**Soil Burn Severity Field Data Sheet and Key**

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| **Soil Burn Severity Assessment Field Data Sheet** | | | | | | **Fire Name:** | | | | | | | | **Observers:** | | | |
| **Date:** | | **Site ID:** | | | | **GPS Coordinates:** | | | | | | | | **BARC Classification:** | | | |
| **Observation Point** | **Ground cover (1)** | | | | **Surface Color and Ash Depth (2)** | **Soil Structure (3)** | **Roots (4)** | | **Soil Water Repellency (5)** | | | | | **Observed Soil Burn Severity Class (6)** | **Photo #** | **Other Comments** | |
| ***EXAMPLE*** | ***20 to 50%*** | | | | ***white, 1 mm*** | ***no change*** | ***intact*** | | ***I*** | | ***3 mL*** | | ***surf*** | ***Mod*** | ***23*** | ***homogenous*** | |
| 1 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 2 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 3 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 4 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 5 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 6 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 7 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 8 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 9 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| 10 |  | | | |  |  |  | |  | |  | |  |  |  |  | |
| **Average/Majority for Site (7)** |  | | | |  |  |  | |  | |  | |  |  |  |  | |
|  |  | | |  |  |  | |  | |  | |  |  |  |  | |
|  | | | |  |  |  | |  | |  | |  |  |  |  | |
|  | | | | | | | | | | | | | | | | | |
| **Site Characteristics:** | |  | | Aspect (deg): | | | | Slope %: | |  | |  |  |  |  | |  |
| Slope Length (ft or m): | | | | Slope Position: | | Lower | | Middle | | | | Upper | | Ridge | Other | |  |
|  | | | | | | | | | | | | | | | | | |
| **Soil Texture Class:**  clay loam, silt loam, loam | |  | **Dominant Pre-Fire Vegetation Type** | | | **Pre-Fire Vegetation Density** | | | | **Vegetation Comments:** | | | | **Other Notes:** |  | |  |
| Surface Rock %: | | | Chaparral | | | Low | | | |  | |  |  |  |  | |  |
| **Soil Comments:** | |  | Forest | | | High | | | |  | |  |  |  |  | |  |
|  |  |  | Sagebrush/grassland | | | Other | | | |  | |  |  |  |  | |  |
|  |  |  | Other | | |  | |  | |  | |  |  |  |  | |  |

**Soil Burn Severity Assessment Field Data Sheet Key**

This form is a guide for 10 observation points at a single field stop. It will not always be necessary to record 10 observations if site variability is low; however, if variability is high, more observations may be needed. The purpose is to quickly record information to document observations of soil burn severity and provide support and rationale for post-fire treatments. This form will also provide metadata to describe site conditions. The data collected here may be used as inputs to hydrologic models.

You will have to use your professional judgment when estimating change from pre-fire conditions. Examine areas of similar soil and vegetation that have not burned and form your opinion as to the degree it has or has not been changed by the fire.

**Data Form Columns:**

(1) **Ground Cover**: Record an estimated percentage of cover (greater than 50%; 20 to 50%; or less than 20%). Ground cover means effective organic cover as it pertains to mitigation of runoff and erosion and includes litter, duff, and woody debris.

*Example: “*20 to 50%*”*

(2) **Surface Color and Ash Depth**: Include a brief note on color and depth of ash (inches or cm), if any.

*Example: gray, 5 cm*

(3) **Soil Structure**: Has it changed from pre-fire structure? The most common change is from a granular structure in the surface horizon to a loose- or single-grained soil in areas where heat residence time was long and organic matter was consumed.

*Example: “changed (loose);” or “no change”*

(4) **Roots**: Have they been altered from pre-fire condition?

*Example: “scorched;” “no change;” or “very fine consumed”*

(5) **Soil Water Repellency**: Use the infiltrometer (I) or water drop penetration time method (W) and record volume of infiltration or how long water takes to infiltrate, respectively. If repellency is observed, note the depth tested (inches or cm).

*Example: “I/3mL/at surface;” or “W/25 sec/1-2 cm”*

(6) **Observed Soil Burn Severity Class**: Record the soil burn severity class at the observation point.

*Example: “Unburned;” “Low;” “Moderate;” or “High”*

(7) **Average/Majority for Site:** Estimate the most frequent or average of the 10 observations.