

Threat-Based Strategic Conservation

SageCon Summit 2023 Mini-workshop



What is Threat-Based Strategic Conservation?

Threat-Based Strategic Conservation is a **hands-on, interactive process** to facilitate **landscape-scale, proactive planning** in complex local landscapes.

The Goal: Develop your own **science-informed but locally-derived** spatial strategy to defend and grow the core

Today: A whirlwind tour of the background, principles, mapping tools, and an interactive activity for the area of our field tour tomorrow

Where does Threat-Based Strategic Conservation fit in the bigger picture?

This exercise helps develop a **spatial strategy**, which is one element of strategic planning.

Key Questions	Planning Step
1. Where do we want to be?	Vision
2. Where are we now?	Inventory & assessment
3. What needs to change and when?	Goals & objectives
4. How do we get there?	Strategy & prioritization
5. What are we going to do?	Implementation
6. How do we measure progress and adjust as needed?	Monitoring & adaptive management

← Threat-Based Strategic Conservation fits here

TBSC in Three Acts

1. Foundations: Context and principles
2. Tools for strategic conservation – spatial data
3. Bust out the maps and sharpies!

When I am thinking about how to prioritize where and how to work
across a landscape, I am considering...

Click to open word cloud

TBSC Foundations

- Context
 - Sagebrush Conservation Design
 - Threat-Based Land Management
- Principles of strategic conservation

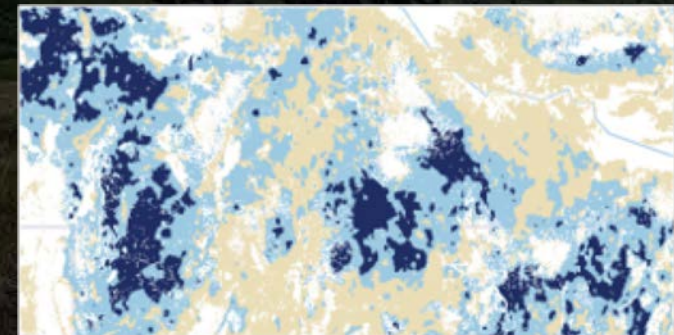
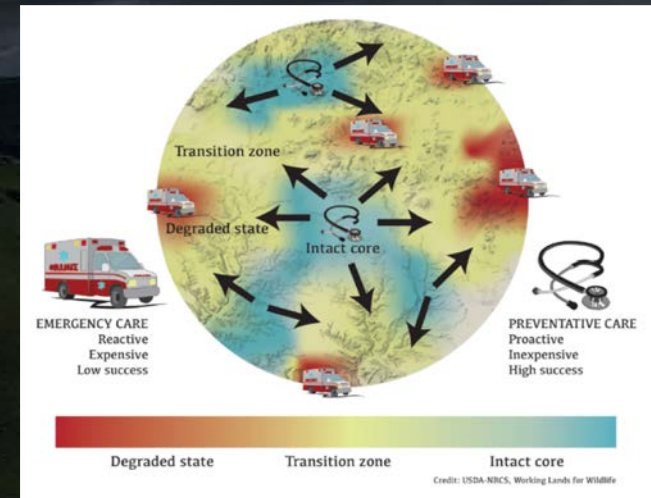


Module 1: Foundations

Context: Sagebrush Conservation Design

1. Wake-up call and call to action
2. Framework & common language for strategic, proactive conservation: "defend and grow the core"
3. Spatial dataset to implement the framework across large spatial scales

The Sagebrush Conservation Design shows that **1.3 million acres** of intact sagebrush is being lost on average each year, underscoring the need for a strategic, landscape-scale, threat-based approach.



Module 1: Foundations

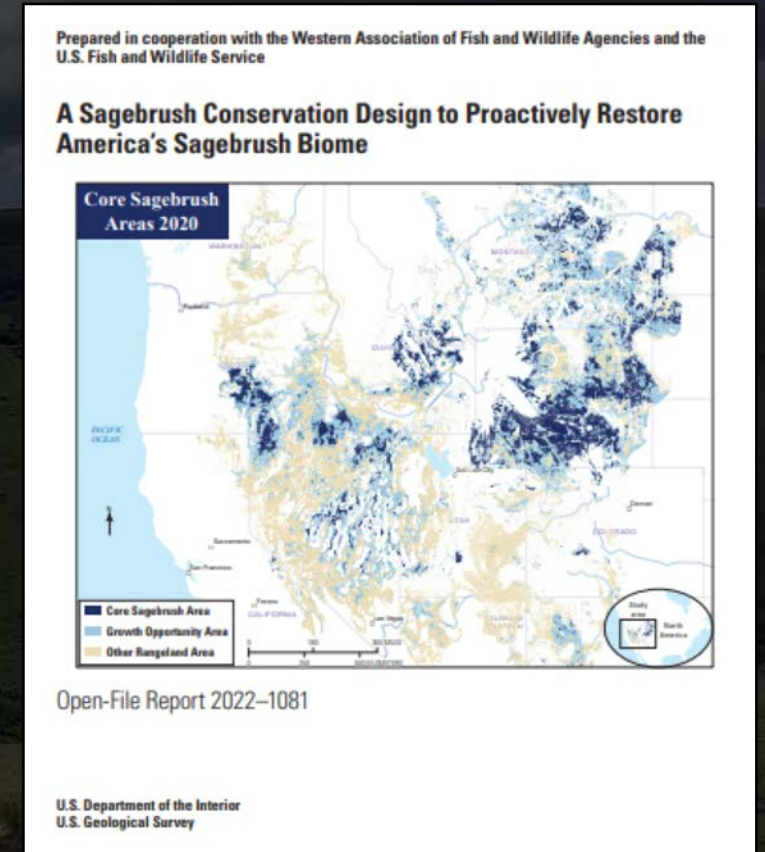
Context: Sagebrush Conservation Design

1. Wake-up call and call to action

The Sagebrush Conservation Design shows that **1.3 million acres** of intact sagebrush is being lost on average each year, underscoring the need for a strategic, landscape-scale, threat-based approach.

We are doing a lot of good work... but it is not moving the needle at the scale that is needed

We need to rethink business-as-usual

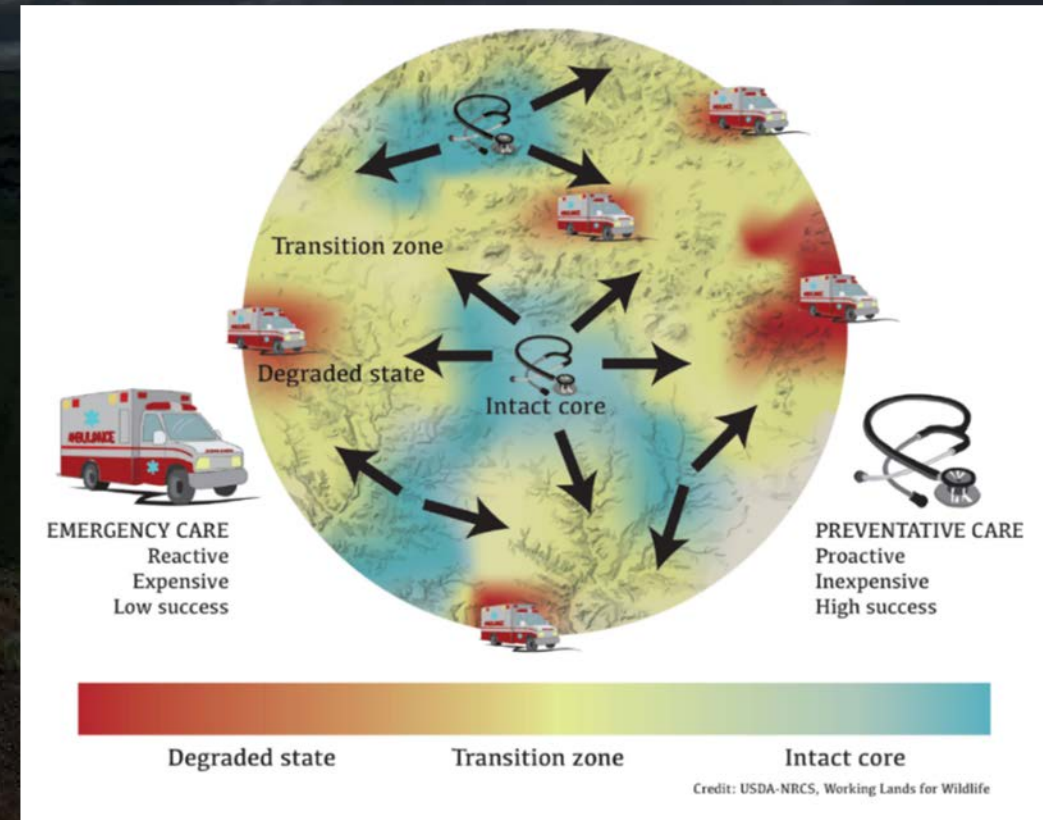
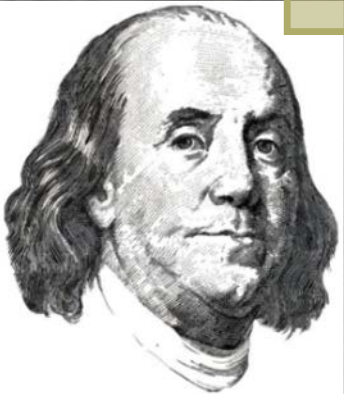


Context: Sagebrush Conservation Design

2. Framework & common language for strategic, proactive conservation: "defend and grow the core"

- Generalized framework that is scalable

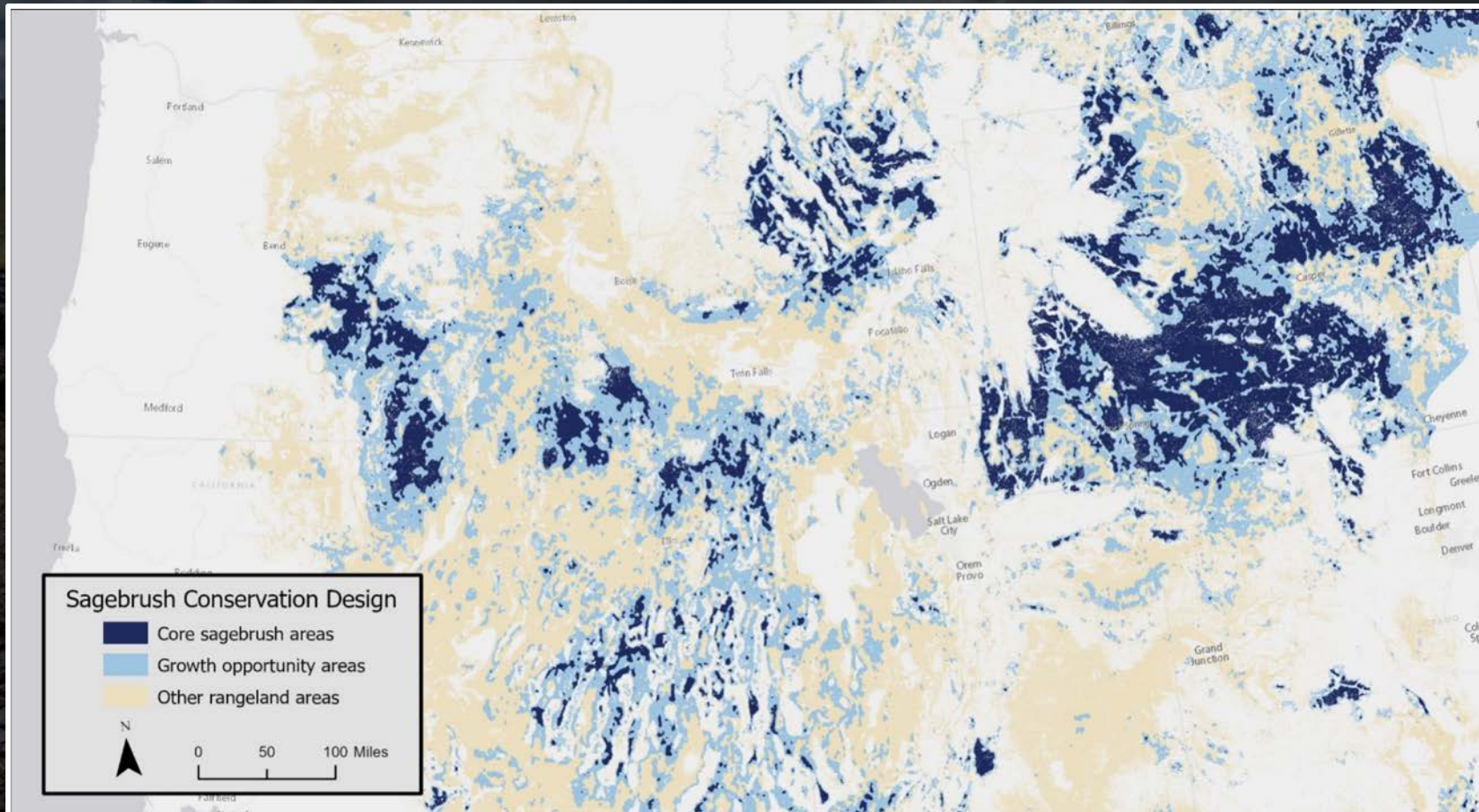
"An ounce of prevention is worth a pound of cure"



Module 1: Foundations

Context: Sagebrush Conservation Design

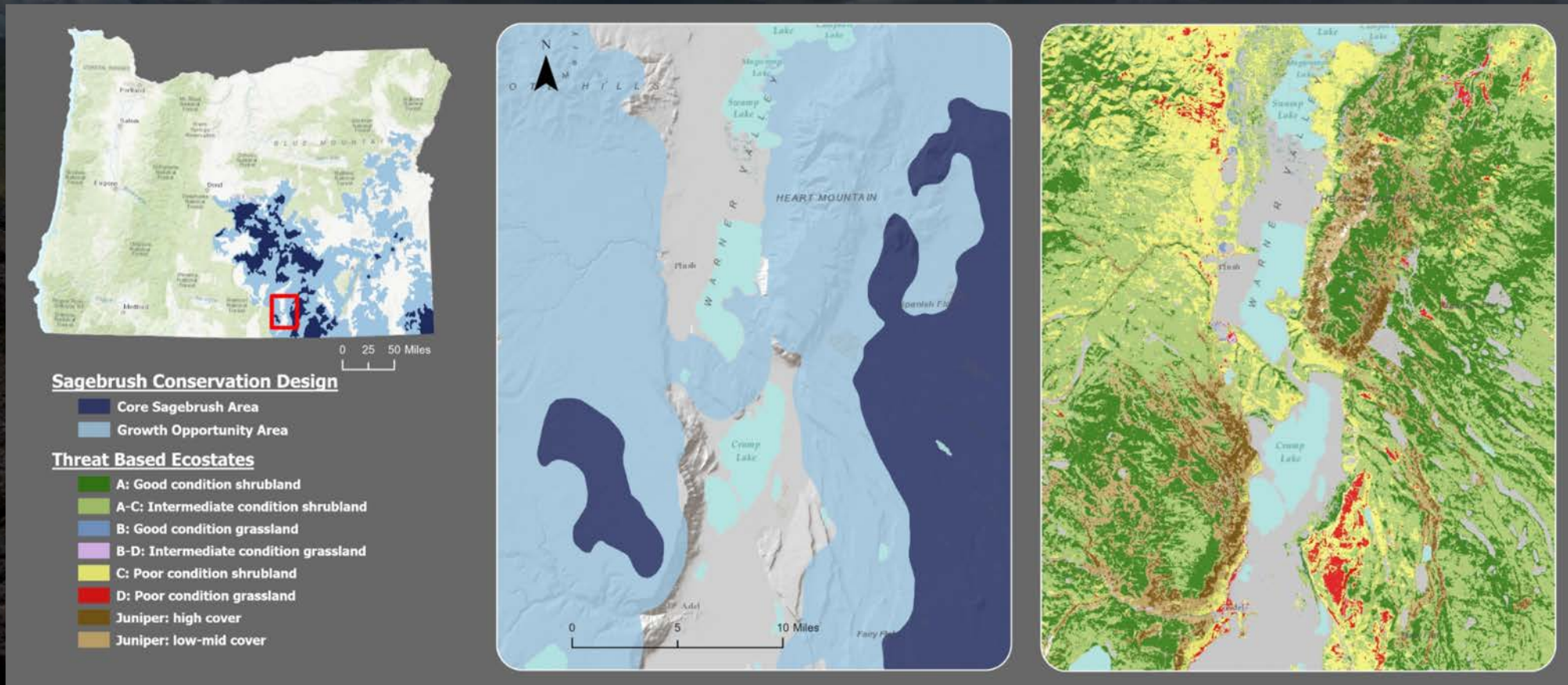
3. Spatial dataset to implement the framework across large spatial scales



Module 1: Foundations

Context: Sagebrush Conservation Design

3. **Spatial dataset** to implement the framework across large spatial scales
 - Other datasets can help us downscale to **management-relevant landscapes**



