

## **Sagebrush-Steppe Cooperative Habitat Condition Class Assessment Project**

### **Situation**

The High Desert Sagebrush Cooperative (the Cooperative; <http://conserveonline.org/workspaces/SagebrushCooperative>) works to conserve approximately 30 million acres of sagebrush-steppe habitat across the high desert of eastern Oregon, Idaho and Nevada (see map). The Cooperative consists of multiple stakeholders who work to identify strategies and set priorities for successful conservation of sagebrush habitat through information sharing, tools development and distribution, identifying information gaps, funding restoration projects and coordinating with related organizations. Cooperative members include conservation organizations, land management and wildlife agencies, research institutions, cooperative weed management areas, private ranchers, soil and water conservation districts and watershed councils.

Sage-steppe habitat is declining or disappearing across much of its range due in part to weed invasion, juniper expansion and altered fire frequency. The decline and fragmentation of this habitat impacts wildlife and livestock who use it for forage. An assessment of habitat condition is needed to help the Cooperative prioritize its work and determine appropriate management actions.

### **Tools and methods**

Few data sources are available to make an assessment across the area of interest. The LANDFIRE project provides the only dataset of vegetation conditions (Fire Regime Condition Class, or FRCC) for the entire project area, but the dataset is calculated at a broad scale that is not suitable to meet the goals of the Cooperative. The Cooperative decided to use LANDFIRE's map of current vegetation and its models of reference conditions to calculate a related measure of departure called Succession Class Relative Amount (SCRA). SCRA depicts the departure of current vegetation conditions from reference conditions for individual seral-stages within a vegetation type (or Biophysical Setting, or BpS).

The Conservancy's Heather Swartz, coordinator of the Cooperative, worked with TNC's LANDFIRE team to map SCRA for the High Desert using LANDFIRE Succession Class (S-class) and BpS datasets. The spatial data were downloaded from the National Map (<http://landfire.cr.usgs.gov/viewer/>), an online spatial data storehouse, and clipped to the project area. Using the FRCC Map Tool and the LANDFIRE reference condition information it contains SCRA was calculated using level five hydrologic unit codes (HUC5) as the summary unit.

Swartz presented the SCRA map to key partners in May 2009. The map depicts what partners intuitively know about the region - vegetation departure is

widespread and driven by uncharacteristic vegetation (e.g. weeds such as cheatgrass and medusahead and the encroachment of juniper into sagebrush habitat). Comparison of the LANDFIRE-based SCRA map with other datasets (independent maps of juniper, cheatgrass, shrub cover, and wildfire history) indicate that the SCRA map is helpful in depicting the general departure across the landscape at the scale of the analysis. It is also appropriate for the Cooperative's management prioritization across the region but more detailed datasets will be needed for planning desired conditions and management scenarios within the landscapes that are identified.

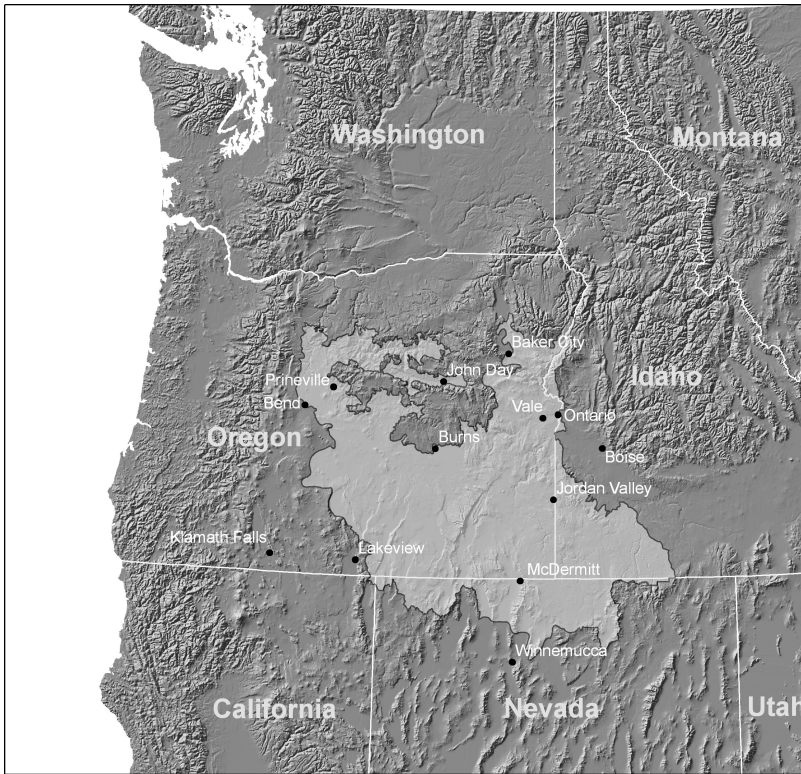
This assessment will become part of a regional sagebrush steppe document that can be used as a guide for managers, and will include maps of priority areas for specific practices including protection of existing high quality habitat, containment and treatment of invasive species, treatment of juniper, potential impacts of developing wind and energy facilities and other practices identified in the conservation approach. Due to constant change in the ecosystem, management practices, and scientific understanding members of the Cooperative hope this will be a living document that is updated every few years.

### **Next Steps**

Partners will combine the LANDFIRE-based SCRA map with other datasets and, using collaborative input, ask specific questions of the dataset to identify priorities. This information will then be combined with an analysis of management actions over the last 10 years and current science on the outcomes of management practices to identify priorities for specific management practices across the region and to direct research towards the information gaps. The Collaborative plans to complete the first iteration of the assessment and conservation approach in winter of 2009/2010

### **Summary and Maps/Graphs**

**Sagebrush-Steppe Cooperative Area Map** (cooperative area, defined by the extent of sagebrush-steppe habitat, shown in light gray)



**Succession Class Relative Amount in the Sagebrush-Steppe Cooperative Area with a Three-mile Buffer** (blue shades show successional stages that are abundant or over-represented on the landscape today compared to their reference condition).

