

# Landscape Conservation Design at the Refuge Complex Scale

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# Landscape Conservation Design in the ETPBR LCC

What's our guidance?

Where to start?

Refuges

State Areas

COAs

How big?

TCF Hypoxia Project

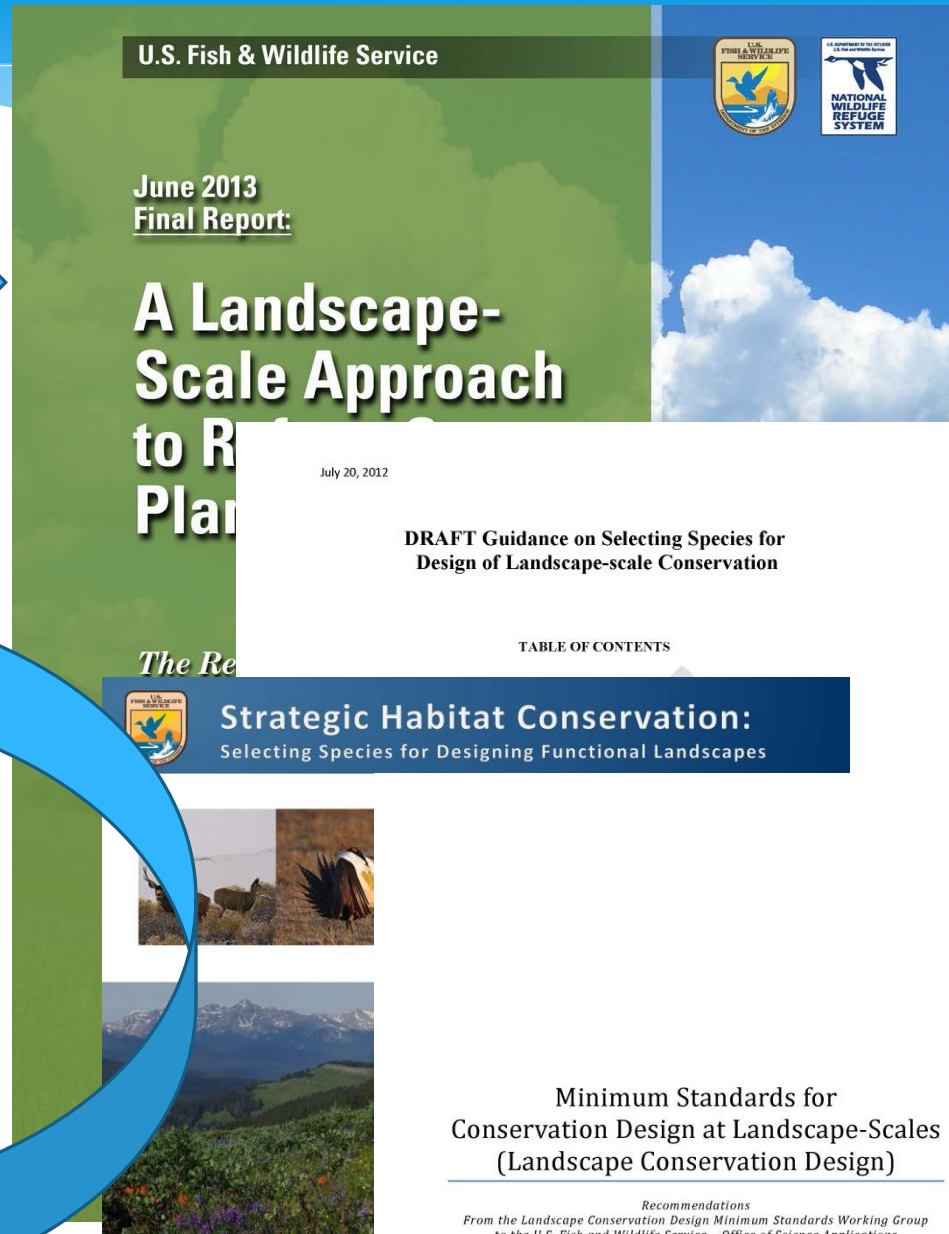
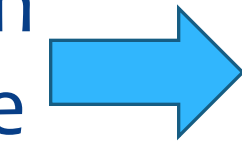
Watersheds/HUCs

“Buffered” LPP boundaries

LPP boundaries

Existing COA boundaries

When to bring in partners?



