

Southern Sierra Nevada Fisher Conservation Strategy

Public Meeting #1 – December 3, 2013

Purpose/Goals

- **SSNFCS:** Provide structured guidance for actions that contribute to the conservation and viability of the southern Sierra Nevada fisher population, while also achieving other resource management objectives.

Team Structure

- Fisher Inter-Agency Leadership Team (FIALT)
- Fisher Technical Team (FTT)
- Core Support Team (CST)

Milestones

November 2012-January 2013: FIALT members identified; Process/timeline development; FTT member selection and recruitment

April 2013: First FIALT Meeting; Charter developed.

November 2013: FTT Kickoff Meeting

December 3, 2013: First public meeting

January 28, 2014: FTT Working Meeting (with SSN Fisher Working Group/TWS Meetings)

Spring 2014: Conservation Strategy draft completed for designated reviewers

Summer 2014: FIALT review final Conservation Strategy draft

Fall 2014: Final public meeting (Final Conservation Strategy/Support System demo)

Fisher Core Support Team

Role:

- Serve as an interface between the FIALT and FTT
- Provide logistical and administrative support
- Public communications and outreach

Members and Affiliations:

- Diana Craig (Region 5 USDA Forest Service)
- Diane Macfarlane (Region 5 USDA Forest Service)
- Wayne Spencer (Conservation Biology Institute)
- Sarah Sawyer (Region 5 USDA Forest Service)
- Mandy Vance (Sierra Nevada Conservancy)

Fisher Inter-Agency Leadership Team

Role:

- Ensure sufficient resources available to meet the goal
- Ensure products will meet agency needs
- Adopt final Conservation Strategy for implementation

Members and Affiliations:

- Barnie Gyant (Region 5 USDA Forest Service)
- Cay Goude (US Fish and Wildlife Service)
- David Graber (National Park Service)
- Kent Smith / Eric Loft (California Department of Fish and Wildlife)
- Jim Branham (Sierra Nevada Conservancy)

Fisher Technical Team

Members and Affiliations:

- Wayne Spencer, PhD (Team Leader) – *Conservation Biology Institute*
- Sarah Sawyer, PhD – *US Forest Service Region 5*
- Bill Zielinski, PhD – *Pacific Southwest Research Station*
- Rick Sweitzer, PhD – *Great Basin Institute*
- Kathryn Purcell, PhD – *Pacific Southwest Research Station*
- Sue Britting, PhD – *Sierra Forest Legacy*
- Hugh Safford, PhD – *US Forest Service Region 5 and UC Davis*
- Deana Clifford, DVM, MPVM, PhD – *CA Dept. of Fish and Wildlife*
- Roger Powell, PhD – *North Carolina State University (Emeritus)*
- Jeremiah Karuzas – *US Fish and Wildlife Service*
- Craig Thompson, PhD – *Pacific Southwest Research Station*
- Lindsay Cline, MS – *National Park Service*

Fisher Technical Team

Additional Experts:

- Special Topic Advisors
 - Contribution to relevant sections of Assessment and Strategy Documents (as their time allows)
- Reviewers
 - Peer review for Assessment and Strategy Documents
- Managers
 - Review of utility and consistency of documents for various agency uses

Fisher Technical Team

Role

- Compile, Synthesize, and Summarize latest information and data on southern Sierra Nevada fisher
 - Conservation Assessment
- Make management recommendations based on latest fisher information and manager needs
 - Conservation Strategy
- Provide data and input to management decision support tools
 - Decision Support System

Process:

- Phone conferences
- In-person working meetings (Nov 2013, Jan 2014)
- Document compiling, writing, editing, and reviewing

Public Outreach

Goal:

- To inform the public about the current status of the Conservation Strategy and Decision Support System under development for the Pacific Fisher in the southern Sierra Nevada
- Provide balanced and objective information to assist understanding of the process and answer questions
- Identify gaps in topics, guiding questions or relevant studies

Tools:

- Website <http://www.fs.usda.gov/detail/r5/plants-animals/wildlife/?cid=STELPRDB5426714>)
- Update emails
- Public meetings

Public Outreach

What's next:

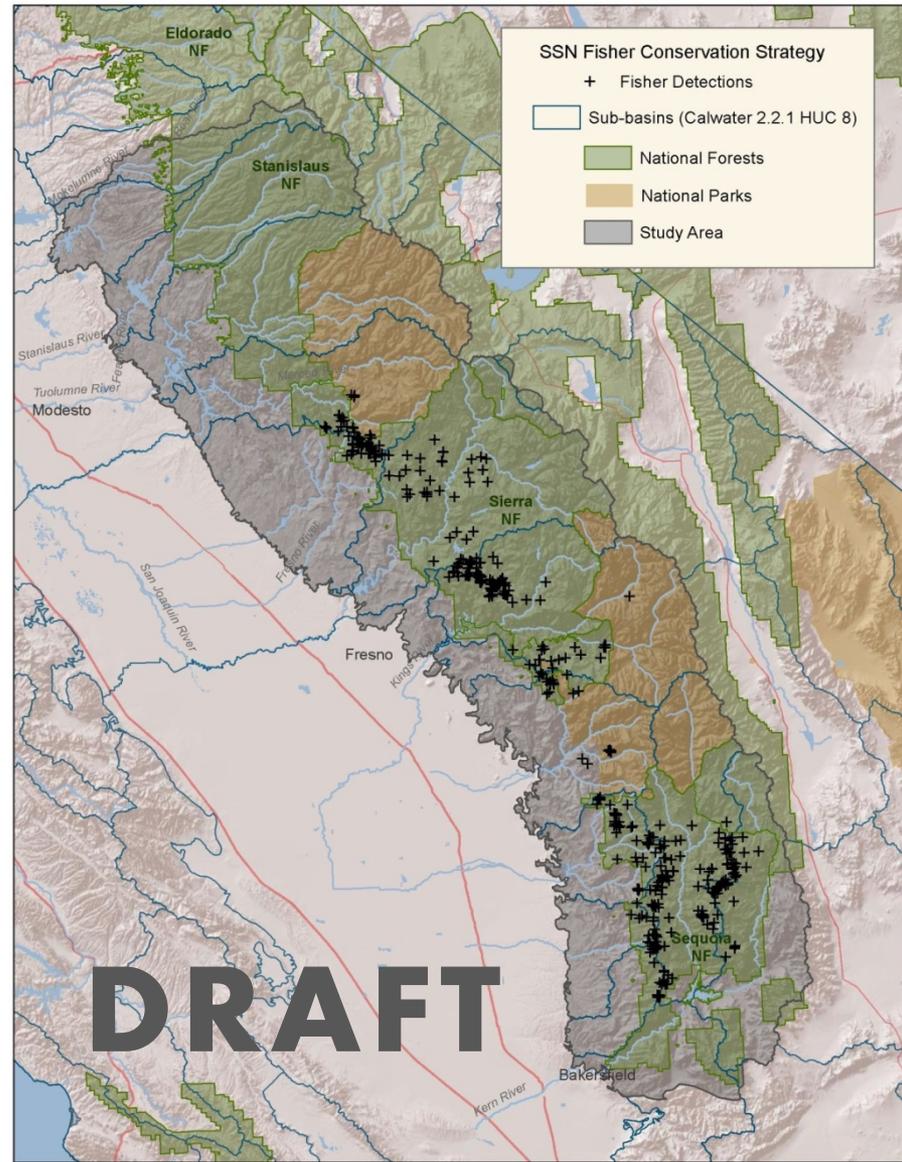
- status updates (email and website)
- public meeting in Fall 2014 (Final Conservation Strategy and demonstration of the Decision Support Tool.)
- ssnfcs@gmail.com

