NRCS United States Department of Agriculture
Natural Resources Conservation Service

Sage-Grouse Initiative (SGI)

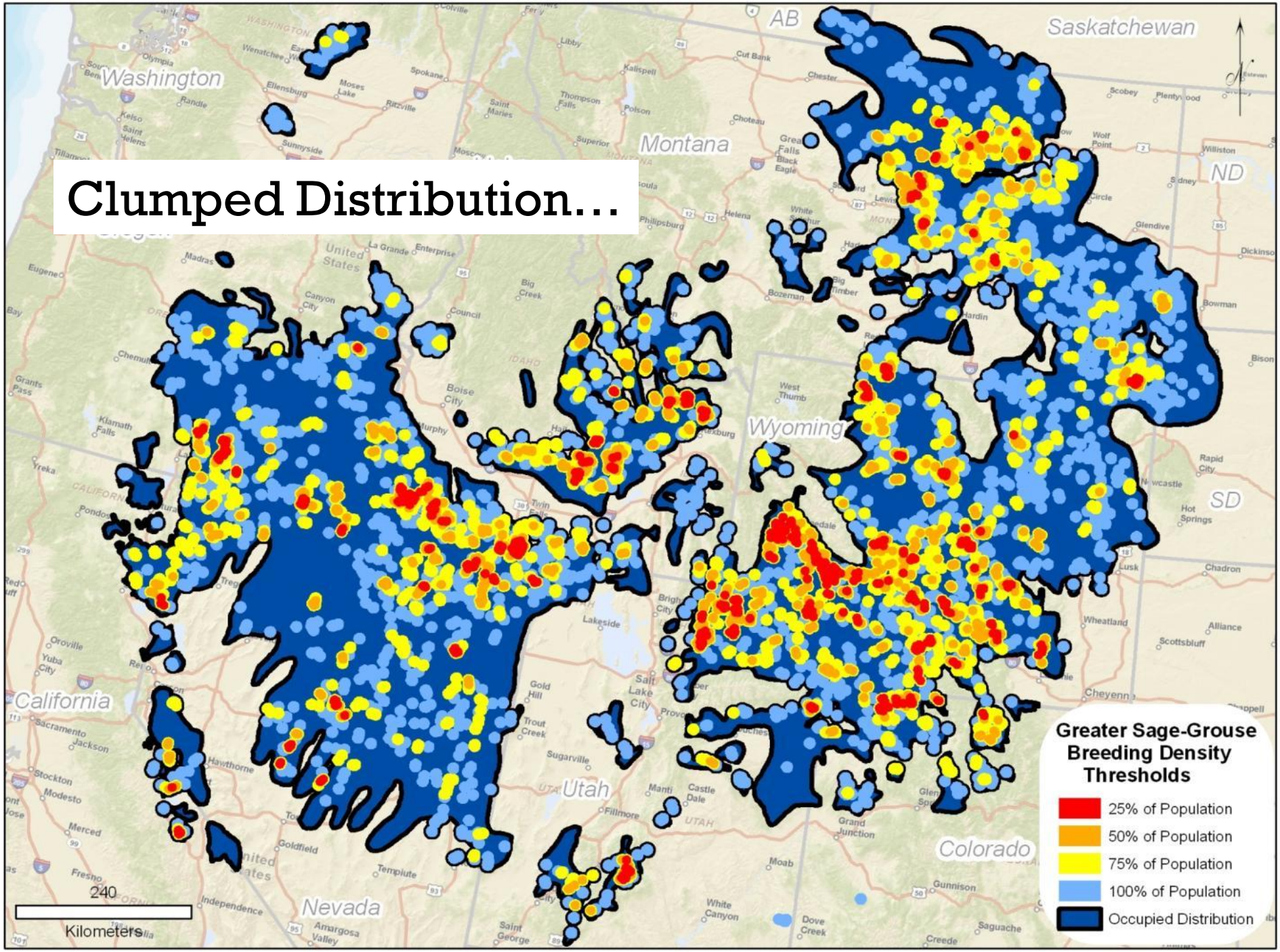
A STRATEGIC APPROACH TO FARM BILL CONSERVATION PROGRAM DELIVERY

World-class Wildlife

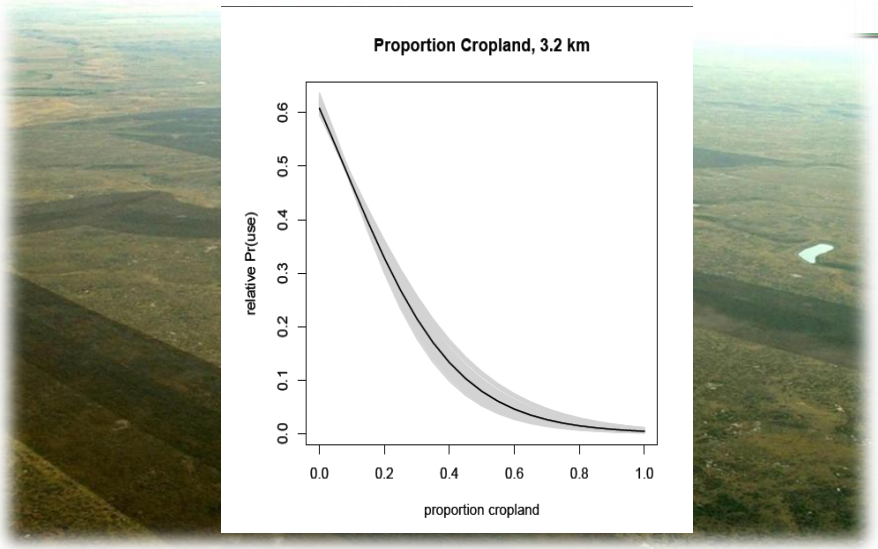
Rural Ways of Life

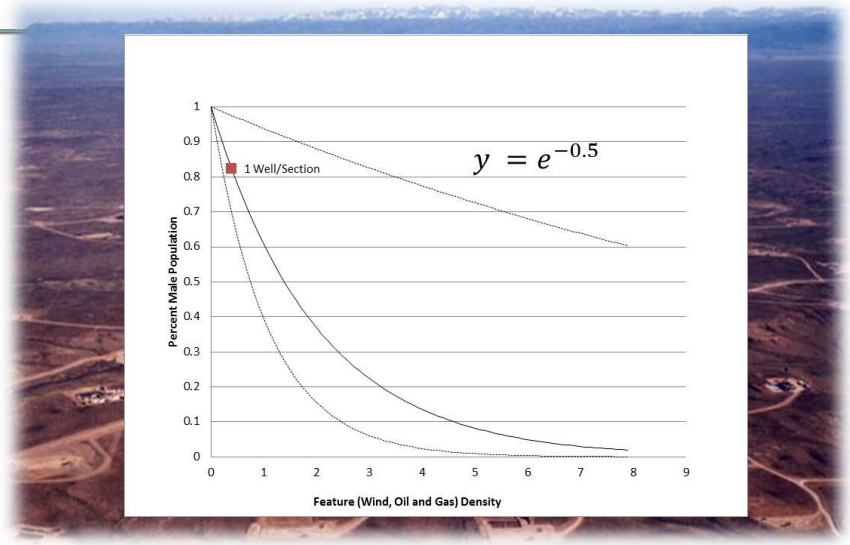
Tim Griffiths
National Coordinator

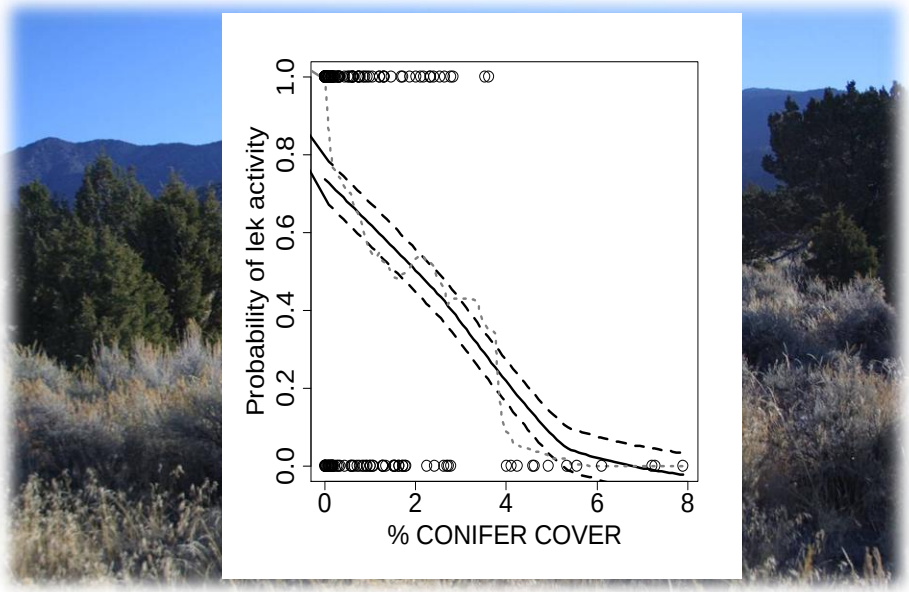
Dave Naugle
Science Advisor

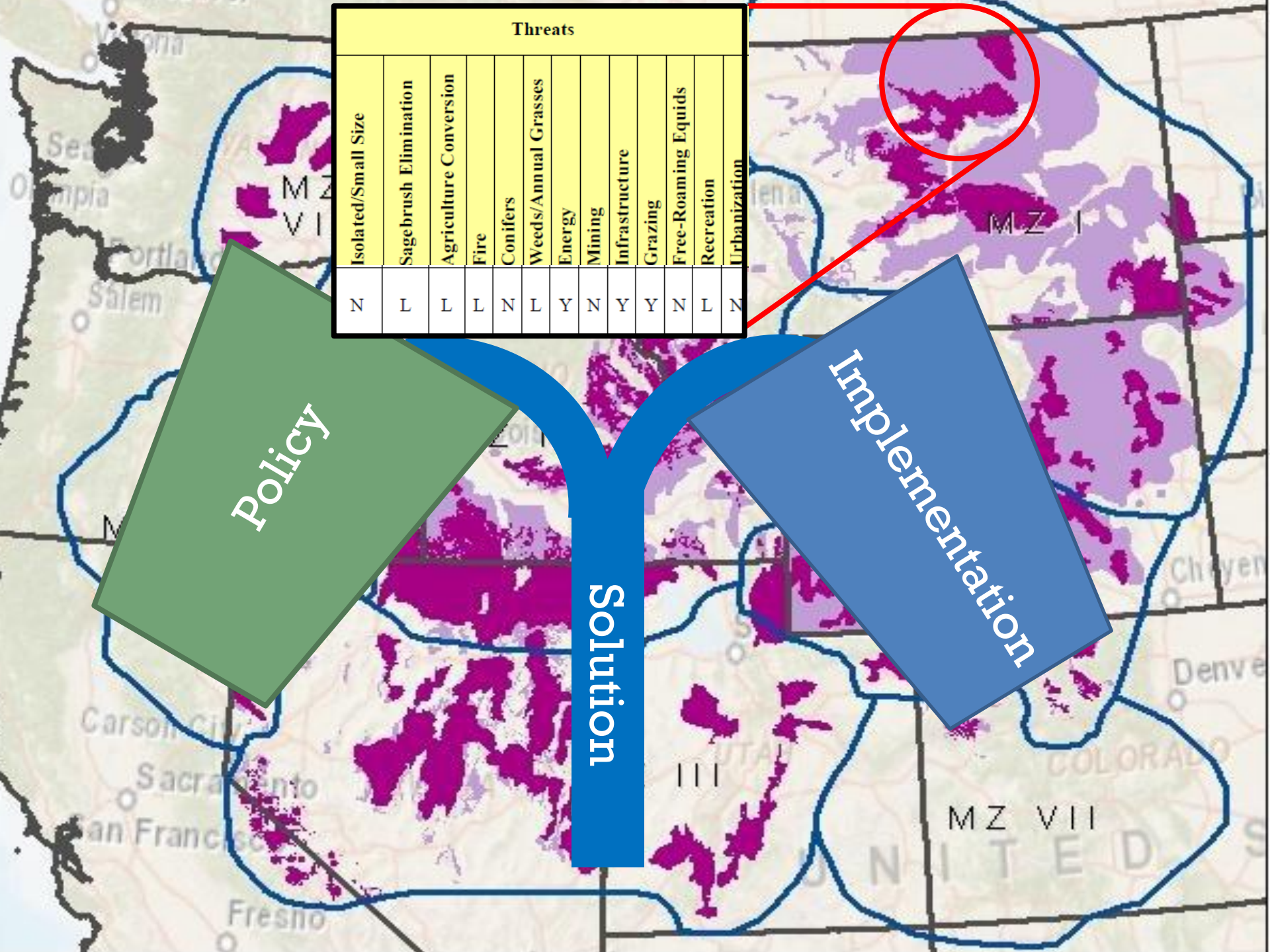

Clumped Distribution…
Greater Sage-Grouse Breeding Density Thresholds
25% of Population
50% of Population
75% of Population
100% of Population
Occupied Distribution
240
Kilometers
Washington
Montana
Saskatchewan
AB
ND
SD
Wyoming
Utah
Colorado
Nevada
California
Boise
Salt Lake City
Bozeman
Helena
Great Falls
Billings
Cheyenne
Denver
Grand Junction
Moab
Reno
Sacramento
Fresno
Las Vegas
Saint George
Twin Falls
Pocatello
Idaho Falls
Spokane
Seattle
Olympia
Portland
Eugene
Medicine Hat
Calgary
Edmonton
Regina
Saskatoon
Winnipeg
Minot
Williston
Bismarck
Rapid City
Lusk
Scottsbluff
Alliance
Chadron
Hot Springs
Gunnison
Saguache
Creede
Dove Creek
White Canyon
Amargosa Valley
Independence
Templeton
Goldfield
Fillmore
Sugarville
Trout Creek
Gold Hill
Lakeside
Brigham City
Provo
Manti
Castle Dale
Hawthorne
Stockton
Modesto
Merced
Jackson
Yuba City
Oroville
Yreka
Klamath Falls
Grants Pass
Madras
Eugene
Canyon City
La Grande
Enterprise
Council
Big Creek
Murphy
Twin Falls
West Thumb
Big Timber
Hardin
Bowman
Bison
Williston
Glendive
Circle
Sidney
Scobey
Plentywood
Wolf Point
Chester
Cut Bank
Choteau
Kalispell
Libby
Thompson Falls
Polson
Superior
Philipsburg
Saint Maries
Moscow
Sunnyside
Moses Lake
Ellensburg
Wenatchee
Ritzville
Randle
Kelso
Saint Helens
Tillamook
Colville
Ferry
Cheyenne
Wheatland
Newcastle
Lusk
Dickinson
Bismarck
Minot
Williston
Glendive
Sidney
Circle
Wolf Point
Scobey
Plentywood
Chester
Cut Bank
Choteau
Great Falls
Black Eagle
Helena
White Sulphur
Lewistown
Bozeman
Big Timber
Hardin
Rapid City
Hot Springs
Lusk
Chadron
Alliance
Scottsbluff
Wheatland
Cheyenne
Denver
Grand Junction
Moab
Gunnison
Saguache
Creede
Dove Creek
White Canyon
Saint George
Amargosa Valley
Independence
Templeton
Goldfield
Fillmore
Sugarville
Trout Creek
Gold Hill
Lakeside
Brigham City
Provo
Manti
Castle Dale
Hawthorne
Stockton
Modesto
Merced
Jackson
Yuba City
Oroville
Yreka
Klamath Falls
Grants Pass
Madras
Eugene
Canyon City
La Grande
Enterprise
Council
Big Creek
Murphy
Twin Falls
West Thumb
Big Timber
Hardin
Bowman
Bison
Williston
Glendive
Circle
Sidney
Scobey
Plentywood
Wolf Point
Chester
Cut Bank
Choteau
