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Session B2- Building the infrastructure for large-scale connectivity restoration in the Great Lakes Basin

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Building the Infrastructure for Large-Scale Connectivity Restoration in the Great Lakes Basin

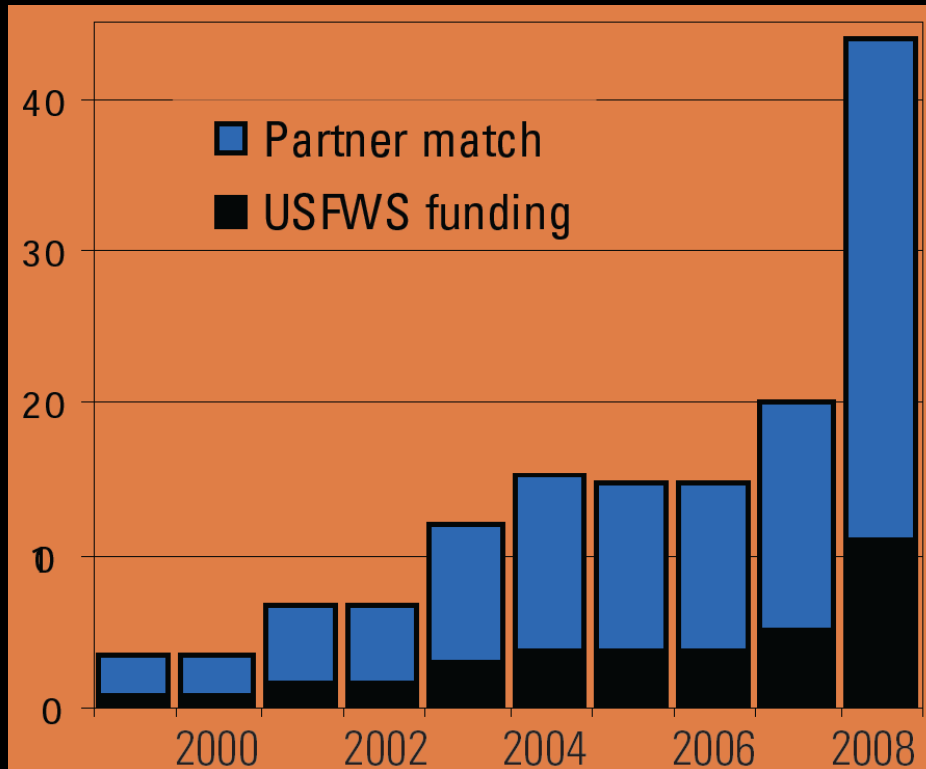
Matt Diebel, Wisconsin Department of Natural Resources