CONSERVATION ASSESSMENT

SSNFCS

DRAFT Study Area

- Based on watersheds
- Includes all occupied plus some unoccupied fisher habitat .
- Northern boundary revised based on FTT feedback
 - Includes all of Stanislaus NF
 - Follows Mokelumne River



Conservation Assessment

Process/Status:

- Tiered off of West Coast Conservation Strategy
 - specific to southern Sierra fisher population
 - focus on new information
- FTT currently working on draft
- Relevant sections of FTT draft will then be reviewed by Special Topic Advisors
- Final Draft will then go out for external peer review (early 2014)

Conservation Assessment

Outline:

- Introduction
 - Context, objectives, scope, products, process
- Population Distribution and Trends
 - Population size and trend; distribution and genetic diversity
- Biology and Ecology
 - Life History: reproduction, survivorship, cause-specific mortality, mortality impacts on survival rates
 - Ecology: Space-use patterns, diet, other interspecific interactions
- Habitat Associations
 - Landscape Scale, Home Range Scale, Sub-Home Range Scale
 - Resting, denning, foraging, traveling
- Risk Factors
 - Small population size, vegetation management, uncharacteristic fire, roads, predation, pesticides, disease, other human activities, climate change
- Conclusions
 - Tie to Conservation Strategy and Decision Support System

CONSERVATION STRATEGY

Conservation Strategy

- **Goal:**

- Develop/promote a fisher population and landscape that are resilient to future change and natural disturbances

- **Objectives:**

- Protect extant population and promote expansion of population into currently unoccupied areas
- Maintain or restore connectivity within and between fisher subpopulations in the southern Sierra Nevada and into potential current and future habitat
- Restore or maintain habitat conditions that can support fishers
- Ameliorate identified threats to fisher persistence/conservation

Conservation Strategy

Process/Status:

- Goals Identified
- Working on Structure
 - Will tier to West Coast Conservation Strategy
- Assessment document will feed into Strategy recommendations
 - To be developed by Fisher Technical Team
- Rough draft expected in Spring, 2014