Module 1: Foundations

Context: Threat-Based Land Management

- • Invasive annual grasses: spreading with and without fire
- Fire: modern fire regimes differ from historical at high & low elevation
- Conifer expansion



Photos: US Fish & Wildlife Service

Module 1: Foundations

Context: Threat-Based Land Management

- Invasive annual grasses: spreading with **and without** fire
- • Fire: modern fire regimes differ from historical at high & low elevation
- Conifer expansion



Scott Shaff - USGS



Nolan Preece - USFWS

Module 1: Foundations

Context: Threat-Based Land Management

- Invasive annual grasses: spreading with **and without** fire
- Fire: modern fire regimes differ from historical at high & low elevation
- • Conifer expansion

Phase I



Phase II



Phase III



Module 1: Foundations

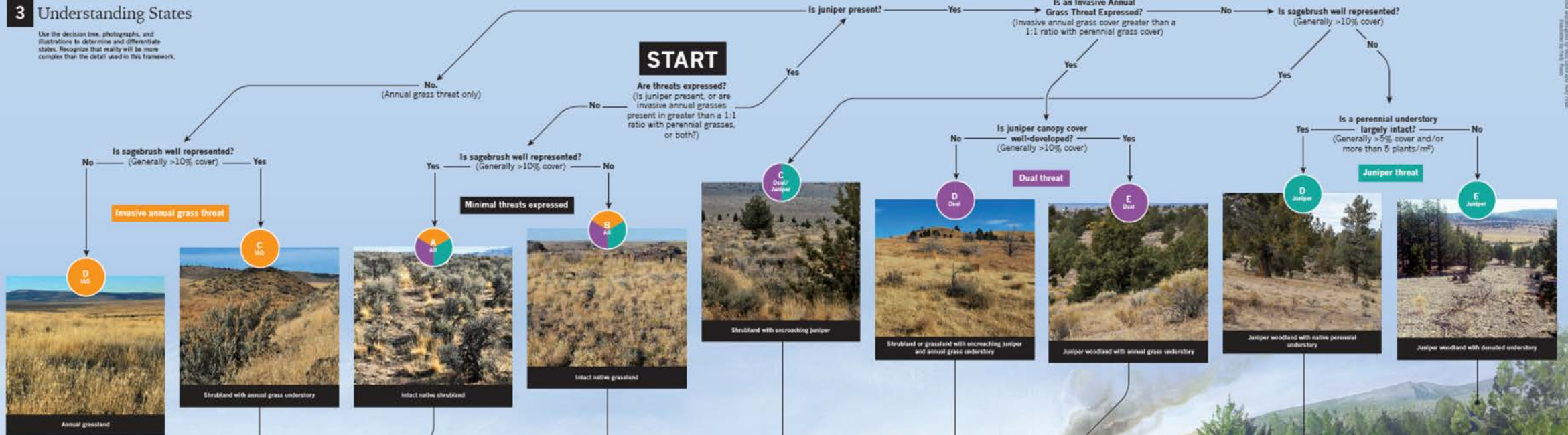
Context: Threat-Based Land Management

3 Understanding States

Use the decision tree, photographs, and illustrations to determine and differentiate states. Recognize that reality will be more complex than the detail used in this framework.

START

Are threats expressed?
(Is juniper present, or are invasive annual grasses present in greater than a 1:1 ratio with perennial grasses, or both?)

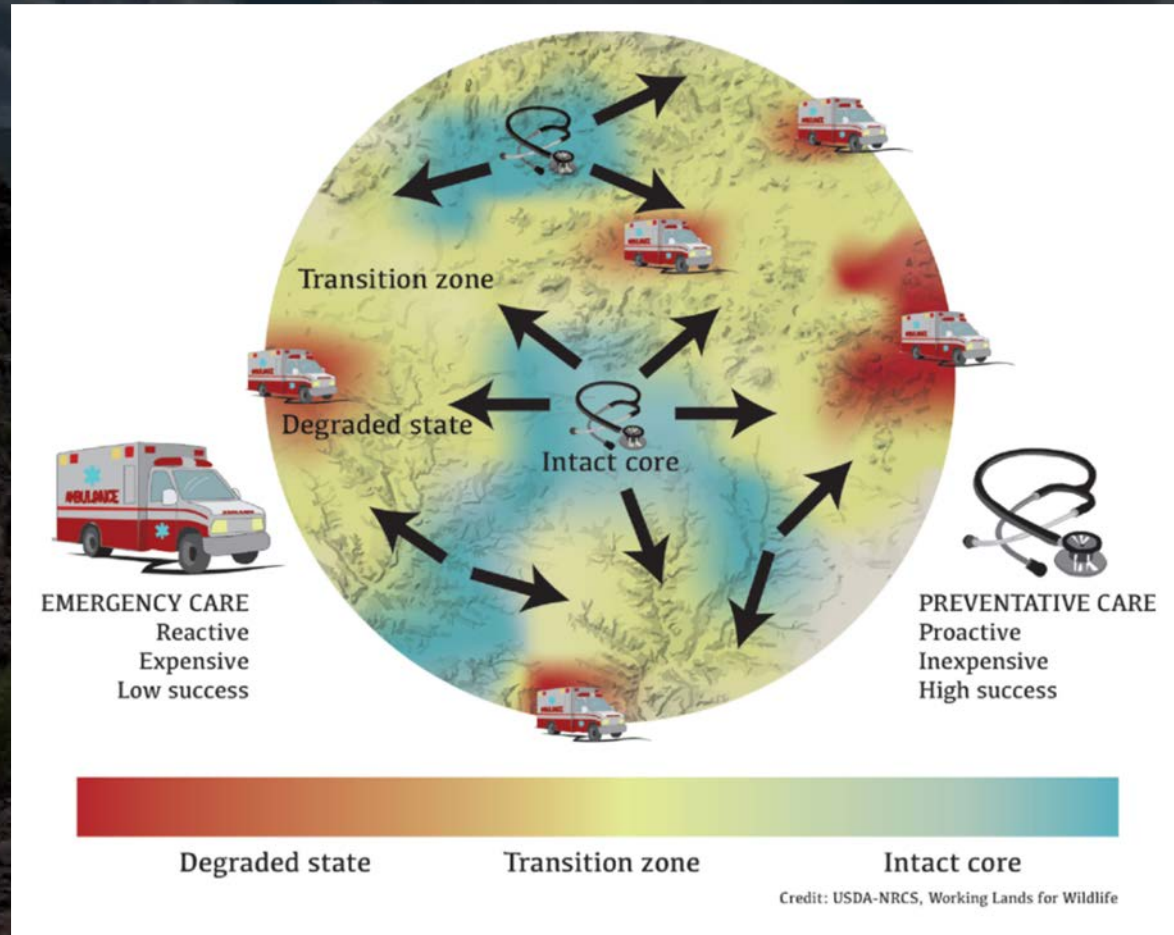


Principles of Strategic Conservation

1. Prioritize **defending and growing the core** from primary ecosystem-level threats
2. Find the **relevant scale and people** for your area
3. Let your **Why** guide your Where and What
4. Beware of both **action bias** and **action paralysis**
5. Remember that conservation is **empowered by relationships**

Principles of Strategic Conservation

1. Prioritize defending and growing the core from ecosystem threats

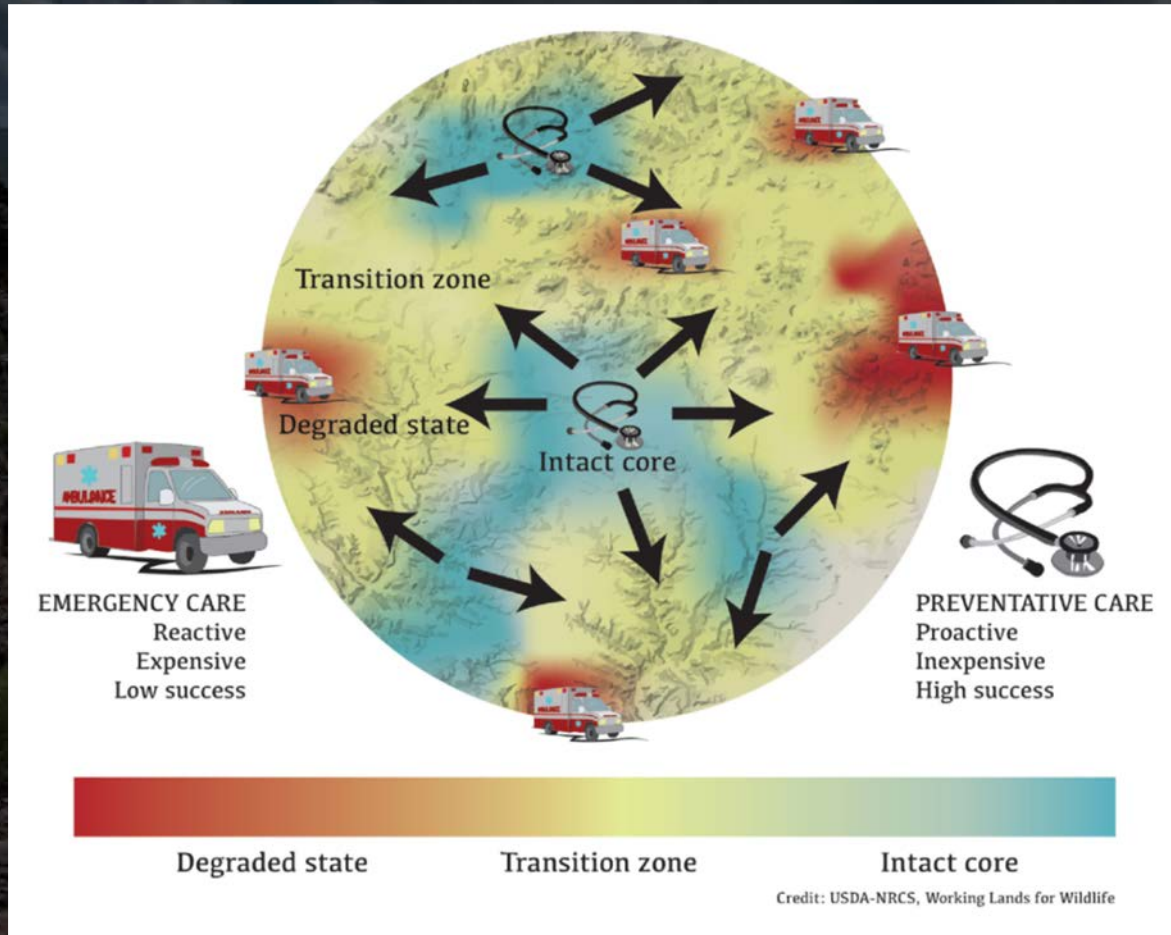


Common language of "defend and grow the core"

- Facilitates communication
- Helps focus on the big picture

Principles of Strategic Conservation

1. Prioritize defending and growing the core from ecosystem threats

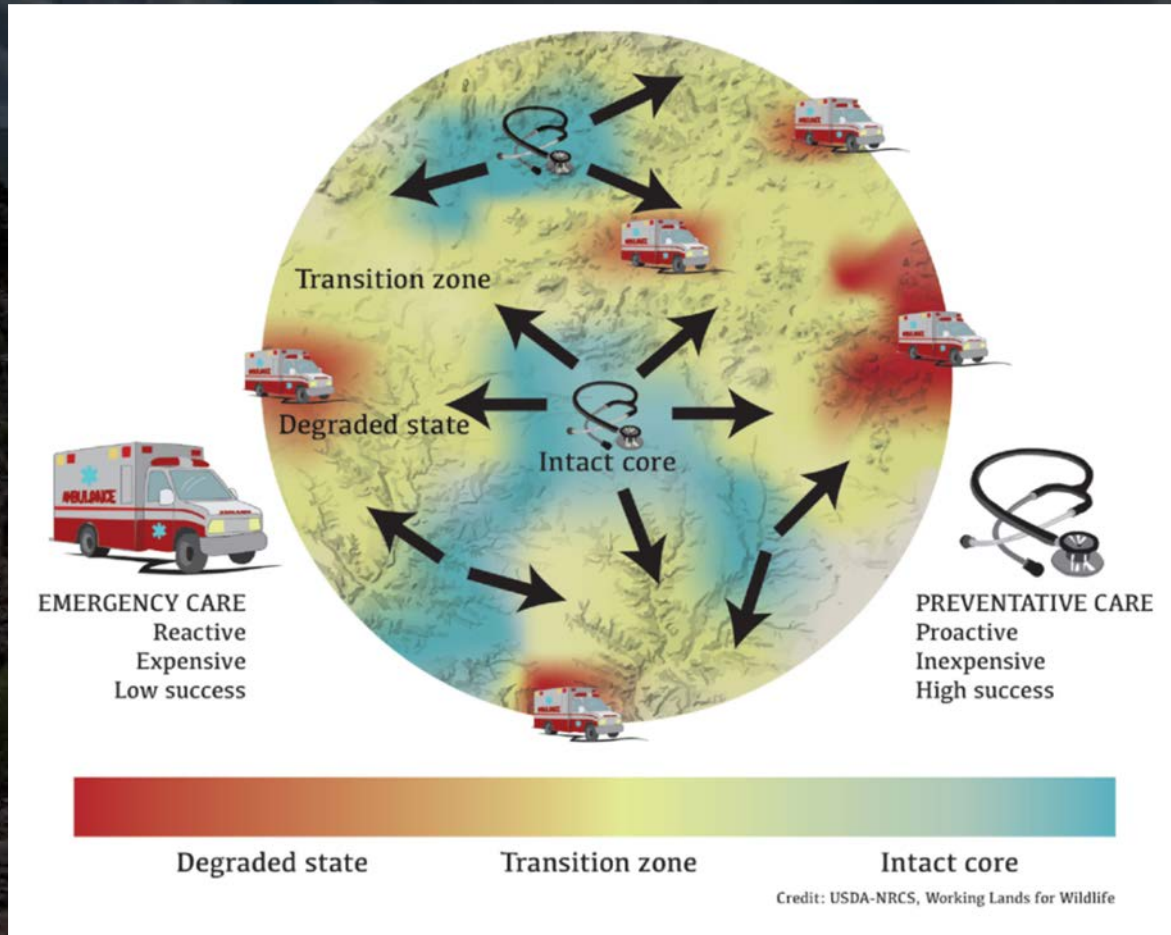


Through a proactive lens:

- Be **realistic** about where we can be most successful
- Expectations and **definition of success** will vary in core, growth, and other rangelands

Principles of Strategic Conservation

1. Prioritize defending and growing the core from ecosystem threats



What does this look like from a fire & fuels perspective?

Reactive model

- Fire suppression
- Opportunistic fuel treatments
- Post-fire rehab wherever possible

Proactive model

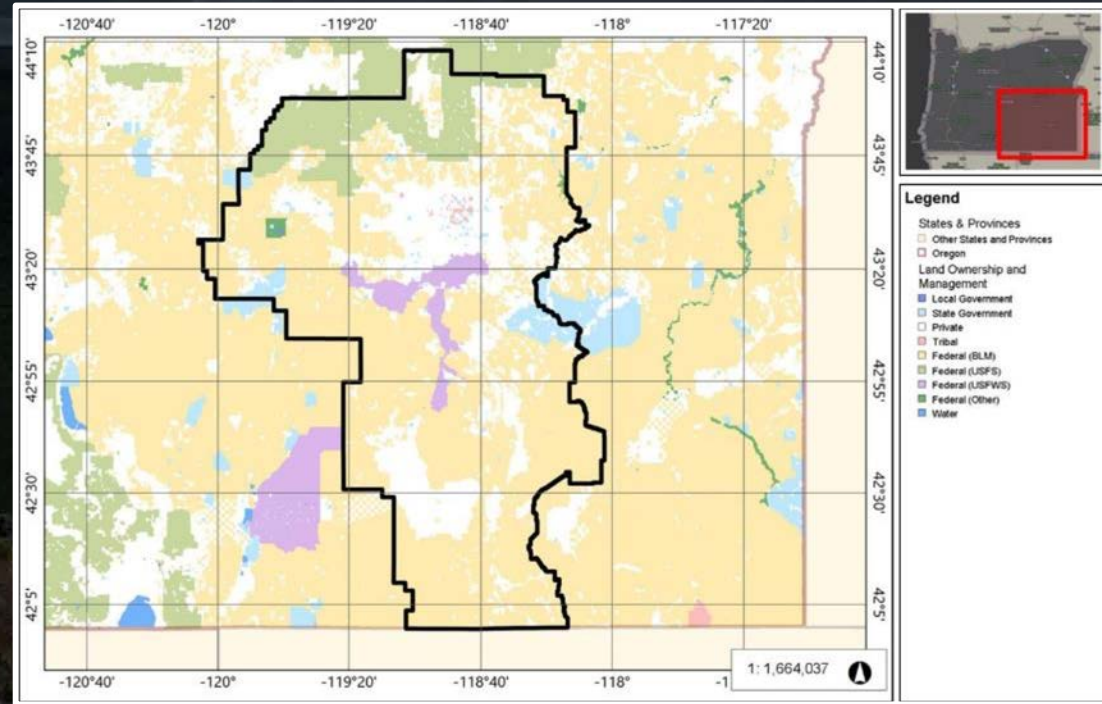
- Strategic landscape-scale management
- Activities before, during, after fire are aligned with ecosystem resilience
- Projects are driven by larger spatial and temporal scale objectives

Principles of Strategic Conservation

2. Find the relevant scale and people for your area

We can't do everything everywhere.
Where can we effectively do meaningful work together?

