



Greater Sage-grouse Status Review

Conifer Encroachment

Impacts to Sage-grouse

- Conifer encroachment in sage-grouse habitats has resulted in:
 - Loss of sagebrush cover and herbaceous vegetation
 - Increased predation risk
 - Reduction and elimination of sage-grouse occupancy
- Sage-grouse incur population-level impacts at very low levels of encroachment; i.e., no leks remained active when conifer canopy cover $>4\%$ (Baruch-Mordo et al. 2013, p. 239).



Impacts to Sage-grouse

Phase I



Phase II

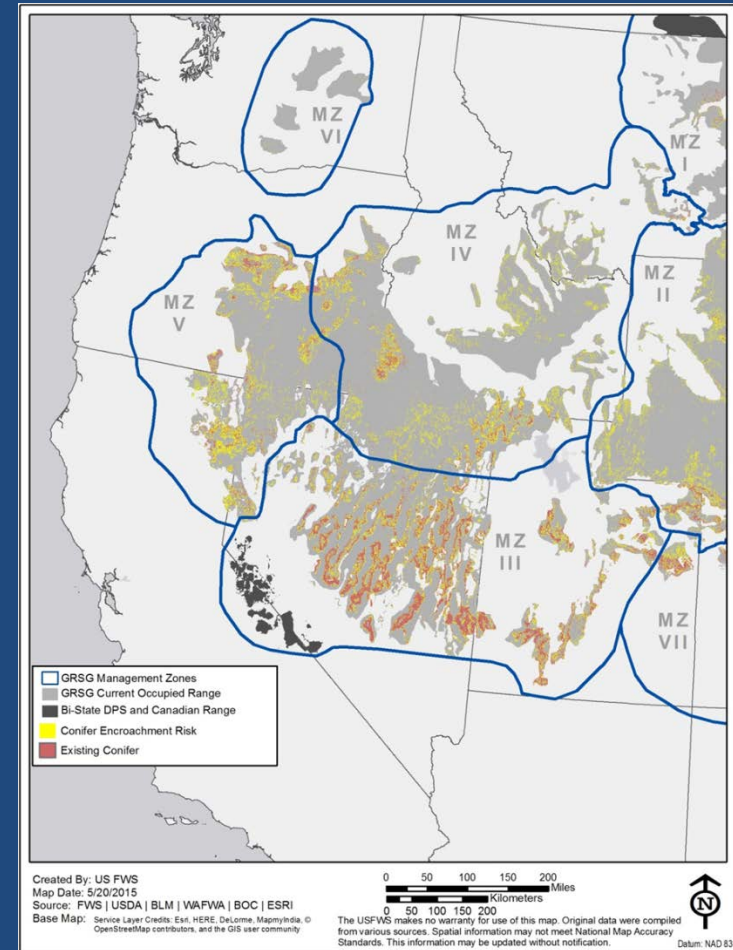


Phase III



Location and Extent of Conifer

- >11.5 million ac (6% of the occupied range)
- Pervasive in MZs III, IV, and V
- Locally present rangewide



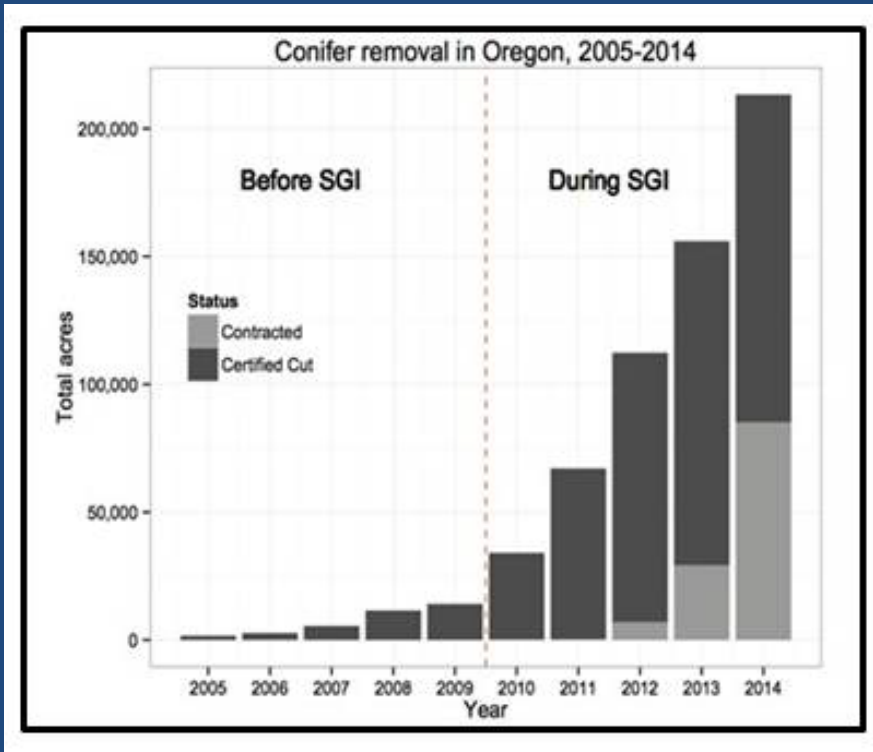
Changes Since 2010

- In 2010 we found that even though conifer is present throughout the range, conifer encroachment is not at a level that is causing a impact to sage-grouse everywhere within the species range.
- Since 2010, SGI has cut invasive conifer from 405,241 ac of primarily Phase I and II conifer, of which 84% of the removal was focused in the Great Basin.



Uncertainties

- The efficacy of conservation actions in restoring sage-grouse occupation is unknown.
- While many acres have been treated since 2010, it is uncertain if treatments are keeping pace with the current rate of conifer encroachment, at least in parts of the species range.



From NRCS 2015, p. 18



SGI Conifer Removal inside Oregon PACs

Population	Ownership	Acres Early Successional Conifer ¹	Acres Cut Inside PACs ^{2,3}	% Threat Reduced in PACs
Central Oregon	Private	80,387	67,955	85%
Northern Great Basin	Private	97,367	65,052	67%
Western Great Basin	Private	39,085	20,412	52%
Baker, Oregon	Private	19,005	7,864	41%
TOTAL	Private	235,844	161,283	68%

From NRCS 2015, p. 19

- Juniper cover increased 0.7 to 1.5% annually (Sankey and Germino 2008, pp. 412-413)
- 32,250 ac/yr of conifer has been removed from private lands in Oregon



Summary

- The Great Basin appears more susceptible to conifer encroachment than other portions of the range.
- The concerns presented by the stressor will likely continue to influence the persistence of sage-grouse, particularly in the Great Basin.

