The Natchaug River Healthy Watershed Implementation Plan

At Mansfield Hollow Lake in Mansfield, three rivers join together, the Natchaug, Mount Hope and Fenton Rivers. The Connecticut Department of Energy and Environmental Protection (DEEP) in conjunction with US Environmental Protection Agency (EPA), has determined the Natchaug River basin to be an example of a healthy watershed in Connecticut due to the limited impacts from development in the watershed. This project, a first of its kind in Connecticut, will result in the development of a protection plan to maintain and enhance existing water quality from unnecessary pollution. The plan will provide management guidance for the growing upstream communities of Ashford, Chaplin, Eastford, Mansfield, Union, Willington, Windham, and Woodstock. While issues have been identified, the water quality found in the wetlands, streams and lakes of these towns is generally of high quality and contributes to the quality of life in the region. Healthy watersheds also contribute to good quality and sufficient quantities of groundwater, from which most residents and businesses draw their drinkable water. The customers of downstream Windham Water Works also benefit as the Natchaug River watershed is the source of their drinking water.

Did you know?

- The Natchaug Watershed upstream of the Mansfield Hollow Dam is about 164 square miles.
- The beautiful landscapes and clean water in the Natchaug River Basin supports an ecotourism industry, including cottage rentals and campgrounds, as well as a popular white water kayak run above Diana's Pool in Chaplin.
- The Natchaug River is a Trophy Trout Park. DEEP Fisheries Division also maintains a northern pike spawning habitat area in tributary waters adjacent to Mansfield Hollow Lake.
- Forests make up over 74% of the watershed land cover and are an essential part of promoting groundwater recharge. This, in turn, helps maintain stream flow during dry periods and the overall healthy water quality in the streams. These extensive forest areas also attract fall leaf peepers to visit the region.

In 2011 - 2013, the 8 towns within the Natchaug watershed participated in a Conservation Action Planning process that culminated with a signed Natchaug River Basin Conservation Compact. This commits the towns to working cooperatively to balance conservation and growth in the watershed.

- The Connecticut Forest and Parks Association manages almost 60 miles of its Blue Blaze Trail System within the Natchaug watershed. Additional hiking opportunities are available at the Nipmuck and Natchaug State Forests and lands managed by local land trusts.
- Stormwater runoff is a potential stressor to water quality in local wetlands, streams and lakes.
- Currently, developed land comprises less than 8% of the overall Natchaug watershed. We typically begin to see water quality impacts when developed land is greater than 12%, or when development is concentrated near rivers.
- Stormwater impacts from developed land can be significantly reduced by maintaining naturally vegetated buffers areas along wetlands, streams and lake shorelines.

By carefully siting new development, and planting vegetation along wetlands, streams and lakes, the Natchaug watershed can continue as a healthy watershed.

- Residents and businesses within the Natchaug River watershed have a big influence on water quality. You can help keep the water clean and healthy by maintaining on-site septic and wastewater treatment systems, reducing the size of lawns and hard (impervious) surfaces, especially near wetlands, streams and lakes and reducing use of fertilizers, herbicides and pesticides.

Frequently Asked Questions

What Is a Healthy Watershed?

Ideally, a healthy watershed has the ability to provide:

- habitat that connects and sustains native aquatic and riparian species;
- native vegetation in the landscape to maintain the natural flow of water through the environment (including recharge of groundwater) and nutrient and organic matter inputs essential to maintaining healthy underwater and streamside environments;
- a place of refuge or critical habitat (e.g., deep pools, seeps and springs, cold water tributary junctions for survival during droughts -- all supported by sufficient water levels in lakes and streams);
- natural hydrology (wetlands, river flow and lake water levels) that supports aquatic species and habitat;
- a dynamic system in constant change that provides for a variety of natural habitats.
- natural disturbance regimes (e.g., floods and fire) over time on which many living organisms depend;
- water quality that supports aquatic and streamside communities and habitat.

Healthy watersheds range from those undisturbed by humans to developed areas that still retain some healthy components and habitat connections.

How was the Natchaug watershed selected for this project?

Healthy watersheds were identified state-wide using professional, scientifically sound, strategic, integrated assessments based on ecological, social and stressor indicators. DEEP conducted these assessments in collaboration with EPA, which then were prioritized. This resulted in the selection of the combined Natchaug and Mount Hope River basins as one of the initial, limited priority watersheds for this designation in Connecticut.

Who will be preparing the Natchaug River Healthy Watershed Protection Plan?

The Eastern Connecticut Conservation District (ECCD), working with DEEP and local stakeholders will meet a minimum of 4 times over the course of the project to participate in forming the plan. Information about plan components is also being exchanged in public formats including a Naturally Natchaug newsletter and on social media; Naturally Natchaug on Facebook and @NaturallyNatchaug on Instagram, and on the ECCD website https://conservect.org/eastern/current-projects/ under Water Quality Investigations.

How Is a Healthy Watershed Plan Developed?

