

Lake-Friendly Landscapes

Maintenance for All Seasons



The biggest influence on lake water from landscapes: Runoff

Runoff mitigation: sediment and chemicals pollute the lake

Good landscaping practices are **aware**, **careful**, and **creative**.

- Be **aware** of how our current landscape may be effecting the lake, and aware of how changes may effect the lake.
- Make **careful** decisions and take care in our actions (both legal and socially responsible).
- Be **creative**: Find solutions which give us desired outcomes while being mindful of the lake.



Landscape Maintenance Programs Can Reduce the introduction of chemicals to the watershed and encourage healthy plant life to mitigate runoff and erosion.



The Department of Environmental Services has rules and regulations designed to protect the lake. These are enforced through the permitting and site review process for landscape construction, and application and practices parameters for maintenance services.

For the DIYer permitting information can be found at

<https://www.des.nh.gov/>

The Department of Agriculture has rules and regulations regarding the application of, and qualifications for applying pesticides.

There are a number of different permits and licensures for the application of pesticides. The most common for a homeowner is the General Use Permit.

More information can be found at

<https://www.agriculture.nh.gov/>

Lawn Care

Without the use of chemicals...

Mulching

Mulching is the best way to reintroduce nutrients into your lawn which may otherwise be removed in the mowing process.

Make sure you're using a mower and blade capable of mulching. Most, but not all mowers and blades can mulch.

Check your thatch before you mulch. Mulching onto a layer of more than $\frac{1}{2}$ " of thatch will compound your excess thatch problem.

Bagging and removing lawn clippings should occur if:

- You are mowing particularly tall grass
- Diseased areas or Weeds are being mowed
- You are mowing over leaves or other materials



Lawn Care

Without the use of chemicals...

Dethatch, Aerate, and Over-Seed annually.

Thatch is a natural, healthy part of a lawn, but if allowed to become too thick it can become a barrier to the absorption of water and nutrients.

Dethatch your lawn in the early spring or early fall when the turfgrasses are growing and soil has moderate moisture.

Aeration of a lawns introduces holes into the topsoil. These holes allow for water and nutrients to pass easier into the soil beneath the grass and thatch layers.

Over-seeding introduces new turfgrass seeds into your lawn to help assure good coverage and color.

Over-seeding has best results when done in the fall, ideally accompanying dethatching and aeration.



Lawn Care

Without the use of chemicals...

Add Compost (Top Dress)

Lawns benefit from the added nutrients compost adds to the soil.

Apply compost 1-2 times a year in spring and fall.

(accompanying dethatching, aeration, and over-seeding can be an ideal time for this)

Spread compost to be no more than $\frac{1}{2}$ of an inch thick, with an ideal depth of $\frac{1}{4}$ inch.

Your compost consistency should be fine grain with little to no clumps in excess of $\frac{1}{2}$ inch.



Lawn Care

Without the use of chemicals...

Do not over-cut or over-water your lawn

Mowing frequency is one of the biggest influences on turfgrass health.

Mowing should never remove more than 1/3 of the grass blade

It's ideal to set your mower to the highest setting and increase your frequency of mowing. Weekly mowing is commonly a good rate, but environmental factors will influence this.

Do not mow when the grass is wet.

Watering frequency is one of the biggest influences on root health.

Over-watering can lead to runoff, discourage root growth and depth, and encourage fungal and disease growth.

Watering should only occur when needed, and the early morning hours are the best time to water your lawn.



Lawn Care

With mindful use of chemicals...

If you choose to introduce any substance to your lawn, it is important to be mindful of application rates, setbacks from the waterfront, and environmental conditions.

It's a good idea to apply any substance to your lawn or plants at an application rate of $\frac{1}{3}$ the manufacturers suggested rate, and apply 1-3 times as needed over several days or weeks. This will reduce waste and help curb non-absorption. Often you'll find you do not need to continue to a second or third application.

Applications on a lawn are best absorbed after dethatching and aeration.

Organic fertilizers are preferential to chemical applications, but they can still have adverse effects on water quality and should not be used in excess.



Lawn Care

With mindful use of chemicals...

NO pesticides can be used within 50 feet of a body of water 10 acres or larger, or adjacent to a 4th order or larger stream/river.

Regarding bodies of water 10 acres or less a minimum 25' setback is required, but could be greater based upon individual town laws.

