



Greater Sage-Grouse Conservation Efforts Database

USFWS Field Management Team Meeting

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Conservation Efforts Database (CED) Overview



1. Conceptual Framework
2. Goals
3. Website Design
4. Data Entry
5. Bulk Data Upload
6. Data Approval Process
7. Data Visualization / Reporting
8. Partner Participation
9. Timeline
10. Big Picture and Beyond

Conceptual Framework

GIS Overlay/Analysis

47 Sage-grouse populations

Conservation Objectives Team
(COT) report identified threats

Conservation efforts

Plan-level efforts



Database

Goal of the CED: Remotely and securely collect and centralize spatially explicit conservation efforts

Features

- Multiple users can
 - enter data at different scales
 - upload documents and spatial information
 - link conservation actions to one or more threats



Goal of the CED: Remotely and securely collect and centralize spatially explicit conservation efforts

Features

- USFWS determines if conservation efforts were effective
- Reporting and summary functions at multiple scales
- Ability to query data and view conservation efforts on a map



CED Website Design



Greater Sage Grouse Conservation Efforts Database

[Home](#) [Register](#) [Query Data](#) [Interactive Map](#) [Summary Data](#) [About the CED](#) [Help](#) [Log Out](#)

Welcome
jwelty

Welcome to the Greater Sage Grouse Conservation Efforts Database Website

The goal of the Conservation Efforts Database is to efficiently and effectively collect and analyze ongoing conservation efforts for the greater Sage-grouse in advance of the Fish and Wildlife Service's Fiscal Year 2015 decision on whether or not to propose sage-grouse for listing under the Endangered Species Act. Understanding the distribution and type of conservation actions happening across the landscape will allow visualization and quantification of the extent to which threats are being addressed and will therefore be a critical piece of information for our listing decision. This database will also be useful beyond our listing decision and may act as a template for tracking conservation actions across the landscape for other candidate, sensitive, or listed species. Upon completion, the spatially explicit, web-based Conservation Efforts Database will be: (1) capable of allowing multiple-users to enter data from different locations, (2) capable of uploading and storing documents, (3) able to link conservation actions to one or more threats (one-to-many relationships), (4) have reporting functions that would allow summaries of the conservation actions at multiple scales (e.g., management zones, populations, or priority areas for conservation), and (5) able to account for actions at multiple scales from small easements to state-wide planning efforts.

[Edit Profile](#)

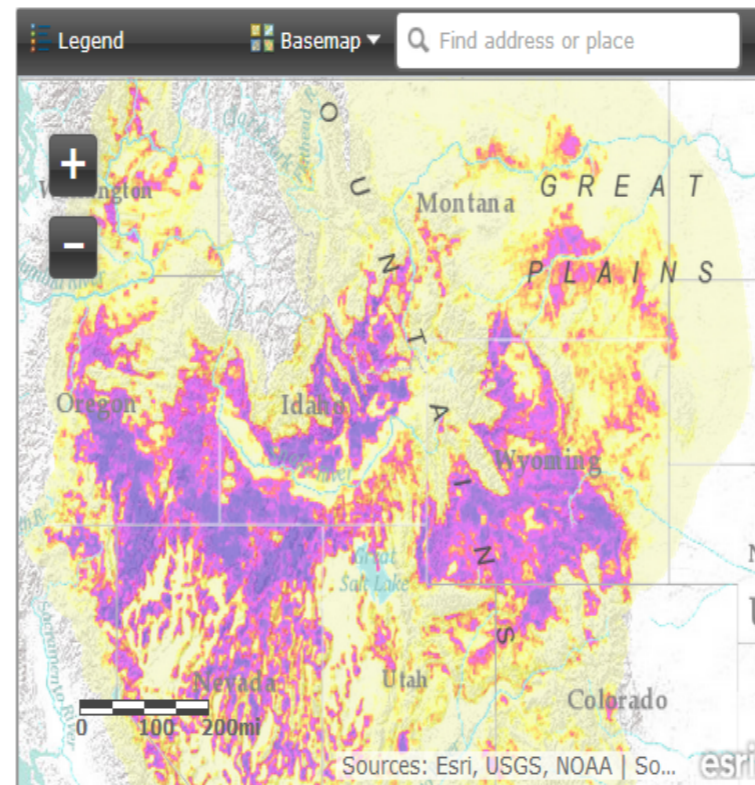
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[New Project](#)

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[Edit Approved Projects](#)



