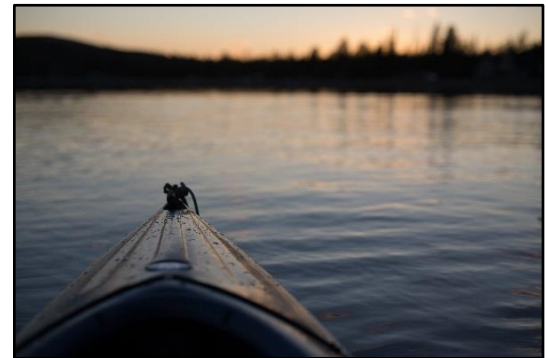




2022 Connecticut Integrated Water Quality Report (IWQR) Factsheet

Why is this report important?

Water is a critical natural resource. In Connecticut, there are nearly 8,000 miles of rivers and streams, 425 major lakes and ponds, 82 coastal harbors and bays, and the world-renowned Long Island Sound Estuary. Federal law in the form of the Clean Water Act, requires each state to monitor, evaluate, report the quality of its waters every two years, and develop plans to restore and protect water quality. The IWQR is the summary of these evaluations called assessments and serves as a report card on water quality in Connecticut. This report includes information on which waters are meeting standards or not meeting standards and provides insights to where water quality is improving or getting worse. This information is useful for the public to inform decision about where to recreate, for municipalities to prioritize water management projects, and for CT DEEP and watershed organizations to plan for restoration or protection actions. The findings of this report also influence permitting decisions by CT DEEP and the U.S. Environmental Protection Agency.



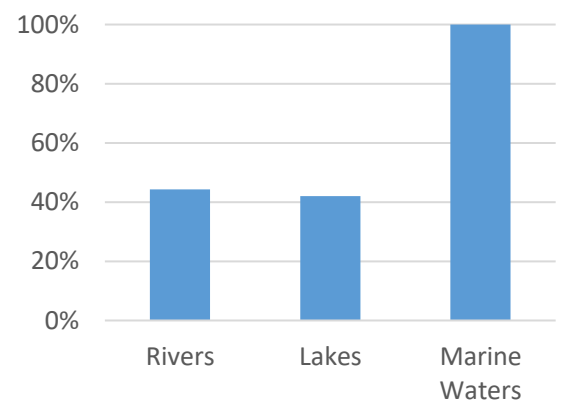
What information is considered for this report?



Scientists from CT DEEP use data collected by the Department and by other government, private, and volunteer organizations to determine if a waterbody is healthy or impaired. A wide variety of data are considered, including physical measurements made out in the field and chemical and biological test results from laboratories. Over a million individual test results are included, covering


about half of all lakes and rivers and all marine waters. The results are carefully reviewed to ensure that they are accurate and that there are enough measurements from a waterbody to be representative. Then, the data are compared to the [Connecticut Water Quality Criteria and Standards](#) to determine whether the waterbody is healthy or impaired.

Percent of CT Waters that Have Been Monitored




Are Connecticut's waters safe for swimming, boating, fishing, and supporting fish and aquatic life?


Water quality assessments are made based on the different uses of the water body. The major uses considered are recreating (e.g., swimming and boating), supporting aquatic life, and consuming fish caught in the waterbody. The graphs on this page show the percent of Connecticut's rivers, lakes, and marine waters where the water quality meets standards to support these uses. These charts are based on the waters that have been monitored in some way, not all waters in the state.



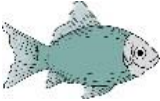
Rivers and Streams. The water quality in most rivers is sufficient to support fish and other aquatic life. In the segments where the aquatic life use is not supported, the causes are likely excess nutrients, altered streamflow, runoff from developed areas, or a mixture of all three. In a few cases, we know for sure that excess nutrients are a contributing factor thanks to new assessment methodology. The most common water quality problem in rivers is bacteria levels exceeding standards for recreation. Elevated bacteria levels indicate there is a risk of coming into contact with pathogens from humans and animals while swimming or boating.