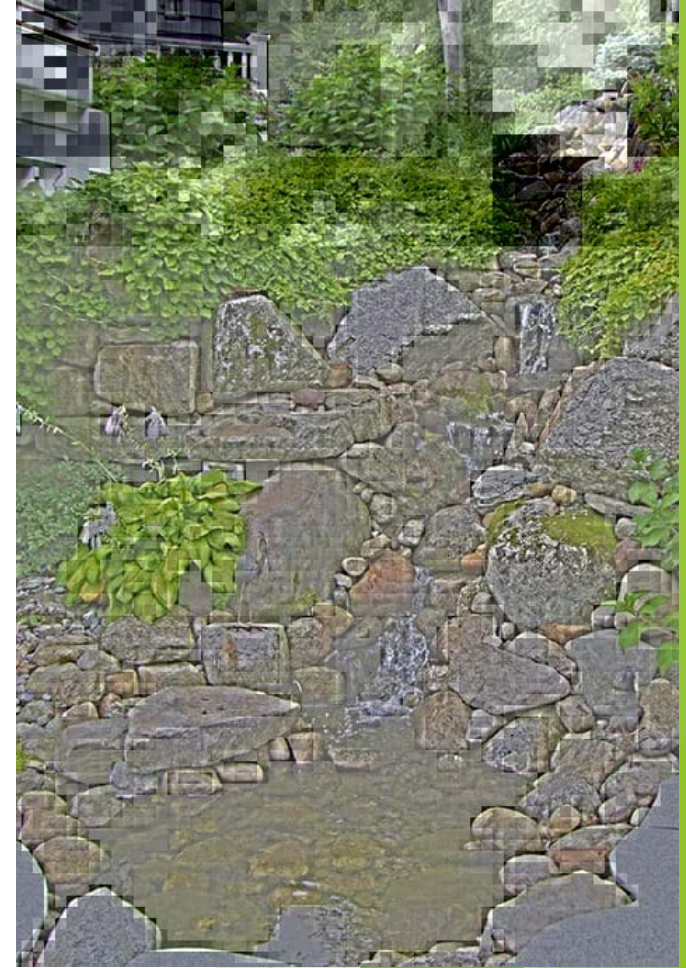
This includes organic pesticides that have an EPA registration number.

NO fertilizer can be used within 25 feet of a body of water 10 acres or larger, or adjacent to a 4th order or larger stream/river.

This includes Phosphorus free fertilizer and Organic Fertilizers that have a N-P-K rating.

There are no expressed setbacks for the use of Lime and Wood ash.

Public Water Supply Setbacks- In the state of New Hampshire there are many public drinking water intake areas in our lakes. The NHDES mandates a 250' setback of any pesticide within a 5 mile radius (upstream) of this intake.



Lawn Care

With mindful use of chemicals...

Common Questions:

Is an insecticide a pesticide?

YES. Pesticide is the overall category name for herbicides, insecticides, fungicides, etc.

Can my Round 1 lawn fertilizer that prevents crabgrass be used within 50' of the water since it's a fertilizer?

NO. Because it is not only a fertilizer, but contains a pesticide (for crabgrass).

Do I need to worry about setback laws with organics?

Yes. For the reasons stated above, and because organics can have detrimental effects on water quality too!

How does my neighbor have such a plush, green lawn all the way up to the waterfront?

Hard work, careful planning, different conditions, luck....or other means.

As long as I follow setback laws I'm good right?

No. Following the setback laws may keep you out of legal trouble, but they do not guarantee you're being lake-friendly. Your property conditions such as slope, natural or garden buffers, the condition of your turf, how you apply chemicals, and other variables all have influence....sometimes more so than the setback distance.



Soil pH

What to know so it will grow...

Soil pH is a measure of acidity or alkaline assigned a numerical figure.

pH can be measured with kits and tools commonly available at retailers that sell gardening supplies. There are also services which will analyze soil samples you mail to them.

