USGS Nevada Habitat Mapping Update

To: Sage-Grouse Ecosystem Technical Team
From: USGS Western Ecological Research Center, Dixon Field Station

This document does not represent a completed data analysis and findings. Inferences should not be made from this document because it may not accurately reflect final conclusions.

Summary of Employment: The USGS has employed a total of 27 employees to work on various tasks related to the Nevada sage-grouse mapping project. We hired 10 GIS specialist's employees during FY13 for GIS analytical tasks within Western Ecological Research Center. Two GIS leads have worked part and full time, respectively, on managing the project and securing data. Approximately 8 of the GIS specialists were tasked with conifer extraction to complete a 1-m resolution state-wide map. See progress on conifer extraction below. Two of the GIS specialists are currently tasked with data compilation and layer preparation. Two statisticians have been working part time in calculating utilization distributions for regions of the state based on VHF and GPS telemetry data. We have now included a component of density index approximation using Kernel estimators to help delineate priority habitat. In the field season of FY13, approximately 15 employees were tasked with ground truthing the GIS layers used in the habitat modeling analysis. We ground-truthed >700 point locations within the state boundaries.
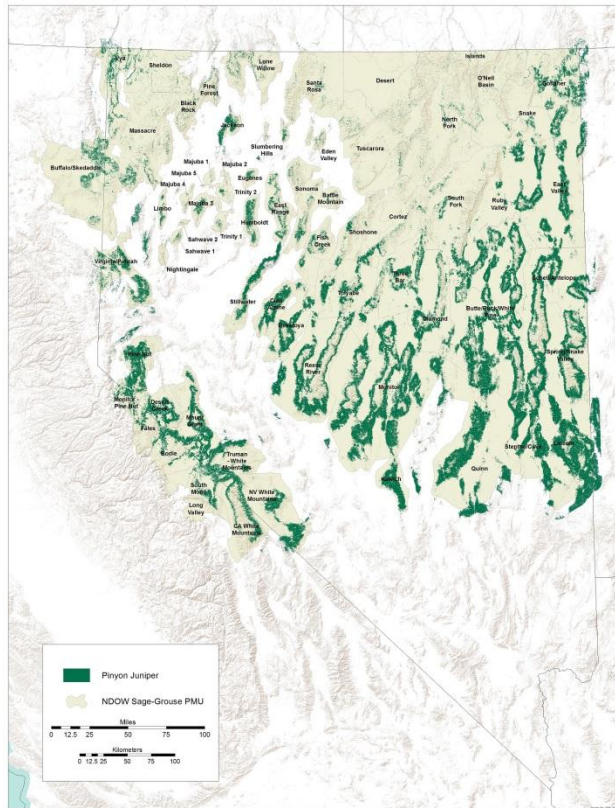
Bulleted Update of Progress:
  Conifer Extraction:

- 5272/7000 tiles completed or currently in progress.
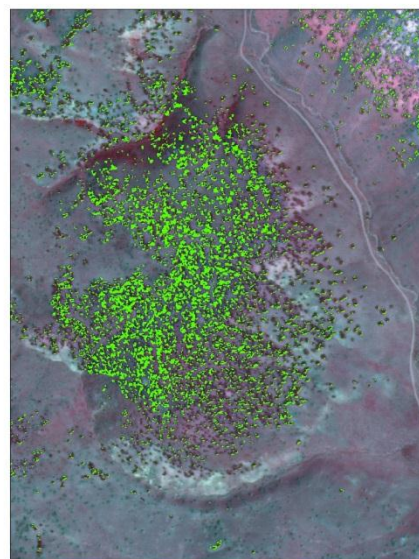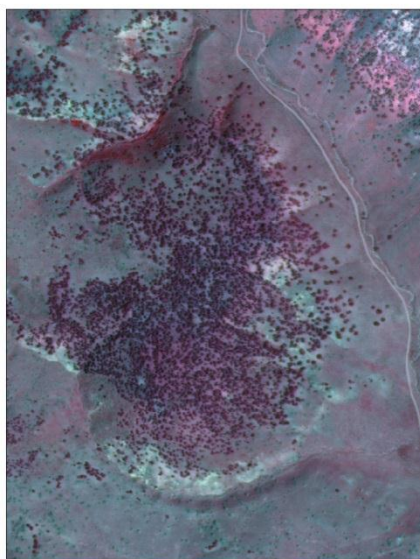
An example of 1-m resolution conifer extraction. National Agriculture Imagery Program (left) and overlay of conifer extraction using Feature Analyst (right).

