Using Easements to Conserve Biodiversity

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Midwest LTA
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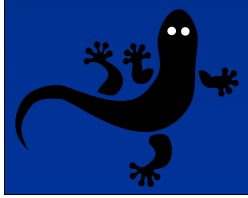
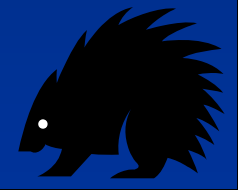
Outline of Talk

- Introduction
- How to Conserve Biodiversity?
- State Wildlife Action Plans
- Funding for Biodiversity Conservation
- Future Opportunities


Introduction

Defenders of Wildlife

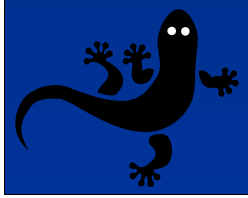
- Mission: to protect native wild animals and plants in their natural habitats, with a focus on conserving biological diversity
- Focus: conservation policy and incentives for private lands
- Approach: collaboration, diverse partnerships

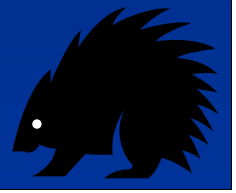
Living Lands Project

- Increase the capacity of land trusts to enhance, restore, and protect wildlife habitat and biodiversity values
- First year of multi-year project
- Partnership with LTA

Biodiversity (Biological Diversity)

- The variety of life and natural processes:
  - Species
  - Genetic variation
  - Communities, ecosystems
  - Predation, symbiosis, etc.
  - Flood, fire, etc.





Why is Biodiversity Important?

- Balance of nature / natural processes
- Many species at risk or in decline
- Natural heritage and legacy
- Protection cheaper than recovery
- Food, medicine, ecosystem services, recreation

Living Lands Project: Why Now?

- Accreditation, Standard 8
  - Conservation value
  - Public benefits
- Funders want strategic planning
- New State Wildlife Action Plans (aka Strategies)

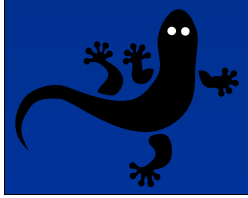
Opportunistic vs. Strategic

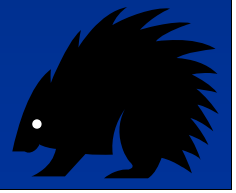
- Opportunistic:
  - Landowners are self-selected
  - Landowners share values with land trust
  - Projects are separate, scattered, not linked

- Strategic:
  - Identify highest priority conservation needs
  - Seek opportunities to conserve these areas
  - Projects linked to landscape-scale conservation

Life Cycle of a Land Trust

Phase 1	Forming	Need easements to prove concept	Opportunistic
Phase 2	Making Progress	Criteria to accept easements	Opportunistic/ Proactive
Phase 3	Mature	Accept and seek easements	Proactive
Phase 4	Finding meaning & context	Use easements and other tools; restoration	Strategic





Living Lands Project

- Assessment phase: to determine the extent of local land trust work that contributes to biodiversity conservation
- Interviews with LTA staff, land trusts, conservation organizations
- Web survey, January 2006
  - Sent to ~800 land trusts
  - 135 responded (18%)
  - 28 states

Survey Results

- Mission includes:
  - habitat **96%**
  - biodiversity **66%**
- Most protected areas…
  - have biodiversity conservation as a goal **38%**
  - have a habitat conservation plan in place **25%**
  - are managed for biodiversity **29%**
  - are restored for biodiversity **17%**
- Interested in increasing capacity…
  - Somewhat or very interested **89%**

Survey Results

- Barriers:
  - Limited stewardship / monitoring funding
  - Limited staff capacity
  - Limited staff expertise
  - Not a priority for funders
  - Not a local community priority
  - Uninterested landowners

Survey Results

- Assistance (or training) needs:
  - Conservation planning
  - Resource management
  - Species management
  - Restoration
  - Monitoring
  - Grants
  - Partnering / merging for effectiveness

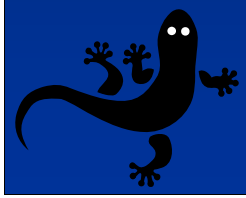
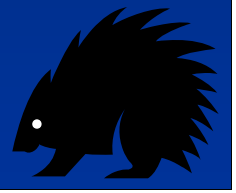
Survey Results

- 16 federal programs listed
  - Have used federal funding **51%**
  - Program not used **70-90%**
  - Program important **0-17%**

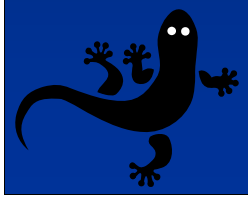
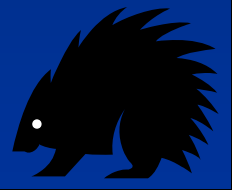
- Help tap into federal funding
  - Knowledge of sources
  - Grant-writing
  - Matching funds
  - Conservation planning
  - Management or restoration skills
  - Closer relationships with NRCS or SWCD


Question:

How do the survey results reflect your experience?


How to Conserve Biodiversity

Site Selection

- Identify high priorities at landscape level:
  - Regional or state agency / organization / partnership
  - May already exist (TNC, SWAP, GAP, NH, land trust?)
  - If a good wheel already exists, don’t invent a new one!!

Site Selection

- Priority areas should consider:
  - Representation (types of sites)
  - Resiliency (size of sites)
  - Redundancy (number of sites)

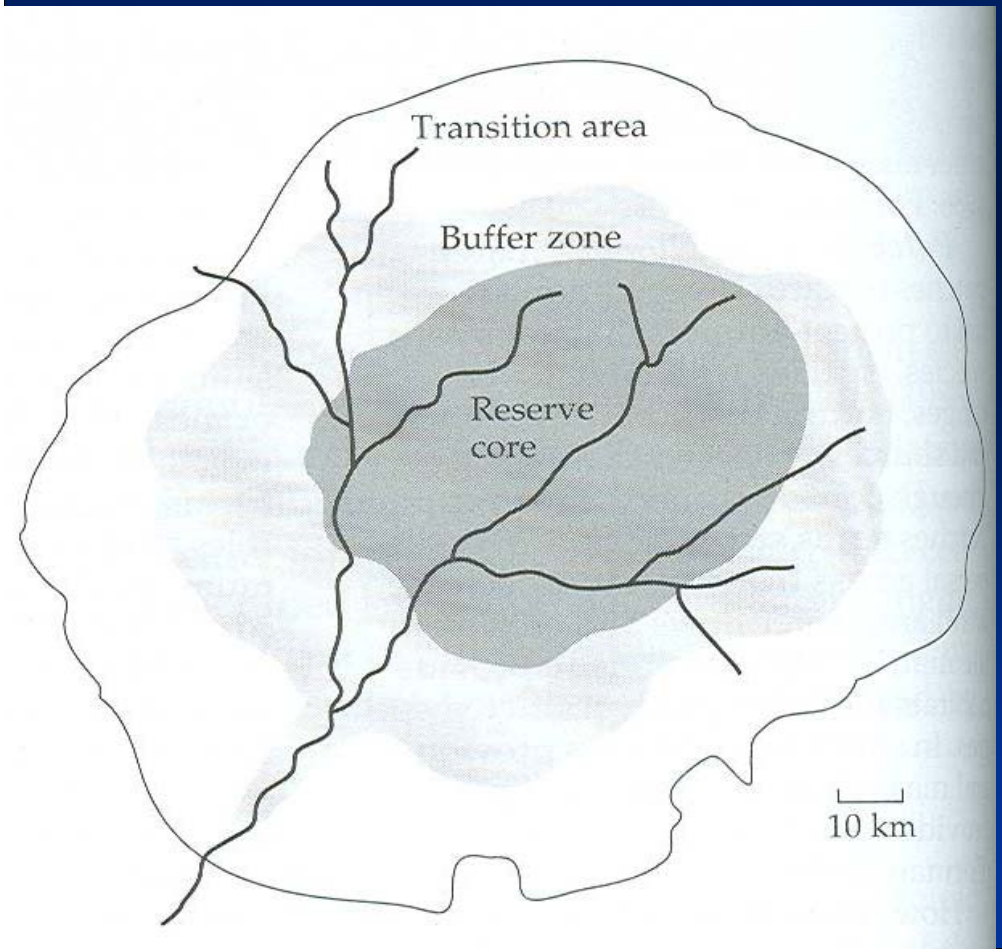
Site Selection

- Priority areas should also consider:
  - At-risk / rare habitats
  - Habitats for multiple species, including at-risk species
  - Functioning ecosystems

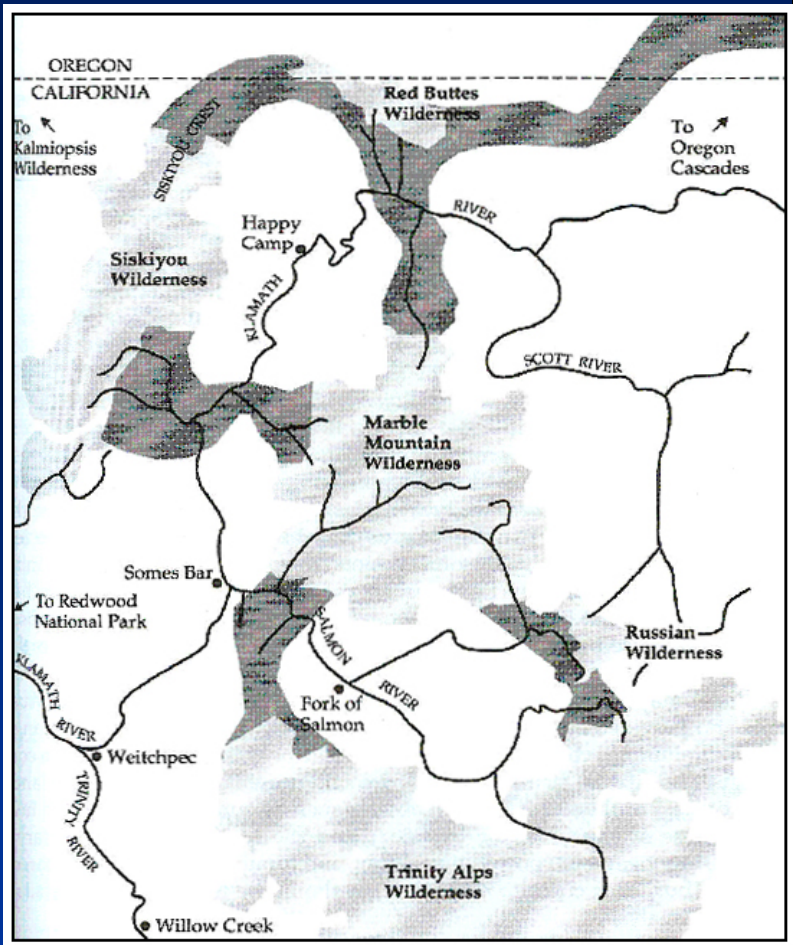
Site Selection

- Find sites that fit into landscape-scale priority areas

Core, buffer, and transition zones



Connectivity



Site Planning

- Inventory species, habitats, conditions:
  - Start with: What's there now?
  - Historical context: What was there?
  - Landscape context: What's nearby?

Site Planning

- What is needed to have functioning ecosystems with diverse native species?
  - Restore / enhance habitat
  - Add missing structural elements
  - Control invasive species
  - Remove barriers / constraints
  - Mimic or restore natural processes

Site Planning

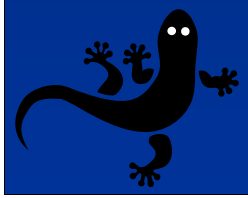
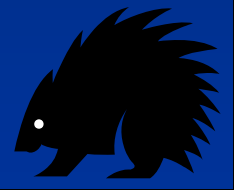
- How can we make it happen?
  - In the easement: refer to a management plan
  - Partnerships
  - Funding
  - What does the landowner need / want?

Site Planning

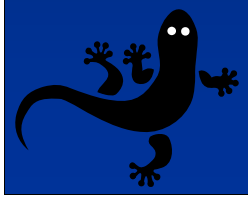
- Improving biodiversity values on existing easements
  - Check or redo inventory for at-risk species and priority habitats
  - Prioritize effort based on value of opportunity
  - Revise easement: refer to management plan
  - Partnerships / funding
  - What does the landowner need or want?

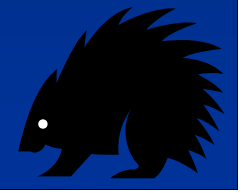

Question:

What challenges or opportunities have you had when trying to be strategic?

State Wildlife Action Plans



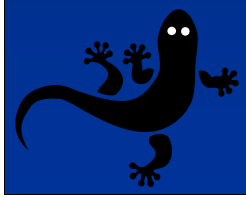
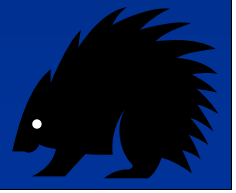


State Wildlife Action Plans

- Required for states to continue receiving State Wildlife Grants
- Completed by October 1, 2005
- Originally “State Comprehensive Wildlife Strategies” (some states use other names)
- Focus is “Species of Greatest Conservation Need” and their habitats


State Wildlife Action Plans

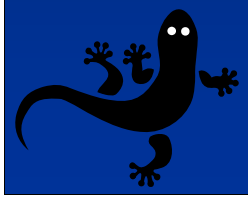
- USFWS approves action plans:
- 68% approved in US (7 in Midwest)
- 22% w/ conditions (4 in Midwest)
- 10% not decided (1 in Midwest)
  (Ohio = ??)