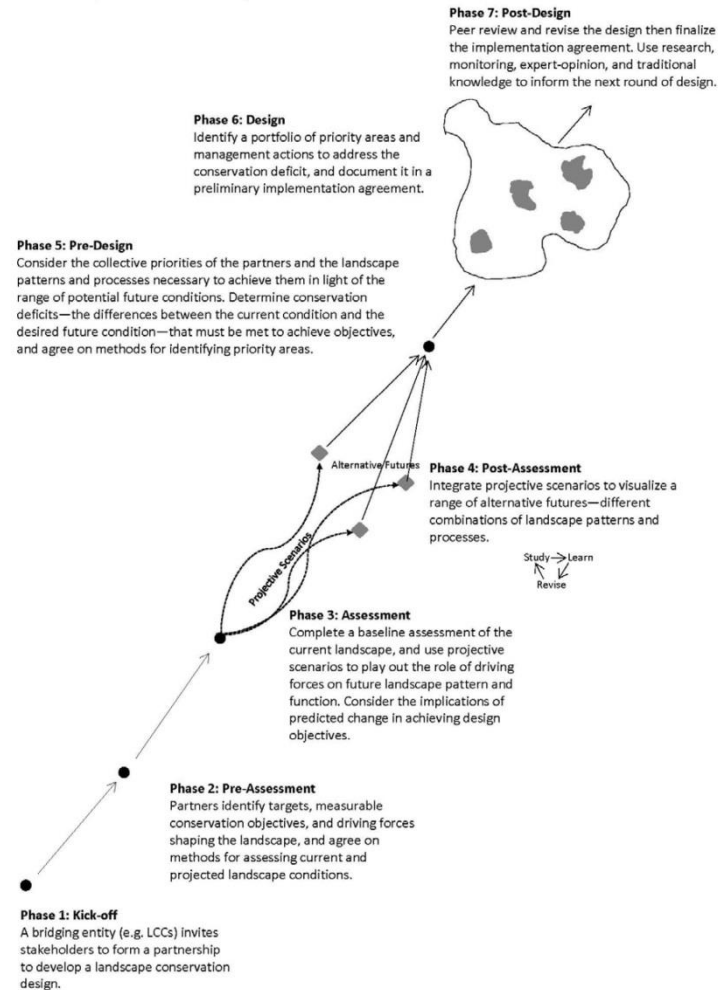
# Minimum Standards, aka Analytic Framework draft

Laid out stepwise approach or phases in LCD development.

2014

Not perfect, yet

Figure 1. Landscape Conservation Design Framework



# Landscape Conservation Design in the ETPBR LCC

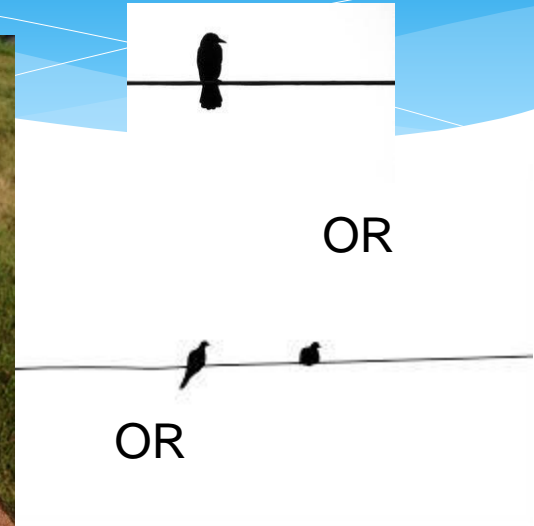
How many goals or objectives are we trying to meet with LCD? At what scale?

Delivery Scales Up:

Landowner, PFW, Refuges, NRCS, State, NGO, WRP, EQIP, MRBI

Planning/Design Scales Down:

- Gulf Watershed Restoration
- UMR Watershed Restoration
- ETPBR Restoration (Surrogates)
- MRBI Watershed (WQ and Habitat)
- Individual Refuge, State Site, or Farm



# What are we trying to achieve?

- \* In this geography, there are goals for natural resources, water quality, agriculture, stormwater management, flood control, recreation, and infrastructure improvement.
- \* Landscape conservation design acknowledges multiple goals
- \* Collaborative conservation.

# Cornerstones of Conservation Design

- \* People
  - \* Partnership-driven
  - \* Multi-jurisdictional
  - \* Multi-Sector
- \* Purpose
- \* Process
- \* Products

# Purpose

- \* To ensure that units of the National Wildlife Refuge System contribute to the vision, goals, and objectives of the larger landscape in which they exist.

# Process

- \* Identify desired landscape characteristics through the integration of quantifiable biological, cultural, social, economic and physical resource objectives.
- \* Identify a shared vision of the future landscape condition that meets conservation goals.



# Process

- \* Identify conservation targets and measurable objectives for those targets.
- \* Evaluate the drivers that influence current and future landscape patterns.
- \* Assess the current and potential future landscape condition.

# Process

- \* Analyze the landscape's ability to support conservation targets at desired levels under a variety of spatial and temporal scenarios.
- \* Provide landscape-scale management, restoration, protection, mitigation, and monitoring strategies to support conservation targets at desired levels.

