

Town of Newbury

Handout - Proposed Septic Rules Nov 6, 2023

What is the Lake Sunapee Watershed?

The Lake Sunapee Watershed is the 47 square mile that drains into the Sugar River via Lake Sunapee

Contained primarily in the Towns of Newbury, Sunapee, New London, and Springfield

Includes 13 lakes and ponds, as well as brooks and streams in the area

Newbury also has water bodies that drain into the Merrimack River.

Everything Ultimately Drains Into our Waterbodies

Good or bad everything in the watershed finds its way into our streams, lakes and ponds

From all land in the watershed not just “waterfront” properties or those in the Shoreland Overlay District

The Newbury Shoreland Overlay District is defined in Newbury’s zoning code:

Any area within 250 feet of:

Lakes and ponds

Permanent brooks and streams

For a list lakes, ponds and streams see appendix

What finds its way into our water?

(data available from [LSPA Watershed Management Plan](#))

Pesticides

Fertilizers

Phosphate based detergents

Contaminants from failed septic systems

Road salts and sand

Uncontrolled stormwater runoff contains all these pollutants

Numerous Factors are Increasing the Stresses on our Groundwater, Lakes, Ponds and Streams

As Population in watershed towns grow and development increases, so do the pollutants and nutrients draining into our water

New construction reduces groundcover, increases paved and impermeable surfaces, and increases runoff

Runoff is exacerbated by the more frequent and intense rainstorms we are experiencing

New and larger homes, and more year-round residents, dramatically increase septic loads.

Building is occurring increasingly on steep slope sites and worsening runoff.

Increase in Short-term rentals with their increasing septic loads

FACT: Water Quality in the Lake Sunapee Watershed is Declining

Conductivity is a measure of impurities in the water (dissolved substances, chemicals, and minerals)

This measure is increasing in Lake Sunapee and watershed tributaries

Significant hotspots exist including Chandler Cove and Wild Goose in Newbury

Salt (chloride) concentrations are high in specific hotspots including Blodgett's Landing, Chandler Brook, and Beck Brook in Newbury

Phosphorus concentration hotspots include Chandler Cove and Wild Goose in Newbury

Turbidity, a measure of water cloudiness, was ten times greater than normal after these year's heavy rains

The number of cyanobacteria alerts in NH are at an all-time high ([Union Leader report](#))

E coli closures have increased over the years at the State Beach in Newbury

The Major Contributors to Water Quality Decline are Well Understood

Septic failures and leaking/faulty septic systems (where failure is not obvious)

Road salts and sands

Pesticides and fertilizers

Poor erosion control and ineffective stormwater management

Failing and Poorly Maintained Septic Systems Pose Major Health Risks

Septic systems that are poorly designed/or improperly maintained are known to contaminate drinking water, wells and surface waters.

Contaminants released from septic systems include bacterial and viral pathogens, pharmaceuticals, and nutrients including phosphorus and nitrogen. These contaminants have negative consequences for human health.

Nutrients added to lakes, rivers and streams lead to algal and cyanobacteria blooms, further reducing water quality, impacting human health, and disrupting important ecosystem processes.

Excessive levels of phosphorus have already resulted in the impaired status of 65 lakes in New Hampshire.

A Decline in Water Quality is Directly Related in a Decline in Property Values and the Local Economy

Recent [articles](#) have also highlighted risks to property values caused by growing cyanobacteria epidemic

Numerous studies have shown that a decline water quality is bigger than just the environmental and health impact

Newbury's local economy is dependent upon Lake Sunapee

Tax Valuation of Lake Sunapee is estimated at over \$52 million by [Dartmouth Study](#)

Seasonal homeowners and visitors drive business at local hotels, restaurants, retail shops

Contractors and tradesmen, landscapers, depend on residential properties

Declining Water Quality has Consequences for Recreational Activities and Quality of Life

Limitations on recreational activities will hinder the appeal of the whole region (Boating, Kayaking, Swimming, Fishing)

The State of Septic Systems in Newbury are Likely Worse than is Apparent

Failing septic systems are obvious (soggy lawns and sewage backed up in basements), but poorly maintained systems can leak effluent that is not always apparent to property owners

Based on results in other towns, 20% and 50% of septic systems will fail or have issues in the first round of pumping/inspection

Here are results in other places: (CP means Conditional Passed)