Stewart Cogswell, US Fish and Wildlife Service

Chris Freiburger, Michigan Department of Natural Resources



USFWS National Fish Passage Program Funding for Fish Passage

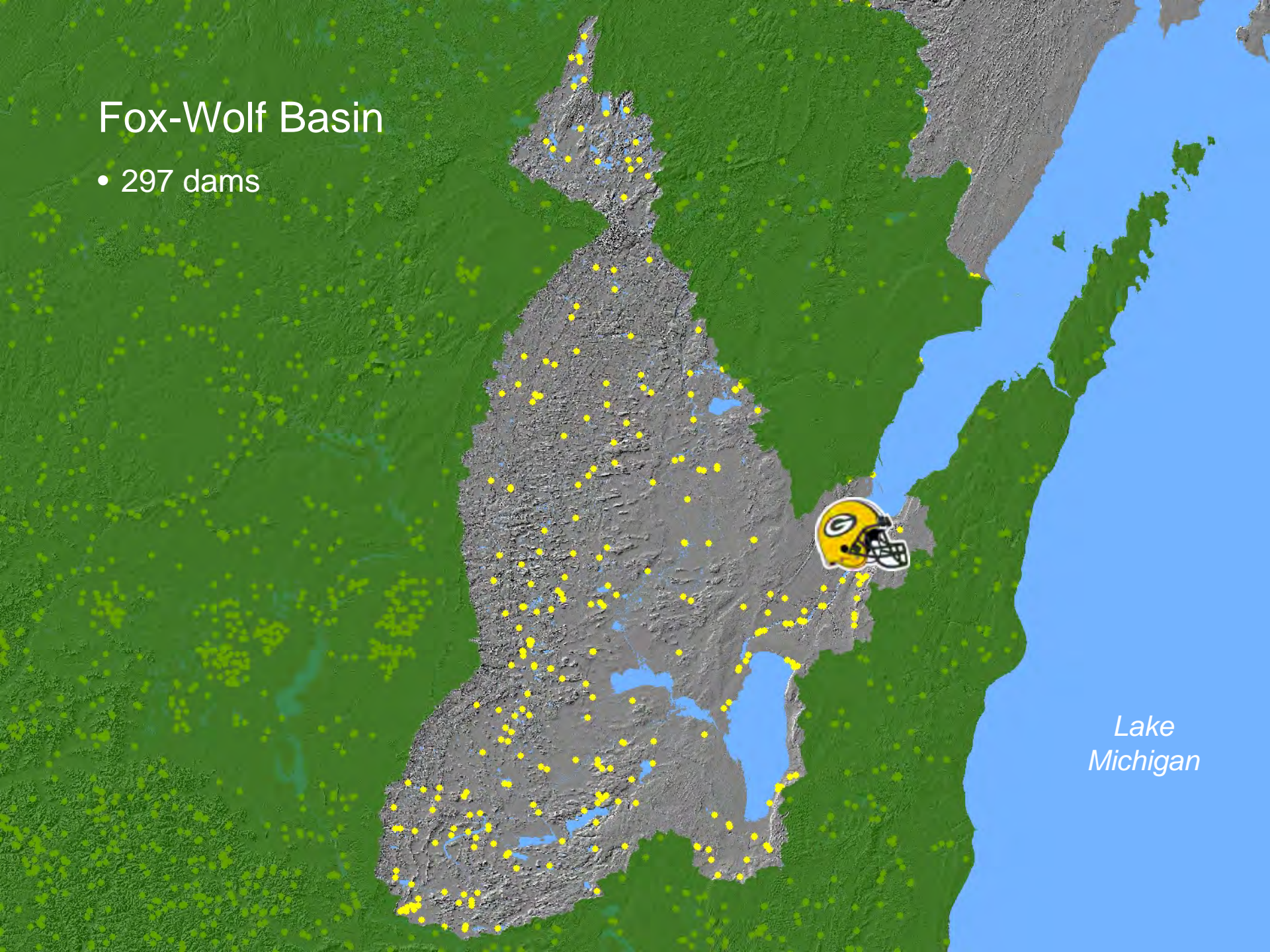


- USFWS National Fish Passage Program, Great Lakes Fish and Wildlife Restoration Act, Great Lakes Basin Fish Habitat Partnership
- NOAA Open Rivers Initiative, Great Lakes Habitat Restoration Program
- EPA Great Lakes Restoration Initiative
- USACE Great Lakes Fisheries and Ecosystem Restoration Program
- Sustain Our Great Lakes
- USDA Forest Service

Our goal is to help spend this money where it can do the most good.