Kalispell
Libby
Thompson Falls
Polson
Superior
Philipsburg
Saint Maries
Moscow
Sunnyside
Moses Lake
Ellensburg
Wenatchee
Ritzville
Randle
Kelso
Saint Helens
Tillamook
Colville
Ferry
Olympia
Spokane
Cheyenne
Wheatland
Newcastle
Lusk
Dickinson
Bismarck
Minot
Williston
Glendive
Sidney
Circle
Wolf Point
Scobey
Plentywood
Chester
Cut Bank
Choteau
Great Falls
Black Eagle
Helena
White Sulphur
Lewistown
Bozeman
Big Timber
Hardin
Rapid City
Hot Springs
Lusk
Chadron
Alliance
Scottsbluff
Wheatland
Cheyenne
Denver
Grand Junction
Moab
Gunnison
Saguache
Creede
Dove Creek
White Canyon
Saint George
Amargosa Valley
Independence
Templeton
Goldfield
Fillmore
Sugarville
Trout Creek
Gold Hill
Lakeside
Brigham City
Provo
Manti
Castle Dale
Hawthorne
Stockton
Modesto
Merced
Jackson
Yuba City
Oroville
Yreka
Klamath Falls
Grants Pass
Madras
Eugene
Canyon City
La Grande
Enterprise
Council
Big Creek
Murphy
Twin Falls
West Thumb
Big Timber
Hardin
Bowman
Bison
Williston
Glendive
Circle
Sidney
Scobey
Plentywood
Wolf Point
Chester
Cut Bank
Choteau
Kalispell
Libby
Thompson Falls
Polson
Superior
Philipsburg
Saint Maries
Moscow
Sunnyside
Moses Lake
Ellensburg
Wenatchee
Ritzville
Randle
Kelso
Saint Helens
Tillamook
Colville
Ferry
Olympia
Spokane
Cheyenne
Wheatland
Newcastle
Lusk
Dickinson
Bismarck
Minot
Williston
Glendive
Sidney
Circle
Wolf Point
Scobey
Plentywood
Chester
Cut Bank
Choteau
Great Falls
Black Eagle
Helena
White Sulphur
Lewistown
Bozeman
Big Timber
Hardin
Rapid City
Hot Springs
Lusk
Chadron
Alliance
Scottsbluff
Wheatland
Cheyenne
Denver
Grand Junction
Moab
Gunnison
Saguache
Creede
Dove Creek
White Canyon
Saint George
Amargosa Valley
Independence
Templeton
Goldfield
Fillmore
Sugarville
Trout Creek
Gold Hill
Lakeside
Brigham City
Provo
Manti
Castle Dale
Hawthorne
Stockton
Modesto
Merced
Jackson
Yuba City
Oroville
Yreka
Klamath Falls
Grants Pass
Madras
Eugene
Canyon City
La Grande
Enterprise
Council
Big Creek
Murphy
Twin Falls
West Thumb
Big Timber
Hardin
Bowman
Bison
Williston
Glendive
Circle
Sidney
Scobey
Plentywood
Wolf Point
Chester
Cut Bank
Choteau
Kalispell
Libby
Thompson Falls
Polson
Superior
Philipsburg
Saint Maries
Moscow
Sunnyside
Moses Lake
Ellensburg
Wenatchee
Ritzville
Randle
Kelso
Saint Helens
Tillamook
Colville
Ferry
Olympia
Spokane

Birds hate fragmentation

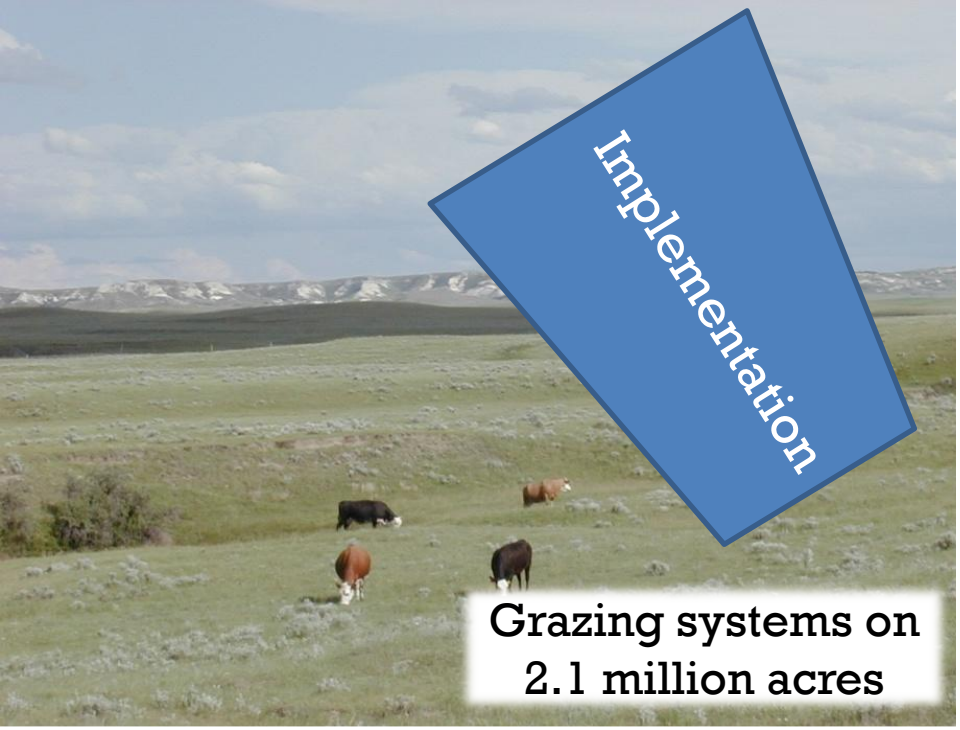






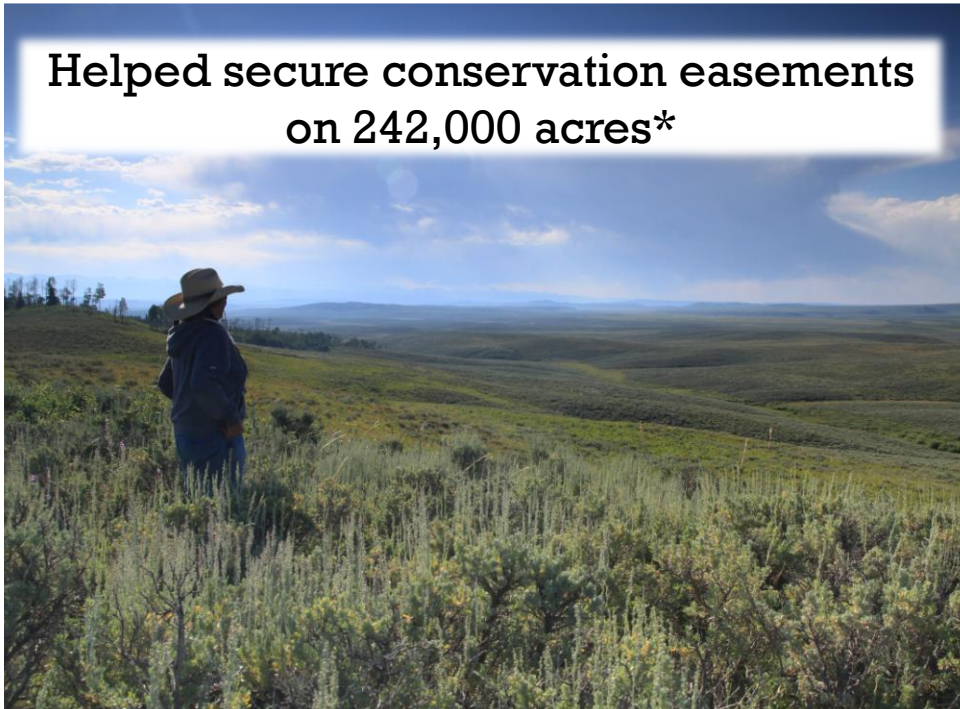


Threats												
Isolated/Small Size	Sagebrush Elimination	Agriculture Conversion	Fire	Conifers	Weeds/Annual Grasses	Energy	Mining	Infrastructure	Grazing	Free-Roaming Equids	Recreation	Urbanization
N	L	L	L	N	L	Y	N	Y	Y	N	L	N


