

Assessing Needs

Tracy Hmielowski

*Where Should We Burn?
A Fire Needs Assessment for Wisconsin*

October 8, 2014



TPOS and Lake States Fire Science Consortia





LANDFIRE/JFSP 2014 Webinar Series



- LANDFIRE and the TPOS/Lake States Consortia offer these webinars to talk about and illustrate LANDFIRE products and processes that can support large land management and planning.
- Others: Northwest Fire Science Consortium and the Northern/Southern Rockies Fire Science Networks on YouTube/Conservation Gateway.
- Southern Fire Science series running concurrently (Sept/Nov 2014)

Today: Assessing Needs - Tracy Hmielowski, Fire Information Specialist, presents *Where should we burn? A Fire Needs Assessment for Wisconsin.*

Final in the TPOS/Lake States series

October 29: Customizing Data - Don Helmbrecht, Wildland Fire Analyst, USDA Forest Service, TEAMS Enterprise Unit, presents *Local Customization of Fuels Data on the Huron-Manistee and Hiawatha National Forests.*

Today's Agenda



Tracy L. Hmielowski

Tallgrass Prairie and Oak
Savanna Fire Science Consortium

- Assessing Needs
- Bringing partners together
- Using LANDFIRE in combination with other data
- Results of Fire Needs Assessment for State of Wisconsin

What is a Needs Assessment?

- Determine and address needs or gaps
- Planning process to identify priorities
- Refine and improve products or outcomes

How much RX fire? And where?



Technical Team

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Sarah K. Carter
Hannah Spaul
Volker Radeloff
Paul Zedler

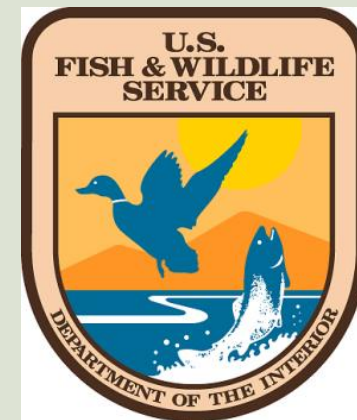
Jack McGowan-Stinski
Jed Meunier
Sarah Hagen
Paul Charland
David Helmers



Stakeholders and Experts

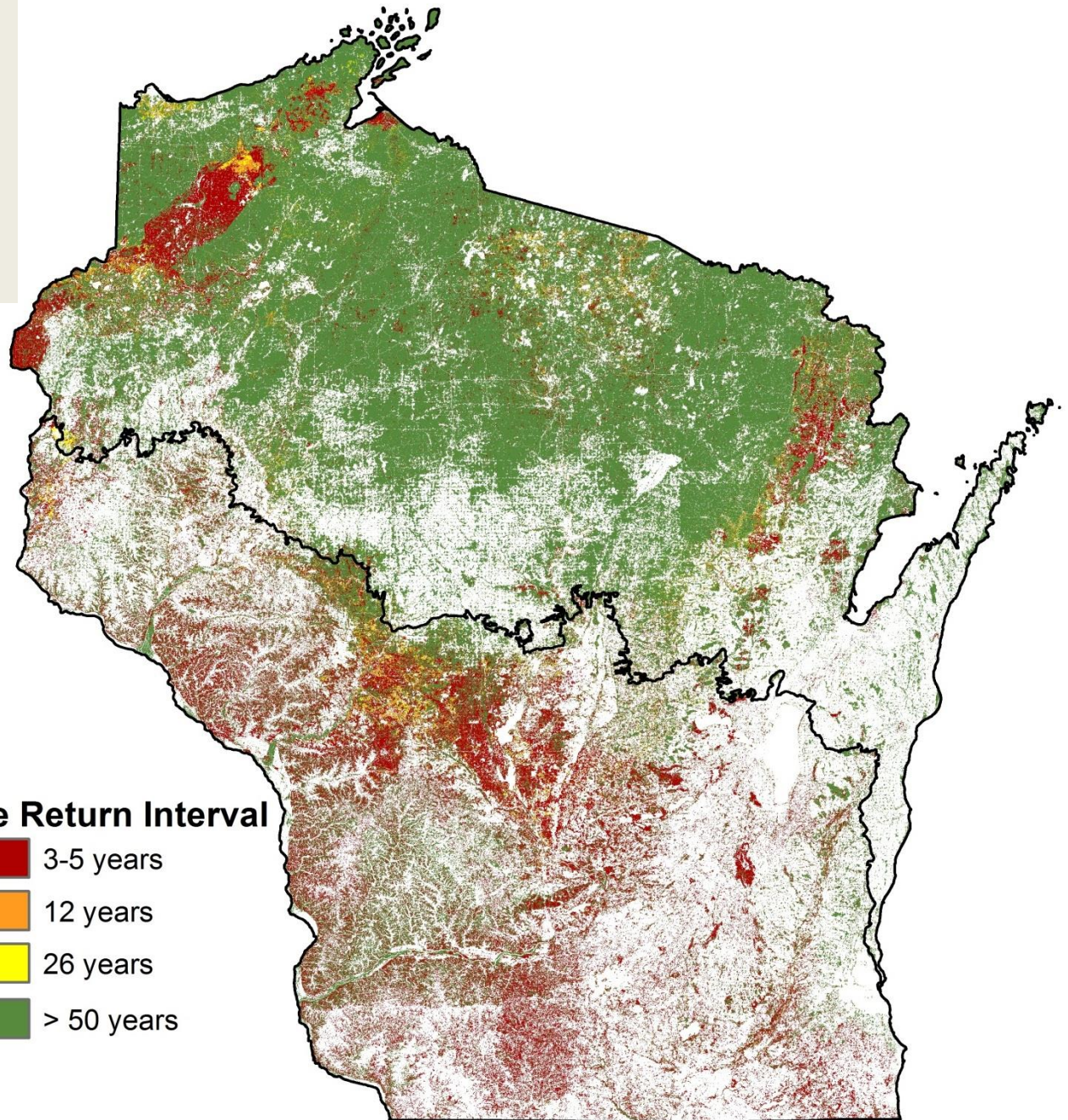
Matt Zine
Mary Lucas
Brad Hutnick
Eric Epstein
Jim Smith
Yari Johnson