- Ecological threats: e.g., How does fire behave on the landscape?
- Social conditions: Where is there existing C.R.A.P. for working together?



From Wollstein and Johnson 2023

Principles of Strategic Conservation

2. Find the relevant scale and people for your area

To find the relevant people/organizations, ask yourself:
Do you have your **CRAP** together??

C - Capacity to work together to address a common problem

R - Resources to empower capacity

A - Authority to implement

P - Process to ensure equitable and effective decision-making

Principles of Strategic Conservation

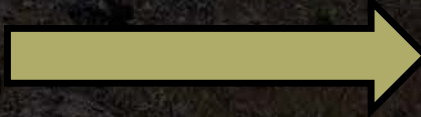
3. Let your **Why** guide your **Where** and **What**

Our **Why-to-What Ratio** is usually skewed heavily toward the **What**
Instead, start with **Why**!

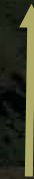
Why?



Why is this important?
Why would I prioritize work here?
Why would this move the needle?



What?

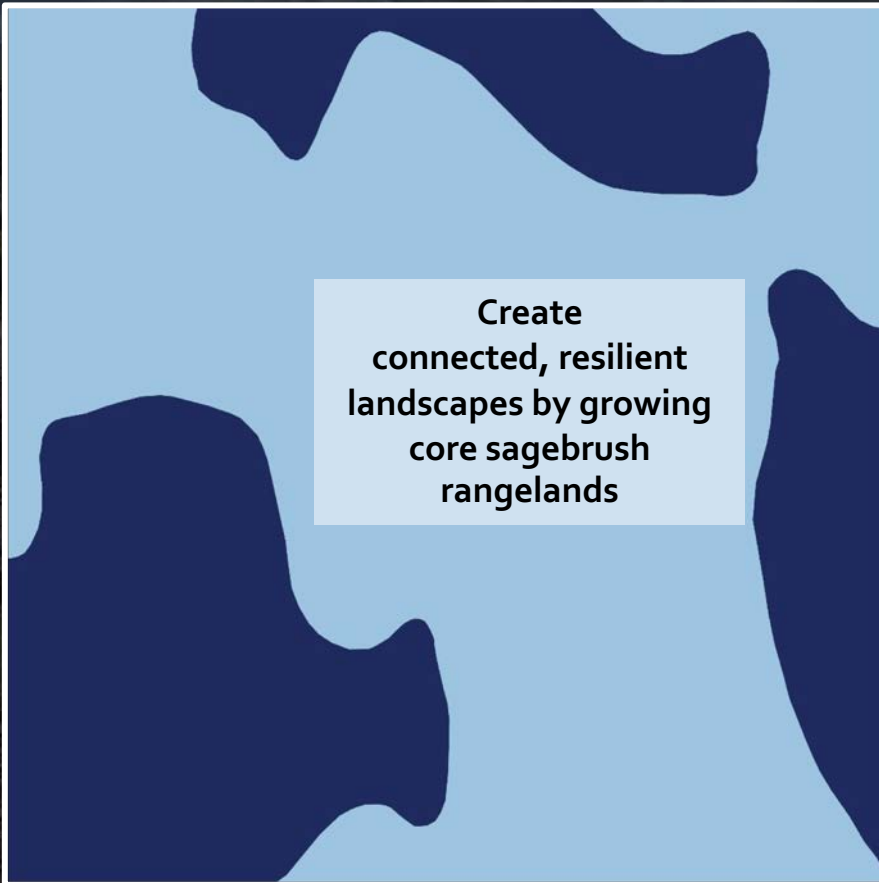


"What are we going to do?"
should be based on the **Why**

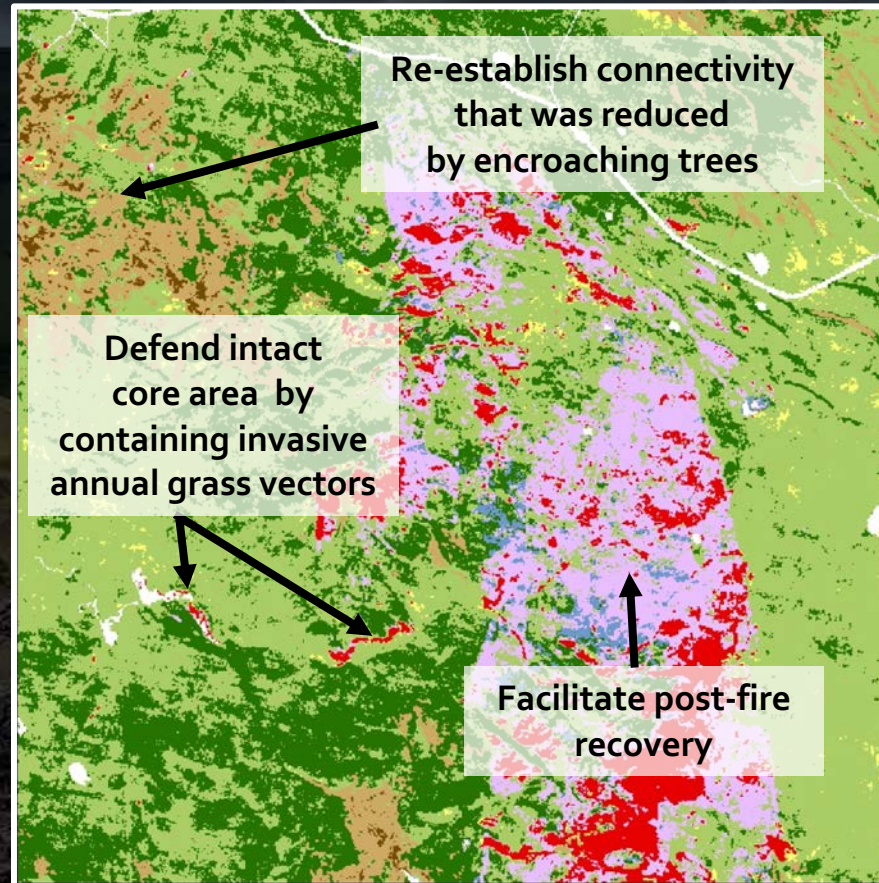
Principles of Strategic Conservation

3. Let your **Why** guide your **Where** and **What**

Why?



Where?



What?

- Remove encroaching conifers
- Control invasive species
- Re-establish sagebrush, control invasive species

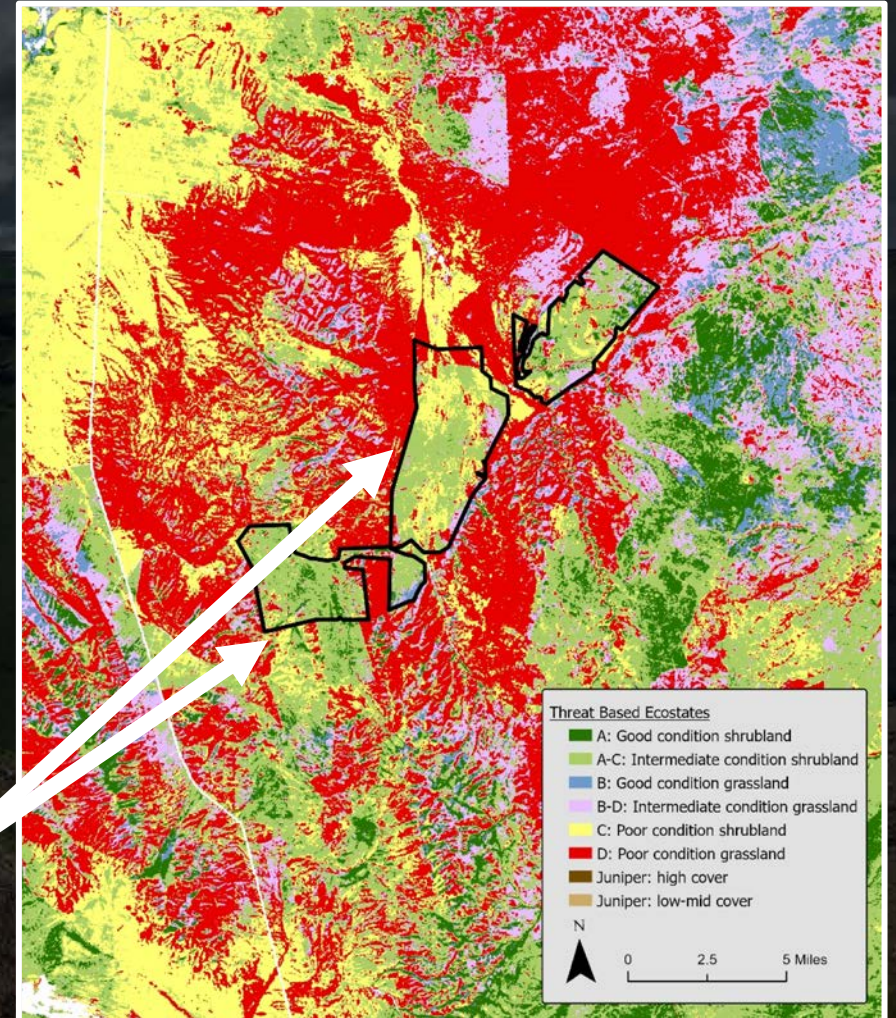
Principles of Strategic Conservation

3. Let your **Why** guide your **Where** and **What**

The Why-to-What Ratio helps us move from project-level measures of success to **landscape-level measures of success**

What is your broadest sphere of influence?
Can you move beyond your pasture/
allotment/ county boundary?

Successful post-fire seedings within
a highly impacted landscape

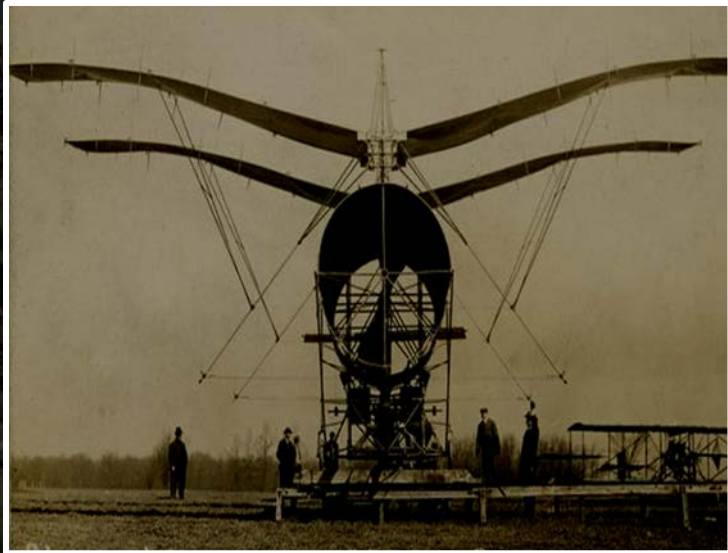


Principles of Strategic Conservation

4. Beware of both action bias and action paralysis

"We have to take action!"

"At least we did *something*"



"We don't have a problem"

"There is nothing we can do"



Action Bias

Action Paralysis

Principles of Strategic Conservation

4. Beware of both action bias and action paralysis

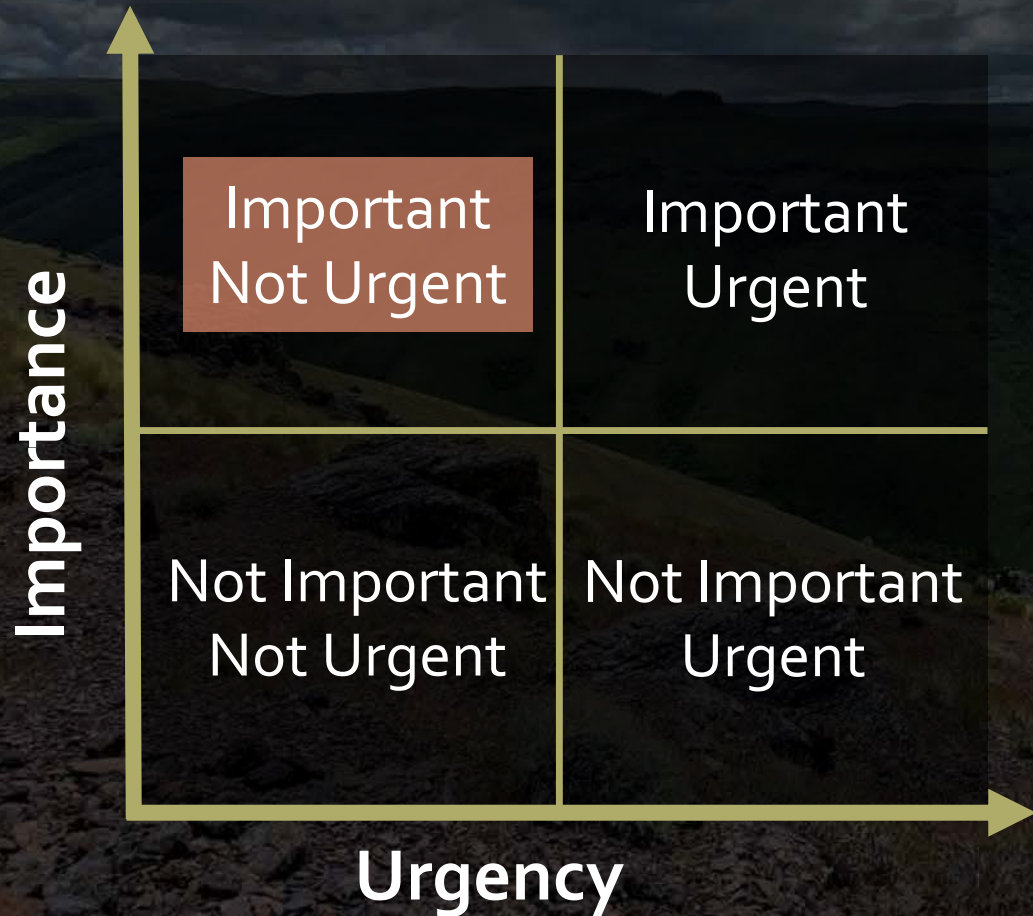
- Why are we taking action?
- What problem will taking action solve?
- Will the action actually address the underlying problem?
- Are we trying to solve the right problem?
- Is the action contributing to a larger whole?



Constantly changing traffic lanes in the opening scene of the movie Office Space, only to be overtaken by a man using a walker

Principles of Strategic Conservation

4. Beware of both **action bias** and **action paralysis**



Connect back to your
WHY

Principles of Strategic Conservation

5. Remember that conservation is **empowered by relationships**



Photo: Katie Wollstein

Recap: What is Strategic Conservation

Strategic conservation is **NOT** just a map!

It IS:

1. Prioritizing **defending and growing the core** from primary ecosystem-level threats
2. Finding the relevant **scale** and **people** for your area
3. Letting your **Why** guide your Where and What
4. Avoiding **action bias** and **action paralysis**
5. Remembering that conservation is **empowered by relationships**

TBSC Tools – Spatial Data

- Threat-based ecostate maps
- SageCon Landscape Planning Tool



Some of the ways I may use ecostate maps include:

0%

A: strategic spatial planning

0%

B: complementary dataset for field-based assessments

0%

C: replacement for field data collection

0%

D: tool to monitor change over short time frames (<5 years)

0%

E: tool to monitor change over medium-long time frames (>5...)

0%

F: discussion support tool for collaborative planning

Pop Quiz: Name that ecostate!

Photo #1

To join, go to: ahaslides.com/6BMS1

AhaSlides

Name that ecostate! (1 of 5)

Click to open poll

0%	0%	0%	0%	0%	0%	0%	0%
State A: Good condition shrubland	State A-C: Intermediate condition...	State C: Poor condition shrubland	State B: Good condition grassland	State B-D: Intermediate condtion...	State D: Poor condition grassland	Juniper: Low-mid cover	Juniper: High cover

Menu

This only works in the full-screen window. [Learn more](#)

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Pop Quiz: Name that ecostate!

Photo #2

To join, go to: ahaslides.com/6BMS1

AhaSlides

Name that ecostate! (2 of 5)

0	0	0	0	0	0	0	0
State A: Good condition shrubland	State A-C: Intermediate condition...	State C: Poor condition shrubland	State B: Good condition grassland	State B-D: Intermediate condtion...	State D: Poor condition grassland	Juniper: Low-mid cover	Juniper: High cover

Menu


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Pop Quiz: Name that ecostate!