Implementation
Grazing systems on 2.1 million acres

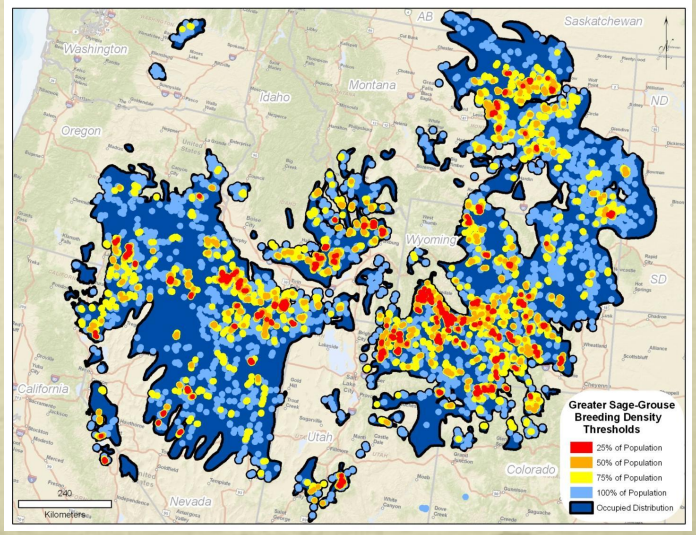
Marked or moved 495 miles of 'high risk' fence

Removed encroached conifers on 195,000 acres


Helped secure conservation easements on 242,000 acres*

Sage Grouse Initiative

- Paradigm shift in at-risk species conservation that negates need for listing
  - Remove threats to sage-grouse and improve sustainability of working ranches
  - Implement enough of the right practices in the right places to benefit populations
  - Use science to assess effectiveness, quantify benefits and adapt program delivery



Conference Report

- *Conditioned 40 practices to ensure benefits to sage-grouse*
- *Provides **'certainty'** to landowners*
- *Enables producers to receive 'credit' for voluntary conservation*

United States Department of the Interior

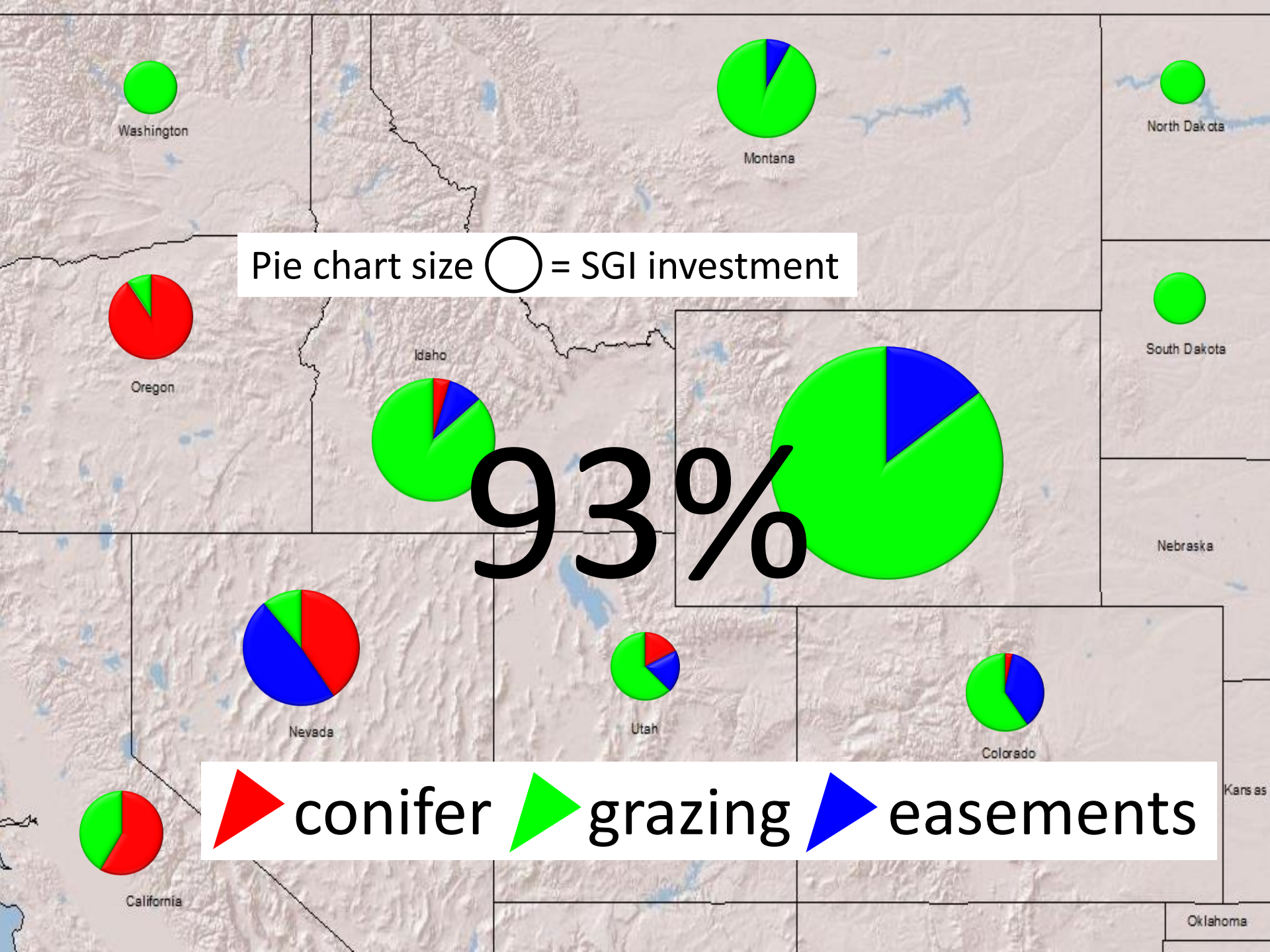
FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

