

FRCC
Fire Regime Condition Class
Procedure Outline
Region 1, USFS

- I. **Analysis area** – determine the boundaries of the area you wish to perform FRCC process on. The FRCC Guidebook says your analysis landscape can generally be equated to delineation of the hydrologic unit (watershed, subwatershed) or the number of 6th HUCs that would surround the gross area that would have burned **historically** in a **one day** burning period under dry, windy, large-fire conditions, typical of when large fire runs occurred naturally (NOT what would burn under CURRENT conditions).
- II. **Biophysical Settings** - Establish the Biophysical Settings (BPSs) that apply to your geographic area from the list at the FRCC.gov web site. For Region 1, these will also be listed for you on the R1Fire/FRCC web site. Work with an interdisciplinary team to group habitat types into groups that crosswalk to the BPSs. A crosswalk for the Region will be available on the web site or from certified Region 1 users.
- III. **Mapping** – If available, you can contact your GIS personnel to help you map BPS on your District or analysis area and “clip” them by 6th code HUCs. This can be done by using TSMRS, stand level info on habitat types and using the BPS to Habitat Type Crosswalk (on web site) to create BPS groups (as in II above). This will give you the strata within your HUC 6. You can use a GIS sum to get the acres in each BPS by HUC 6 – this gives you the percentage of the HUC/landscape in each strata (to put in the Strata Form of the Standard Landscape software). Documentation of this procedure (used on the Lolo NF) will be available on the R1 Fire/FRCC web site, also.

You can also use the mid-scale FRCC map (“Map Tool” created by Jeff Jones to prototype and test the process). This map will have BPS that can also be used for your strata in the FRCC software. However, it MUST be ground verified before entering the strata percentages in the software! You can also use any other combination of maps available to you (such as SILC 3 being used by the B-D NF).

- IV. **6th Code HUCs** - Determine how many 6th HUCs encompassed a historic burn in your analysis area, that would have burned over one burning period on a dry, windy, large-fire conditions, typical of when large fire runs occurred naturally (as mentioned in I, above).
- V. **Current Fire Frequency** – The historic fire frequency is automatically filled in when you select a National BPS type. **You** must determine the current fire frequency. The fire frequency can be calculated by dividing the number of years in the “fire scar period” by the number of fire intervals minus 1 (total scars minus 1). Fire history atlases or TSMRS burn activity information can

be used to help summarize the number of fires in the equation (see the Guidebook for direction).

- VI. **Current Fire Severity** – This value depicts the degree of upper canopy replacement (top-kill) which would occur during peak burning season conditions (90th percentile plus), viewed at a large scale under natural conditions. Stated another way, the natural fire severity is a landscape measure of the proportion of a fire area which would experience greater than 75% upper canopy replacement during an unconstrained, naturally occurring fire event. For example, a natural fire severity of 50% should be interpreted as half the fire area experiencing upper layer canopy replacement of greater than 75%. In this example, the remaining 50% of the landscape would experience non-replacement fire severity, which is defined as less than 75% upper canopy replacement.

The reference or historic fire severity is also automatically filled in when you select a National BPS type on the software form. To determine the current severity, you can infer from the fires of 2000 or 2003 for similar BPS types. Or you can model fire behavior with various models available to determine torching or crowning index (FVS-FFE) or fire intensity/fire type (Farsite). Local expertise can also be used to survey the fuel loads present and estimate the severity based on experience.

- VII. **Veg-Fuel Classes** – The Characteristic Veg-Fuel classes are A, B, C, D and E and represent successional stages of the within the strata in landscape [AESP (Early seral post-replacement), BMSC (Mid seral closed canopy), CMSO (Mid seral open canopy), DLSO (Late seral open canopy), and ELSC (Late seral closed canopy)]. These are filled in by the software program, along with the percent of each class that occurred in the reference/historic condition within your strata/BPS within your landscape/HUCs. However, **you** must figure out the percent of acres in each class for the **current** condition within each of your BPS strata within your landscape/HUCs. TSMRS information can be used to give an **estimate** of the percent of the landscape/HUCs that occur in each Veg-Fuel class. A query will be available on the web site that pulls stand size class AND regeneration activity information. This can be used with the Veg-Fuel crosswalk (also on that web site) to fit the information into the Veg-Fuel classes. ***This information must be ground verified!!!***
- VIII. **Uncharacteristic Veg-Fuel Classes** – These are conditions that did **not** historically occur on the landscape. Examples include introduced weeds or white pine blister rust or other insect or disease damage, fuel loads, hydrologic damage, patch pattern or post fire effects **beyond** the historic range of variability. Also, harvest, cultural treatments, grazing or other human disturbance processes that do NOT mimic the historic disturbance condition (e.g. all old-growth or seral species gone). Many sources of information can be used to determine the percent of acres in these classes – weed maps, TSMRS harvest or burn activity by date, insect and disease survey maps, grazing allotment maps as well as visits in the field. **NOTE:** the percentage of acres in these classes must be subtracted from the **characteristic** Veg-Fuel

Classes (A through E) so the current condition percentages will still add up to 100.

- IX. **NFPORS Data Entry - Before and After Treatment** –Enter the data, run the program and enter the condition class for your planned treatment units in NFPORS. Currently, NFPORS has a Condition Class for percentages of your treatment unit. The whole treatment unit is represented by the condition class result for the entire standard landscape assessment in the FRCC program. Enter the Condition Class result from the entire landscape project for 100 percent of your treatment unit (even if there are other units within the project area). This will change and be broken down in the new version of NFPORS in 2006.

Once treatment is complete, you must change the percentages of acres in the Veg Fuel Class where your particular unit occurred and rerun the program. For example, with ponderosa pine strata/BPS, if your planned treatment unit was in Veg Fuel Class **E** – Late Seral Closed, but **should have been** in **D** – Late Seral Open, hopefully it changed from E to D. So the percent of the strata acres that were in E would be reduced by the amount of your treatment unit. Similarly, acres in the Veg Fuel Class D would increase – reflecting the improvement in condition class. Or if it were in an Uncharacteristic Veg Fuel Class before treatment (like UFUSH due to heavy ladder fuels), after treatment acres would also go from that Uncharacteristic type into Veg Fuel Class D.

Rerun the FRCC software with the new percentage to get the new Condition Class for your project area. It may not have changed classes if it was a small percentage of the overall strata or project area. The new system in 2006 will allow you to show small changes from 1 to 100 for the landscape area, in case you have not changed a complete condition **class**. Starting also in 2006, the Condition Class results along with the other treatment unit information, will be entered into FACTS (which will then load it into NFPORS).

- X. **Pat yourself on the back** for a major accomplishment!