



WILDFIRE BURN SEVERITY CLASSIFICATION

Knowing how intensely the wildfire burned will help you make decisions about your property. The following indicators can help determine the intensity of the wildfire.

(To determine hydrophobicity (soil repels water), scrape ash away and drip water on the soil surface. Hydrophobic soils will cause water to bead at the surface for several minutes. Repeat test in several areas. Determine root damage by digging down and carefully examining the extent of root burning.)

Low Fire Severity (Type III)

General statements

- primarily occur on rangeland
- no sediment delivery
- natural recovery likely

Indicators

- duff and debris are partly burned
- soil is a normal color
- hydrophobicity is low to absent
- standing trees may have some brown needles

Interpretations

- root crowns and surface roots will resprout quickly
- infiltration and erosion potential are not significantly changed

Medium Fire Severity (Type II)

General statements

- primarily occur on steep, lightly timbered slopes with grass
- some sediment delivery

Indicators

- duff is consumed
- burned needles are still evident
- ash is generally dark colored
- hydrophobicity is low to medium on surface soil up to 1 inch deep
- soil is brown to reddish-brown and up to 2 inches of soil is darkened from burning (below ash)
- roots are alive below 1 inch
- shrub stumps and small fuels are charred but present
- standing trees are blackened but not charcoal

Interpretations

- root crowns will usually resprout
- roots and rhizomes below 1 inch will resprout
- most perennial grasses will resprout
- vegetative recovery (non-tree), depending on conditions, could be one to five years
- soil erosion potential will increase due to the lack of ground cover and moderate hydrophobicity

Adapted from: USDA Natural Resources Conservation Service



High Fire Severity (Type I)

General statements

- primarily occurs in unprotected drainages on steep, timbered, north or east slopes with dense forest canopy
- sediment delivery likely
- natural recovery limited

Indicators

- duff consumed
- uniformly gray or white ash (in severe cases ash is thin and white or light)
- no shrub stumps or small fuels remain
- hydrophobicity medium to high – up to 2 inches deep
- 2 to 4 inches of soil is darkened (soil color often reddish orange)
- roots burned 2 to 4 inches
- soil physically affected (crusting, crystallization, agglomeration)
- standing trees charcoal up to 1 inch deep

Interpretations

- soil productivity is significantly reduced
- some roots and rhizomes will resprout but only those deep in soil
- vegetative recovery (non-tree), depending on conditions, could be five to 10 years
- soil erosion potential can be significantly increased