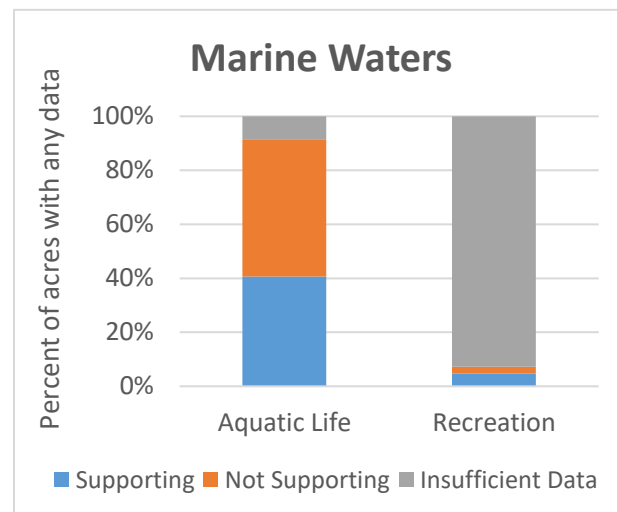
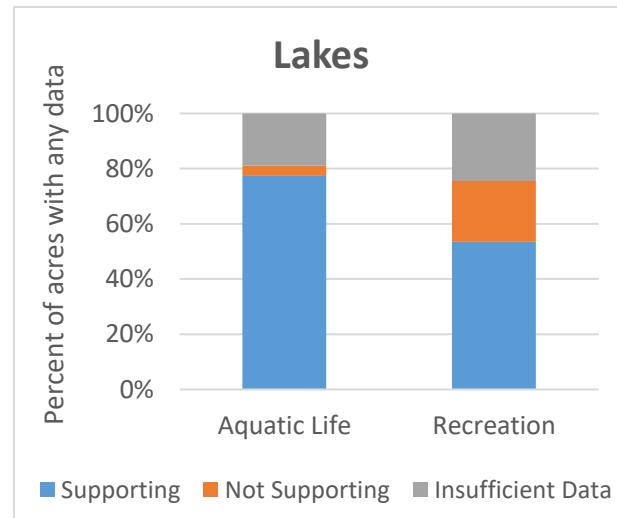
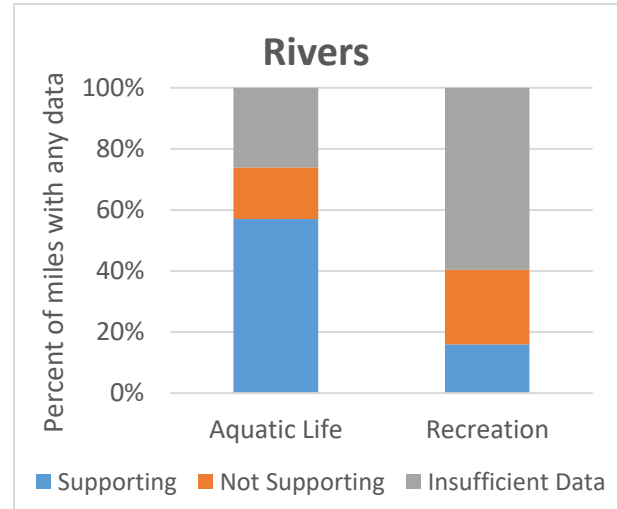
Lakes. The vast majority of lakes have water quality that is supportive of aquatic life. Approximately a quarter of lakes were found to not support recreational use some of the time. Elevated bacteria is one cause. Another cause is cyano-bacteria (blue green algae) blooms often caused by excess levels of nutrients. Cyanobacteria can multiply rapidly under the right conditions and often produce a toxin that is harmful to humans and pets.



Marine Waters. Water quality does not support fish or other aquatic life during the summer in over 50% of marine waters. These impairments are mostly due to low dissolved oxygen in the Sound and the coastal embayments, which is caused by excess nutrients. Legacy pollution in the sediments in some harbors also contributes to the problem. For the recreational use, sufficient monitoring data are only available in a few areas. The state beaches on the coast are tested weekly and consistently meet standards.



Fish Consumption. The graphs on this page do not show the assessment results for fish consumption. This is because fish consumption is limited for all Connecticut waters due to a statewide fish consumption advisory. Please refer to CT DEEP website for the most recent [Fishing Guide](#) or to the CT Department of Public Health's [Fish Consumption Advisory](#) for more information on safely eating fish caught in Connecticut.



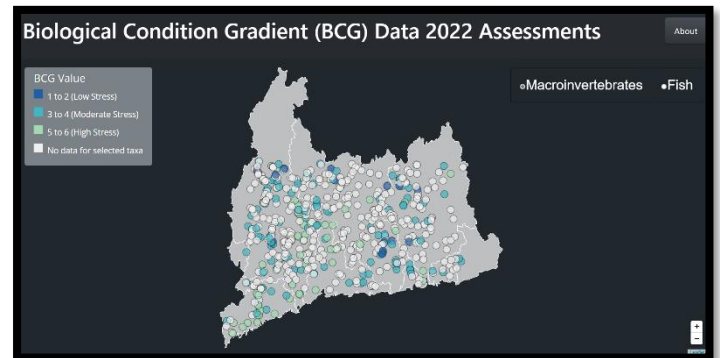
What is new in the 2022 report?

