



# Greater Sage-grouse Status Review

## Agricultural Conversion

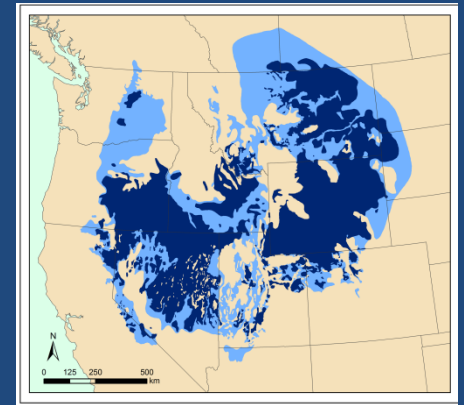
# Impacts to Sage-grouse

- Agricultural Conversion in sage-grouse habitats has resulted in:
  - Habitat loss and fragmentation
  - Loss of population connectivity
  - Decline in lek attendance
  - Loss of seasonal habitat
  - Exposure to pesticides
  - Increased predation



# Impacts to Sage-grouse

- Identified as one of three primary factors resulting in habitat loss and fragmentation in the 2010 finding.
- Concentrated in MZs I, IV and VI
- Has clearly shaped the current landscape by affecting past distribution, population numbers and connectivity



# Changes since 2010



- No restoration of lost habitat due to agricultural conversion
- No information received on rate or amount of conversion since 2010
- Many conservation easements have been established, but efficacy not assessed
- Proposed regulatory mechanisms will reduce this threat on Federal lands



# Models and Ag. Conversion

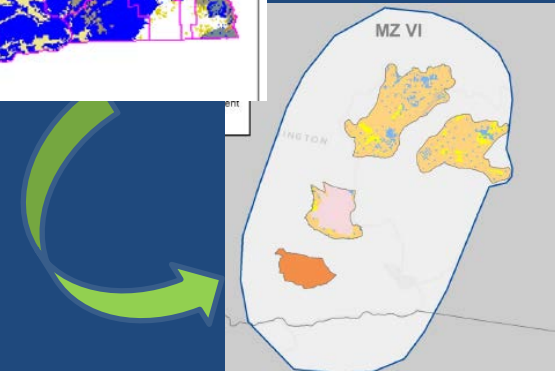
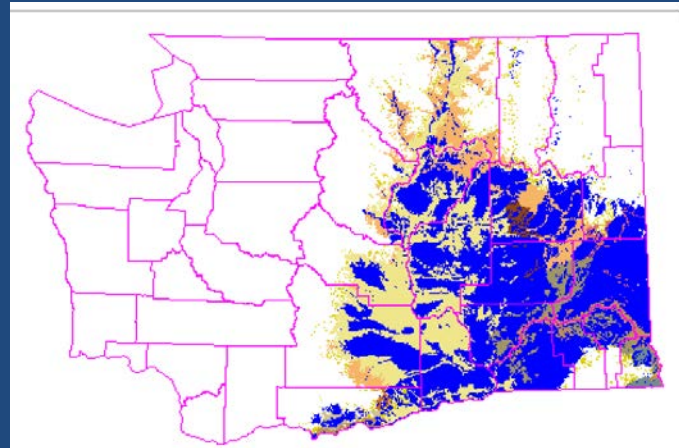
Modeling effort has more precisely identified the extent of the threat, and future exposure.

- Most lands suitable for supporting crops have already been converted.
- In MZ I future risk exposure appears minimal
- In MZ IV possible that some private lands may still be suitable, but no data on risk.
  - Land ownership patterns may minimize the risk



# Ag. Conversion in MZ VI

- Agriculture has been a primary driver of current distribution
- Sage-grouse use agriculture differently
- CRP important here



# Uncertainties

- Efficacy of Farm Bill Programs ↓
- CRP in MZ VI ↑
- New crops and techniques ↑



# Summary

- Clearly shaped the past
- Regulatory mechanisms – if implemented will minimize risk on Federal lands
- Current easements not targeted at grouse, future investments will help reduce impacts.
- Future impact does not appear significant
- MZ I, IV, VI (model only applied to MZ 1)

