

Douglas Core Area Restoration Team

Sagebrush Habitat Restoration Successes and Realities



June 25, 2020 Wyoming Sage-grouse Implementation Team Meeting
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PRESENTATION OUTLINE

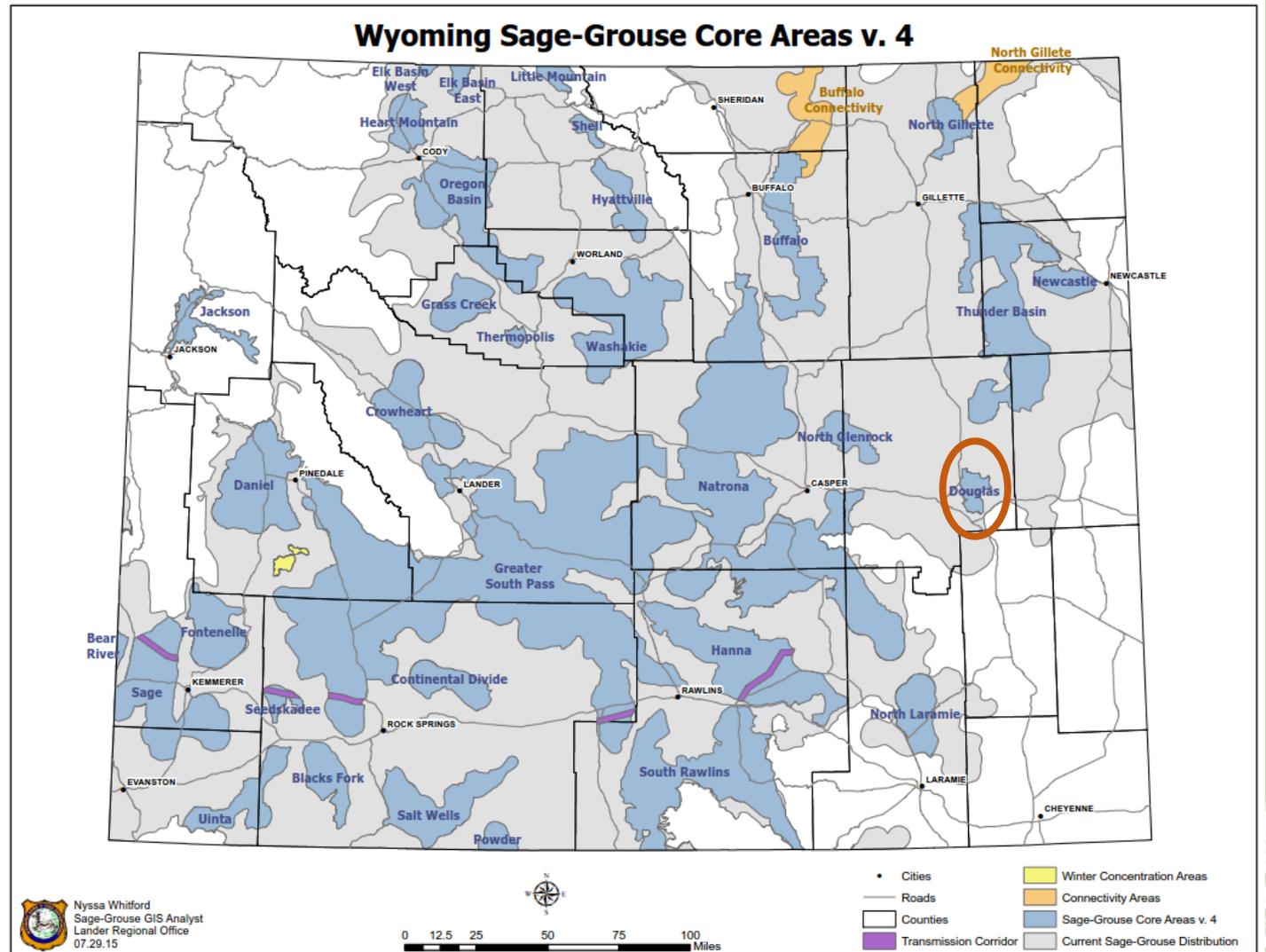
1. Introduction: Douglas Core Area and DCA Development Plan
2. Restoration Projects: Overview and Update
3. Adaptive Management
4. Sagebrush Restoration Successes and Realities
5. Key Take-aways and Outreach Initiatives





