Timber Harvest Unit Design, BMP 14.02
Log Landing Location and Design, BMP 14.10

Objectives

1) To insure that timber harvest unit design will minimize overland flow and soil erosion, compaction and displacement, by locating and designing landings and skidding patterns to best fit the terrain.

Site Description

This site is in Unit 88 of Butler Creek Timber Sale. It is roughly 4 miles from the junction of Road 284 and Tamarack Creek Road on Road 284, on the Superior Ranger District of the Lolo NF. Unit 88 is located in Section 31, Township 19N, Range 27W. LSI classification is 30MB.

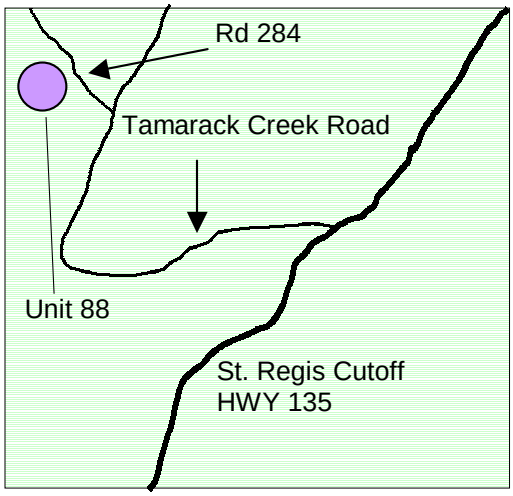


Figure 1

Narrative

To protect water quality and soil productivity, log landings are designed and located where the least soil erosion, compaction and displacement will take place. BMP's recommend landings be at least 100 feet from stream channels to prevent debris from entering the stream.

Unit 88's log landing was positioned at the edge of the harvest unit near Road 284 and is located more than 500 feet from the stream channel (figure 1). The location will reduce the impacted area, as well as enable easier access.

Harvest machinery did not enter or cross the riparian area. Logs near the riparian area were winched out and slash was brought to the landing from two adjacent skid trails. After harvest was done, most of the landing slash was burned and then scattered. Scattering slash adds organic nutrients to the soil, enhancing soil productivity and protecting disturbed soil (photos 1 & 2).

Photo 1

Photo 2

Observations and Measurements

The log landing was 98 feet wide x 82 feet long, and is 78 feet away from the road. The average size of the retained slash is approximately 2 to 5 inches in diameter. Vegetation is reestablishing, but the heavily burned areas have not yet vegetated. One slash pile on the main skid trail has not yet been burned. Currently, it is acting as an access barrier to one of the main skid trails (photo 3).

Photo 3

Effectiveness

Overall, this practice was effective in maintaining water quality and soil productivity, as well as minimizing erosion and displacement. There was no evidence of rutting or rilling, and sediment was not moving off site. Slash scattered throughout the landing will benefit soil productivity and allow nutrient cycling. Vegetation has started to come back and will enhance erosion prevention in the future.

Using Sale Area Maps to Designate Soil and Water Protection Needs, BMP 14.03

Objectives

1) To delineate where protected and special treatment areas are, and to insure they are recognized, and properly considered and protected.

Site Description

The two areas defining this practice are on the Missoula Ranger District of the Lolo NF, in Sections 5 & 6, Township 14N, Range 19W, on the Northside Timber Sale. LSI classification is 64QB.

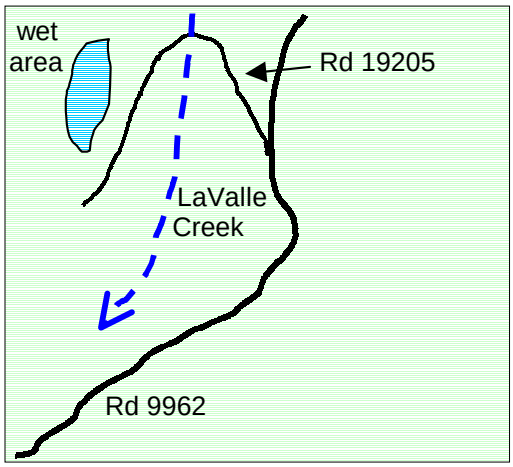


Figure 1

Narrative

Sale area maps delineate stream courses, wetlands and bogs to ensure soil and water protection. Properly delineating protected areas ensures that the sale unit has been thoroughly examined. Areas marked on the map need to be clearly flagged on the ground and equipment operators must be shown where the riparian protection boundaries are. Specialists must evaluate stream courses or wet areas that may be disturbed during harvest, and mitigation measures should be applied if necessary.

