

Utilize Best Available Information

- Existing Remote Sensing Tools
- State databases



Forest and Rangeland Ecosystem Science Center

SAGEMAP

Overview Publications Partners

A GIS Database for Sage-grouse and Shrubsteppe Management in the Intermountain West

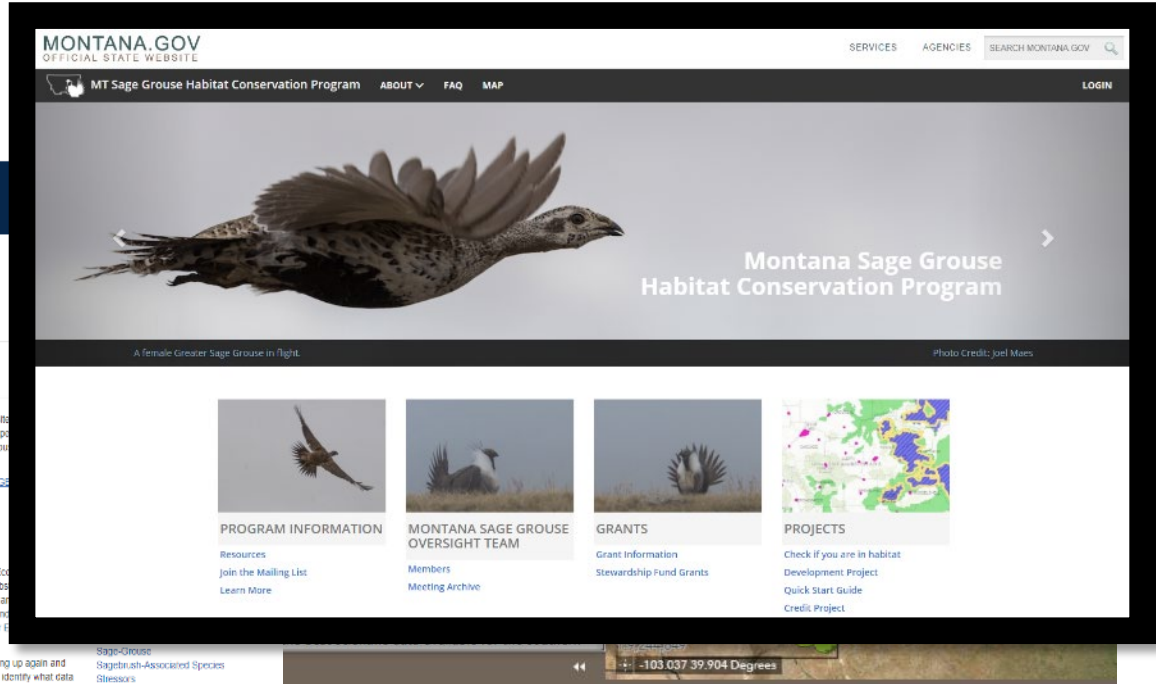
"SAGEMAP - A GIS Database for Sage-grouse and Shrubsteppe Management in the Intermountain West" was a website that display and provide access to spatial information needed to address management of sage-grouse and sagebrush steppe western United States. The original site was a portal for spatial data needed for research and management of sage-grouse shrubsteppe systems.

All the original project narratives from that site has been made available here. The USGS data can be found in the [SAGE ScienceBase](#).

