FORESTRY FILTER STRIPS / BUFFER STRIPS

Description:
Filter strips and buffer strips can be applied in a wide range of activities to form undisturbed or minimally disturbed areas to protect streams and other water bodies from impacts. The following discussion applies directly to filter strips and buffers for use in forestry operations in Massachusetts.

A vegetative filter strip or buffer strip is a gently sloping area of vegetative cover that runoff water flows through before entering a stream or other conveyance. The buffer strip may be an undisturbed strip of natural vegetation or it can be a graded and planted area.

Vegetative buffer strips act as living sediment filters that intercept and detain storm water runoff. They reduce the flow and velocity of surface runoff, promote infiltration, and reduce pollutant discharge by capturing and holding sediments and other pollutants carried in the runoff water. Vegetative buffer strips function much like vegetated or grassed swales.

The Massachusetts Forest Cutting Practices Act (MGL Chapter 132) has specific requirements for the use of filter strips and buffer strips during forestry operations.

Massachusetts Requirements And Recommendations:

Filter Strips
It is the purpose of filter strips to:

• slow the movement of overland water flow, enabling transported sediment to be left behind,

• provide an opportunity for vegetation to take up nutrients that may otherwise flow into the water body,

• provide shade to the adjacent water body to prevent warming of the water, and thus injury to aquatic and riparian wildlife habitat, and

• protect bank stability and prevent erosion.

It is important not to disturb the forest floor of filter strips, to permit the filtration of overland flow through ground vegetation and forest floor debris. It is likewise important to retain at least 50% of the overstory basal area (amount of standing trees), to provide the important shade function to the adjacent water body.

Filter strips are required along all water bodies and certified vernal pools. No more than 50% of the basal area of the filter strip may be cut at any one time, and a waiting period or five years must elapse before another cut is made.
The filter strip will extend 50 feet back from the bank, measured along the slope, except in the following circumstances:

- **Circumstance #1.** For streams greater in width than 25 feet bank to bank, ponds 10 acres or larger (Great Ponds), designated scenic rivers, and along Outstanding Resource Waters and their tributaries (excluding vernal pools), filter strips will be of variable width, depending on slope, as described in the following table:

<table>
<thead>
<tr>
<th>SLOPE %</th>
<th>FILTER STRIP WIDTH (FEET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
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<tr>
<td>10</td>
<td>90</td>
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<tr>
<td>20</td>
<td>130</td>
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<tr>
<td>30</td>
<td>17</td>
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<tr>
<td>40</td>
<td>210</td>
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<tr>
<td>50</td>
<td>250</td>
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<tr>
<td>60</td>
<td>290</td>
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<td>330</td>
</tr>
<tr>
<td>80</td>
<td>370</td>
</tr>
<tr>
<td>90</td>
<td>410</td>
</tr>
<tr>
<td>100</td>
<td>450</td>
</tr>
</tbody>
</table>

- **Circumstance #2.** Where slopes are 30% or greater, the filter strip will extend 100 feet back from the bank, or to the point between 50 and 100 feet from the bank, where a break in the topography reduces the slope to less than 30%.

No logging equipment may operate in the filter strip except:

- to reduce environmental damage shown to be necessary in a statement in an approved Forest Cutting Plan,
- at an approved stream crossing,
- on a pre-existing logging road, or
- in filter strips greater than 50 feet in width, beyond 50 feet from the water body.

Cut trees will be winched out of the filter strip and slash will be disposed of according to the Slash Law. No slash can remain within 25 feet of any continually flowing brook, stream, river, or any lake, pond, or water supply.
Buffer Strips

- Buffer strips are areas of light cutting along roads, where the intensity of cutting is restricted to maintain a forested appearance and an attractive landscape.

- Buffer strips will be left along the edges of publicly maintained ways, except along forest management roads in federal, state, county, or municipal forests, parks or reservations. Within buffer strips, no more than 50% of the basal area may be cut at any one time, and a waiting period of five years must elapse before another cut is made.

- Buffer strips will extend 50 feet back from the outer edge of the highway, except for designated scenic roads, where they will extend 100 feet from the highway.

- Hardwood slash must not be left more than 2 feet above the ground within 40 feet of any highway. Softwood slash must not be left on the ground within 40 feet of any highway, and must not be more than 2 feet above the ground between 40 and 100 feet of any highway.

References