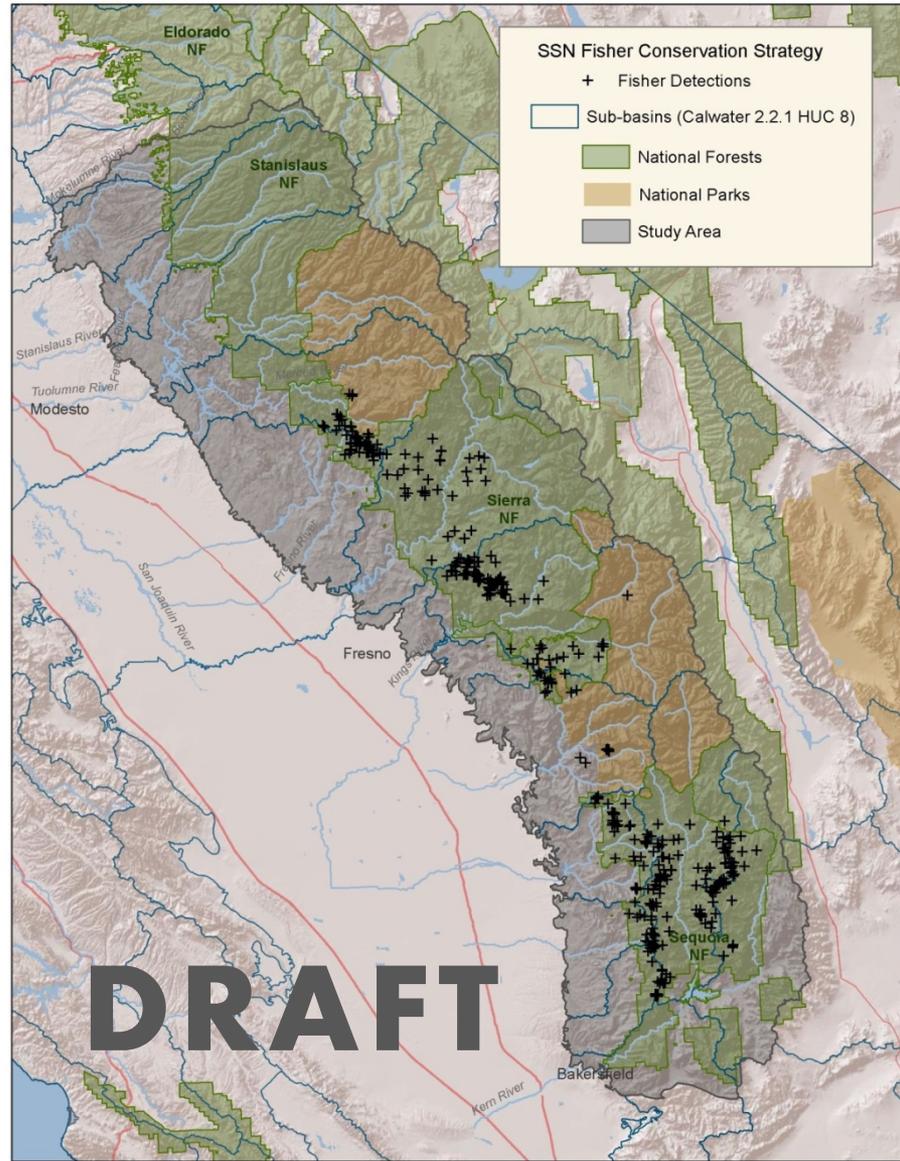
MAPS AND HABITAT MODELS

SSNFCS

DRAFT Study Area

- Based on watersheds
- Includes all occupied plus some unoccupied fisher habitat .
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 - Includes all of Stanislaus NF
 - Follows Mokelumne River

Note: The following maps are based on an earlier draft study area.



New Landscape-scale Fisher Habitat Model

- Uses fisher detection-nondetection monitoring data
- Excellent statistical fit ($F = 0.96$; $AUC = 0.94$)
- Predictor Variables:

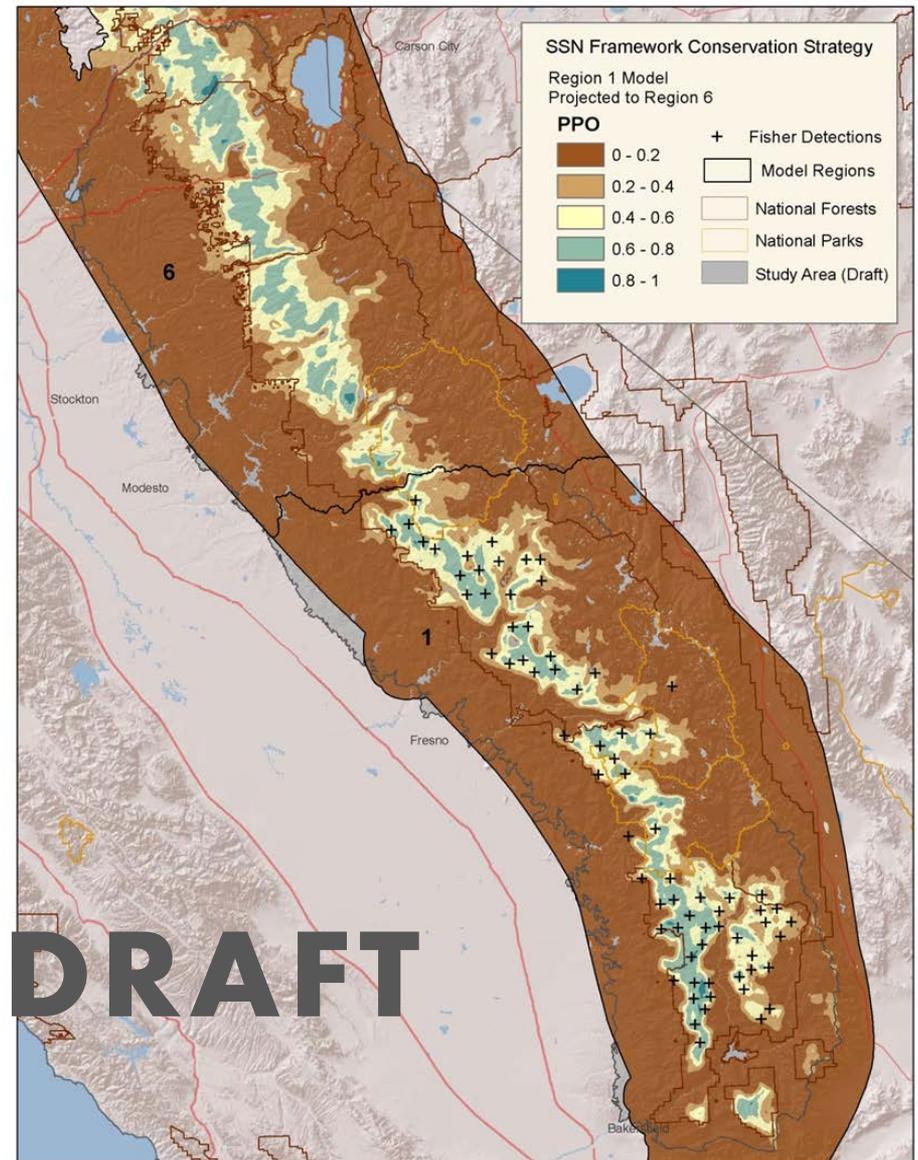
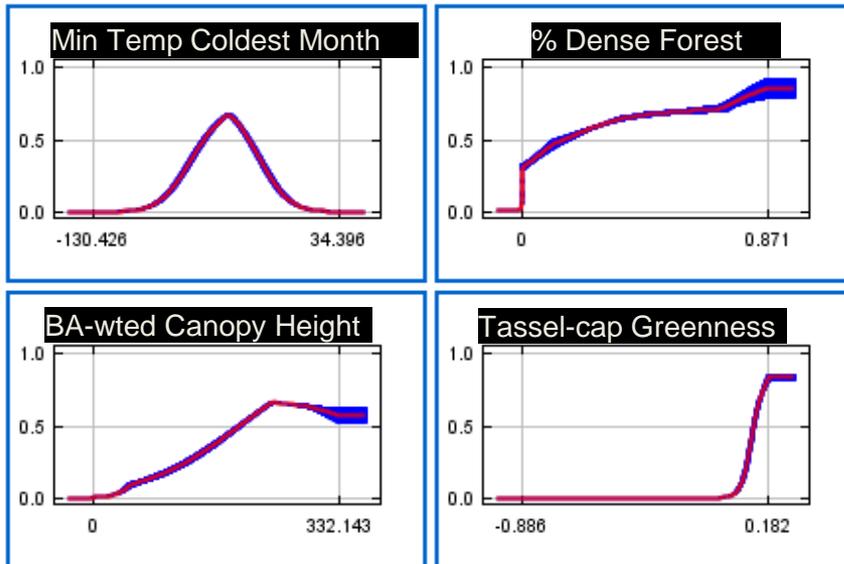
Basal area-weighted canopy ht.

