

# **Connecticut DEEP and Partner Resources: Water Quality, Septic System Impacts, and Legal Origins**

**Disclaimer:** This document is intended as a high-level summary of selected Connecticut DEEP and partner resources related to water quality protection, onsite wastewater (septic) systems, and their legislative foundations. It does not represent a comprehensive inventory of all applicable programs, regulations, or data sources.

Information is provided for reference and informational purposes only and may be subject to change as programs, statutes, or guidance are updated. Users should consult official DEEP webpages, the Connecticut General Statutes, and federal regulatory authorities for the most current and complete information.

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**Purpose:** This summary provides an overview of key Connecticut DEEP and partner programs related to water quality protection, onsite wastewater (septic) systems, and their legislative foundations. Each entry includes statutory authority, program purpose, and links to primary resources.

## 1. DEEP Water (Surface and Groundwater) Classification Map

- **Link:** <https://ctdeep.maps.arcgis.com/apps/webappviewer/index.html?id=a23ad81358e749aab86342aed4c2dfe7>
- **Purpose:** Interactive ArcGIS map displaying Connecticut's surface and groundwater classifications under the Connecticut Water Quality Standards.
- **Legislative Origin:** Authorized under CGS §22a-426 and the federal Clean Water Act §§101(a), 303(c); implemented through RCSA §§22a-426-1 to 9.
- **Relevance to Septic Systems:** Groundwater classifications (GA, GAA, GB) define where onsite septic systems may affect drinking water supplies or surface water.

## 2. DEEP Town Water Quality Fact Sheets and Story Map

- **Link:** <https://portal.ct.gov/deep/water/water-quality/water-quality-classification-maps>
- **Purpose:** Town-specific summaries of water classifications, impaired waters, and watershed designations, now being integrated into an interactive story map.
- **Legislative Origin:** Developed under CWA §§305(b) and 303(d), supported by CGS §22a-426.
- **Relevance to Septic Systems:** Provides local context for evaluating septic impacts on groundwater and surface water quality.

## 3. CT DEEP Long Island Sound (LIS) TMDL and Nitrogen Program

- **Link:** [https://portal.ct.gov/-/media/deep/water/lis\\_water\\_quality/nitrogen\\_control\\_program/tmdlpdf.pdf](https://portal.ct.gov/-/media/deep/water/lis_water_quality/nitrogen_control_program/tmdlpdf.pdf)
- **Purpose:** Implements nitrogen reduction strategies to restore dissolved oxygen levels in Long Island Sound.
- **Legislative Origin:** Required by CWA §§303(d) and 303(e); adopted jointly by CT and NY under EPA approval; managed under CGS §22a-430.
- **Relevance to Septic Systems:** Addresses nitrogen loading from onsite septic systems in coastal watersheds.

#### 4. Connecticut State Water Plan

- **Link:** <https://portal.ct.gov/water/water-planning-council/state-water-plan>
- **Purpose:** Provides an integrated policy framework for water resource management across supply, wastewater, energy, and ecological sectors.
- **Legislative Origin:** Mandated by Public Act 14-163 (2014), codified under CGS §22a-352.
- **Relevance to Septic Systems:** Recognizes septic system management as key to maintaining groundwater and surface water quality.

#### 5. Connecticut Nonpoint Source (NPS) Management Plan (2024)

- **Link:** [https://portal.ct.gov/-/media/deep/water/nps/connecticut\\_nps\\_management\\_program\\_plan2024.pdf](https://portal.ct.gov/-/media/deep/water/nps/connecticut_nps_management_program_plan2024.pdf)
- **Purpose:** Outlines Connecticut's strategy to manage nonpoint pollution from land use activities including onsite wastewater systems.
- **Legislative Origin:** Required under CWA §319(b); administered through EPA §319 grants.
- **Relevance to Septic Systems:** Identifies septic systems as contributors of nitrogen, phosphorus, and pathogens to groundwater and surface water.

#### 6. State Watershed Management Plans and Documents

- **Link:** <https://portal.ct.gov/deep/water/watershed-management/watershed-management-plans-and-documents>
- **Purpose:** Watershed-specific plans outlining pollutant sources, goals, and restoration actions.
- **Legislative Origin:** Developed under CWA §§303(d) and 319; supported by CGS §§22a-426 and 22a-430.
- **Relevance to Septic Systems:** Addresses septic systems as controllable nonpoint sources, recommending BMPs and advanced treatment in sensitive areas.