Lawns thrive best at soil pH levels between 5.8-7.2

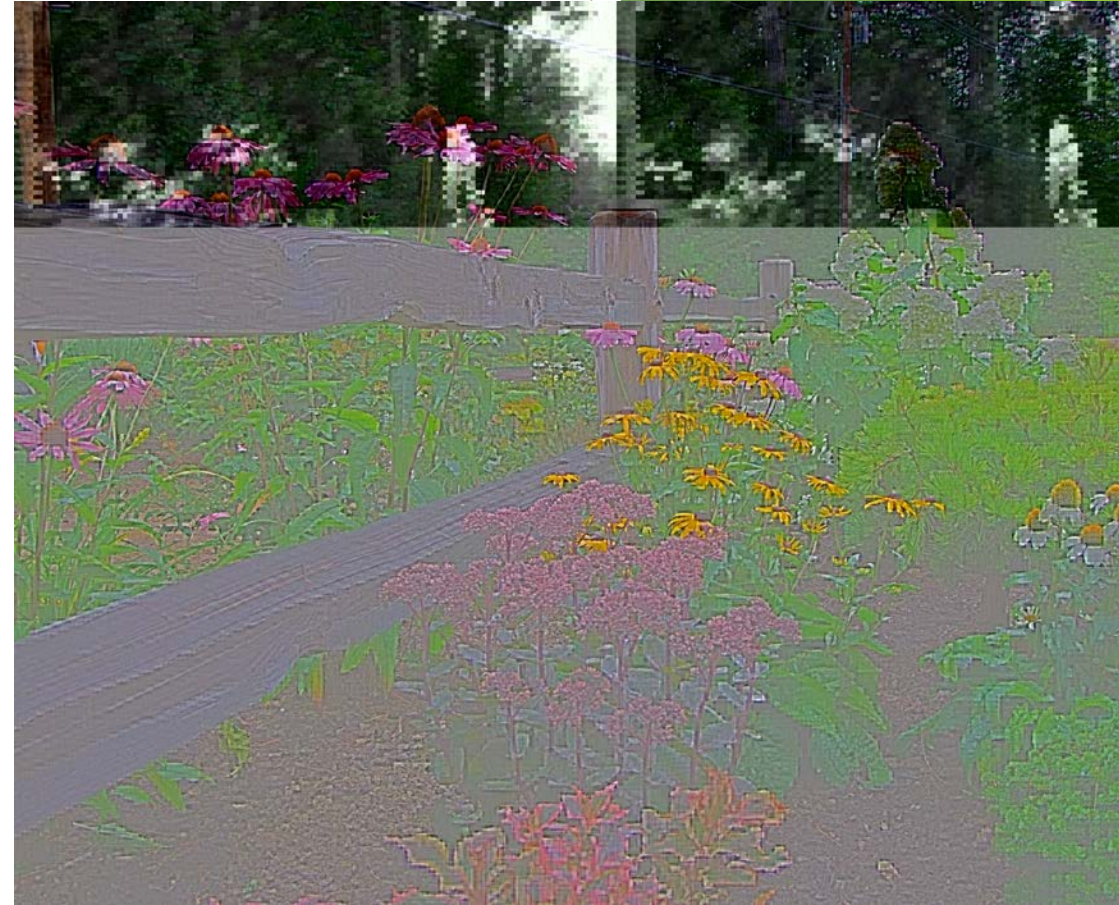
Other plants vary, but 6.5 pH is a good general guideline for most plants in our area.

Soil pH can be adjusted by adding soil amendments.

Lime will increase soil pH

Sulfur will lower soil pH

In highly acidic or alkaline soil, consider introducing plants that thrive in the existing soil, as opposed to amending the soil.



Caring for your plants and trees

Your plants and trees are exceptionally important to mitigating runoff and supporting good water quality.

A good care program for your plants may include pruning to encourage growth, mulching to help the soil retain water and discourage weeds, and an annual inspection for damage or disease.

Weeding is best accomplished by hand.

If you choose to utilize fertilizer for your trees or shrubs, the deep root method tends to be more effective, and is typically more lake-friendly.

Water sparingly, and only when needed. Drip irrigation is less likely to create a runoff concern. Once the ground is saturated, discontinue watering.

In the late fall, utilizing burlap, wing or snow shields, mulch or other methods to shield your plants from harsh winter effects can reduce winter die-off.

Native plants are, by far the most viable choice for our climate and waterfront properties.



Caring for trees

Check for missing foliage and damaged or sagging limbs annually

Is there evidence of a pest infestation?



