

Upper Colorado Interagency Fire Management Unit Live and Dead Fuel Sampling Protocols for Seasonal Severity

Importance of Fuel Sampling:

Sampling of live and dead fuel moistures is a common tool that fire managers have for predicting fire behavior. By monitoring trends in fuel moistures, managers can track seasonal severity. This can help lead to informed decisions on staffing, funding and prescribed fire. National policy now requires that sampling data be entered into the National Fuel Moisture Database (NFMDs) by individual units. NFMDs will now be the source for USFS Regional Offices and BLM State Offices for tracking seasonal severity and decisions on severity funding. This makes it essential that each zone collects and posts accurate data in a timely manner.

The UCR has a history of a great number of sampling sites throughout the unit. These sampling sites have served well for a variety purposes including prescribed fire, fuels, fire ecology, RAWS verification and seasonal severity. These are all good reasons to collect samples but also may complicate the collection process due to the time required. This is especially true during times of high fire activity. **These protocols and requirements are only for tracking severity.** In the interest of providing timely data, Zone FMOs may need to limit the number of sampling sites to 1 – 3 on a regular basis. It is realized that there are a number of sites with a long history of data collection. It is not our intention that these be lost, however there must be a prioritization so that there is regular sampling to track severity.

Sampling Responsibility:

The ultimate responsibility for fuel collection resides with each Zone FMO. FMOs have the local knowledge to decide which fuels to collect, where to collect them and who to assign this task. The Zone FMO will choose one or more people to perform the fuels sampling, with backup collectors also identified. In some zones it may make more sense to identify fuels technicians and specialists as the primary collectors. This can help to avoid loss of sampling during periods of high IA load.

Sampling Frequency and Season:

Sampling frequency will be a minimum of every two weeks. FMOs may require weekly sampling if they see a need for this data. The season of collection will be decided by the Zone FMO. This of course depends on snow pack, staffing and funding. Ideally, low elevation sampling can start in March and end in November. Higher elevations may run from April/May through October. Samples should be collected as close to the 1st and 15th of each month as possible. Ideally, fuels are collected at the peak of the burning period. If possible, collect fuels around 1400.

Sampling Sites:

The goal of these sampling protocols is to provide timely, seasonal severity data. One to three sites are sufficient for this purpose. It is suggested that these sites represent the fuels and topography of most concern for each zone.

Sampling Procedures:

There are several sources on how to collect fuel samples. Essentially, most guides follow the same steps and procedures. In order to gain uniformity, the UCR has adopted “The Fuel Moisture Sampling Guide” (Pollet & Brown) published by the BLM, Utah State Office. This guide is well written, easy to follow and gives good background information. Each zone can follow their own procedures according to local fuels and the type of ovens, scales and sampling containers. It is recommended that each zone review the procedures each season.

Number of samples:

Generally, 5 – 15 samples of live fuels of each species and 3 – 5 samples of 1000 hour fuels is sufficient for seasonal severity tracking. The Sampling Guide also details a method of determining the number samples to collect, using statistical formulas. This method can be time consuming and may provide more preciseness than is needed.

Recording and Posting Data:

All data is entered and displayed in the NFMD website (<http://72.32.186.224/nfmd/public/index.php>). Each zone will designate one or more people to enter data into NFMDs. Passwords are required for data entry and can be obtained from Marco Perea or Sandy Nelson at RMAC.

Sampling site information will be entered first using the attached Site Description Form. Data on fuel moistures will be recorded on the attached Collection Forms. These forms will then be used to enter data into NFMDs. In the past, data was forwarded to Linde Jacks to be posted on the UCR website. We will now provide a link to NFMDs, where UCR data as well as data from all over the country will be displayed.