Min. temp. coldest month

Tassel-cap greenness

Dense forest

- Univariate response curves (below) show relationship between each variable and fisher presence.



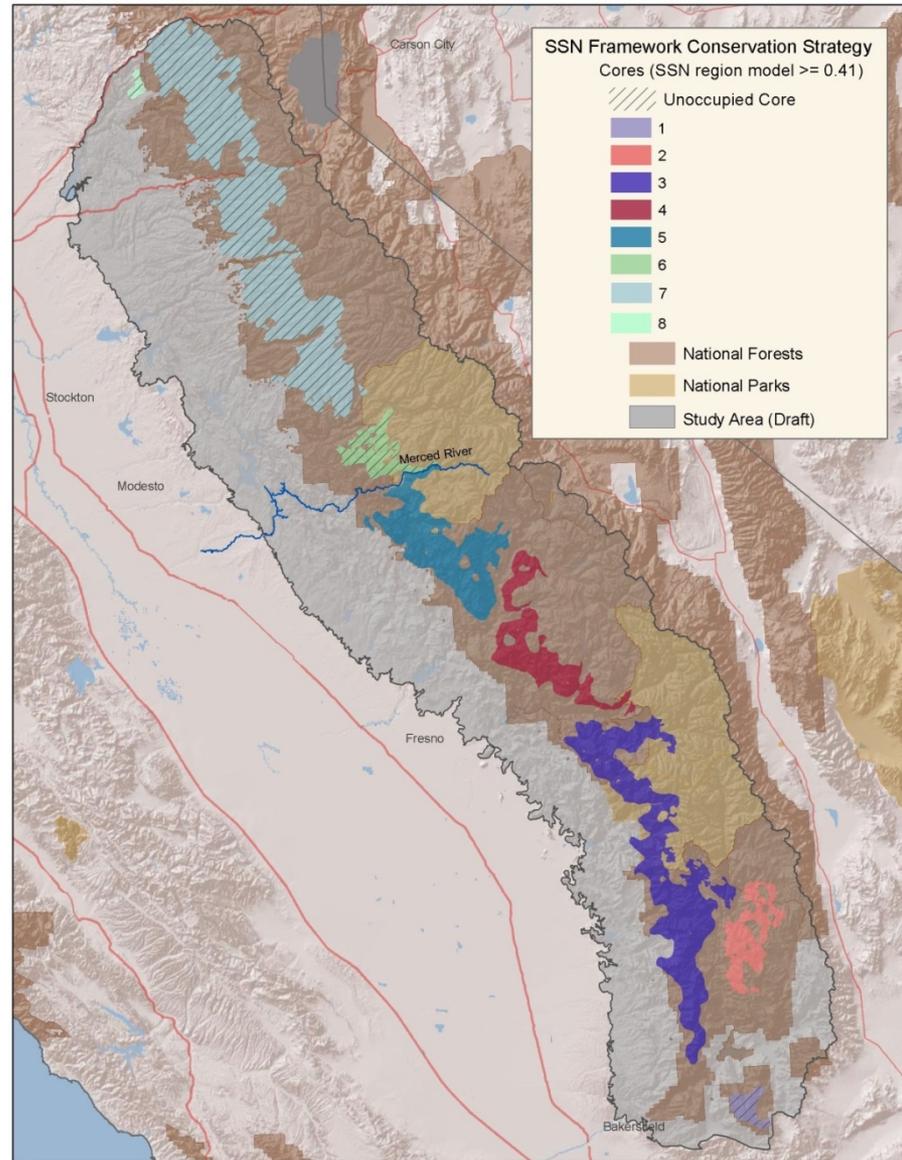
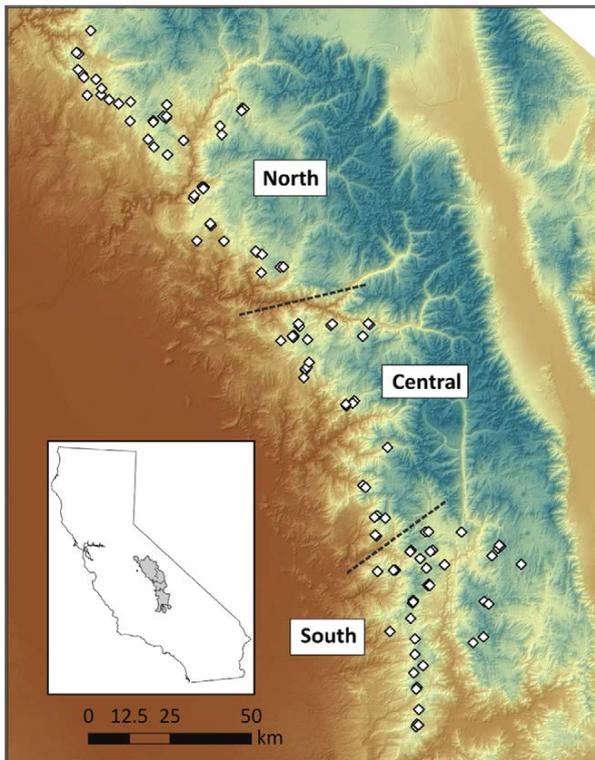
Occupied and Unoccupied “Core” Habitat Areas

