


Using Easements to Conserve Biodiversity

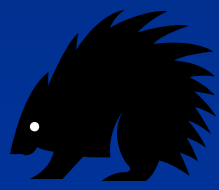
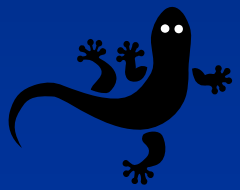
A large flock of sandhill cranes is gathered in a field of tall, golden-brown grass. Several cranes are also shown in flight against a clear blue sky. In the background, there is a line of trees, including a prominent tall, thin tree.

Cheryl Hummon / Will Murray
Defenders of Wildlife
chummon@defenders.org

Southwest LTA
May 5, 2006

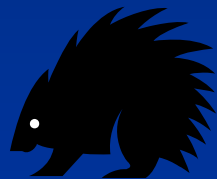
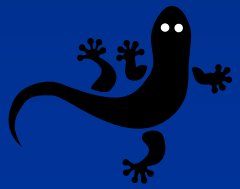
Defenders of Wildlife

- 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



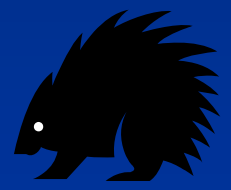
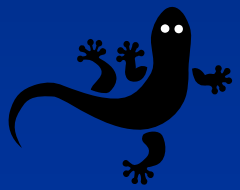
Outline of Talk

- Living Lands Project
- Strategic Conservation Planning for Biodiversity
- State Wildlife Action Plans
- Funding for Biodiversity Conservation
- Future Opportunities



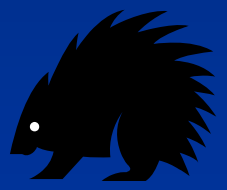
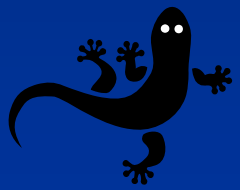


Living Lands Project



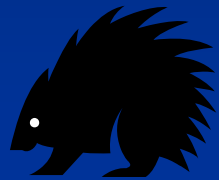
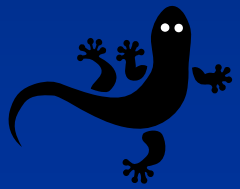
Living Lands Project

- Purpose: to increase the capacity of local land trusts to enhance, restore, and protect wildlife habitat and biodiversity values
- New project – 1st year of 5+ years
- Partnership with LTA
- Easements and fee lands



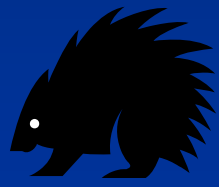
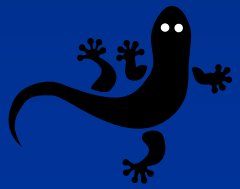
Biodiversity Definition

- The variety of life and natural processes, including:
 - Species
 - Genetic variation
 - Communities, ecosystems
 - Natural processes (flood, fire, predation, symbiosis, etc.)



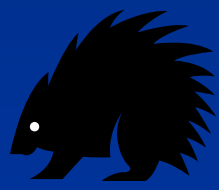
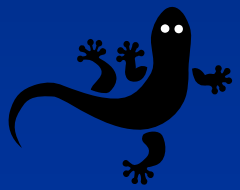
Why is Biodiversity Important?

- Many species at risk or in decline
- Protection cheaper than recovery
- Natural heritage and legacy
- Balance of nature
- Ecosystem services and natural functions (clean air / water, food, medicine, recreation)



Living Lands: Why Now?

- IRS and taxpayers need conservation donations to be worthy of a federal tax benefit
- Land trusts need to document “conservation purposes” in easement language
- Funders (public and private) want strategic planning and project selection
- Standards and practices...