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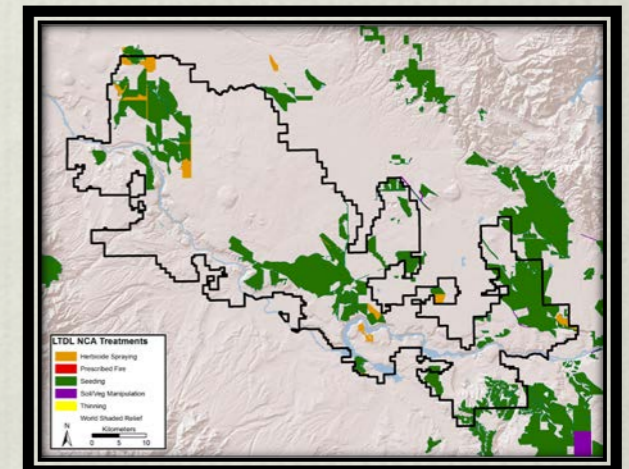
CED Data

- The CED will store 3 types of data

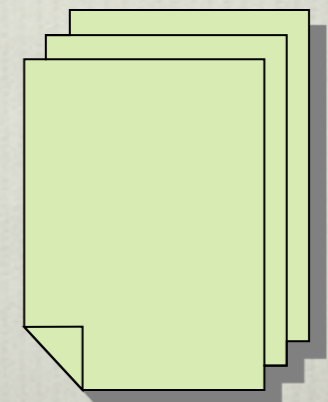
Project Name	Project Start Year	State	Major Agency	Contact Office Name
Clear Lake Quaking Aspen Restoration_MOF_2012_2018	2012	California	US Forest Service	Modoc National Forest
Clear Lake Sage-Grouse Improvement_MOF_2012_2018	2012	California	US Forest Service	Modoc National Forest
Grosvonts Prescribed Fire_2012	2012	Arizona	Bureau of Land Management	Kingman
Big Sage Juniper Improv Phase1_MOF_2011_2009	2011	California	US Forest Service	Modoc National Forest
Center Knob Riparian Enhancement_2011	2011	Utah	Bureau of Land Management	Grand Staircase-Escalante National Monument
Commissary Ridge Whitebark Pine Restoration and Thinning_2011	2011	Wyoming	Bureau of Land Management	Ketchikan
Big Canyon Wildfire_2011	2011	New Mexico	Bureau of Land Management	Las Cruces
Fish Alkali Tule Control_2011	2011	New Mexico	Bureau of Land Management	Las Cruces
Hayden Hill Sagegrouse_AJFO_2011_2024	2011	California	Bureau of Land Management	Alturas
Mader Gulch Sagestopper Restoration_AJFO_2011_2004	2011	California	Bureau of Land Management	Alturas
Mounts Pasture Juniper Treatment_MOF_2011_2197	2011	California	US Forest Service	Modoc National Forest
Old Draw Prescribed Burn_2011	2011	New Mexico	Bureau of Land Management	Carlsbad
South Canyon Vegetation Enhancement_2011	2011	Utah	Bureau of Land Management	Kanab
South Lake Prescribed Fire_2011	2011	New Mexico	Bureau of Land Management	Carlsbad
Van Horns Invertebrate Free_2011	2011	Arizona	Bureau of Land Management	Arizona Strip
Yupond Road North Highway 89 West_2011	2010	Nevada	Bureau of Land Management	Carson City
Alamoza Grassland Restoration Treatment_2010	2010	New Mexico	Bureau of Land Management	Las Cruces
Alkali Lake Cattail Crestock Control_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Alkali Lake Mesquite Control_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Alkali Lake Prescribed Fire_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Andrews Flat Mesquite Control_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Antelope Ridge Mesquite Control_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Army Posture Grassland Restoration Treatment_2010	2010	New Mexico	Bureau of Land Management	Las Cruces
Avolon Hills Cattail Crestock_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Beaver Wildlife_2010	2010	Colorado	Bureau of Land Management	Uncompahgre
Big Deer_2010	2010	Nevada	Bureau of Land Management	Carson City
Big Meadows Draw Mesquite Control_2010	2010	New Mexico	Bureau of Land Management	Carlsbad
Blue Book Flat AJOC AJFO_2010_2022	2010	California	Bureau of Land Management	Alturas
Bolton Dutton Perez Mammoth MOP_2010_24277	2010	California	US Forest Service	Modoc National Forest
Bonanza View Juniper Treatment_2010	2010	Oregon	Bureau of Land Management	Harney Falls
Bower Wildlife_2010	2010	Utah	Bureau of Land Management	Frontalier
Box Canyon Tule Control_2010	2010	New Mexico	Bureau of Land Management	Las Cruces
Brushland Juniper Control_2010	2010	Oregon	Bureau of Land Management	Vale
Butcher Lake and Sycamore_2010	2010	Utah	Bureau of Land Management	Grand Staircase-Escalante National Monument

- Tabular data
 - Building reports and summaries

- Spatial data
 - Visualizing spatial properties



- Documentation
 - Finding out details



CED Data Entry

5 Main Components

- Basic project information
- Location information
- Activity and metrics
- Threats addressed
- Implementation and effectiveness analysis
- Upload supporting documents