- A “thresholded” version of the habitat map



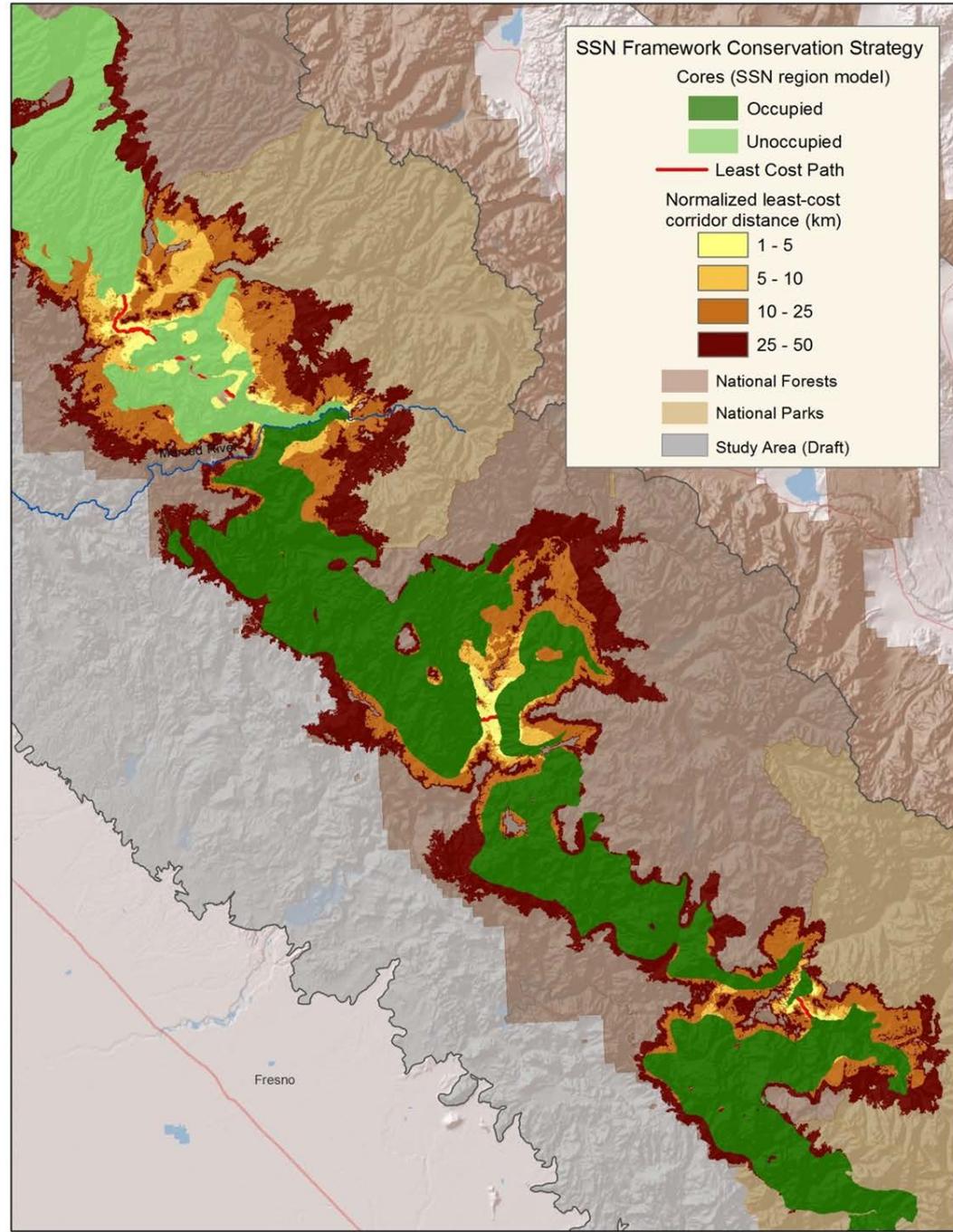
Individual Core Areas

- May be useful for planning purposes.
- Comingling individuals within each core; occasional dispersal between cores.