# Partners

- \* Initial meeting purpose will be to identify objectives and geography for the design process
- \* Rich history of interagency and public interaction:
  - \* Integrated Management Plan for the Illinois River Watershed – 1997
  - \* Illinois River Basin Restoration Comprehensive Plan - 2007

# Products

- \* Science-based, technologically-advanced, spatially-explicit products that reflect the ability of current and potential future landscapes to support priority resources at specific target levels.
- \* Adaptation strategies that identify alternative management approaches to achieve objectives for identified conservation targets

# LCD efforts to date

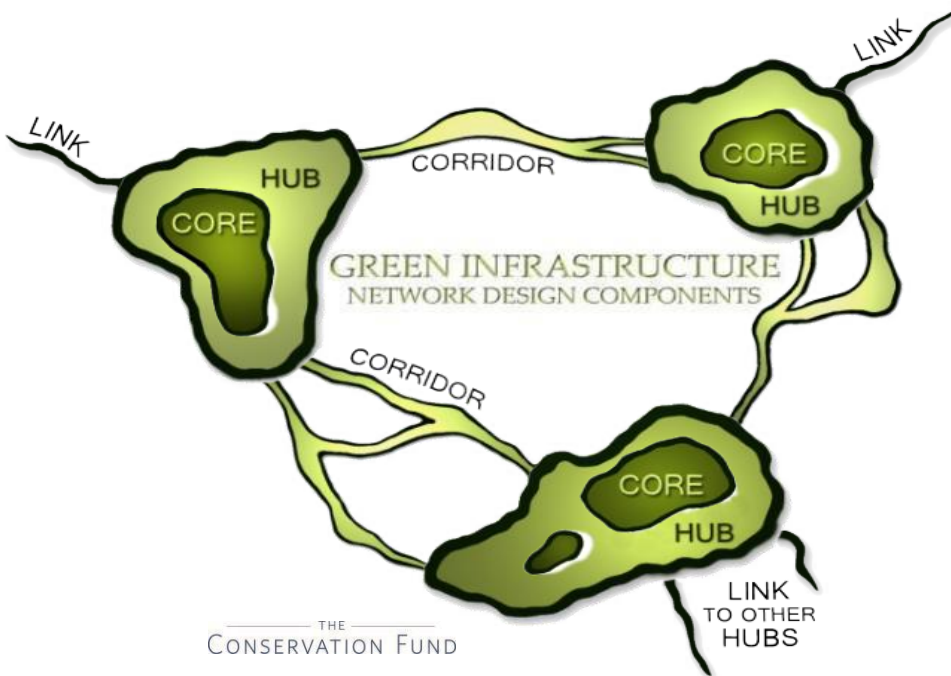
- \* South Atlantic LCC Conservation Blueprint uses projections and optimization to address key habitats and species.
- \* Peninsular Florida LCC used scenario planning to address landscape capability and connectivity
- \* North Atlantic. Landscape prioritization given projected urban growth and climate change

# LCD efforts to date

- Gulf Coastal Plains & Ozarks. Simulation of alternative scenarios coupled with viability models for species of concern
- Gulf Coast Prairie LCC. Identifying Conservation Opportunity Areas by stacking existing priorities
- Eastern Tallgrass Prairie & Big Rivers LCC. Joint tool development among seven LCCs to inform conservation delivery in the MRB.
  - EPIC Urban Monarch LCD identifying where monarch conservation helps people and monarchs in urban areas along I-35 corridor.