Douglas Core Area

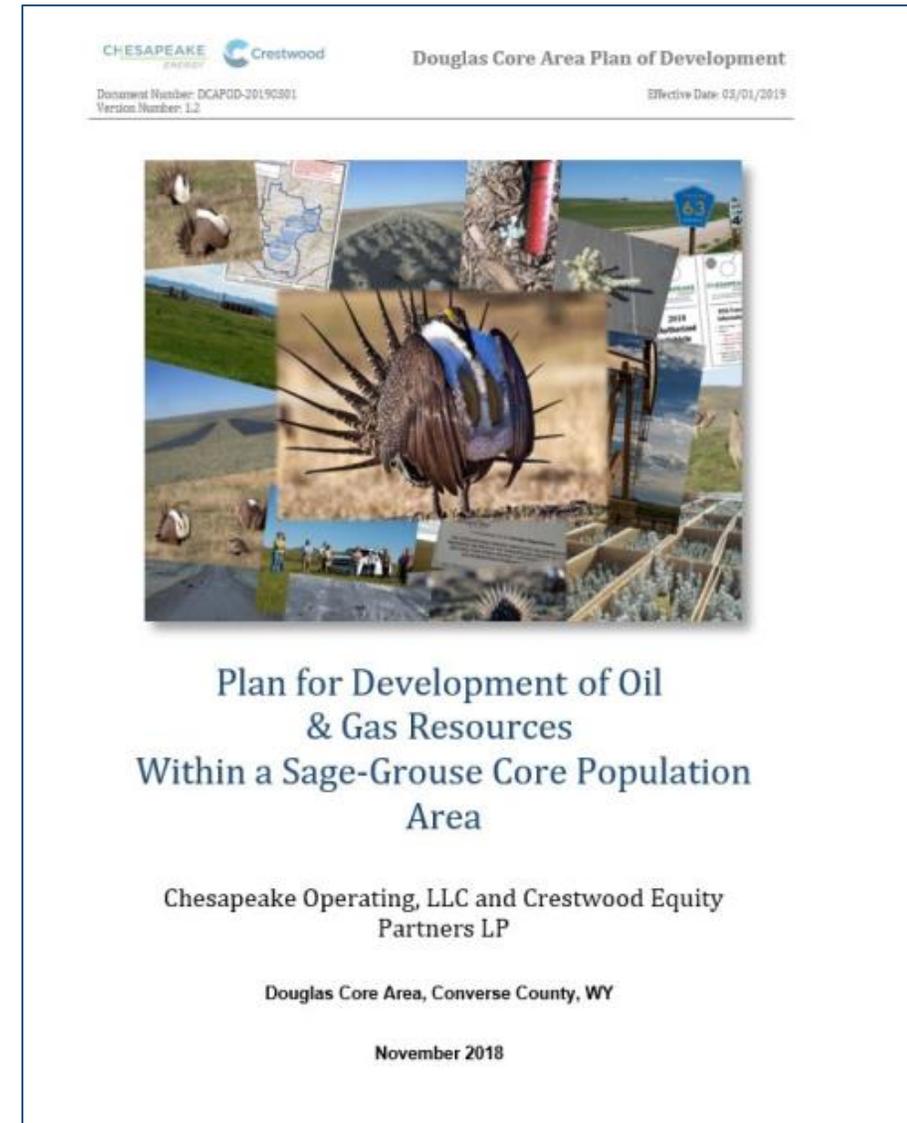
- 66,813 acres
- 2013: disturbance >5%
- Numerous wildfires within last 25 years (~10% of core area)
- ~93% private land ownership
- Prior existing rights for oil & gas development
- Small number of birds and leks (4 occupied, 2 active)





Chesapeake Energy Plan for Development

- 2013: Chesapeake Operating Development Plan for the Douglas Core Area
 - 2016, 2019 updates
- Mitigation Hierarchy
 - Avoid
 - Minimize
 - Mitigate





The Douglas Core Area Restoration Team

A multi-stakeholder team comprised of partners working to advance collective knowledge of sage-grouse habitat conservation.