AUG - 3 2012

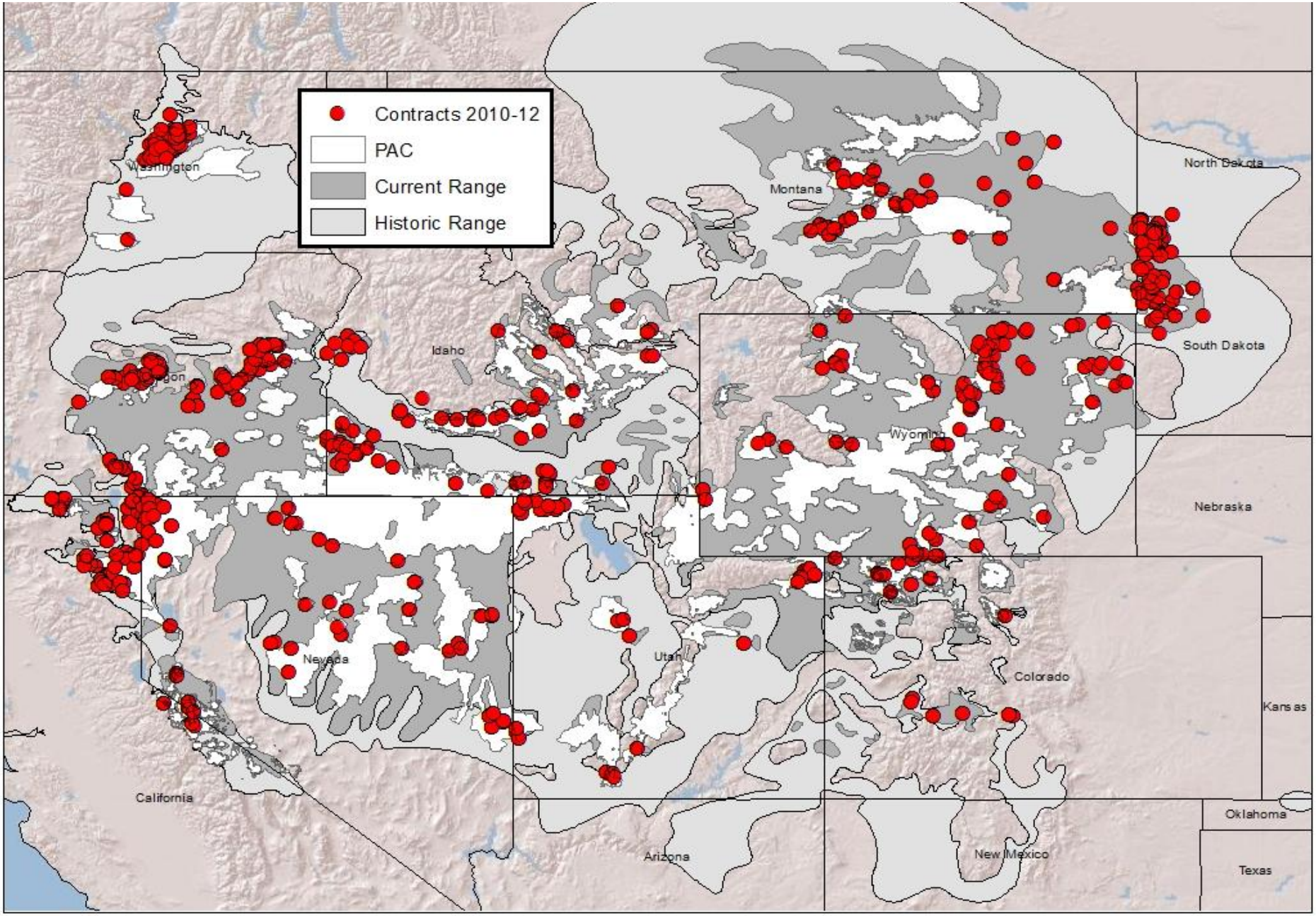
In Reply Refer To:
FWS/AES/52307

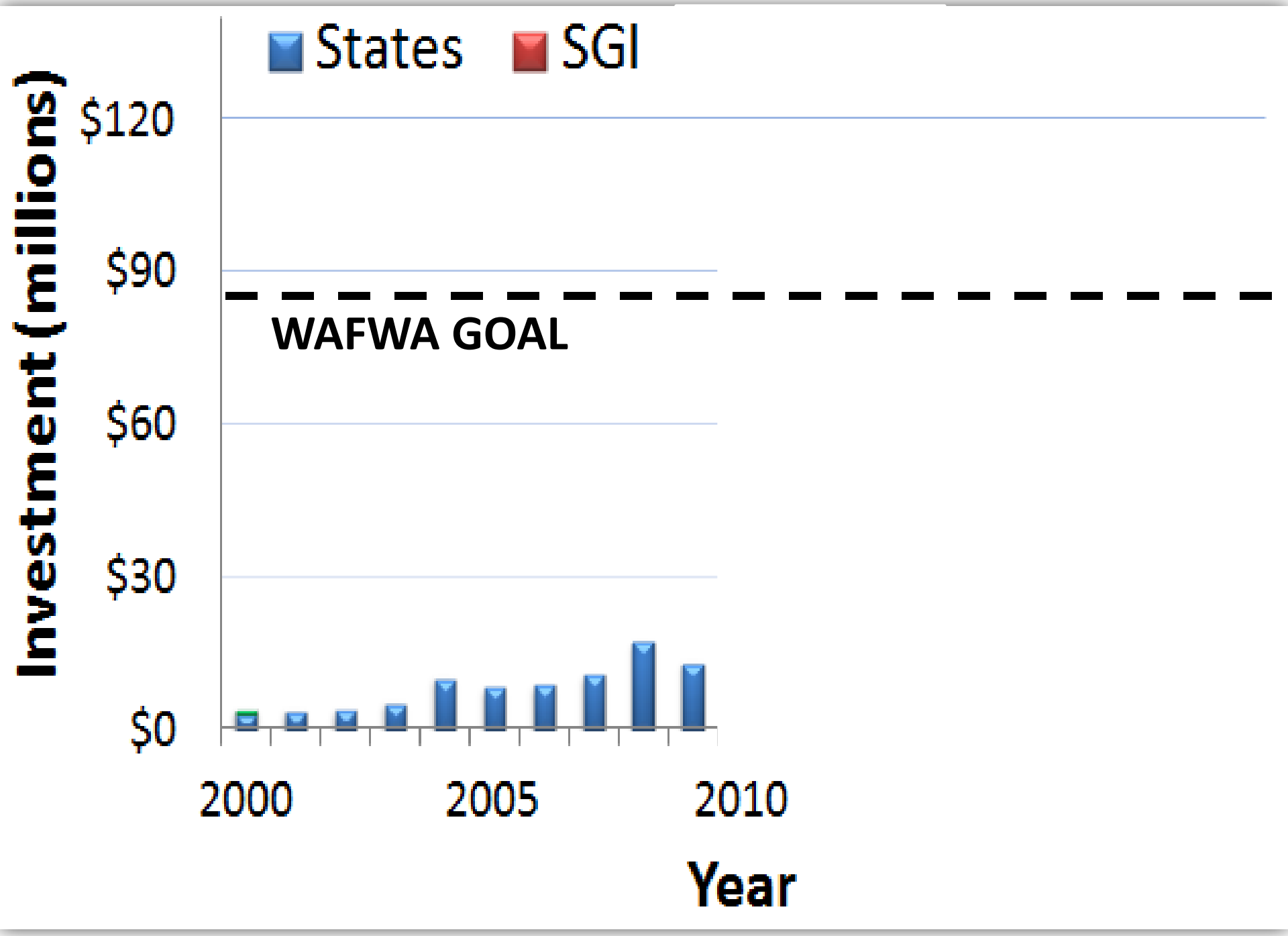
"In the event that any of the species are listed, the Service is committed to validating the conference report and opinions as biological opinions for NRCS under section 7 of the ESA, and exempting any incidental take as described in the biological opinions associated with implementing the specified conservation practices."

The purpose of this letter is to describe the Service's approach to candidate conservation under the Endangered Species Act (ESA) and predictability for landowners who participate in WLFW. As referenced in your letter, the Service has recently completed conference opinions for three of the four candidate species involved in WLFW, including lesser prairie-chicken, the eastern


Washington
Montana
North Dakota
Pie chart size = SGI investment
Oregon
Idaho
South Dakota
93%
Nebraska
Nevada
Utah
Colorado
Kansas
conifer
grazing
easements
California
Oklahoma

All SGI WHIP and EQIP Contracts 2010-2012




States
SGI
Investment (millions)
$120
$90
$60
$30
$0
WAFWA GOAL
2000
2005
2010
Year

Effects of Conifer Encroachment on Grouse

What do we know, what don't we know?

- Trees outcompete sagebrush, grasses & forbs = direct habitat loss
- Evidence of avoidance, or reduced use (Freese 2009; Doherty et al. 2008, 2010; Casazza et al. 2011)
- Males on leks doubled after PJ removal (Commons et al. 1999)

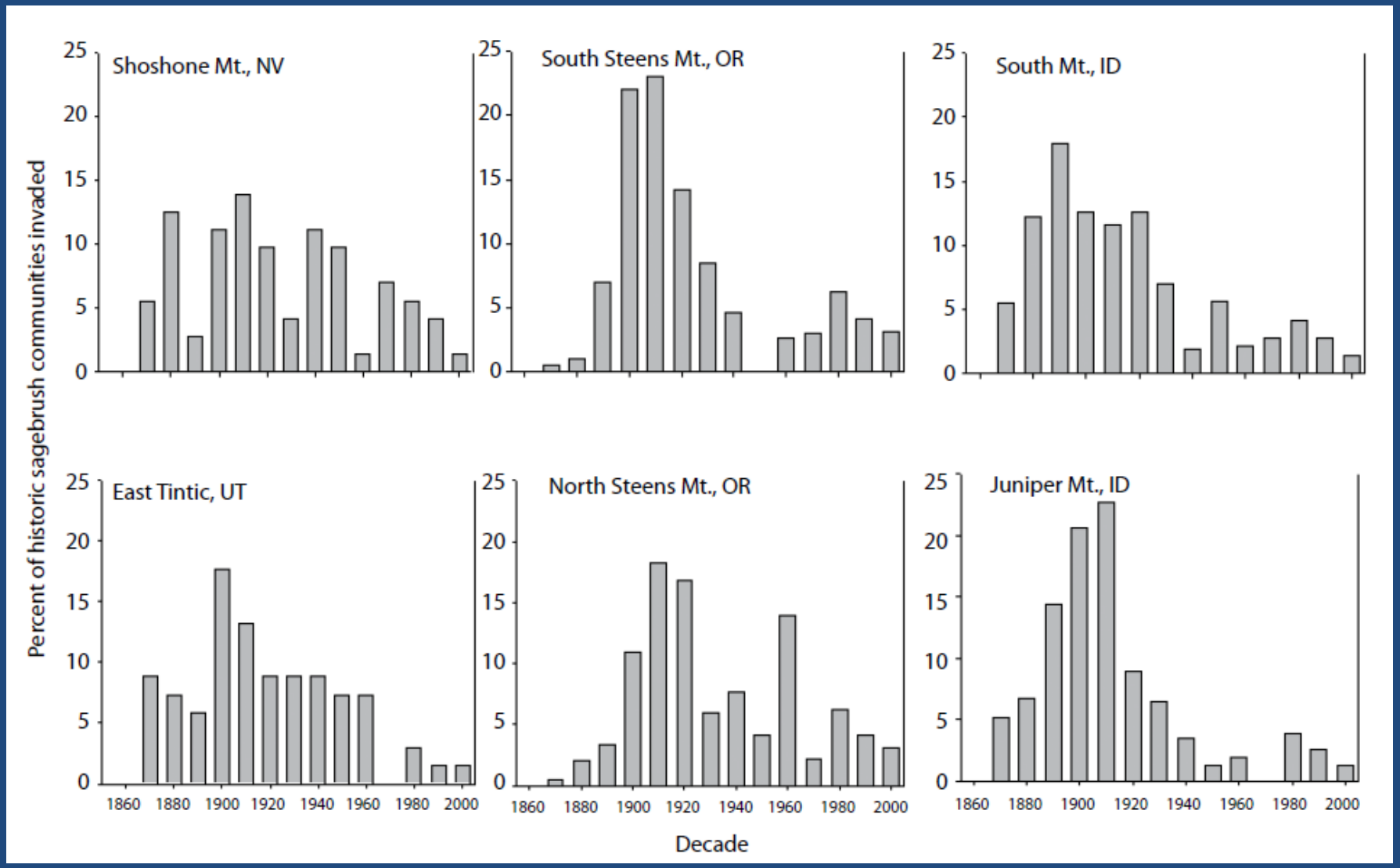
Phases of Woodland Succession

Phase I (early)

Phase II (mid)

Phase III (late)

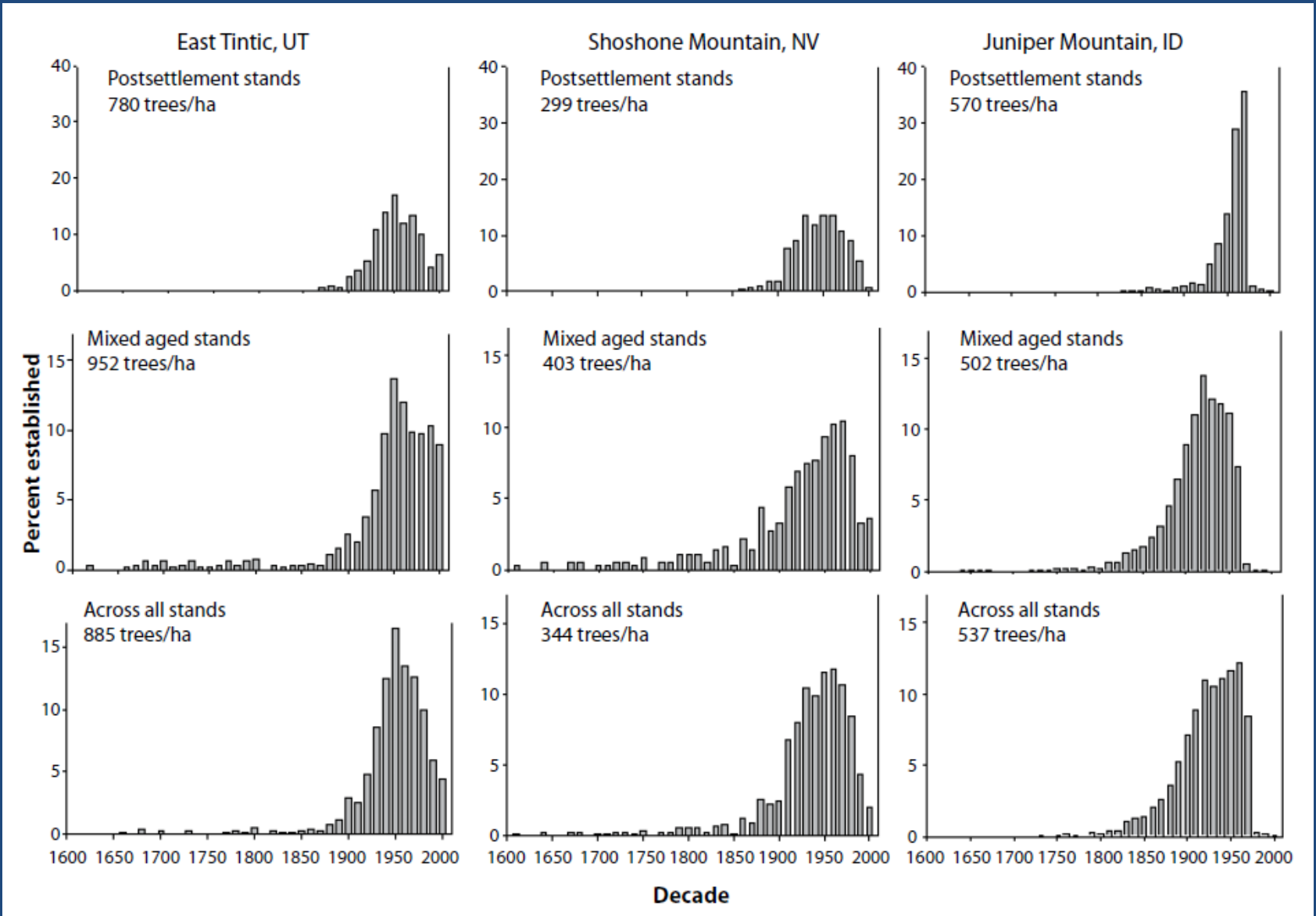
Proportion of encroachment into historic sagebrush sites by decade