Fox-Wolf Basin

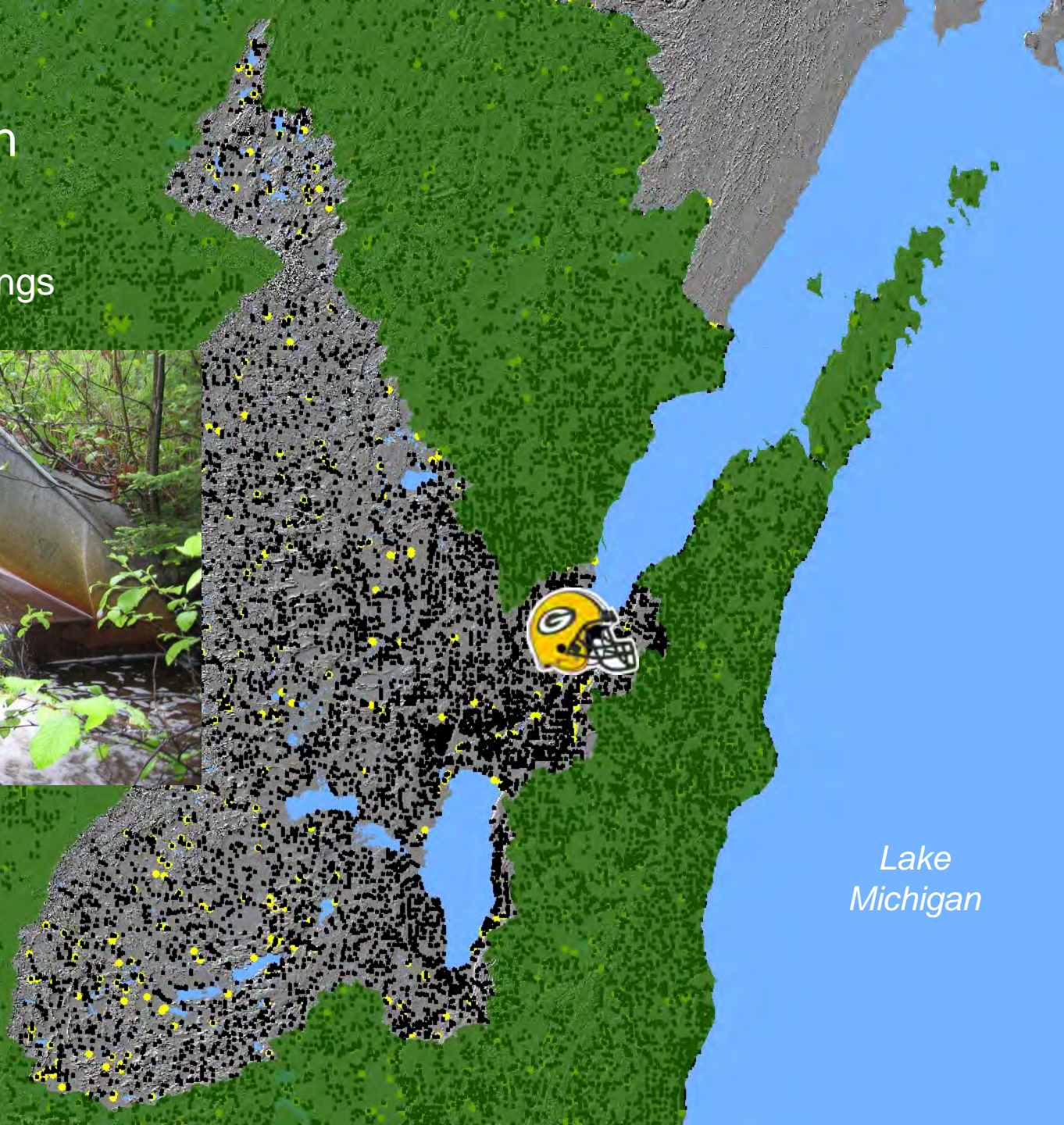
- 297 dams



Lake
Michigan

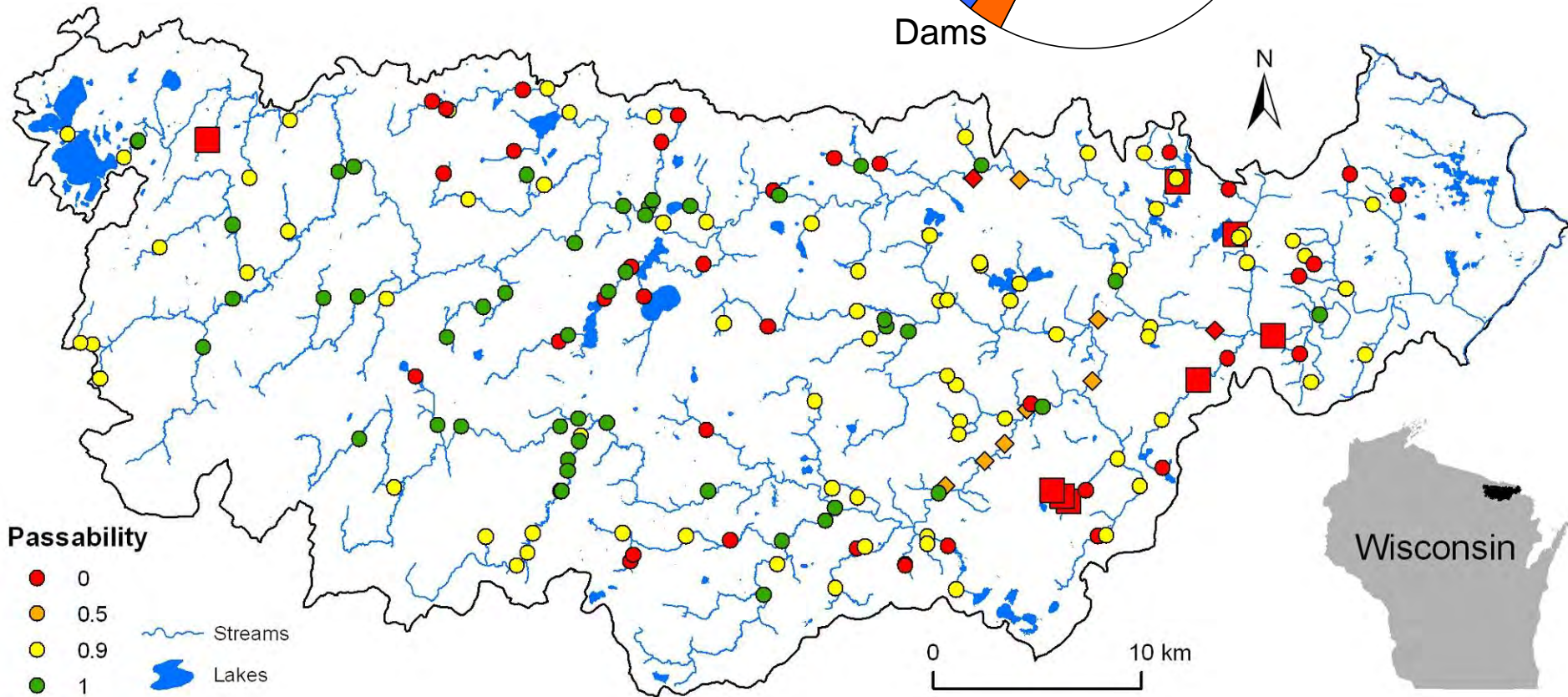
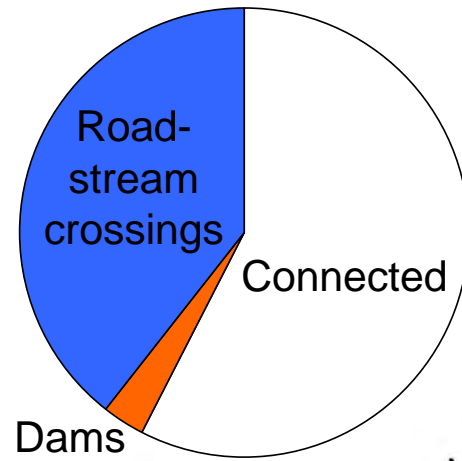
Fox-Wolf Basin

- 297 dams
- 8,420 road crossings



Lake
Michigan

Connectivity Impairment by Dams and Road Crossings





Lake Superior

Net

Two Hearted

Bad

Manitowish

Pine-Popple

Pike

Wisconsin

Lake Huron

Huron
Pines

Conservation
Resource
Alliance

Duck-
Pensaukee

Ozaukee
County

Lake Michigan

Michigan

Great Lakes Aquatic Connectivity Project (GLACP)

- Goal: Build a common infrastructure for storage and analysis of fish passage barrier data.
- Coordinators: Wisconsin DNR, Michigan DNR, USFWS
- Focus on road crossings
- Objectives:
 - Design a standardized road crossing assessment protocol
 - Create a centralized database for fish passage barrier assessment data
 - Integrate analysis tools into this database that will allow users to quantify the connectivity status of watersheds and prioritize barrier removal
 - Engage a wide range of stakeholder groups, including federal, state, and tribal natural resource agencies, transportation agencies, and nonprofit and volunteer conservation groups

<http://conserveonline.org/workspaces/streamconnect>

Road Crossing Inventory Protocol

- Goal: Estimate passability by fish and cost to replace with fully passable crossing.
- 30-60 minutes per crossing
- Equipment:
 - Tape measure
 - Survey rod and level or current meter
 - Trimble Yuma or data sheets



Fish Barrier Data Management

- Goal: Create a centralized repository for stream barrier data to:
- Encourage standardized data collection procedures
- Facilitate large-scale connectivity analysis
- Integrate natural resources and road infrastructure data management
- Michigan – RoadSoft (Michigan Tech)
- Wisconsin – SWIMS database

