and natural conditions have returned to acceptable conditions.

It should be noted that in the past several years the upper watershed has experienced increased beaver activities, causing the flooding of an extensive red maple swamp in an undeveloped area just south west of Route 131. I will be recommending the Town again sample Backwater Brook during its MS4 outfall sampling as part of its anticipated contract with the Eastern Connecticut Conservation District to verify conditions.

Thank you for your time and consideration. – Marla Butts

Marla Butts, Thompson Wetlands Agent

Erik Bedan
CT DEEP Bureau of Water Protection and Land Reuse
Water Planning and Management Division
79 Elm Street
Hartford, CT 16106

June 26, 2019

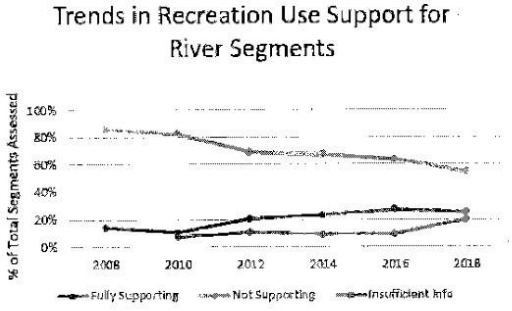
Dear Mr. Bedan,

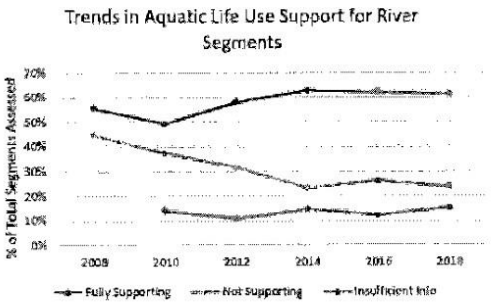
Thank you for the opportunity to comment on the draft 2018 Connecticut Integrated Water Quality Report.

Commendations and Concerns

Total Phosphorus Methodology
DEEP should be commended for the development of a method to identify total phosphorus as a cause of Aquatic Life Impairment in our rivers. The addition of several listings of waters impaired caused by Total Phosphorus as a pollution source will enable the agency and stakeholders to more effectively address the sources of phosphorus pollution.

Trends and Water Quality Goals
We've made a lot of progress over the past four decades in cleaning up our water bodies. It is a point of pride that Connecticut has always been a leader in setting high standards for our water. However, increases in river segments that fully support both aquatic life and recreation have leveled off over the past four years. The leveling off of segments fully supporting for recreation is particularly interesting considering the increase in approved TMDLs thanks to a statewide TMDL for bacteria in 2012.





The leveling off of the downward trend in segments that are not supporting of Aquatic Life Use Support is particularly concerning when taking into consideration *Figure 1-3 CT DEEP Monitoring Biological Conditions Gradient Value Results Map* which shows a majority of our macroinvertebrate and fish populations under moderate to major stress. Could this leveling off be an inflection point to an upward trend? CT DEEP is still in the process of reviewing water quality standards. Perhaps it's time to prioritize the update of temperature criteria.

Delisting of Broad Brook

The delisting of CT 4206-00_01 Broad Brook (East Windsor)-01 for Escherichia coli raised an eyebrow. Several years of monitoring by the Scantic River Watershed Association and the University of St. Joseph indicate that high values for E coli are still being found in Broad Brook. You can find the data on Connecticutriver.us. We would like to see the data supporting this delisting.

Edits and Comments on Form

Table 2-1. Designated Use support summaries for rivers, lakes and estuaries – The title of the first column needs to be changed from USE SUPPORT 2016 to USE SUPPORT 2018.

Table 3-2. 4c - Waterbodies impaired for one or more designated uses which is the result of pollution but is not caused by a pollutant. Please find another way to describe this category as the sentence is too confusing.

Thank you to everyone in the Water Planning and Management Division who work hard to improve and maintain water quality in Connecticut.

Sincerely,

Alicea Charamut
Executive Director

June 26, 2019

Erik Bedan
Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Water Planning and Management Division
79 Elm Street
Hartford, CT 06106-5127

RE: Draft 2018 Connecticut Integrated Water Quality Report

Dear Erik Bedan,

On behalf of Save the Sound, a bi-state program of Connecticut Fund for the Environment, we write to you with comments on the Draft 2018 Connecticut Integrated Water Quality Report (IWQR). First, Save the Sound commends the CT Department of Energy and Environmental protection (CT DEEP) for its continued progress in protecting Connecticut's waterways through advancements in data and methodology, such as the implementation of a methodology to determine impairment caused by total phosphorus. We request further clarification or amendment of the IWQR as described below.

Assessments

Horseneck Brook Assessment Request

Save the Sound sampling results from 2014-2018 showed that a location on Horseneck Brook-01 (CT7409-00_01) has elevated levels of the pathogen indicator bacteria, Enterococci (Table 1). R-HNB-1.6, Horseneck Brook at Eagle Hill, is the station ID assigned to this location which is located at -73.641356, 41.032621 (WGS_84). Save the Sound requests ambient water sampling for pathogen indicator bacteria be conducted along the Pemberwick Creek as part of the next round of CT section 305(b) assessments. Horseneck Brook-01 is currently listed as unassessed on the Connecticut 2018 305b Assessment Results.

Table 1. Save the Sound 2015-2018 (R-HNB-1.6) geometric means (GM) and number of samples.