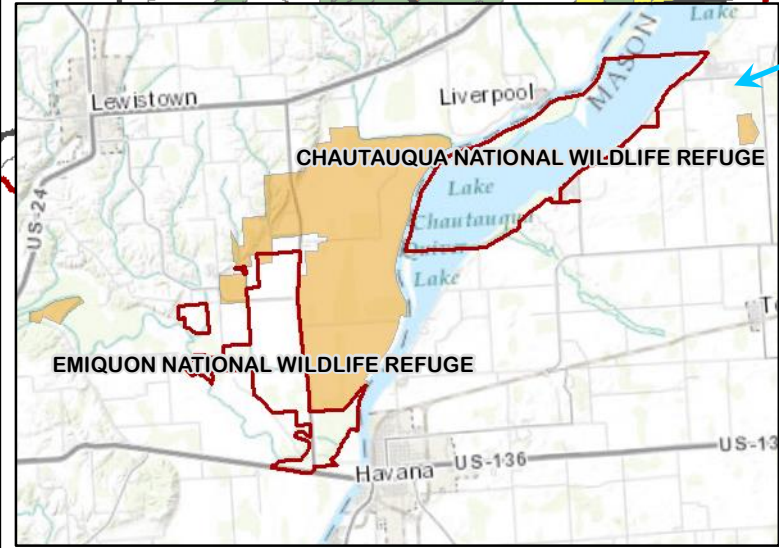
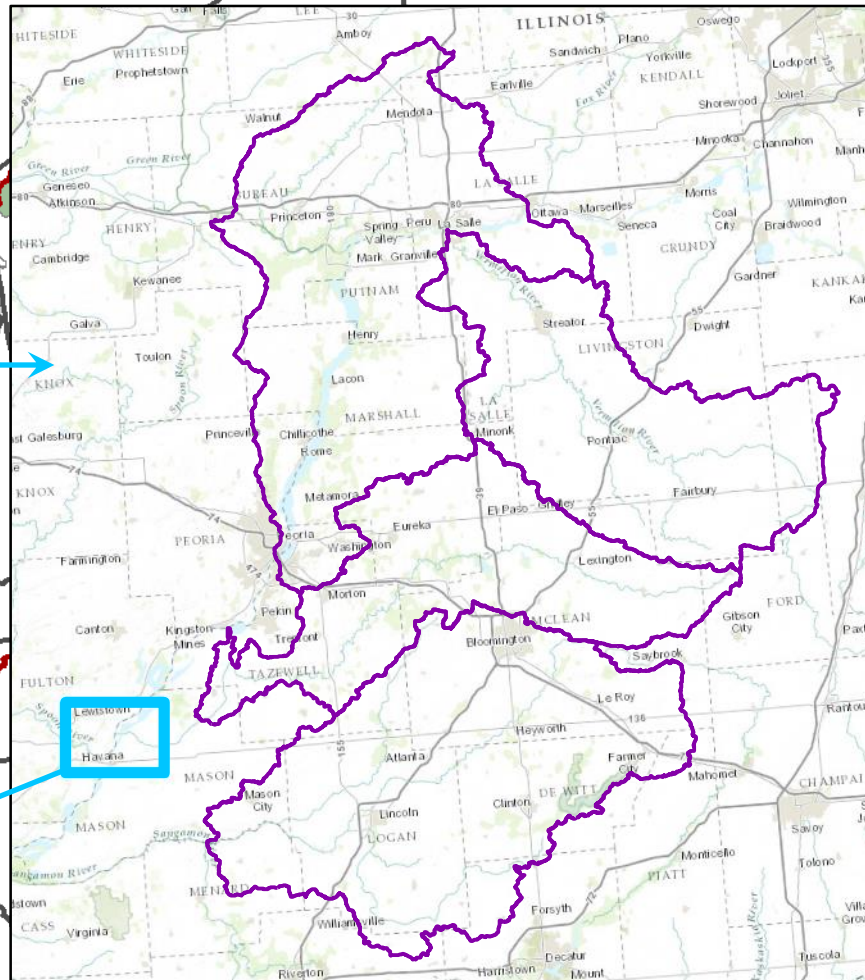
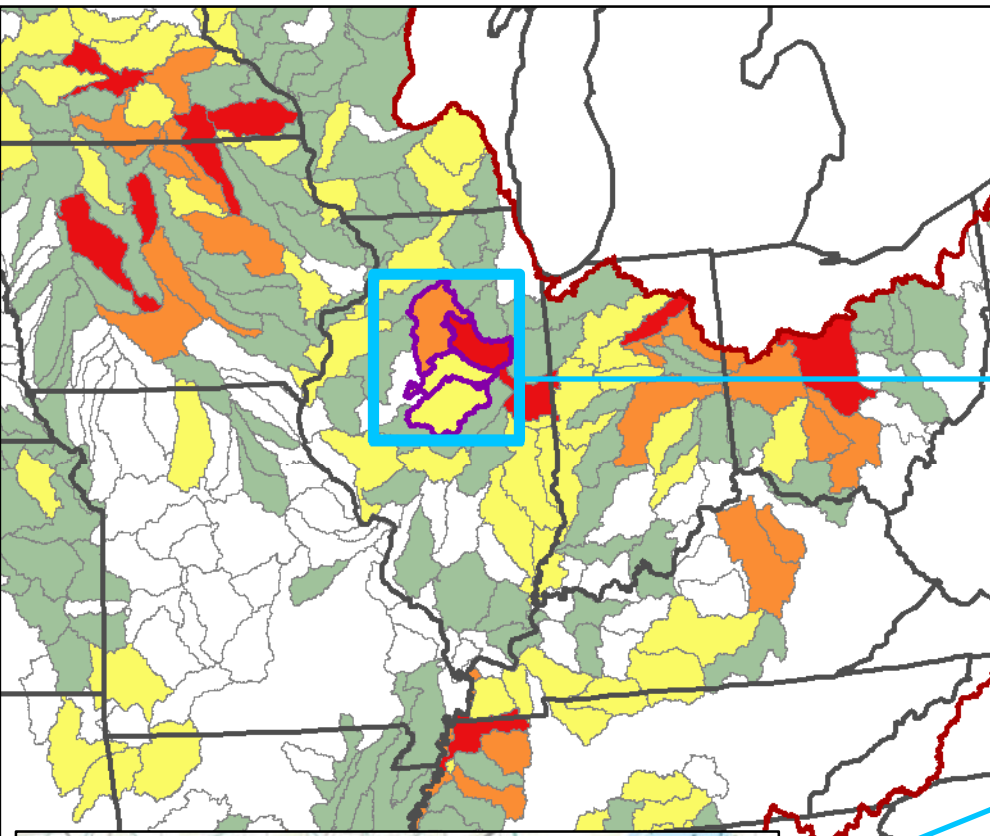
# EPIC Monarch LCD Project

- LCD framework that any city can pick up and use to create a Monarch's View of their city at all scales



