

STATE OF NEW HAMPSHIRE

**DRAFT 2024 Section 303(d)
Surface Water Quality List
Content Introduction**

September 20, 2024



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CHAPTER 1 INTRODUCTION

1.1 PURPOSE

The Federal Water Pollution Control Act [PL92-500, commonly called the Clean Water Act (CWA)], as last reauthorized by the Water Quality Act of 1987, requires each state to submit a list of impaired waters to the US Environmental Protection Agency (USEPA) every two years. The document is typically called the “303(d) List,” so named because it is a requirement of Section 303(d) of the CWA. The 303(d) List includes surface waters that are:

- Impaired or threatened by a pollutant or pollutant(s).
- Not expected to meet water quality standards within a reasonable time even after application of best available technology standards for point sources or best management practices for nonpoint sources.
- Require the development of a comprehensive water quality study (i.e., called a Total Maximum Daily Load or TMDL study) that is designed to meet water quality standards.

1.2 ASSESSMENT METHODOLOGY AND TERMS

The 2024 Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology (CALM) describes in detail how surface water quality assessment decisions were made in fulfillment of 40 CFR 130.7(b)(6). The [CALM](#) also includes descriptions and definitions of the many terms used to assess surface waters. Readers are strongly encouraged to read the CALM before reviewing assessments as it will help one to better understand and interpret assessment results.

1.3 DATA

The 2024 assessments are supported by more than 1 million grab samples and several million datalogger results. These data records were collected from more than 2,000 stream sites, 2,500 lake sites, and 640 marine sites and include over 180 water-quality and ecological parameters. Most of the data are available from the [NHDES data warehouse](#) or by contacting NHDES at EMD@des.nh.gov.

Additionally, a new [Surface Water Quality Assessment Viewer](#) has been created for the 2024 assessment cycle. This tool was developed for users to:

- 1) View the spatial extent of assessment units.
- 2) Identify where sampling data was collected.
- 3) Access the watershed report cards.
- 4) Run reports to access the base data and water quality data summaries for the Aquatic Life and Primary Contact (i.e. Swimming) designated uses in the 2024 assessment cycle.
- 5) See what waterbodies are impaired in the 2024 assessment cycle.

6) View the extent of the USEPA 2017 MS4 General Permit Areas.

1.4 ASSESSMENT UNITS

Assessment Units (AU) are the basic unit of record for conducting and reporting water quality assessments.

To help determine the extent and/or location of each AU, visual aids such as maps are useful. To that end, a [web mapping application](#) was built.

For those wishing to download the base GIS for use with the more common GIS software products, AUs are available in Geodatabase format. All GIS layers may be accessed through the Department's FTP site by using the following instructions:

- 1) Paste the following link into File Explorer, not Internet Explorer or another web browser: <ftp://PUBFTP.nh.gov/DES/WMB/WaterQuality/SWQA/2024>.
- 2) At the login window, click on the box in the lower left hand corner labeled "Login Anonymously."
- 3) The user name will then be automatically filled in with the word "Anonymous."
- 4) Type in your email address in the Email Address block.
- 5) Then click on the Log On button.
- 6) The [GIS] folder should appear containing the geodatabase described above.
- 7) Right click on the geodatabase and select the Copy to Folder... option.

1.5 THE GREAT BAY ESTUARY

The complexity of the Great Bay estuary presents a number of assessment challenges. In addition to the CALM (see section 1.2 above) a Technical Support Document for the Great Bay Estuary Aquatic Life Use Support Assessments, 2024 305(b) Report/303(d) List has been prepared to provide supplemental information regarding New Hampshire's 305(b)/303(d) assessments of the Great Bay estuary. This document is meant to provide additional information about how the water quality status of each of the 19 assessment zones was determined. Specifically, this document addresses the water quality data used to determine if the estuary meets the Aquatic Life designated use.

