

ENVIRONMENTAL Fact Sheet



29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

SP-5

2020

Vegetation Management for Water Quality

New Hampshire's waterbodies provide benefits we all enjoy: fishing, boating, and natural beauty to name a few. As communities grow and New Hampshire's landscape changes, the quality of our public waters depends on each of us managing the vegetation on our property. Nature's most economical and efficient water purification system is a combination of native shoreland plants.

Stormwater runoff is water from rain or melting snow that does not soak into the ground. Plants help remove the oils, salt, heavy metals, fertilizers, and other contaminants from stormwater runoff before they enter our lakes and rivers. Even the dense mats of leaves and needles under trees play a unique role in purifying our water. The best vegetation for healthy waterbodies are native plants, such as oaks, pines, willows, and blueberry bushes. Native plants slow down, absorb, and purify much more stormwater than plants with shallow roots typically found in lawns and mulched garden beds. Plus, birds, fish, and insects rely on the shade, protection, and fruits provided by native shoreland plants.

To protect water quality and wildlife habitat, the Shoreland Water Quality Protection Act (SWQPA) regulates the removal of ground cover, shrubs and trees within 150 feet of public waters. This distance is measured from the reference line. Within 150 feet of the reference line there are two regions, the **waterfront buffer** and the **woodland buffer**, shown below (Figure 1). The regulations on vegetation management are different within these regions and are explained in the following pages.

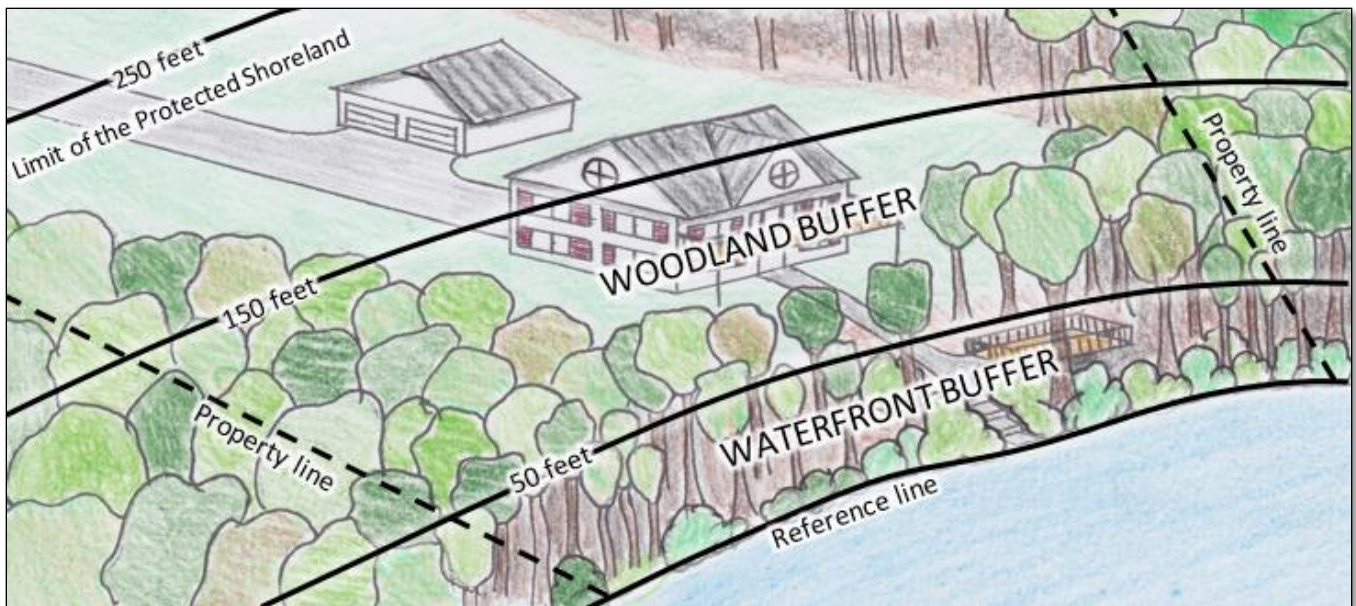


Figure 1 - Areas within the protected shoreland. Distances are measured horizontally from the reference line.

WATERFRONT BUFFER REQUIREMENTS

Within 50 feet of the reference line, ground cover and shrubs may **not** be removed and replaced with landscaping or lawn. They may only be removed to provide a single 6-foot wide footpath to the water or to structures in the waterfront buffer (a shoreland permit may be required). Ground cover and shrubs may only be trimmed to a height of no less than 3 feet (Figure 2).