By 1920, 50-75% of sites had been invaded

Miller et al. 2008

Rates of tree establishment by decade



Rate of establishment peaked in the mid 20th century and has declined since

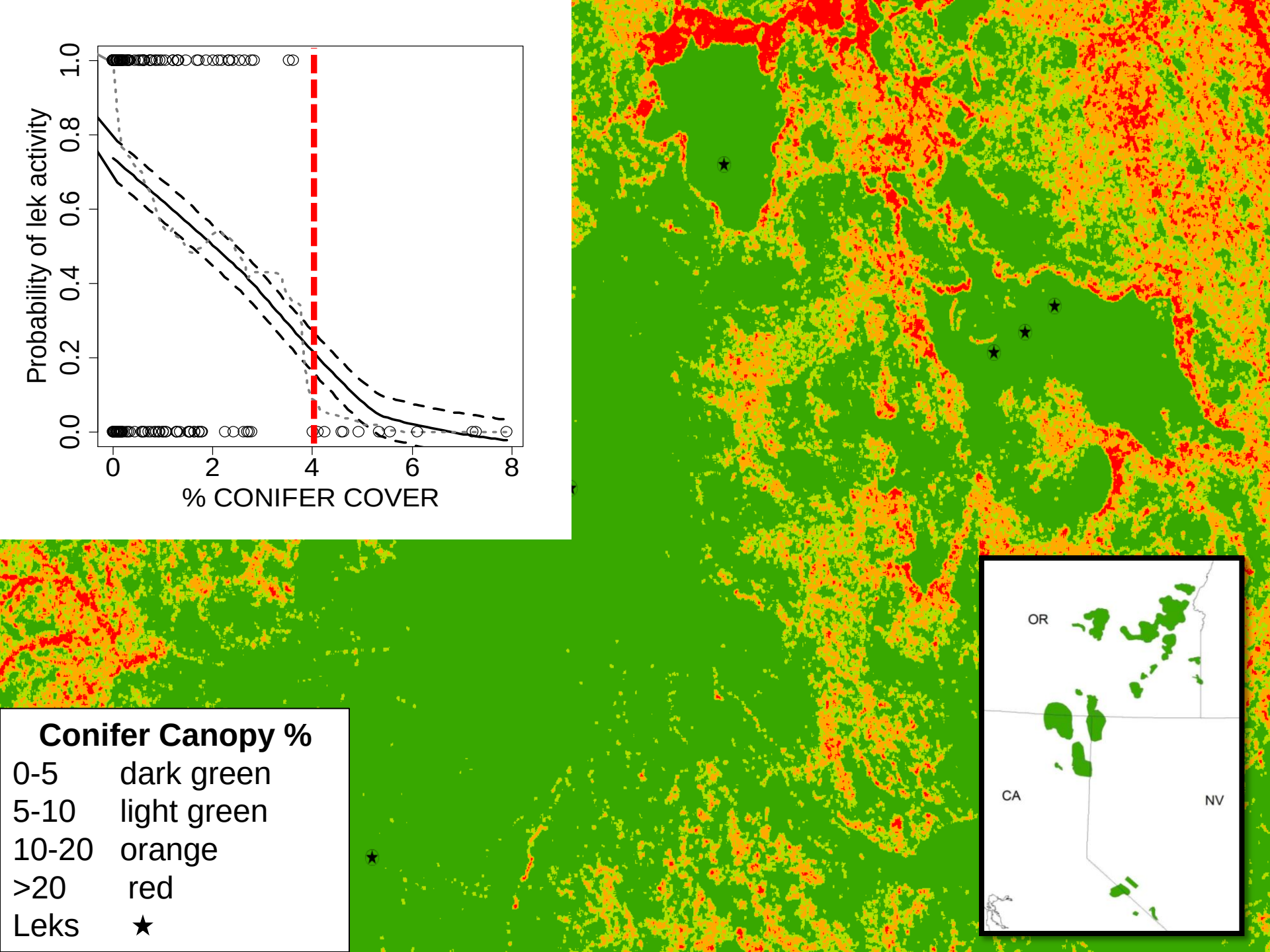
Miller et al. 2008

Photo credits: BLM-Prineville District

Now is the time to fix this problem

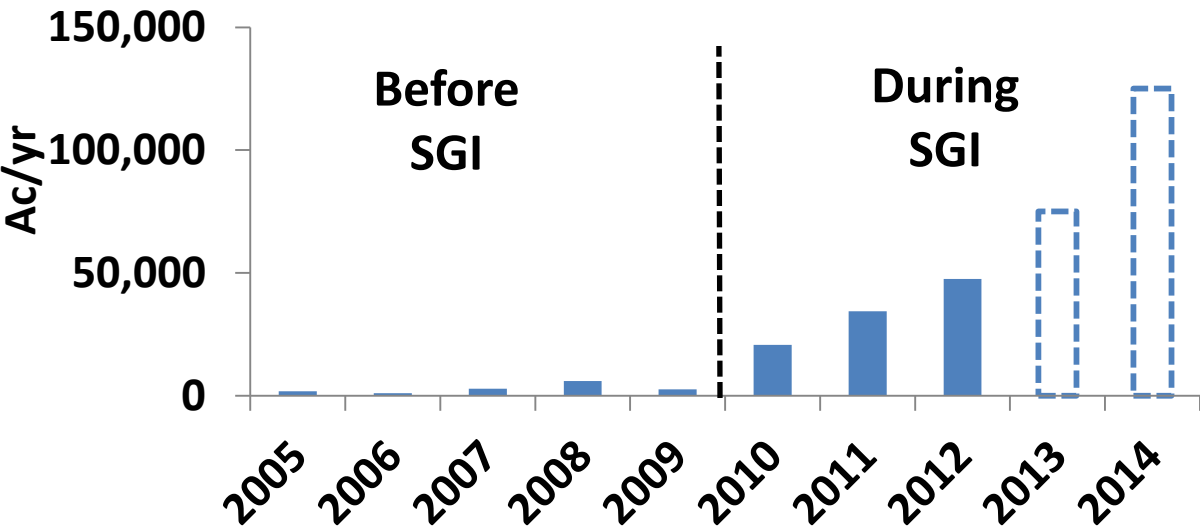
- Amount of Phase III today is 20% of total
- Expected to be 75% of total in next 30-50 years
- 200,000 ac crossing threshold to Phase III per year in Great Basin

(Miller et al. 2008)



Conifer Canopy %

0-5	dark green
5-10	light green
10-20	orange
>20	red
Leks	★



OREGON

Planned Implementation

- 875,000 ac Phase I & II within 3 mi of leks
- >102,000 ac already treated

Sustained Investment

- 773,000 ac left @ $100/ac = $77M
- Over 10 years = $7.7 M/yr
- Current NRCS investment = $4M/yr
- Partner investment needed = $3.7M/yr

Shared Vision

What's good for rangelands, is good for grouse

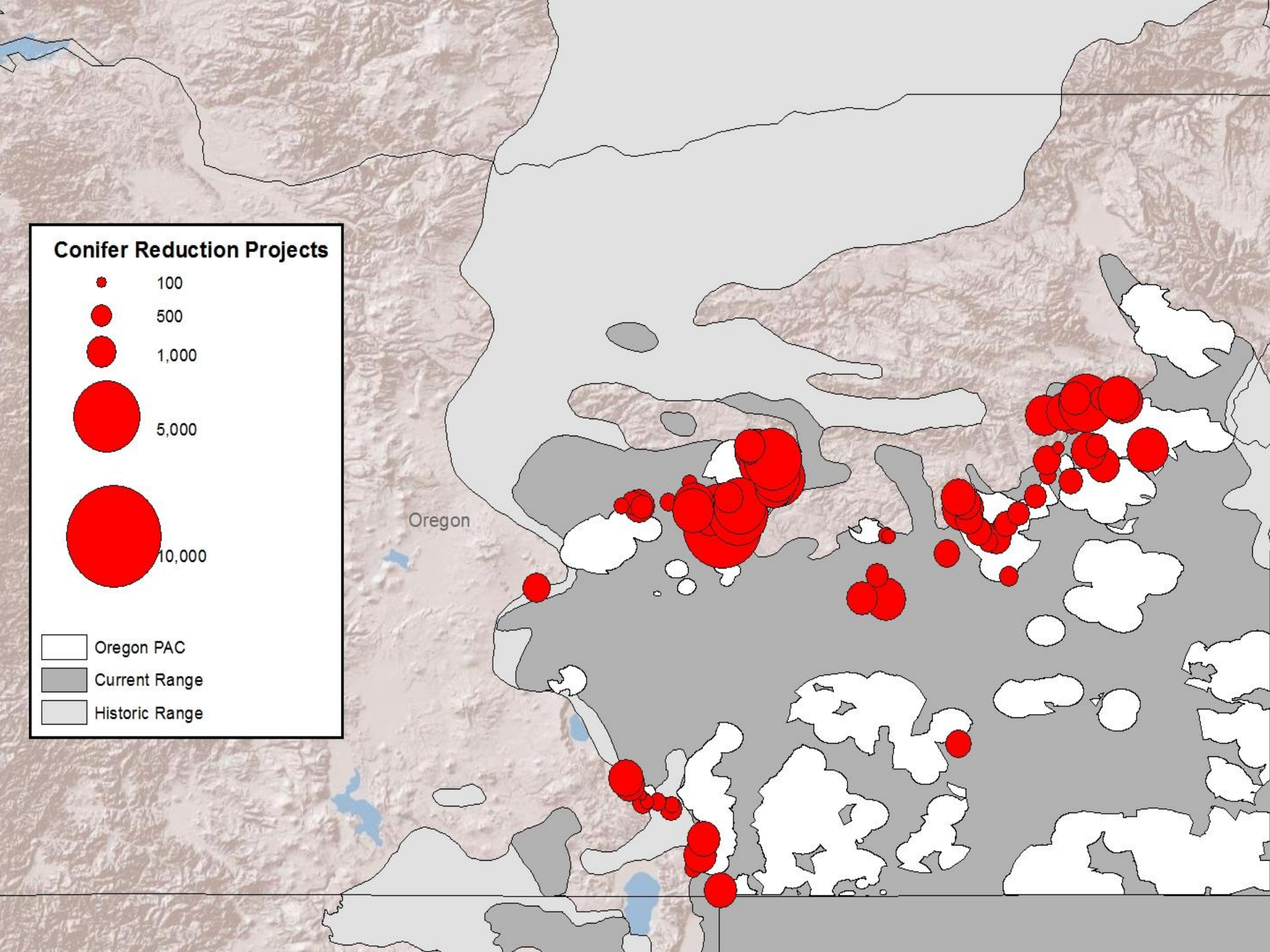
Phase I to III = 60% ↓ in AUMs of forage

Decreases ranch income stream by a third

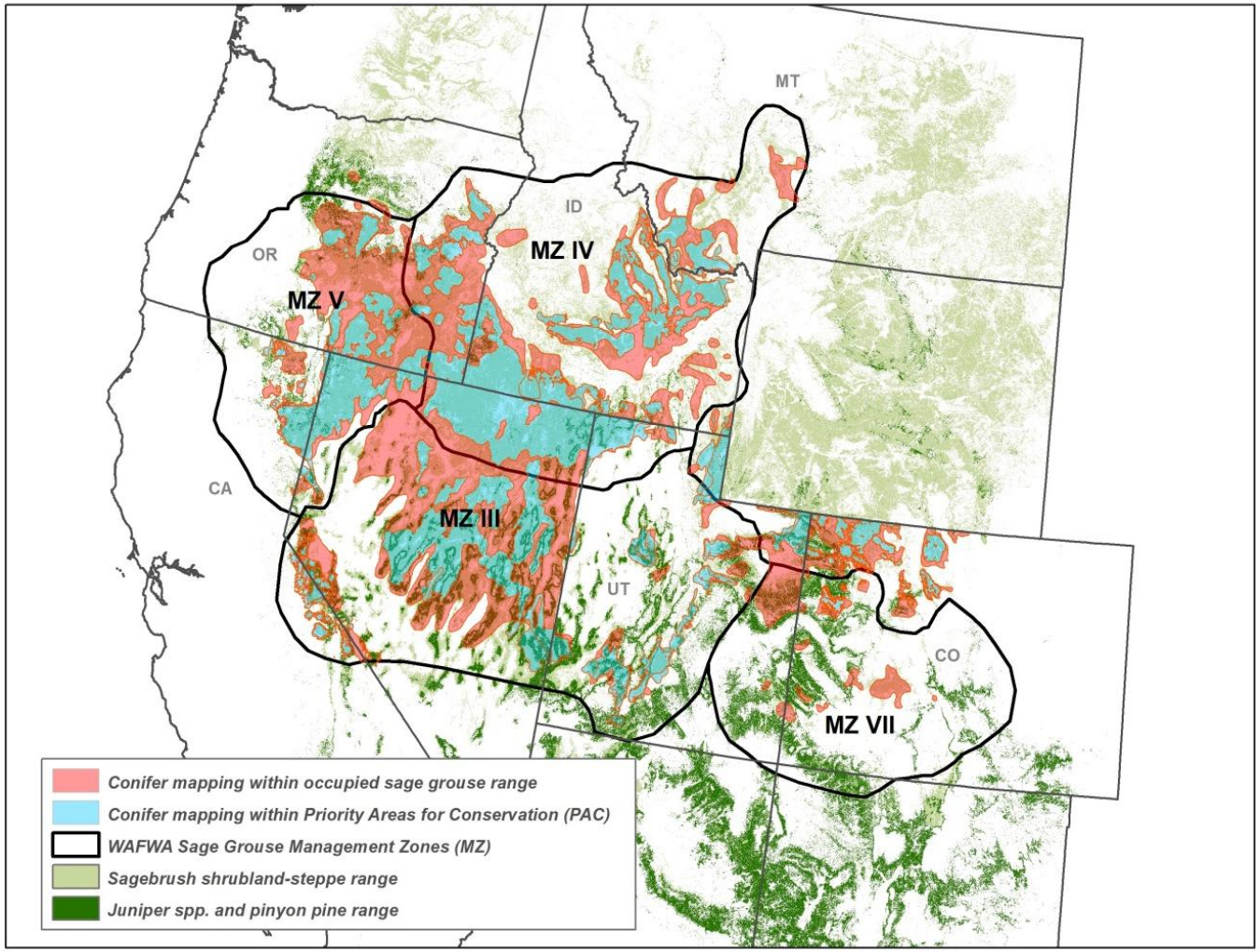
Ranchers can only afford to invest so much

