

Sage-grouse and Sagebrush Steppe



Ecological science for the Idaho Alternative

Part II. Key issues in developing an alternative

OVERVIEW

Key issues (**the big three**)

- Wildfire
- Invasive species
- Infrastructure
 - Transmission lines
 - Oil/gas wells
 - Structures (pumping stations)
 - Fences
 - Roads
 - Restoration
 - Secondary issue
 - *Livestock grazing*



SAB SAGE-GROUSE VOLUME

Final chapter

Contents

- Review
 - Populations
 - Habitats
 - Threats
- Challenges
- Roadmap to conservation
 - Population Management
 - Habitat Management



SAB SAGE-GROUSE VOLUME

Final chapter

- Take home message
 - **protect what's left, fix what's broken**



GENERAL COMMENTS

- Activity of this group constitutes a major theme of the final chapter
 - Identifying important areas and developing a plan
- **Prioritization is important**
 - threats are large,
 - resources are limited,
 - conservation actions targeting all remaining populations may not be feasible



General Comments(cont.)

MEASURING SUCCESS

- *The Only Acceptable Currency*
 - Sage-Grouse
- *Counterfeit Currencies*
 - Number acres treated
 - Number of projects
 - Funds expended

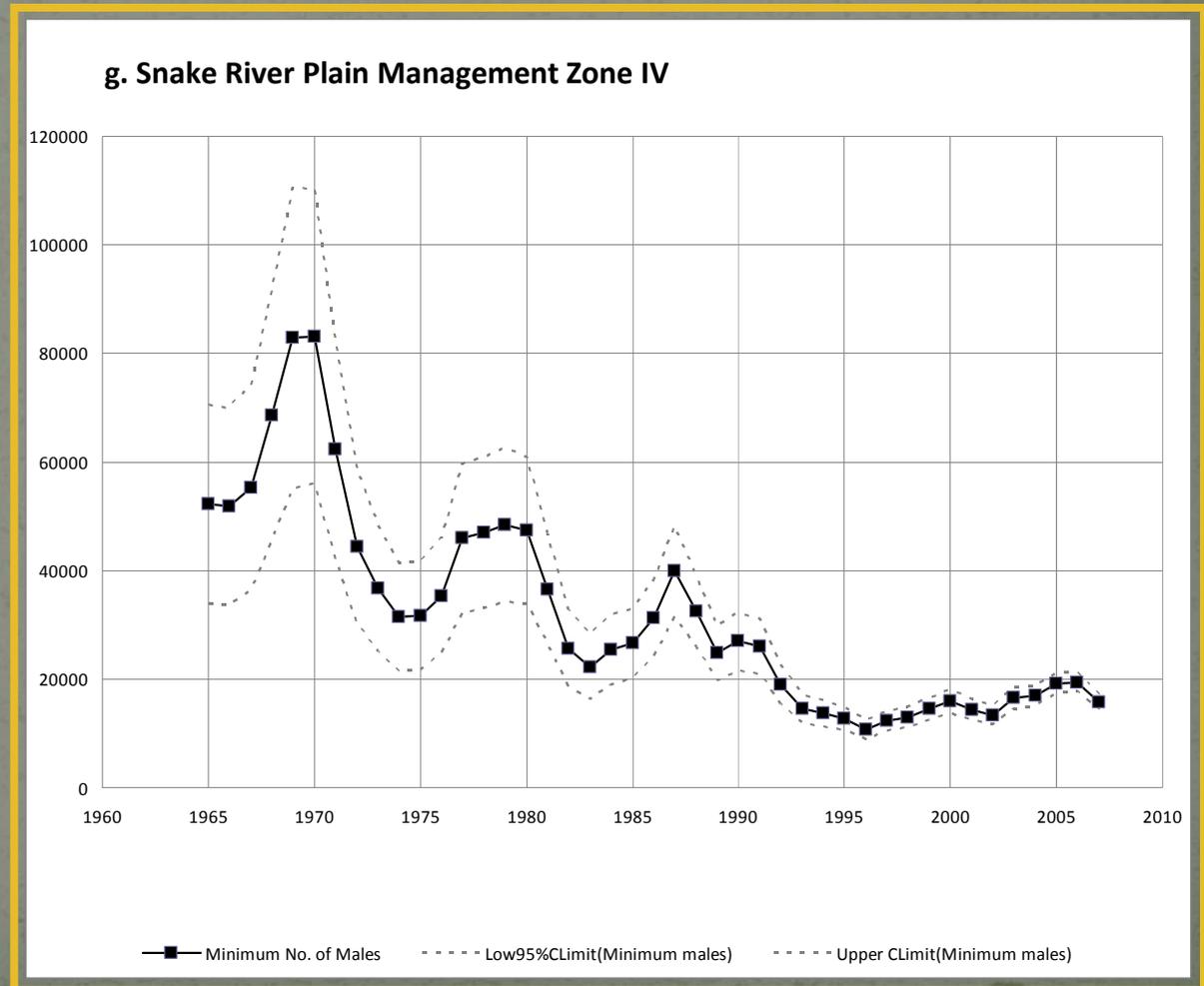


General Comments(cont.)