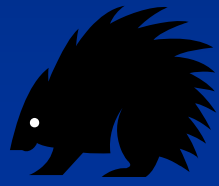
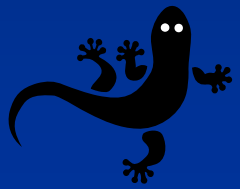




Living Lands: Standards and Practices



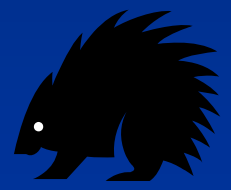
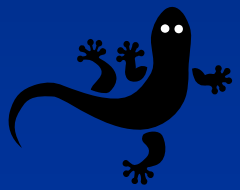
- Standard 8: Evaluating and Selecting Conservation Projects
 - A. Identifying focus areas
 - B. Project selection and criteria
 - D. Public benefit of transactions
 - F. Documenting conservation value
 - G. Project planning
 - H. Evaluating the best conservation tool
 - I. Evaluating partnerships
- Standard 11: Conservation Easement Stewardship
 - D. Landowner relationships (management)
 - E. Amendments





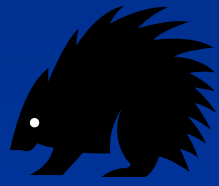
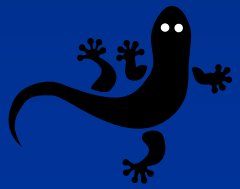
IRS and Habitat

- IRS income tax deduction for “qualified conservation contributions” must meet conservation purpose (section 170(h))
 1. Recreation or education for general public
 2. Protection of relatively natural habitat
 3. Open space (including farm or forest land)
 4. Historically important land or structure



Treasury regulations (section 1.170A-14)

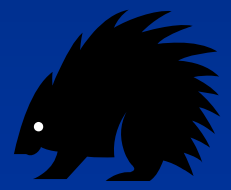
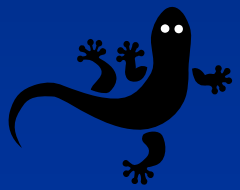
- Significant habitats and ecosystems:
 - habitats for rare, endangered, or threatened species of animal, fish, or plants
 - natural areas that represent high quality examples of a terrestrial or aquatic community
 - natural areas that are included in, or contribute to, the ecological viability of a local, state, or national park, preserve, refuge, or other similar conservation area
- Inconsistent use prohibited. Example: open space easement (farmland / flood control) cannot allow harm to habitat through pesticide use.





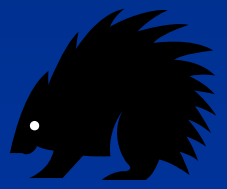
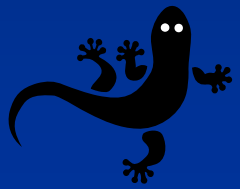
Being Strategic

- Opportunistic:
 - Landowners are self-selected
 - Projects are separate, scattered, not linked
- Strategic:
 - Identify highest priority conservation needs
 - Seek opportunities to conserve these areas
 - Projects are linked to landscape-scale conservation



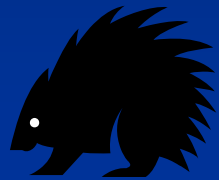
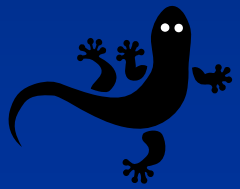
Life Cycle of a Land Trust

| <u>Stage</u> | <u>Activity</u> | <u>Approach</u> | <u>Scale</u> |
|----------------------------|--------------------------------------------------------|-----------------------------|----------------|
| <u>Stage 1</u> Forming | Need easements to prove concept | Opportunistic | Local |
| <u>Stage 2</u> Progress | Criteria to accept easements | Opportunistic/ Proactive | Service Area |
| <u>Stage 3</u> Mature | Accept and seek easements | Proactive | Service Area + |
| <u>Stage 4</u> Advanced | Use many tools to create desired and permanent results | Strategic | Land-scape |



