



SUGAR MAPLE

benefits - a vital concern, since good timber is often found along watercourses.

Woodlot owners can easily find a great deal of material about woodlot management. But finding information about managing wildlife on woodlots is not so easy.

In order to plan a SMZ along a watercourse the woodlot owner should study the variety of wildlife using the area. Frequent walks through your woodlot will reveal tracks in the mud or snow, browsed plants, and droppings.

Glimpses of the disappearing creatures can also help you discover the animals that share your forest. Identification guides are a worthwhile investment. Some of these are available through the department of Lands and forests, the Nova Scotia Museum and various recreation associations. As you develop an understanding of the wildlife species in your woodlot, your forest management planning can be expanded to include provisions for wildlife.

The width of SMZs can vary from 10 to 330 feet or more (3 to 100 metres) on each side of a waterway. Base your width selection on the following factors:

Land sensitivity

**Soil type:** Streams flow through areas with different soils. Some soils erode more easily than others; disturbing such soils can result in stream siltation. Thus clay soils can create more silt than sandy soils. Soil maps can be purchased from book stores to assist you. You may need to dig some holes near your stream or lake and pour some water on to the exposed soil pit to determine the sensitivity of the site.

**Water table:** it is also important to determine how close the water levels in your soils are to the ground surface. This varies with the time of year. Most woodlot owners who have been stuck with their machinery can spot wet areas and are willing to work around them.

**Slope:** The slope of the land near your stream or lake is also important. Steeper slopes require a wider SMZ to prevent silt from crossing the buffer strip and destroying good fish habitat.

Solar sensitivity

Trout and salmon thrive in water temperature between 57 and 61 degrees F (14-16 degrees C). As water temperatures rise, the oxygen available for fish decreases. When water temperatures exceed 72 degrees F (22 degrees C) trout and salmon begin to die. In Nova Scotia summer water temperatures above 86 degrees F (30 degrees C) are common in rivers and open streams. Unless your brook is supplied by cold spring water, forest shade is essential for trout and salmon to survive. Leaving trees along a stream will keep temperatures cool enough for young trout and salmon. The shade provided by individual trees varies with sizes, shape and species, and by their position in relation to our summer sun. For example, the south side provides most of the shade for a brook flowing in an east-west direction. The north side may not offer much shade, but it is the side favoured by overwintering deer since it faces south. Brooks oriented north-south are shaded by trees on both sides.

Woodlot owners considering SMZs along waterways must also consider wind and storm damage. It is common for overmature mixed-wood (hardwood and softwood) forest, and pure softwood forests exposed by clear-cutting, to blow down. The same is true of younger, closely-spaced stands with small, competing root systems. Softwoods are shallow-rooted. Many well-intentioned one-tree-wide buffers along small brooks serve to keep machinery out of the brook, but fall down in autumn storms. These small



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