Mutual benefits make beautiful public/private partnership

McLain 2012, Univ. of Idaho


Conifer Reduction Projects
100
500
1,000
5,000
10,000
Oregon PAC
Current Range
Historic Range
Oregon

Sage-grouse hate trees: A range-wide solution for increasing bird benefits through accelerated conifer removal

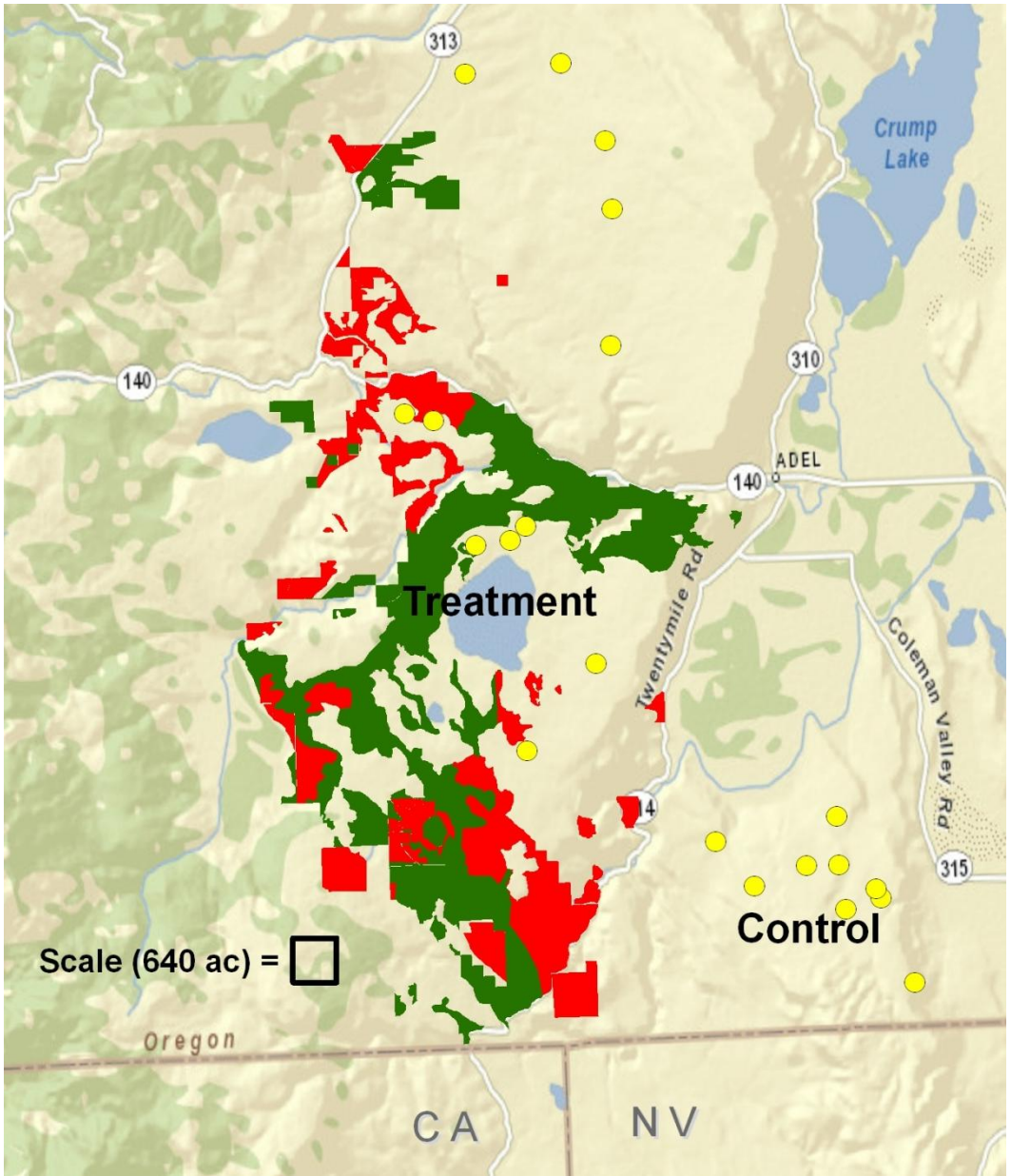


State	Status	Acres
CA	PAC	2.1
	Non PAC	1.1
CO	PAC	2.4
	Non PAC	6.3
ID	PAC	9.8
	Non PAC	7.1
MT	PAC	1.4
	Non PAC	2.2
NV	PAC	20.4
	Non PAC	21.4
OR	PAC	6.6
	Non PAC	12.5
UT	PAC	7.5
	Non PAC	4.2

Proposed acres (millions) of conifer mapping by state within PAC and non-PAC areas.

