CONTOUR TREE FELLING

What is Contour Tree Felling?

Contour Tree Felling is a way to reduce the erosive impact of raindrops and the amount of rain water that runs down a slope by cutting Trees such that they fall perpendicular to the main direction of the slope.

When is Contour Tree Felling Used?

Contour Tree Felling is used on burned slopes where there are a number of dead trees that have little or no alternative value. When the original ground cover is lost after a fire the soil is at risk for erosion. Additionally drainage ways may flood more frequently due to increased runoff from the burned slopes. Contour Tree Felling is a way utilize the dead timber for some beneficial purpose. However consideration for the wildlife habitat value of the dead trees should be given prior to clear cutting, even in areas where all trees have been killed by the fire. Also note that Contour Tree Felling in a burned area is dangerous due to a significant risk that trees may drop branches on workers or fall over completely with little or no warning. Logs or slash from the felling should not be placed in drainage ways or swales. When unanchored the logs or debris may be washed downstream causing damage to drainage improvements or blockage of natural channels resulting in increased erosion.

How is Contour Tree Felling Accomplished?

Sawyers cut the trees, dropping the trunks across the slope (perpendicular to the direction water runs) as much as possible. Stumps are left about 12” high to brace the tree from sliding downhill. Tree limbs are removed to the extent necessary for the log to lie flat on the ground, encouraging the collection of water and trapping the debris moving down slope. For this practice to be most effective, enough trees must be felled to create a barrier that interrupts the movement of water down the slope, as shown in the theoretical pattern depicted by Figure 1. In reality the theoretical pattern is only a guide, as it is rarely achievable in a natural setting.

How Effective is Contour Tree Felling?

When there are 400 to 600 feet of logs available per acre, especially in the 6 inch to 12 inch size range, Contour Tree Felling may significantly increase infiltration, add surface roughness, and replace some lost cover, thus reducing a slope’s erosion potential.

At best Contour Tree Felling provides short term protection on slopes that require re-establishment of permanent vegetation for long term erosion control. Contour Tree Felling has little effect when logs are oriented up and down the slope instead of across it, when felled logs are not in contact with the soil, where the slope is steeper than 50%, and where the density of logs is less than 300 feet per acre.

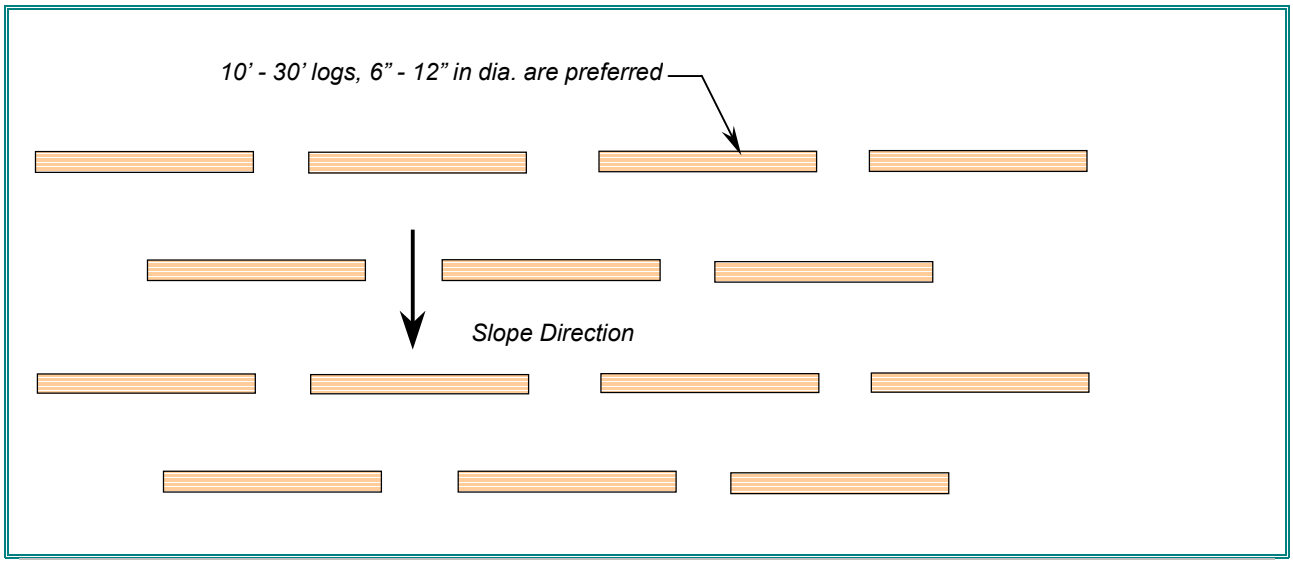

FIGURE 1 - Theoretical Pattern for Contour Tree Felling

NOTE: After a fire many trees are weakened from burning around the base of the trunk. The **trees can fall over or blow down without warning**. Shallow rooted trees can also fall. Therefore **be extremely alert when around burned trees**.