RESULTS OF CONSERVATION

Continued
population
declines

WY chicks/hen
2010=0.80
2011=1.35
<1985=2.46 (ave.)



General Comments (cont.)

Given our knowledge and efforts

Why are sage-grouse still in trouble?



General Comments (cont.)

CHALLENGES

- Wildfire
- Invasive Species
- Energy Development
- Disease
- Climate Change
- Drought
- Success of Conservation Efforts



KEY ISSUES

Invasives



Infrastructure



Wildfire

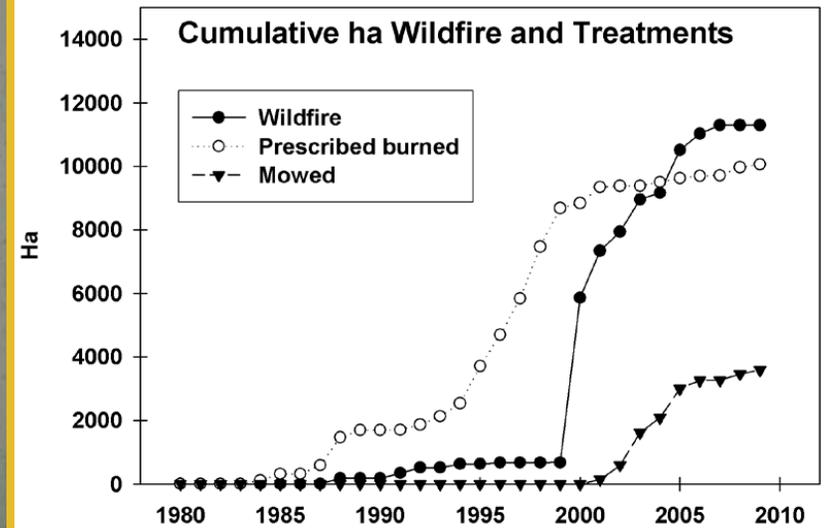
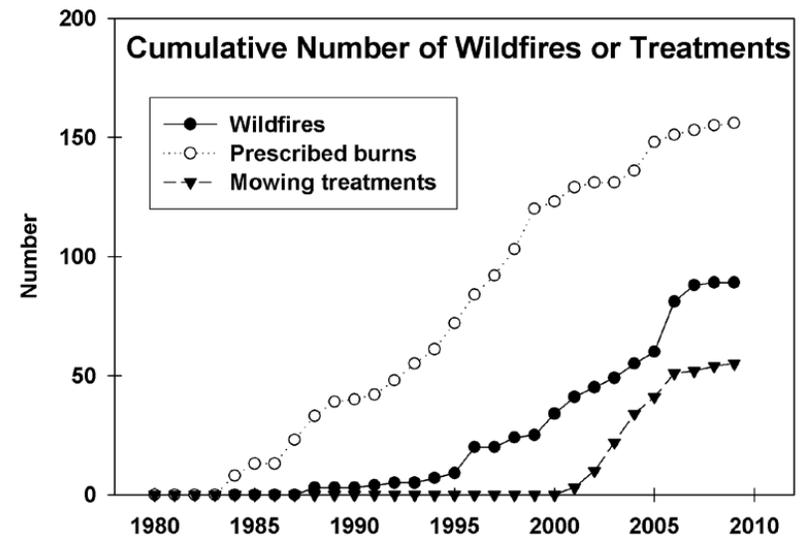


Wildfire

A severe problem in the Great Basin but occurs everywhere



Big Horn Basin, WY



WILDFIRE(cont.)

Fire-proofing not possible but we can make priority areas fire resistant

- **Possible actions**

- **Fire breaks**

- green stripping
- control of vehicle access
- grazing

- **Fire suppression**

- must be high priority (#1 after human safety, structures)



Invasive Species

- Cheatgrass
- Medusahead
- Mustards
- Rush Skeleton weed
- Wild horses and burros
- Feral cats
- Pinyon/juniper?



INVASIVE SPECIES(cont.)

- Comes with disturbance including fire
 - Big Desert cheatgrass example
- Possible Actions
 - Reduce risk by reducing disturbance
 - Continue work on effective control techniques
 - Eliminate sagebrush treatments in important habitats
 - Reduce PJ encroachment



INFRASTRUCTURE

Oil and Gas

WY, MT, CO, ND

Wind

Transmission Lines

Fences

Roads



INFRASTRUCTURE (cont.)

Fences



Year	Lek Routes Sampled	Corrected Collision Rate
2009	16	0.704
2010	14	0.747

INFRASTRUCTURE (cont.)