Trees may also be pruned as long as the health of the tree is not endangered. Pruning only the bottom 1/3 of a tree is recommended to maintain property aesthetics and tree health. Always determine if a tree can be pruned before removing it. Pruning trees often increases views while providing wildlife habitat, privacy, and retaining shade.

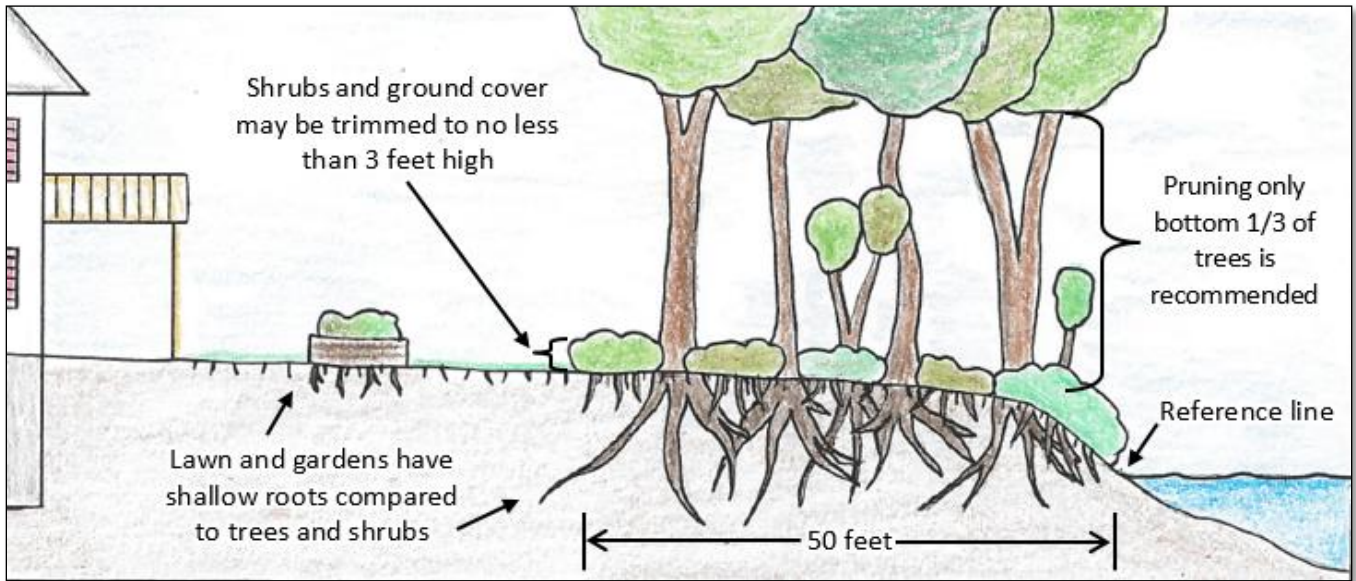


Figure 2 - Waterfront buffer profile view.

Removing trees and saplings within the waterfront buffer *may* be permissible, but there are limitations based on a *grid segment and point score* system. Property owners must maintain a minimum tree and sapling point score within each “grid segment” in their waterfront buffer. They cannot remove trees or saplings from a segment that does not meet this minimum point score. To determine if trees or saplings can be removed, beginning from the northern or eastern property boundary, divide the waterfront buffer into grid segments that are 25 feet along the shore by 50 feet inland (see Figure 3). Properties that have shoreland frontage that does not divide to an even number of 25-foot segments require points in the last segment in proportion to the area of the last segment.

Next, to determine if trees can be removed from a grid segment, calculate the grid segment’s total tree and sapling point score. Each tree is awarded a point score based on its trunk diameter (width) 4½ feet above the ground (Figure 4). Dead, diseased or dying trees are not awarded points.

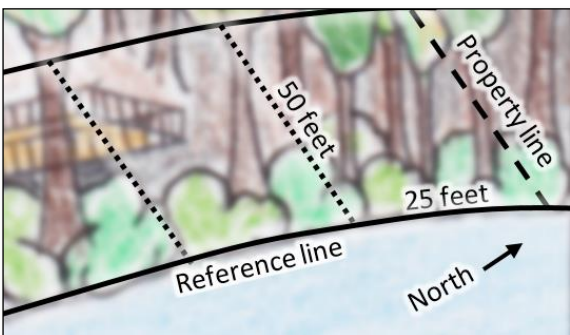


Figure 3 - Mapping out each grid segment.