Ryan O'Connor
John Wagner
Rich Henderson
Jay Saunders
Jerry Szymaniak
Randy Swaty



Decision to use LANDFIRE Existing Vegetation Type

Mean Fire Return Interval

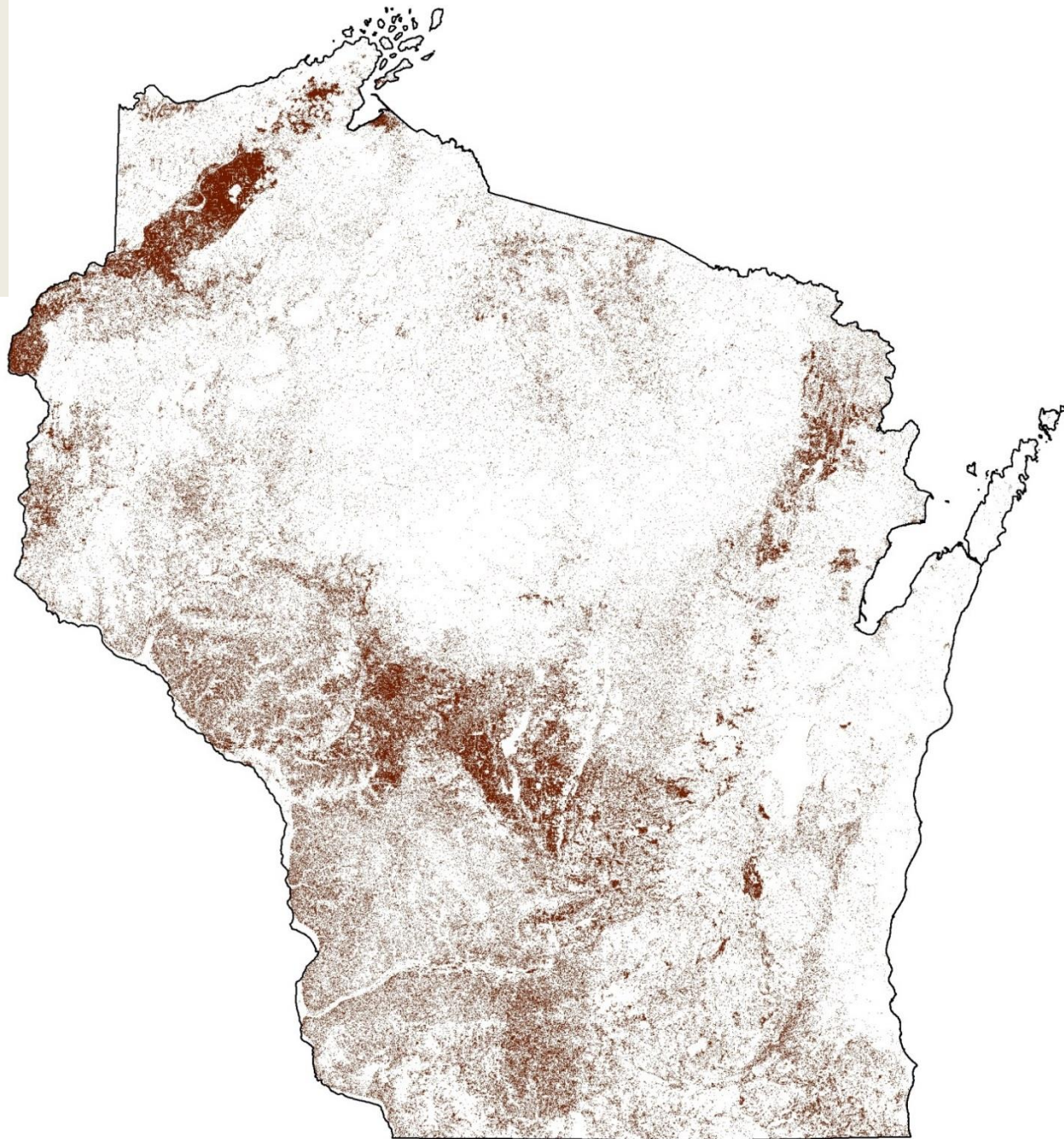


Stakeholder Input

Focus on fire-dependent communities

- Natural communities in LANDFIRE with a fire return interval
- Fire return interval < 50 years
- Broad community groups
- Include managed grasslands (e.g., pasture)

**Vegetation in EVT
with historical fire
return interval < 50
years**





Estimate of Prescribed Fire Needs



UW Arboretum



N. Fayram



J. Vogel

Estimate of Prescribed Fire Needs

Breakdown by community groups

Community Group	Total Acres	Acres/year to burn		Community Group	Total Acres	Acres/year to burn
Managed Grasslands	976,837	325,612		Pine-Oak forest	267,614	10,293
Pine barrens	782,662	195,665		Bluff and talus	266,289	66,572
Oak forest	708,827	141,765		Oak barrens	103,004	20,601
Oak woodland	523,878	104,776		Dry prairie	35,581	11,860
Herbaceous wetlands	471,743	157,248		Oak savanna	29,739	7,435
Pine forest	291,493	24,291		Tallgrass Prairie	26,673	8,891