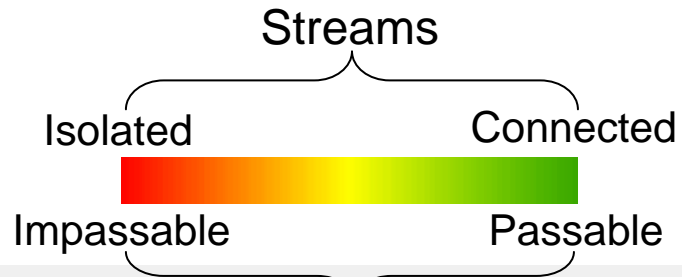




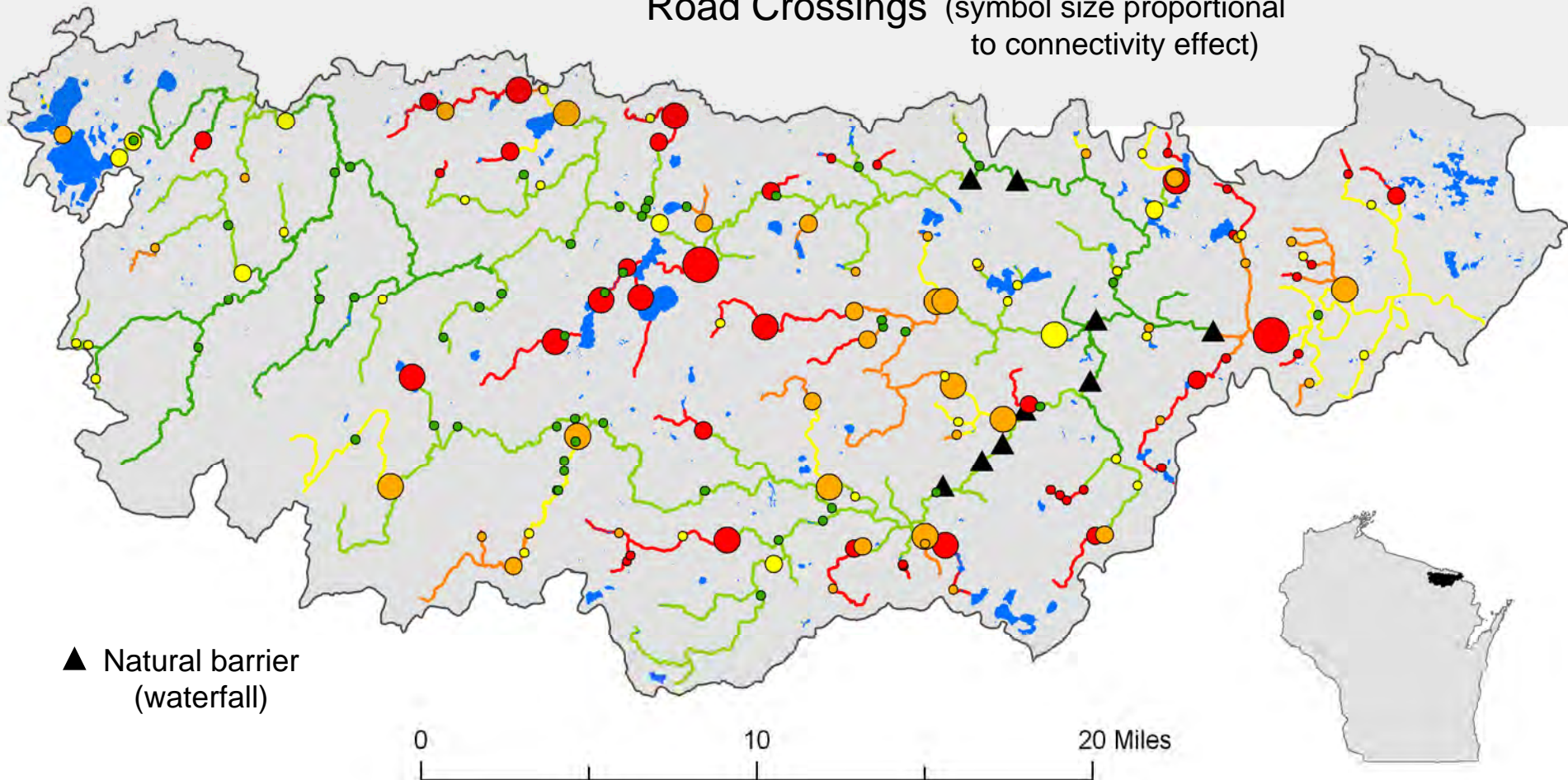
Prioritization Tools

- Improve on “miles of stream connected” metric
- Scenarios involving multiple barriers, species
- Tradeoffs between habitat fragmentation and invasive species spread