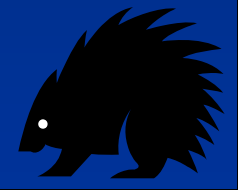



State Wildlife Action Plans: 8 Required Elements

- At-risk species *
- At-risk habitats *
- Threats *
- Conservation actions *
- Monitoring *
- Review
- Coordination *
- Public Participation *

- 50 very different plans





State Wildlife Action Plans: Other Useful Parts

- Ecoregions / watersheds
- Historic distribution of habitats
- Invasive species
- Restoration actions
- Other…

State Wildlife Action Plans: Easements

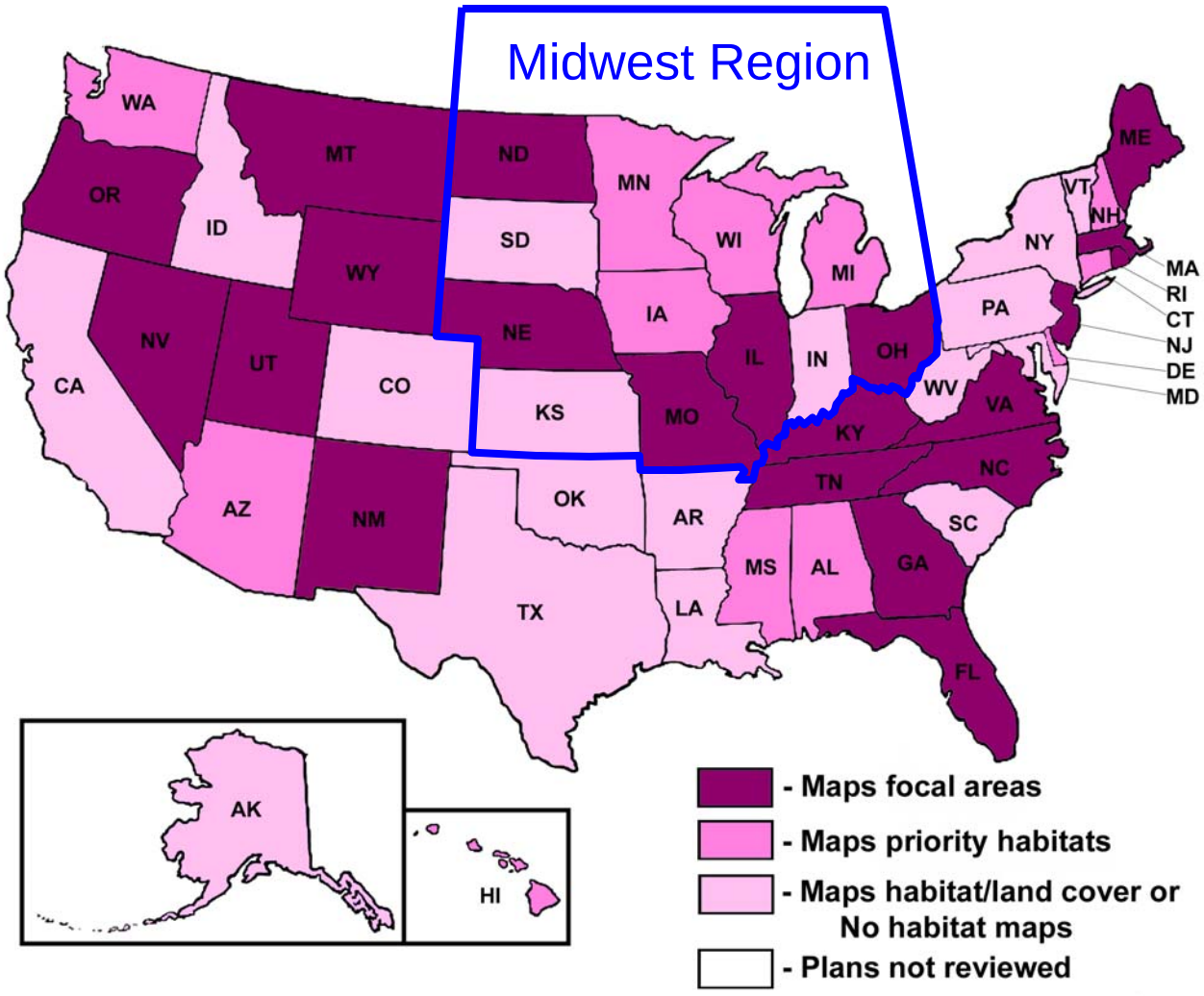
- 42 states included easements in “conservation actions”
- 9 Midwest states included easements. Not these:
  - South Dakota
  - Minnesota
  - Ohio
- Why not ??

State Wildlife Action Plans: Maps and Priorities

- Why map priorities?
  - Conservation planning is a spatial exercise
  - Maps help partners work together
- “Priority habitats” = at-risk or sensitive
- “Focal areas” = subset of at-risk habitats; best conservation opportunities (ecological significance, threats, opportunities)

STATE WILDLIFE PLANS: PRIORITY MAPS

Winter 2006



	National	Midwest
	21	5
	12	4
	17	3

North Dakota: Overview

- Conditionally approved (monitoring)

+ Maps focus areas and priority habitats

+ Easements

http://gf.nd.gov/conservation/toc.html

North Dakota: Easements

- Easements are one of the most effective tools for permanent conservation of endemic grassland birds and other grassland-dependent wildlife
- An easement may not exceed 99 years
- The law preventing perpetual easements is a major obstacle to retaining intact native prairie habitat, and therefore to prevent grassland birds from becoming endangered
- N.D.C.C § 47-05-02.1

North Dakota: Acquisition

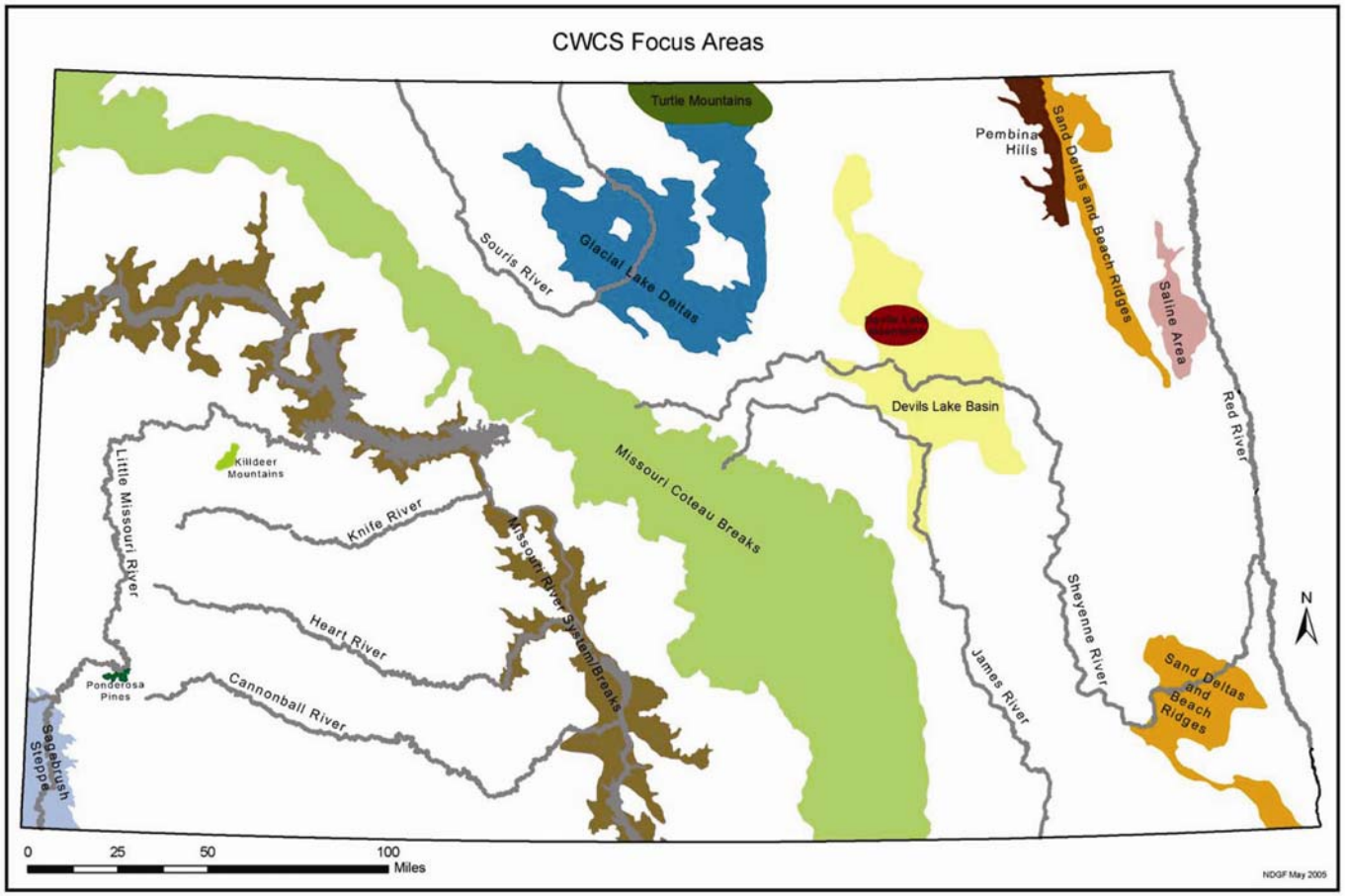
- Before farmland or ranchland may be purchased by a nonprofit organization for conserving natural areas and habitats…
  - Ag commissioner convenes advisory committee
  - Public hearing with county commissioners
  - Governor must approve proposed acquisition
- Significant disincentive for land trusts and landowners
- N.D.C.C § 10-06.1-10

North Dakota: Species

- 100 species of conservation concern
- Three levels of priority
- Information for each species:
  - Status
  - Distribution and abundance
  - Habitat requirements
  - Threats
  - Management practices
  - Research and monitoring
  - References

North Dakota: Priorities

- 21 focus areas, highly variable in size
- Ensure representation of state's biodiversity
- Native vegetation or natural community type rare to North Dakota



Note: The focus area "CRP" is not depicted on this map. The digital CRP information has not yet been obtained for North Dakota.

South Dakota: Overview

- Conditionally approved
  - coordination with agencies
  - public involvement

- Maps ecosystems but not priority habitats or focus areas

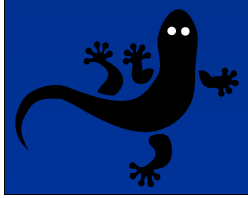
- Easements (not even mentioned)

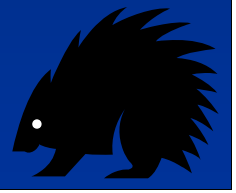
- www.sdgfp.info/wildlife/diversity/Final_CWCP.pdf

South Dakota: Species

- 90 species of greatest conservation need

- Information includes, for each species:
  - current protection status
  - distribution historically and currently within SD
  - habitat and historical ecosystems
  - causes of decline
  - existing recovery plans or conservation strategies





South Dakota: Priorities

- Maintain / restore >= 10% of historical occurrence for each ecosystem in each ecoregion
- Math but no map
- Species of concern get habitat through the 10% ecosystem conservation, plus non-habitat actions
- Evaluate and adjust percent

Minnesota: Overview

+ Approved

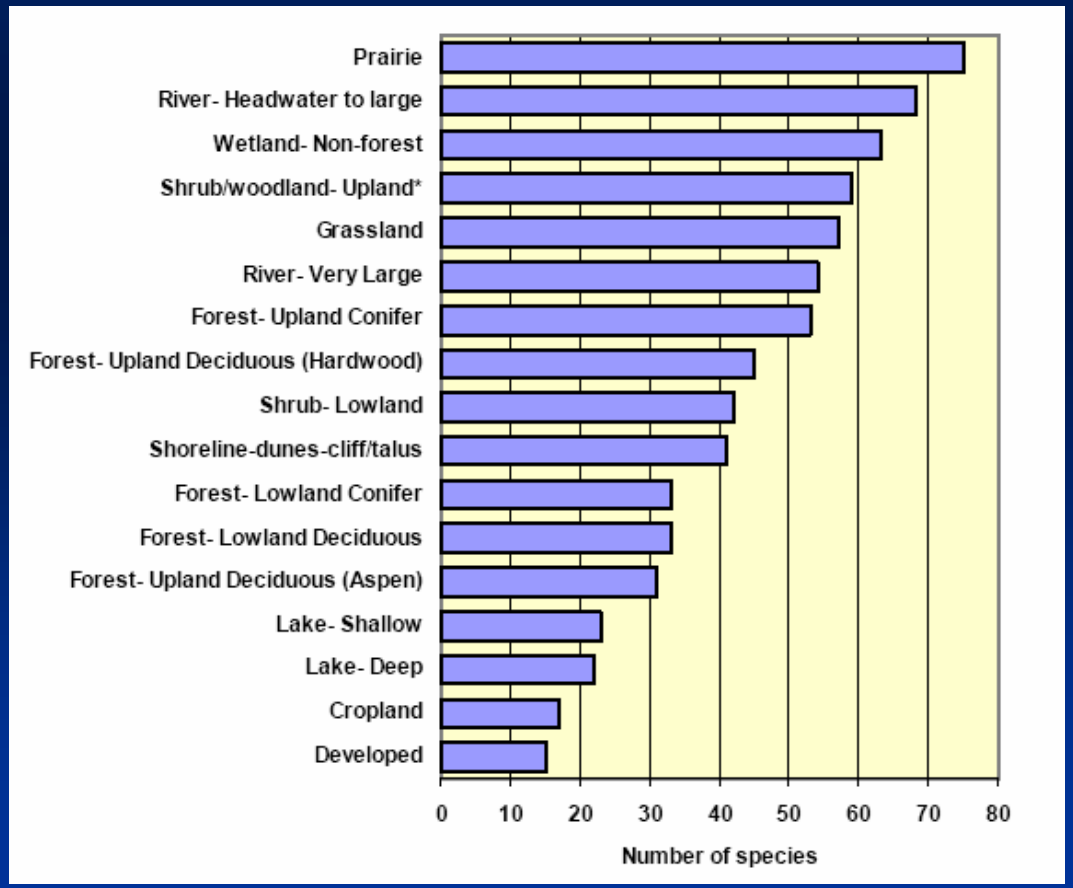
~ Maps priority habitats but not focus areas

- Easements (not mentioned)

www.dnr.state.mn.us/cwcs

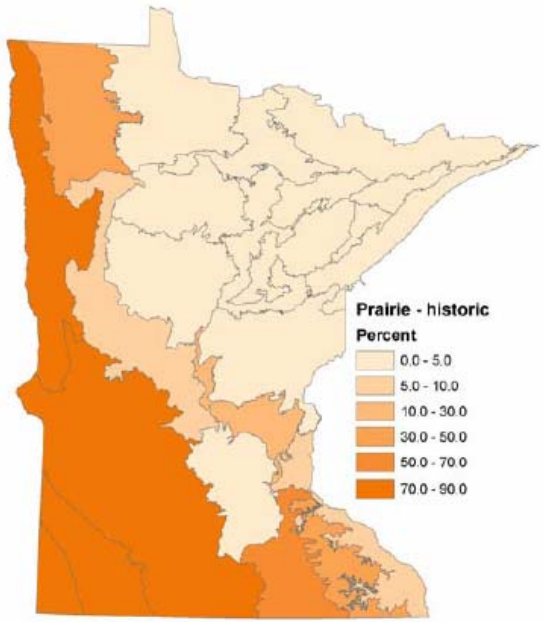
Minnesota: Species

- 292 Species of Greatest Conservation Need
- Number in each habitat
- Key habitats = all except cropland and developed

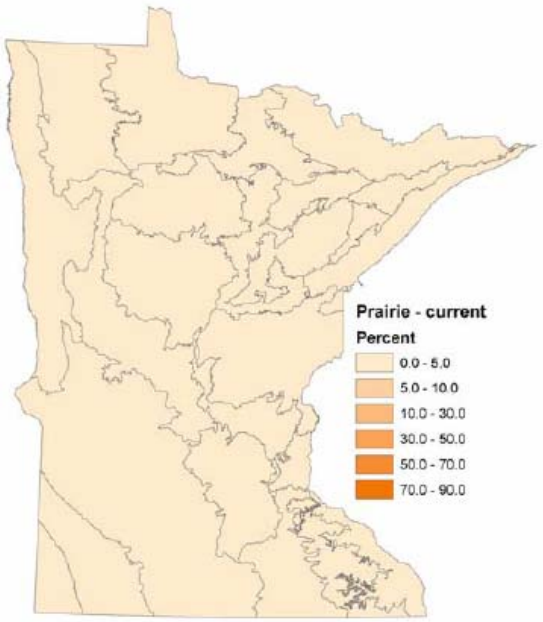


Minnesota: Habitats

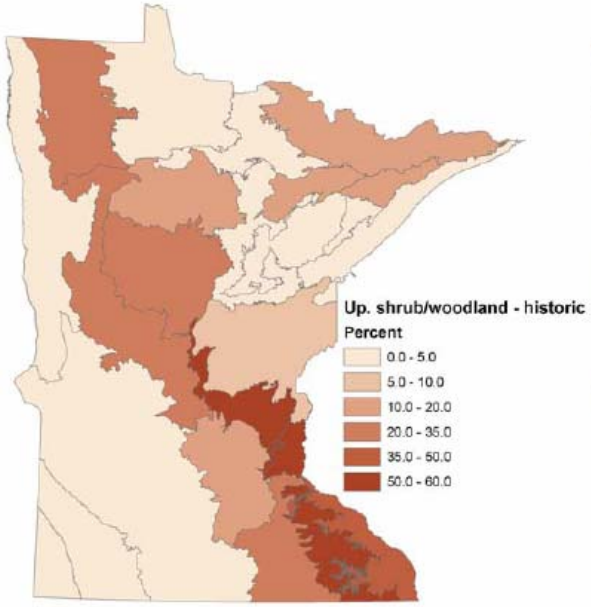
- Historic (1929) and current distribution
- Prairie
- Shrub / Woodland



