**From:** Peltz-Lewis, Lorri -FS
**Sent:** Wednesday, May 25, 2016 10:10 AM
**To:** Hinkley, Everett A -FS <ehinkley@fs.fed.us>
**Cc:** Peltz-Lewis, Lorri -FS <lpeltzlewis@fs.fed.us>
**Subject:** TFRSAC Breakout 3 Post Fire notes

**BREAKOUT SESSION – Group 3 – Post-Fire:**

**Ecological Context/Climate Change Research:**

Where we should go is an ecological context – severity in one region is vastly different from another. Fire Ecology and Remote Sensing needs to be cross walked to support this analysis further. Species integration – Sage Grouse, etc.

**Degradation of the site** – health hazards, mud flows, etc. how can remote sensing be used.

**Climate change** – post fire what does this do on the ground? Challenges there.

**Suppression** – accurate fire history – final perimeter and severity within (Todd Hawbaker USGS study – get from Susan), need additional data on this, changing fire regimes 20 years ago, 5 years ago. Todd’s analysis is good to look back.

**Decision Support/Modeling Improvement**: RS for DS – any time we detect fire we suppress it and put it out. When a prescribed or controlled burn can be positive.

**Effectiveness** - fuels treatment (prescribed fire), effectiveness of the rehab of the fire; suppression and how it impacts the rehab.

**Sensitivity analyses** on how well a model did – is it the data, fuels, weather that impacted the outputs – did they match what we observed in the field?

**Values at Risk** – is there something we can do post fire

**What is the correct model to use** – who is comparing these, what models work where, how do they work, what are the unique problems with those models? Where did the models come from, what algorithms were used, identify tools to fix or update the models,

**BAER team work** – fire and fuels datasets from coast to coast, once it burns then it is out of date. We have ignition points – we know where they started, but we don’t know where they burned.

**Technology Options:**

**Platforms UAV and small satellites** – how can you use large numbers of small satellites to observe the earth for every 15 mins or hourly? Can get 25 m resolution – better than this would be a UAV.

**Hawkeye Program** – post incident forensic analysis quality of the data, false positives, what caused it, size of fire when report went out, some analysis is high, needs to know minimum fire size. Susan – analysis on the coast lines is good, but internal country is problematic, topography, ground truthing, world-wide applications exist as well.

**Sensing modalities** – spectral, spatial, designing processing chips for nats (SP?), UAS development – 30 m vs 3 cm. Now we have millions of leads – lots of spectral and spatial.  Timeliness associated with UAV – controlling the sensor. Sage Grouse applications – and ecological context of fire.

**Burn Severity remote sensing** – NASA intern – damage assessment (Chris Cole BLM),

**Suppression** – accurate fire history – final perimeter and severity within (Todd Hawbaker USGS study – get from Susan), need additional data on this, changing fire regimes 20 years ago, 5 years ago. Todd’s analysis is good to look back.