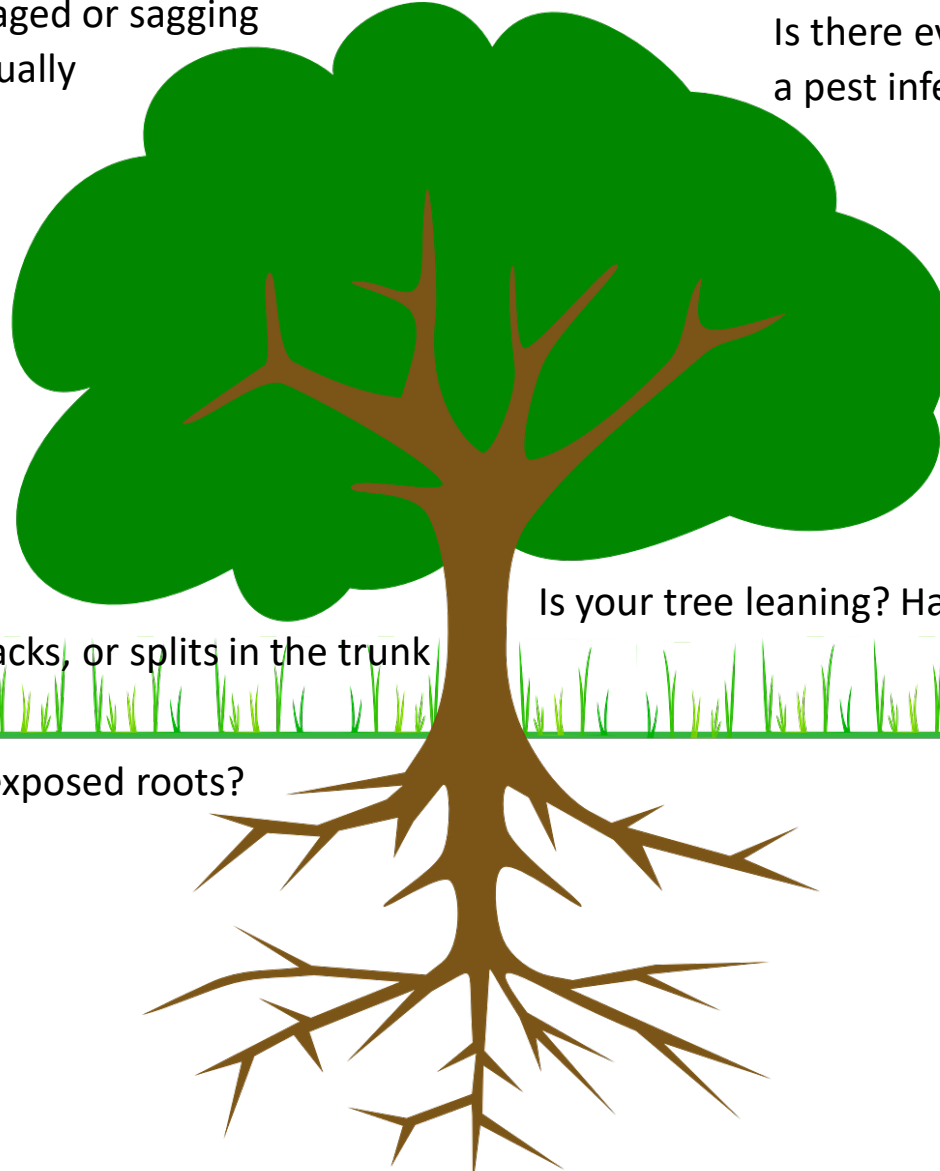
Look for areas of discoloration, fungal growth, and mold



Check for damage, cracks, or splits in the trunk

Is your tree leaning? Has an existing lean become more pronounced?

Are there damaged or exposed roots?



If you see evidence of tree damage, pest or disease concerns, or hazardous conditions, contact an ISA Certified Arborist



How to recognize runoff & erosion concerns

One of the most expressive illustrations of runoff or erosion problems is exposed earth. Areas where plant life or ground cover has been disturbed or washed away.

Erosion typically also is expressed in unstable areas on a property. This can be expressed through areas where earth is breaking apart, receding, or losing its cohesion with the surrounding areas.

Runoff may also be expressed in areas where sediment is accumulating. Look for a convergence of sediment in an area of water, along the shore, a bend or turn in a pathway, or low spots on your property.

Finally, consider “taking a walk in the rain”. The best way to understand how excess water is shed from, or effecting your property is to inspect what happens when excess water is introduced. Inspecting your property during a rainstorm will help you realize a better understanding of any concerns you may be experiencing.