CED Data Entry

Example of Activities/Metrics/Threats Addressed

Step 4: Activity Information

Type: Activity:

Subactivity:

Metric: Metric value:

Select Threats Addressed

- | | | |
|--|---|---|
| <input type="checkbox"/> Agricultural Conversion | <input checked="" type="checkbox"/> Conifer Encroachment | <input type="checkbox"/> Energy Development |
| <input checked="" type="checkbox"/> Fire | <input type="checkbox"/> Free Roaming Equids | <input type="checkbox"/> Grazing / Range Management |
| <input type="checkbox"/> Infrastructure | <input type="checkbox"/> Isolated / Small Population Size | <input type="checkbox"/> Mining |
| <input checked="" type="checkbox"/> Noxious Weeds / Annual Grasses | <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Sagebrush Elimination |
| <input type="checkbox"/> Urbanization | | |

Objectives Description:

Effects Description:

CED Data Entry

Example of Implementation and Effectiveness Analysis

Step 5: Implementation

Implementation status: Planned Implemented

Has the activity been deemed effective or is it part of an existing regulatory mechanism?

Yes No

Start year: Finish year:

Start date: Finish date:

Implementation and Effectiveness Status Confirmed? Yes No

Implementation Status

Is the activity reasonably certain to be implemented? Yes No

Has the activity been fully implemented? Yes No

Activity completion date?

Have all the necessary resources to implement the activity been secured? Yes No

Does the implementing party have legal authority to conduct the activity? Yes No

Have all the federal/state/local legal procedural and regulatory requirements been met or is it reasonably certain they will be met? Yes No

Effectiveness Status

Has the activity been deemed effective? Yes No

Do you have written objectives for the activity and does each objective have a defined timeline? Yes No

Does the activity contain a monitoring plan that demonstrates whether objectives are being met AND are regular progress reports part of that plan? Yes No

Does the project have an adaptive management strategy? Yes No

USFWS Approval

USFWS Only: Was the activity implementation and activity form correct? Yes No

USFWS Only: Explain your reasoning:

Bulk Data Upload

- Partners may have existing databases
 - USGS Land Treatment Digital Library (LTDL)
 - USDA Forest Service Activity Tracking System (FACTS)

Pros

Efficient

Data has been entered

Easier partner buy in

Cons

Missing data

Missing spatial data

Difficult to get definitions

Approval Process

- Secure data entry
 - Multiple levels of authorized users
 - Agency assigned approving officials
 - Users approved prior to data entry
 - Projects verified by approving officials
 - Implementation and effectiveness verified by USFWS
- Once approved, data will be made public in a read-only format