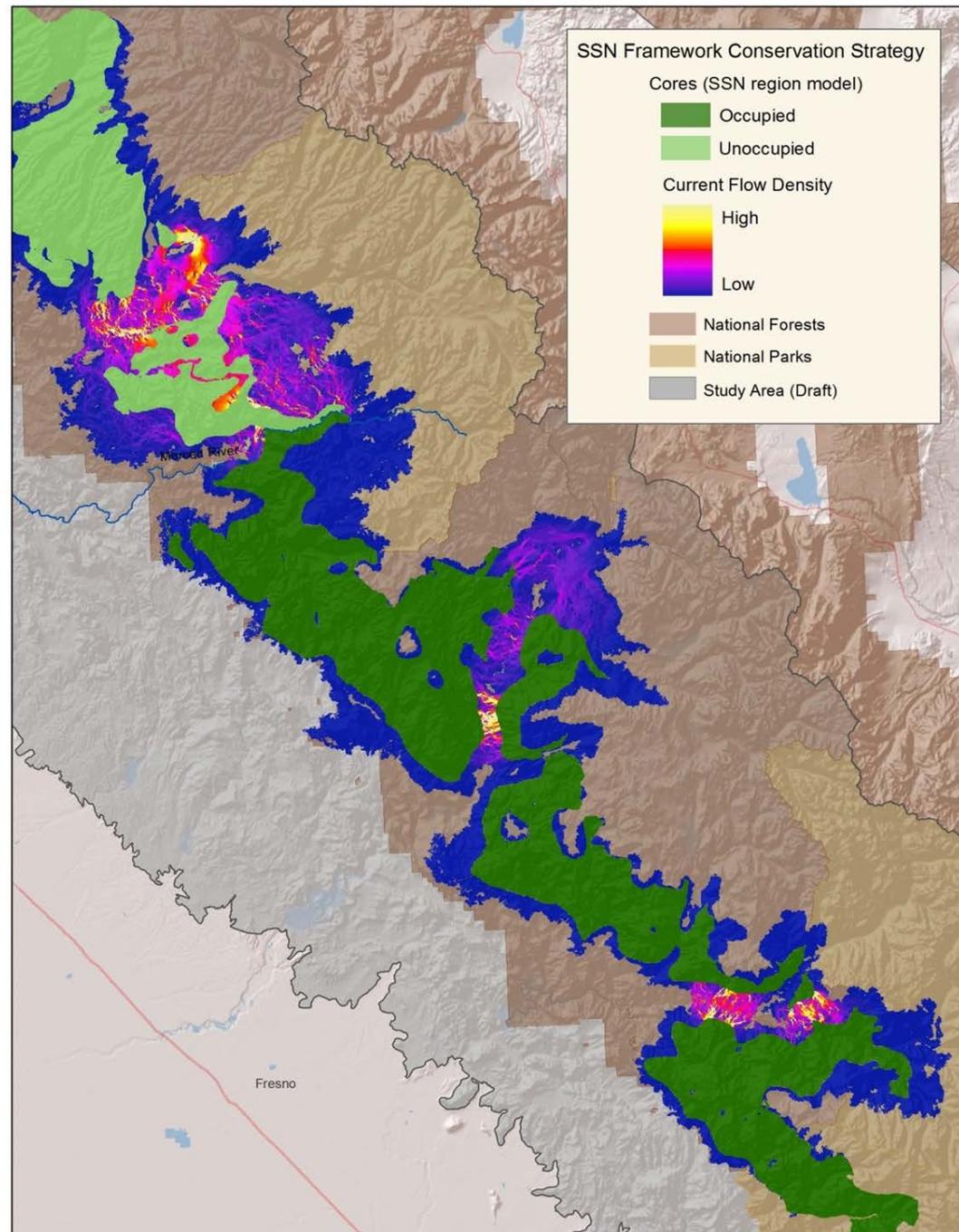
Connectivity Habitats

- Least-cost Corridor Models:
 - Predict where fishers can travel between cores with least potential cost or risk.
 - Identify movement “pinch points” or other constraints.



Connectivity Habitats

- Circuitscape Models:
 - Predict where fisher dispersal movements may be concentrated.
 - Identify movement “pinch points” or other constraints.

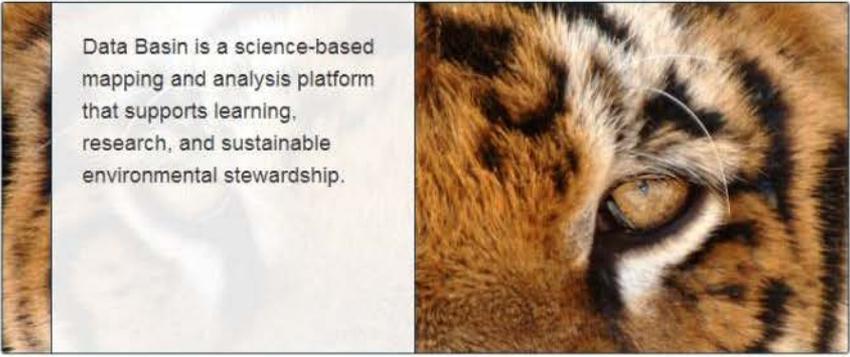


DECISION SUPPORT SYSTEM

Decision Support System

- **Goals:** A useful, defensible, efficient, structured approach for implementing the Conservation Strategy; the “brains” of an adaptive management program.
- **Major Components:**
 - Data Basin Group/Gateway:
 - Organized, updateable galleries of datasets, maps, etc., to support planning and implementation.
 - Decision-support Models/Logic Models
 - Provide objective and transparent support for management decisions.
 - Help streamline complex analyses (e.g., project impacts assessments, cumulative effects analyses).
 - Improve with new data/information (i.e., adaptive)

- [What is Data Basin?](#)
- [What can I do?](#)
- [Who is using Data Basin?](#)
- [How do I start exploring?](#)



Data Basin is a science-based mapping and analysis platform that supports learning, research, and sustainable environmental stewardship.

Get started quickly with Data Basin [Take a Tour](#)



- Upcoming Events**
- Webinar: Navigating the Data Basin Platform: A Guided Tour**
Thursday, September 26, 2013
 - Webinar: Navigating the Data Basin Platform: A Guided Tour**
Thursday, October 10, 2013
 - Webinar: National Conservation Easement Database (NCED): A Vital Information and Planning Resource**
Thursday, November 14, 2013
- [see more](#)

Recommended Items

 Gallery	 Map
<p>Mapping of stress on native tree species across western United States ...</p>	<p>Diversité Amphibiens</p>
 Guide/Study	 Guide/Study
<p>Global Freshwater Crisis</p>	<p>Effects of climate and vegetation on martens and fishers in the Sierra ...</p>

Explore Data Basin Guides & Case Studies...



National Conservation Easement Database (NCED), Phase III released July 2013

In 2010, the National Conservation Easement Database (NCED) an initiative of the U.S. Endowment for Forestry and Community, published the first national database of conservation easement information. This public-private partnerships brought together national conservation groups, local and ...