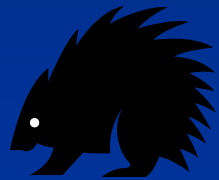
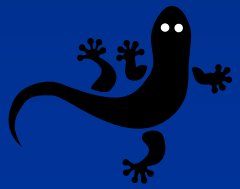
Living Lands: Assessment

- Purpose: determine the current 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 (including AZ, CO, NM, TX)



Survey Responses

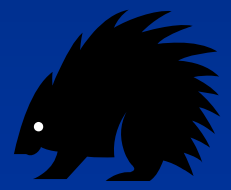
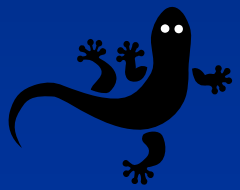
- Most local land trust's missions include wildlife, habitat, and/or biodiversity
- Most land protected by land trusts does not include plans, restoration, or management for biodiversity
- Most land trusts are interested in increasing their capacity to conserve biodiversity





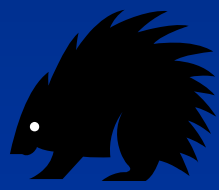
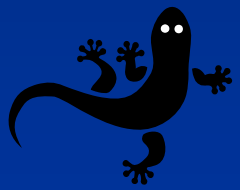
Survey Responses

- About half of land trusts have used federal funding
- Each federal funding program is only used by 10 - 30% of land trusts



Survey Responses

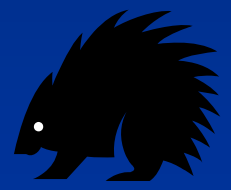
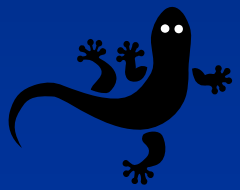
- Major barriers:
 - Limited stewardship / monitoring funding
 - Limited staff capacity
 - Limited staff expertise
 - Not a priority for funders
 - Not a local community priority
 - Uninterested landowners





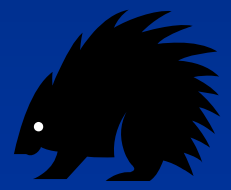
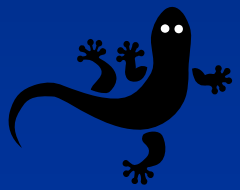
Survey Responses

- Assistance or training needs:
 - Conservation planning
 - Habitat restoration and management
 - Monitoring
 - Grant writing
 - Partnering / merging for effectiveness
 - Identifying funding sources
 - Matching funds





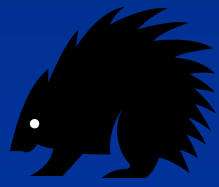
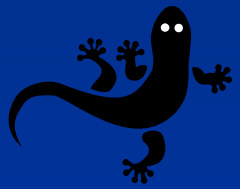
Strategic Conservation Planning for Biodiversity



