

June 21, 2021

Via email

Richard F. Chase
MassDEP, Bureau of Water Resources, Watershed Planning Program
8 New Bond Street
Worcester, MA 01606
Richard.f.chase@mass.gov

Re: Draft Massachusetts 2018/2020 Integrated List of Waters

Dear Mr. Chase,

Charles River Watershed Association (“CRWA”) submits the following comments on the Draft Massachusetts 2018/2020 Integrated List of Waters. CRWA’s mission is to protect, preserve, and enhance the Charles River and its watershed through science, advocacy, and the law. CRWA develops science-based strategies to increase resilience, protect public health, and promote environmental equity as we confront a changing climate. Reviewing and commenting on MassDEP’s Integrated List of Waters is core to our mission, as it is at the intersection of our monitoring and advocacy efforts to improve water quality. The Integrated List provides a critical assessment of the overall health of the Charles River watershed and forms the basis for future pollution reduction efforts.

As MassDEP is aware, in order to provide meaningful input on the Integrated List, it is necessary to carefully comb through the data, verify their accuracy, and compile detailed technical comments—a significant undertaking for watershed organizations and volunteer-based groups. The original comment period for the draft Integrated List was only 30 days. CRWA, along with a coalition of organizations, requested a 60-day extension. As noted above, a complete and accurate Integrated List that incorporates public feedback is critical to improving water quality in the Charles River watershed and throughout the Commonwealth. While we appreciate the 3-week extension ultimately granted, we continue to be concerned that such a short comment period on a highly technical and data-dense document is not conducive to adequate public input.

Overall Comments

Improvements in Documentation and Organization

The inclusion of the data used in MassDEP’s assessment in the spreadsheet and the watershed-specific appendices is a significant improvement from the 2016 report. In general, the documentation has continued to improve over the years. The organization of the 2018/2020 List allows reviewers and commenters to sort by watershed and by changes in condition to quickly see delistings by watershed. We are pleased to see these improvements.

Data Age and Use of External Partner Data

A number of classifications in the draft Integrated List are based on older data; more recent data are needed to make accurate assessment decisions. Going forward, we strongly recommend that data used to make assessment decisions be collected within seven years of the date of the Integrated List. This would align with MassDEP's seven-year schedule for surface water monitoring. Moreover, as the effects of climate change continue to affect and shape the quality of Massachusetts' water bodies, the use of older data does not accurately reflect current conditions.

In addition, CRWA and other watershed organizations have provided more recent sampling data for many sites than appear to have been used in the assessment decisions. In some cases, data provided by watershed organizations are more continuous and long-term than the data collected by MassDEP, but the report seems to give more weight to MassDEP data. We request clarification on why our data are not considered "regulatory level" for MassDEP's purposes and what steps we can take to provide data that will be of use to MassDEP in compiling future Integrated Lists.

For the Charles River specifically, many of the notes in the draft report indicate that CRWA data were only used for the years 2009, 2012, and 2013 for most of the main stem assessment units. CRWA submits consistent and reliable data annually to EPA's Water Quality Exchange (WQX) Data Portal that should be utilized in MassDEP's assessment decisions. If our data are not meeting MassDEP's standards, please explain why so that we can ensure our data are usable for listing decisions. Otherwise, they should be included in the final 2018/2020 Integrated List.

Non-Native Aquatic Plants Refinement and Categorization

Restoring lakes and ponds by removing invasive plant species is a priority for CRWA to promote the health of native species and allow for recreational activities. CRWA appreciates the refinement of the "non-native aquatic plants" impairment category and the availability of species-specific information. In particular, milfoil and water chestnut impairments are now listed with a level of detail not seen in previous reports. In some cases, however, it was not clear what the source of the species data was, which we request be included in future reports. For segments listed in category 4c, it is not clear which TMDL is being used for placement in this category. Please make this clear in the final Integrated List.