#### 7. NEIWPCC – Long Island Sound TMDL Resource Hub

- **Link:** <https://neiwpc.org/our-programs/pollution-control/lis-tmdl/>
- **Purpose:** Regional coordination resource documenting progress on LIS Nitrogen TMDL implementation.
- **Legislative Origin:** Supported under CWA §§104(b)(3) and 320 (National Estuary Program).
- **Relevance to Septic Systems:** Highlights the need for septic upgrades and maintenance in nitrogen-sensitive watersheds.

## 8. Long Island Sound Partnership – 2025 Comprehensive Conservation and Management Plan (CCMP)

- **Link:** <https://lispartnership.org/2025/06/2025-comprehensive-conservation-and-management-plan-ccmp/>
- **Purpose:** Provides a long-term regional plan for water quality, habitat, and coastal resilience in the Long Island Sound watershed.
- **Legislative Origin:** Authorized under CWA §320 (National Estuary Program); jointly managed by EPA, CT DEEP, and NYSDEC.
- **Relevance to Septic Systems:** Promotes septic system retrofits, advanced treatment technologies, and public education to reduce nutrient inputs.

## 9. Simulated Mean Monthly Groundwater-Transported Nitrogen Loads in Watersheds on the North Shore of Long Island Sound, 1993–2022

- **Link:** <https://doi.org/10.3133/sir20245090>
- Barclay, J.R., Holland, M.J., and Mullaney, J.R., 2024, Simulated mean monthly groundwater-transported nitrogen loads in watersheds on the north shore of Long Island Sound, 1993–2022: U.S. Geological Survey Scientific Investigations Report 2024–5090, 63 p.,

## 10. Comparative analysis and model development for determining the susceptibility to eutrophication of Long Island Sound embayments

- **Link:** [Nitrogen Loading to Long Island Sound Embayments | Vaudrey Lab#10](#)
- Jamie Vaudrey, Charlie Yarish, Jang Kyun Kim, Chris Pickerell, Lorne Brousseau with Justin Eddings, Veronica Ortiz Tanguay, Claudia Koerting, Michael Sautkulis 2013-2015, funded by: LISS & CT Sea Grant & NY Sea Grant

## 11 Second Generation Nitrogen Strategy

- **Link:** <https://portal.ct.gov/deep/water/lis-monitoring/lis-hypoxia-and-nitrogen-reduction-efforts>
- In 2016, CT DEEP developed its Second Generation Nitrogen Strategy which combines existing efforts with new initiatives under one plan. It engages nitrogen reduction efforts in three main focus areas: wastewater treatment plants, nonpoint source and stormwater,

and embayments. Near-term actions that can be taken at the state level to enhance nutrient reduction efforts are proposed for each of the three main focus areas.

- Component projects of the Second Generation Nitrogen Strategy:
  - **Onsite Wastewater Treatment System Study**
  - **Expanded Onsite Wastewater Treatment Study**
- **UCONN CLEAR:** <https://www.youtube.com/watch?v=LK6MGeqQaDU&feature=youtu.be>

## **12. DEEP Contract with CASE: “Evaluation of Onsite Wastewater Treatment System Impacts on Waterbodies in Connecticut with Consideration of Mitigation Strategies and Implementation Actions.”**

**Link:** <https://ctcase.org/>

DEEP is in the final stages of contracting for this project with CASE using EPA LIS funds:

**Purpose:** The purpose of this Contract is for DEEP to provide LIS Program funds to the Connecticut Academy of Science and Engineering, Inc. (“Contractor” or “CASE”) to fulfill the following major objectives: (1) scientifically evaluate the existing body of information regarding onsite wastewater treatment systems (OWTS) as sources of nutrient impacts on Connecticut’s waterbodies, specifically Long Island Sound and its embayments (2) determine appropriate mitigation strategies; and (3) identify potential implementation actions which may include innovative/alternative treatment systems, policy changes, regulatory changes, and funding strategies.