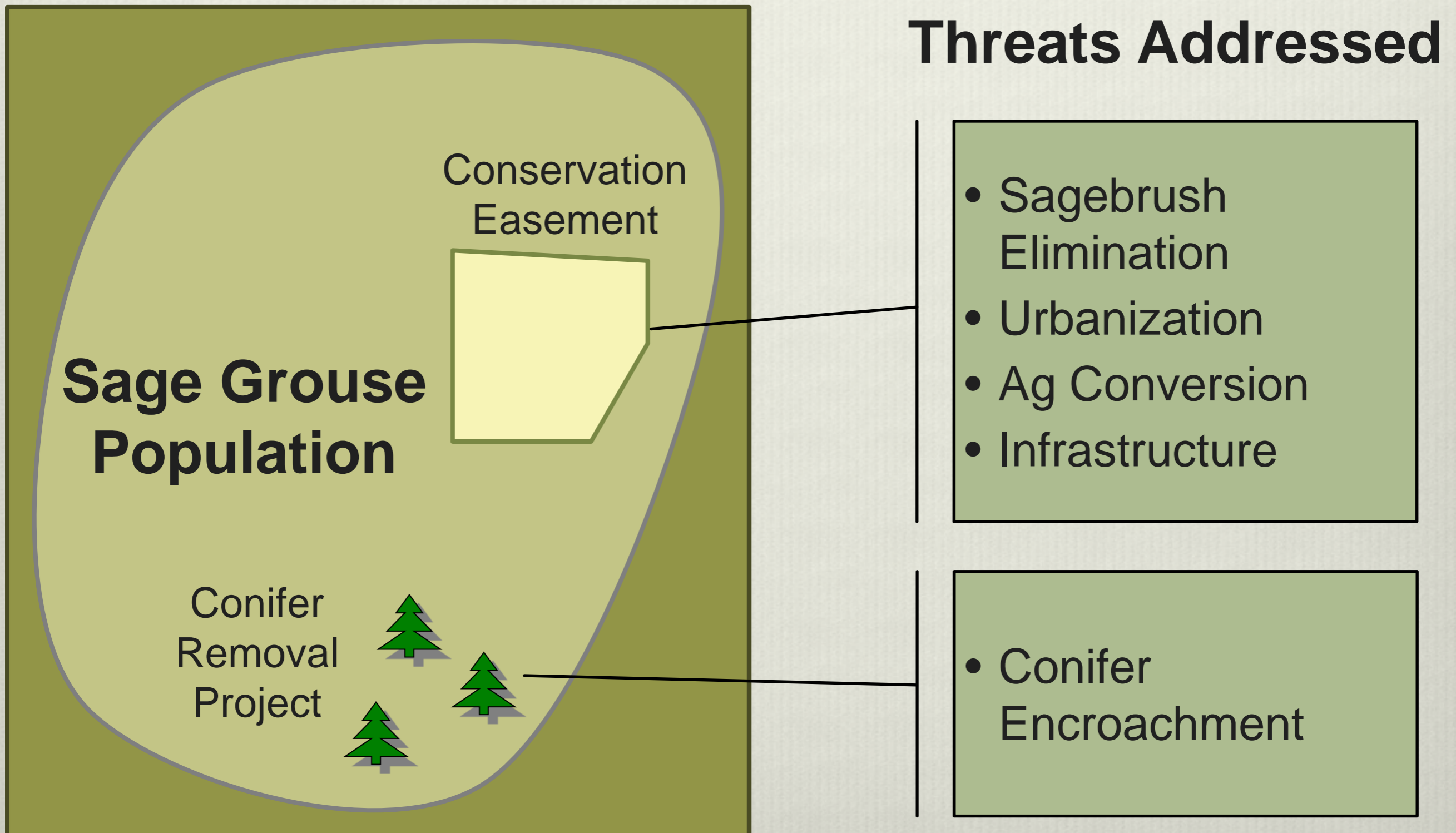
COT Evaluation

(Conceptual Only)

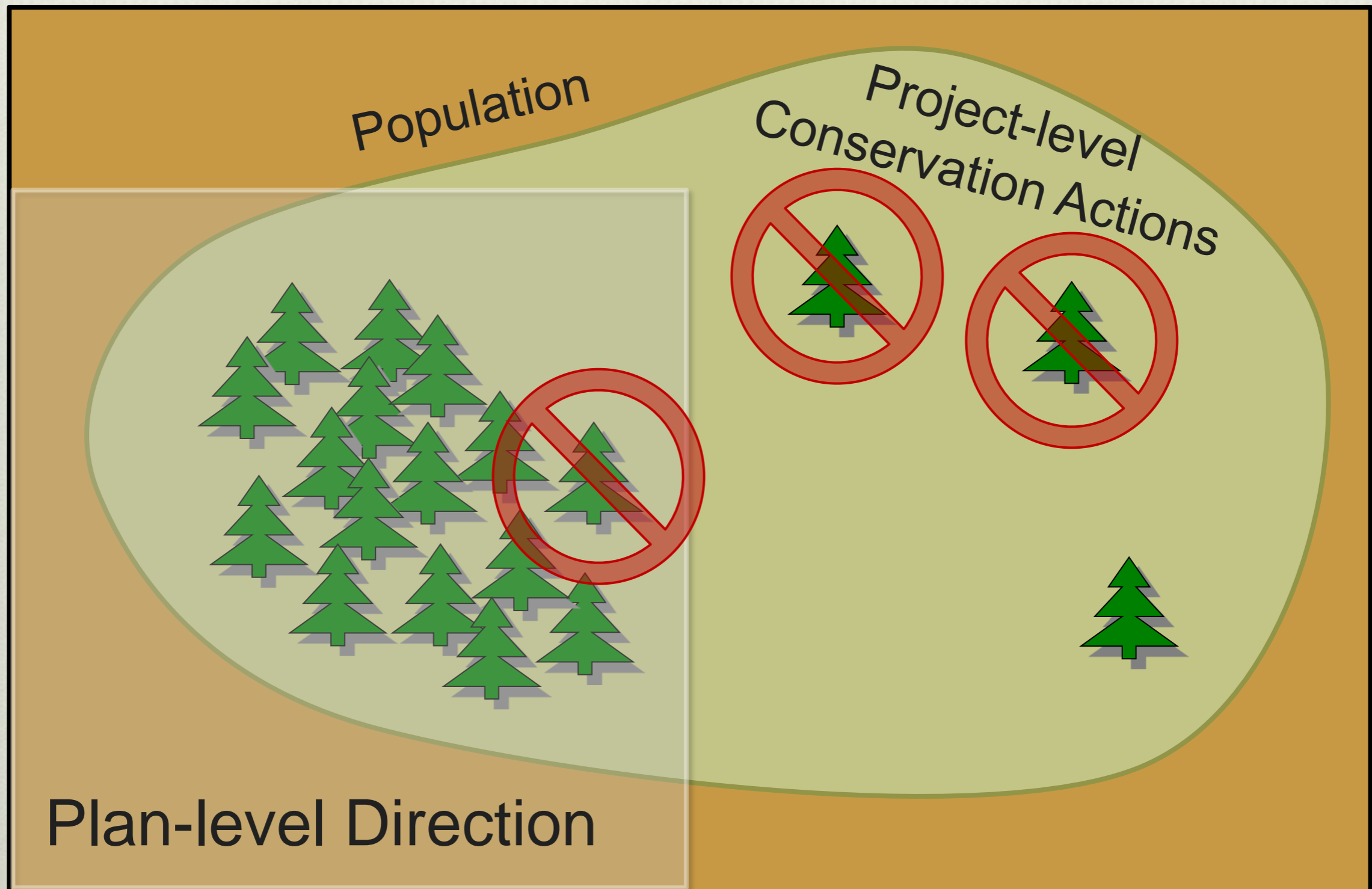
Population	Threats												
	1	2	3	4	5	6	7	8	9	10	11	12	13
W	N	L	L	Y	Y	Y	L	Y	L	Y	N	L	L
X	Y	Y	L	Y	Y	Y	L	N	Y	N	Y	N	N
Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Z	N	L	L	Y	Y	Y	L	L	L	Y	Y	N	N