DEEP has been carefully reviewing existing data to identify the current watershed condition and determine potential threats to water quality. From this data, DEEP will develop a pollution budget for the Natchaug watershed. ECCD is using this information to work with a group of local stakeholders, including municipal officials, conservation and land use professionals, to find opportunities to minimize impacts from potential pollution sources. A timetable with strategies, actions and assignments will be developed. Then stakeholders will reconvene to review the recommendations and provide comment, after which ECCD will draft the final Natchaug Watershed Protection Plan.

If the watershed is healthy, why do we need a plan?

The rivers in the Natchaug watershed are currently supporting healthy diversity of fish and aquatic organisms because of limited development, protective land use practices, and extensive forest and wetlands. It is rare to have such a large, healthy watershed in CT. All of that can change. There needs to be a regional plan in place to balance future growth through thoughtful, scientifically-sound land-use policies and practices.

Will the Plan be a regulatory document that dictates how the land in my town can be developed?

No, this Plan will be advisory for municipalities within the watershed. Project partners will encourage each municipality to adopt the plan's guiding principles and include them in their respective Plans of Conservation and Development and integrate them with regional Council of Government planning.

If you have questions, or would like to join the Natchaug River Healthy Watershed Stakeholder Group, please contact Jean Pillo at Jean.Pillo@Comcast.net

Water Quality Conditions in the Natchaug Watershed

The Connecticut Department of Energy and Environmental Protection (DEEP) develops the Connecticut Water Quality Standards and Classifications (CT WQS&C), last updated in 2013, to define standards and classifications for both surface and ground waters. Across the state, DEEP monitors many parameters, some with set numerical or narrative limits, providing criteria necessary to support designated uses.

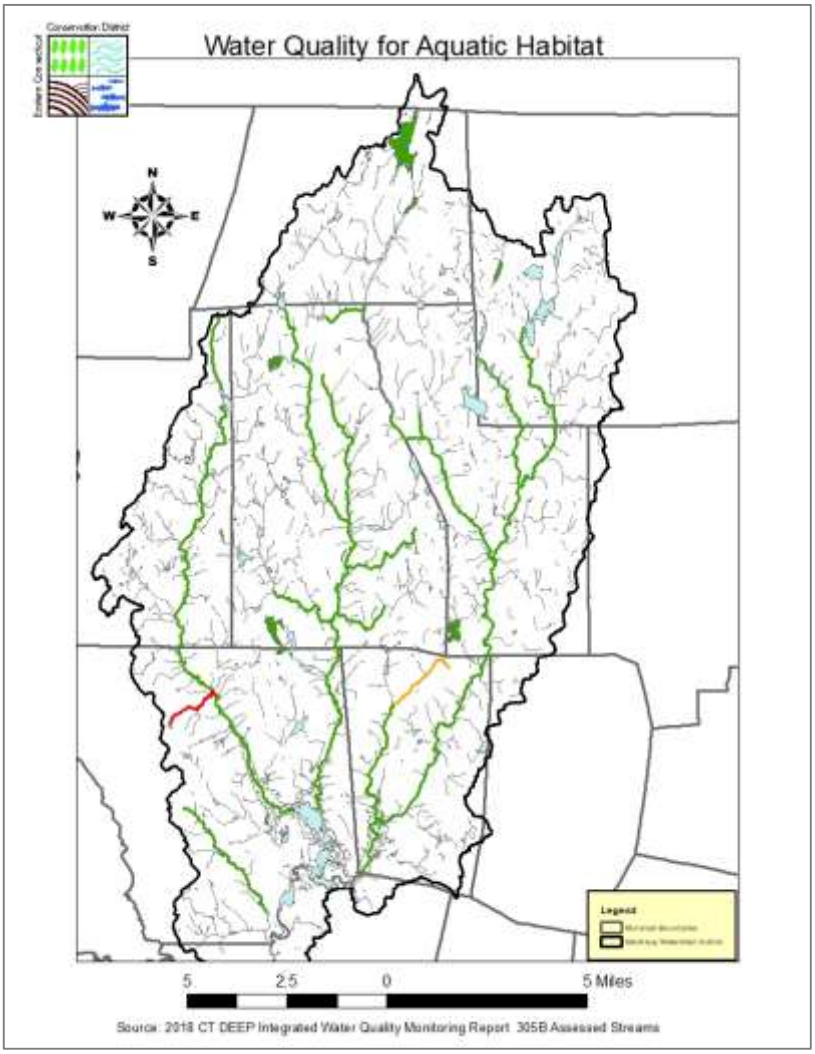
Under the federal Clean Water Act (CWA), DEEP is required to prepare an Integrated Water Quality Assessment Report for the US Congress every two years. The Integrated Water Quality Assessment Report summarizes the water quality conditions in Connecticut based on current data.