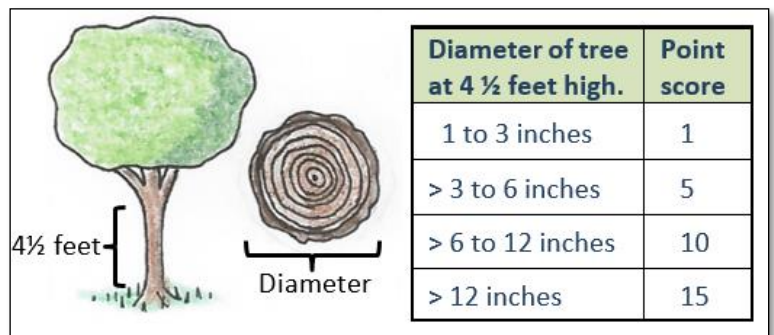
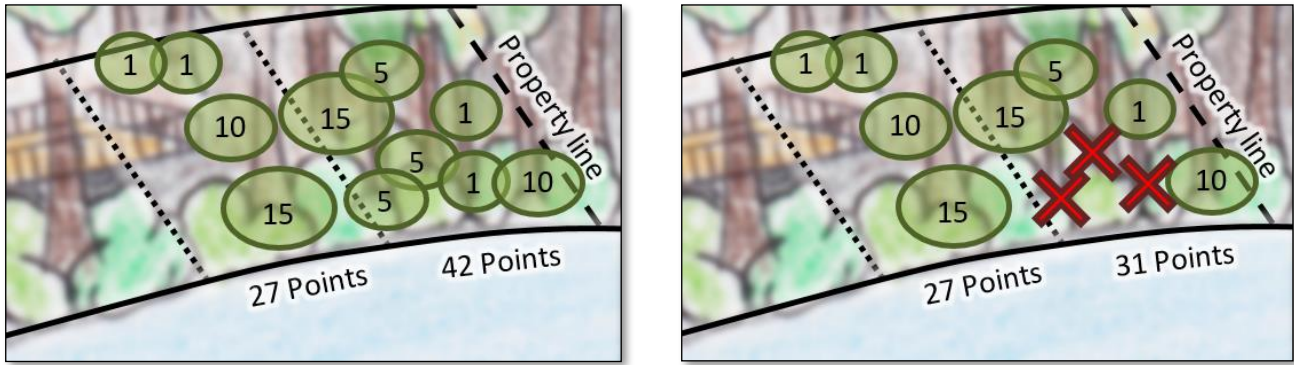


Figure 4 - Scoring each tree by its trunk width.

Trees or saplings may be removed from any grid segment provided that, after removing the trees or saplings, the sum of the tree and sapling point score within the affected grid segment will be at least 25 points (Figure 5).



Before management

After management

Figure 5 -Managing trees and saplings within the waterfront buffer. Trees and saplings are represented by green circles, labeled with their point scores. Trees and saplings to be removed are indicated by a red “X”. In this example, three trees and saplings were removed.

Property owners are encouraged to manage grid segments by strategically planting additional native saplings, especially within grid segments that do not meet the minimum point score so that, once the saplings are well-established and mature, and the grid segment’s total point scores increases above 25 points, trees may then be removed.

Within the waterfront buffer, stump removal requires a permit. Stumps that are removed are to be replaced with pervious surfaces, new trees, or other woody vegetation.

WOODLAND BUFFER REQUIREMENTS

Between 50 and 150 feet from the reference line, at least 25% of this area must be managed as natural woodland where all existing native ground cover, shrubs and trees are allowed to grow. Property owners have the freedom and flexibility to select which region(s) are designated as natural woodland. This area does not have to be contiguous and many people place it on the edges of their property to provide a dense area of vegetation for privacy.