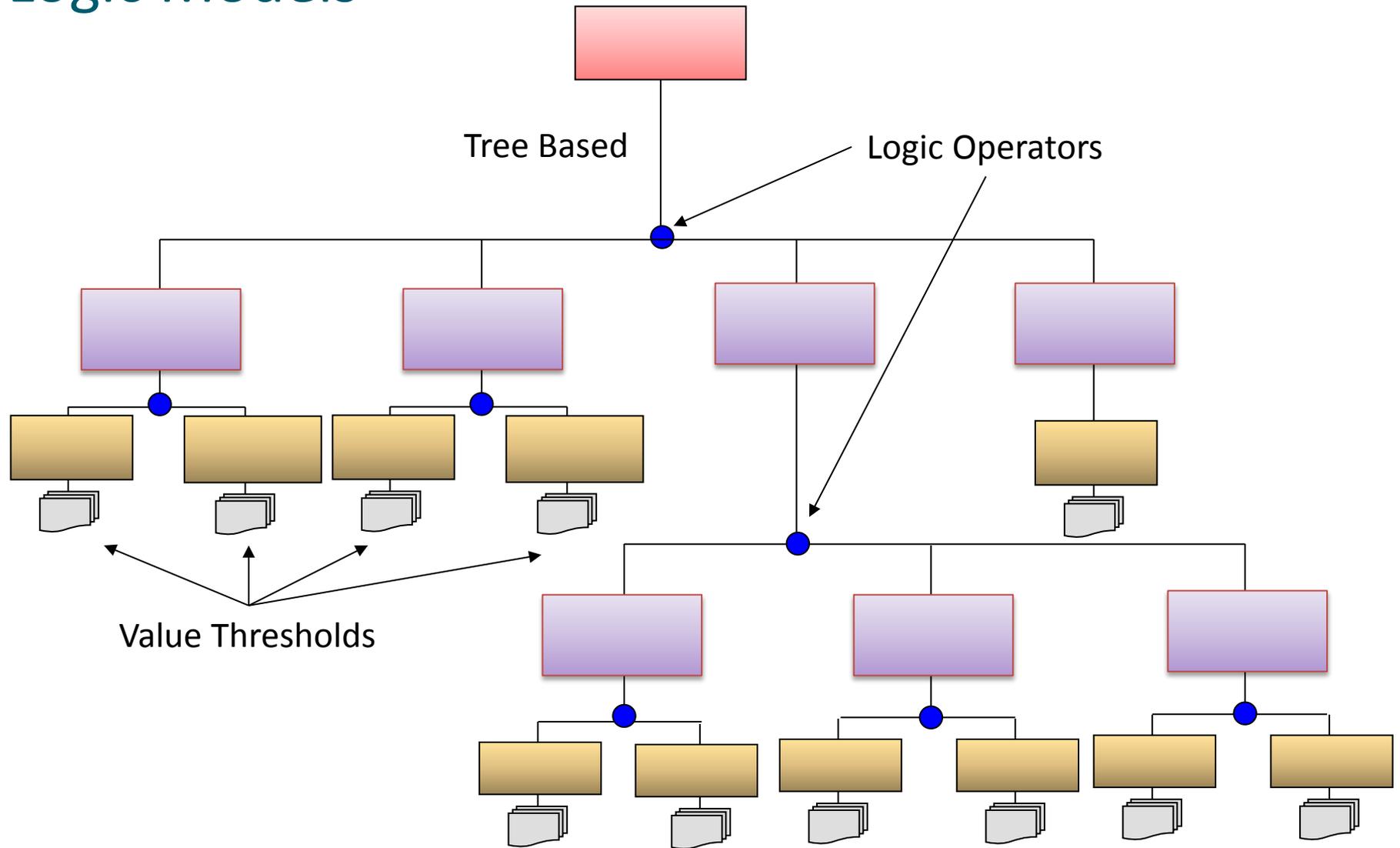
[read more](#)



Follow Data Basin:  

The Wilburforce Foundation provides funding to maintain and develop Data Basin.

Logic Models



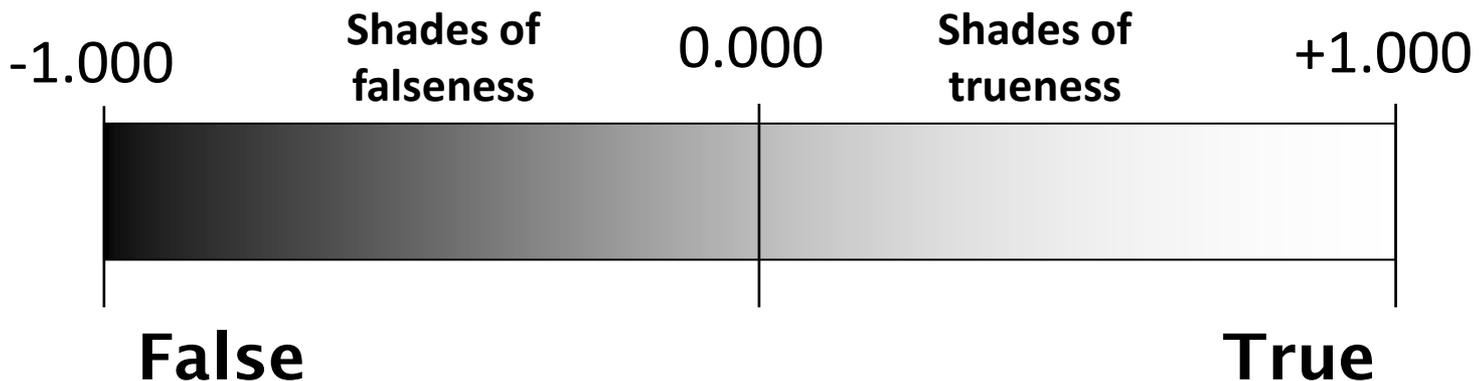
Multiple factors combined to address a question