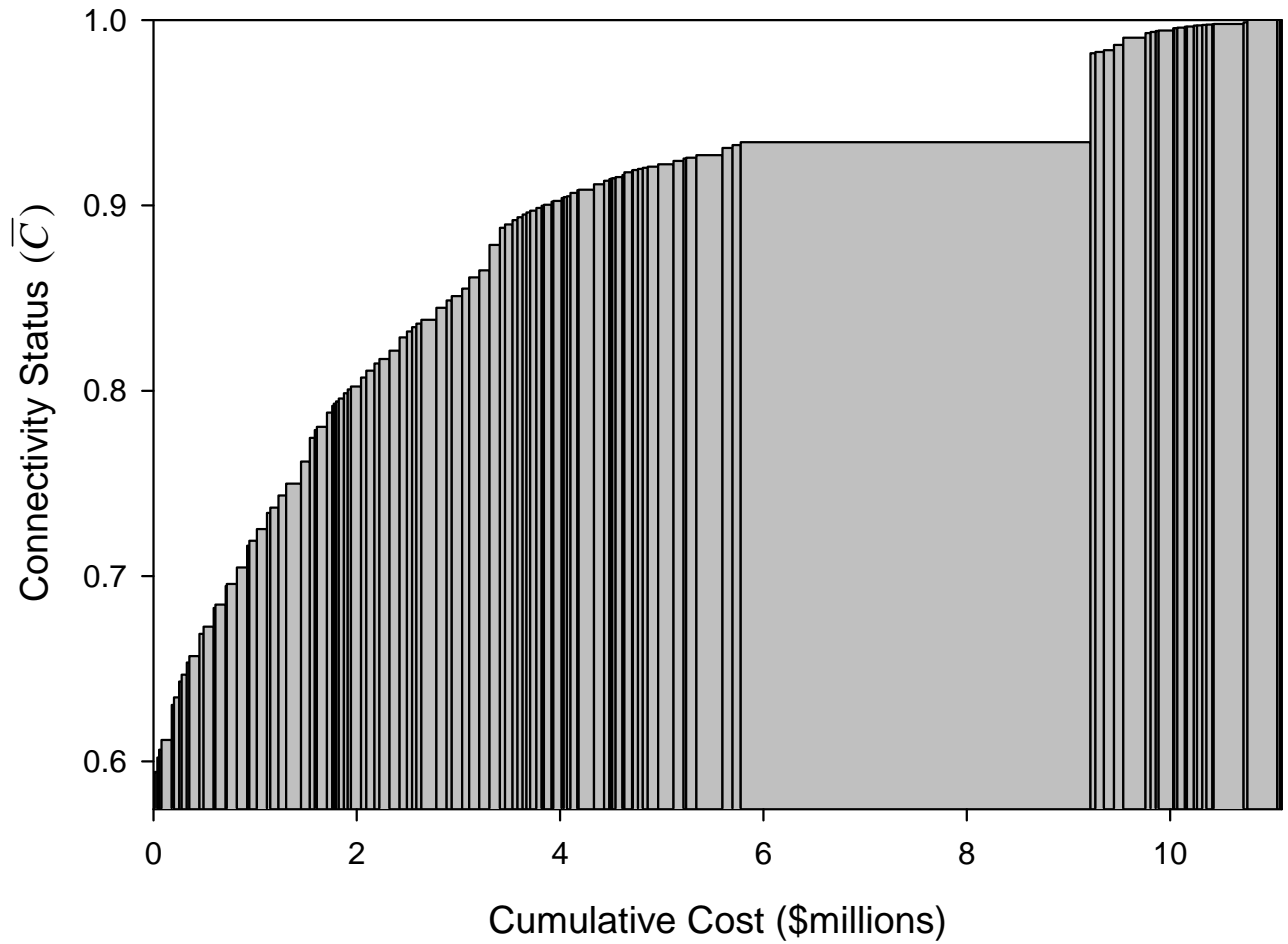
Prioritization Tools



Road Crossings (symbol size proportional to connectivity effect)