Source: Marschner 1929



Source: MN GAP 1994



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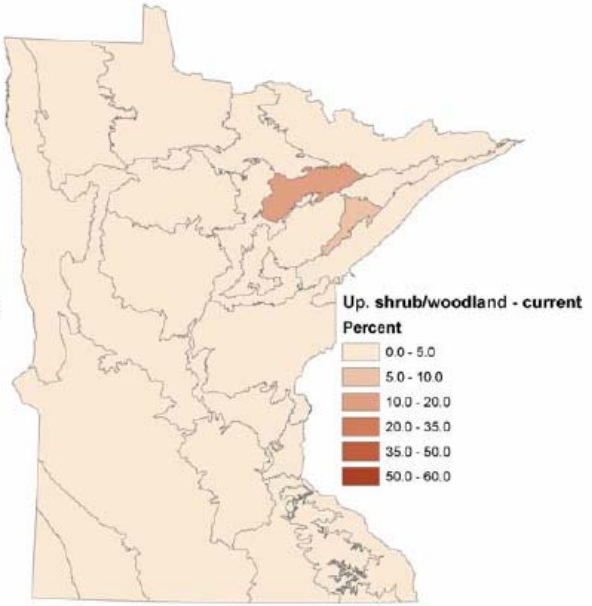
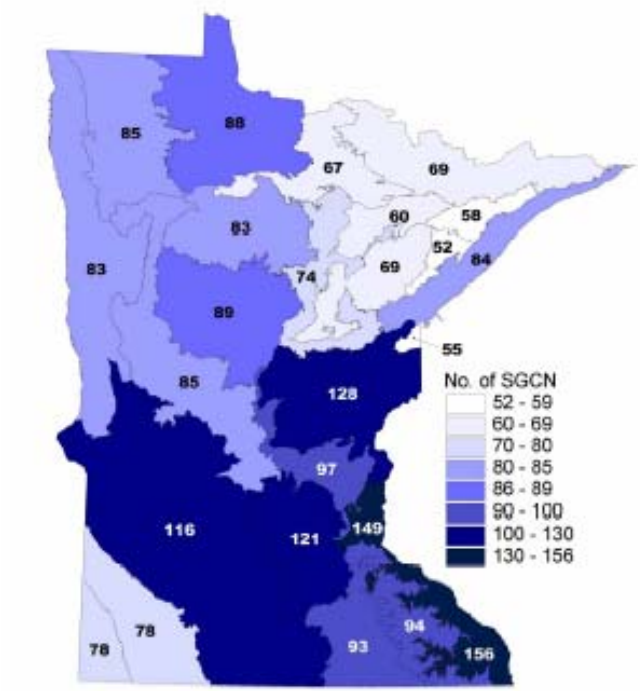
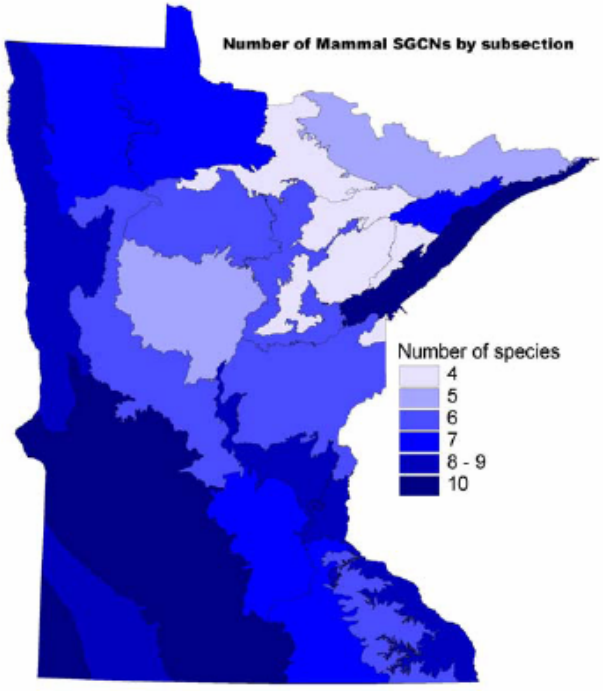


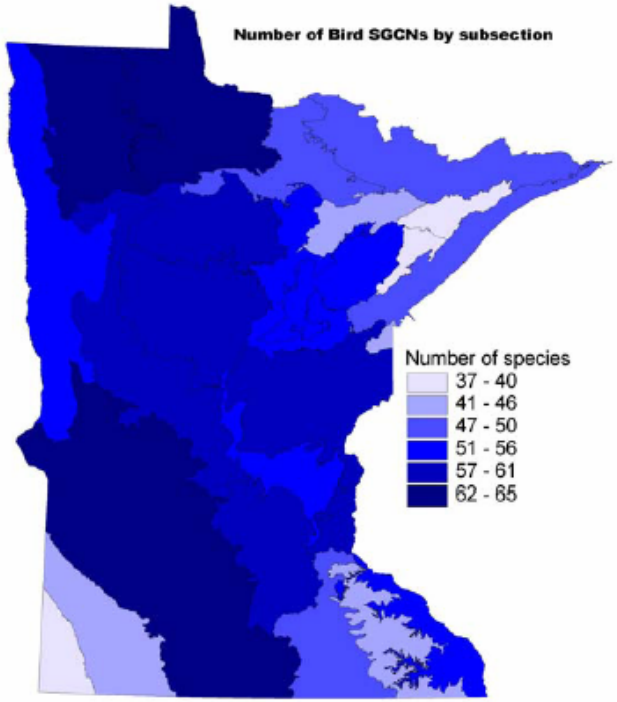
Source: MN GAP 1994

Minnesota: Species of Greatest Conservation Concern

- Total number in each subsection
- Mammals in each subsection
- Birds in each subsection

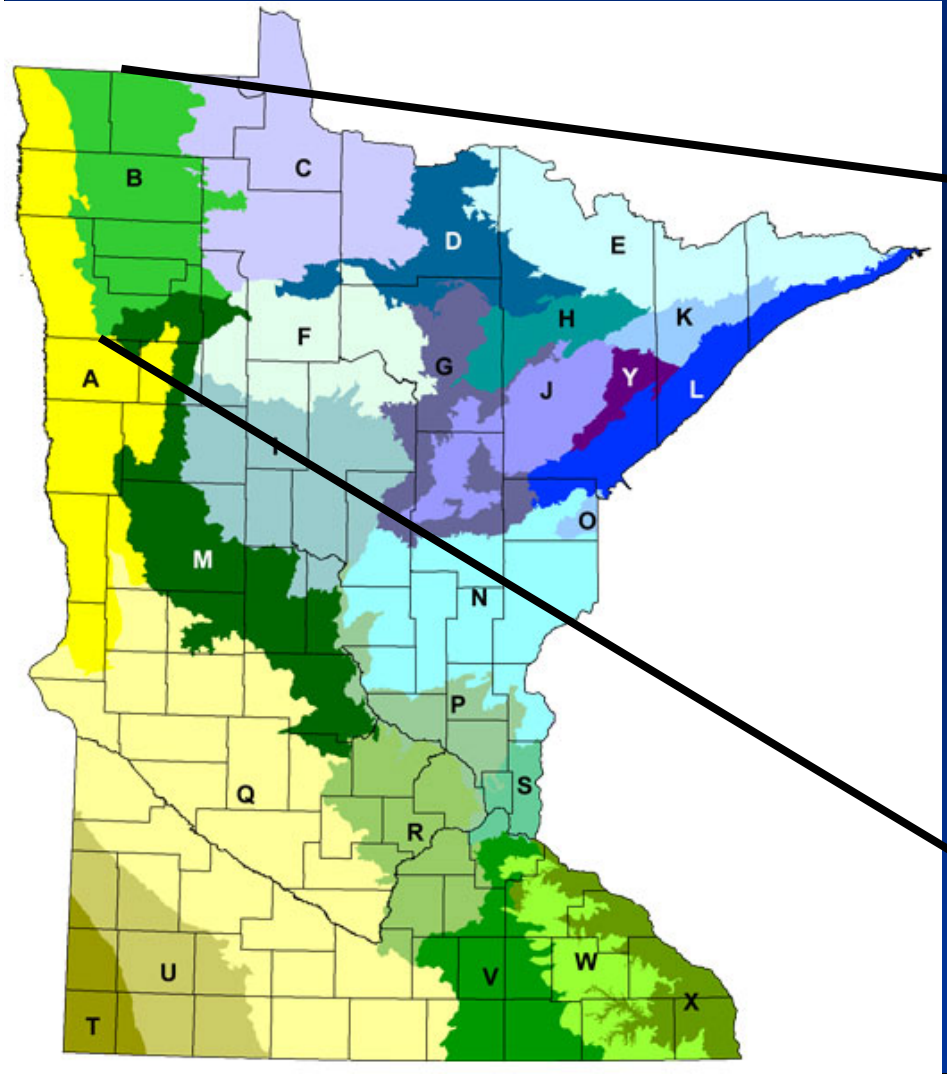




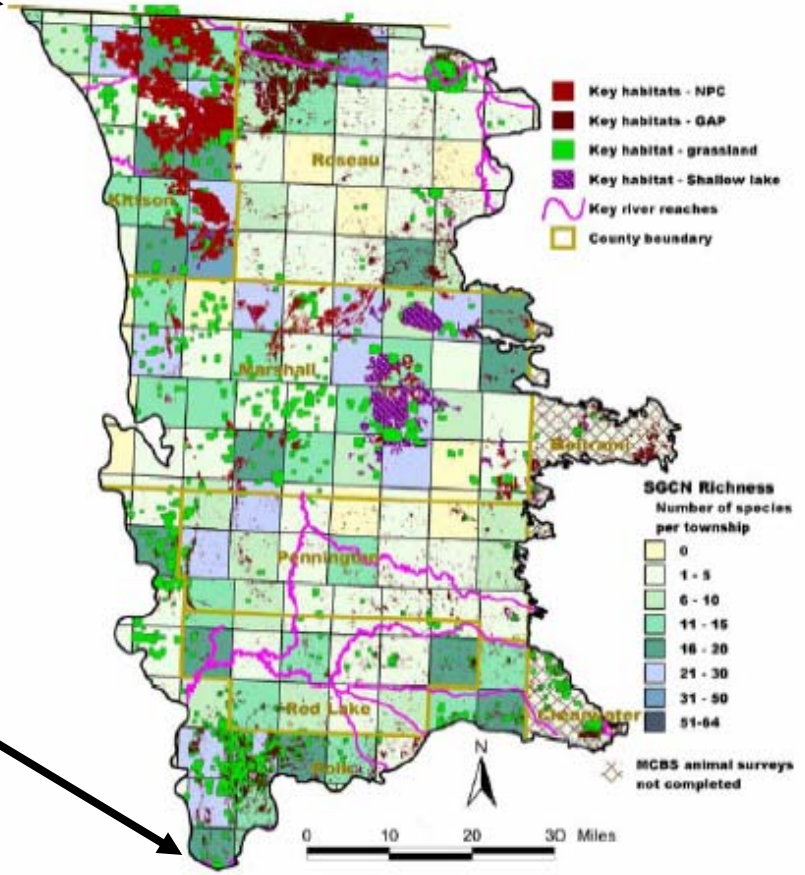


Minnesota: Priorities

- Ecological provinces: 25 “subsections”



- B: Aspen Parklands
- Distribution of key habitats and species richness by township
- Local partnerships identify conservation opportunities



Wisconsin: Overview

+ Approved

~ Maps priority habitats but not focus areas

+ Easements

www.dnr.state.wi.us/org/land/er/cwcp

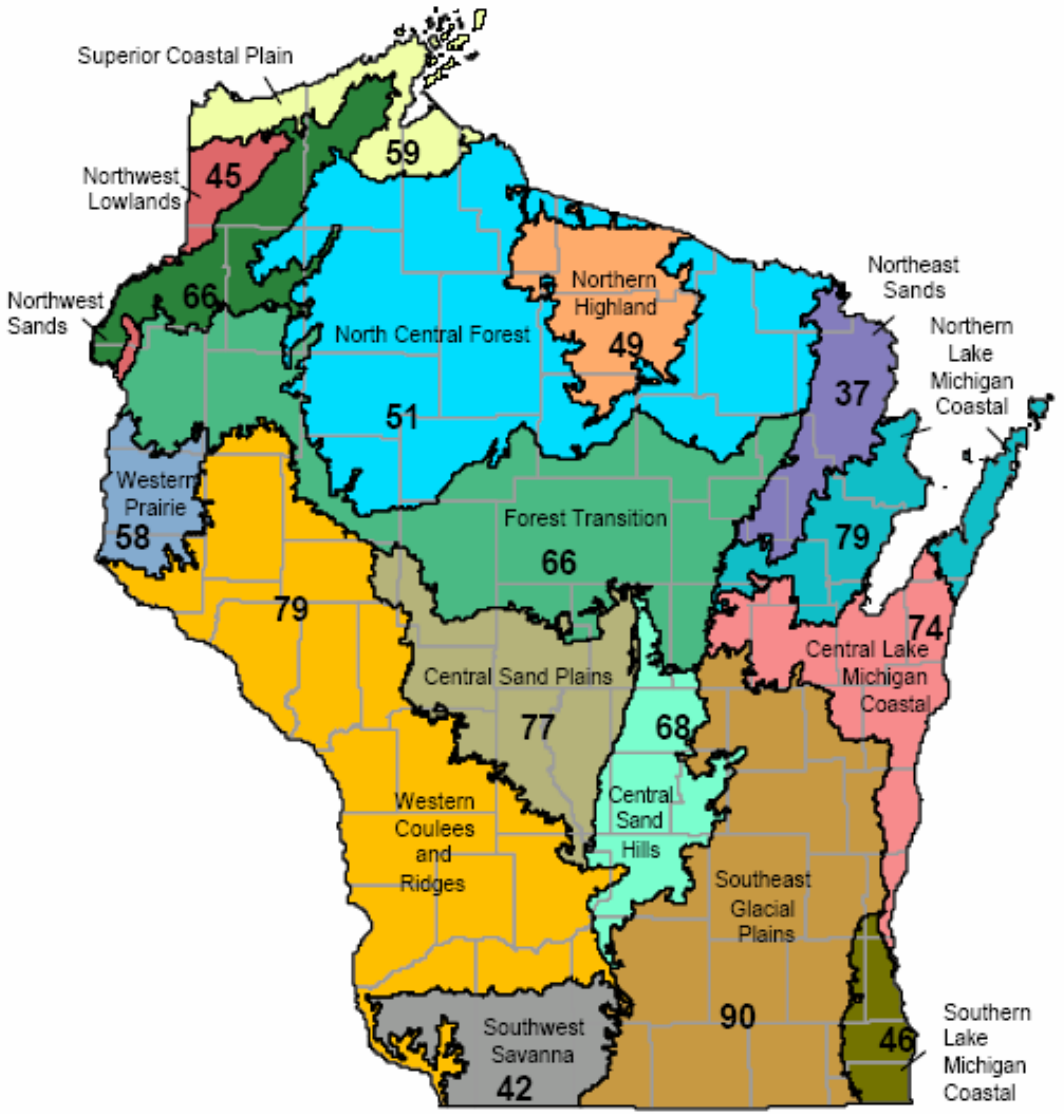
Wisconsin: Easements

- Mentioned briefly as conservation tool for these habitat groups:
  - Grassland Group
  - Miscellaneous Group
  - Northern Forest Group
  - Southern Forest Group
  - Wetland Group