Scale	Area	Main stakeholder group(s)
1. Backyards	0.01 acres	homeowners
2. Underutilized spaces, vacant lots, community gardens	0.1 acres	neighborhood organizations
3. Schoolyard	~1.0 acre	school boards
4. Public park or private corporate property	~10 acres	city department staff, corporations, faith-based organizations, golf courses etc.
5. Intra-city corridor	~100 acres	urban planners, mayors, city councils
6. Multi-city pathway	~100,000 acres (central flyway)	regional, state or federal planners and program managers

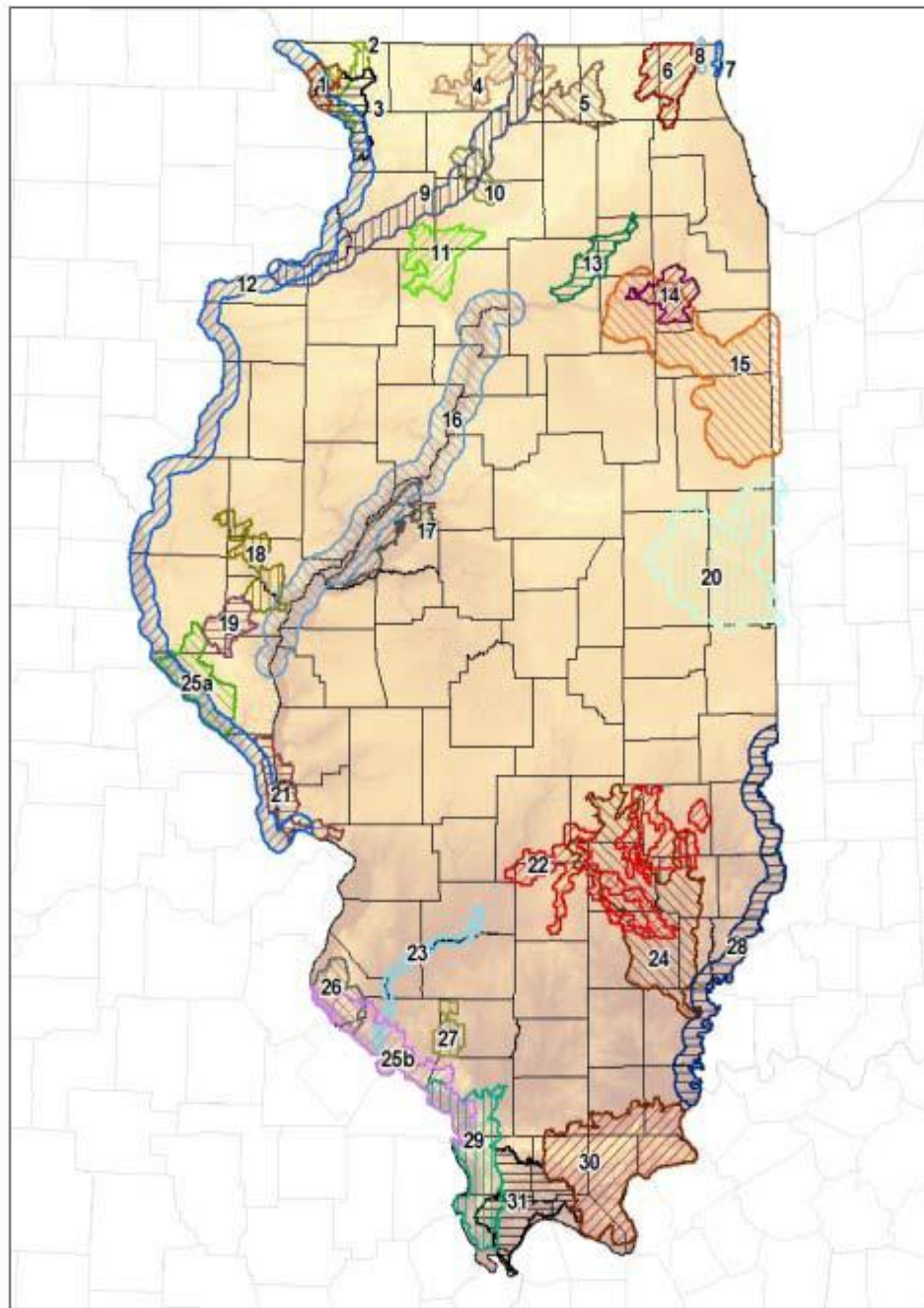




THE  
CONSERVATION FUND



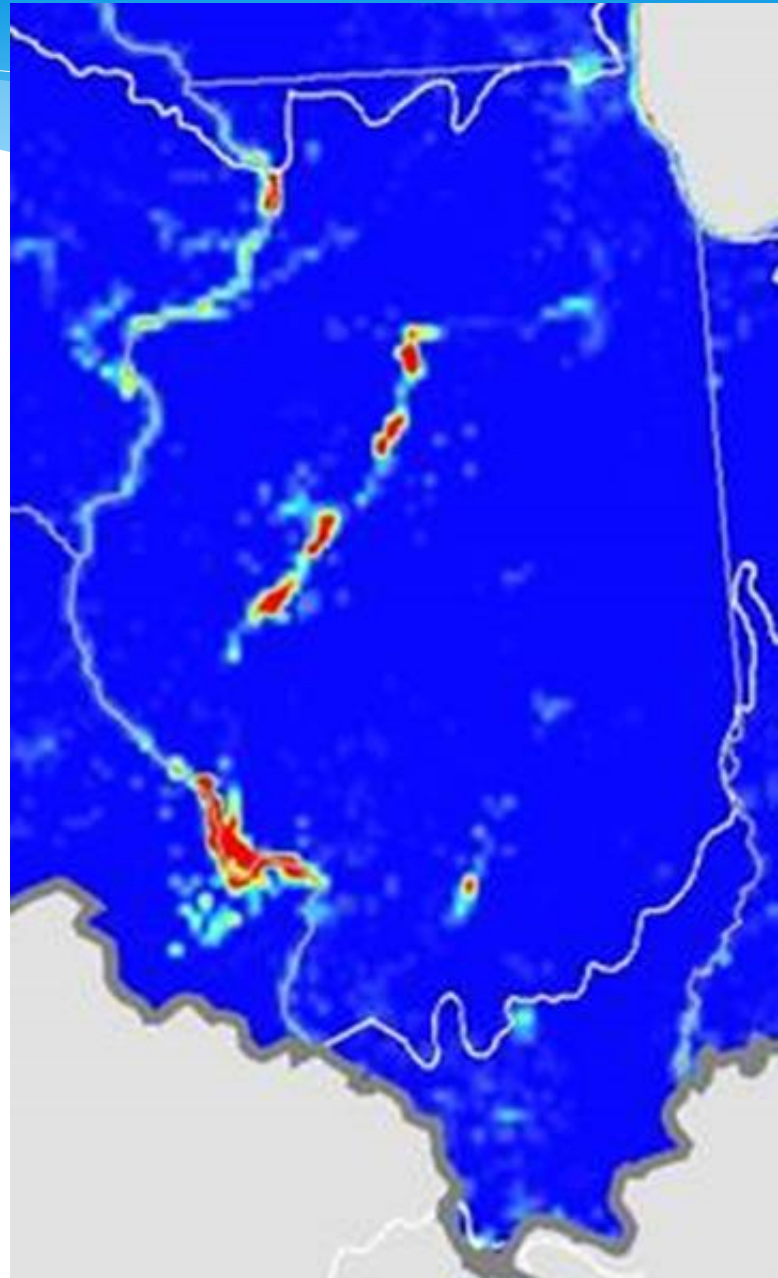
# Illinois Conservation Opportunity Areas



Final Report,  
SWG Grant Project  
No. T-55-P-1

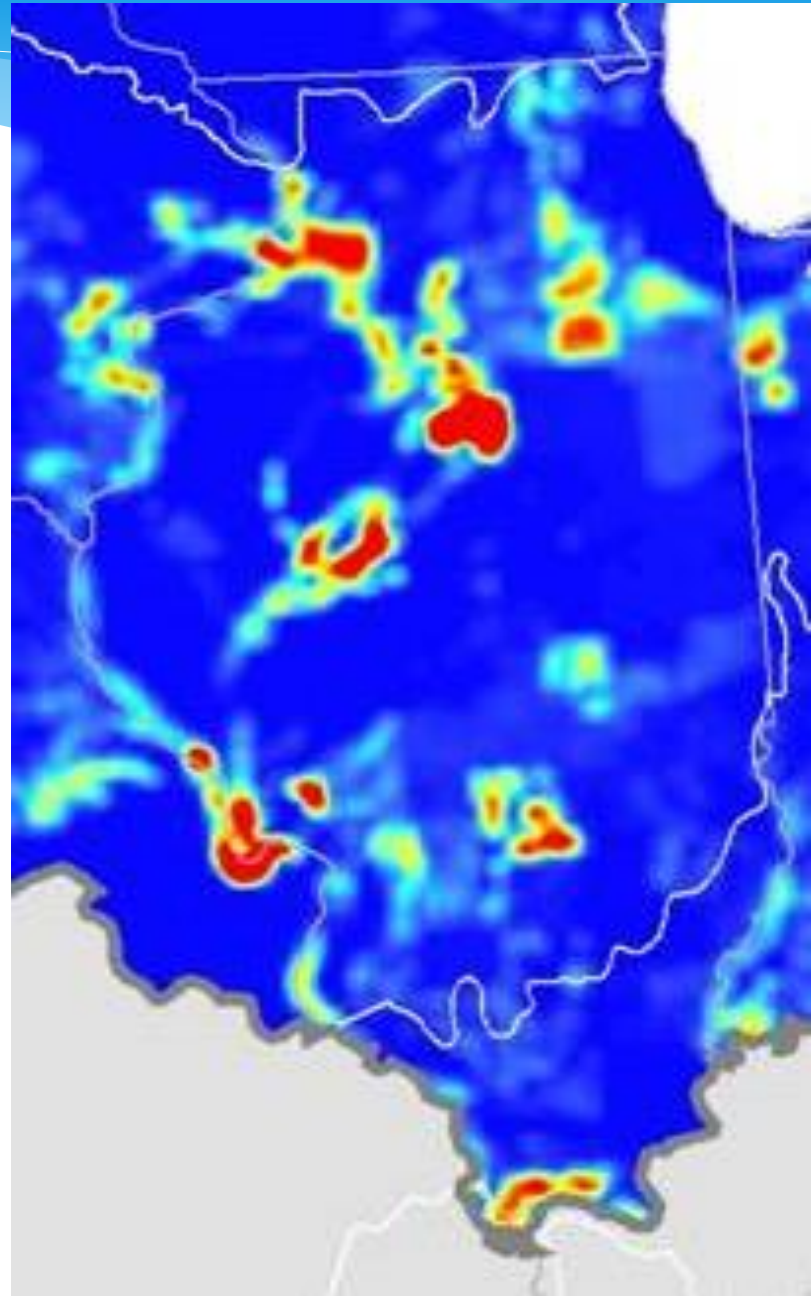
# Upper Mississippi River and Great Lakes Joint Venture

