

Summary of the UDWR Sage-grouse Threat Analysis Map

3/3/2015

Utah's Division of Wildlife Resources (UDWR) has been collecting data on Greater Sage-grouse for more than 50 years. In February of 2013, Governor Herbert signed the Conservation Plan for Greater Sage-grouse in Utah. The 2013 conservation plan outlined goals and objectives for conserving the species and identified priority habitat areas within which 94% of the state's sage-grouse reside. The State of Utah and its conservation partners are dedicated to reaching these goals and objectives.

Since resources are limited, UDWR began compiling the years of population and habitat data in an effort to strategically focus conservation efforts where they would have the greatest positive impact to the birds. The result of this effort is a detailed analysis of sage-grouse needs, opportunities and threats. Using spatially explicit data, the results of the analysis have been compiled into one easy to use online map. The map is a useful tool for many groups:

1. The State and its conservation partners can effectively focus conservation projects and strategically address landscape level needs.
2. Fire professionals can focus pre-suppression and suppression resources in areas with the greatest potential impact to sage-grouse.
3. Industry planners will know early in their development process where they will need to consider sage-grouse habitat avoidance, minimization or mitigation.
4. Cooperative Weed Management Area members will be better equipped when working in SGMAs to control the impact of invasive plant species.

Using the Map: Go to: wildlife.utah.org/sage-grouse then click on > "Management Map"

The toolbar at the top of the page includes:



1. **Home button:**
 - a. This will return the map to its default settings
2. **Legend:**

- a. the legend can be clicked at any point while using the map and will display symbology for selected data layers

3. Layers:

- a. **SGMAs:**

- i. There are 11 Sage-grouse Management Areas in Utah. Click the perimeter or the polygon or any lek within and a text box will appear with the lek name.

- b. **2014 Leks:**

- i. Identifies occupied leks found within SGMAs

- c. **Nesting and Brood Rearing:**

- i. Over 90% of Utah sage-grouse nest and raise their broods within 3-miles of a lek. As a result, 3 mile buffers surrounding leks guide where specific management actions take place. *See “Management Plan” on wildlife.utah.gov/sage-grouse to review the Conservation Plan for Greater Sage-grouse.

- d. **Winter Sage-grouse Habitat:**

- i. Sage-grouse are almost entirely dependent on sagebrush during the winter months for their nutritional needs, and as cover from predators and the elements. Areas where sagebrush is wind swept, or tall enough to stay above the snow provides suitable winter habitat.

- e. **Land Ownership**

- f. **Counties**

- g. **Wildfire Priorities:**

- i. While all SGMAs are considered a priority for wildfire suppression, the five along the western side of the state are at higher risk. Fire priorities within the five SGMAs were created to focus fire resources where fires will have the greatest impact on sage-grouse population viability.

- h. **Cheatgrass Intensity:**

- i. The intensity of cheatgrass dominance was calculated by the USU GIS lab. They used remote sensing to capture images of the cheatgrass peak which generally occurs mid-May to mid-July and used a series of calculations to determine where cheatgrass intensity is high, medium and low.

- i. **Oil Gas Wells:**

- i. Oil or gas wells - each well is identified by a color coded marker. While this layer is selected, the map legend displays the well types.

- j. **Oil Gas Units:**

- i. Click on the Unit to get pertinent information, e.g. Operator name, acres of unit, lease date, etc.

- k. **Oil Gas Fields:**

- i. Click on the Field to get pertinent information, e.g. Field name, date, status, etc.

1. **Encroachment, Tier I, Tier II and “Originals”** layers represent the Pinyon and Juniper (P/J) treatment planning effort that developed for implementation over the next 15 years. Local UDWR habitat and wildlife biologists in each of the eleven SGMAs were presented with a modeled P/J map overlaid with lek specific nesting and brood rearing habitat and asked to identify priority treatment projects which would address conifer encroachment as well as Tier I and Tier II opportunity areas which will allow for the expansion of suitable habitat.
 - i. The “Original” layers represent the polygons identified by UDWR biologists
 - ii. The Encroachment (0-2 years), Tier I (0-5 years) and Tier II (0-15 years) layers represent the original polygons after being filtered for <10% P/J coverage as well as Biophysical Settings (BpS) which are not compatible with sagebrush ecosystems.
- m. PJ Predictive Model:**
 - i. Relying on the University of Minnesota’s Michael Falkowski study, funded in part by UDWR and NRCS, a conifer encroachment map was created and used to refine the habitat within SGMAs. Previously mapped habitat and opportunity delineations were overlaid with the new Pinyon and Juniper (P/J) data and areas with greater than 10 percent conifer cover were designated as opportunity area. Areas with less than 10 percent conifer cover were designated as habitat.
- n. NRCS Soil Temperature / Moisture Data:**
 - i. These data were helpful in determining fire priorities within the five priority SGMAs. They also help explain why fires are not so prevalent in the other SGMAs, since most are found in colder, moister ecosystems.
- 4. Basemap Gallery:**
 - a. A wide selection of basemaps were added which can be selected depending on the information the viewer hopes to extract from the map.
- 5. Overview Map:**
 - a. Shows where the map is in context of a larger map view
- 6. Measure:**
 - a. The measure tool allows viewers to easily measure area or linear distances, or to determine exact coordinates of a location. Select a tool type, click on the map until the full selection has been identified, then double click to finalize the polygon or linear feature. The measure text box will show the results. There are a variety of units which can be selected to give the desired outcome, e.g. Miles, kilometers, feet, or sq. miles, acres, hectares, etc.