Otsego Lake Watershed Management Study / NY: They started inspections in 2005 on a 5-year cycle. In 2006 they reported 180 failures out of 337 inspections.	58% Fail at Cycle 1
Queensbury NY / Town Inspection Spreadsheet created by the town.	17% Fail at Cycle 1 40% CP at Cycle 1
Canandaigua Lake Watershed NY / has required inspections since 2018. Inspector, in a telcon, provided the following data.	17% Fail at Cycle 1 60% CP at Cycle 1
Lake George NY – Dave Wick LGPC / Related data from their studies on many lakes that is being used to write new inspection rules for Lake George	50% Fail at Cycle 1 4% CP at Cycle 2 4% CP at Cycle 3
Massachusetts Title 5 / Requires inspections since early 1990’s. In 1995 NPR reported one in four systems failed to meet standards.	25% Fail

It is important to note that conditions quickly improve in subsequent cycles with only approximately 5% having issues.

New Hampshire State Law Only Regulates Septic Failures

State Laws dictates what happens after a septic system fails (and the damage is our done and health risks are already occurring.)

Property owners are responsible “to operate and maintain systems to prevent failure” but the law specifies no requirements to do so and places the burden of enforcement on the town.

The rules being proposed in Newbury strive to prevent septic failure before contaminants leach into ground water, wells and water bodies.

Proper Septic System Maintenance

Regular and timely septic pumping is the single best way to avoid septic failure

Failure prevention is substantially less costly to property owners (\$300 to \$500? every 3 years) than remedying septic failure (tens of thousands of dollars)

Although difficult to precisely calculate the phosphorus load into NH lakes from septic systems (as opposed to other non-point sources)

There have been measurable reductions in phosphorus levels – and improvement in overall water quality in lakes where systematic efforts were made to address maintenance of septic systems

The consequences of neglect are not purely on the owner, calling for the need for community level action

The water table is all connected, and water, over time, flows downhill through the streams and ponds of our watershed. The consequences of neglect are shared and adversely affect the health and quality of life of all who live, work and play here.

What are the Septic Rules Being Proposed in Newbury?

The Town of Sunapee recently adopted a Health Ordinance detailing Septic Rules which are being used at starting template in Newbury

Requires septic pumping every 3 years in the Shoreland Overlay District

A copy of pumping service invoice to be submitted to town as proof

Exceptions can be granted for seasonal and low occupancy (2 or less) properties

Sunapee moved forward without specific enforcement requirements

Officials believe education and notifications alone will drive 95+% compliance

Notification requirement to all effected households

When property is sold or transferred, a copy of the Waterfront Property Site Assessment Study (required by NHDES) must be submitted to the Town by seller or their Agent) within 10 days of the sale of property.

Other Considerations for the Town of Newbury

Should the rules apply to all homes in town, all of which impact the watershed?

Should enforcement and actions for violations be spelled out?

Can financial assistance be arranged for qualified households dealing with a failed septic system?

Appendix:

A list of lakes, ponds and streams from Newbury Zoning Ordinances / Article 7.3

The Shoreland Overlay District extends two hundred-fifty (250) feet inland:

The following lakes and ponds: Lake Sunapee, Lake Todd, Lake Solitude, Doctors Colony Pond, Chalk Pond, Gillingham (Otter) Pond, Loch Lyndon and Mountain View Lake.

The following permanent Newbury streams: Andrew Brook, Bartlett Brook, Beal's Brook, Beck Brook, Blodgett Brook, Blodgett Brook South, Blood Brook, Hemlock Brook, Mountain Brook, Chandler Brook, Cunningham Brook, Gillingham Brook, Gunnison Brook, Johnson Brook, Morse's Brook, Newbury Harbor Brook, Pike Brook, Reservoir Brook, Ring Brook, Shaw Brook, West Branch North, West Branch South, Roaring Brook (the northerly stream entering Chalk Pond on its southwest shore), and Bly Brook (the southerly stream entering Chalk Pond on its southwest shore).

data available from [LSPA Watershed Management Plan](#)

<https://www.lakesunapee.org/2020-wmp>

Cyanobacteria alerts in NH are at an all-time high ([Union Leader report](#))

https://www.unionleader.com/news/environment/a-record-year-so-far-for-cyanobacteria-in-nh-lakes-ponds-and-rivers/article_8ee91f57-a711-5270-af7e-6c6cb629b92c.html#:~:text=The%20state%20is%20on%20its,in%20contact%20or%20ingest%20them

Recent [articles](#) have also highlighted risks to property

<https://cottagelife.com/realestate/do-blue-green-algae-blooms-impact-waterfront-property-prices>

Valuation of Lake Sunapee estimated by [Dartmouth Study](#)

<https://rockefeller.dartmouth.edu/report/valuation-lake-sunapee>