Landscape-level Planning



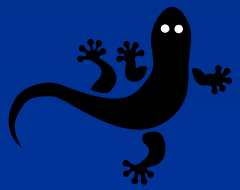
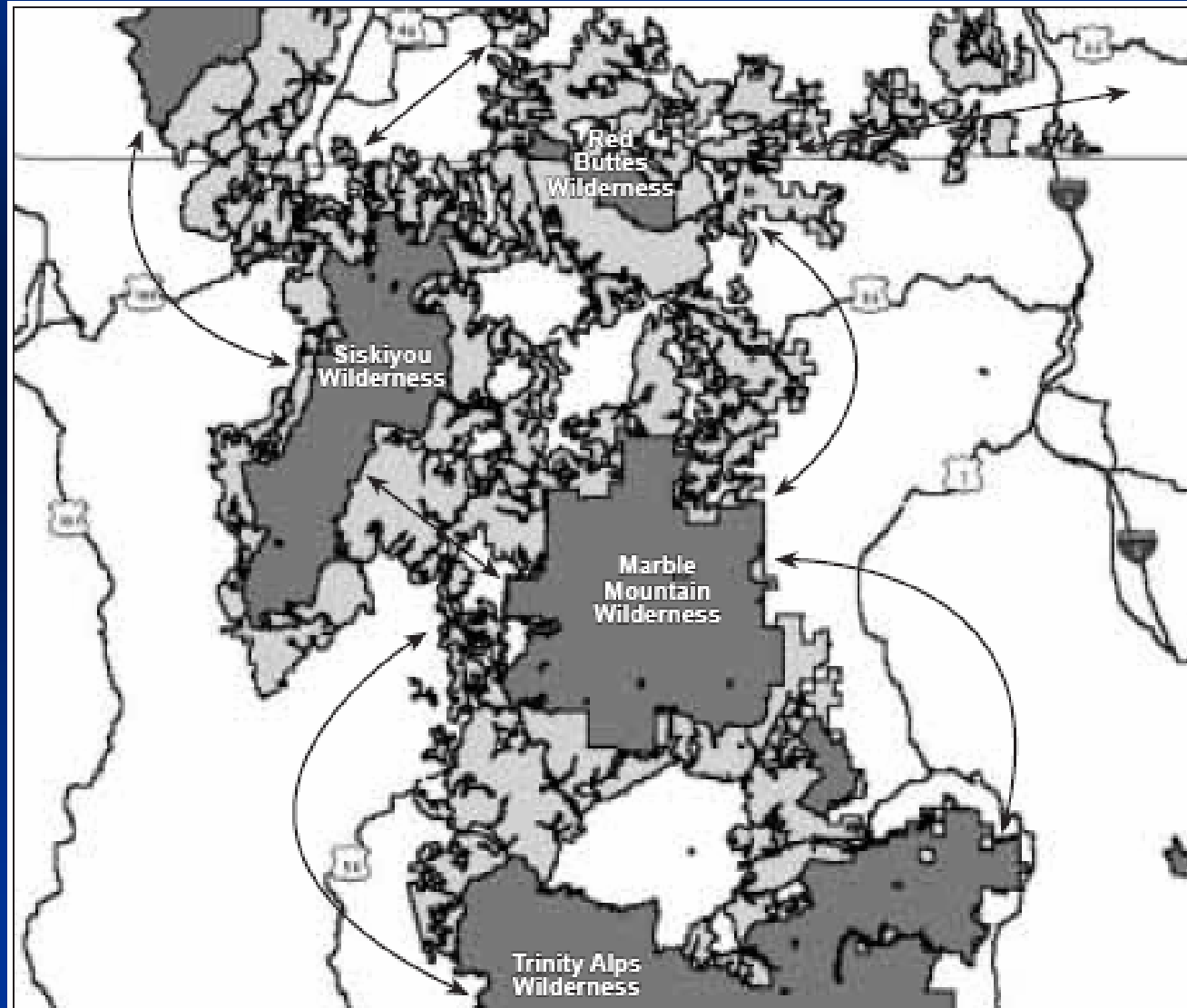
- Identify priorities in your local area based on priorities from a state or regional biodiversity or habitat conservation plan
- Focus on:
 - At-risk / rare habitats
 - Habitats for multiple at-risk species
 - Functioning ecosystems
- Many landscape-level plans already exist (SWAP, TNC, GAP, NH, land trust?)





Site Selection

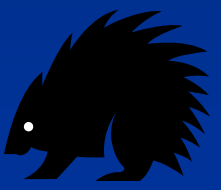
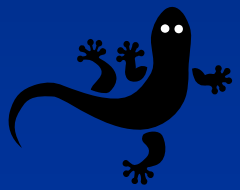
- Find sites in your area that fit into landscape-scale priorities
- Core, buffer, and connectivity areas





Site Planning

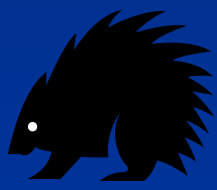
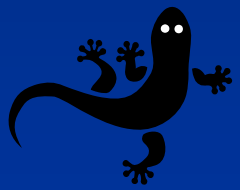
- Inventory species, habitats, conditions:
 - Start with: What's there now?
 - Historical context: What was there?
 - Landscape context: What's nearby?