Photo #3

To join, go to: [ahaslides.com/...](https://ahaslides.com/) 

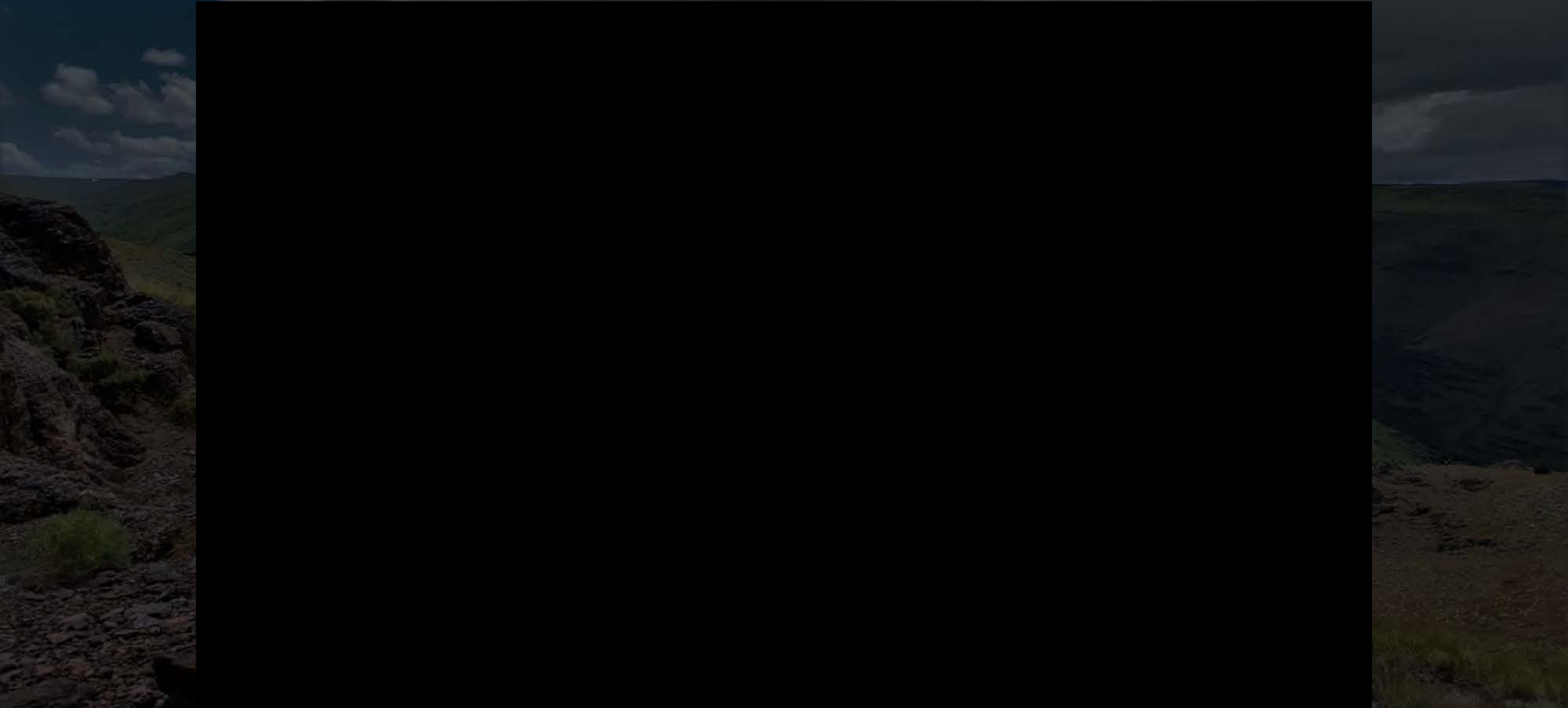
 Menu

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Pop Quiz: Name that ecostate!

Photo #4



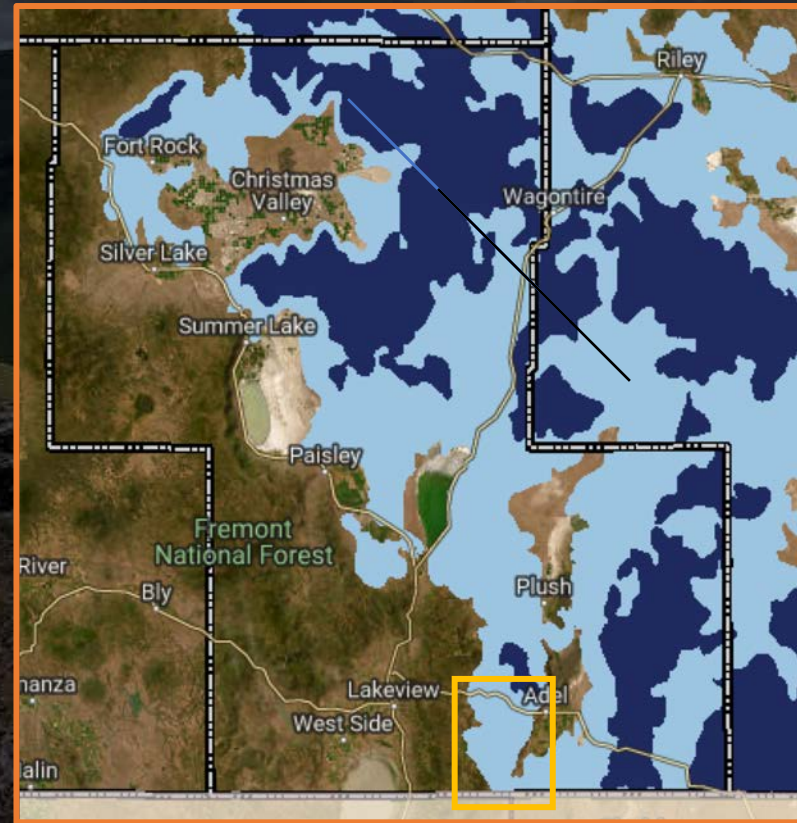
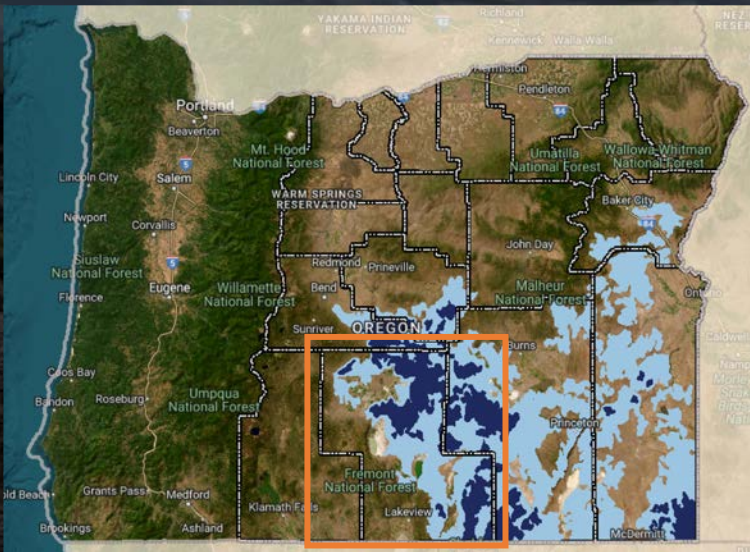
Interactive Activity

Viewing Lake County through the lens of
Threat-Based Strategic Conservation



Interactive Activity

- Viewing Lake County through the lens of Threat-Based Strategic Conservation



Your task

This is an interactive mapping exercise to identify potential management priorities in the mixed-ownership landscape we will visit tomorrow in the field.

Participants' objectives:

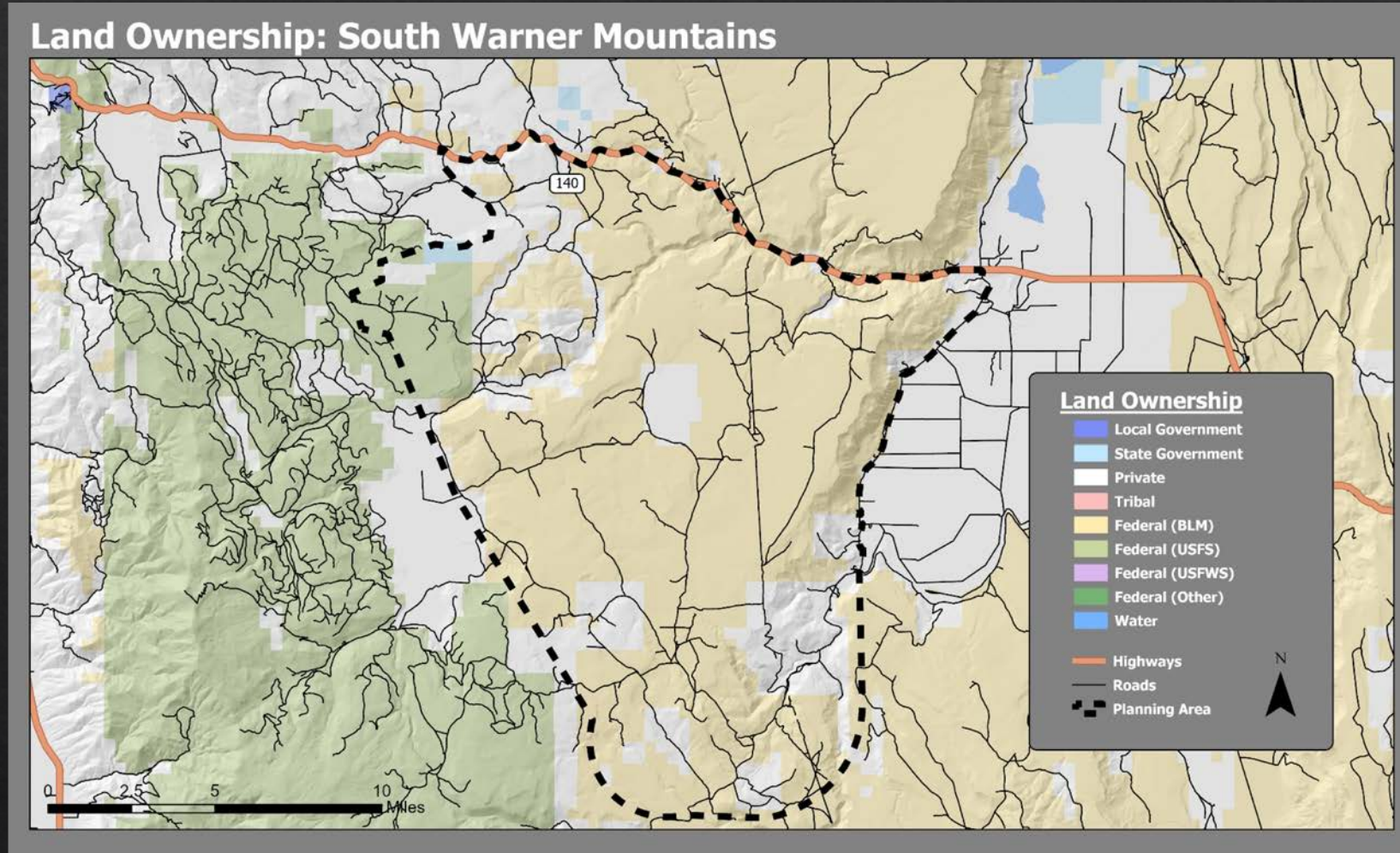
- Where can you defend, grow the core, and mitigate impacts in this Lake County landscape?
- How will you leverage previous investments to grow your core?



SageCon Summit 2022 workshop
Photo: Megan Creutzburg

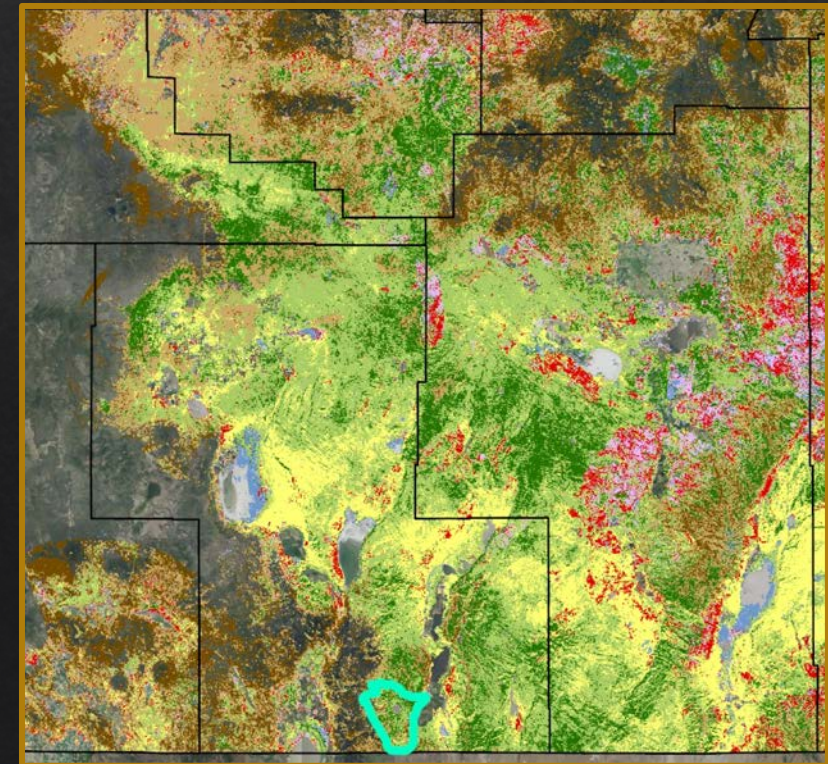
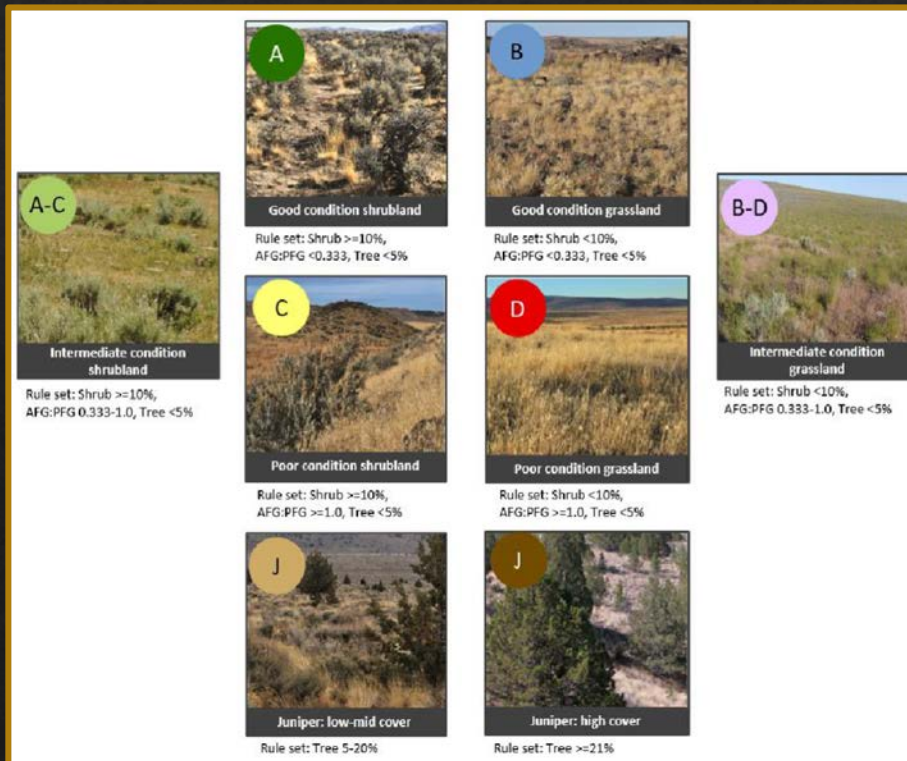
The South Warner Mountains Landscape