		Horseneck Brook at Eagle Hill (R-HNB-1.6)	
Year	**Indicator**	GM (MPN/100 ml)	# of Samples
2015	Enterococci	206	8
2016	Enterococci	284	10
2017	Enterococci	86	10
2018	Enterococci	198	11

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545 Tompkins Avenue | 3rd Floor | Mamaroneck, New York 10543 | 914-381-3140 | www.savethesound.org

Pemberwick Creek Assessment Request

Save the Sound sampling results from 2014-2018 demonstrate that water flowing from Pemberwick Creek into the Byram River in the vicinity of the northern extent of Byram River-01 (CT7411-00_01) has elevated levels of the pathogen indicator bacteria, Enterococci (Table 2). R-PC-0.01, Pemberwick Creek at Pemberwick Road, is the station ID assigned to this location which is located at -73.661073, 41.027332 (WGS_84). Save the Sound requests ambient water sampling for pathogen indicator bacteria be conducted along the Pemberwick Creek as part of the next round of CT section 305(b) assessments. Pemberwick Creek is currently not listed in the Connecticut 2018 305b Assessment Results. *See* IWQR, Appendix A-1.

Table 2. Save the Sound 2015-2018 (R-PC-0.01) geometric means (GM) and number of samples.

		Pemberwick Creek at Pemberwick Road (R-PC-0.01)	
Year	**Indicator**	GM (MPN/100 ml)	# of Samples
2015	Enterococci	222	7
2016	Enterococci	544	10
2017	Enterococci	226	9
2018	Enterococci	360	11

Save the Sound Questions Byram River Fully Supporting Recreation Designation

Save the Sound requests Byram River-02 (CT7411-00_2) be reassessed by CT DEEP, or a delegated group, to confirm the fully supporting designation for recreational use in the next IWQR report. One location on this segment of the river has yielded Enterococci geometric means of > 35 MPN/100 ml as demonstrated by Save the Sound bacteria monitoring efforts undertaken from 2015-2018 (Table 3). R-BR-7.55, Byram River at Cliffdale Road, is the station ID assigned to this location which is located at -73.695517, 41.078963 (WGS_84). Save the Sound samples fresh and marine water for the EPA-recommended Enterococci indicator for pathogens. CT DEEP is utilizing *E. coli*, a different EPA-recommended indicator for pathogens in freshwater, but the high Enterococci geometric means of this document demonstrate elevated pathogen indicator bacteria presence in the waterway that warrants further sampling to confirm the accuracy of the fully supporting designation.

Table 3. Save the Sound 2015-2018 (R-BR-7.55) geometric means (GM) and number of samples.

		Byram River at Cliffdale Road (R-BR-7.55)	
Year	**Indicator**	GM (MPN/100 ml)	# of Samples
2015	Enterococci	50	6
2016	Enterococci	49	10
2017	Enterococci	19	10
2018	Enterococci	76	11

IWQR to Inform IWRM

Save the Sound hopes that the conditions reported here are used to inform the selection of priority water bodies in the forthcoming Integrated Water Resource Management report. If impaired water bodies, as indicated in the IWQR, are not selected as priorities or for action plan development, we would appreciate a clarification as to how CT DEEP intends to address those impairments. We believe that an overreliance on the availability of partners in an area when determining priority areas will result in significant environmental justice concerns, therefore the water quality itself should drive these determinations. Save the Sound will participate in the public comment process for the IWRM and will reiterate this concern.

Clarification on River Miles Tracked, Assessed, and Not Assessed

The spatial component of CT DEEP's river segment sampling is robust. We understand that there is an impaired water body predictor model utilizing impervious surface and concomitant development density utilized as a prioritization tool. The table describing miles assessed, not assessed and tracked should include an additional column enumerating total miles of stream reach in the state.

Additionally, areas where the impaired waterbody predictor model results in unpredicted impairments/stressors should be enumerated to highlight the uncertainty in the model or Akaike information criterion (AIC). Of note, is the forested triangle between I-91, the Connecticut River, and the coast which shows high stressor levels despite abundant forest cover.

Phosphorus Pollution Monitoring

CT DEEP should be commended for the aggressive effort to mitigate freshwater phosphorus pollution. Utilizing diatom ecology as an assessment tool builds on a large body of literature in the U.S. and overseas. Save the Sound looks forward to post-management monitoring results.

Improving IWQR Functionality

User-Friendly IWQR

Save the Sound requests minor changes to the format of the report in order to make the IWQR and its updates more user-friendly. First, Save the Sound recommends that updates to the IWQR clearly outline the changes in the document from prior versions, whether in a separate factsheet or section, or noted throughout the report. Second, we recommend that the appendices be named according to their contents when listed on the webpage (i.e., transcribing their full titles found in the documents to the landing page on CT DEEP's website).

Request for Data to be Uploaded to EPA WQX

CT DEEP conducts robust and well-organized water quality monitoring efforts. However, these data are not being entered into the EPA Water Quality Exchange (WQX) and subsequently

are not readily available to the largest amount of users possible. CT DEEP is accommodating and timely with the release of water quality monitoring data but Save the Sound requests a timeline for when the state will be able to upload current and backlogged water quality data into the federal data storage platform.

Collaboration on Sampling and Data Sharing

Save the Sound would welcome the opportunity to collaborate on this effort and potentially sample for *E.coli* and run split samples with CT DEEP to strengthen the usability for assessments by CT DEEP and to maximize coverage.

Individual sample results including precipitation and time of sampling are available upon request. Save the Sound's seasonal bacteria monitoring efforts are undertaken between June-August of every year. Stations are broken into sampling days by watershed and sampled weekly.

Thank you for your consideration of these comments.

Sincerely,

Katherine Fiedler

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Connecticut Fund for the Environment, Inc./
Save the Sound