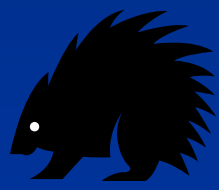
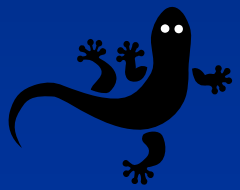
Site Planning

- Goal: functioning ecosystems with diverse native species
- How: may need restoration and/or management to...
 - Restore or enhance habitat / native vegetation / structural elements
 - Control invasive species
 - Remove barriers / constraints
 - Mimic or restore natural processes



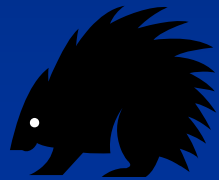
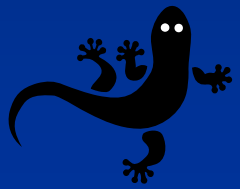
Restoration and Management for a New Easement

- Easement document:
 - Refer to a management plan?
 - Affirmative commitments?
- Landowner: education / resources / goals
- Other partners
- Funding



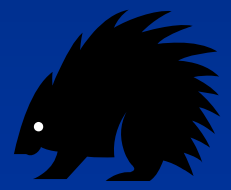
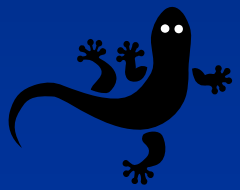
Restoration and Management for an Existing Easement

- Prioritize efforts based on benefits
- New inventory, for new goals?
- Easement document – amend?
- Other options same as for new easement



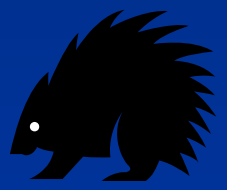
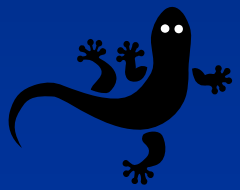


State Wildlife Action Plans



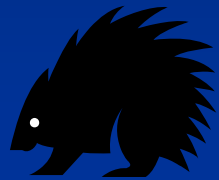
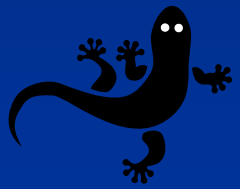
State Wildlife Action Plans

- Brand new, all 50 states
- Required for states to continue receiving State Wildlife Grants
- Approved by U.S. Fish and Wildlife Service
- Originally “State Comprehensive Wildlife Strategies” (some states use other names)
- Focus is “Species of Greatest Conservation Need” and their habitats



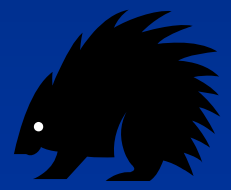
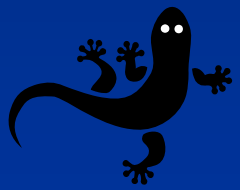
State Wildlife Action Plans: 8 Required Elements

- At-risk species
 - At-risk habitats
 - Threats
 - Conservation actions
 - Monitoring
 - Review
 - Coordination
 - Public Participation
-
- 50 experiments in wildlife conservation



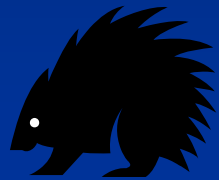
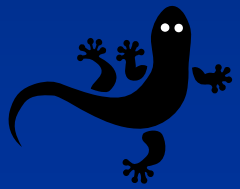
State Wildlife Action Plans: Other Useful Parts

- Ecoregion / watershed maps
- Historic distribution of habitats
- Invasive species
- Restoration actions
- Other...