- Audubon Rockies
- Bureau of Land Management
- Chesapeake Energy
- Converse County Conservation District
- Crestwood Equity Partners
- The Nature Conservancy
- Thunder Basin Grasslands Prairie Ecosystem Association
- University of Wyoming



- U.S. Department of Agriculture – Natural Resources Conservation Service
- U.S. Fish and Wildlife Service
- Wyoming Department of Agriculture
- Wyoming Game and Fish Department
- Wyoming Stockgrowers Land Trust

Technical Support:

- Trihydro Corporation and WEST Inc.





DCA RT Focus Areas

1. Develop projects to enhance seasonal habitat to support survival and reproduction of sage-grouse
2. Restore 'disturbed' to 'transitional' or 'functional' grouse habitat
3. Implement projects that target local threats to sage-grouse in northeastern Wyoming (e.g. West Nile Virus, wildfire, etc.)
4. Develop and maintain partnerships with private landowners



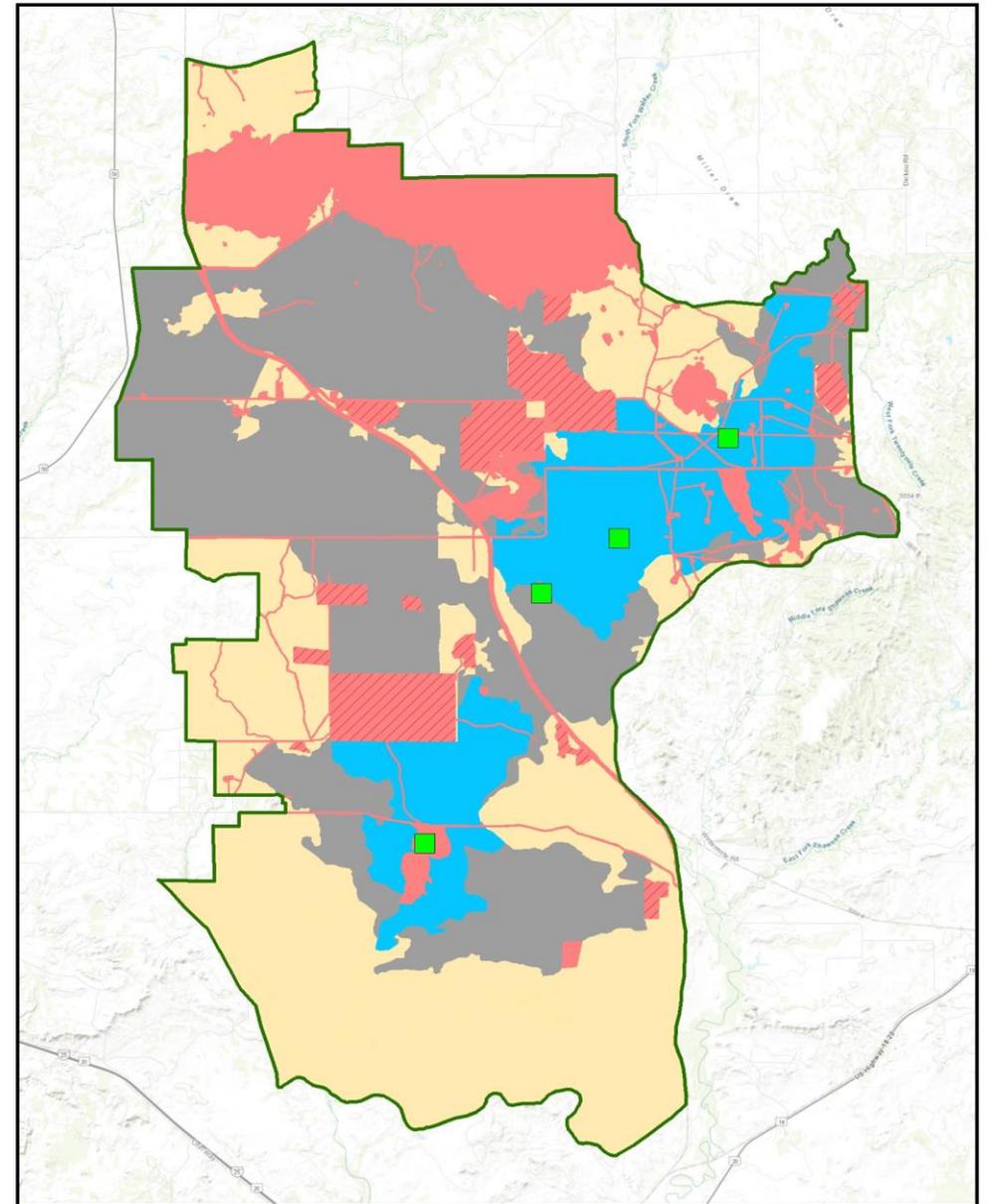


Project Prioritization

DCA Plan: Established Management Areas and Goals

- **Blue** – Predominantly high quality habitat that supports leks
- **Gray** – Predominantly suitable habitat or potential connectivity corridors
- **Tan** – Predominantly low quality/unsuitable habitat
- **Pink** – Pre-1994 and Disturbed areas
- Sage-grouse leks

Project prioritization, design, and monitoring were guided by the RT's Restoration Plan and Wyoming Sage-Grouse Executive Orders



2. RESTORATION PROJECTS

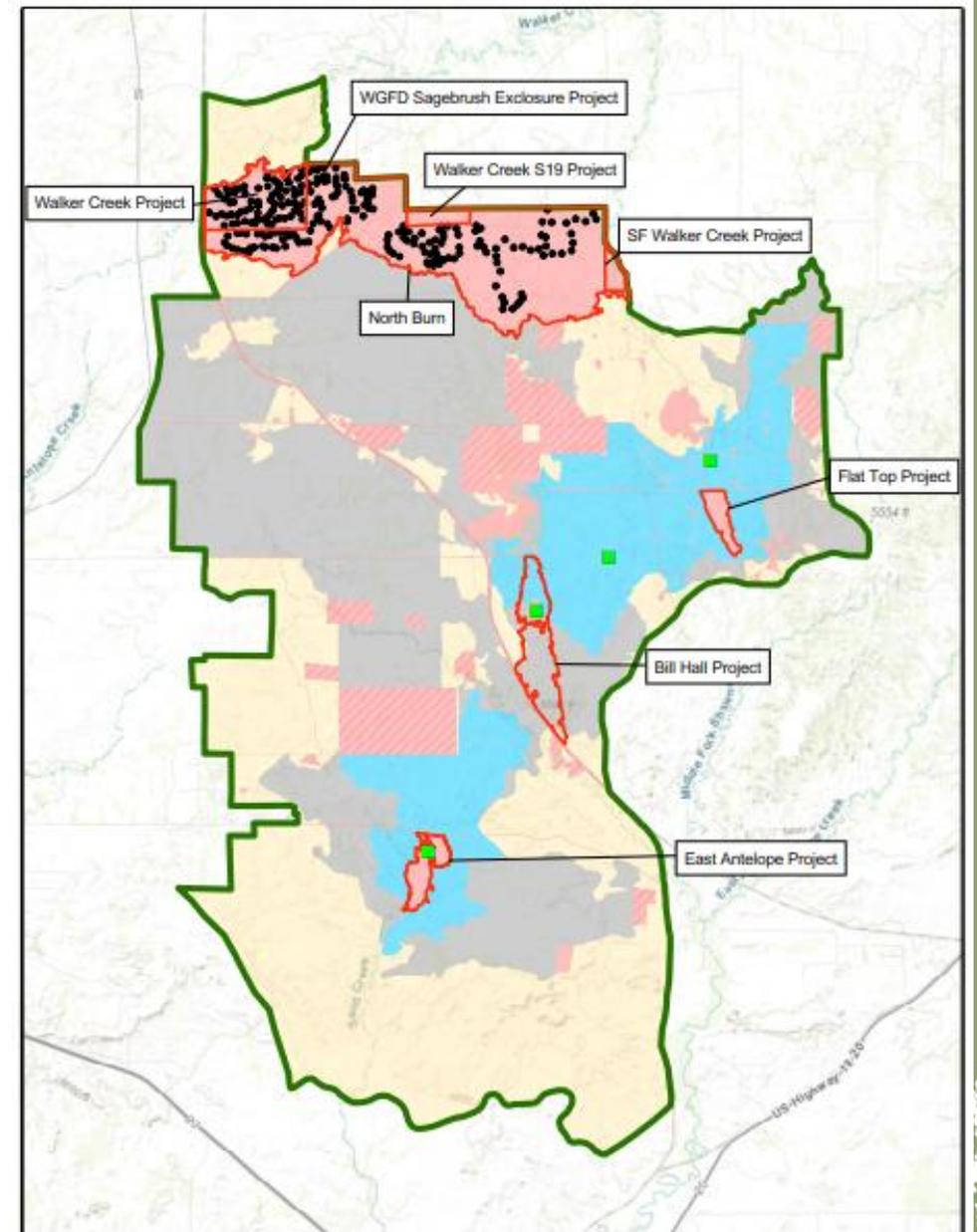




Providing lift through Habitat Restoration

Re-establishing sagebrush in wildfire burn areas.