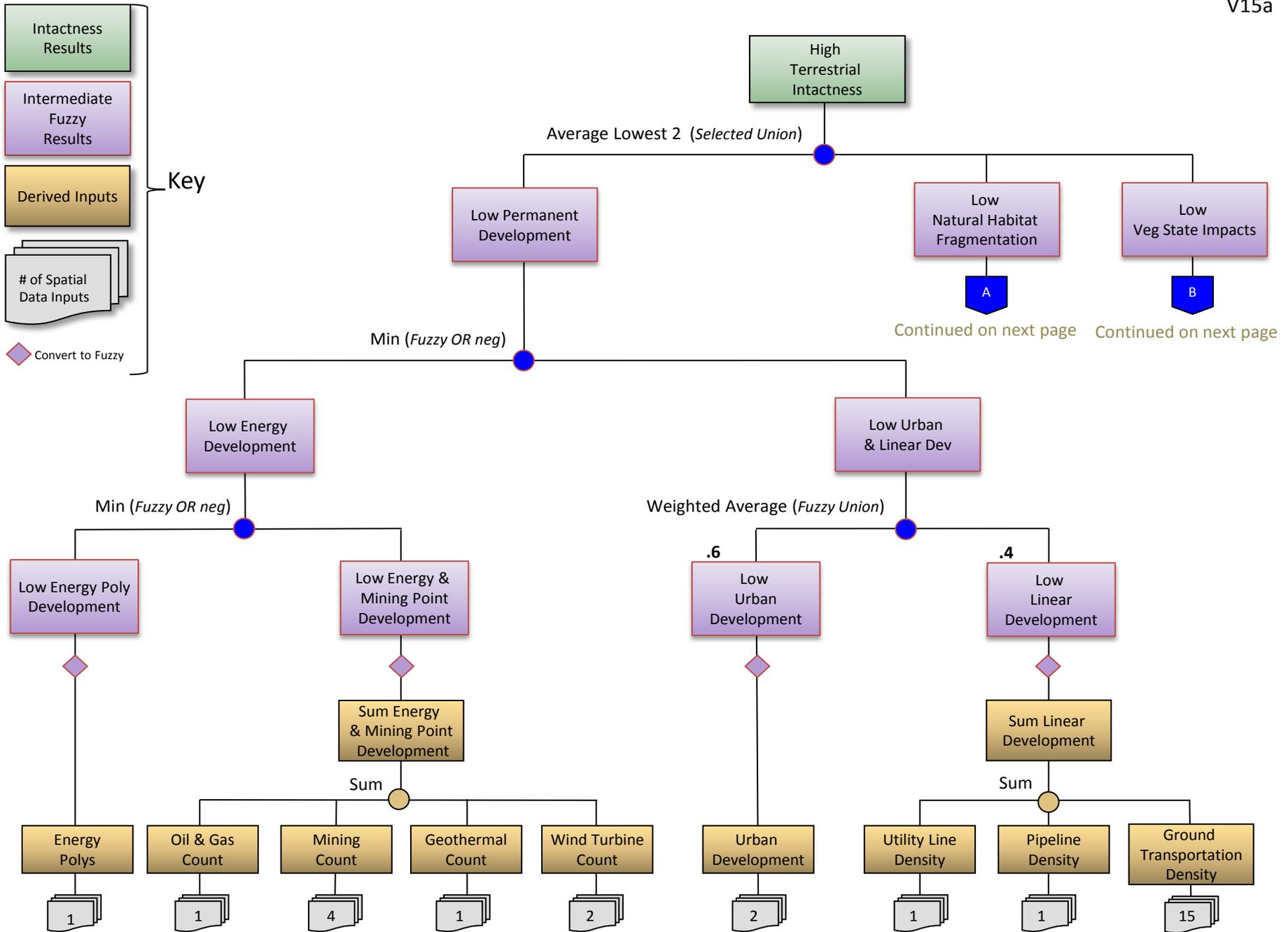
Based on Fuzzy Logic

Provides a way of normalizing different types of data into a common range of values (“fuzzy values”).

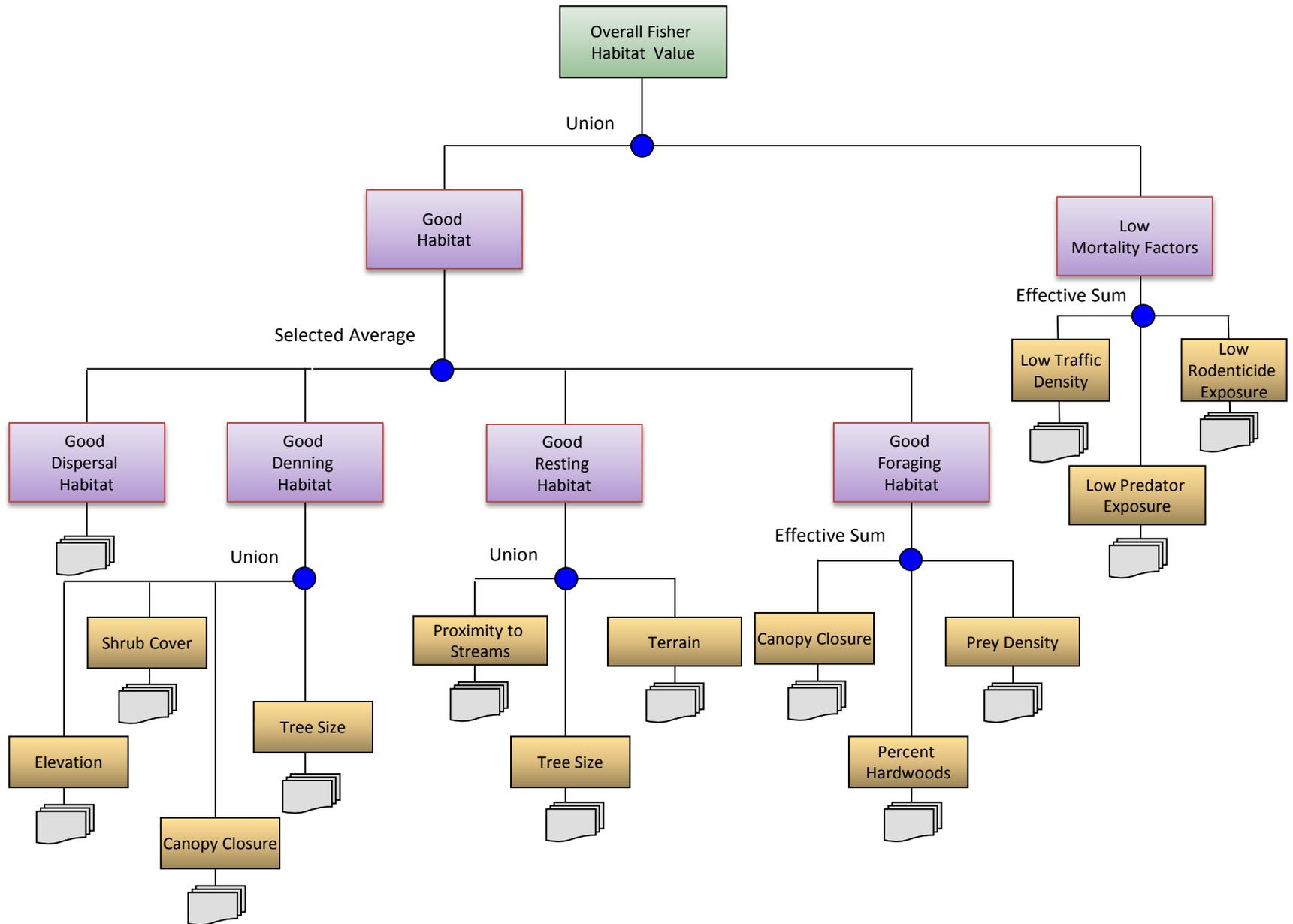
e.g., “High Priority for Fuels Treatments” might take into account:

- Fisher habitat quality (at multiple scales)
- Vegetation Condition
- Fire History
- Proximity to homes
- Etc.





"Strawman" Fisher Habitat Value Logic Model



QUESTIONS & DISCUSSION