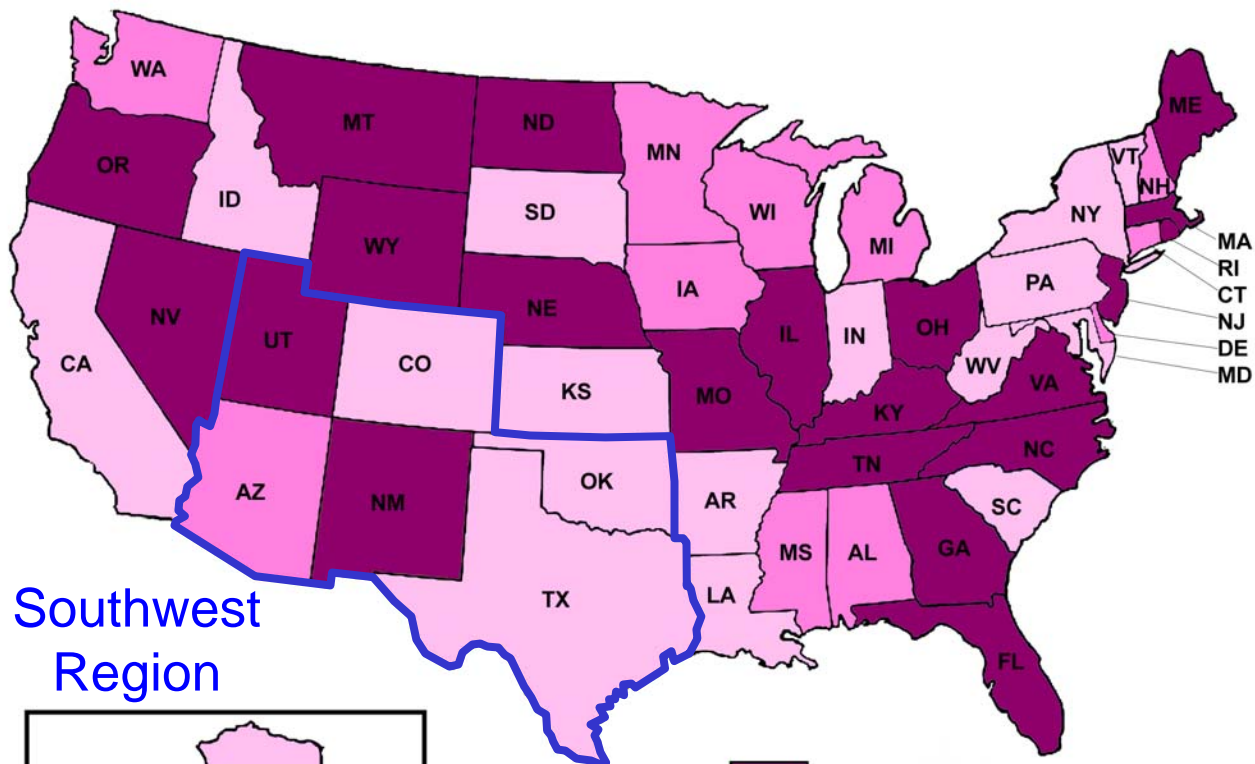
Summaries for 6 SW States

- Website
- # “Species of Greatest Conservation Concern”
- Easements (all 6 states in SW)
- Priority habitats
- Mapped priorities (if any)
 - priority habitats
 - focus areas

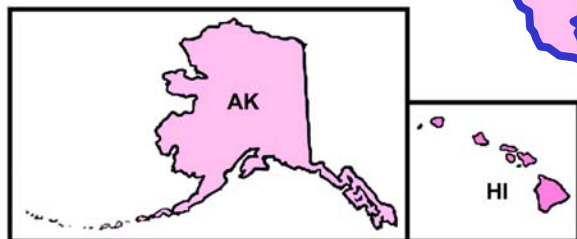


STATE WILDLIFE PLANS: PRIORITY MAPS

Winter 2006



Southwest
Region



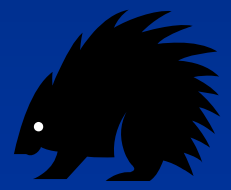
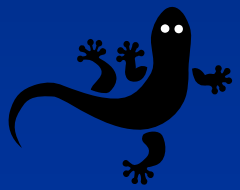
- Maps focal areas
- Maps priority habitats
- Maps habitat/land cover or No habitat maps
- Plans not reviewed

| National | Southwest |
|----------|-----------|
| 21 | 2 |
| 12 | 1 |
| 17 | 3 |