- Six project sites (2014-2018)
- Over 100,000 sagebrush seedlings planted
- 2060 acres in discrete project areas including a recent (2016) burn
- Projects complementing WGFD planting efforts in North Burn Area
- Fall 2020 sagebrush planting projects under development (20,000 seedlings)
- Total investment = \$2M+



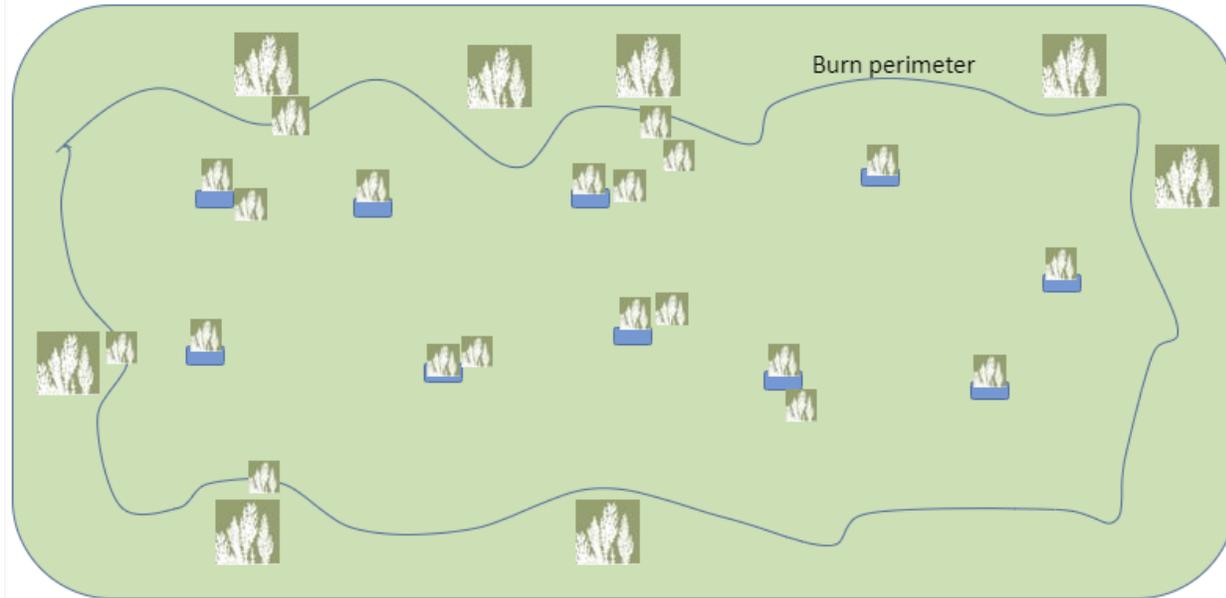
2. RESTORATION PROJECTS





Project Approach

Seed source islands – Sagebrush Outplantings

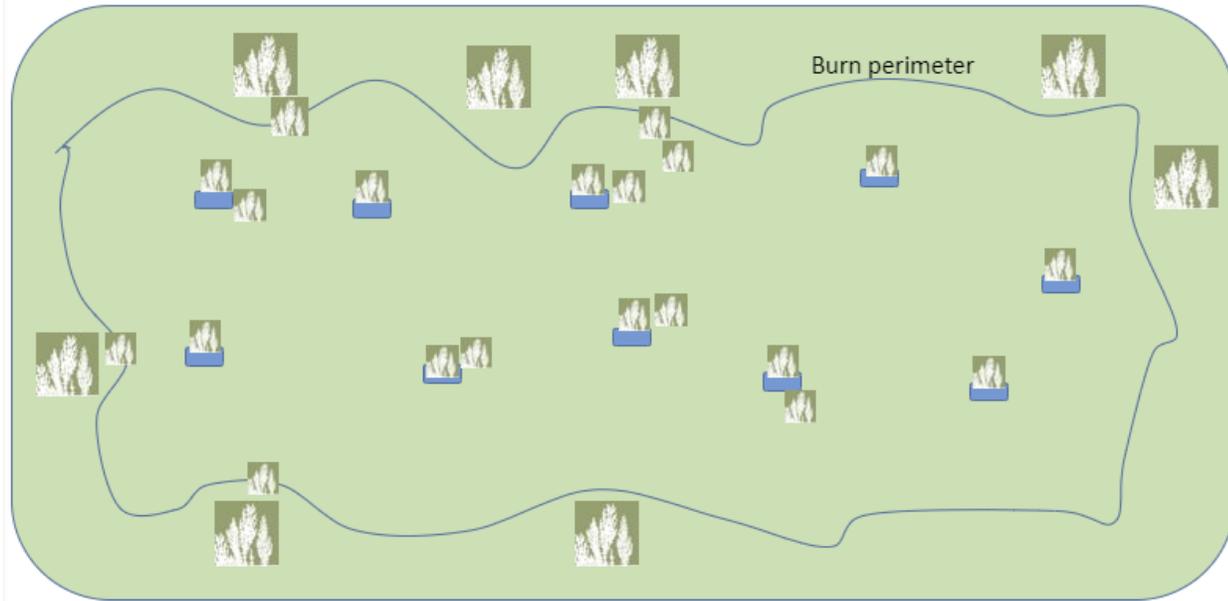


- Science-based and research-based restoration
 - UW grad student research assistantships
 - RT member experience in sagebrush restoration





Does the seed source island approach work?



- Survival
- Growth
- Recruitment (3-5 years)
- Sage-grouse use
- Cover





Project Results

- Sagebrush seedling survival is variable
 - 4 years post planting: 19-80%
- Sagebrush produce viable seed within 2 years
 - New seedlings emerge following spring/summer
- Sagebrush canopy cover trends upward until fencing removed
- Sage-grouse use documented within all project sites in close proximity to active leks

