



Monitoring Sagebrush-steppe Vegetation in the UCBN

Network parks where resource is being monitored

- City of Rocks National Reserve
- Craters of the Moon National Monument and Preserve
- Hagerman Fossil Beds National Monument
- John Day Fossil Beds National Monument
- Lake Roosevelt National Recreation Area

Importance: Sagebrush-steppe – a threatened ecosystem

Sagebrush steppe is one of the most threatened ecosystems in the Intermountain West. Substantial portions of the region have been converted to agriculture and heavily grazed rangeland. Much of the remaining sagebrush steppe has been degraded through altered fire regimes and invasion of introduced plants. Sagebrush steppe is a high priority vital sign for the UCBN, occupying over 50% of land cover in CIRO, HAFO, and JODA, and over 90% of the vegetated area of CRMO. At LARO, sagebrush steppe is present and significant in the southern half of the park and represents an important park ecosystem. Historic and current land use practices both within and adjacent to UCBN park steppe communities continue to fragment and alter steppe ecosystems, and predicted climate change scenarios for the region will likely exacerbate these changes.



Bunchgrass-dominated steppe at JODA, 2008

2008 Status

In 2008 the UCBN measured fundamental steppe community indicators in over 500 plots at CIRO, HAFO, and JODA as a pilot effort to test the UCBN's draft protocol and to begin to describe baseline conditions. Preliminary results clarify the unique community types in each park, ranging from bunchgrass-dominated communities in JODA to the dense mountain big sagebrush stands in CIRO. Describing the composition and structure of these communities is a critical first step for managers in understanding their respective park systems, setting desired future conditions, and interpreting future trends. For example, cheatgrass and other annual invasive grasses dominate many areas of JODA and HAFO, two low-elevation parks. At CIRO, a high-elevation park, cheatgrass is widely present but represents only a small fraction of overall plant cover.



Sagebrush-dominated steppe at CIRO, 2008

Monitoring Objectives

- Determine the status and trends in key indicators of ecosystem soil/site stability, hydrologic function, and biotic integrity in UCBN sagebrush steppe communities.

Management Applications

- Provides critical indicators of park ecological condition
- Provide feedback on the timing and intensity of park management and restoration activities
- Inform integrated assessments of climate change impacts on park resources
- Support park resource planning and land health reporting efforts

Contact Information

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