Conifer classification based on Nevada Synthesis Map. Green represents areas that will be completed as 1-m resolution.
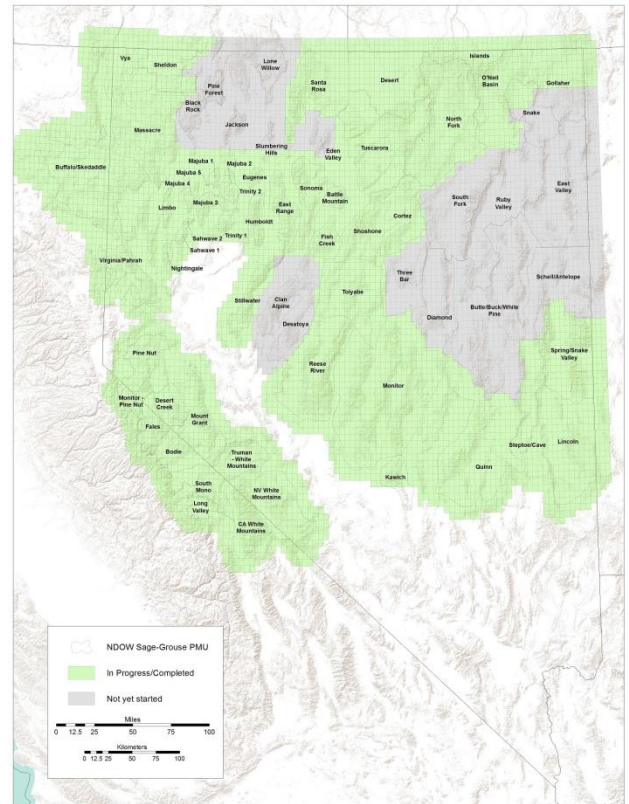
Progress of conifer extraction. Green represents areas either completed or in progress

RSF Preparation:

- Reclassified the NV SynthMap into new generalized land cover categories and created individual binary rasters (right image).
- Collected and prepared multiple project-wide datasets, including:
    - Elevation (elevation, roughness, and slope)
    - Distance to water (intermittent and perennial streams, water bodies, springs and seeps)
    - Distance to roads (local, minor, primary, and secondary)
    - Distance to land cover types (wet meadows, urban areas, agricultural fields, water)
    - NDOW Telemetry
    - BLM Fire polygons (1999-2008)
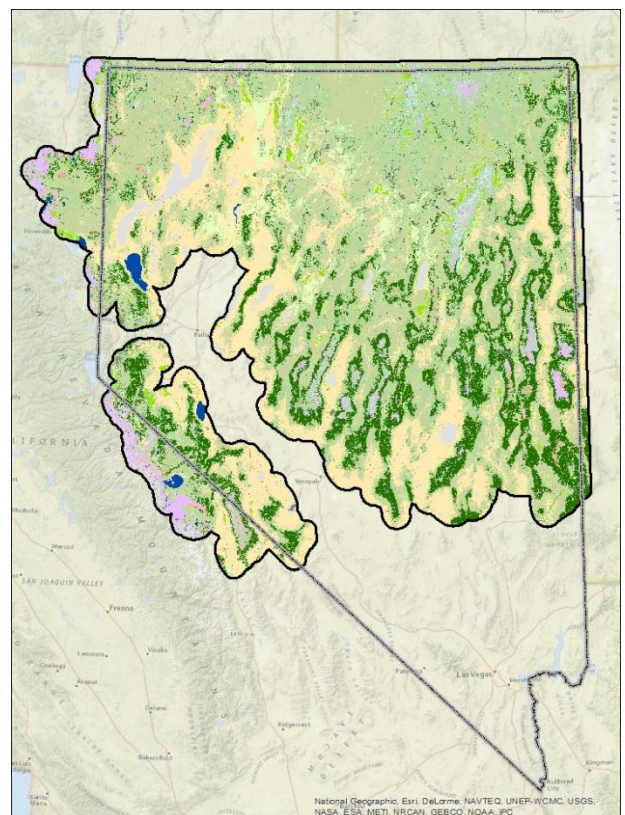
WERC Website:

- Draft project page created at: http://www.werc.usgs.gov/project.aspx?projectID=251
- We will be adding more content to this page soon.