Mean
collision
rate 6x
greater in
unmarked
segments

Treatment	Collisions
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Marked	7
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Unmarked	42
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Buffer	7
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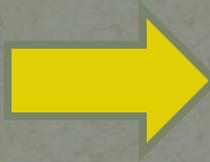


INFRASTRUCTURE (cont.)

- Possible Actions
 - **Transmission lines**
 - Siting
 - Raptor spikes
 - Mark
 - **Fences**
 - Mark
 - Remove
 - **Structures**
 - Remove
 - **Roads**
 - Manage access



RESTORATION



Build out from existing occupied habitat

Prioritize

Focus on key habitat components

Triage approach

LIVESTOCK GRAZING

- Improving sage-grouse habitat
 - Riparian management

Sagebrush

Forbs

Brian Kelly: “**Grazing is not the threat to sage grouse that fire, development and invasive species are.**”



LIVESTOCK GRAZING (Cont.)

- Reducing wildfire **next to** sage-grouse habitat
 - No supporting research for sage-grouse



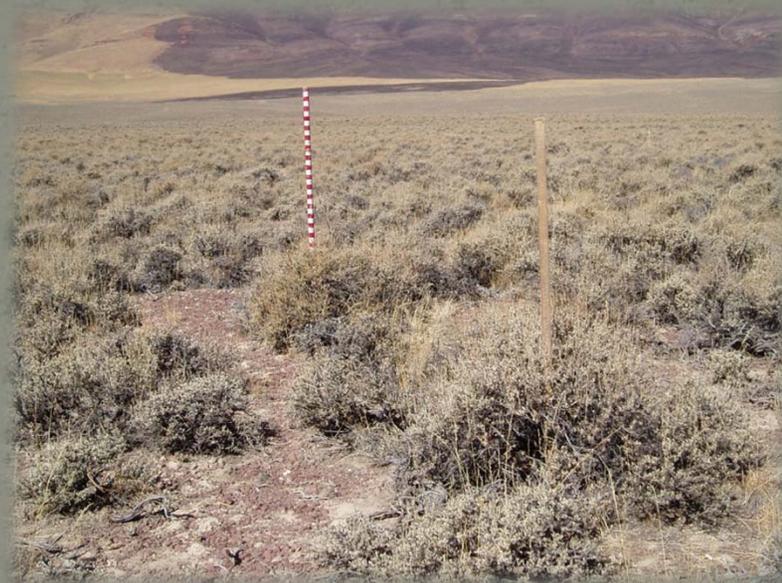
BUT



Reducing fuels adjacent to
sage-grouse habitat

LIVESTOCK GRAZING (Cont.)

- Reducing wildfire **in** sage-grouse habitat
 - No supporting research for sage-grouse



Consider fuel loads

Dwarf sagebrush habitats

LIVESTOCK GRAZING (Cont.)

- Reducing wildfire in sage-grouse habitat
 - No supporting research for sage-grouse



Consider fuel loads
Big sagebrush habitats

LIVESTOCK GRAZING (Cont.)

- Reducing wildfire **in** sage-grouse habitat
 - No supporting research for sage-grouse
- Evidence for:
 - None that I know of
- Evidence against
 - INL fires (most start in grazed areas)
 - Cox's Well fire
 - Sagebrush (fuel) eliminated but fire still occurred



So, be careful not to throw the baby out with the bath water!

In Summary
ROADMAP TO CONSERVATION

Identify

Key Habitats and Corridors

Use existing knowledge and databases

Good News!

Much (most?) of this work already done

Bad News!

These areas can change in either direction

Roadmap (Cont.)

Protect What's Left

Eliminate

Treatments in known breeding and winter range
Wildfire

Halt/Minimize

Infrastructure in key habitats

- 44% of areas w/high biological value are at risk
(Doherty et al. 2011)

Roadmap (Cont.)

Protect What's Left

Emphasize

- Wildfire suppression
- Fire breaks
- Conservation easements

Maintain

- Intact sagebrush stands
- CRP

Inform

- Landowners
- User groups



Roadmap (Cont.)

Fix What's Broken

Short-term (< 5 yrs) Impacts

Pinyon /Juniper encroachment

Grazing systems

Fences and other structures

Reduce/eliminate corvid-raptor perches, nest sites & subsidies

Important to prioritize



Roadmap (Cont.)

Fix What's Broken

Long-term Impacts

Controlling Invasives

Restore sagebrush

*Avoid fire and emphasize
mechanical or chemical
treatments if needed*

Enhancing understory

Conservation Easements

Build on Existing Habitat



Still in the Game!



Minimum of 88,816 male SG counted on 5,042 leks in 2007

Sagebrush is the dominant land cover on ~204,580 mi² within sage-grouse range

Opportunities to conserve sage-grouse without ESA oversight still exist

THANK YOU