Y-Present and widespread, L-Present and localized, N-Not present

Linking Populations, Threats, and Conservation Actions Spatially



Accounting for Project-level and Plan-level data

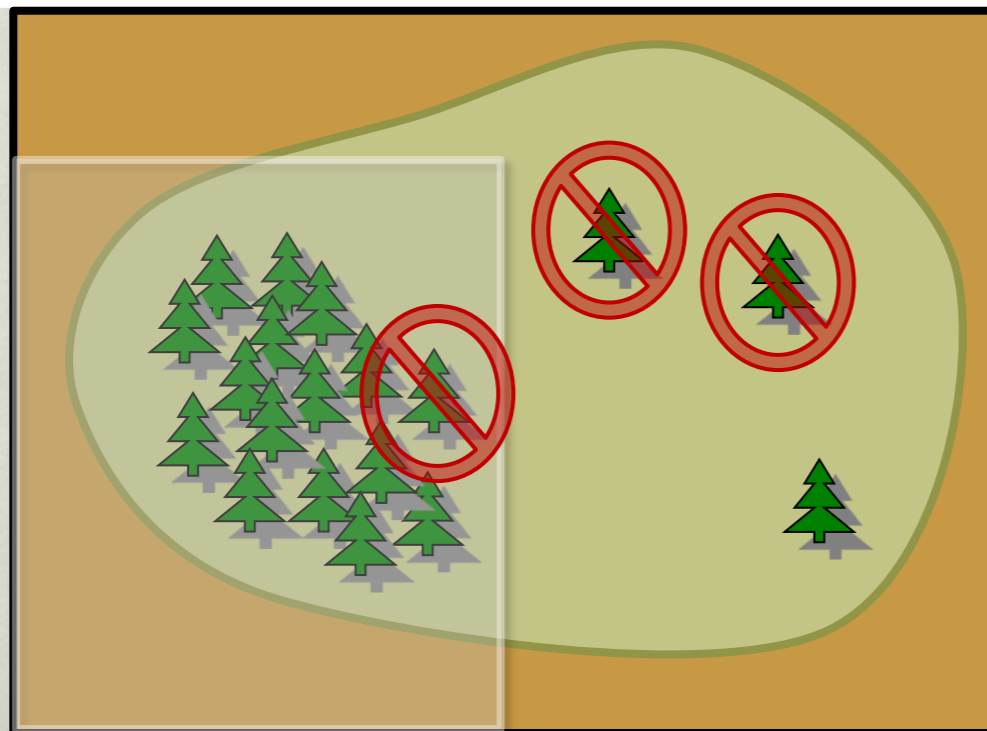


Data Visualization/Reporting

Database

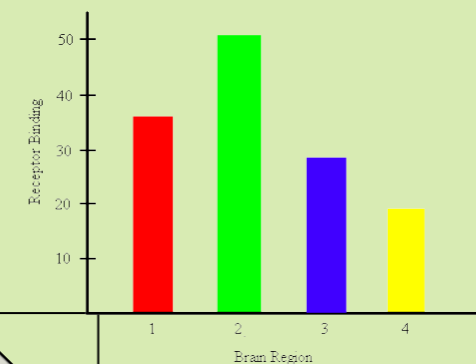
Query by Threat/Population

Visual Report/GIS Overlay

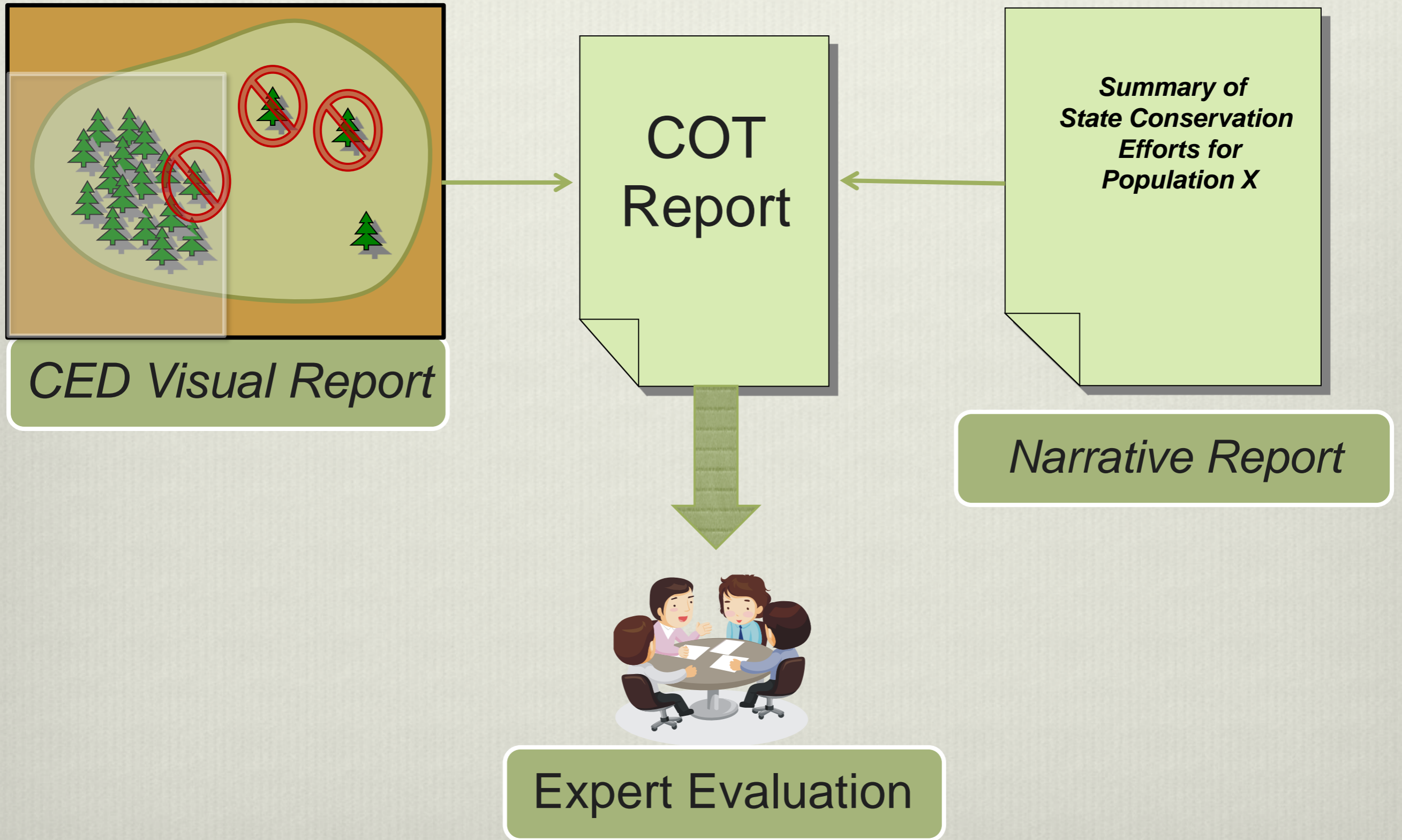


Text Report/Summary Graphics

**Summary of
Conservation Efforts
Across the Landscape**



Data Visualization/Reporting



COT Evaluation

(Conceptual Only)

Population	Threats												
	1	2	3	4	5	6	7	8	9	10	11	12	13
W	N	L	L	Y	Y	Y	L	Y	L	Y	N	L	L
X	Y	Y	L	Y	Y	Y	L	N	Y	N	Y	N	N
Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Z	N	L	L	Y	Y	Y	L	L	L	Y	Y	N	N