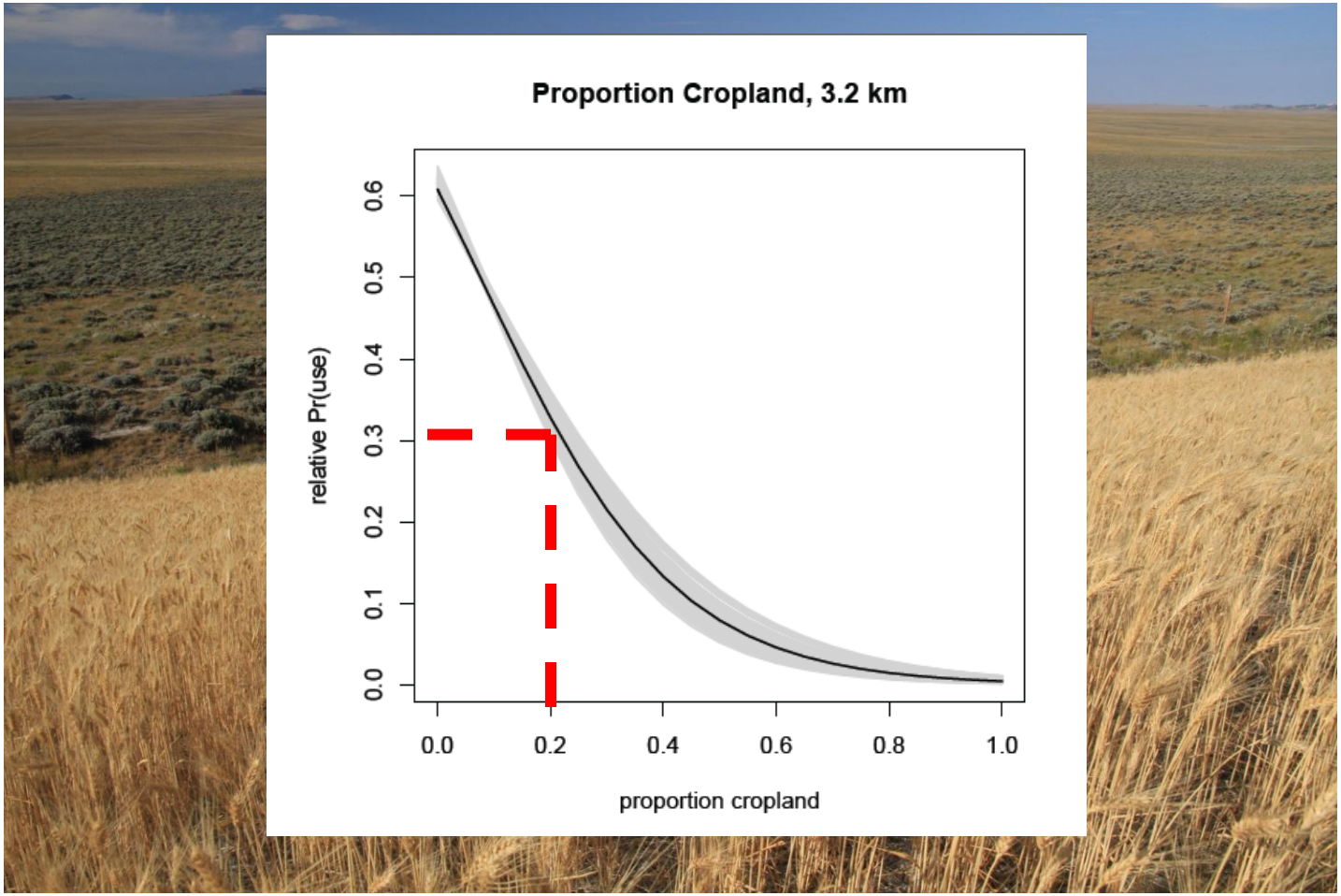
SAGE GROUSE INITIATIVE

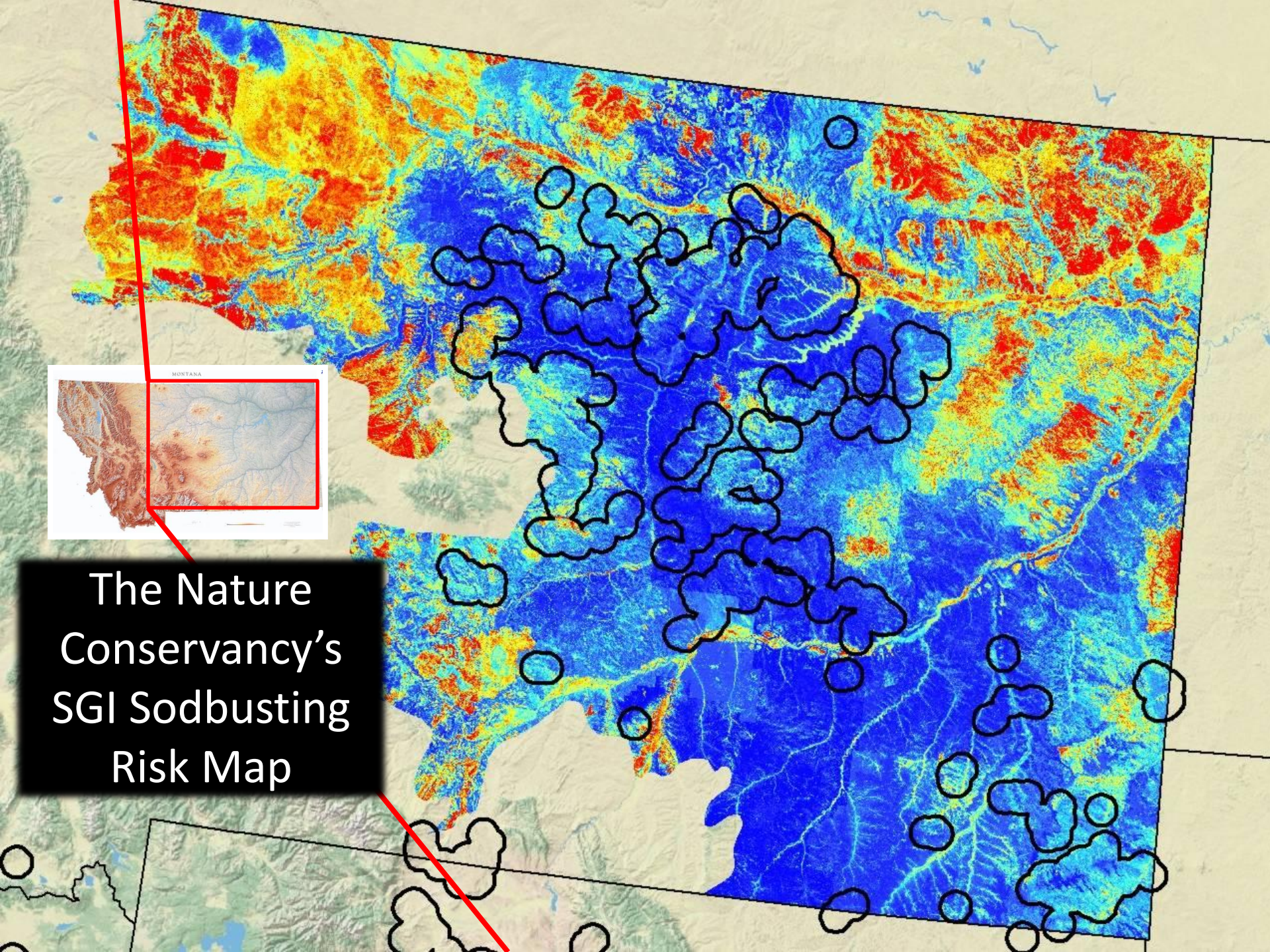
Quantifying Bird Response to Conifer Removal

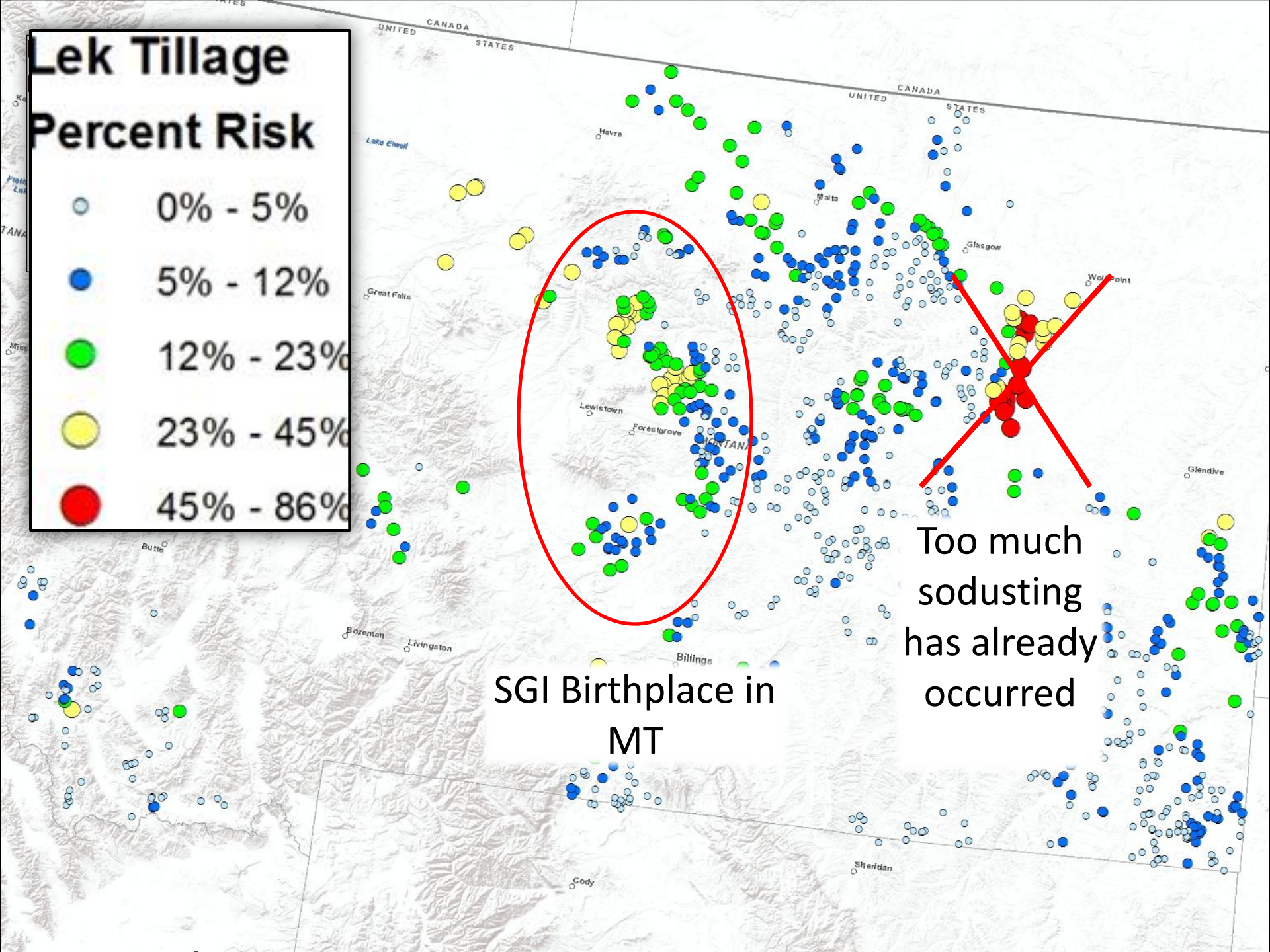


- 100,000 ac study area
- 80 birds on air
- BLM treating 25,000 ac
- SGI treating 7,500 ac

Job # 1
Stop the bleeding by keeping ranchers in business




MONTANA
The Nature Conservancy's SGI Sodbusting Risk Map


Lek Tillage
Percent Risk
0% - 5%
5% - 12%
12% - 23%
23% - 45%
45% - 86%
CANADA
UNITED STATES
Havre
Malta
Glasgow
Great Falls
Lewistown
Forestgrove
Glendive
Butte
Bozeman
Livingston
Billings
Cody
Sheridan
SGI Birthplace in MT
Too much sodusting has already occurred

Stop the bleeding, ***make more birds***

8% increase in nest success

equates to 10% increase in population growth

Taylor, Naugle and Mills BLM Report 2011

The Journal of Wildlife Management 76(2):336–347; 2012; DOI: 10.1002/jwmg.267

Population Ecology

Managing Multiple Vital Rates to Maximize Greater Sage-Grouse Population Growth

REBECCA L. TAYLOR,[1,2] *Wildlife Biology Program, College of Forestry and Conservation, University of Montana, 32 Campus Drive, Missoula, MT 59812, USA*

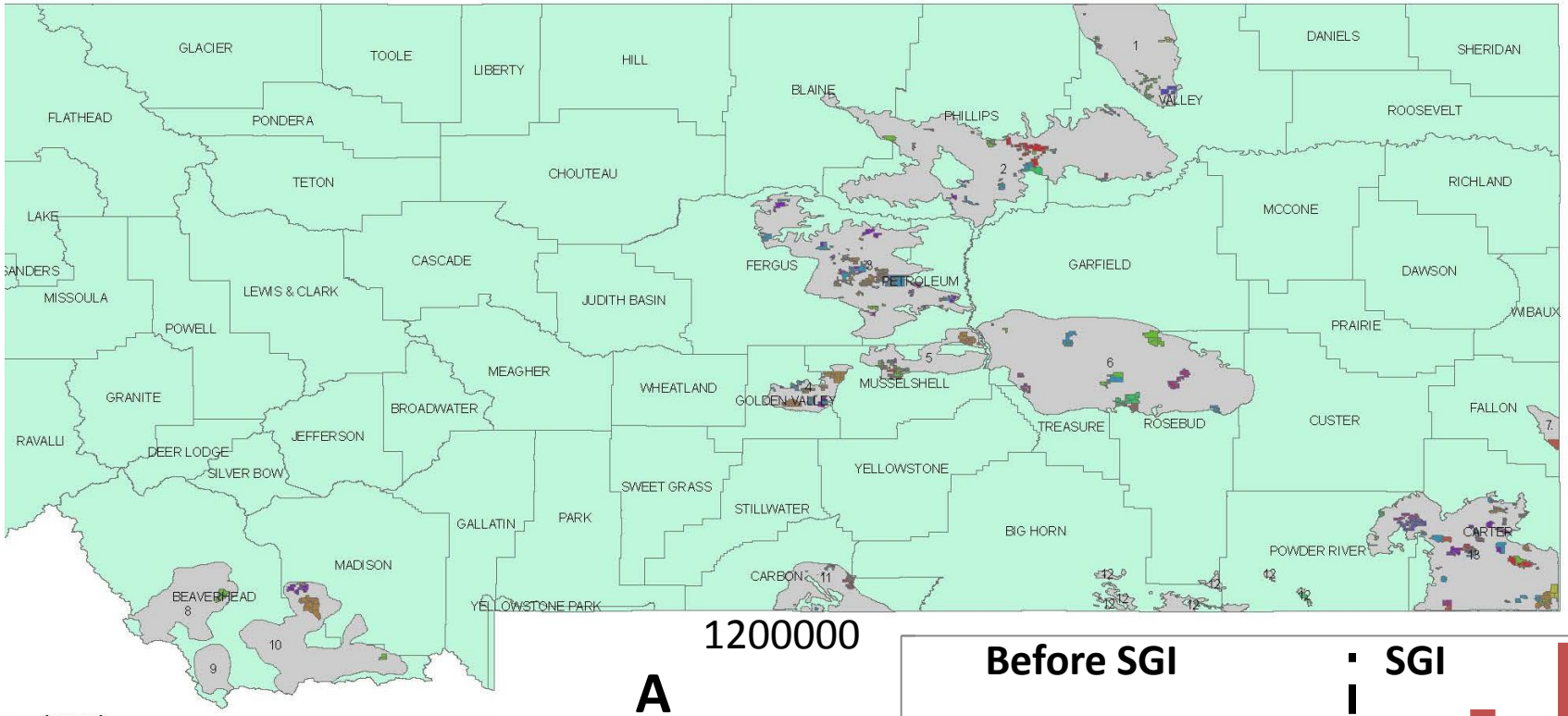
BRETT L. WALKER,[3] *Wildlife Biology Program, College of Forestry and Conservation, University of Montana, 32 Campus Drive, Missoula, MT 59812, USA*