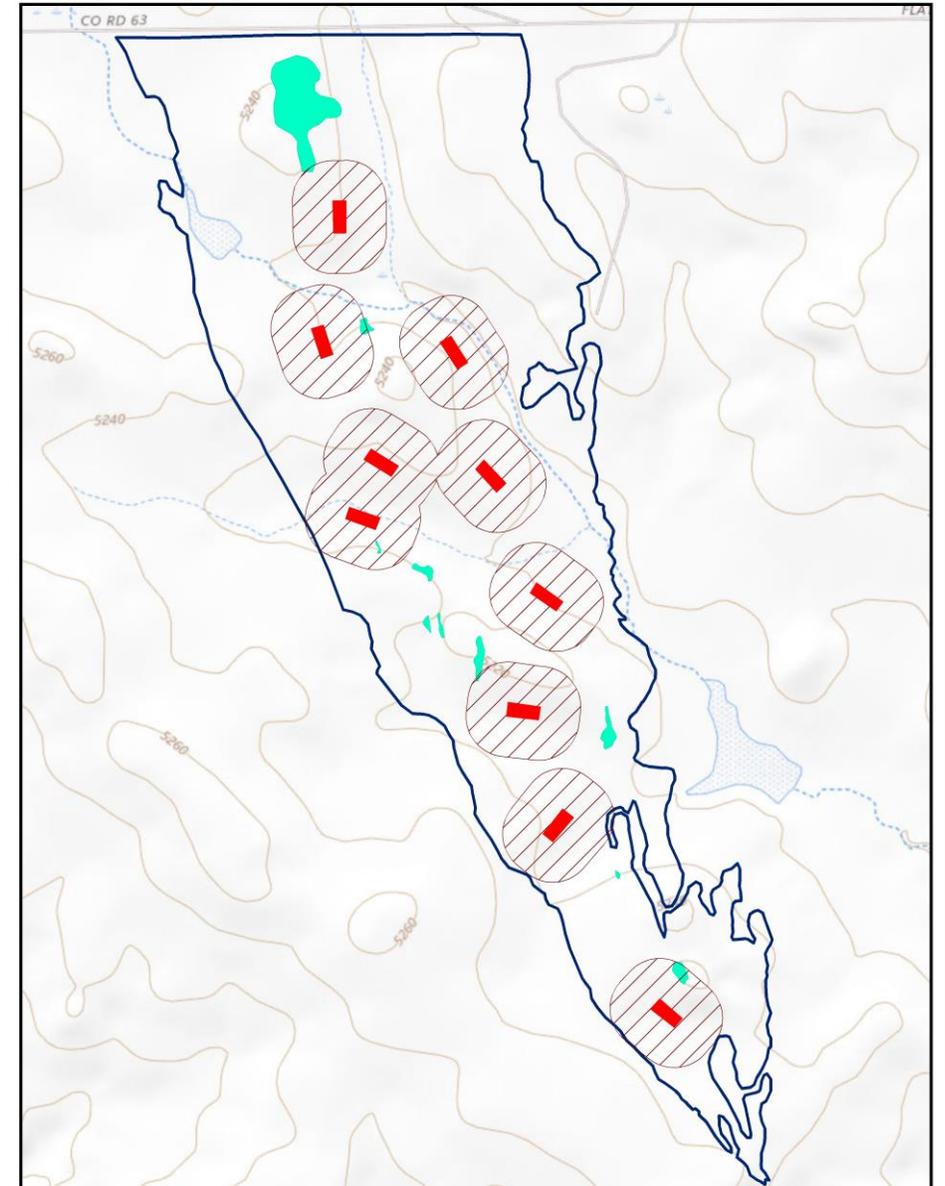




Approach Limitations

- Sagebrush restored in relatively small areas of burns at a relatively high cost.
- Flat Top Project a 2006 burn
 - 161 ac project area
 - 2.5 ac islands ~1.6%
 - 40 ac if 60m buffer applied ~29.8%

Seemingly small structural changes in the present have the potential to result in large structural and functional changes in the future.



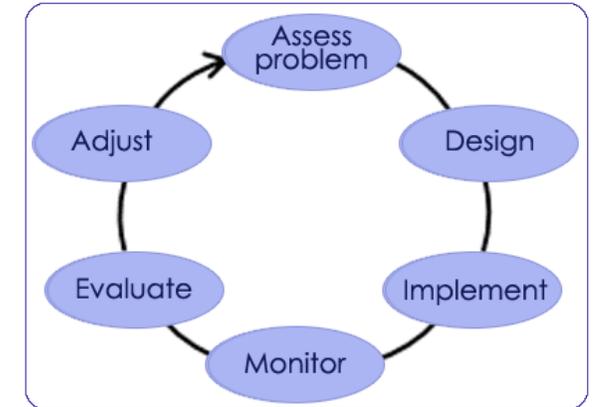
2. RESTORATION PROJECTS





Using Adaptive Management

- Project design and monitoring
- Approach – WY Sage-grouse Executive Orders, Ecology, and Cost elements
 - How can we do this better to push sagebrush restoration science forward?
- Additional research
 - Herbivory and recruitment research projects
 - Innovative approaches – Seed pod research with TNC





RT and Project Successes

- Since 2014, RT projects have targeted nearly 8% of the core area
 - Increasing project success
 - Increasing understanding of system recovery
- Project planning for additional projects are underway for Fall 2020
- Project sites are used being used by sage-grouse





Realities of Restoring Habitat

Next Steps

- Reclassification of 3 projects to transitional habitat
- EO "Transitional habitat is land that has been previously disturbed or burned resulting in <5% sagebrush cover but is actively managed to provide functional habitat within 10 years"
 - Annual monitoring data to support lift
 - Seedling survival
 - Recruitment of outplanted seedlings
 - Sage-grouse use
 - Commitment from landowners





Realities of Restoring Habitat

Time: Slow moving ecosystem with quickly moving pressures on the landscape

- Avoidance of key habitat is critical
- Management actions to reduce ignition and spread of wildfires is important in preventing habitat loss
- Large areas impacted by wildfire may take decades to centuries restore
- Projects are long-term and need long-term commitments.





Cross-sharing and collaboration

- Cross-sharing of information is essential
 - Presentations
 - Story Map
 - Site visits, workshop participation
 - WGFD website for documents
- Organizational and RT member commitments made this work possible
- State support of the RT and the Chesapeake Plan of Development has been invaluable



Questions?

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