This is a complex, multi-ownership landscape

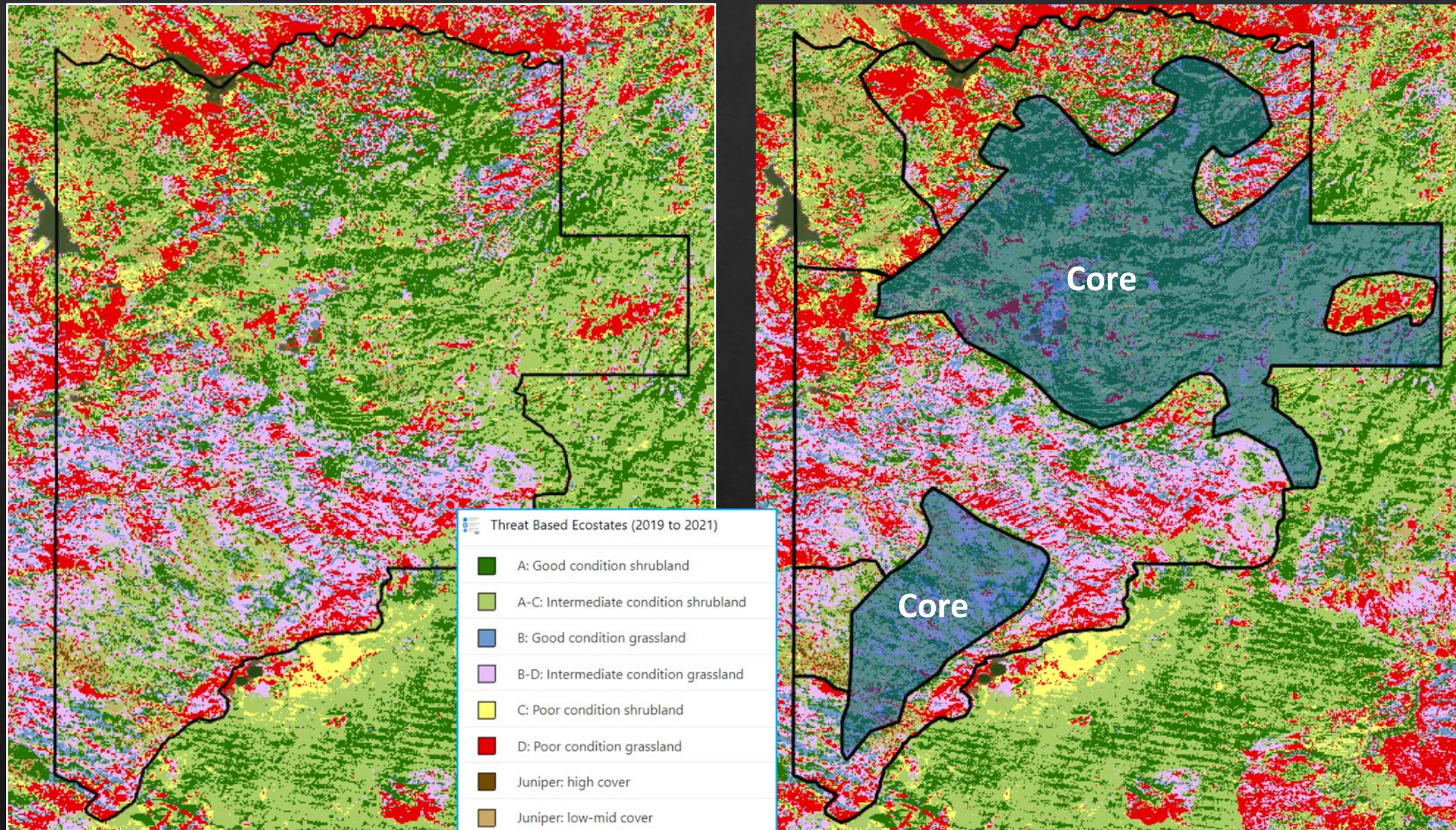


Where can you defend, grow the core, and mitigate impacts on this Lake County landscape?

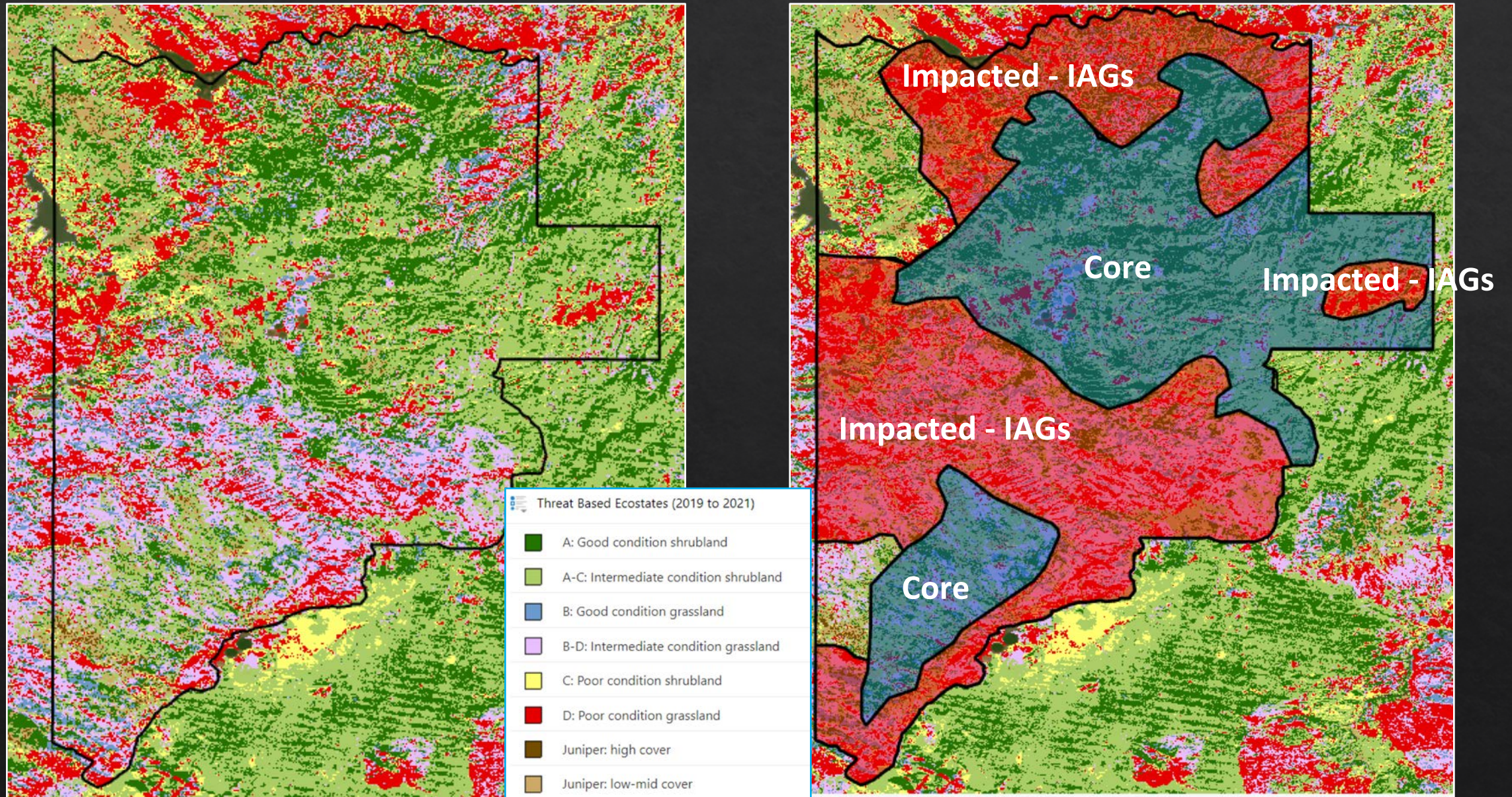
- How to break up this landscape into manageable units/ priorities/ activities?
- 3 Step process
- Start with the ecostate map



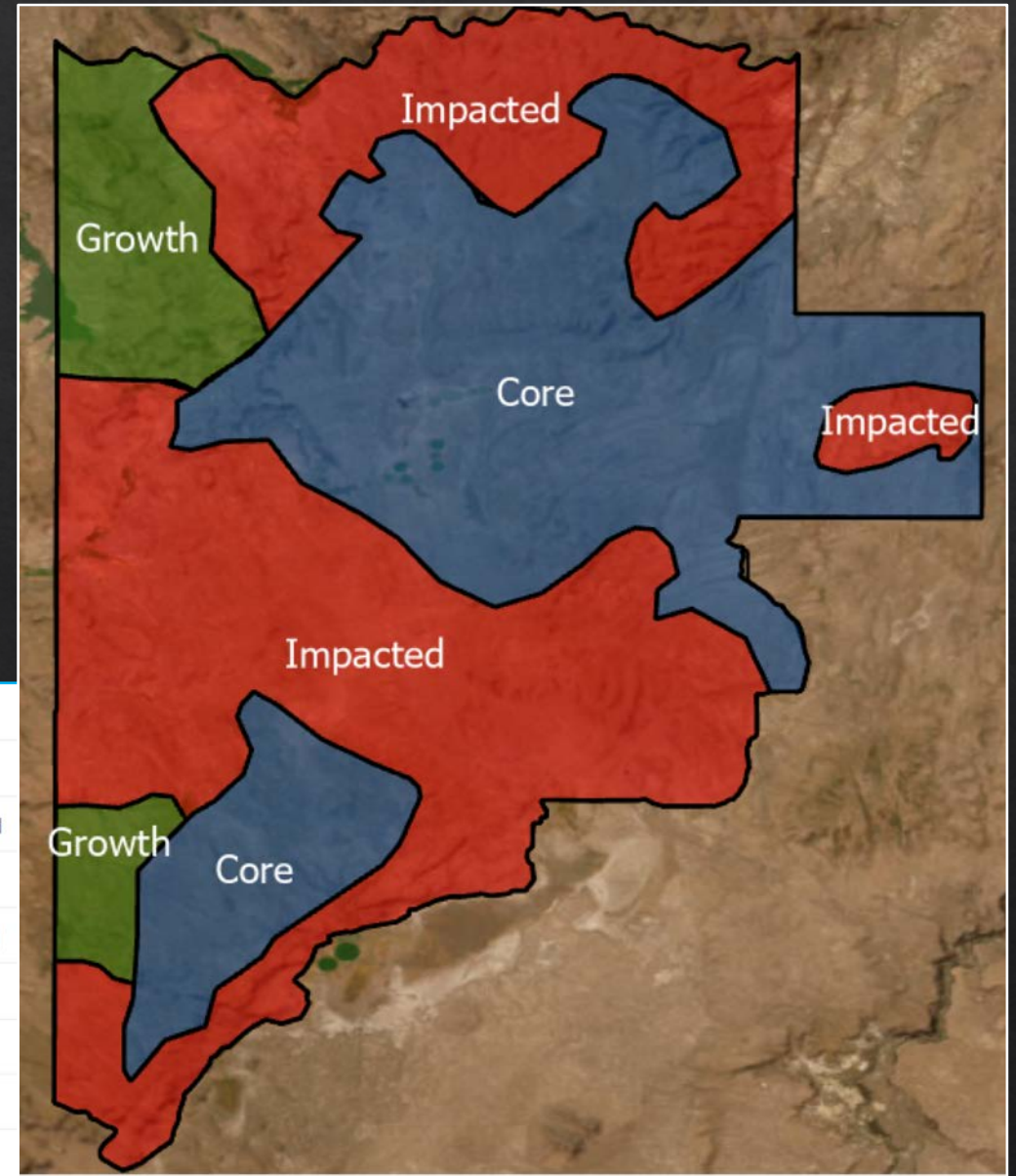
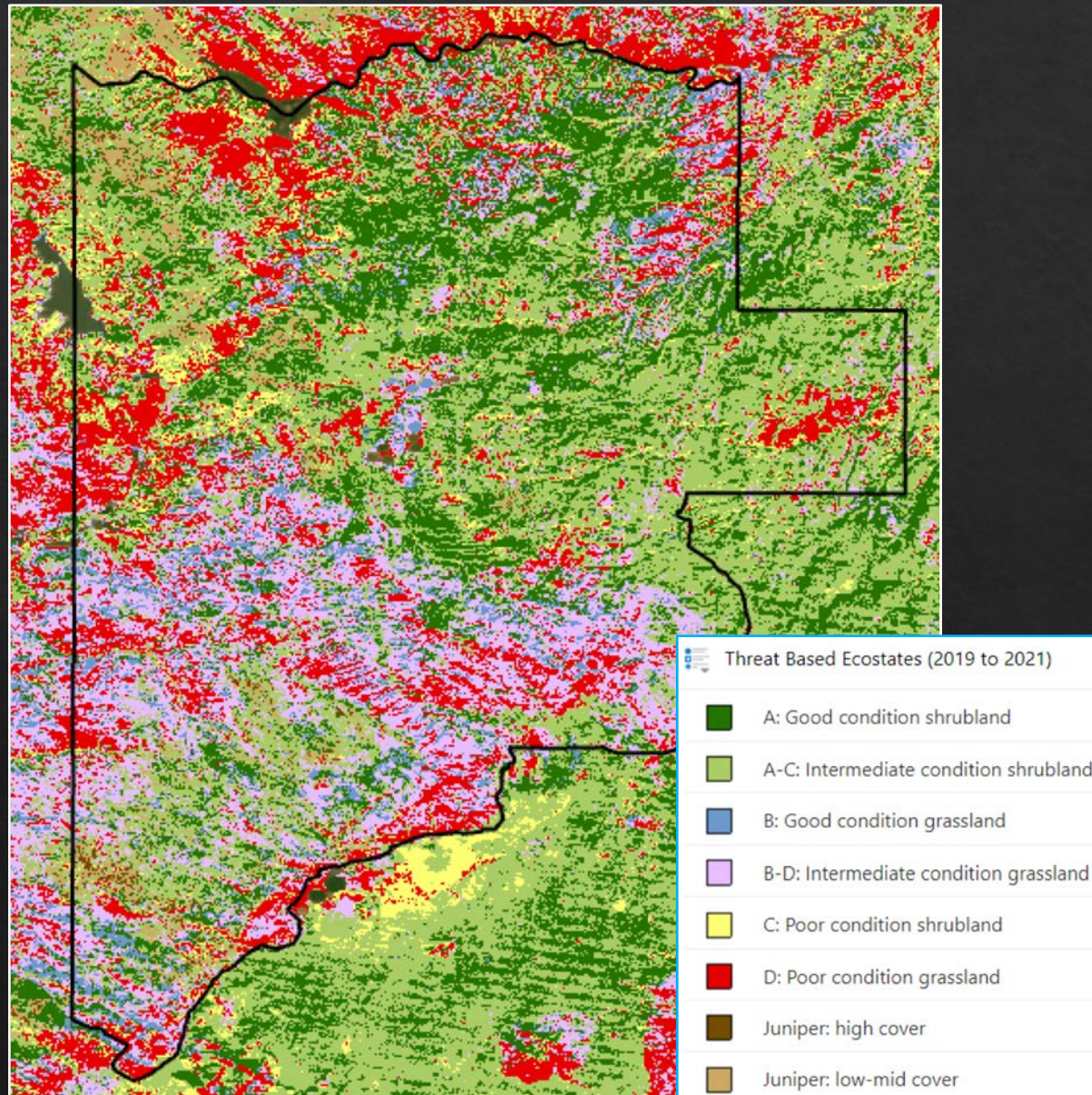
Step 1: Define Core Areas



Step 1: Identify Impacted Areas



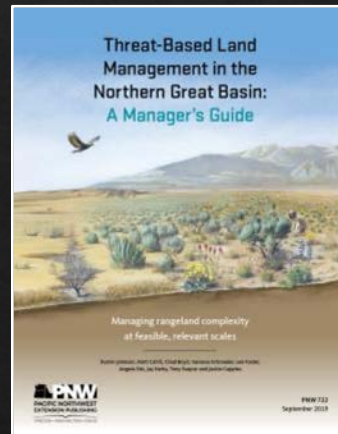
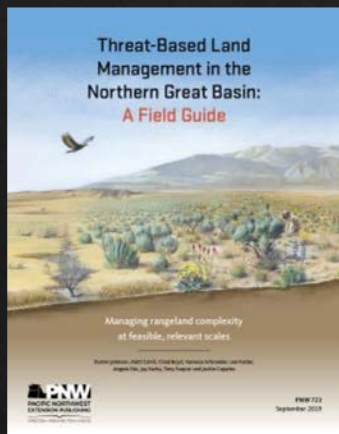
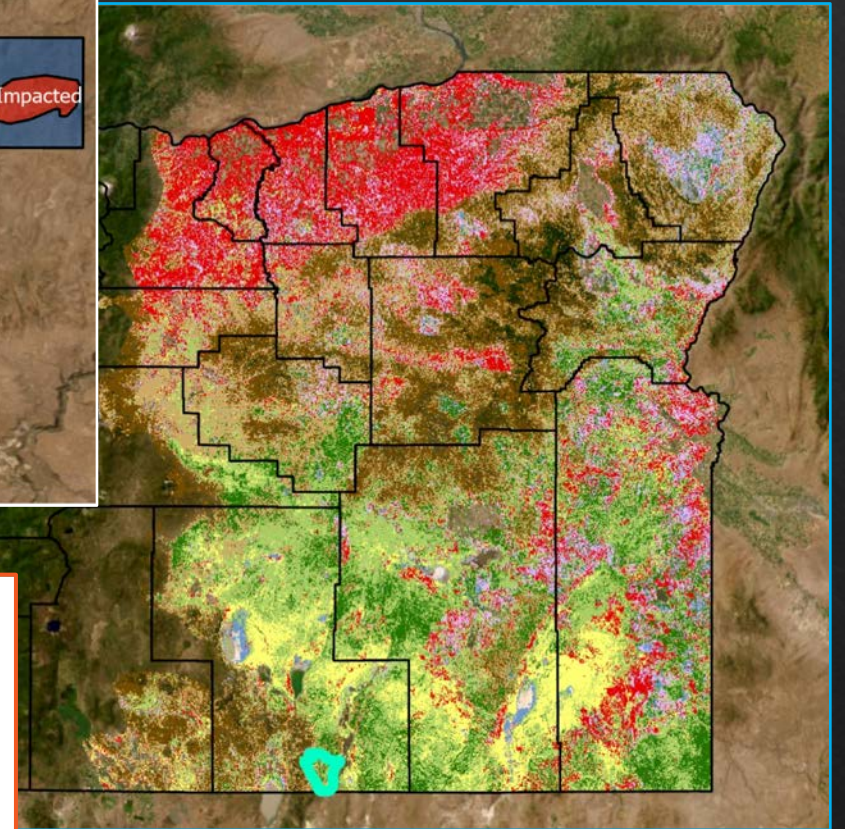
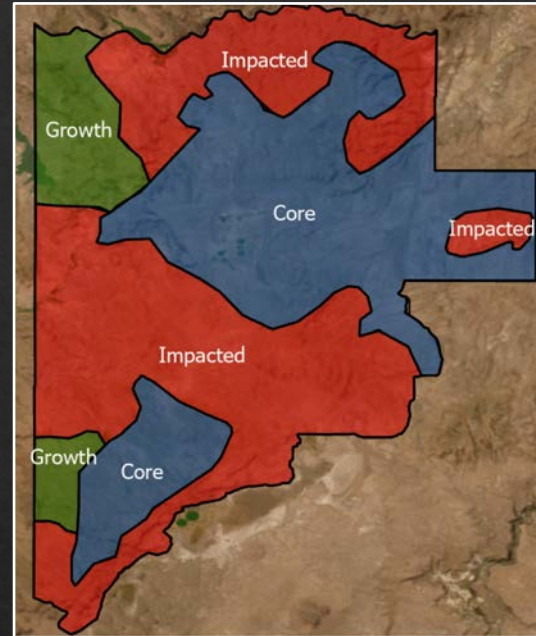
Step 1: Define Growth Opportunity Areas