Estimate of Prescribed Fire Needs

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Estimate of Prescribed Fire Needs

- Without managed grasslands,
total acres/year = 749,397
- Includes public and private lands

Cost / Benefit Analysis can be used
to identify priority areas

BENEFITS × FEASIBILITY

COST

Modified for spatial data
and ecological communities

BENEFITS
(weighed by rarity) **×** **CHALLENGE**

EFFORT

Create indices of each term

RARITY





BENEFIT

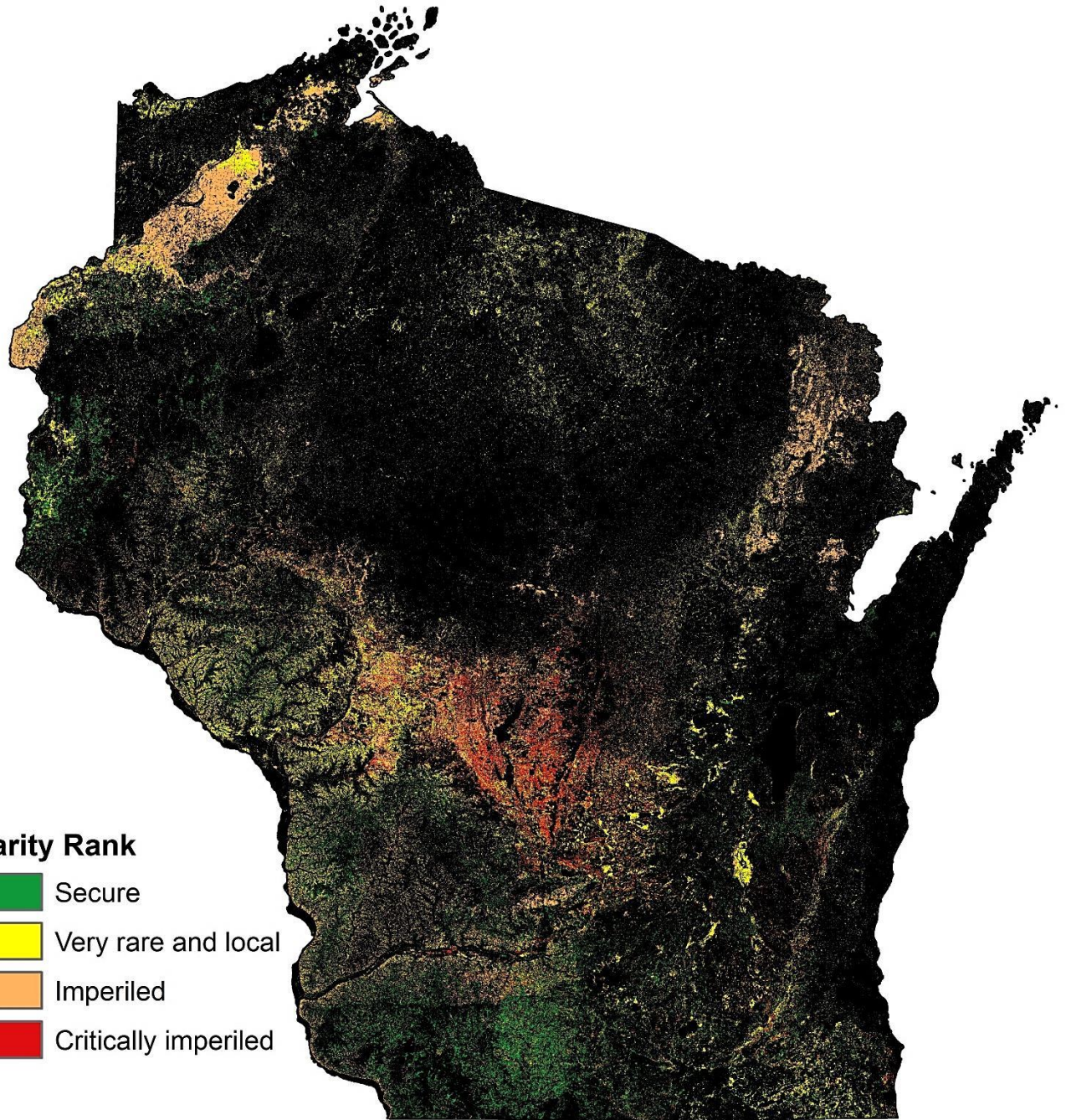
EFFORT

CHALLENGE

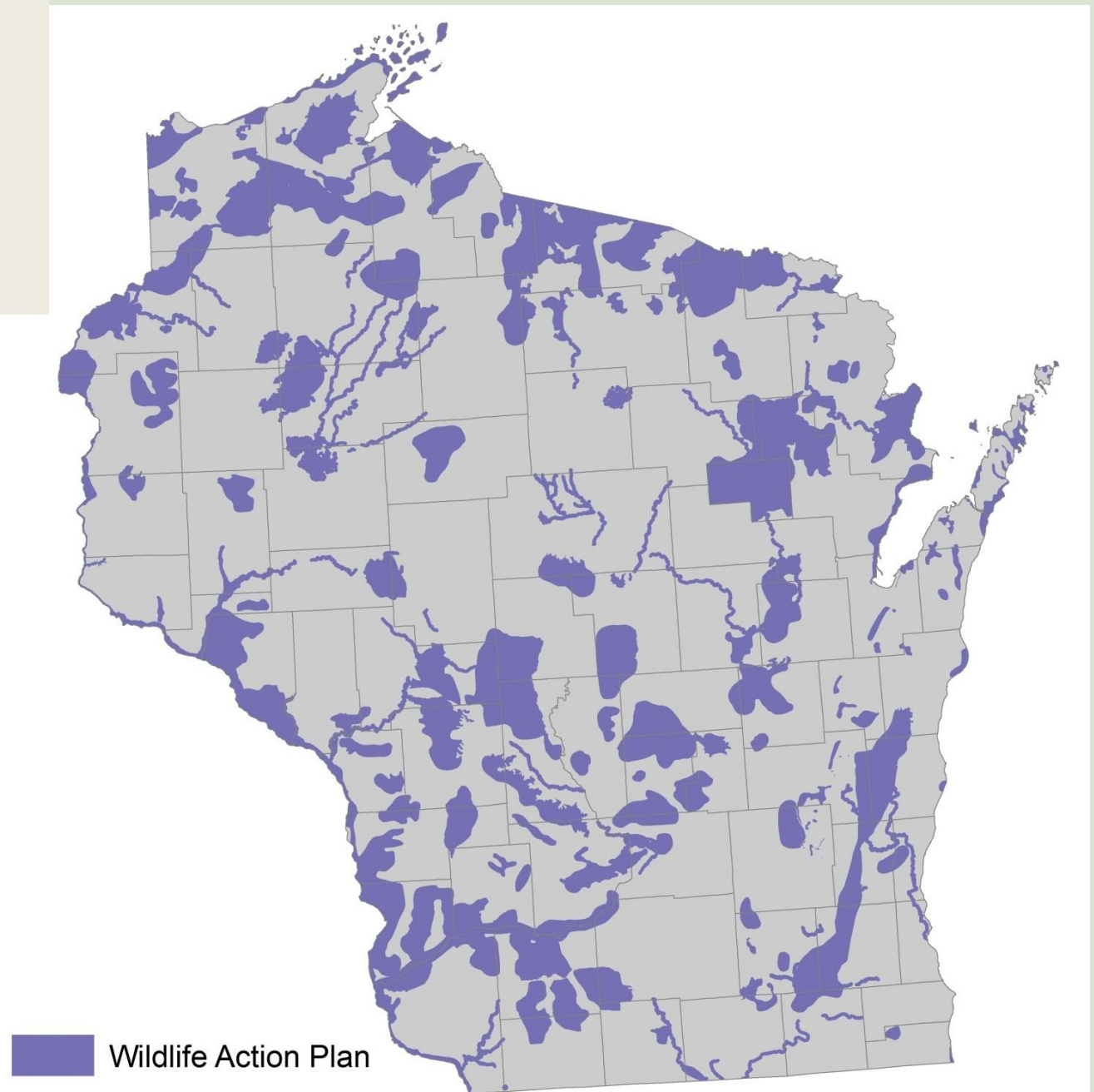
Rarity based on NHI rankings

Rarity Rank

-  Secure
-  Very rare and local
-  Imperiled
-  Critically imperiled



Benefit Index
based on
Wildlife Action
Plan

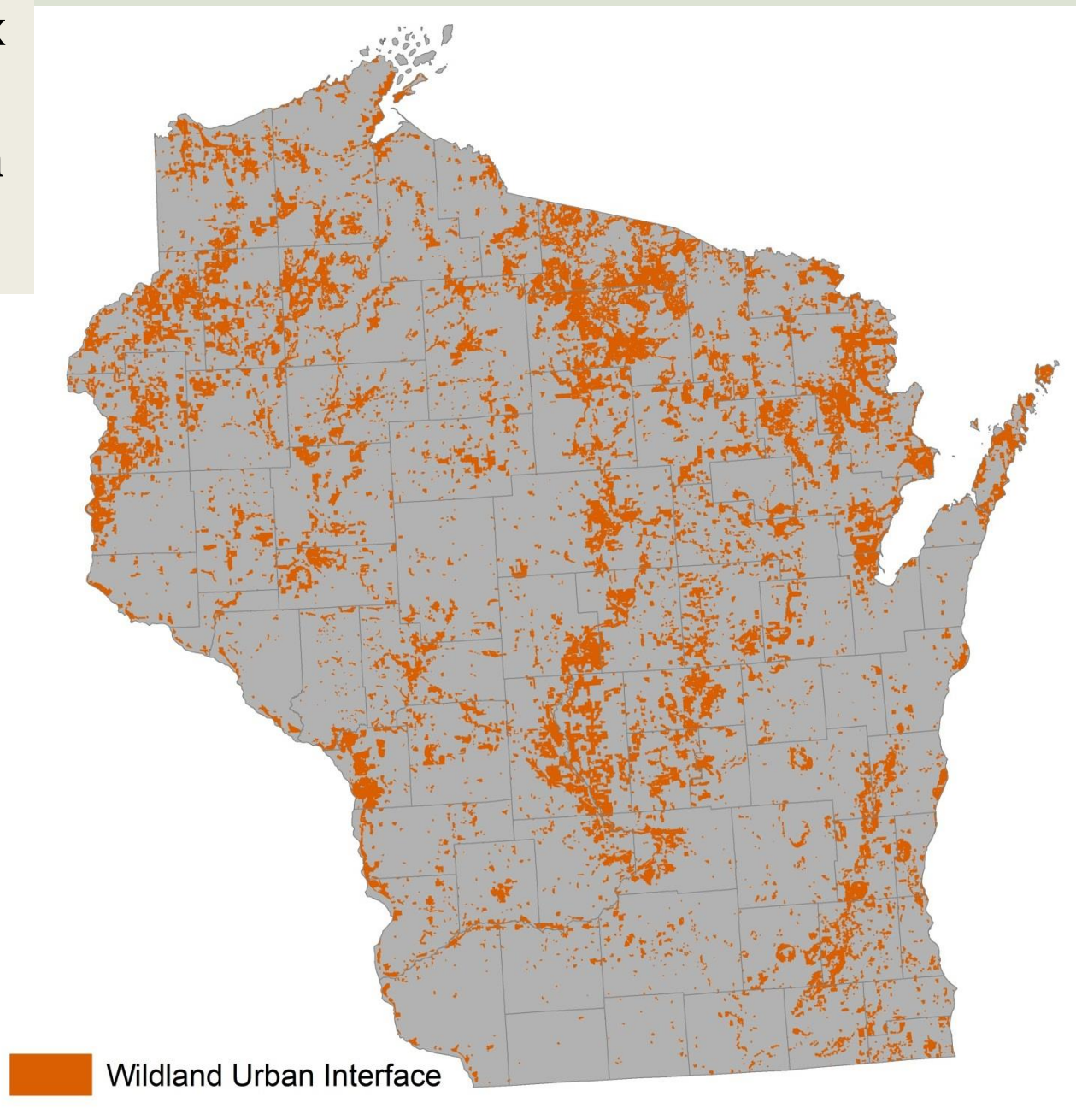


Effort Index
based on fire
return interval
and number of
patches

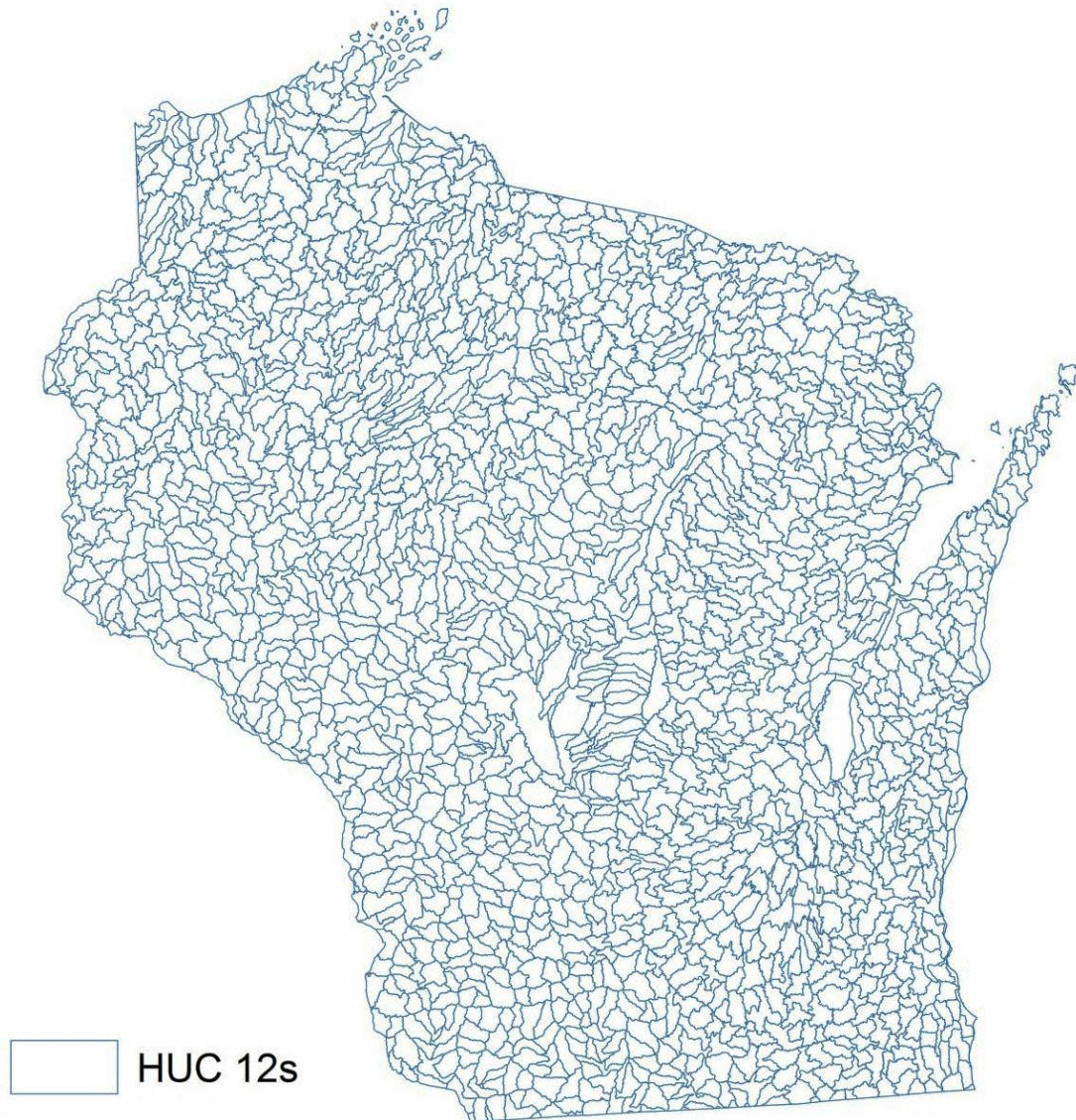


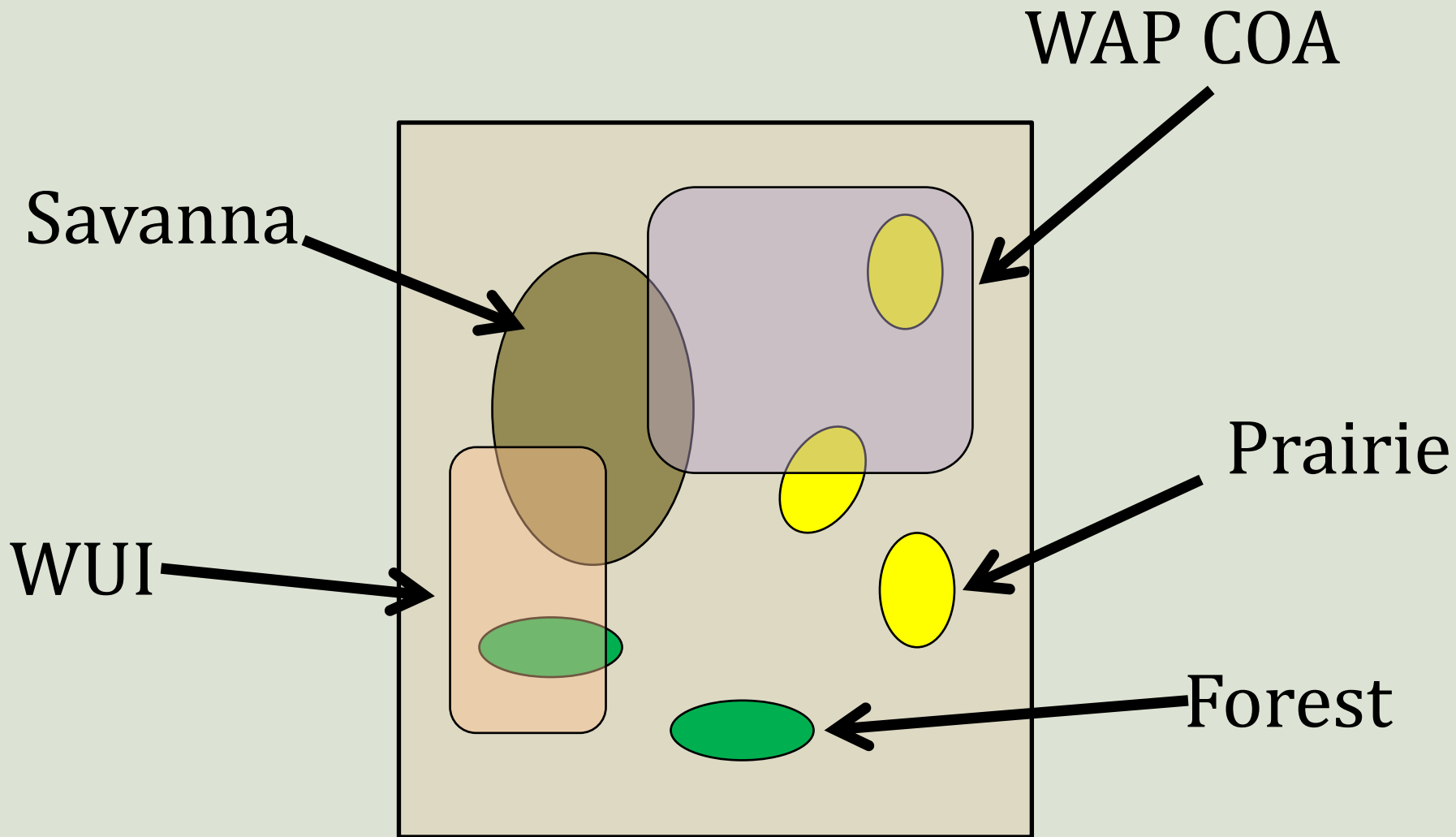
Photo: TPOS Fire Science