Degree to which threat has been addressed

Low



High

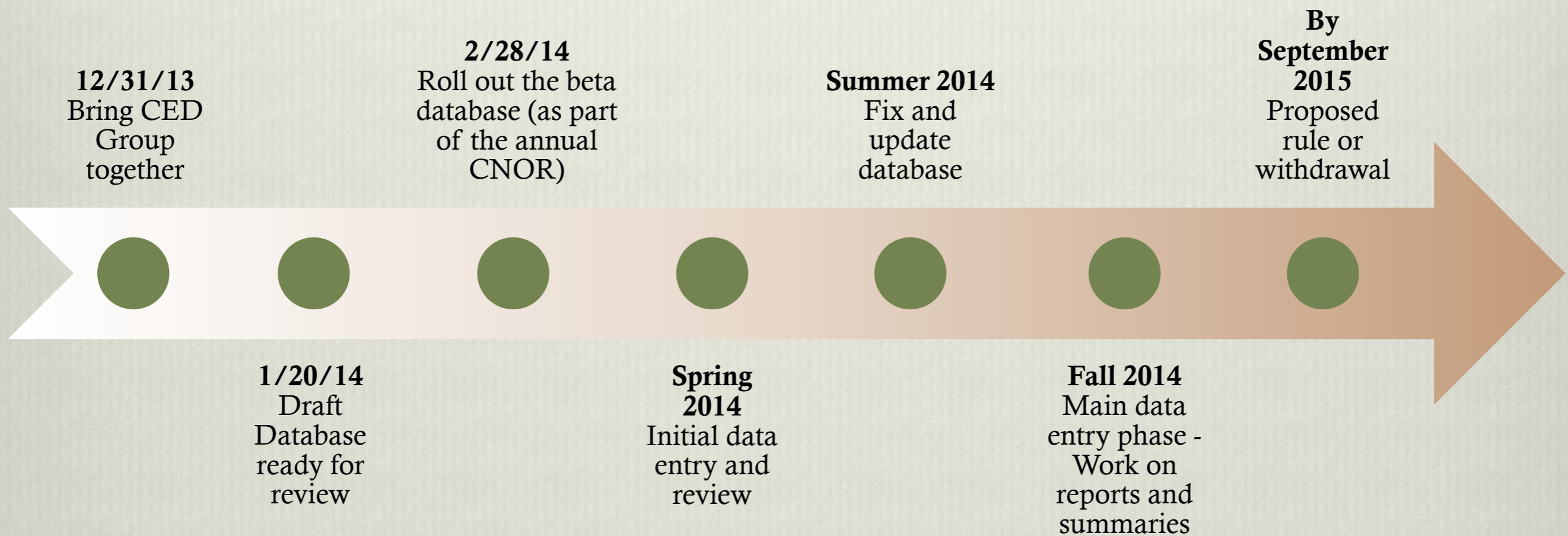
Partner Participation

- The CED will not be successful without partner participation
- How can we gain partner support?
 - Get the word out
 - Engage early and often
 - Provide help and support
 - Demonstrate usefulness



CED Timeline

The CED must be ready for the 2015 listing decision



The Big Picture and Beyond

- The CED could be
 - Broadened and generalized
 - Track conservation efforts
 - Assist with both listing and delisting decisions

- Buy in from our partners is critical to database success



Yellow-billed loon



Gopher tortoise

CED Website Beta

http://ec2-107-21-104-109.compute-1.amazonaws.com/ced_main

Questions/Comments



LC Map

The Landscape Conservation Management and Analysis Portal, LC MAP, provides a collaborative virtual workspace allowing partners of the Great Northern LCC to securely share, access, and analyze common datasets and information to further coordinated research, management, and resource conservation. LC MAP supports large landscape conservation in several ways. It:

- ❖ Advances project-level research and modeling by providing a secure virtual workspace where multiple partners can discover, assess, edit, analyze, and model common data themes in near real-time.
- ❖ Facilitates data mining and discovery from the World Wide Web.
- ❖ Functions as a secure repository where GNLCC partners can safely store their data, custom-control access, and manage metadata using customized, intuitive data documentation tools.
- ❖ Takes advantage of the powerful geospatial analysis capabilities of ArcGIS 10 and its broad array of extensions.