Background

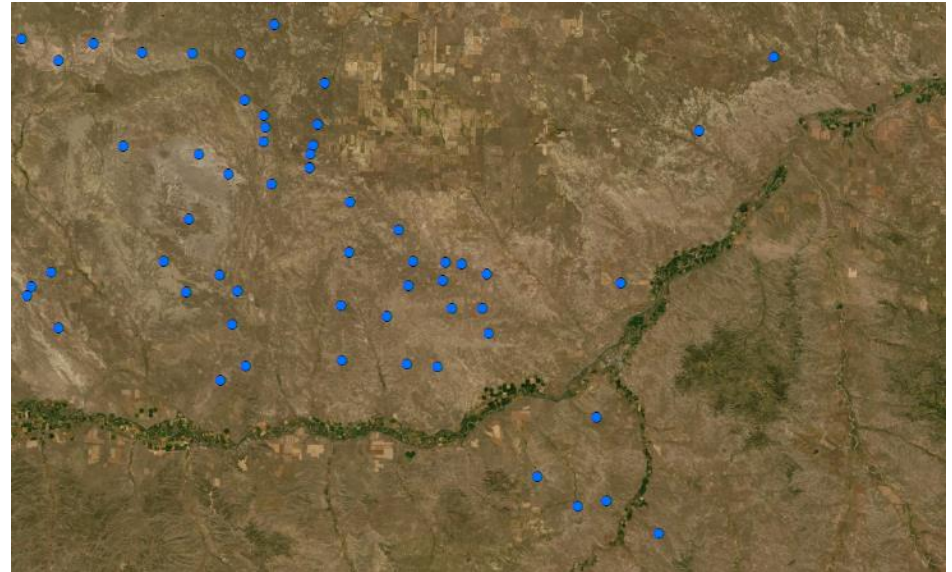
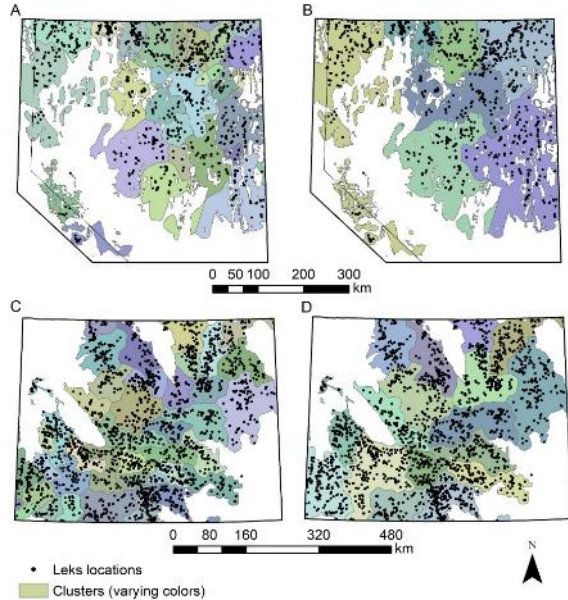
The SAGEMAP project was conducted by the Snake River Field Station (SRFS) of the USGS Forest and Rangeland Ecosystem Science Center and identified and collected spatial data layers needed for research and management of sage grouse and shrubsteppe systems. The datasets, which could be queried, viewed, and downloaded from an FTP site, are important for our understanding of shrubsteppe lands and associated wildlife. The data can be used to identify factors causing the declines of wildlife and habitats, or in the decision process for listing of Greater Sage-grouse (*Cathartes aura*) as a "Threatened" or "Endangered" species, and to help guide restoration of habitats in the Great Basin.

The SAGEMAP project came about simply because we attended too many meetings where the same topics kept coming up again and again: "We don't know what maps are available" or "Where should we focus our efforts?" We finally suggested that we identify what data were needed and available, collect the GIS layers if possible, and build this website for others to access and use the information. Thus, SAGEMAP (the Sagebrush and Grassland Ecosystem Map Assessment Project) was born.



Understand the Extent of Population

Designing multi-scale hierarchical monitoring frameworks for wildlife to support management: a sage-grouse case study



Ecosphere, Volume: 10, Issue: 9, First published: 25 September 2019, DOI: (10.1002/ecs2.2872)

