LOG TERRACING

What is Log Terracing?	Log terracing is a way to intercept water running down a slope by felling trees along the contour of the slope, and bedding them in shallow trench.
When is Log Terracing Used?	Log terracing is used on burned slopes that have less than 30% of the original ground cover remaining and are at risk for increased erosion where there are enough trees of adequate size to construct a semi continuous line of logs at the desired horizontal spacing. Log terraces can be installed on slopes up to 70 percent, however their effect diminishes greatly on slopes steeper than 50 percent. Soils can be shallow, but not less than about 8 inches. Log terracing increases infiltration, add roughness, reduces erosion, and helps retain small eroded soil on site. Log terracing should be effective for a period of one to three years, providing short term protection on slopes where permanent vegetation will be established that provides long term erosion control.
What Materials are Needed?	• 6-12 inch diameter logs, 10-30 feet long • An expert sawyer and labor crew • Machines may be used for moving logs or trenching them in on 30% or flatter slopes
How is Log Terracing Installed?	A contour line is marked on the slope with wire flags to identify the approximate cross slope alignment. Trees along this line are felled on the upstream side of the contour line as much as possible. Stumps are left about 12” high to brace the tree. The logs are cut to a length that permits safe handling and placement for the crew, generally 10 to 30 feet. Tree limbs are removed to the extent necessary for the log to lie flat on the ground. A shallow trench (about 4 to 6 inches deep) is dug along the contour. The log is placed in the trench and seated with tamped backfill such that water flowing down the slope will not run under it. For this practice to be effective, enough trees must be felled along the contour line to create a semi continuous barrier to the movement of water down the slope, as shown in Figure 1 & 2.
How Much Log Terracing is Required?	The horizontal spacing of logs on the slope is determined with consideration for normal rainfall intensity, slope steepness, soil characteristics, and the extent of surface cover remaining after the fire. Figure 1 depicts the spacing of log terraces on the slope. Table 1A and 1B show recommended spacing for treating burn areas along the Colorado Front Range.

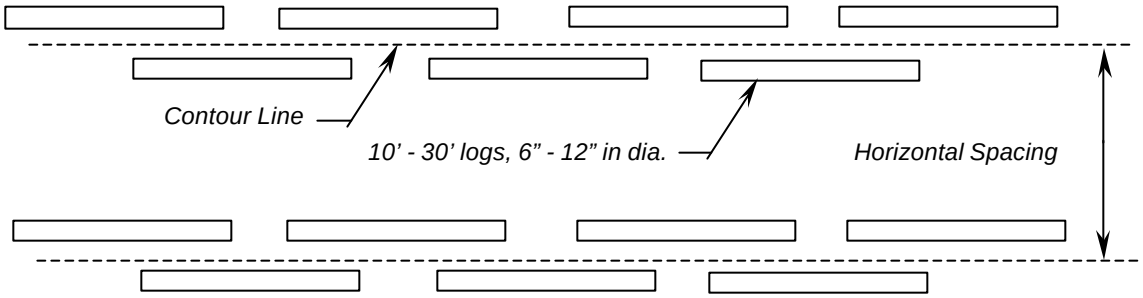

FIGURE 1 - Theoretical Log Terracing Pattern

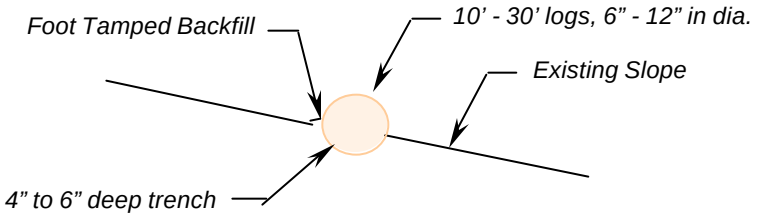

FIGURE 2 - Typical Log & Bedding Detail

Table 1A - Recommended Spacing for Contour Slope Treatments - South of I-70

Slope steepness (percent)	Burn Intensity		
	Low	Moderate	Severe
	Horizontal Spacing In Feet		
< 5 %	250	160	130
5 - 10 %	200	120	90
10 - 20 %	120	60	40
20 - 50 %	60	30	20
> 50 %	40	20	20

Table 1B - Recommended Spacing for Contour Slope Treatments - North of I-70

Slope Steepness (percent)	Burn Intensity		
	Low	Moderate	Severe
	Horizontal Spacing In Feet		
< 5 %	350	200	150
5 - 10 %	300	160	100
10 - 20 %	200	100	50
20 - 50 %	100	50	20
> 50 %	50	20	20

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**.