Challenge Index based on Wildland Urban Interface



Summary Units





Effort index
Dark colors =
greater effort



Combine indices to determine priorities

RARITY

BENEFIT

EFFORT

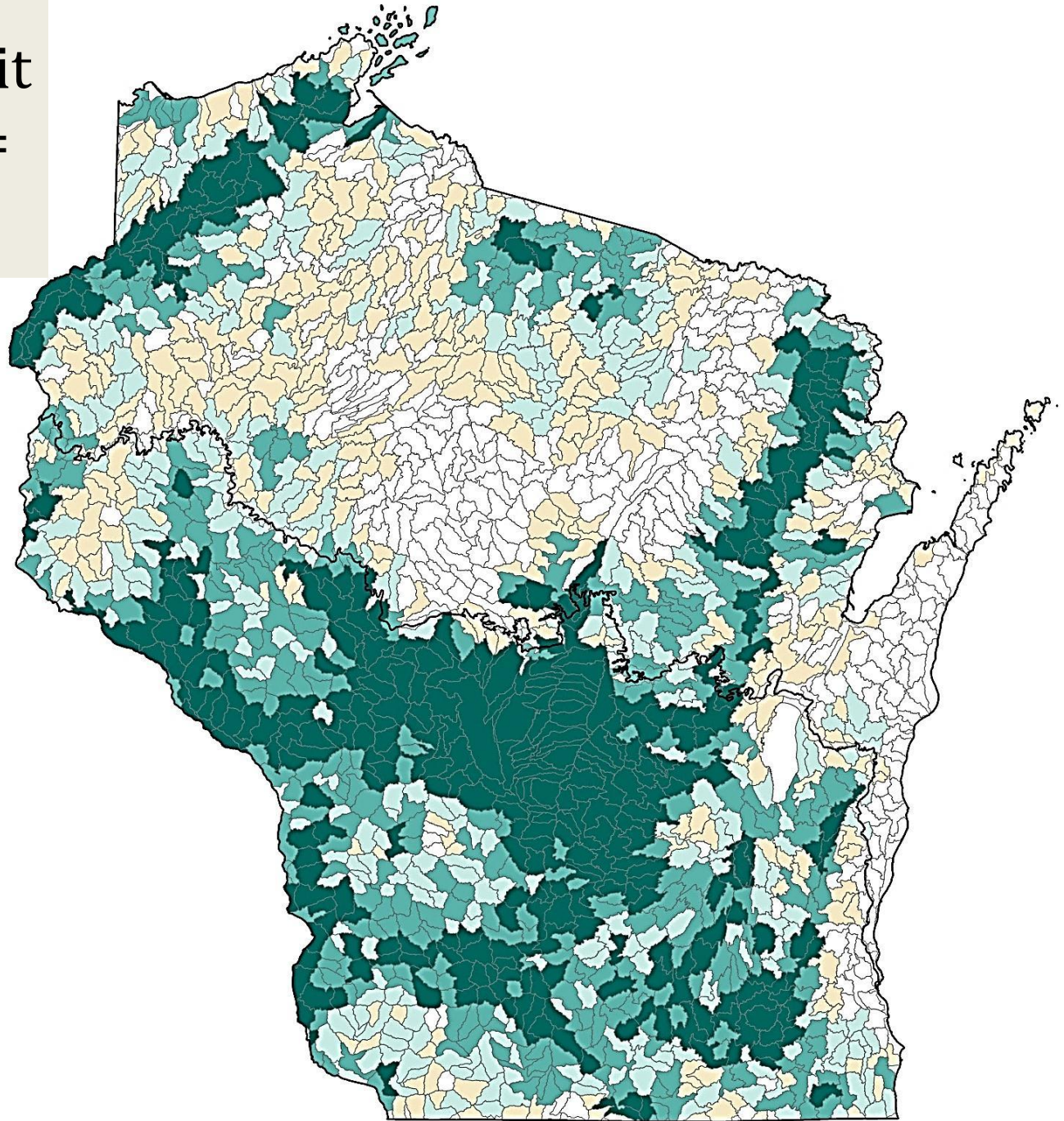
CHALLENGE

**GREATEST ECOLOGICAL
BENEFIT**

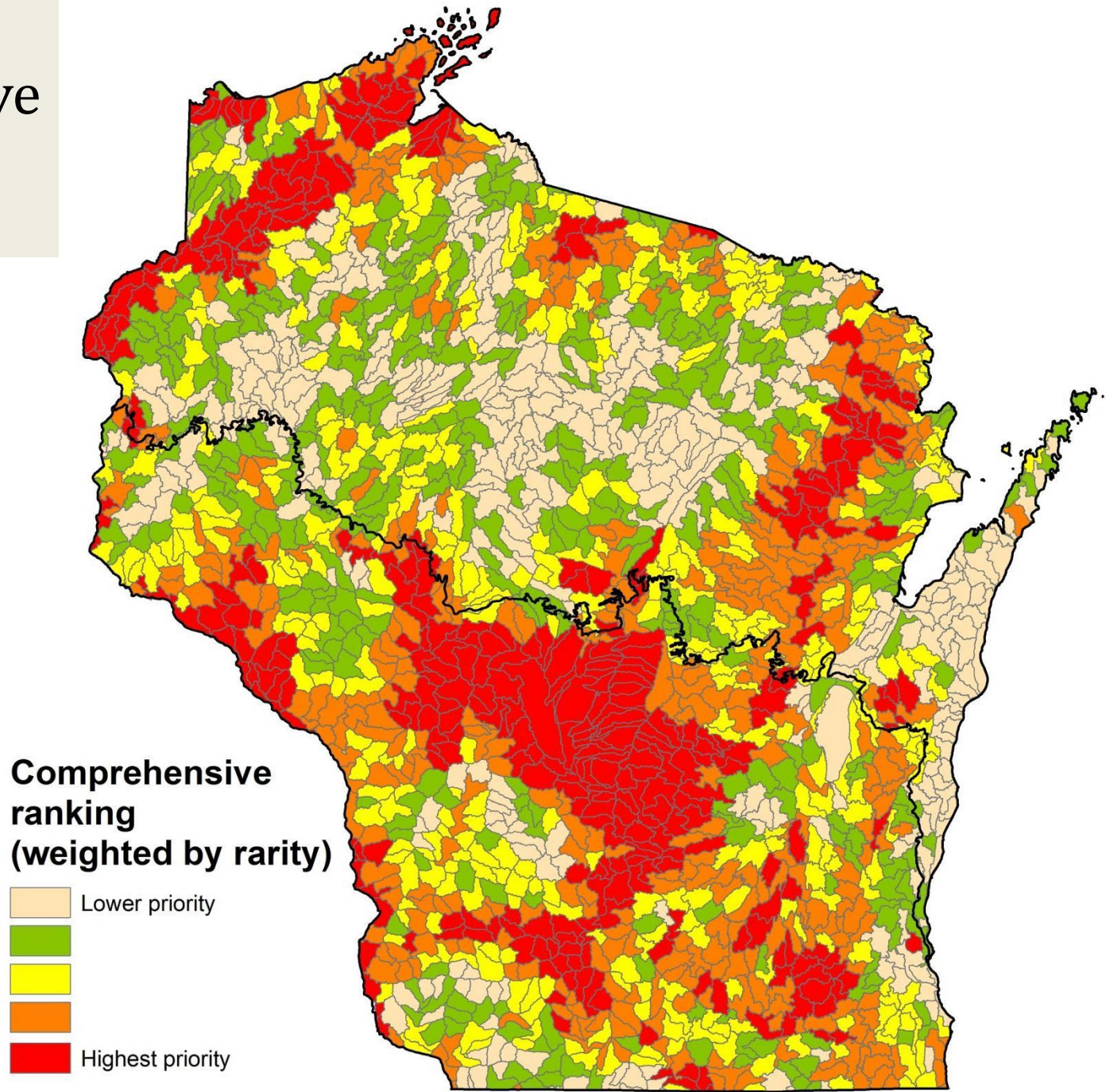
**MAXIMUM GAIN WITH
MINIMUM EFFORT**

COMPREHENSIVE RANKING

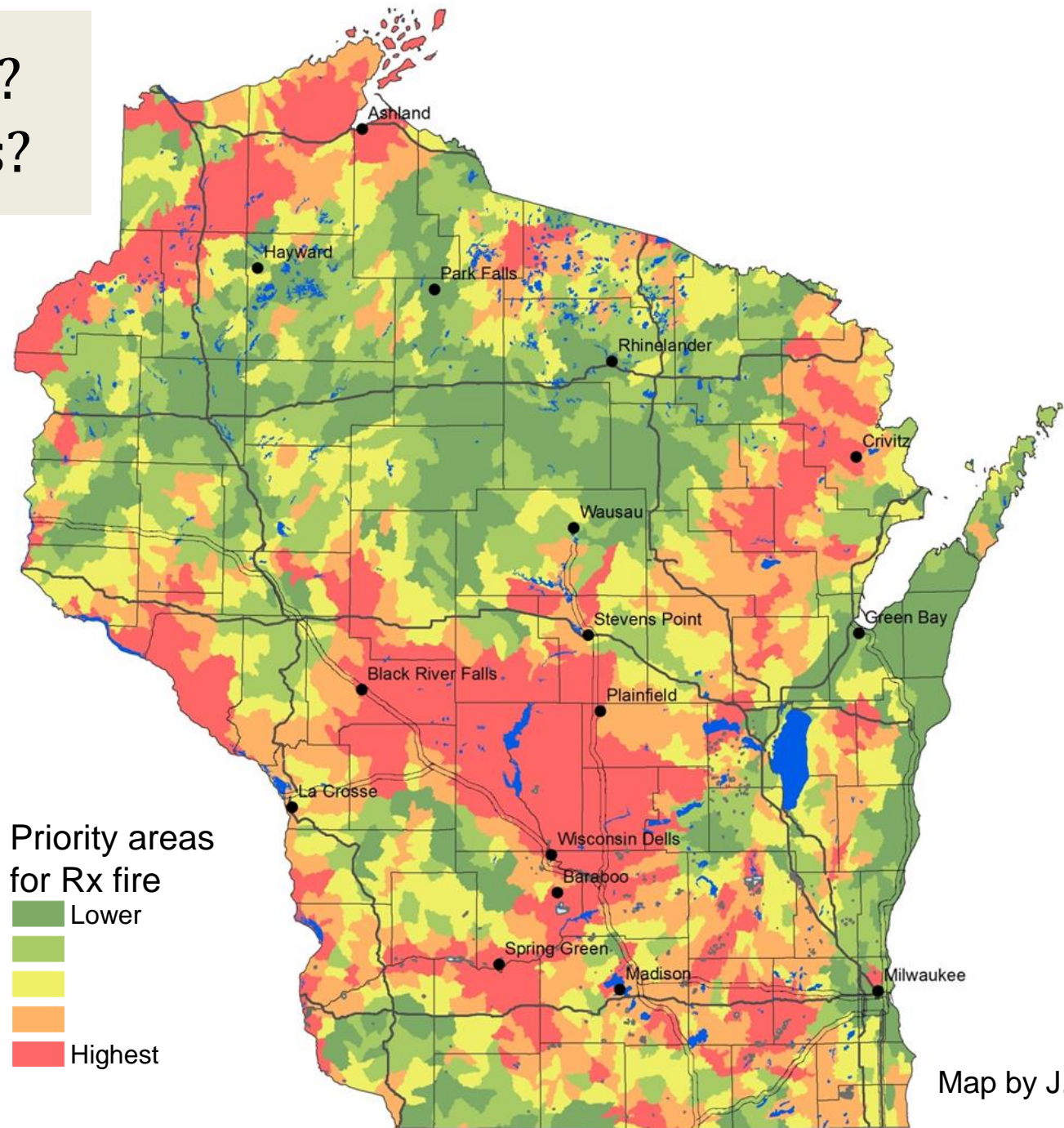
Ecological Benefit
Darker shades =
greater benefit



Comprehensive ranking



Questions?
