# Featured Projects from Oregon/Washington BLM

## Climate Data – Identifying Tools Based on What Users Do

This agreement funded an undergraduate student, Melanie Brown, at Oregon State University who worked with the Conservation Biology Institute. Melanie conducted one-on-one interviews over the phone with 30 managers from eastern Oregon and southern Idaho to understand what they did with respect to sagebrush ecosystem management and restoration and what climate and weather data they used to conduct their analyses and work. She walked the managers through a series of climate and weather websites covering snow cover, longer range weather forecasts, drought, and climate change. Among the key findings were:

* Collaboration between climate scientists and land managers is key to effective tool development that creates accessible, useable, and useful climate tools for land management.
* There is a need for basic information and climate change education to promote the use of existing climate-related web sites and prevent misinterpretations.
* Managers need finer spatial scales relevant to their management areas, no larger than a county or ecoregion, and temporal scales that include both near-term weather forecast and longer-term climate projections.
* The climate variables most frequently mentioned were precipitation and temperature, but more specifically their seasonality.
* Managers need information on climate impacts as opposed to just changes in climate.

Melanie completed her undergraduate thesis based on this project. The feedback received resulted in changes to web-based tools provided by the Conservation Biology Institute to better serve land managers and the blueprint for a new tool to focus on potential climate change impacts on vegetation, as requested by the managers. Melanie presented her findings at the 2015 Great Basin Consortium conference in Boise, the North Central Climate Science Center Open Science conference in Fort Collins, and the Northwest Climate Science Conference in Coeur D’Alene. She also presented the results in two webinars. Interest in further development of the climate impacts delivery tool is high. The BLM plans to provide additional funds to support further development of the climate impacts delivery tool as part of Melanie’s graduate studies in 2016.

## Managing Forest Understories for Climate Change Adaptation

This project at Oregon State University is funding a post-doc, Julia Burton, to build on research conducted under the Density Management Study (DMS), examining how climate change and forest management interact to affect understory species composition. While much research has been conducted on this topic concerning commercially important trees, understory response remains poorly understood. In the first year of this 3-year project, Julia conducted additional field sampling at the DMS sites to collect additional samples of understory plants, measuring leaf, stem, and root traits and obtaining samples for elemental and isotopic analysis, focusing on isotopes of nitrogen and carbon. Of particular interest are plants on the State Director’s special status species list and species of cultural interest to western Oregon tribes.

## Live Fuel Moisture Sampling

The Prineville District has an agreement with the Oregon State University – Cascades (formerly Central Oregon Community College) to monitor live fuel moisture for prescribed fire and wildfire preparation planning. Students from OSU-C sample representative vegetation (bitterbrush, sagebrush, and/or juniper) at 4 sites in Central Oregon from mid-April through mid-October and the data is loaded into the National Fuel Moisture Database. We look to continue this arrangement as it provides important information to local managers.