Type	Activity	SubActivity	Metric
Planning	Regulatory Mechanisms, Plans, Policy	Federal Land Use Plan	
Planning	Regulatory Mechanisms, Plans, Policy	State Conservation Plan	
Planning	Regulatory Mechanisms, Plans, Policy	County/Local Government Plan	
Planning	Regulatory Mechanisms, Plans, Policy	Programmatic Candidate Conservation Agreement	
Planning	Regulatory Mechanisms, Plans, Policy	Programmatic Candidate Conservation Agreement with Assurances	
Planning	Regulatory Mechanisms, Plans, Policy	Wild horse and burro control/removal strategy	
Planning	Regulatory Mechanisms, Plans, Policy	Compensatory Mitigation Planning and Conservation Banking / Crediting Systems	
Planning	Regulatory Mechanisms, Plans, Policy	Restoration Plan (Invasive Plants)	
Planning	Regulatory Mechanisms, Plans, Policy	Restoration Plan (Fire)	
Planning	Regulatory Mechanisms, Plans, Policy	Reclamation Plan	
Planning	Regulatory Mechanisms, Plans, Policy	Fire Related Conservation Strategy (Pre-suppression Plans)	
Planning	Regulatory Mechanisms, Plans, Policy	Fire Mutual Aid Agreement	
Planning	Regulatory Mechanisms, Plans, Policy	Sage-grouse Harvest Regulation	
Planning	Regulatory Mechanisms, Plans, Policy	Zoning Regulation (Urban and Agriculture)	
Planning	Non-regulatory Conservation Strategies / BMPs	Non-regulatory Conservation Strategies / Minimization Strategies / BMPs	
Planning	Non-regulatory Conservation Strategies / BMPs	Grazing Management Practices and Avoidance	
Efforts	Sagebrush & Habitat Protection	Conservation Agreements (includes CCAs, CCAAs, Farm Bill, Incentive-based programs)	Acres (give for each seasonal habitat)
Efforts	Sagebrush & Habitat Protection	Conservation Easement	Acres (give for each seasonal habitat)
Efforts	Sagebrush & Habitat Protection	Land Purchases / Swaps	Acres (give for each seasonal habitat)
Efforts	Sagebrush & Habitat Protection	Vegetation Management / Habitat Enhancement	Acres (give for each seasonal habitat)
Efforts	Sagebrush & Habitat Protection	Fuel Breaks / Fuel Management	Acres
Efforts	Sagebrush & Habitat Protection	Area Closure (Area and/or Seasonal)	Acres
Efforts	Habitat Restoration (Non-wildfire related)	Seeding (native only)	Acres (give for each seasonal habitat)
Efforts	Habitat Restoration (Non-wildfire related)	Seeding (non-native)	Acres (give for each seasonal habitat)
Efforts	Habitat Restoration (Non-wildfire related)	Seeding (native/non-native mix)	Acres (give for each seasonal habitat)
Efforts	Habitat Restoration (Non-wildfire related)	Planting	Acres (give for each seasonal habitat)
Efforts	Habitat Reclamation Efforts	Mine reclamation	Acres (give for each seasonal habitat)
Efforts	Conifer Removal	Conifer Removal	Phase 1 Acres
Efforts	Conifer Removal	Conifer Removal	Phase 2 Acres
Efforts	Conifer Removal	Conifer Removal	Phase 3 Acres
Efforts	Fire: Pre-suppression Efforts	Preposition Resources	
Efforts	Fire: Pre-suppression Efforts	Fuel Breaks / Fuel Management	
Efforts	Fire: Pre-suppression Efforts	Weather Augmentation	
Efforts	Habitat Restoration (Wildfire)	Post-fire restoration: seeding (native only)	Acres (give for each seasonal habitat)
Efforts	Habitat Restoration (Wildfire)	Post-fire restoration: seeding (non-native)	Acres (give for each seasonal habitat)
Efforts	Habitat Restoration (Wildfire)	Post-fire restoration: seeding (native/non-native mix)	Acres (give for each seasonal habitat)
Efforts	Habitat Restoration (Wildfire)	Planting	Acres (give for each seasonal habitat)
Efforts	Infrastructure Removal, and Modification	Structure Removal	Type of structure removed
Efforts	Infrastructure Removal, and Modification	Structure Removal	Acres restored
Efforts	Infrastructure Removal, and Modification	Powerline Burial	Type of powerline
Efforts	Infrastructure Removal, and Modification	Powerline Burial	miles of powerline buried
Efforts	Infrastructure Removal, and Modification	Powerline Retrofitting / Modification	miles of powerline retrofitted/modified
Efforts	Infrastructure Removal, and Modification	Fence Modification	miles of fence modified
Efforts	Infrastructure Removal, and Modification	Fence Marking	miles of fence marked
Efforts	Infrastructure Removal, and Modification	Fence Removal	miles of fence removed
Efforts	Livestock & Rangeland Management	Allotment Closure	Acres (give for each seasonal habitat)
Efforts	Livestock & Rangeland Management	Road closure	miles of road closed
Efforts	Recreation Management	Road and Trail closure	Length (miles) of road/trail closed
Efforts	Recreation Management	Reroute Trail	Length (miles) of road/trail rerouted
Efforts	Predator Control	Predator Control	Number killed (by predator)
Efforts	Population Augmentation	Translocation	Number of birds translocated
Efforts	Wild Equid Management	Wild Equiid Population Control	Number of wild equids treated
Efforts	Wild Equid Management	Wild Equiid Gather	Number of equids gathered

Threats

Threats
Agricultural Conversion
Conifer Encroachment
Energy Development
Fire
Free Roaming Equids
Grazing / Range Management
Infrastructure
Isolated / Small Population Size
Mining
Noxious Weeds / Annual Grasses
Recreation
Sagebrush Elimination
Urbanization