A watershed is an area of land that drains into a body of water, such as a river, lake, reservoir, estuary, sea or ocean. The watershed includes the network of rivers, streams and lakes that convey the water, as well as the land surfaces from which water runs off. Watersheds are separated from adjacent watersheds by high points, such as mountains, hills and ridges.

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Protecting water quality and forest and soil resources are among the most important aspects of a successful and environmentally sustainable timber harvest. Studies have shown that skid trails, haul roads and landings have the potential to be sources of sedimentation, erosion and siltation of streams and other water bodies.

The key to timber harvesting that protects soil and water resources is proper planning and the use of BMPs, like waterbars or well-designed stream crossings. These are simple, often low-cost, practices that will pay big dividends in keeping our water clean, maintaining the productivity of the forest, improving public confidence in timber harvesters, and maintaining public support for forest management and timber harvesting, which are essential for sustainable forest management.

Landowners considering a timber harvest should contact a DEC forester to assist with establishing the objective of the harvest, and identifying areas of special concern such as streams, ponds, wetlands, snags and bird nesting sites. Tools like aerial photographs, soil survey maps, soil descriptions, and topographic maps, can help in evaluating a property and developing a plan for logging and other land management activities, which may be included in a Forest Stewardship Plan.

Planning not only entails how you will access the timber but also when the timber will be cut. Timing is one of the most important best management practices. Operating when the ground is dry, frozen or snow covered, or when water levels are low, is an excellent way to reduce or eliminate erosion and sedimentation. A forest landowner should also plan to take additional precautions or even suspend harvesting during muddy periods in the spring or fall.

**Landings**

Landings are areas where forest products are staged for pick-up and where loading equipment is kept. They should be out of sight of public highways by curving the access road, or leaving a strip of vegetation between the landing and the highway. Muddy roads, piles of slash and debris, and trash spread about the landing give a poor impression of logging. Landowners considering a timber harvest should ensure that the sale contract adequately addresses the location, construction and maintenance of the landing.

**Skid Trails**

Skid trails are access routes used by harvesting equipment to transport forest products to the landing area. Existing trails should be used if they provide the best long-term access. Relocating existing trails should be considered if both access and environmental impact can be improved. Skid trail grades should be kept to less than 15 percent slope if possible. If a steeper grade is unavoidable, the use of drainage structures and soil stabilization practices, like waterbars and culverts, can help to minimize runoff and erosion. If existing trails are to be relocated or additional trails constructed, the landowner should work with a professional forester to consider the topography within the harvest area and have the locations of these trails designated as part of the timber sale contract.

Most sediment enters streams from skid trails during severe storms, and the landowner should have plans to address trail maintenance during these events. Waterbars and other diversion methods are the best way to keep sediment laden water from entering streams at skid trail crossings. These practices not only prevent the degradation of nearby streams, but also keep the landowner’s trail network in good condition. Having the harvest monitored by a professional consulting forester can help to ensure that these diversion devices are used as necessary.

**Stream Crossings**

Stream crossing structures are installed across intermittent or perennial streams to provide temporary access for logging equipment. When properly located and constructed, crossing structures can prevent damage to the bed and banks of streams, and can control the movement of sediment into the water. A forestry professional can assist you in planning the stream crossing structure best suited to the site.

A permit is required to construct a ford, or install a culvert or bridge across any protected steam. If you have a question about a stream classification associated with a potential timber sale on your property, contact the nearest DEC office and speak to a representative from the Environmental Permits Office.

At the conclusion of a harvesting operation, the landowner should ensure techniques are used to maintain the integrity of skid trails and forest landing areas. Smoothing skid trails and landings to fill in ruts, and installing waterbars or other diversion devices as needed, will minimize erosion and sedimentation until vegetation becomes established and can hold soil in place. Seeding the landing area can shorten the time required to stabilize it.

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**Regional DEC Offices in the Upper Susquehanna Watershed**

Contact the DEC regional office in the county where your land is located for forestry information and assistance.

Otsego/Delaware/Schoharie:
Region 4 Stamford Office
6501 State Hwy. 10, Suite 1
Stamford, NY 12167-9503
(607) 652-7365

Chenango/Madison:
Region 7 Sherburne Office
2715 State Hwy. 80
Sherburne, NY 13460-0594
(607) 674-4036

Steuben/Chemung/Schuyler/
Yates/Livingston/Ontario:
Region 8 Bath Office
7291 Coon Road
Bath, NY 14810-9728
(607) 776-2165

Herkimer/Oneida:
Region 6 Herkimer Office
225 North Main Street
Herkimer, NY 13350
(315) 866-6300

Onondaga/Cortland/Tompkins/Tioga:
Region 7 Cortland Office
1285 Fisher Road
Cortland, NY 13045-5170
(607) 753-3095

Allegany:
Region 9 Belmont Office
5425 County Route 48
Belmont, NY 14813
(585) 268-5395

Brome:
Region 7 Kirkwood Office
1679 NYS Route 11
Kirkwood, NY 13795-9503
(607) 775-2545

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