

**Position Description – Eastern Region  
Fire Behavior Assessment Team (FBAT) Member (THSP)  
Exception Position AD-I**

**INTRODUCTION**

This position is a member of a Fire Behavior Assessment Team (FBAT). The primary mission of FBAT is the collection of real-time fire behavior data on wildland fire incidents. Collected data is used to validate the effectiveness of fuels, treatments, evaluate fire effects, improve safety zone information, and/or calibrate fire behavior and emission modeling. This team consists of 5 to 12 fireline qualified personnel, led by overhead qualified at the strike team leader level or above.

**MAJOR DUTIES:**

The FBAT measures pre-fire fuels/vegetation, active fire behavior (with sensors in the fire), & post-fire fuels/vegetation conditions during wildfires and prescribed fires. The Team's mission is to safely study the effectiveness of fuel treatments, and provide data useful for calibration of smoke emissions and fire behavior and effects modeling. FBAT uses fire behavior sensors and special video camera set-ups to measure direction and variation in rate of spread, fire type (e.g. surface, passive or active crown fire behavior) in relation to fuel loading and configuration, topography, fuel moisture, weather and operations. The amount and the arrangement of live and dead vegetation is collected before and after the fires.

**KNOWLEDGE REQUIRED BY THE POSITION**

- Knowledge of fire behavior models (BEHAVEplus, crown fire initiation algorithms, Rothermel crown fire spread), CONSUME, and FOFEM.
- Technical knowledge of the equipment in order to set up for data collection. Equipment used includes: sensor arrays (for rate of spread/temperature profile through time), heat-flux sensors, GoPro video cameras with fire initiating triggers and five foot anemometers that withstand heat.
- Utilize Lookouts - Communications - Escape Routes - Safety Zones (LCES) to respond as necessary to changes in the active fire near their location.
- Familiarity with, understanding of, and ability to function as a single resource.
- Ability to make sound decisions while under stress.
- Ability to obtain information regarding assignments, including any Resource Order, travel arrangements, and reporting location.
- Ability to check in through the proper channels and take the necessary equipment to perform the assignment.
- Ability to brief the FBAT Leader and provide input for the completion of the Unit Log (ICS-214).

**SUPERVISORY CONTROLS**

The supervisor makes continual assignments by indicating generally what is to be done. The employee usually functions independently and handles problems, deviations, and makes decisions on their own.

**COMPLEXITY**

The work includes various related duties involving different processes and methods, including:

- Measuring fire behavior and effects and their relationship to fuels, fire history, fuels treatments and/or other values (botany, wildlife habitat, heritage sites, etc.)
- Supply data and video useful for improving firefighter safety and public outreach.

- Build a dataset useful for calibration of consumption, emissions and fire behavior/effects models to improve tools for land and fire managers.
- Provide quantitative documentation about fuels treatment effectiveness and fire behavior for land and fire managers.
- Measure direction and variation in rate of spread, fire type (e.g. surface, passive or active crown fire behavior) in relation to fuel loading and configuration, topography, fuel moisture, weather and operations.

**PERSONAL CONTACTS**

Contacts are primarily with incident and agency personnel and others directly involved with incidents.

**PURPOSE OF CONTACTS**

The purpose of contacts is to convey specific information to the line officers and agency administrators. Data can also be collected and analyzed to meet longer term management needs such as verifying or testing fire behavior modeling assumptions for fire management plans, unit resource management plans or project plans. We can address specific unit objectives such as effects to archeological, botanical or wildlife habitat resources in relation to fire behavior and fuels.

**PHYSICAL DEMANDS**

Walking and standing for long hours; exertion of an arduous level.

**WORK ENVIRONMENT**

The employee can be subjected to extreme heat, high humidity, cold temperatures, or insect infestations.

*/s/Randee L. Olson*  
Incident Business Specialist, R9