Development of New Database for Ambient Monitoring Data

We have a brand-new database that will house all ambient monitoring data. This will improve our ability to manage data to conduct assessments needed to meet requirements of the IWQR and our PPA agreement to flow data to EPA's Water Quality Portal. Work continues to build on the success of the database to back populate the database with historical data, provide training to staff, and build scripts and procedures to automate reporting and data analysis.

Biological Condition Gradient Web Application

The [Biological Condition Gradient](#) (BCG) is a conceptual model that describes changes in aquatic communities and provides a more refined way of assigning stream health than the traditional pass/fail approach. Over the past 10 years, CT DEEP has developed BCG models for [fish communities](#) and [macroinvertebrate communities](#) and, starting in 2018, incorporated these concepts into water quality assessments for the Integrated Water Quality Report. We received comments during the 2020 IWQR asking DEEP to develop and communicate additional information on the Biological Condition Gradient, also known as BCG. We have updated the CT DEEP [web-based interactive BCG mapping application](#) with the most recent data used for the 2022 assessments and added a link to a [newly developed EPA fact sheet on the BCG](#) to provide additional information.



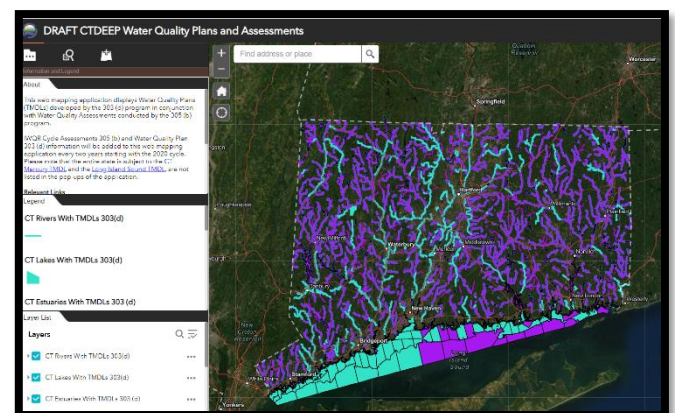
Public Input and Communication

IWRM and Water Quality Plans

In the Fall of 2019, CT DEEP conducted additional public outreach for the Integrated Water Resource Management process. CT DEEP is currently developing projects that were identified through the IWRM process. The list of these plans and waterbodies can be found in Appendices C-1 and C-2 of the IWQR. Some of the work includes the [Bantam Lake TMDL](#) and the [Statewide Nutrient Core Document](#) for lakes. The Bantam Lake TMDL is the driver that paved the way for CT to develop a narrative nutrient translator. The next outreach for IWRM will be in 2023.

Web application to view and download information relevant to the IWQR

As a result of previous public input, this cycle we have developed an [online web mapping application](#) that will allow the public to view and download assessment and TMDL information for the 2020 and 2022 cycles. We will continue to use this web application for future cycles.



New Email Address

To manage the vast number of emails and comments that are received by CT DEEP, we have created a new email address for public comment and communication and data submission. All comments and questions must be submitted to DEEP.IWQR@ct.gov before July 6, 2022 for this reporting cycle.



How can I get more information and get involved?

The most recent and past [Integrated Water Quality Reports](#) are available for reference.

The following webpages have more information about related CT DEEP Programs:

- [Connecticut Water Quality Standards](#)
- [Connecticut Integrated Water Resource Management](#)
- [Connecticut Action Plans for Water Quality Restoration and Protection](#)
- [Connecticut DEEP Water Monitoring Program](#)

If you have water quality data you would like CT DEEP to consider evaluating for the next IWQR, please contact us [at DEEP.IWQR@ct.gov](mailto:DEEP.IWQR@ct.gov).

All data submitted must conform to the requirements listed below:

- Was collected under an approved Quality Assurance Project Plan (QAPP);
- Has been validated by the Quality Assurance Officer per the QAPP; and
- Is in the spreadsheet format provided by CT DEEP with all the required fields filled in.

There are many active environmental groups throughout Connecticut looking for volunteers to help provide water quality monitoring information to CT DEEP for use in the IWQR evaluations. There may be a group in your neighborhood that is involved with water quality monitoring. For more information, please see our [volunteer water monitoring webpage](#).