- Puerto Rico
- Virgin Islands
- Guam
- American Samoa
- Northern Mariana Islands

Utah: Overview

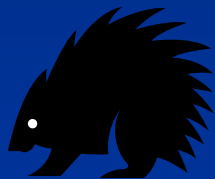
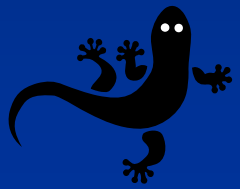
- www.wildlife.utah.gov/cwcs
- 196 at-risk species (no plants)
- Mapped priorities:
 - key habitats
 - conservation focus areas





Utah: Easements

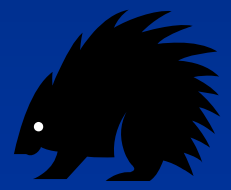
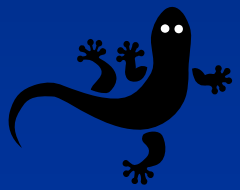
- Land trusts included in developing plan
 - The Nature Conservancy
 - Rocky Mountain Elk Foundation
 - Mule Deer Foundation
- Easements = general tool for permanent habitat conservation
- Easements = specific tool for selected at-risk species and key habitats





Utah: 10 Key Habitats

- Lowland Riparian Habitat
- Wetlands
- Mountain Riparian Habitat
- Shrub/steppe
- Mountain Shrub Habitat
- Flowing-water Habitat
- Wet Meadows
- Grasslands
- Standing-water Habitat
- Aspen Forest