Including Coldwater Fisheries as Designated Use

CRWA encourages MassDEP to coordinate closely with the Department of Fish and Game ("DF&G") when classifying water bodies as supporting coldwater fisheries. DF&G has classified more streams in the Commonwealth as coldwater fisheries than are currently listed in the water quality standards issued by MassDEP. The discrepancy between departments makes it extremely difficult for watershed organizations to assist municipalities in conservation planning efforts. Specifically, where coldwater fish species are observed, CRWA believes that those assessment units should be classified as supporting the use of a coldwater fishery. Where coldwater fish species are observed and the water body meets the DF&G Coldwater Protocol, CRWA believes that using the targeted fish community approach is not an appropriate substitute for classification as a coldwater fishery. These assessment units should be included in the 2018/2020 Integrated List.

More Fish Passage Barrier Impairments Should be Included

CRWA is pleased to see the inclusion of fish passage barriers in many of the assessed uses. It appears that the fish passage barrier impairment was included in several downstream units with dams. In addition to these units, CRWA requests that other assessment units with dams be evaluated for their fish passage ability, especially those immediately upstream of dams with existing fish passage. We recommend that MassDEP consult with watershed organizations who have on-the-ground experience with the dams in their watershed to make these determinations.

State Surface Water Quality Standards

The Integrated List documents which water bodies (or segments thereof) throughout the Commonwealth are not meeting state water quality standards. It is critical that the water quality standards be updated regularly based on the best available information, including establishing standards for emerging contaminants of concern. CRWA commented on the most recent updates to the state water quality standards in November 2019. The final updates have not yet been published. We reiterate several of our prior comments here, as these critical updates to the water quality standards should also be reflected in the 2022 Integrated List.

First, as noted above, the definition and classification of coldwater fisheries should be consistent across state agencies and regulatory frameworks. The discrepancies between DF&G's and MassDEP's lists of coldwater fisheries should be resolved. Further, the water quality standards should reference the Wetlands Protection Act regulations pertaining to coldwater fisheries.

Second, criteria should be developed for cyanobacteria concentrations (cells/mL), aesthetics, and/or toxin levels ($\mu\text{g/L}$). The Massachusetts Department of Public Health ("DPH") already has guidelines for cyanobacteria, which are currently used for decision-making regarding declarations of harmful cyanobacterial bloom advisories in Massachusetts, and U.S. EPA recently came out with its own guidance for cyanobacteria toxins in recreational waters. Given this existing and readily available information, MassDEP should incorporate these criteria in the surface water quality standards.

Finally, criteria should be developed for per- and polyfluoroalkyl substances ("PFAS") in surface waters. PFAS, also known as "forever chemicals" due to the fact that they do not break down naturally and will remain in the environment for long periods of time, pose significant threats to ecological and human health in our watershed communities. Health concerns associated with PFAS exposure include decreased fertility, reduced ability of the immune system to fight infections, and cancer. Although MassDEP has set standards for PFAS in Massachusetts drinking water, protections should also be in place for those who use surface water for recreational purposes through incorporation in the surface water quality standards.

Comments on Specific Charles River Basin Segments

CRWA thanks MassDEP for incorporating our suggestions on the 2016 draft Integrated List. Our comments on several of the assessment units in the Charles River watershed in the draft 2018/2020 Integrated List are below.

Delisting Decisions

CRWA believes that many of the segments proposed for delisting should not be delisted because old data were used in the decision-making process. CRWA requests that MassDEP provide a written explanation as to why these old data are being used, as use of old data is inconsistent with the last MassDEP CALM.

Stop River (MA72-09)

CRWA questions the delisting of this segment for impairments from dissolved oxygen (“DO”) and total phosphorus (“TP”). The DO and TP data being used to support this delisting are from 2002 and 2007, which is not recent enough to assess the current state of DO in this stream segment and is inconsistent with the 2018 CALM. We believe that this segment should not be delisted until current water quality data are collected. Going forward, data used to make assessment decisions should be collected within seven years of the date of the Integrated List, since MassDEP will be implementing a seven-year schedule for surface water monitoring.

In the description of data collected in this segment, MassDEP notes that the data were collected during or just before drought conditions were present. Data collected during drought conditions are just as relevant as other data, and should be included in the datasets used to make listing decisions. Drought conditions are becoming more common with climate change; giving equal weight to these data reflects accurate in-stream conditions that may limit aquatic life more often in the future.

Stop River (MA72-10)

CRWA appreciates and agrees with the need to conduct more monitoring in this segment before a listing decision about TP concentrations is made. We encourage MassDEP to coordinate with the MCI-Norfolk Water Pollution Control Facility during the next Integrated List cycle and use any TP data they are collecting pursuant to the requirements of their NPDES permit.