Your Turn: Strategic Conservation in the southern Warners

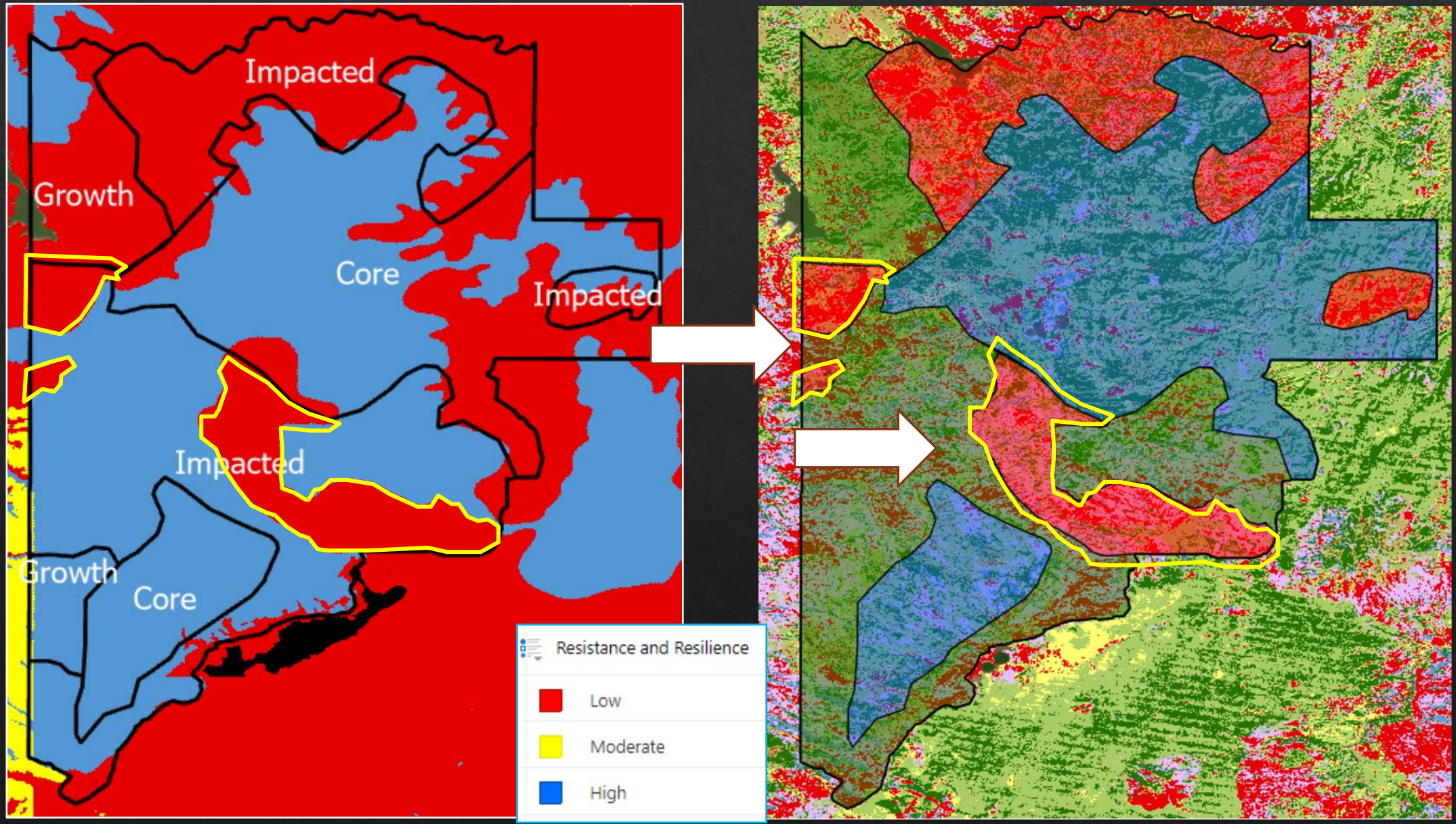
Step 1: Use the ecostate map to identify:

- Core sagebrush areas
- Growth opportunity areas
- Heavily impacted areas (where you want to contain the problem)

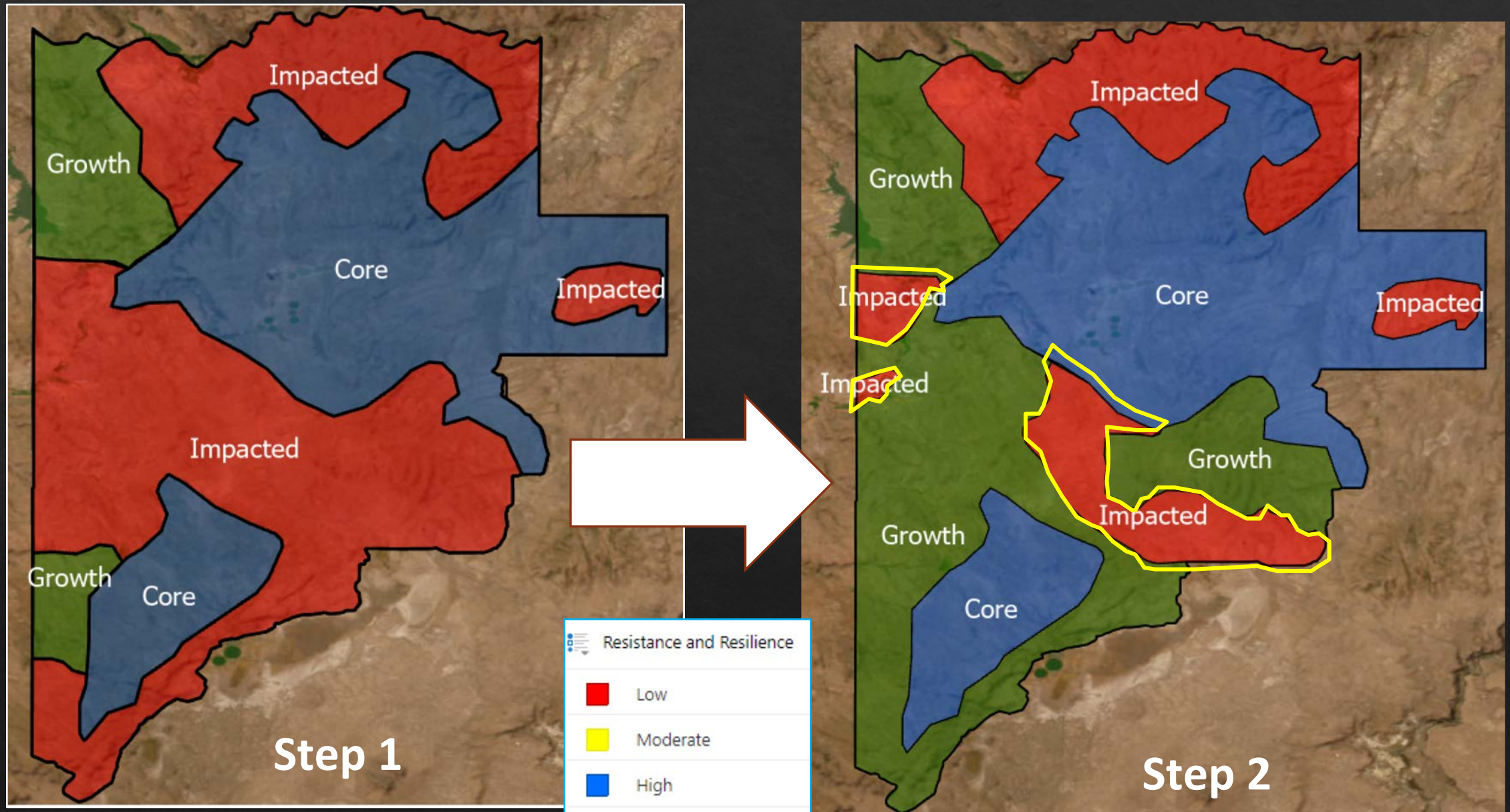


Step 2: Refine Polygons using R&R

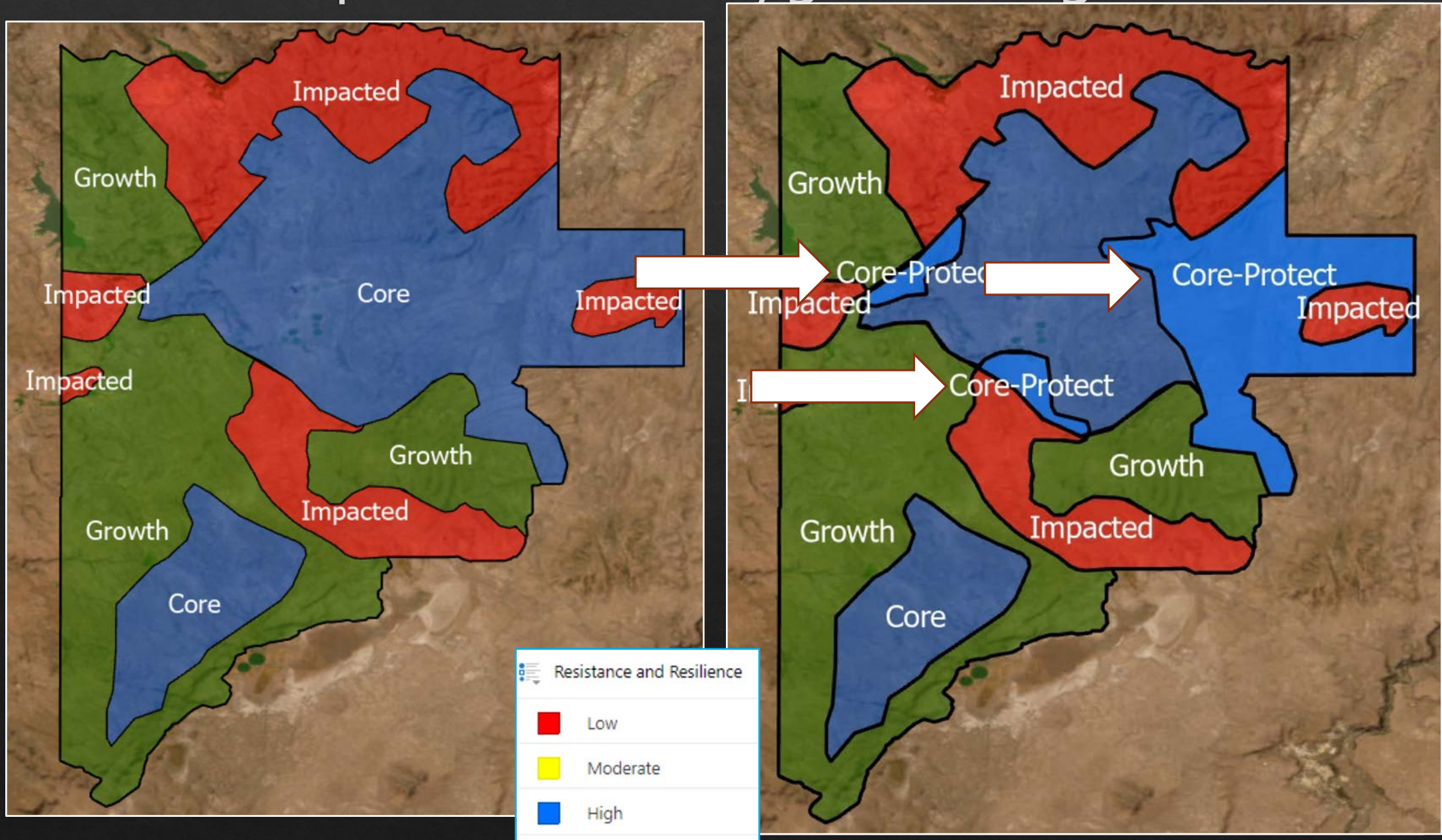
Step 1 boundaries:



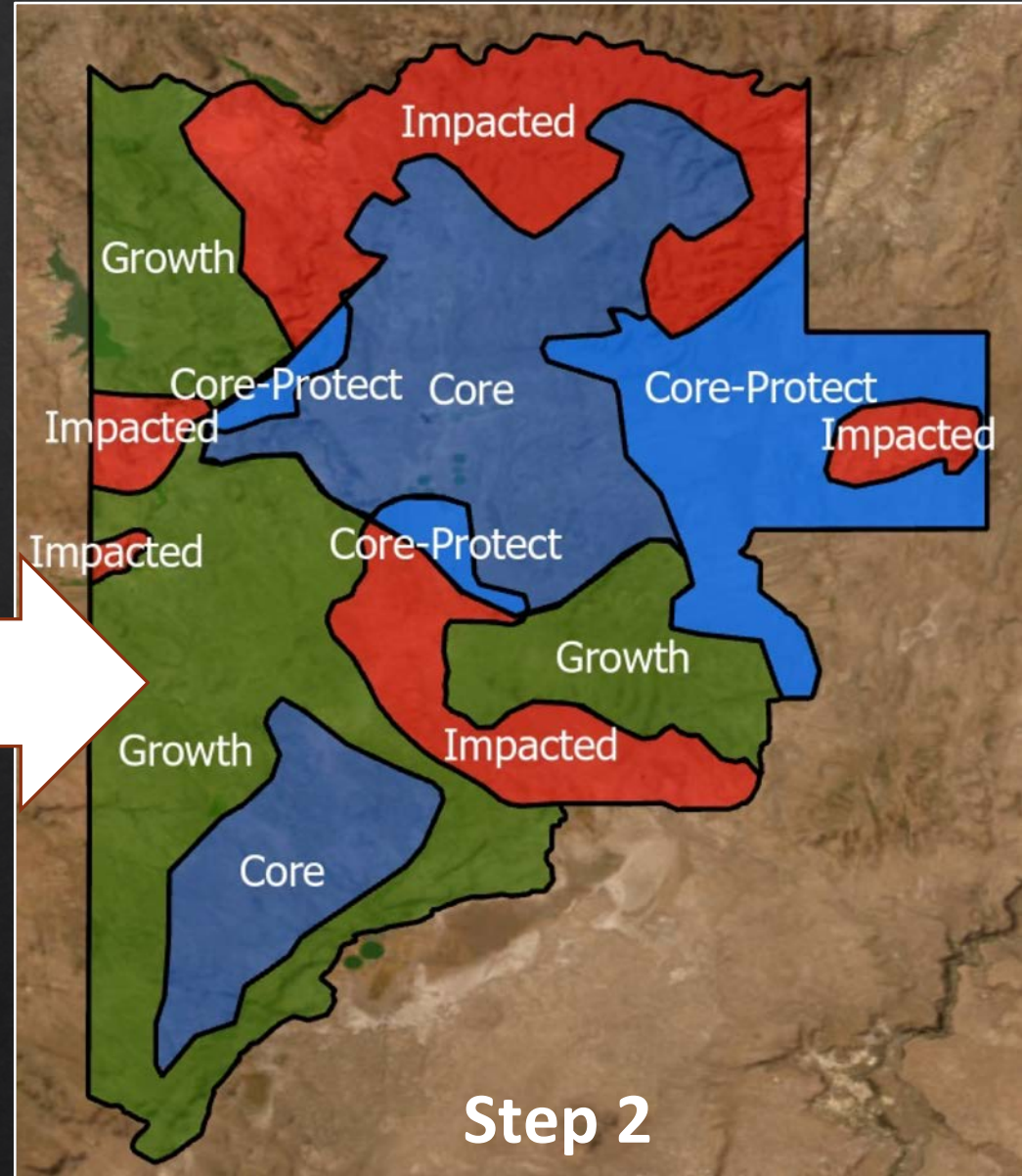
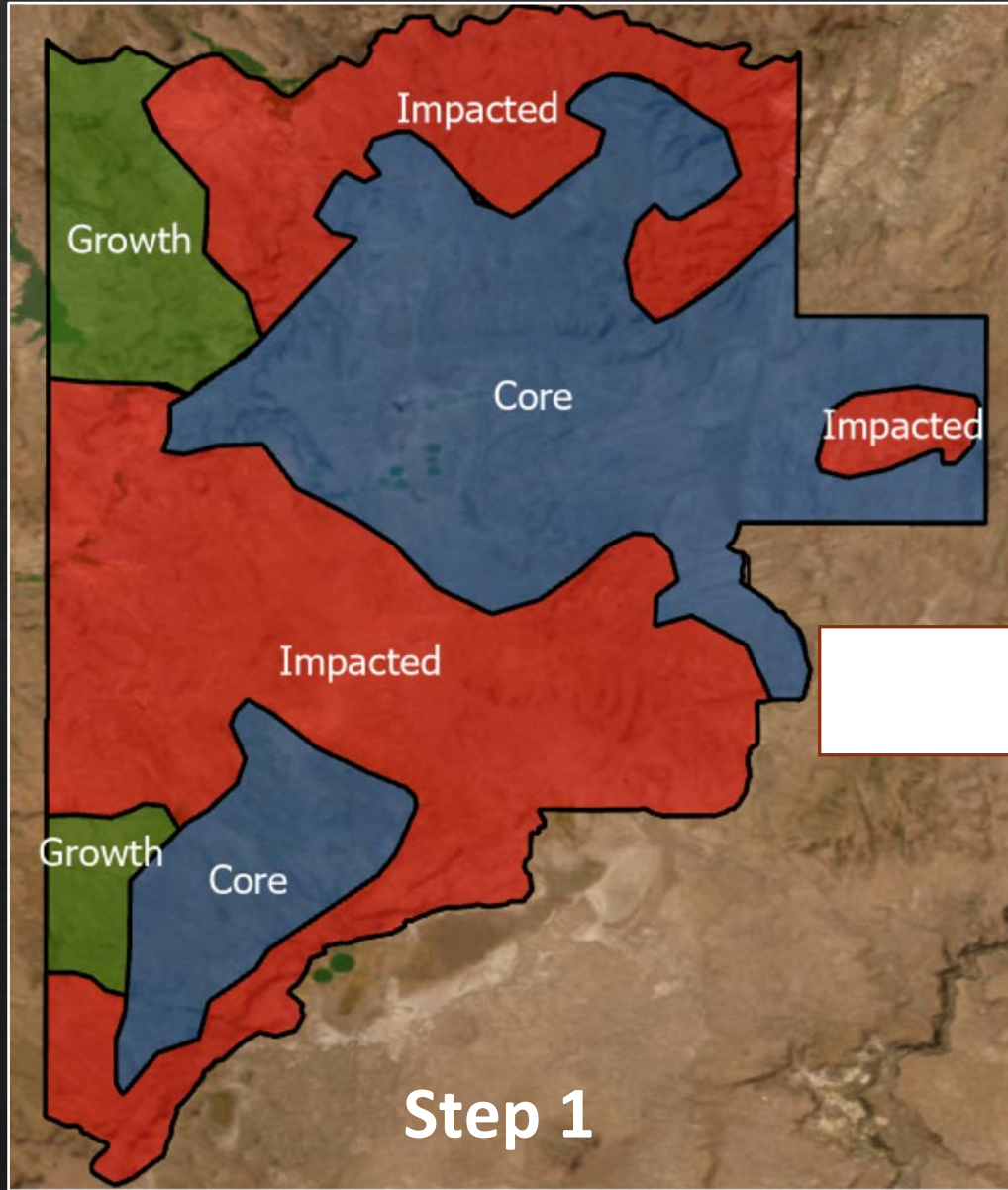
Step 2: Refine Polygons using R&R



Step 2: Refine Polygons using R&R



Step 2: Refine Polygons using R&R

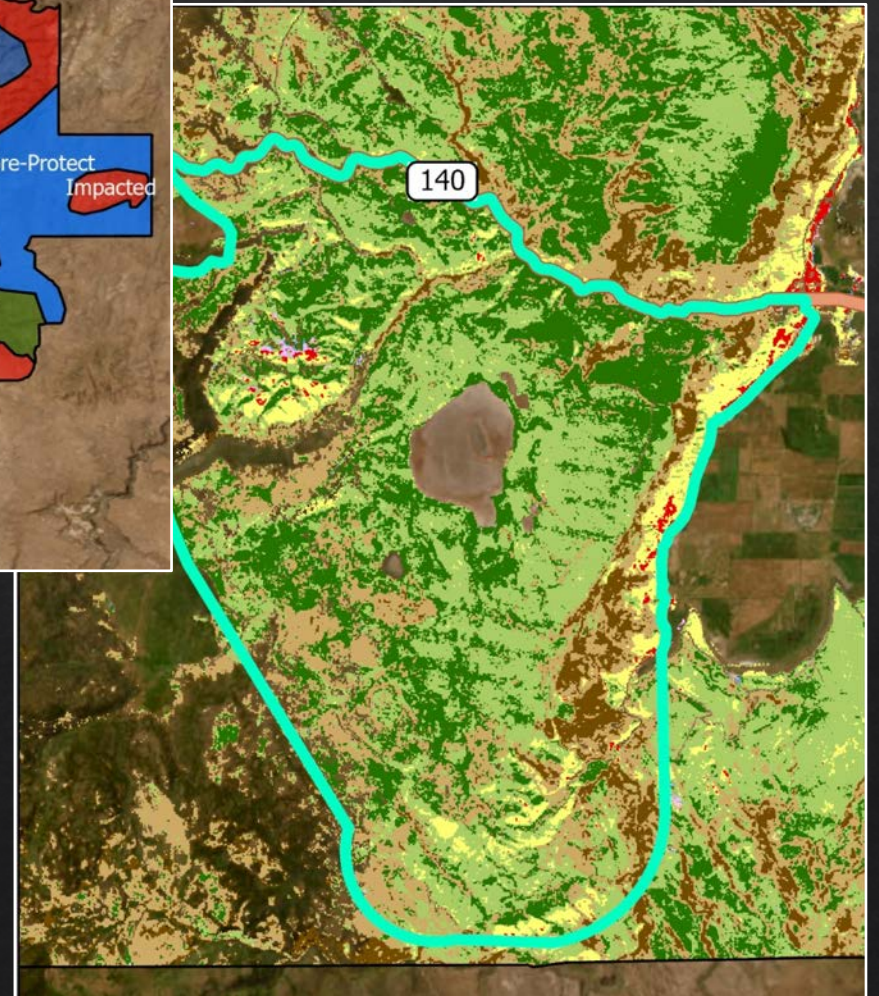
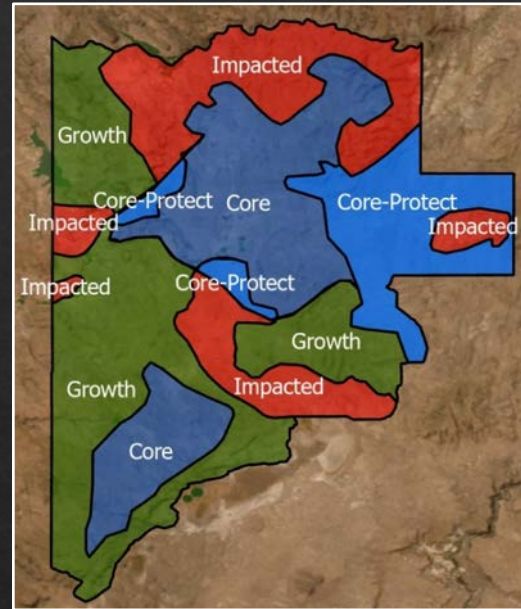


Your Turn:

Strategic Conservation in the southern Warners

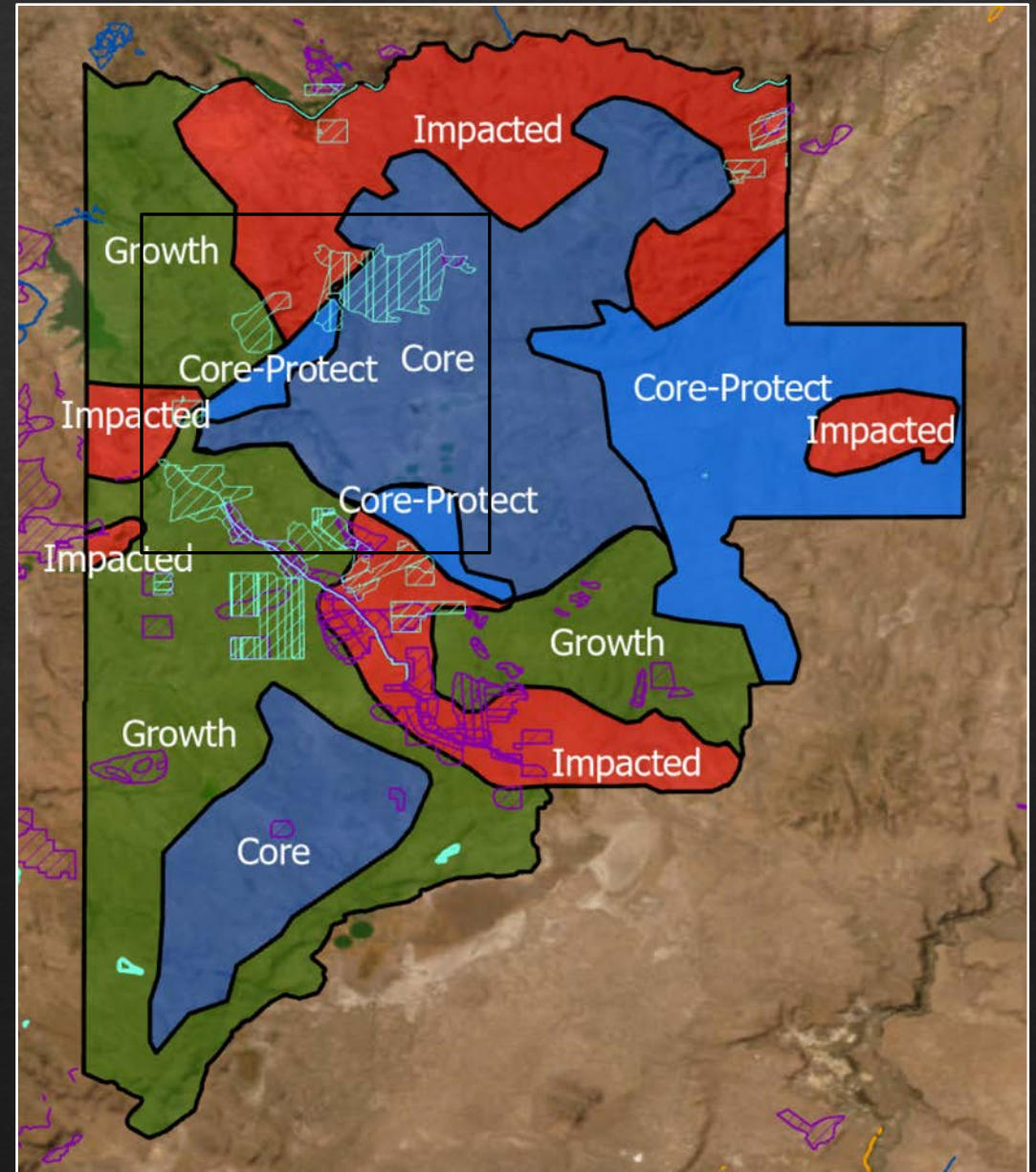
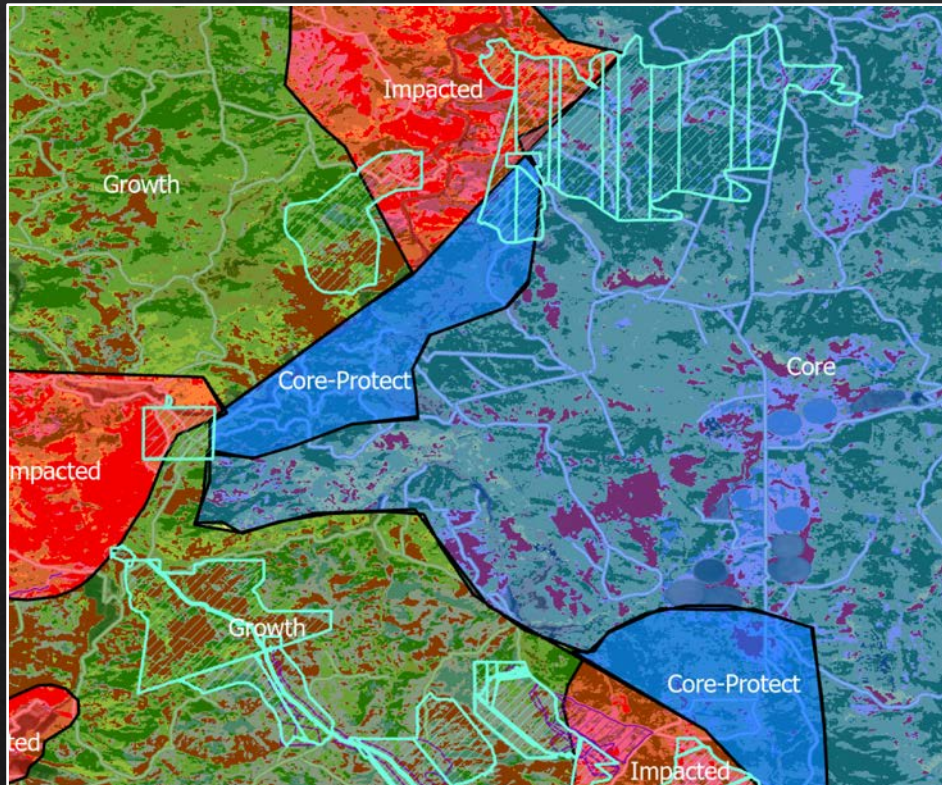
Step 2: Further refine the polygons on your map using R&R*

- What areas are you more likely to be successful with growing the core? (think abiotic R&R)
- Where are core areas you should prioritize for protection from threats?