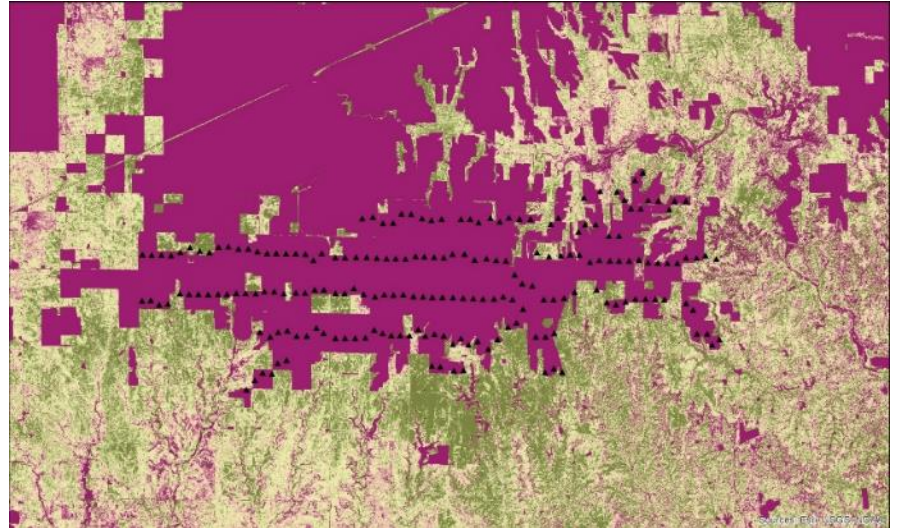
Predict Direct and Indirect Impacts

- Identify concentration areas
 - Breeding Habitat
 - Identify all historical leks and find any unknown leks within the survey area
 - Aerial leks surveys via fixed wind or infrared
 - Ground counts
 - Brooding Habitat
 - Flush counts
 - Winter Habitat (Mostly sage -grouse)
 - Driving track counts
 - Pellet counts
 - Aerial abundance surveys

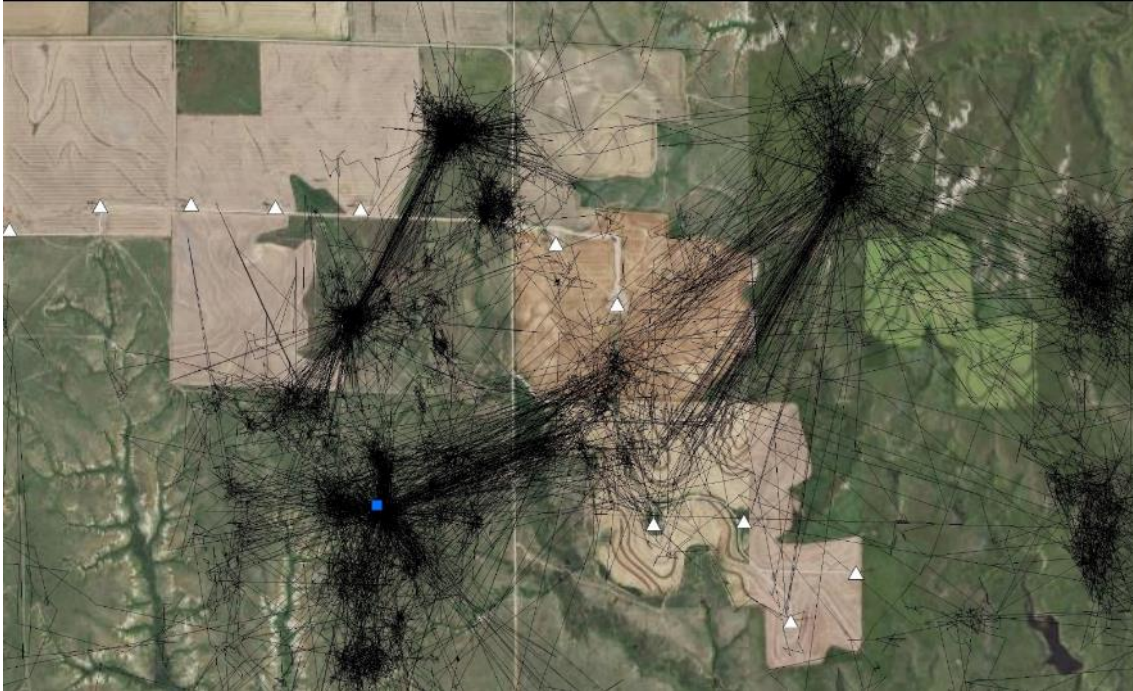


Predict Direct and Indirect Impacts

- Identify Habitat
 - Easier to identify what is not
 - Existing anthropogenic features
 - Cultivated lands
 - Non-native areas



Minimize and Mitigate



- Site away from concentration areas
- Site in non-habitat
- Mitigate for unavoidable impacts

Monitoring

- Conduct monitoring to evaluate impacts from the facility
- Incorporate those results in an adaptive management framework that will be used to inform future conservation measures