The first step is to scout the ground thoroughly for stream courses and any wet areas that might be damaged by equipment. The Northside Timber Sale area maps show three streams and one wet area. Each is clearly marked on the map with special symbols (maps 1 & 2).

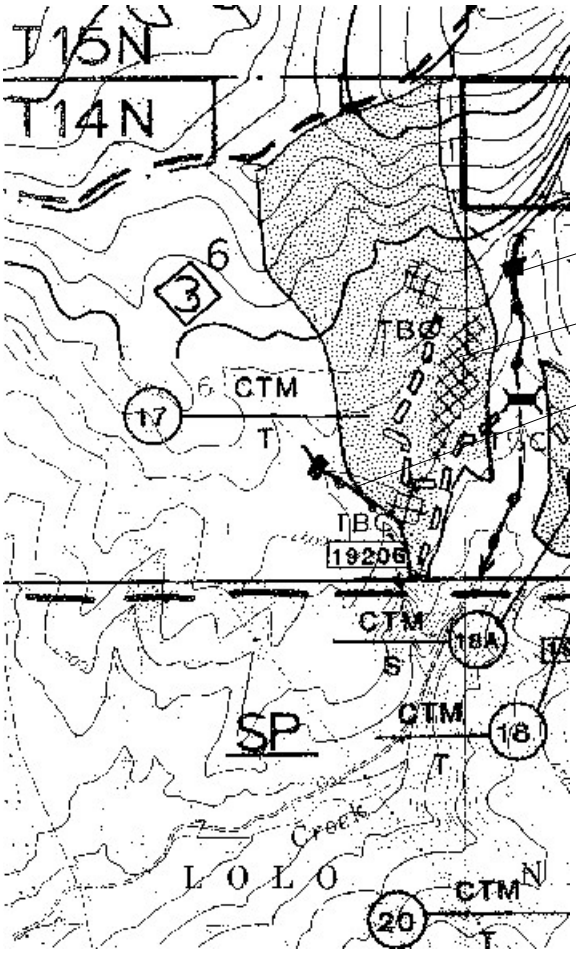
Observations and Measurements

After observing these areas on the ground, all stream courses were marked with 50 to 100-foot buffering boundaries. The wet areas were marked with SMZ flagging. Soil and water protection needs were delineated on the sale area map.

During road construction and harvest, equipment remained outside the SMZ flagging, except at specified stream crossings. The equipment operators and crewmembers were well aware of the boundaries of the protected and sensitive areas.

Effectiveness

This practice has proven to be effective at protecting soil and water quality. All of the protected stream courses and wet areas were properly marked on the map, as well as flagged in the field. Because of this, damage was prevented in the protected areas.

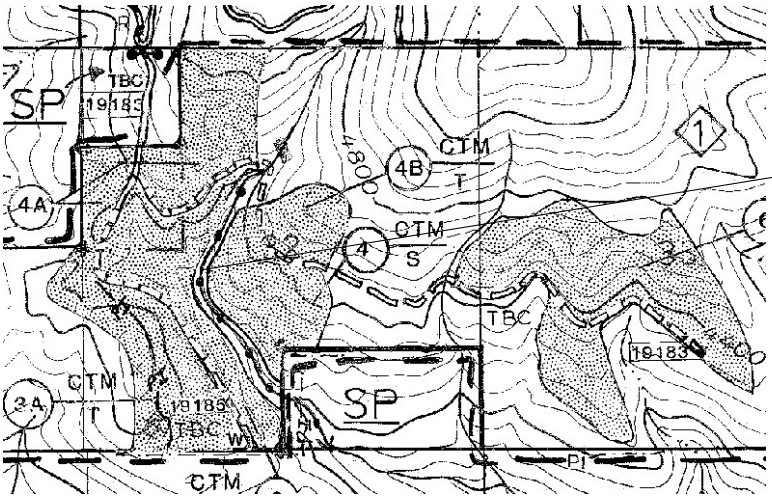


Protected stream course delineation

Wet area delineation

Protected stream course delineation

Map 1



Protected stream course delineation

Map 2