United States Department of Agriculture
Natural Resources Conservation Service

2010 Ranking Period 2

Soil Quality Enhancement Activity – SQL07 - Forest stand improvement for soil quality

Enhancement Description
This enhancement consists of the management of forest activities (planting, thinning and harvesting) to minimize the impact on forest soils and improve soil quality

Land Use Applicability
Forestland

Benefits
Managing forest activities to improve soil quality results in increased organic matter that improves nutrient cycling and increase rainfall water absorption. Avoiding soil compaction allows for greater root development and tree growth to prevent windthrow, minimize drought stress and reduce susceptibility to insects and disease. Limiting soil disturbance and controlling erosion increases organic matter, improves infiltration and limits offsite sedimentation.

Criteria
This enhancement requires that two activities from each of the specific areas be completed.

1. Soil Compaction
    a. Use of skidding and forward logging during harvest
    b. Use of walk-on-slash during harvest
    c. Sequencing of harvest activities (back to front)
    d. Use of smaller equipment, track equipment, low PSI tires and lighter loads
    e. Sub-soil compacted areas after harvest
    f. Use of mules, draft horses or other animals for skidding moving harvested trees

2. Roads & Landings
    a. Preserve drainage pattern where possible
    b. Make up 5% or less of total wooded acreage
    c. Establish cover on roads and landings
    d. Control use between harvest

3. Limit Soil Disturbance & Control Erosion
    a. Avoid disturbing litter and soil surface
    b. Protect roads through the use of water bars/rolling dips
    c. Establish cover on disturbed areas after harvest or thinning activities are complete
    d. Retain all downed tops and other unharvested materials for ground cover and nutrient recycling

Documentation Requirements

Following implementation of this activity, the landowner must document:

1. List of activities used to improve soil quality
2. Map with location of roads and landings
3. Photo's of roads and landings after activities are complete

This activity may NOT be used with the following enhancements: ANM09, ANM20, WQL03, WQL12, WQL18, WQL19

Potential duplicate practices: 666 - Forest stand improvement, 490 - Tree/shrub site preparation, 612 - Tree and shrub establishment, 384 - Forest slash treatment