Drinking Water Supply

The Natchaug Watershed above the Willimantic Reservoir has been classified Class AA in recognition as a source of surface drinking water. The permitted uses for streams and lakes above a drinking water supply intake include fish and wildlife habitat, recreation (may be restricted), and agricultural and industrial supply. Unpermitted wastewater discharges are not allowed. The Connecticut Department of Public Health administers the federal Safe Drinking Water Act (different from CWA) and DEEP cooperates with those efforts.

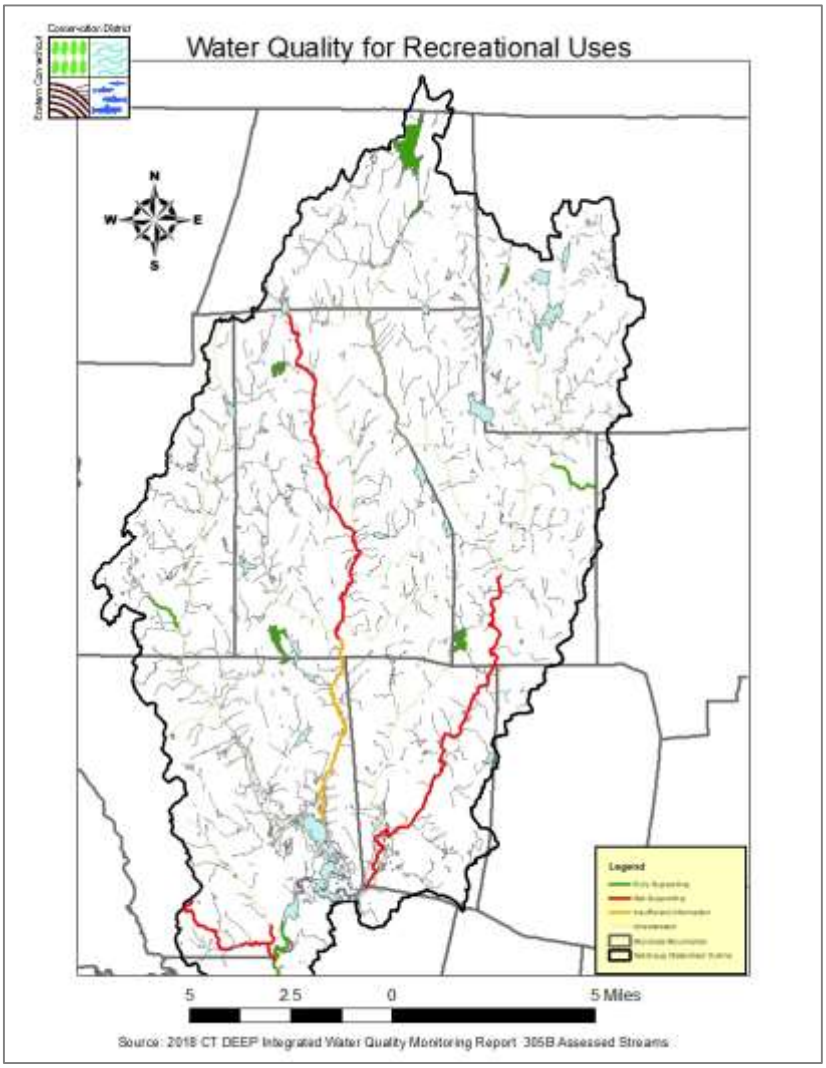
Aquatic Life Use Support (ALUS)

In the CT WQS&C, the ALUS or "fishable" category, includes not just fish, but also bugs that live underwater in the stream bed, is referred to as Aquatic Life Use Support. On the map below, you can see where DEEP, assisted by trained water quality monitoring volunteers, has collected water data that shows where the streams are meeting those standards. The one current exception in the Natchaug watershed is Roberts Brook in Mansfield where the sources of the water quality issues have not yet been determined.



Recreational Use Support

The other broad category for water quality is Recreational Use Support. There are a range of water-based activities for which people use the Natchaug watershed streams and lakes: swimming, water skiing, tubing or other full body contact activities (primary contact), as well as boating, canoeing, kayaking, fishing, aesthetic appreciation or other activities that do not require full body contact (secondary contact). In order for people to not become sick from accidently consuming the water while enjoying these activities, DEEP has set numerical standards for pathogens. They use an indicator organism, *Escherichia coli* (aka *E. coli*) to estimate the presence of disease-causing organisms, or pathogens, in fresh water. Criteria for primary contact are stricter than secondary contact.



The map above shows that the Mount Hope River upstream of the Route 89 crossing near the Ashford Volunteer Fire House does not meet the recreational standard criteria. The Natchaug River at the confluence of Bigelow Brook and Still River in Eastford all the way downstream to the Mansfield Hollow Reservoir inlet also does not meet those standards in the 2018 assessment, but is likely to be upgraded to meeting the requirements in the 2020 CT Water Quality Assessment Report based on new data. Randomly assessed streams including Indian Hut Brook (Eastford/Pomfret) and Eldredge Brook (Willington) are meeting CT DEEP standards for recreational contact.

Municipal or private lake data is not included in these water quality summaries. Further assessment of these resources is recommended.

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