Snow and Ice Management

The introduction of snow and ice management materials to our local properties and roadways is a significant contributing factor to drinking and lake water quality concerns in our area.

Specific concerns are primarily based upon the introduction of chemicals and sediment into the watershed. Salt, and Ice Melt products typically remove ice through a chemical reaction. Sand and other sedimentary aggregates are primarily used to create traction on slippery iced surfaces. The best way to protect our water quality is to properly manage, and reduce the use of these materials.

In NH, the Department of Environmental Services in conjunction with UNH has created a training and certification program called Green SnowPro to assist in learning how to manage and reduce the use of these materials.



Snow and Ice Management

The NH Green SnowPro program focuses on ways to reduce the use of chemicals used to manage snow and ice during the winter.

In order to become certified in SnowPro, professionals must take a course, and pass an examination that focuses on topics like:

- How snow melt chemicals work
- The negative effects on over-use of chemicals
- Proper application rates of chemicals
- How to set, adjust, and test their equipment for proper application rates.

Certification must be renewed annually by attending refresher courses bi-annually.

SnowPro certified companies must also track and report their chemical usage to the NHDES



Snow and Ice Management

Using Salt and Ice Melts

Salt and ice melts break down as they work. This can make them particularly troublesome because they are more easily dissolved in water, absorbed into the ground, or carried in runoff.

When using these materials, the goal should be to use as little as possible to achieve the needed results.

Be realistic in what results you need, and what areas need to be ice-free as opposed to what areas need to be slip-resistant.

As it gets colder, salt and most ice melts become less effective. At a temperature of **30 degrees** (F), one pound of salt (sodium chloride) will melt 46 pounds of ice. But, as the temperature drops, salt's effectiveness slows to the point that when you get down near **10 degrees** (F) and below, salt is barely working.



Snow and Ice Management

Using Sand

Sand is an effective way to make ice slip resistant.

In order for sand to be effective it must be applied to, and remain on the top of the ice. This makes thaw and freeze cycles challenging for solely using sand. As a result, sand may need to be reapplied regularly.

Sand does not dissolve in water, making it easier to manage and remove from your property after winter.

Sand can be carried in runoff, and as a result anti-runoff efforts should be made.

Use only clean sand intended for the purpose of snow and ice management.



Snow and Ice Management

Snow Management

Be mindful where snow is plowed. Snow carries chemicals and debris with it as it is plowed. Snow banks can create a concentration of chemicals and sediment in an area, and as they melt, runoff is a concern.

Ideally snow banks will be placed in areas which slope away from the waterfront and are mindful of post-season cleanup efficiency. Sand for example is most easily removed from paved or hard surfaces.

Snow and ice that is plowed into, or allowed to accumulate in drainage features like catch basins, drains, swales, and dry river beds can render these features ineffective.

Make your snow and ice management plan in the fall. Walk your property with your service provider and make note of areas where snow should be stored and the direction of plowing.



How to Get Started

For Do-It-Yourselfers



Participate in the LakeSmart program to learn about changes you can make to your property.

Local engineers or surveys with working knowledge of your area.

Utilize the available resources on nhlakes.org

Educate yourself on ice melting methods and alternatives

Get the right equipment. Snow blowers can reduce the accumulation of snow banks and their respective concerns.

Plan ahead, and know your plan before the first snow storm.

How to Get Started

Hire a Professional

Not all professionals are qualified to work responsibly on waterfront or watershed properties.

Consider hiring a NH Green SnowPro certified contractor. <https://www.des.nh.gov/> (Search SnowPro)

Experience matters. Look for a provider with a proven track record of successful and responsible service of water front and water shed properties.

Quality landscape firms will be insured, hold multiple certifications, and show a willingness to answer your questions about their qualifications.

Walk your property with potential service providers. Ask questions about how they will assure you quality services in a lake-friendly manner. Get specifics.



About Us

Belknap Landscape Company

Servicing all of the Lakes Region

Over 30 years proven experience

Business Member of NH LAKES

Winner of 2 NH Home Magazine Design Awards

Winner of 17 NH Home Builders Cornerstone Awards

BBB Accredited

Best of Houzz 2017-2020

Certifications from

- NH Landscape Association
- National Association of Landscape Professionals
- International Concrete Paver Institute
- International Society of Arborists
- Tree Care Industry Association
- NH SnowPro



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