

Fire Related Research Projects Ongoing in the Jarbidge Field Office

Title / Principal Investigator	Location / Status	Abstract
<p>Using native annual plant species to suppress weedy invasive species in post-fire habitats</p> <p>Mark Paschke, Colorado State University, Joint Fire Science Program (JFSP) www.firescience.gov</p>	<p>Murphy Complex Fires (and other locations)</p> <p>In Progress (06/14/2007-08/31/2010)</p>	<p>The focus areas of the study are to determine the effectiveness of native annual plant species seed mixtures in post-fire habitats in comparison to more common seed mixtures that are comprised of mid- to late seral species by (1) determining if the native annual plant species will be superior competitors with invasive annuals like cheatgrass and (2) determining if the native annual plant species will facilitate the establishment of native perennial plant species.</p>
<p>Feasibility of a Chronosequence Approach to Identifying Post-fire Effectiveness of Seeding Non-forested Rangelands</p> <p>David Pyke, USGS, Joint Fire Science Program (JFSP)</p>	<p>Jarbidge Field Office (and other locations)</p> <p>06/01-12/31/2008 (Initial findings have been submitted to Joint Fire Science for further funding of on the ground monitoring)</p>	<p>This investigation involves examining previously implemented post-fire treatments of different ages within the intermountain west and southwest bioregions (Columbia and Snake River Basins, Great Basin, Colorado Plateau, and the Mojave, and Sonoran deserts) to determine how often, when, and where these treatments have been successful over the short (3-5 yrs) and long-term (> 5 yrs).</p>
<p>USGS Dynamic Ecosystem Performance</p> <p>Bruce Wylie, USGS</p>	<p>Owhyee Shrublands and Murphy Complex Fires</p> <p>In Progress One year (2007) anomaly mapped. 4 years of temporally smoothed eMODIS 250 m NDVI and have PRIZM climate data. Plan to have 2000-2008 performance anomaly mapped by Sept. 2009.</p>	<p>Interannual variations in weather cause variations in ecosystem performance which make it difficult to detect ecosystem disturbances and anomalies. Using the growing season average Normalized Difference Vegetation Index (gNDVI) as a proxy for ecosystem performance, we build models to predict gNDVI from seasonal weather and site.</p>
<p>Big Springs Number Eight Erosion Traps</p> <p>Beth Newingham, University of Idaho, College of Natural Resources, www.cnr.uidaho.edu</p>	<p>Murphy Complex Fires</p> <p>In Progress Set up December 2008, to be read at 4-month intervals</p>	<p>University of Idaho research staff placed 15 erosion trap structures strategically throughout the 2007 Murphy Complex to monitor the amount of erosion occurring. Sites will be visited every four months to collect the dust that has accumulated. Information collected will be extrapolated to calculate that amount of erosion occurring at 15 cm, 50 cm, and 100 cm, giving pounds / acre calculation.</p>

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<p>Effects of Livestock Trampling on <i>Lepidium papilliferum</i> and its Habitat in Southwestern Idaho</p> <p>Stephen C. Bunting, University of Idaho, College of Natural Resources, www.cnr.uidaho.edu</p>	<p>Juniper Butte area of the Jarbidge Field Office</p> <p>In progress completion of study expected on May 31, 2010</p>	<p>This study was designed to study the direct effects of cattle trampling on <i>Lepidium papilliferum</i>. Four study sites were chosen in the Juniper Butte area including: Airbase, Holding Pen Native, Holding Pen Seeded and Three Creek study sites. Three sites were enclosed by fences prior to initiation of the study. A fence was installed to protect the remaining site, Three Creek, from livestock grazing in 2004. Twenty slickspots in each study site were selected based on the presence of <i>Lepidium</i>.</p>
<p>Monitoring Solar Radiation</p> <p>University of Idaho, Research and Extension Center, College of Natural Resources, Ecophysiology, www.cnr.uidaho.edu</p>	<p>West of Balanced Rock</p> <p>In Progress</p>	<p>The focus of this study is to improve computer simulation models to estimate incoming solar radiation and thermal radiation from the atmosphere. Use these simulations to estimate evaporation and transpiration of water from various land-use types, including rangeland, using satellite imagery. Measuring incoming solar and thermal radiation and reflected and emitted outgoing solar and thermal radiation from the range grass cover. In addition, wind speed and direction, air temperature and air humidity are monitored every five minutes.</p>
<p>Telemetry and Flights for Sage- Grouse Monitoring</p> <p>Idaho Department of Fish and Game</p>	<p>Jarbidge Field Office</p> <p>Ongoing since 1998</p>	<p>Fixed wing aircraft flights are conducted over potential sage-grouse habitat areas to locate active leks.</p>