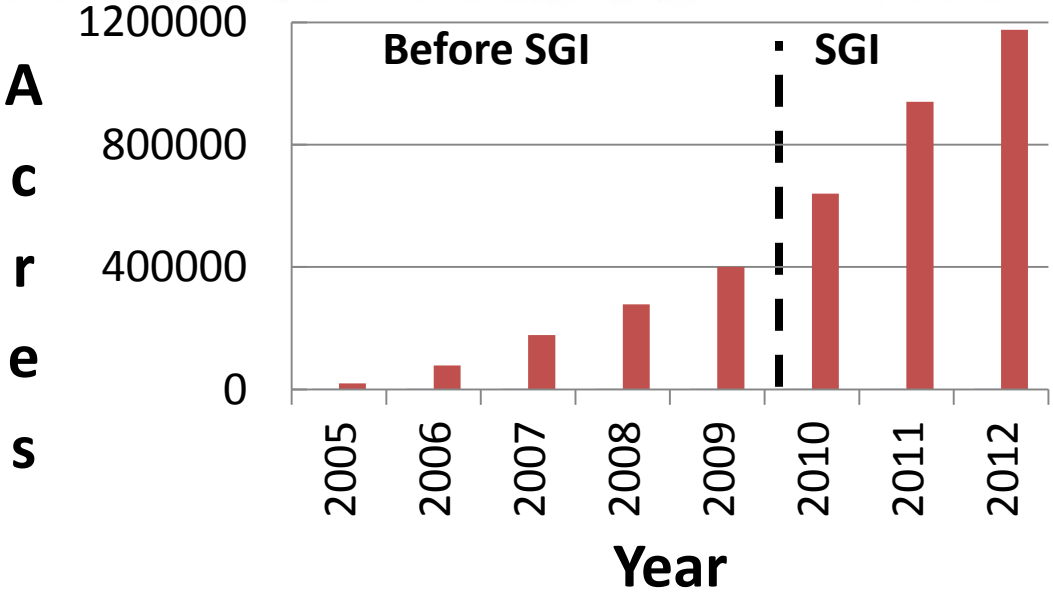
DAVID E. NAUGLE, *Wildlife Biology Program, College of Forestry and Conservation, University of Montana, 32 Campus Drive, Missoula, MT 59812, USA*

L. SCOTT MILLS, *Wildlife Biology Program, College of Forestry and Conservation, University of Montana, 32 Campus Drive, Missoula, MT 59812, USA*

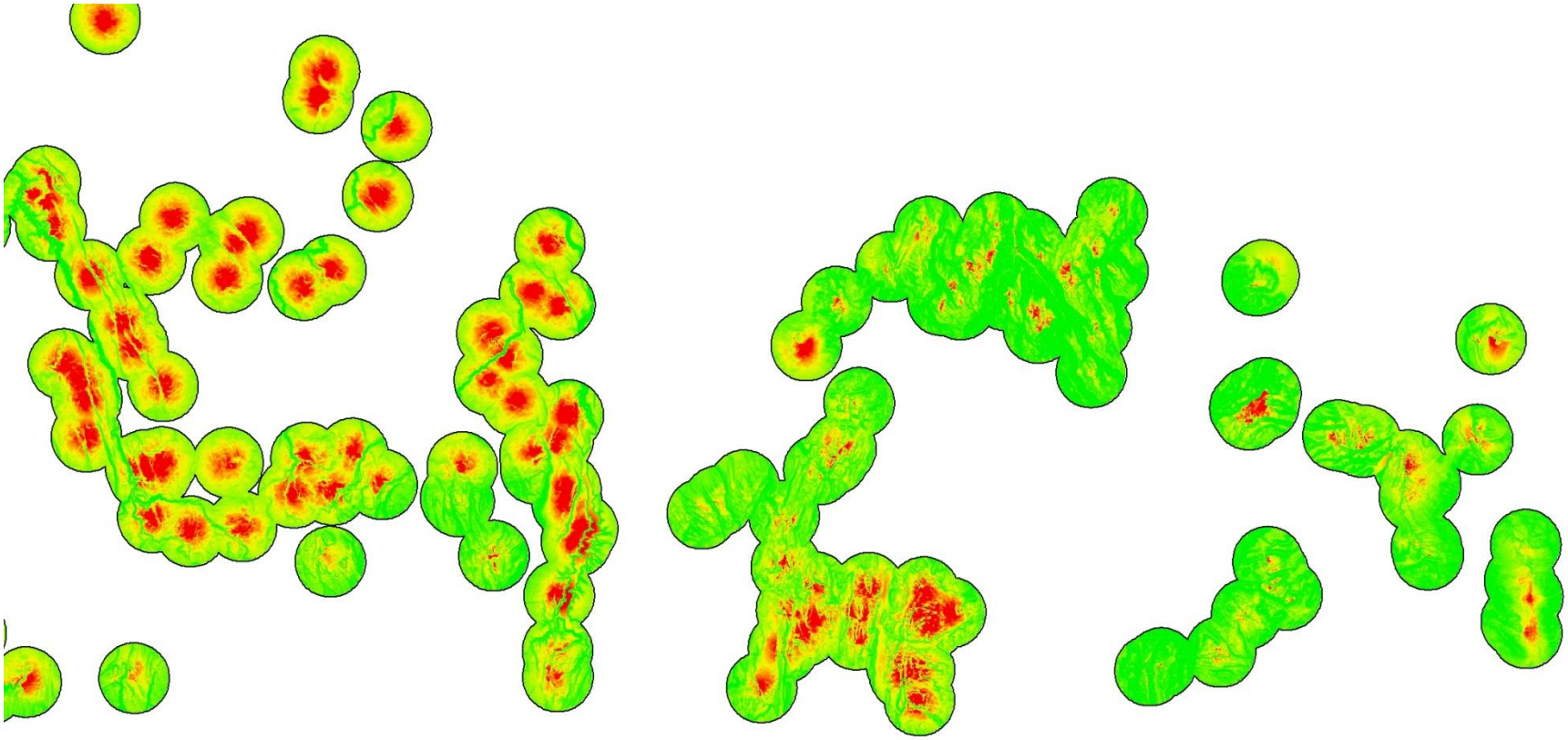
4 years of applied grazing system

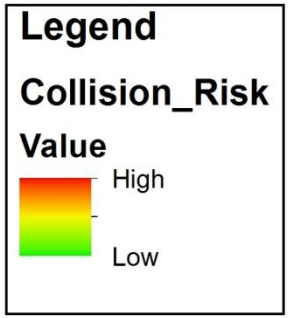
Montana Grazing Systems 4x higher with SGI





New range wide fence marking tool





Marking fence >1 collision is 11%
of area 465,600 ac within 3km of leks

United States Department of Agriculture
Natural Resources Conservation Service

CEAP Conservation Insight
Conservation Effects Assessment Project

November 2012

Applying the Sage-Grouse Fence Collision Risk Tool to Reduce Bird Strikes

Summary Findings

- Fence collisions by sage-grouse can

Background

Bird collision with human structures is

grated conservation strategy reduces the need to list the species under the Federal

Wildlife Society Bulletin; DOI: 10.1002/wsb.273

Tools and Technology

Mapping Sage-Grouse Fence-Collision Risk: Spatially Explicit Models for Targeting Conservation Implementation

BRYAN S. STEVENS,[1,2] *Departments of Fish and Wildlife Sciences and Statistical Sciences, University of Idaho, P.O. Box 441136, Moscow, ID 83844, USA*

DAVID E. NAUGLE, *Wildlife Biology Program, University of Montana, Missoula, MT 59812, USA*

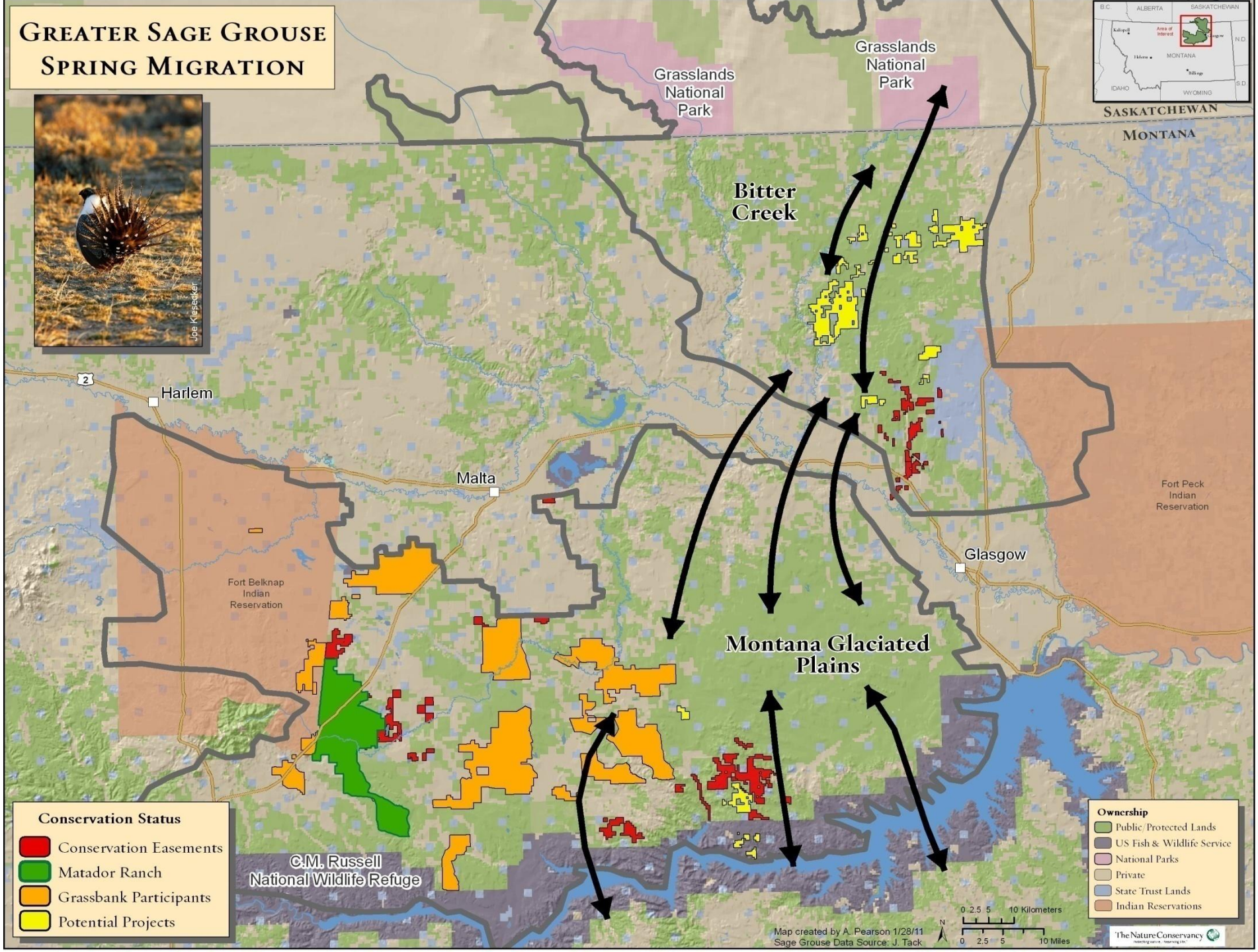
BRIAN DENNIS, *Departments of Fish and Wildlife Sciences and Statistical Sciences, University of Idaho, P.O. Box 441136, Moscow, ID 83844, USA*

JOHN W. CONNELLY, *Idaho Department of Fish and Game, 1345 Barton Road, Pocatello, ID 83204, USA*

TIM GRIFFITHS, *United States Department of Agriculture, National Resources Conservation Service, 10 E. Babcock Street, Bozeman, MT 59718, USA*

KERRY P. REESE, *Department of Fish and Wildlife Sciences, University of Idaho, P.O. Box 441136, Moscow, ID 83844, USA*

Strength through partnerships


Greater Sage Grouse Spring Migration
Joe Kiesecker
Grasslands National Park
Grasslands National Park
Saskatchewan
Montana
Bitter Creek
Harlem
Malta
Glasgow
Fort Peck Indian Reservation
Fort Belknap Indian Reservation
Montana Glaciated Plains
C.M. Russell National Wildlife Refuge
Conservation Status
Conservation Easements
Matador Ranch
Grassbank Participants
Potential Projects
Ownership
Public/Protected Lands
US Fish & Wildlife Service
National Parks
Private
State Trust Lands
Indian Reservations
0 2.5 5 10 Kilometers
0 2.5 5 10 Miles
Map created by A. Pearson 1/28/11
Sage Grouse Data Source: J. Tack
The Nature Conservancy

Visit us at: www.sagegrouseinitiative.com

Questions!