Comments?



Map by J. Meunier

Use the information “as-is”

- Baseline numbers
- Build partnerships
- Target outreach
- Demonstrate the need for prescribed fire



Modify for end-user needs

- Fine scale analyses
- Expand to other states
- Adjust values for local conditions
- Add to other planning efforts



Future Plans

- Make data available
- Peer reviewed publication
- Products via TPOS Consortium

Next in the TPOS/Lake States Series

October 29: Customizing Data - Don Helmbrecht presents “Local Customization of Fuels Data on the Huron-Manistee and Hiawatha National Forests.”

Off-the-shelf LANDFIRE data is intended to support broad sub-regional-to-regional scale strategic planning efforts but may be 3-5 years out of date at the time of application. Don will show how local knowledge and expertise can be used to update LANDFIRE data for applicability at finer scales with examples from work on the Huron-Manistee and Hiawatha National Forests.

Don is a Wildland Fire Analyst with USDA Forest Service TEAMS Enterprise Unit

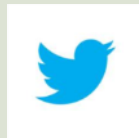
LANDFIRE Online



LANDFIRE National
www.landfire.gov



Conservation Gateway:
<http://nature.ly.landfire>



@[nature LANDFIRE](#)



LANDFIREvideo

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Questions? Comments?



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LANDFIRE@tnc.org Newsletter? Just ask!

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