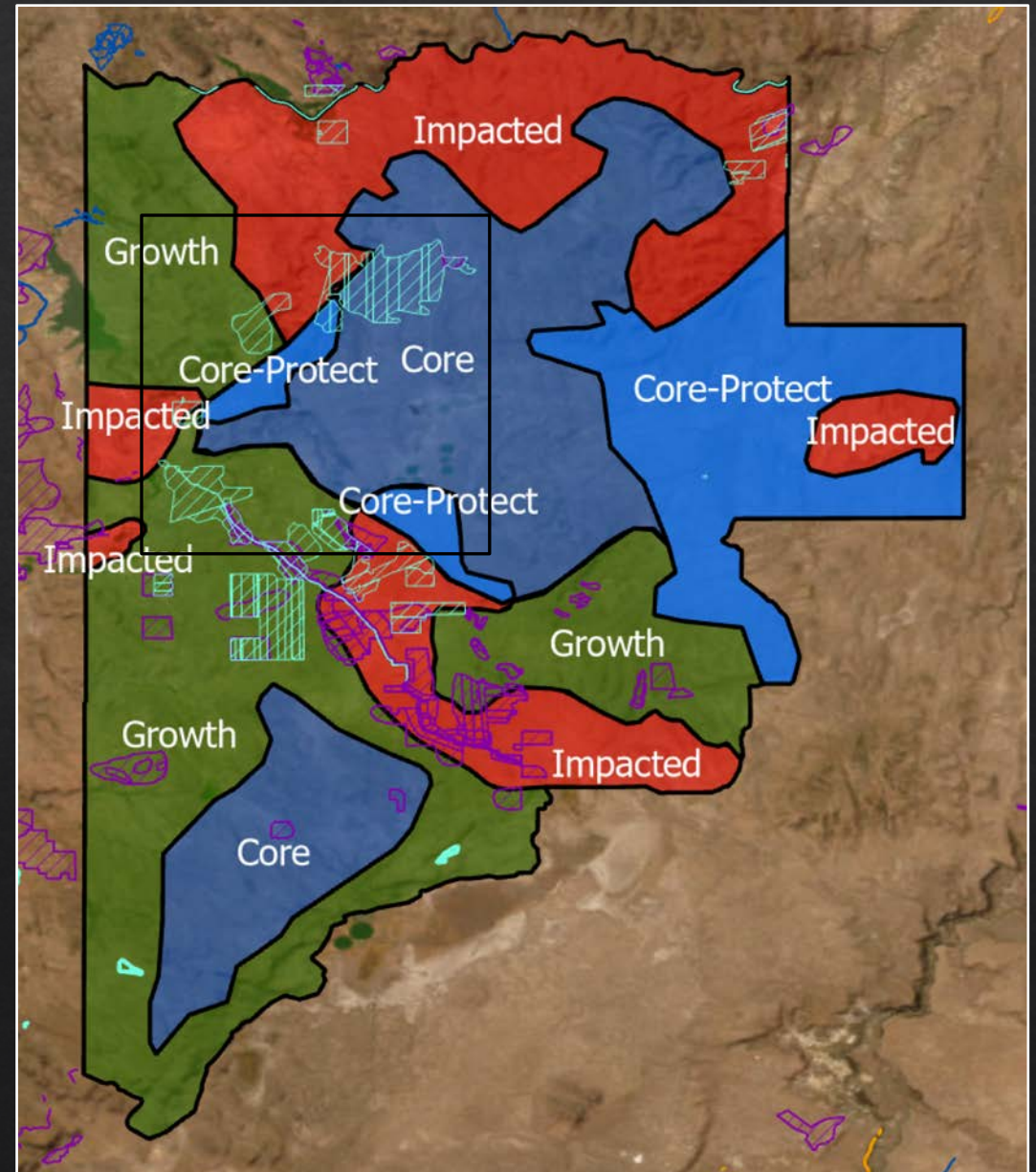
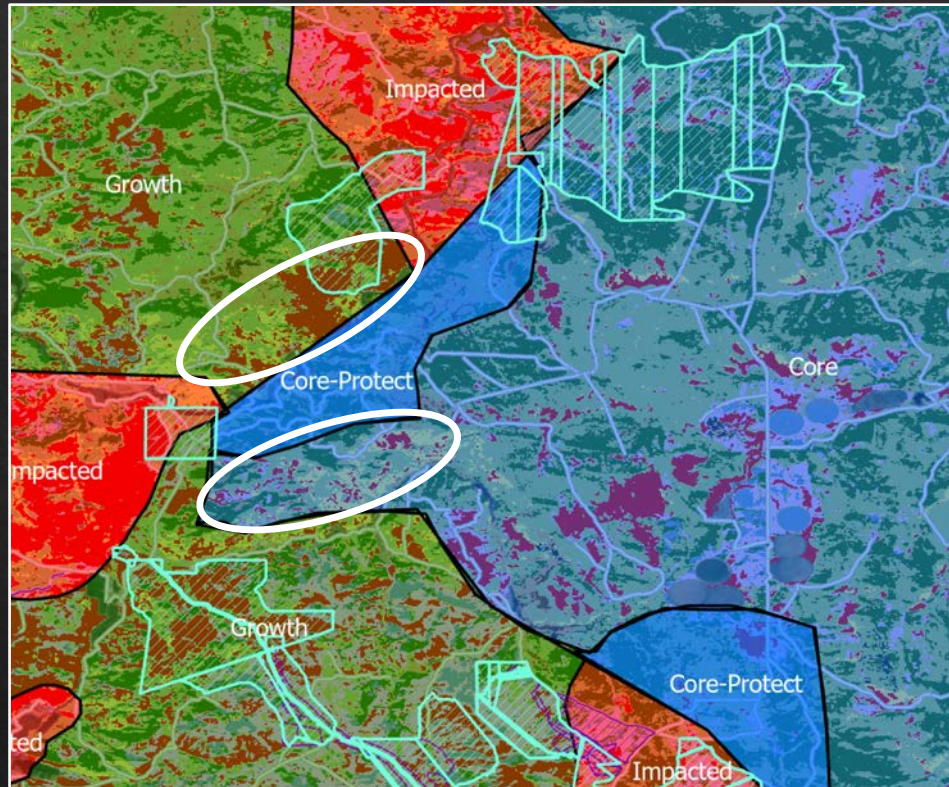


*R&R: resilience to fire and resistance to invasion by annual grasses

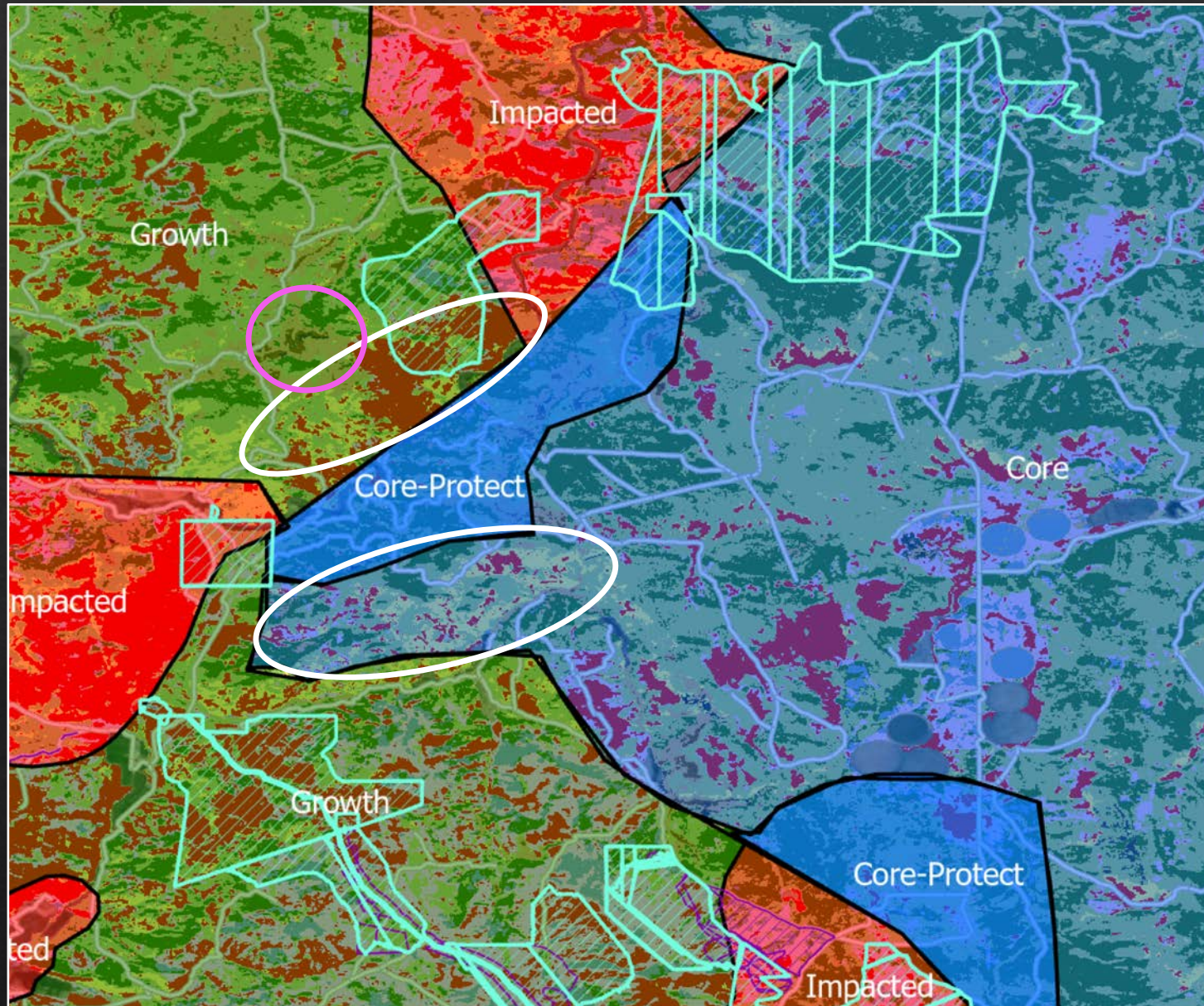
Step 3: Prioritizing management to leverage investments



Step 3: Prioritizing management to leverage investments



Step 3: Prioritizing management to leverage investments

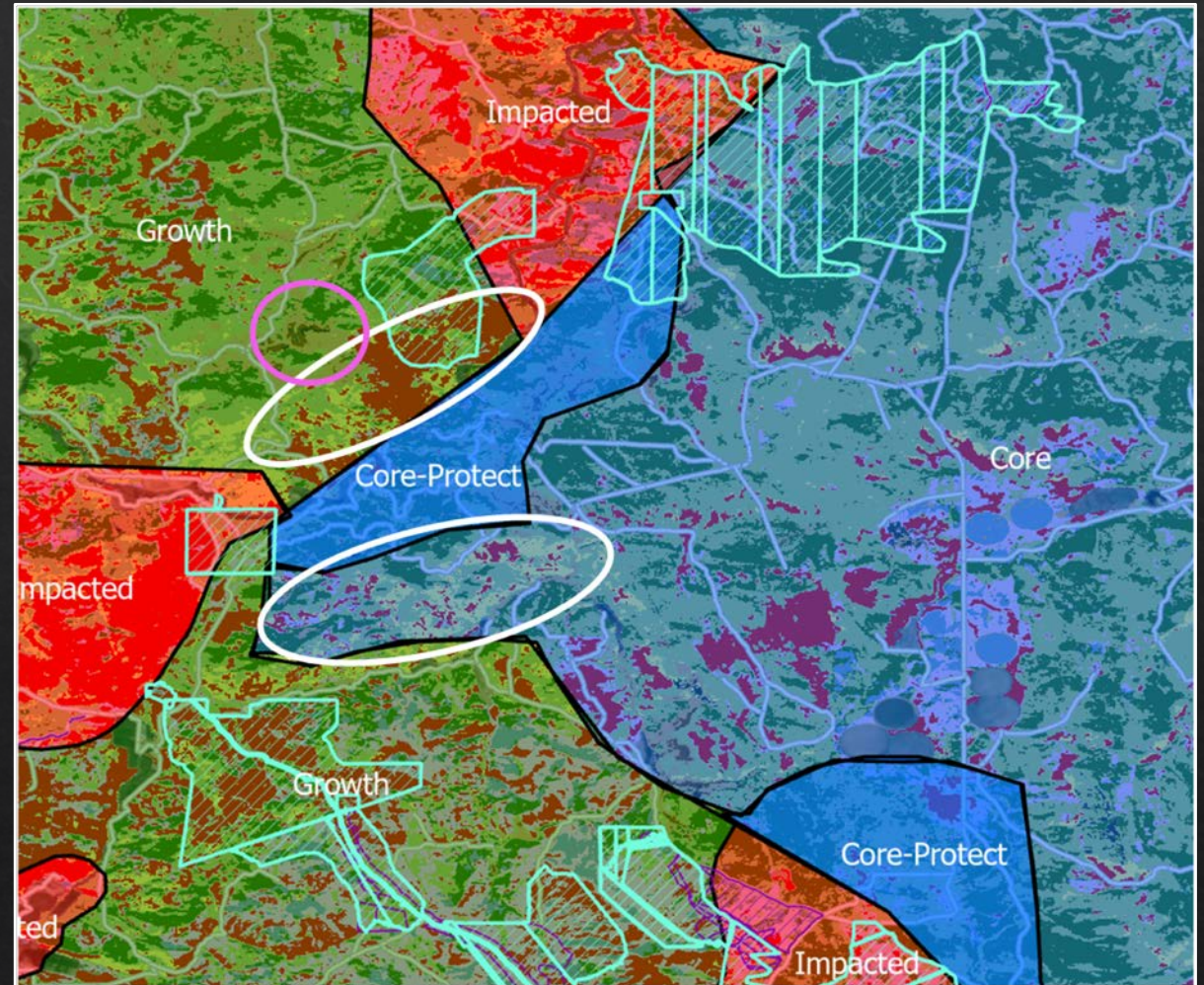


Your Turn:

Strategic Conservation in the southern Warners

Step 3: Identify top priorities

- Where are areas you should defend the core?
- Are there areas you can grow the core?
- Where are areas of past successes?
- Are there areas of past treatments that should be re-visited?



Tomorrow in the field

Step 4: Field Verification

- Transfer your strategy map to your paper map
- Bring your map tomorrow, discuss with colleagues in the field
- Consider ecostates and your priority areas as we drive through the landscape and discuss project work



Mini-workshop wrap-up

When we do this in real life...

- Acknowledge the realities of working within relationships, jurisdictions and authorities
- Start with a proactive, ecosystem-level focus, then layer other values (e.g. sage-grouse)
- Intentional engagement of relevant partners at a meaningful, community-led scale
- Engage small groups in mapping; encourage and make time for discussion within and among groups

5

Remember that conservation is empowered by relationships.

1

Prioritize defending and growing the core from primary ecosystem-level threats.

2

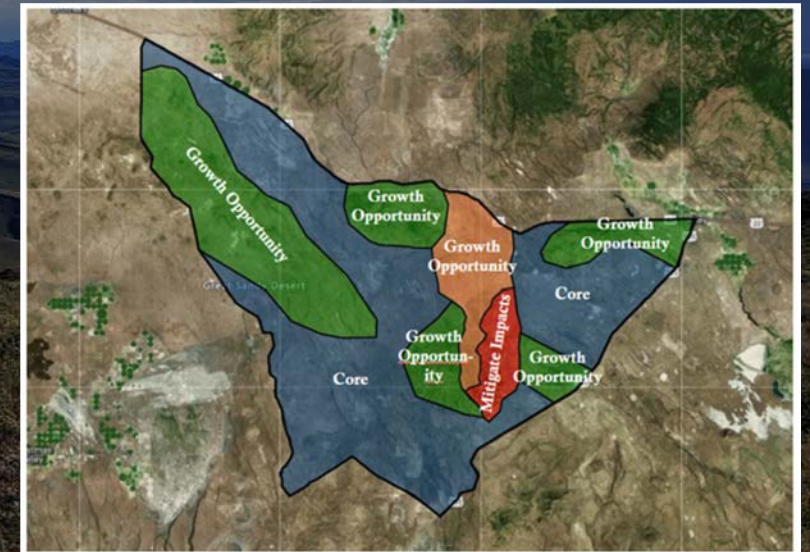
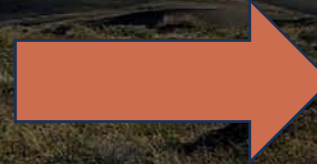
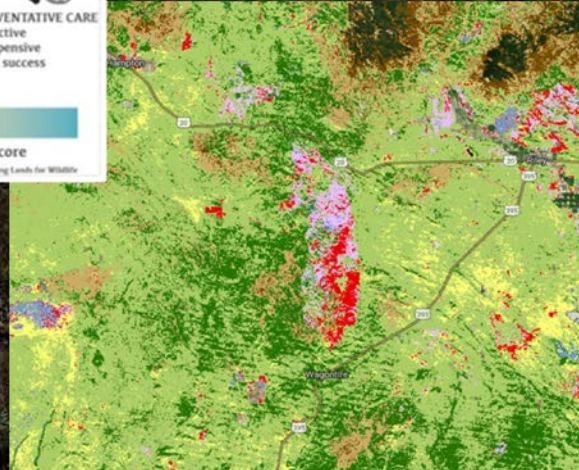
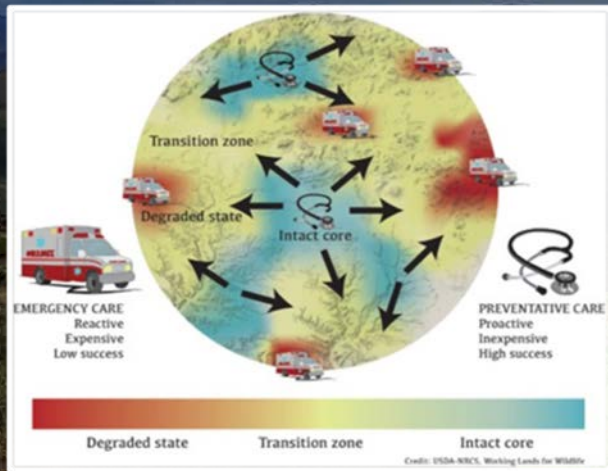
Find the relevant scale and people for your area.



Maps are a discussion support tool!

Mini-workshop wrap-up

The Goal: Develop your own science-informed but locally-derived spatial strategy to defend and grow the core



Empower the use of science and technical tools in service of strategic planning

Mini-workshop wrap-up

Want the ecostate maps on your phone for the field tour?

1. Download Avenza through your app store (free version)

Android

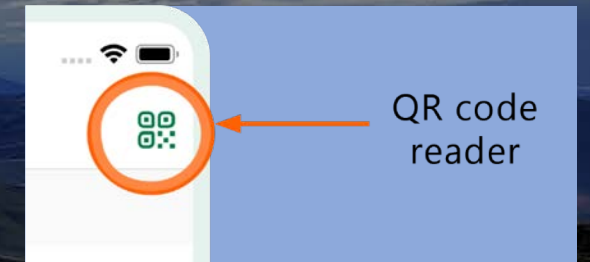


iOS



1. Click to add a map:

1. Scan the QR code for the Lake County ecostate map



Don't forget your paper maps too!