- Not mentioned for these habitat groups:
  - Aquatic Group
  - Barrens Group
  - Oak Savanna Group

Wisconsin: Species

- 152 vertebrate Species of Greatest Conservation Need
- Distribution →
- 530 invertebrate Species of Greatest Conservation Need



Michigan: Overview

+ Approved

~ Maps priority habitats but not focus areas

+ Easements

www.michigan.gov/dnr click on Wildlife and Habitat, then Wildlife Action Plan

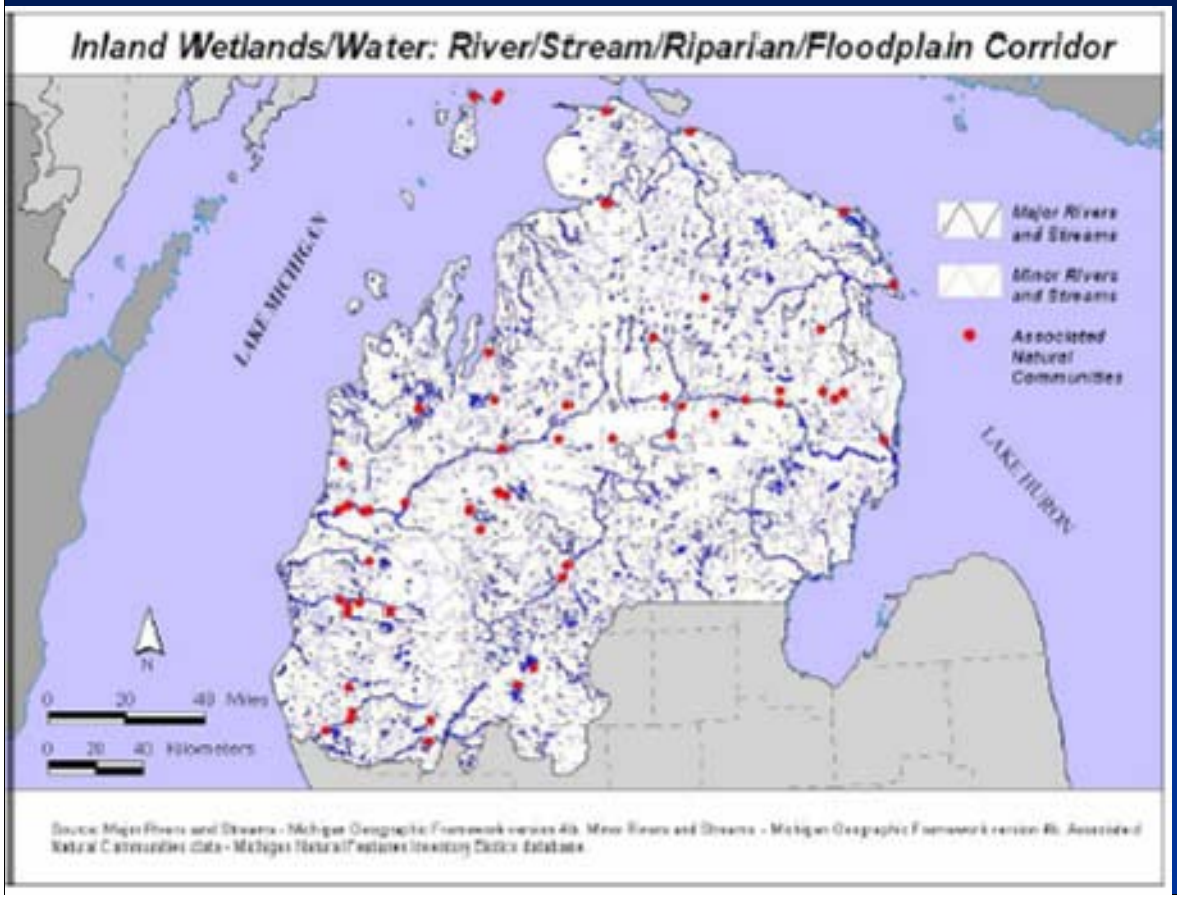
Michigan: Species

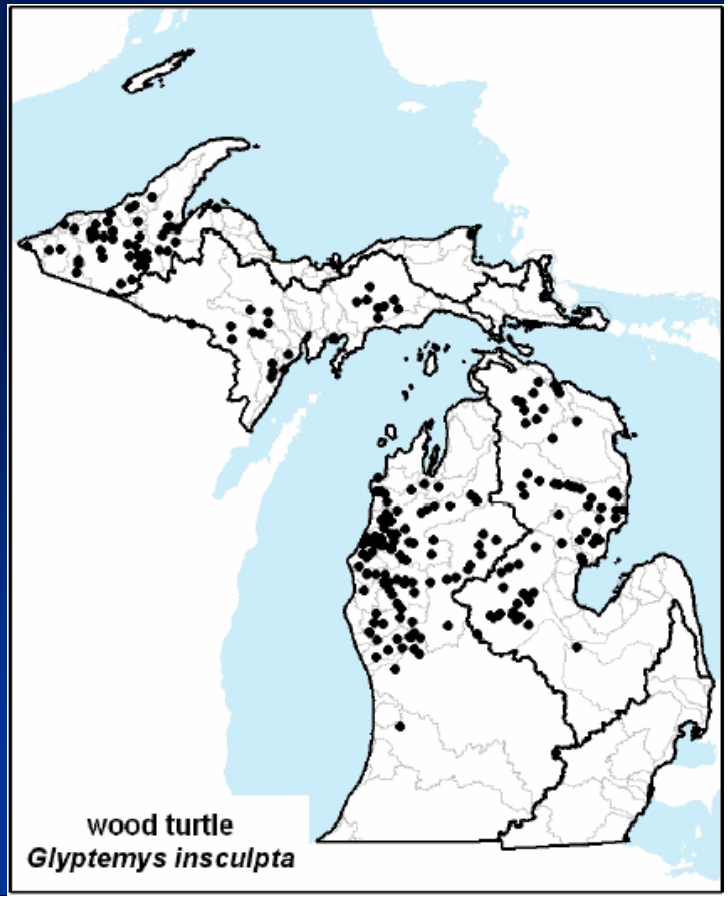
- 404 Species of Greatest Conservation Need
- ~1/2 are invertebrates
- Includes plants

Michigan: Maps

- Habitat maps without priorities

- Species maps without species richness





Nebraska: Overview

+ Approved

+ Maps focus areas and priority habitats

+ Easements

www.ngpc.state.ne.us/wildlife/programs/legacy

Nebraska: Easements

- Encourage and support the formation of new (or expansion of existing) land trusts to acquire and manage conservation easements that conserve biological diversity in Nebraska

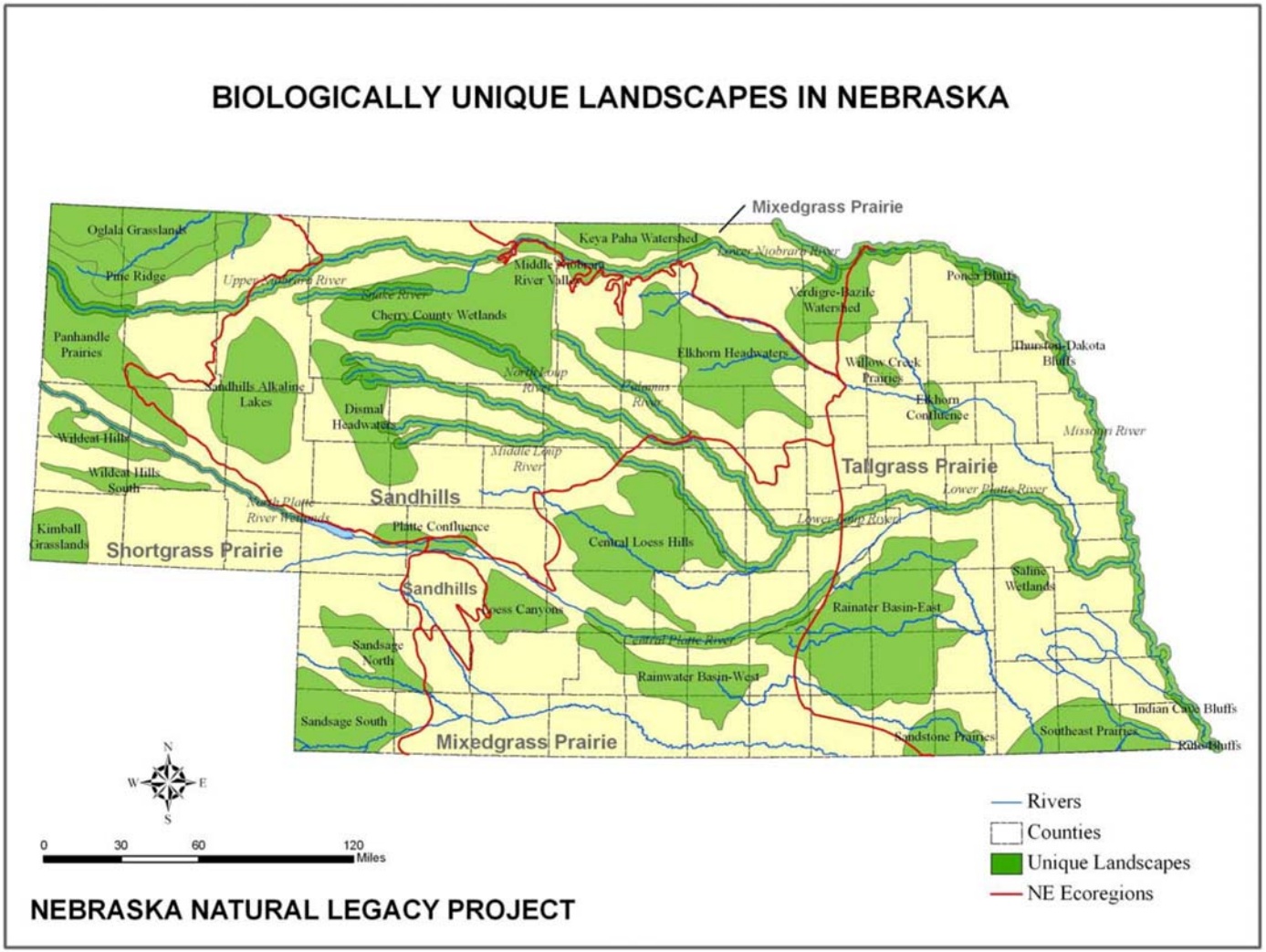
- Use easements to facilitate the long-term protection of biologically important lands enrolled in short-term conservation programs (e.g. Conservation Reserve Program)

Nebraska: Species

- 80 Tier 1 at-risk species
  - Globally or nationally at risk
- 500+ Tier 2 at-risk species
  - At-risk in Nebraska but OK elsewhere
- Includes plants
- Goals
  - number of populations to conserve
  - number of habitat occurrences to conserve

Nebraska: Focus Areas

- Biologically unique landscapes
- Ranking based on rarity / at risk status
- Improve habitat conditions



Kansas: Overview

+ Approved

- Maps all habitats or land cover but not priorities

+ Easements

kdwp.state.ks.us/other_services/wildlife_conservation_plan

Kansas: Easements (n=44)

- Increase funding and use of Grassland Reserve Program, Wetland Reserve Program, and other conservation easements to reverse the trend of habitat conversion and encourage reconversion back to habitat.
- Use conservation easements to prevent further fragmentation of habitats.
- Monitor the use of easements:
  - Track counties involved in conservation easements and other contracts
  - Develop map / database that tracks easements on important habitats
- Actively seek, expand, and encourage use of easements on critical habitat and for critical species
  - At-risk habitats
  - Playa lakes
  - Black-tailed prairie dog
- Pay landowners for easements

Kansas: Species

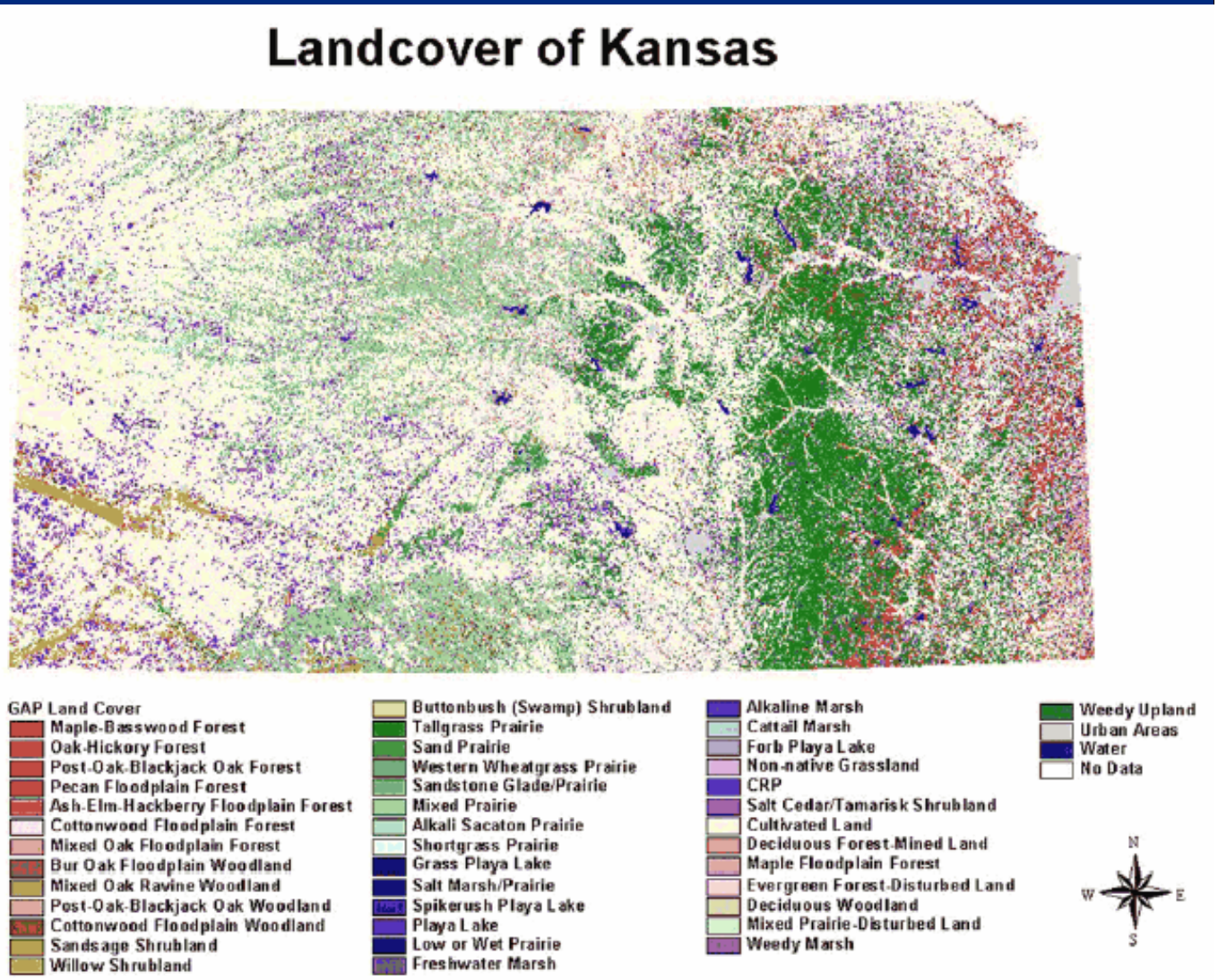
- 315 Species of Greatest Conservation Need
- 3 tiers with ~1/3 in each tier
- Based on criteria and ranking

Kansas: Key Habitats

- Key habitats identified for each ecoregion, but not mapped
- Focus areas not identified or mapped

Kansas: Maps

- 3 ecoregions
- Landcover (habitats)
- That's it!