CRWA disagrees with delisting temperature as an impairment for this segment solely due to the change in the CALM assessment method. If segments are to be delisted due to a change in assessment method, then recent data, collected after the assessment method changes, must be used to make that decision.

Though CRWA does not have continuous monitoring at this location, we have observed temperatures exceeding 25°C regularly in the summer months since 2012 (Table 1). Since these conditions are observed early in the morning, it is likely that this segment reaches higher temperatures later in the day during summer months. CRWA strongly recommends that this segment remain listed as impaired for temperature until more recent data have been collected.

Table 1. Data collected at CRWA Site 269T exceeding 25°C since 2012.

Date Collected	Time Collected	Temperature (°C)
7/17/2012	6:10 AM	25.4
7/16/2013	6:10 AM	25.8
7/15/2014	6:06 AM	25.0
7/21/2015	6:06 AM	27.7
8/18/2015	6:06 AM	27.0
7/17/2018	6:07 AM	26.5

Mine Brook (MA72-14)

Similarly, the delisting of temperature of this segment is based on older (2007) data. CRWA urges MassDEP to use data from the past seven years in their assessments. This is especially true for temperature, as we have observed that average water temperature has increased in recent years due to climate change.

Trout Brook (MA72-19)

The delisting of Trout Brook for ‘Nutrient/Eutrophication Biological Indicators’ is again based on older (2007) data. CRWA has more recent benthic macroinvertebrate samples (2016, 2018) that should be used by MassDEP.

Houghton Pond (MA72050)

MassDEP notes that the non-native aquatic plant impairment is being delisted in this assessment unit due to an error. Though errors do happen, this alert status is still based on data collected in 1997, far too old to be referenced in the 2018/2020 report. CRWA requests that more updated sampling or observations be collected at Houghton Pond as soon as possible to confirm or deny the non-native aquatic plant impairment.

Charles River Main Stem

Charles River (MA72-07)

This segment should be listed as impaired for fish passage. Two dams, just upstream and downstream of Echo Bridge in Hemlock Gorge Reservation, do not have any means of fish passage (no fish ladder) and their height limits successful fish passage.

Charles River (MA72-38)

We appreciate this segment being listed as impaired for fish passage, and encourage MassDEP to list more segments with dams as impaired for fish passage as well, as described above. In this segment, we also noted that no data from the EPA's long-term buoy located at the Museum of Science were evaluated in making assessment decisions this cycle. CRWA encourages MassDEP to utilize temperature, conductivity, and dissolved oxygen data that are being collected by the EPA buoy in future reporting cycles.

Coldwater Fisheries

As mentioned previously, the discrepancy between MassDEP's and DF&G's classification of water bodies as coldwater fisheries should be corrected. In particular, three streams in the Charles River watershed should be listed as coldwater fishery resources: Trout Brook in Dover (MA72-19), Shepherds Brook in Franklin (MA72-50), and Stony Brook in Waltham/Weston (MA72-26).

Charles River Lakes and Ponds

Crystal Lake (MA72030)

CRWA appreciates that MassDEP incorporated data from the DPH Harmful Algal Bloom (HAB) database to reassess the use of this water body. It is our understanding that more recent data (2019) are also available from the City of Newton that indicate an extended cyanobacteria bloom. We request that MassDEP provide more information in the final 2018/2020 Integrated List about how the agency incorporates municipality-specific datasets for HABs if the municipality does not coordinate with DPH.

Lake Archer (MA72002)

CRWA has collaborated with the Lake Archer Association for the past year, since a cyanobacteria bloom occurred in Lake Archer. It is our understanding that older data from 2000, which were never submitted to MassDEP, indicate a phosphorus impairment. The Association plans to collect newer data in the next year to evaluate the designated uses for DO and TP. CRWA supports this effort, and will assist them as needed to ensure that their data meet appropriate standards for MassDEP to use in the 2022 Integrated List.

Thank you for reviewing our comments on the draft Massachusetts 2018/2020 Integrated List of Waters. If you have any questions regarding these comments, please feel free to contact us. We look forward to continuing to work with MassDEP to protect and restore water quality in the Charles River watershed.

Sincerely,



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