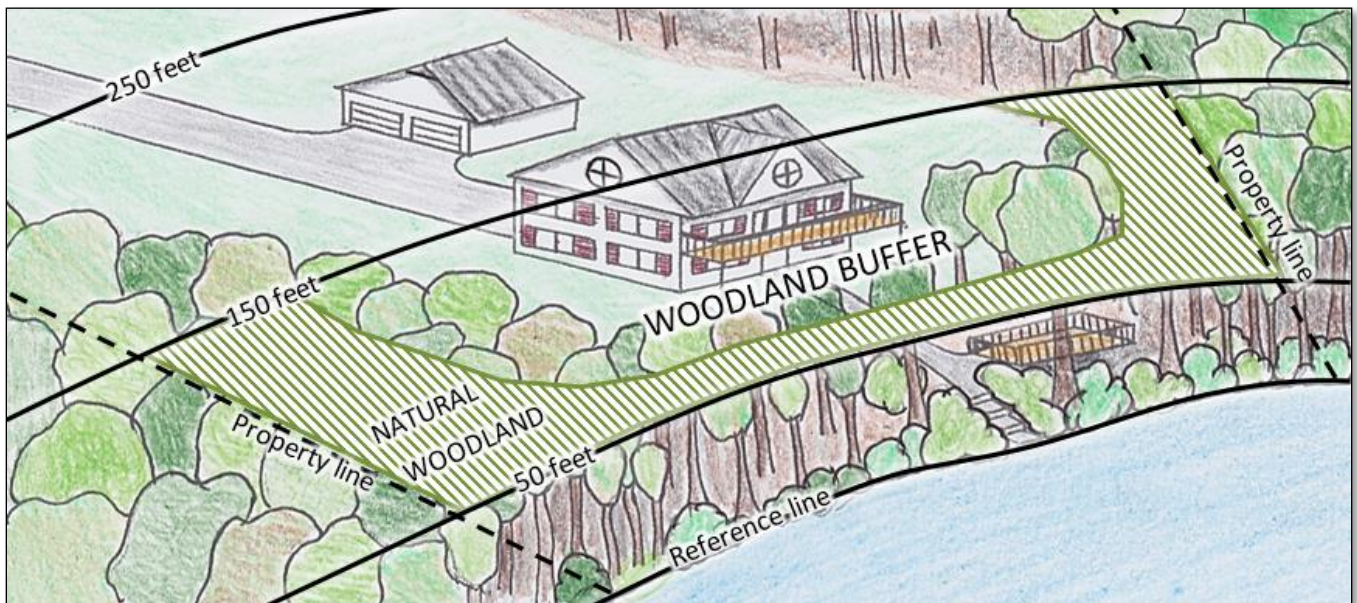


Figure 6 - At least 25% of the area between 50 and 150 feet of the reference line must be designated as natural woodland to be maintained in an unaltered state or improved with additional vegetation.

Areas of the property with the highest density of native trees, shrubs, and ground cover should be given priority for designating as natural woodland. Managing vegetation within the natural woodland is done by allowing the native plants to grow without cutting except as needed to maintain or improve plant health.

The natural woodland may appear very different depending on site conditions. See Figure 7 for some examples.



The natural woodland on either side of the path has native trees with some native shrubs for ground cover.



This area may have been an abandoned cleared area, but now qualifies as a natural woodland with native shrubs and ground cover.



This grandfathered lawn area contains a patch of native trees. Because of these trees, the area may qualify as natural woodland, although the grandfathered lawn may be maintained as such.

Figure 7 - Examples of natural woodland areas. The area on the left has the highest density of native trees, shrubs, and ground cover and thus should be given priority for designating as natural woodland, followed by the area shown in the middle picture. If similar areas were not present on the property, the area shown in the right picture would qualify as natural woodland.

PERMITTING REQUIREMENTS

- A NHDES shoreland permit is not required for vegetation management provided it occurs in accordance with the limitations described in this fact sheet.
- Any dead, diseased or unsafe tree which has a structural defect and poses an imminent hazard may be cut to ground level at any time without a shoreland permit. NHDES recommends property owners retain documentation of the tree's condition at the time of removal such as clear photos and written confirmation from a horticultural professional describing the tree's defect or condition.
- A NHDES shoreland permit is required for excavation, fill, or construction within 250 feet of the reference line. Examples include, but are not limited to removing stumps, constructing most walkways, patios, other structures, or grading. *Any earthwork or construction of structures on the bank, in the water, or on the bed of a waterbody are regulated by the NHDES Wetlands Bureau* and are subject to the NHDES Wetlands Permitting Process.
- Areas cleared of ground cover, shrubs, or trees prior to July 1, 2008, in excess of the limits described in this fact sheet, may be maintained but not enlarged. Examples of cleared areas include lawn and mulched landscaped areas.
- Before removing trees, always check local ordinances as well. Many municipalities have standards that are stricter than the NH Shoreland Water Quality Protection Act.

CHEMICAL APPLICATION

No fertilizer, may be applied within 25 feet of the reference line. Between 25 and 250 feet from the reference line, only slow or controlled release fertilizer may be used. Low phosphate, slow release nitrogen means fertilizer that is guaranteed, as indicated on the package label, to contain:

- At most 2% phosphorous, and

- A nitrogen component which contains at least 50% slow release nitrogen components.

No chemicals, including pesticides, such as herbicides, or fertilizers of any kind, can be applied to ground, turf, or established vegetation within 50 feet of the reference line, except by a professional licensed for pesticide application by the state of New Hampshire. This includes organic pesticides. For more details, please see the Shoreland Program fact sheet: "Pesticide Use Within the Protected Shoreland".

FOR MORE INFORMATION

For more information, please visit www.des.nh.gov. You may also contact the Wetlands Bureau by phone at (603) 271-2147, via email at shoreland@des.nh.gov, or by mail at 29 Hazen Drive; P.O. Box 95 Concord, NH 03302-0095.