Iowa: Overview

- Conditionally approved (monitoring)

~ Maps priority habitats but not focus areas

\+ Easements

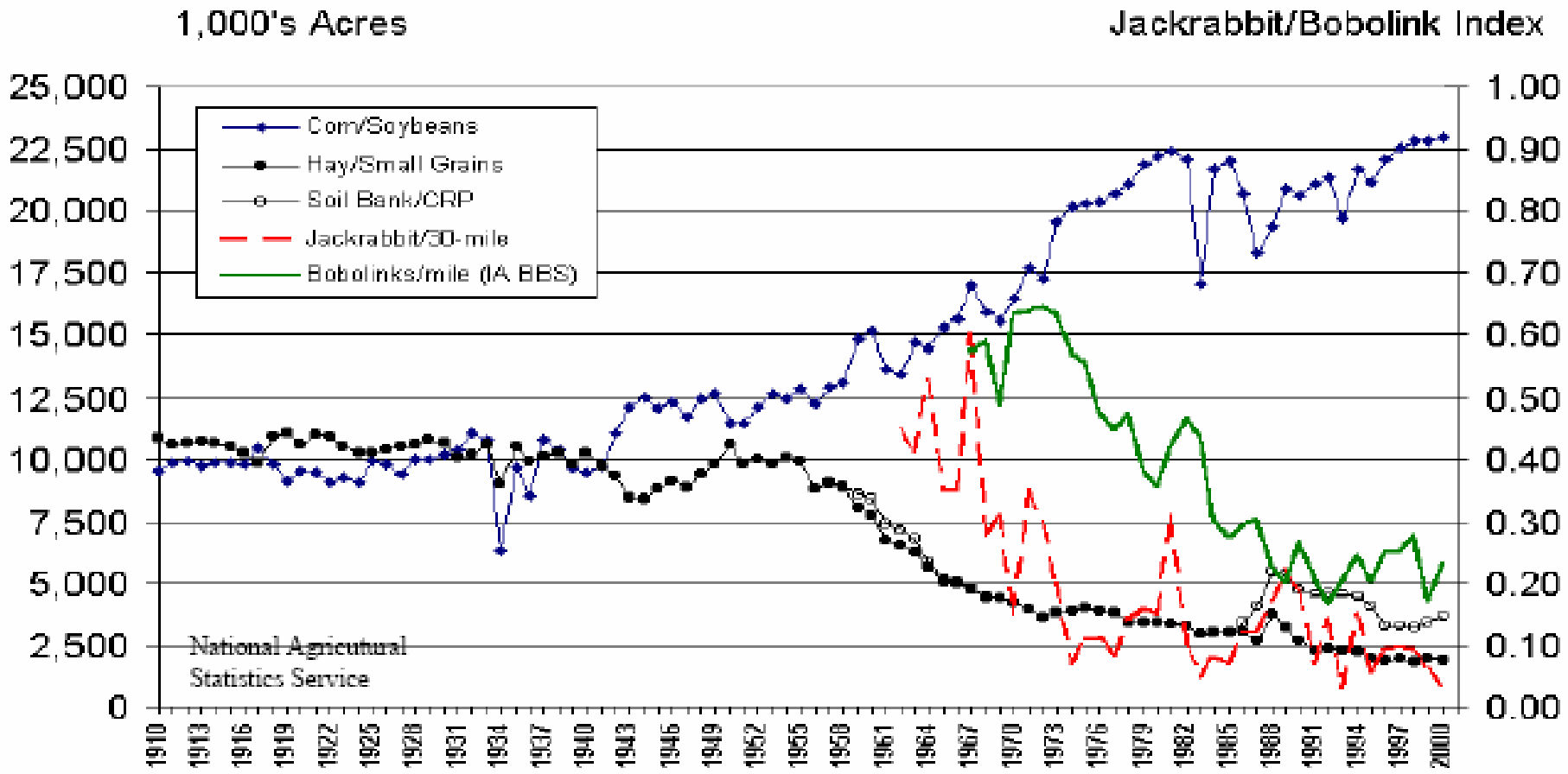
www.iowadnr.com/wildlife/files/IAcomprehensive_plan

Iowa: Easements

- Identify and protect large habitat blocks to avoid habitat fragmentation.
- Use permanent easements and acquisition to permanently protect habitat within larger target areas.
- At-risk snails: use conservation easements and cost-share programs on private lands.
- Glacial relict plant and animal communities: protect with conservation easements on private lands

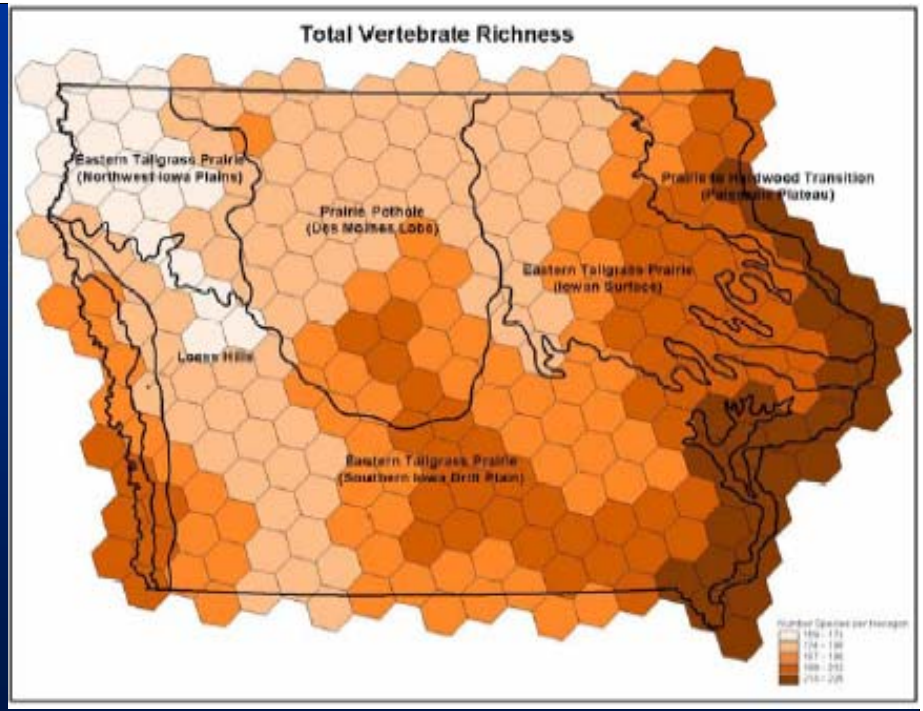
Iowa: Species

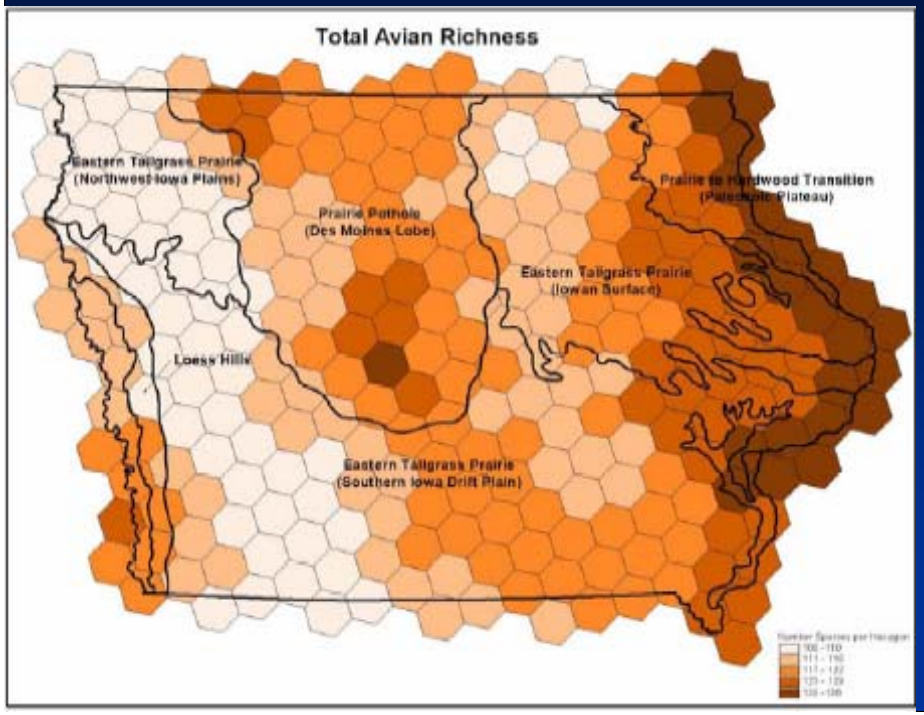
- 297 Species of Greatest Conservation Need