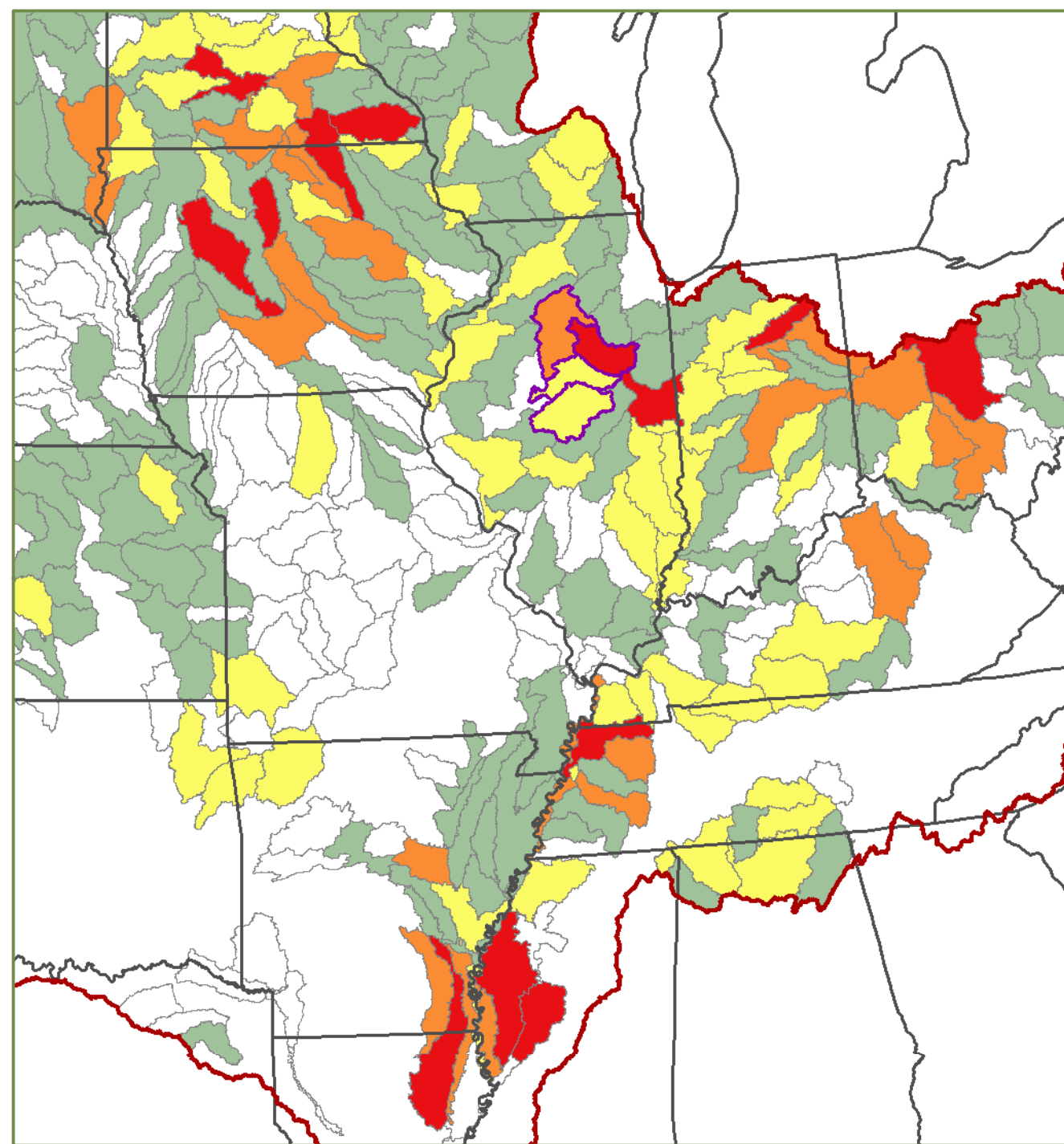
Non-Breeding Habitat Objectives



# Upper Mississippi River and Great Lakes Joint Venture

Habitat restoration potential





- HUC-8 Cluster
- Mississippi River Basin
- State Boundary

### WQ Implementation Focus Areas

Count

- 0
- 1
- 2
- 3
- 4 - 6



0 50 100 200  
Miles

THE  
CONSERVATION FUND

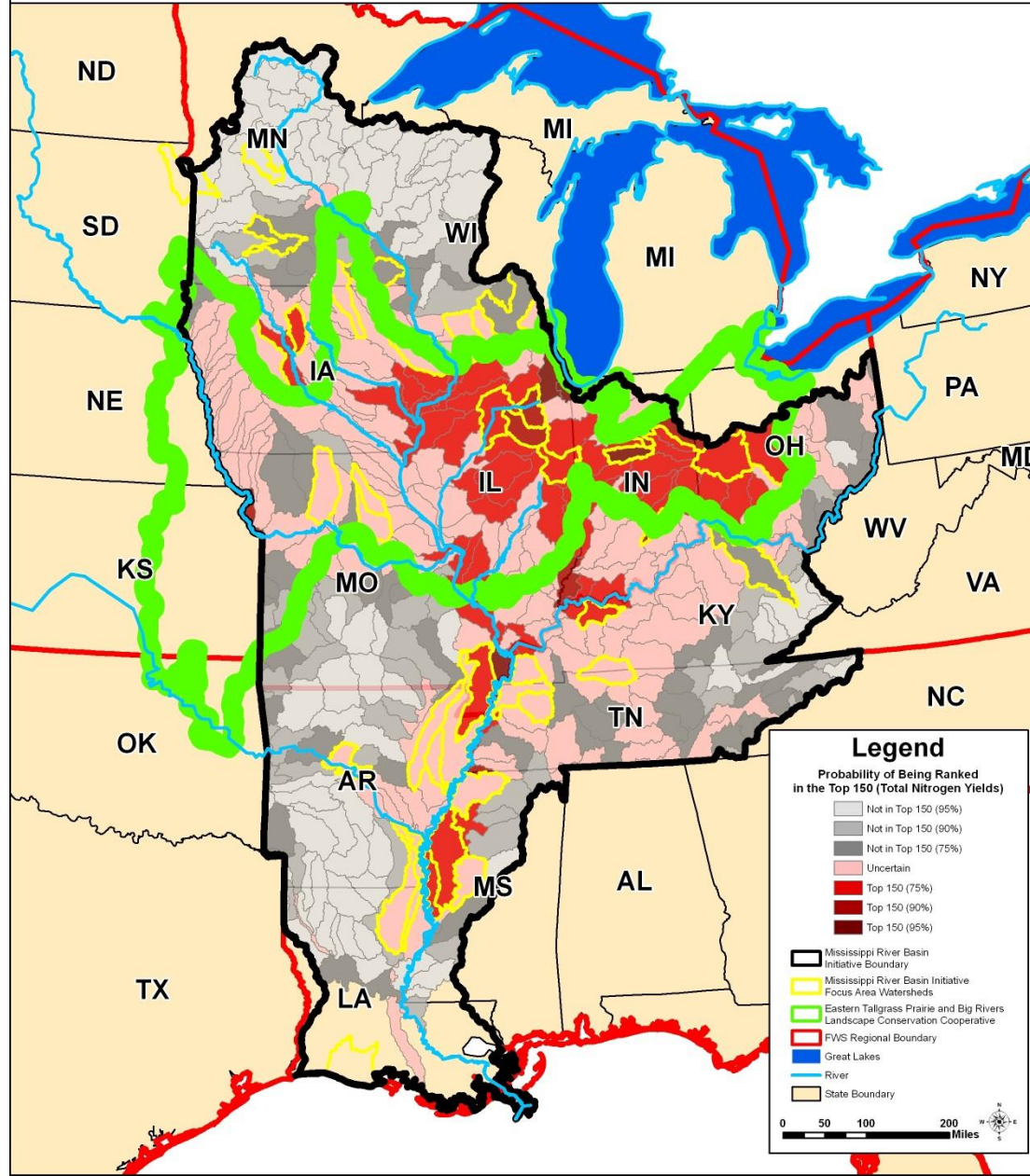




# Mississippi River Basin Initiative Ranking of Total Nitrogen Yields (Data from USDA)

## U.S. Fish and Wildlife Service

Eastern Tallgrass Prairie and Big Rivers Landscape Conservation Cooperative (ETPBR LCC)



# Where are we?

- \* Preparing for the Kick-Off meeting
- \* Potential partners have been contacted
- \* Policy shared, along with portions of our emerging guidance
- \* ETP-BR LCC concurred with engaging TCF support - leveraging

# Landscape Conservation Design

- \* Covers a large geographic area that has many habitats, conditions and human uses
- \* Landscape Conservation Design (LCD) ensures that refuge-level actions contribute to a landscape-level vision
- \* Provides the opportunity to create a recipe for functional landscapes
- \* Will utilize adaptive management - focusing on learning and adapting, through partnerships of managers, scientists and other stakeholders who collaborate on how to create and maintain sustainable ecosystems

# Thanks for Your Time!

Questions?

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