The 2024 CALM has been updated to provide a robust assessment methodology as a translator for New Hampshire's narrative nutrient criteria that differs from the stressor-response matrix previously used (2008, 2010, 2012) to determine total nitrogen impairment. In the 2024 assessment, the department continues to use the indicators listed in the CALM (criteria for dissolved oxygen, thresholds for chlorophyll-a, light attenuation, and eelgrass cover in addition to total nitrogen) and now incorporates measures of macroalgae, dissolved oxygen super-saturation and daily swings, and additional assessments of healthy total nitrogen concentrations. Inherent in this evaluation is a consideration of the quality, currentness, representativeness, completeness, applicability, frequency, magnitude and duration of each

indicator. Collectively, NHDES utilizes a “preponderance of evidence” approach that looks at a stressor-response relationship between total nitrogen and an enlarged set of indicators. It does not tie the impairment decision to a single TN number, rather it implicitly examines the relationship between the stressor and the responses based on the data for each particular Assessment Zone. It is not a ‘one size fits all’ number but rather appreciates the complexities of the site specific interaction between nutrients and biological activity across multiple important factors.

The CALM is a guidance document. As such, the assessment program utilizes the CALM to the extent it can, but often, additional datasets or professional judgment may yield assessment decisions outside of the CALM descriptions. Finally, the approved state water quality standards are the ultimate basis for assessment decisions, not the CALM. It is worth noting that the assessment process is different from the effluent permitting process. While both ultimately rely on surface water quality standards, the development of nutrient limits in permitting activities by permit writers may follow a different path as it requires the calculation of reasonable potential with all discharges discharging at design loads. It is foreseeable that situations may arise wherein the 305(b)/303(d) does not find a waterbody to be currently impaired, but based on reasonable potential analysis, nutrient limits are imposed to prevent impairments. In other words, the 305(b)/303(d) is a planning document that informs, but does not dictate, management decisions.

1.6 NHDES SURFACE WATER QUALITY ASSESSMENT WEBSITE

The department’s [surface water quality assessment website](#) contains the following materials helpful for review of the draft 303(d) List:

- 2024, Draft Consolidated Assessment and Listing Methodology (CALM):
 - Request for Comments on the 2024, Draft CALM.
- 2024, Draft 303(d) List Content Introduction:
 - Appendix A - 2024, Draft 303(d) List.
 - Waters Removed from the 2020/2022 303(d) List.
 - Waters Added to the 2024 303(d) List.
 - Request for Comments on the 2024, Draft 303(d) List.
 - Appendix B - New Hampshire’s Long-term 303(d) Vision and Comments Opportunity.
- 2022 – 2032, Draft TMDL Vision for the Clean Water Act Section 303(d) Program:
 - Request for Comments on the 2022 – 2032, Draft TMDL Vision.
- Other related materials:
 - Technical Support Document for the Great Bay Estuary Aquatic Life Integrity Designated Use Assessments, 2024 305(b) Report/303(d) List.
 - Accessing GIS Layers for the 2024 Assessment.
 - Impairments Removed Since the 2020/2022 305(b).
 - Impairments Added to the 2024 305(b).

- Surface Water Quality Mapper and Watershed Report Cards.
- 2024, Draft Status of Each Assessment Unit.

SECTION 303(D) LIST FORMAT

1.7 OVERVIEW

The Section 303(d) List is provided in Appendix A. As previously mentioned, the Section 303(d) List only includes waters that are impaired or threatened by pollutants that require Total Maximum Daily Load studies (TMDLs). Consequently, the 303(d) List represents a subset of all impaired waters as not all impairments require a TMDL.

The List is sorted by Assessment Unit ID number or AUID (each waterbody has a unique AUID). Each record includes the impaired designated use in that assessment unit and a TMDL priority. Prior to reviewing the assessments, the reader is encouraged to review the 2024 Consolidated Assessment and Listing Methodology, which includes detailed explanations of the various methods used to derive the results described below.

[**APPENDIX A: 2024, Draft 303\(d\) List**](#)

[**APPENDIX B: 303\(d\) Long-Term Vision**](#)