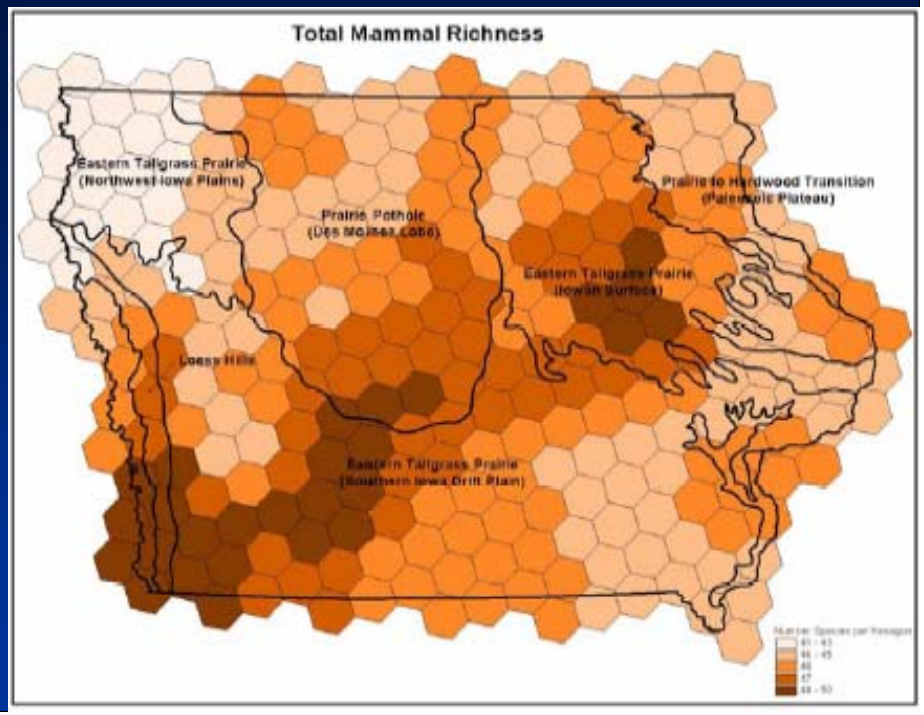


Iowa: Species Richness

- GAP (Gap Analysis Program)
- Total richness doesn't capture mammals well

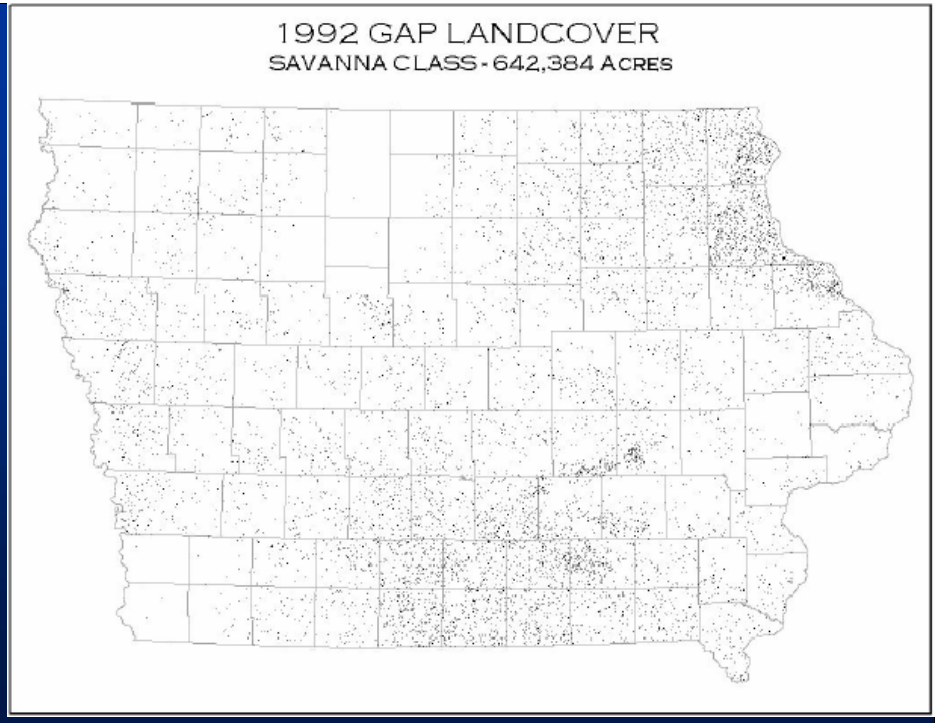


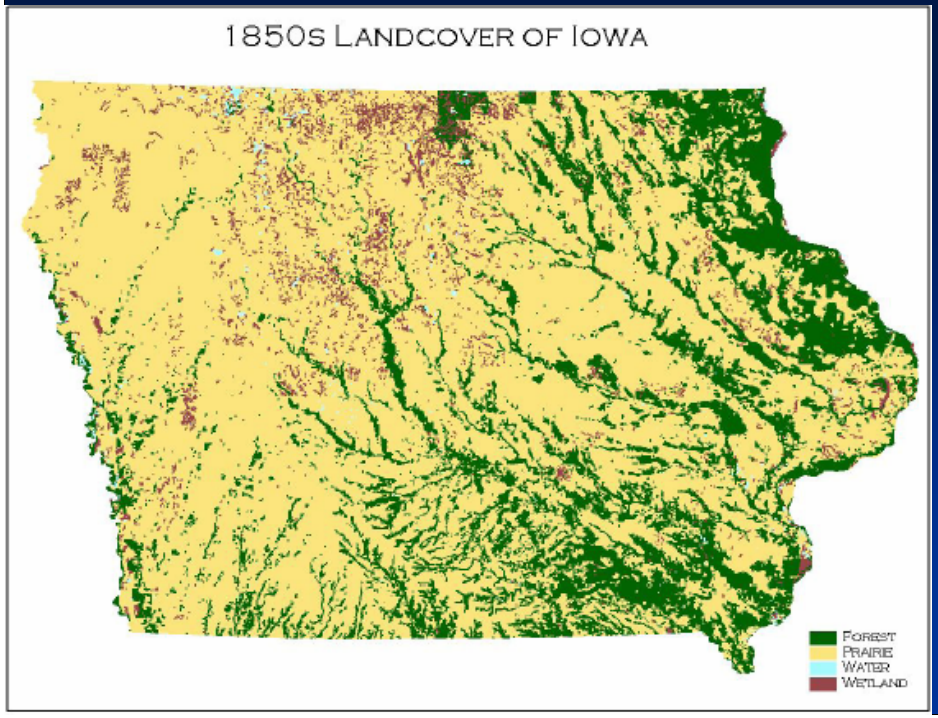


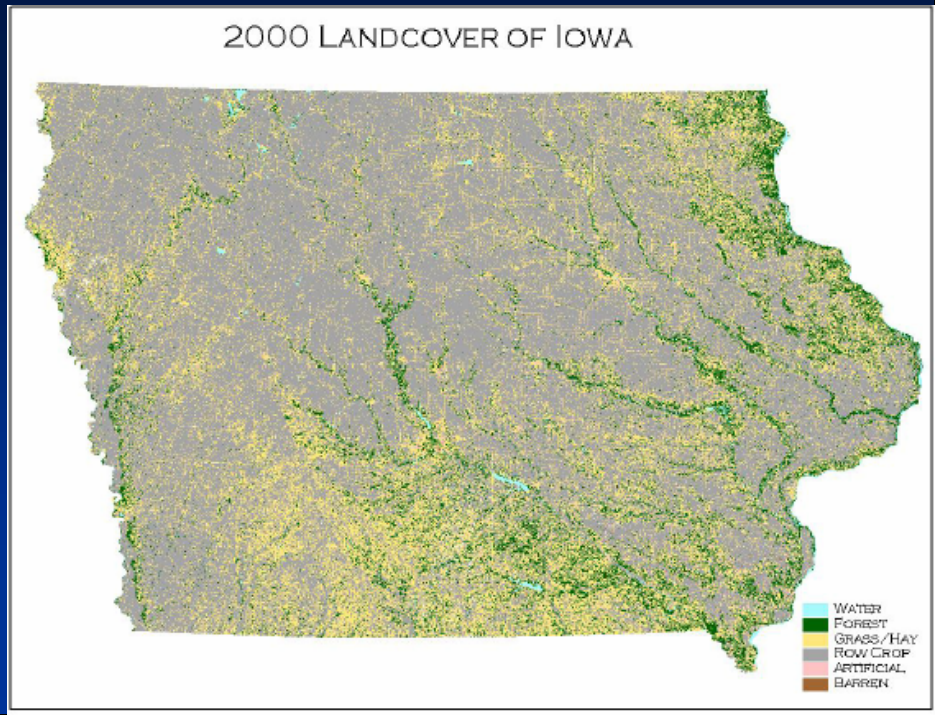


Iowa: Maps

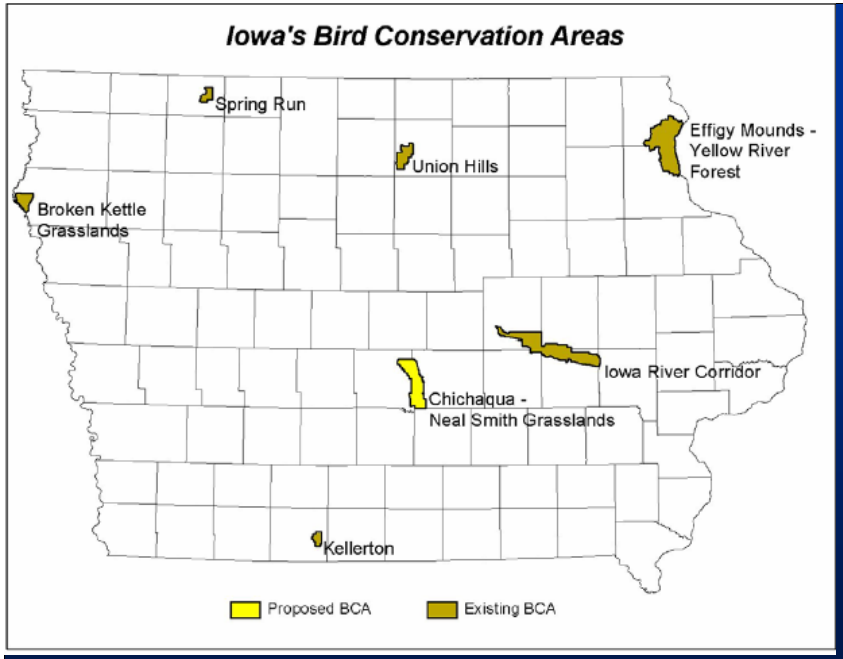
- Key habitats
- Land cover

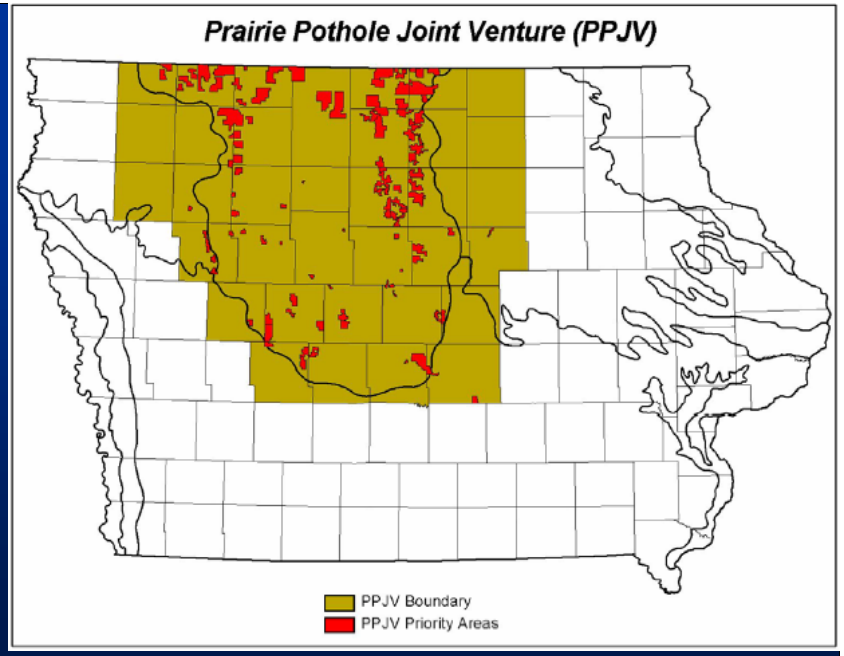


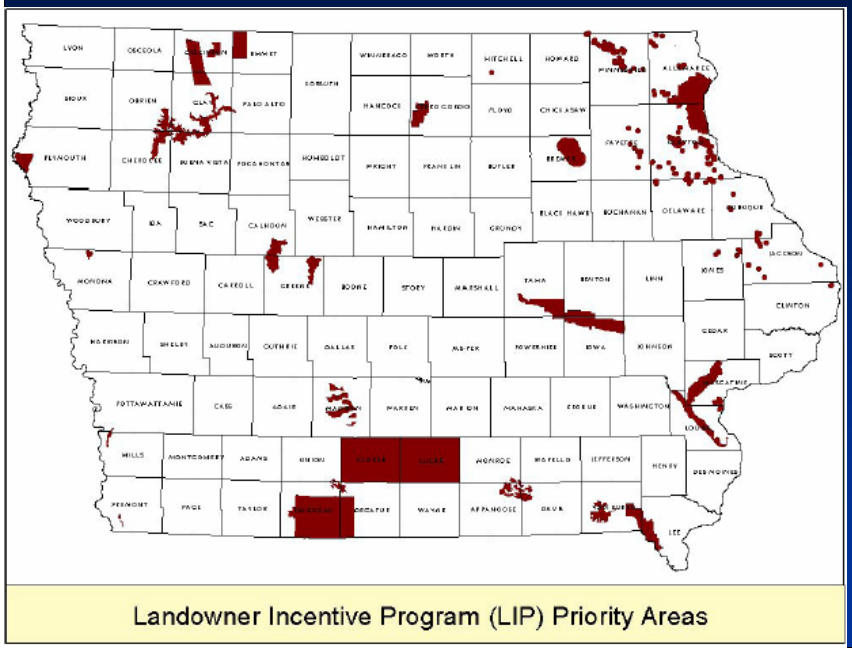


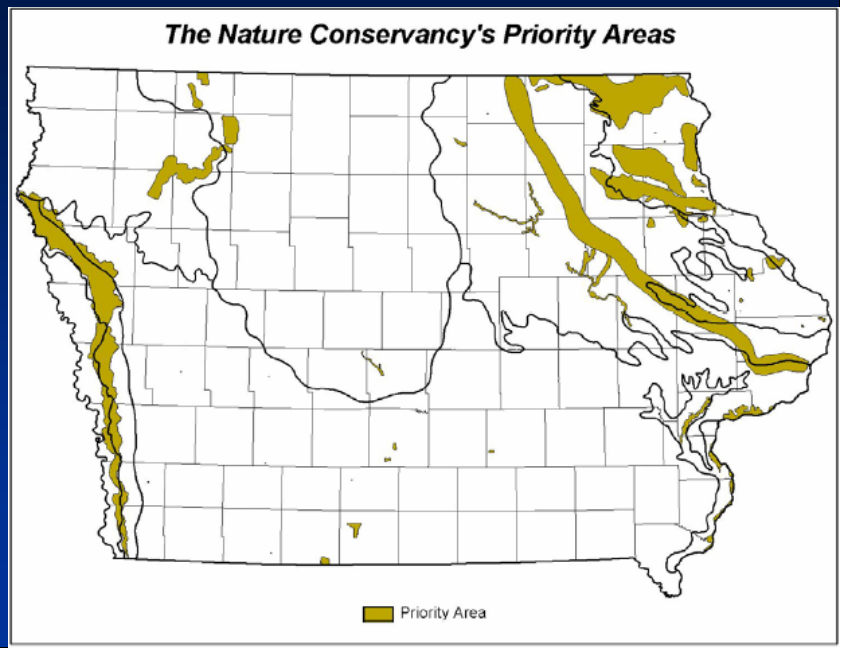


Iowa: Previous Efforts to ID Priority Areas






Landowner Incentive Program (LIP) Priority Areas



Missouri: Overview

+ Approved

+ Maps focus areas and priority habitats

+ Easements

www.mdc.mo.gov/documents/conmag/2005/20051001.pdf

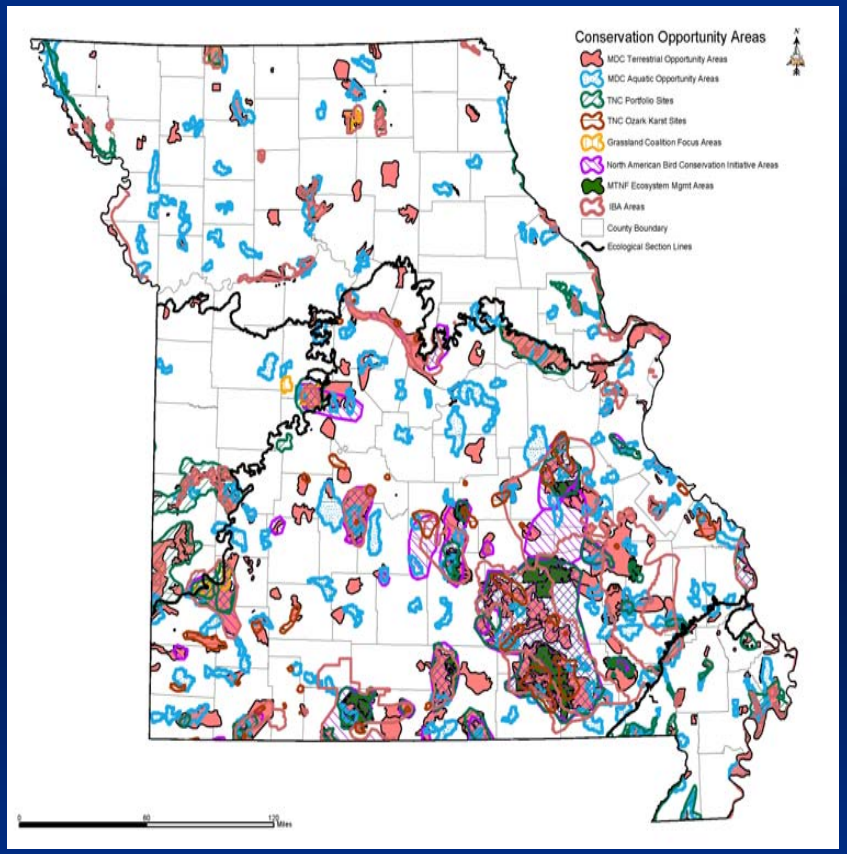
"Missouri Conservationist" (full plan not on web)

Missouri: Species

- Can’t conserve every species one by one
- Desired outcome: functioning habitats, natural communities, and healthy landscapes that produce diverse wildlife into the future
- Species of concern identified in each ecosystem
- Plan includes plants

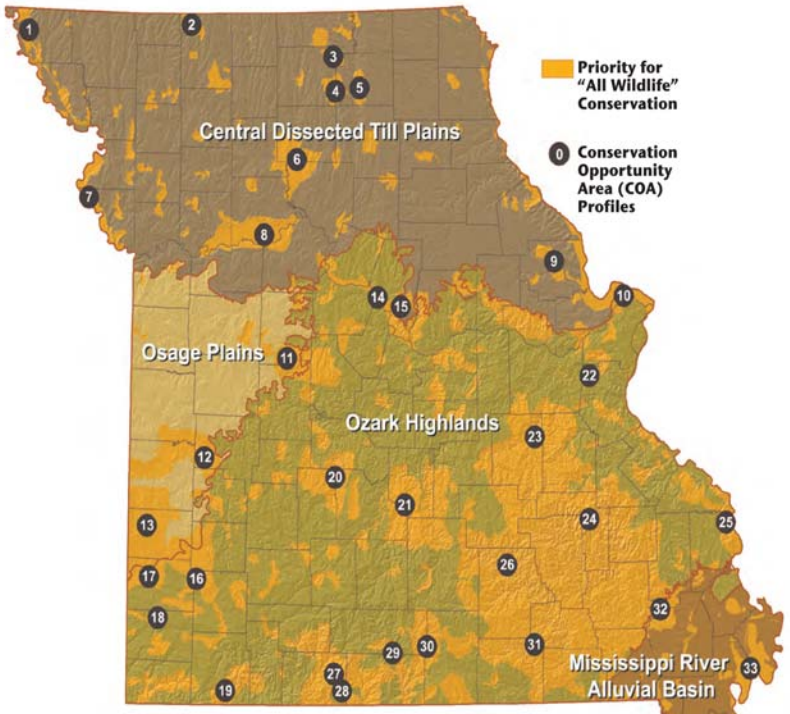
Missouri: Maps

- Overlapping priorities from several conservation partners



- Conservation Opportunity Areas represent native ecosystems, communities, and species