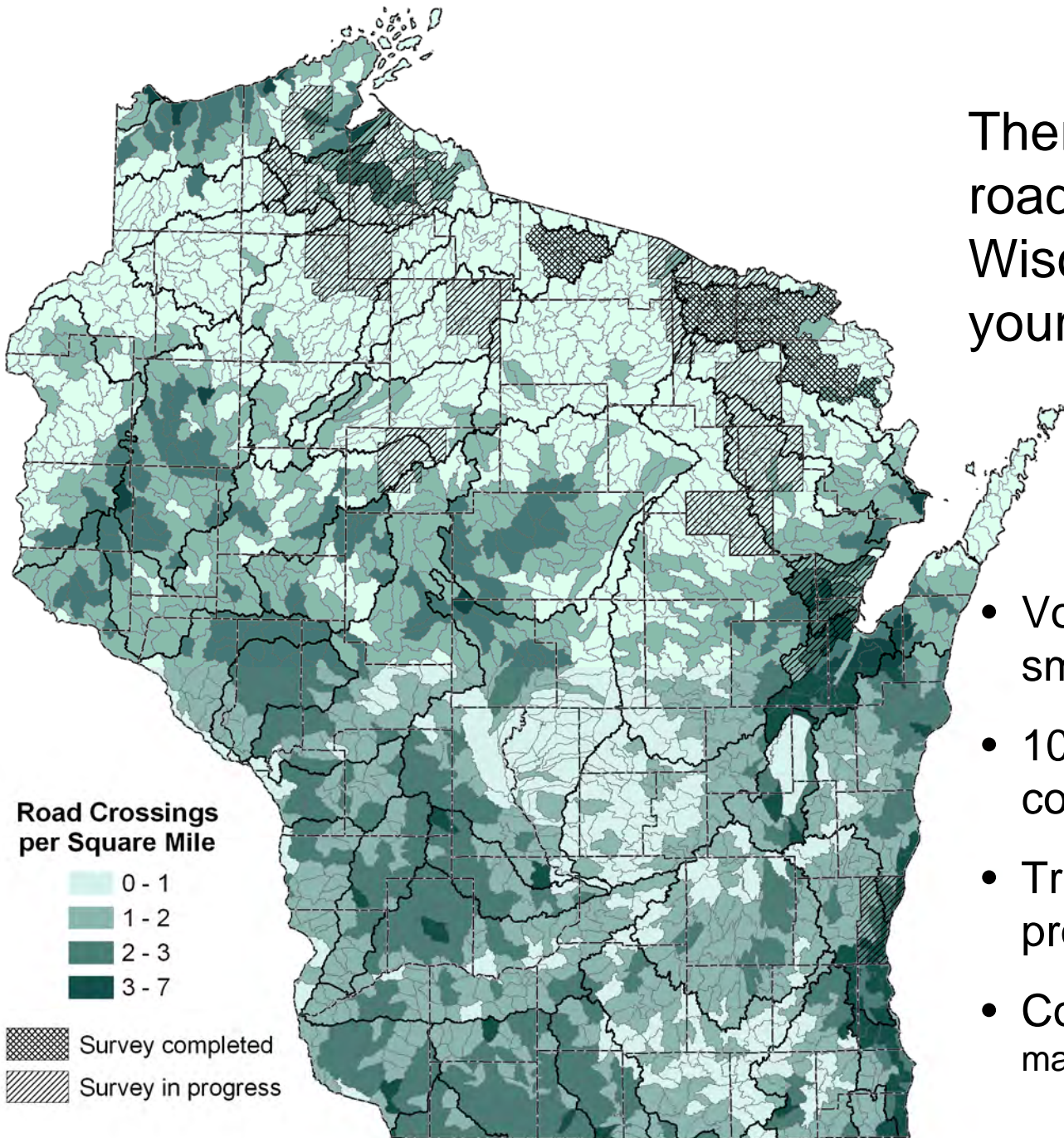
Prioritization Tools



Stakeholder Engagement

- Feds – resources and technologies, coordination with sea lamprey program
- States – coordination with crossing design guidance and permits
- DOTs – implementation and data management
- NGOs – implementation and private funding
- Universities – research
- Tribes – assessment and implementation
- Volunteers – survey labor, influence on local road projects

There are over 75,000 road crossings in Wisconsin... we need your help!



- Volunteer to survey a small watershed
- 10-100 hour time commitment
- Training and equipment provided
- Contact Matt Diebel
matthew.diebel@wisconsin.gov



For more information...

matthew.diebel@wisconsin.gov

<http://conserveonline.org/workspaces/streamconnect>