Conservation Opportunity in Missouri



Conservation Opportunity Area Profiles by Ecoregion:

Central Dissected Till Plains
1 Loess Hills
2 Grand River Grasslands
3 Union Ridge
4 Mystic Plains
5 Thousand Hills Woodland
6 Lower Grand River
7 Iatan/Weston Missouri River Corridor
8 Wakenda Bottoms
9 Cuivre River Hills
10 Missouri/Mississippi River Confluence

Osage Plains
11 Cole Camp/Hi Lonesome
12 Marmaton/Wah'Kon-tah
13 Western Cherokee Grasslands

Ozark Highlands
14 Manitou Bluffs
15 Bonne Femme Karst
16 Golden Grasslands
17 Spring River
18 Shoal Creek
19 Roaring River
20 Niangua Basin
21 Upper Gasconade River Hills
22 LaBarque Creek Watershed
23 Middle Meramec
24 St. Francois Knobs
25 Cape Hills
26 Current River Hills
27 White River Glades and Woodlands
28 Tumbling Creek Cave Ecosystem
29 Bryant Creek
30 North Fork
31 Eleven Point Hills

Mississippi River Alluvial Basin
32 Mingo Basin
33 River Bends

Illinois: Overview

+ Approved

+ Maps focus areas and priority habitats

+ Easements

dnr.state.il.us/orc/wildliferesources/theplan

Illinois: Easements

- Target easements to achieve desired wildlife and habitat benefits, based on sound principles of reserve design, patch size, and long-term viability
- Restoration / enhancement / stewardship funding for new easements
- Specific tool for several conservation opportunity areas

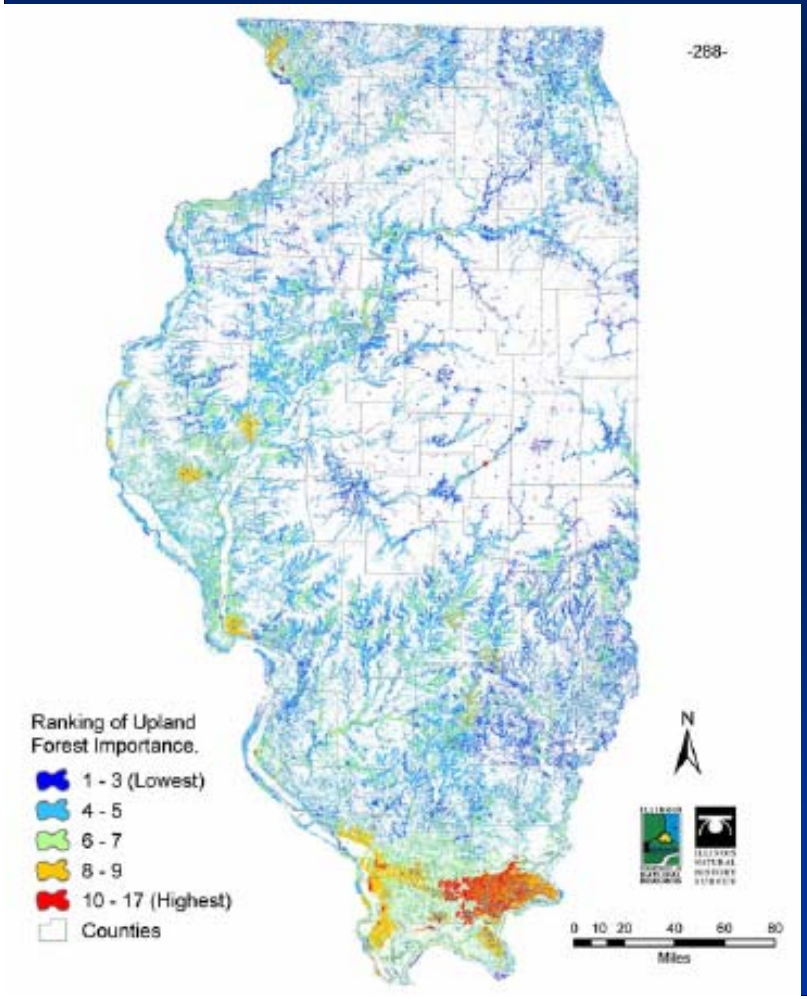
Illinois: Species

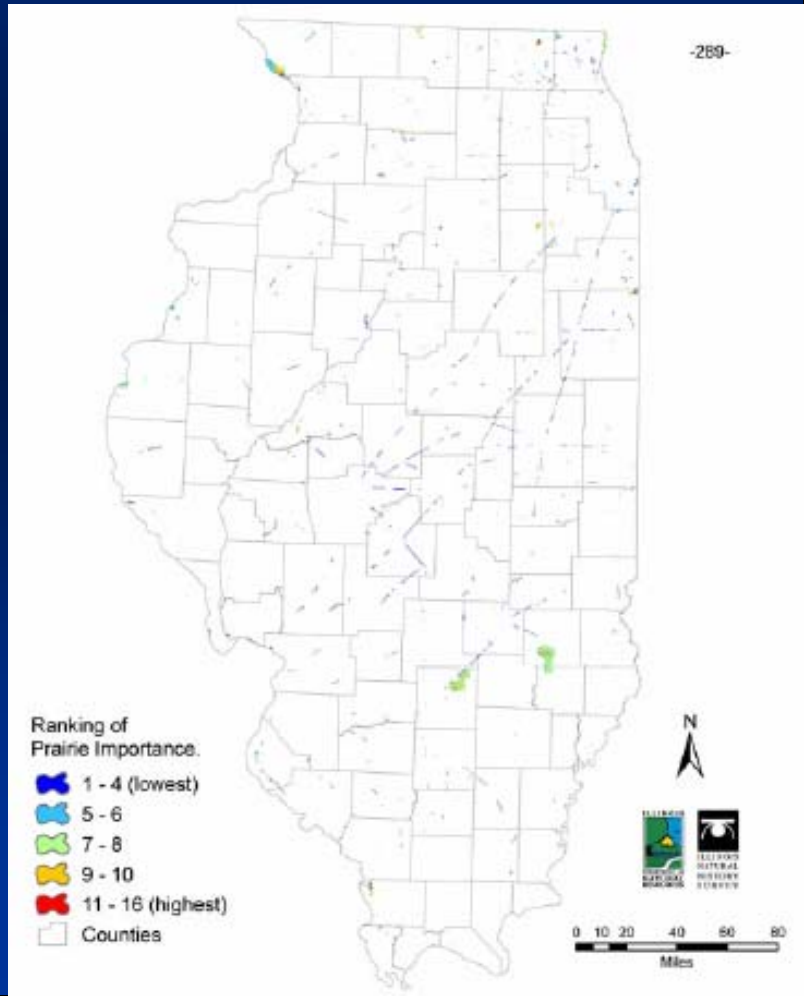
- 249 Species of Greatest Conservation Need

- Goals for desired condition in 2025:
  - Species
  - Habitat conditions

Illinois: Priority Areas

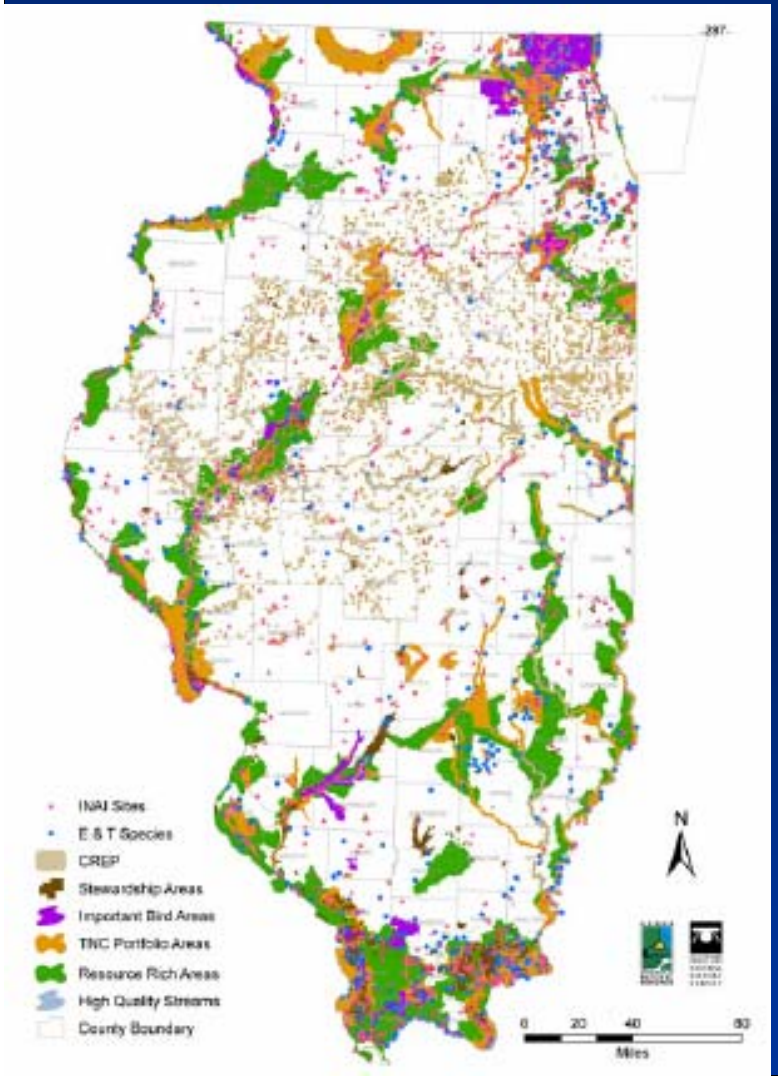
- Key habitat conservation priorities based on Species of Greatest Conservation Need





Illinois: Priority Areas

- Priority areas identified in previous plans



- Focus areas selected by workshop participants

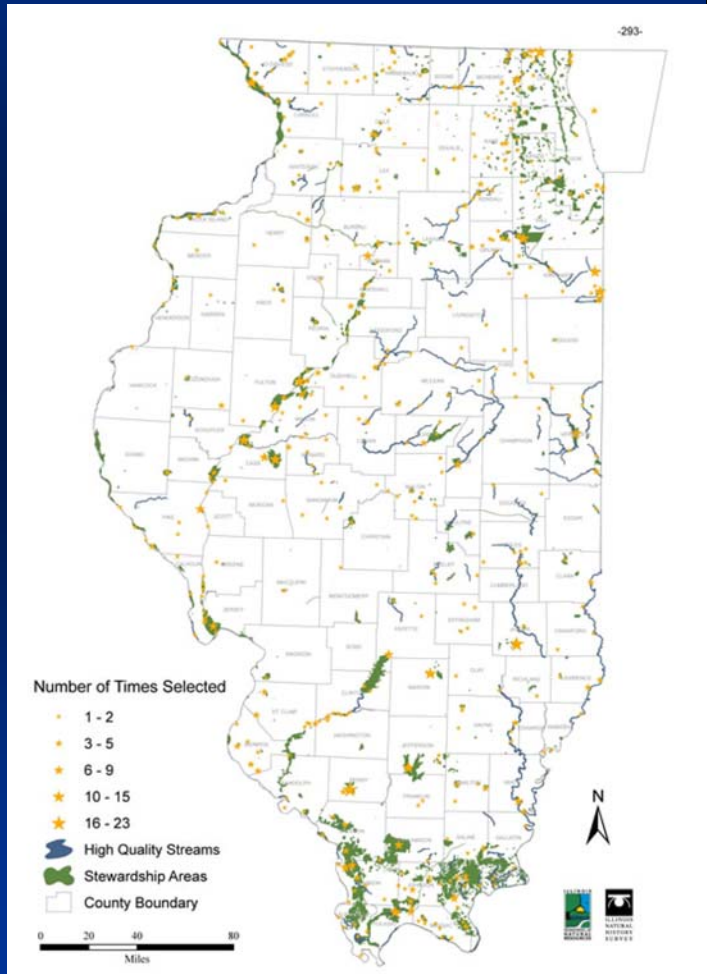


Figure 17. Partner-selected priority areas for conserving Illinois' Species in Greatest Need of Conservation, indicated by participants in planning workshops in 2004. Relative size of stars on the map indicate the number of times an area was marked. High Quality Streams and Stewardship Areas (federal, state and county conservation lands) are shown for reference.

Indiana: Overview

- Conditionally approve (issues, actions, and priorities not adequately linked to species and habitats)

- Maps general habitats only and no priorities

+ Easements

www.djcase.com/incws

Indiana: Easements

- Land trusts and public funds are the primary mechanisms to protect significant habitats
- Tools for private lands management:
  - incentives for habitat protection and restoration
  - conservation easements
- State included land trusts when they developed the wildlife action plan

Indiana: Easements

- Easements ranked #2 out of 17 conservation actions identified to protect habitats

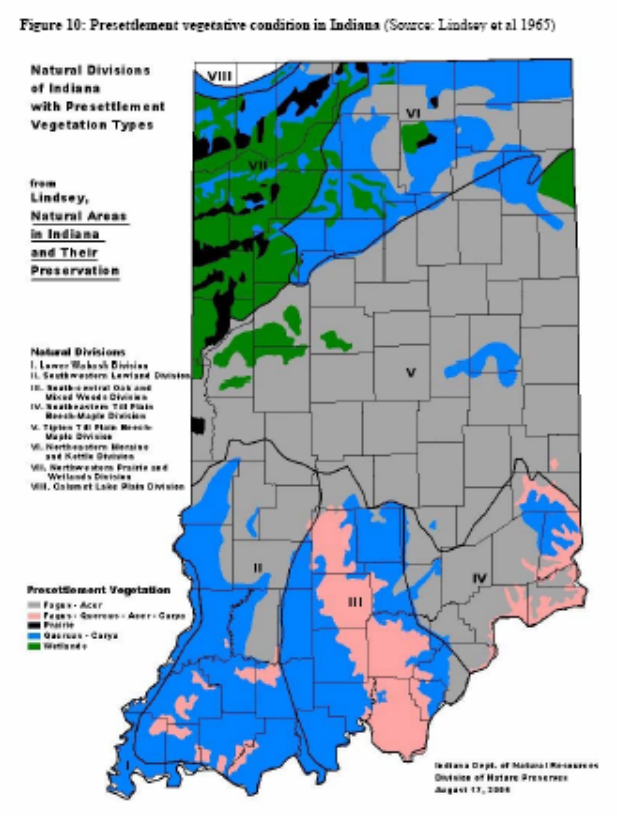
Conservation Action	All habitats combined	Agriculture	Aquatic systems	Barren lands	Developed lands	Forested lands	Grasslands	Subterranean systems	Wetlands
Habitat protection on public lands	1	1 (tie)	5	2	3 (tie)	3	2	5	1
Cooperative land management agreements (conservation easements)	2		4	3 (tie)	3 (tie)	8	3	2	3
Habitat restoration on public lands	3	1 (tie)	3	3 (tie)	2	4	4	7 (tie)	4
Habitat restoration incentives (financial)	4	2 (tie)	1	3 (tie)	1 (tie)	7 (tie)	1	7 (tie)	9 (tie)

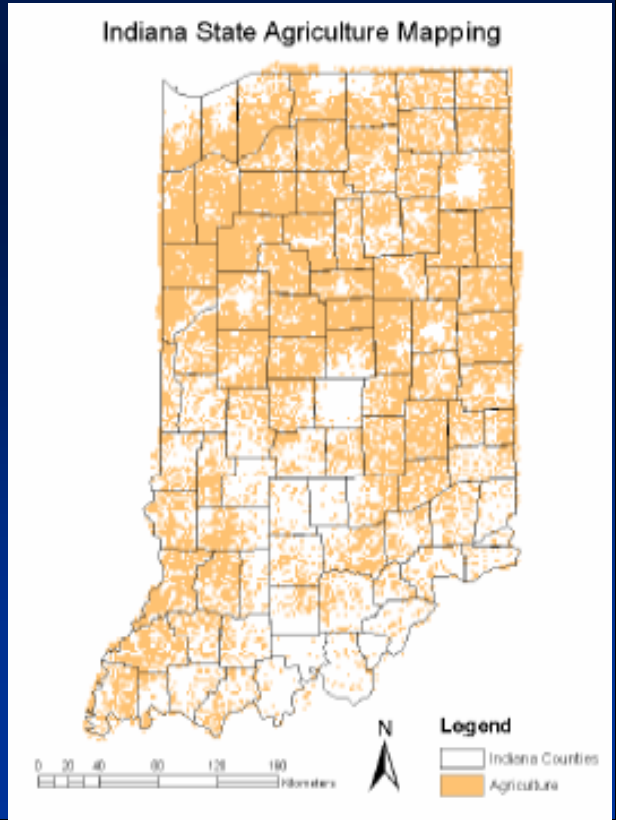
Indiana: Species

- 181 Species of Greatest Conservation Need
- Includes plants

Indiana: Maps

- Historical vegetation
- Current habitat / land use maps
  - Habitats not prioritized
  - Focus areas not identified





Ohio: Overview

? Awaiting approval decision from USFWS

~ Maps focus areas, but not priority habitats

- Easements (not mentioned)

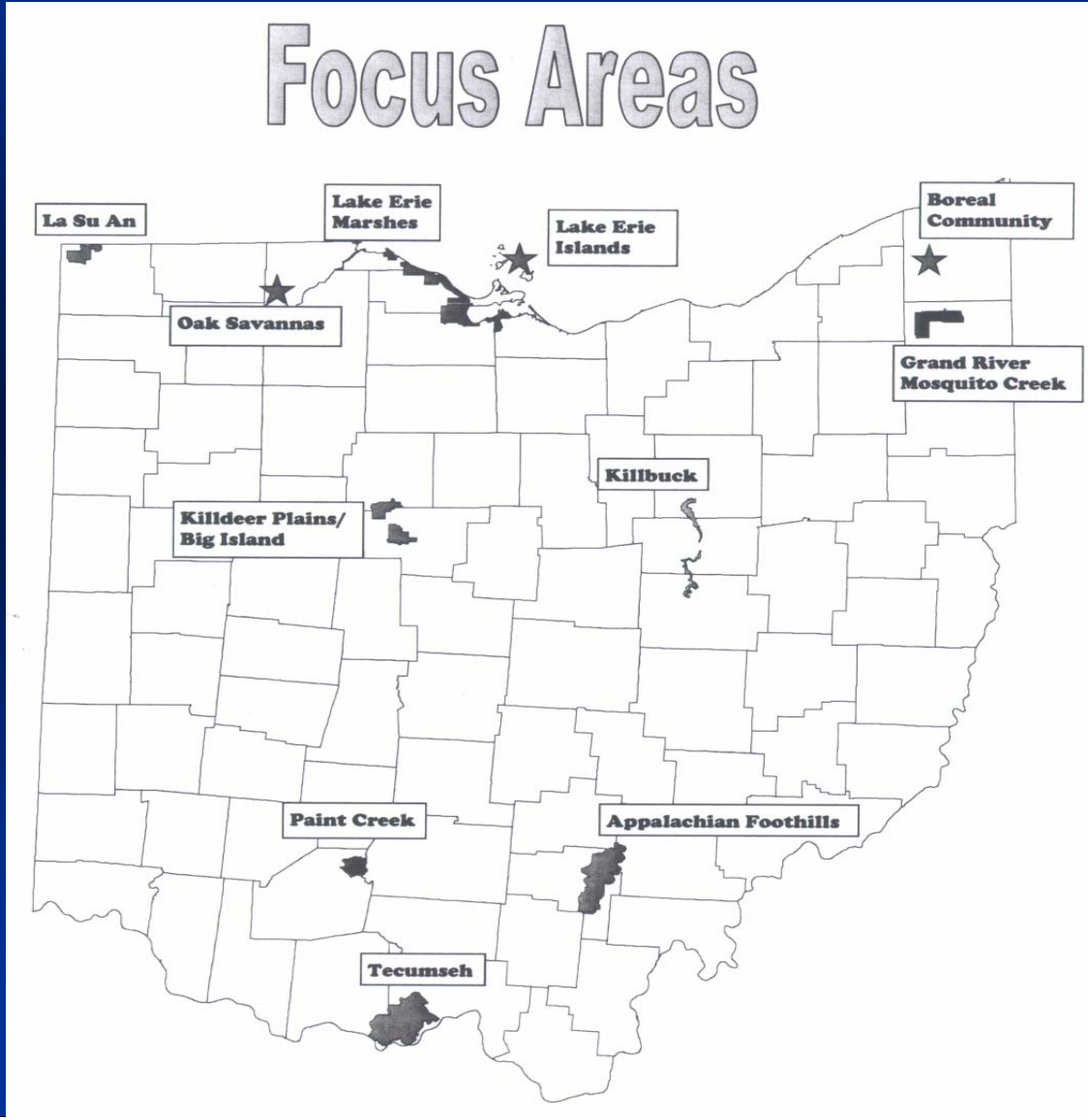
- www.dnr.state.oh.us/wildlife (not posted)

Ohio: Species

- 380 Species of Greatest Conservation Need
- Includes all species that are not pests or extinct

Ohio: Focus Areas

- 11 focus areas, very small
- Not much explanation for how they were chosen
- Detailed maps of each



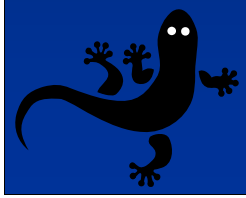
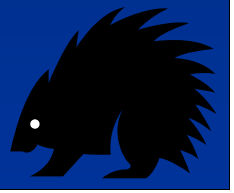
Other Habitat Conservation Planning Efforts

- The Nature Conservancy – ecoregional assessments, portfolio sites
- Audubon – Important Bird Areas
- Conservation International – Biodiversity Hotspots
- Gap Analysis Program (GAP)


Questions:

Was anyone involved in developing their state's wildlife action plan?

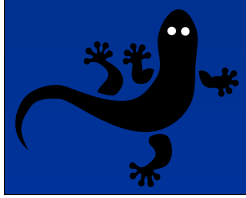
Do you see opportunities to use your state's information or enter a partnership?

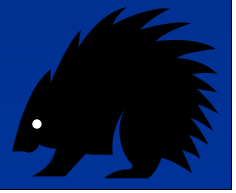



Funding for Biodiversity Conservation

(Federal Programs)

www.biodiversitypartners.org/incentives





Federal Incentive Programs

- Purchase conservation easements
- Cost share (restoration, conservation)
- Rental payments
- Incentive / bonus payments
- Technical assistance

Easement Programs (NRCS)

- Emergency Watershed Protection Program (EWPP)
  - Floodplains after flooding, restoration too
  - Permanent
- Farm and Ranch Lands Protection Program (FRLP)
  - Agricultural lands
  - Permanent; held by land trust
- Grassland Reserve Program (GRP)
  - Grasslands vulnerable to conversion
  - 30 year or permanent
- Wetlands Reserve Program (WRP)
  - Restore farmed wetlands
  - 30 year or permanent

Easement Programs (not NRCS)

- Healthy Forests Reserve Program (HFRP; USFS / NRCS)
  - Forests with at-risk species
  - 10, 30, 99 year easements
- Forest Legacy Program (FLP; USFS / states)
  - Environmentally sensitive forest land
  - Permanent easement or acquisition
- Landowner Incentive Program (LIP; USFWS / states)
  - Listed and at-risk species, multiple species
  - Long term or permanent benefits → can be used for easements
  - Some states link to State Wildlife Action Plan

Cost Share Programs (NRCS)

- Environmental Quality Incentives Program (EQIP)
  - 4 priorities include at-risk species habitat
  - Focus is livestock operations and water quality
- Wildlife Habitat Incentives Program (WHIP)
  - All private land and some public land are eligible
  - State NRCS develops priorities

Cost Share Programs (USFWS)

- North American Wetlands Conservation Act Grants Program (NAWCA)
- Partners for Fish and Wildlife (PFW)
- Private Stewardship Program (PSP)

Cost Share Programs (USFS)

- Forest Land Enhancement Program (FLEP)
- Healthy Forests Reserve Program (HFRP)

Rental Programs (NRCS)

- Conservation Reserve Program (CRP)
  - Highly erodible lands
  - Recently expanded – rare and declining habitats
- Conservation Reserve Enhancement Program (CREP)
  - State / federal partnership; not all states
  - Often for riparian restoration for habitat and/or water quality

Stewardship Programs (NRCS)

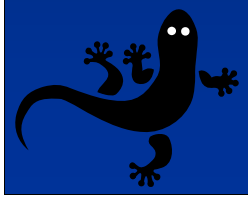
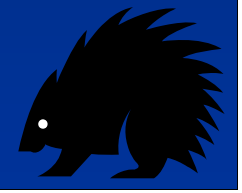
- Conservation Security Program (CSP)
  - Rewards ongoing stewardship on producing land
  - Whole-farm approach
  - Available to all producers (any size, crop)
  - Offered by watershed
  - Tier III requires wildlife component

Challenges

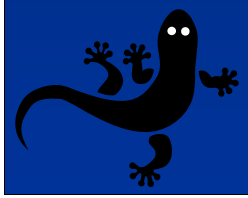
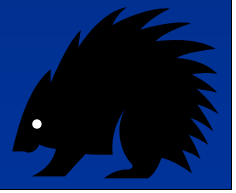
- Programs opportunistic
- Programs complex
  - Many programs, many agencies
  - Applications complex
- Lack of funding
  - Demand > funding
  - Technical assistance
  - Ag > forestry
- Lack of knowledge of programs
  - Landowners
  - Land trusts
- Restoration: landowner pays up front


Question:

What experience have you had with federal (or other public) funding?


Future Opportunities

Opportunities

- Partnerships with State Wildlife Action Plans
- NRCS State Technical Advisory Committees
  - Is a local land trust on yours?
- Oregon Sustainable Agriculture Resource Center (OSARC)
  - one-stop shopping for programs, regulations, certification
  - model for other states
- 2007 Farm Bill Reauthorization

Living Lands Project: Opportunities

- Case studies
- Pilot projects (2007, 2008)
  - Funding
  - Assistance
- Trainings
  - Rally 2006 and 2007, Biodiversity Track
  - LTA Leadership course
- Revolving fund for up-front cost of restoration
- Other resources
  - Sample easement language
  - Sample conservation plans
  - Online resources, links

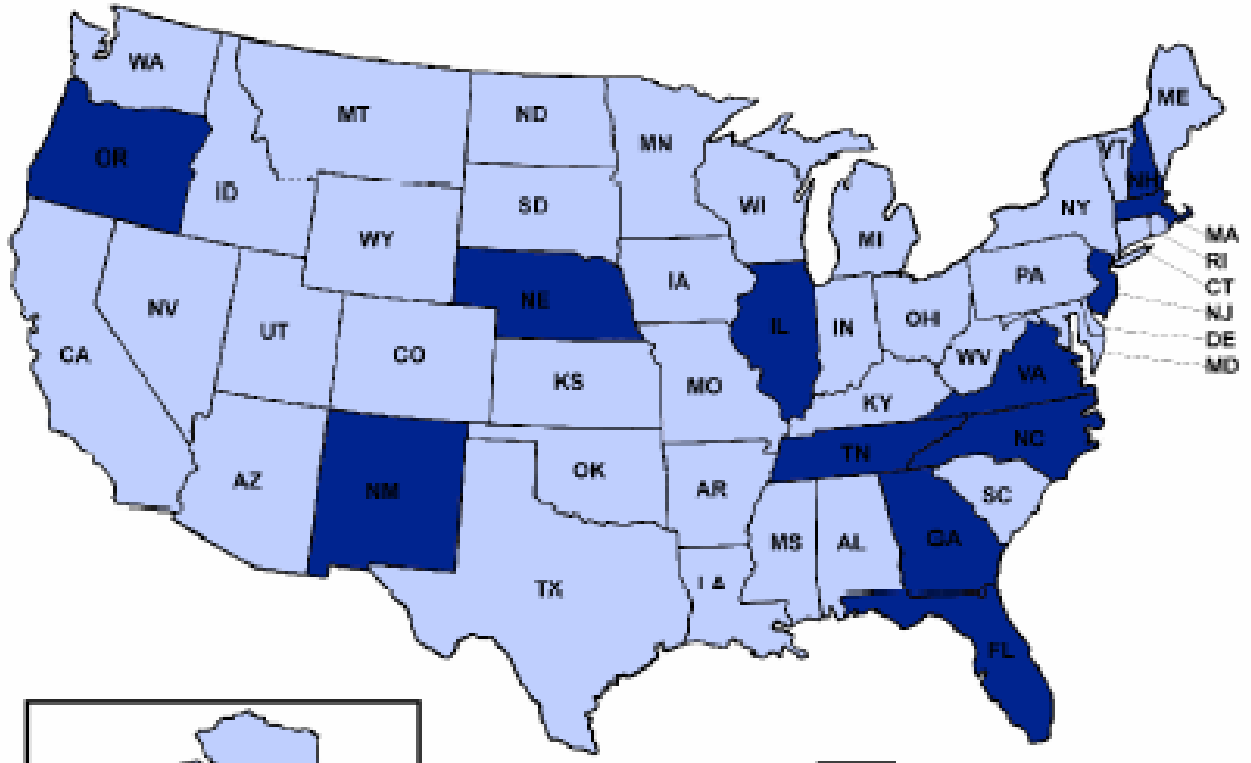
Closing Thoughts…

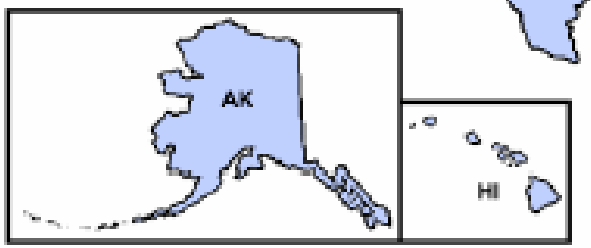
- Biodiversity conservation
  - Where?
  - What?
  - How?
- Biodiversity as a core concept
  - Build capacity
  - Accreditation
- Assistance and opportunities


Questions?
chummon@defenders.org
www.biodiversitypartners.org

STATE WILDLIFE PLANS: STATE LEADERS

Winter 2006





- Leading states
- Other reviewed states
- Plans not reviewed

Puerto Rico
Virgin Islands
Guam

American Samoa
Northern Mariana Islands