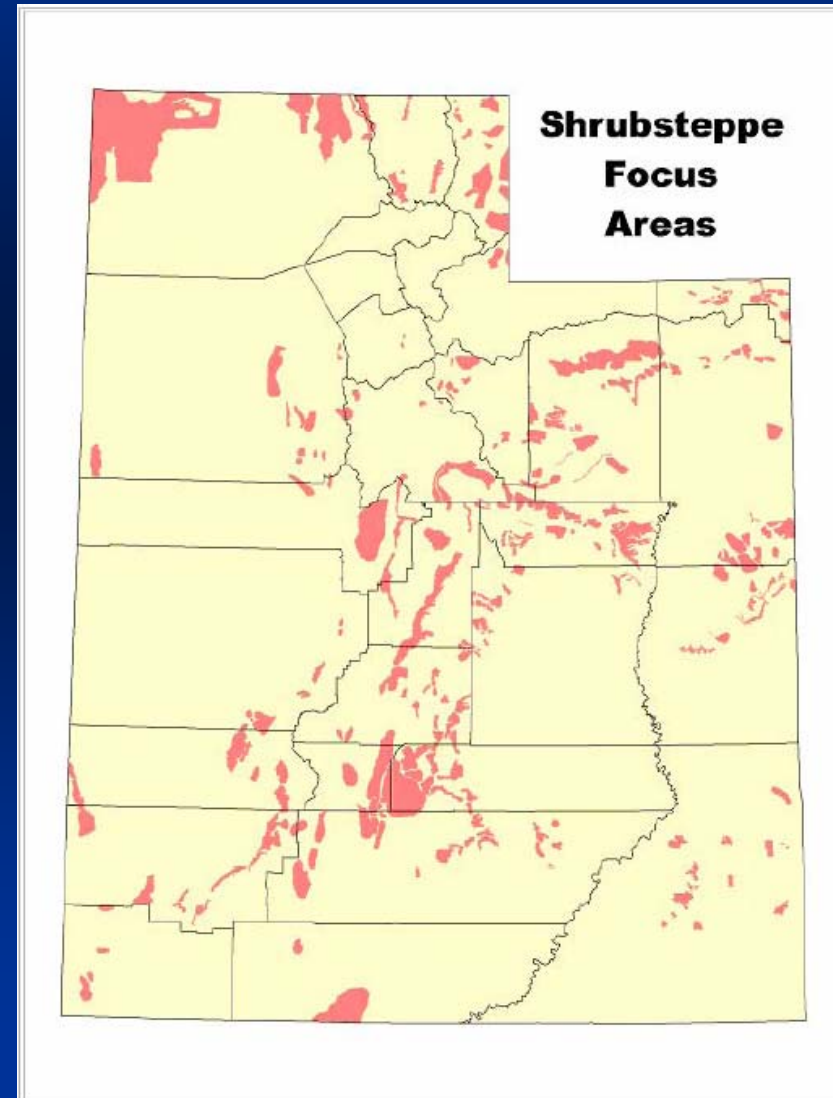
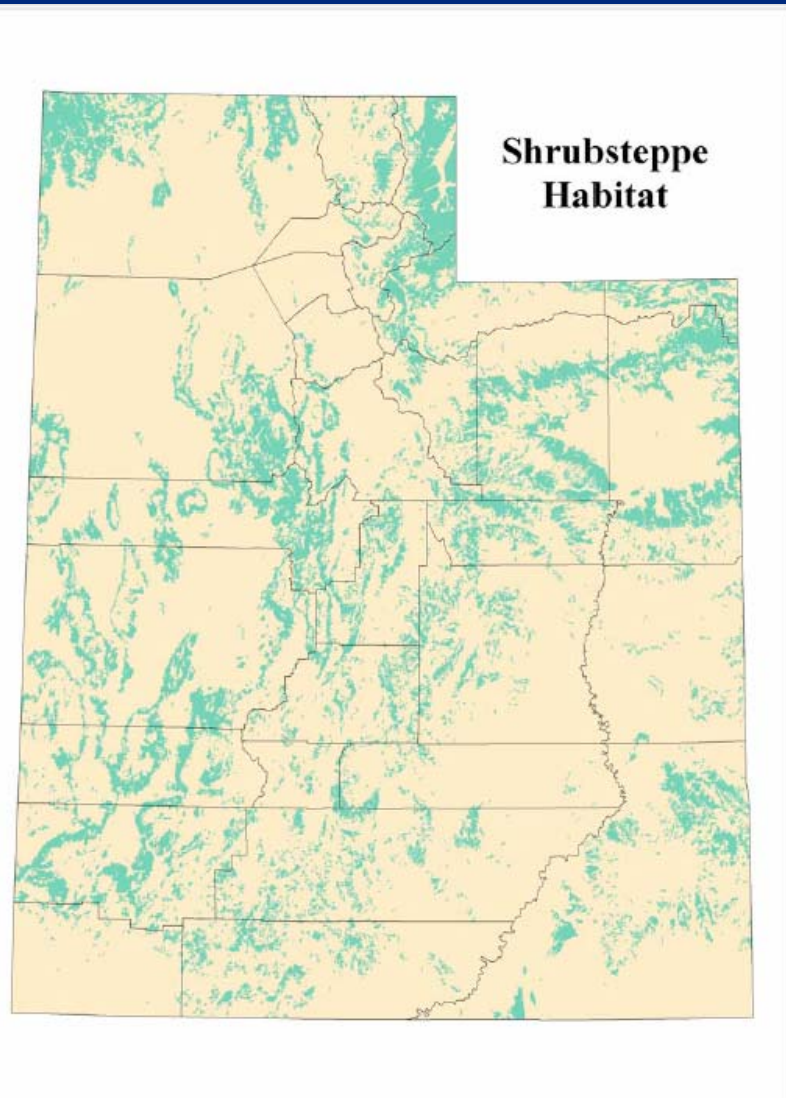




Utah: Mapped Priorities



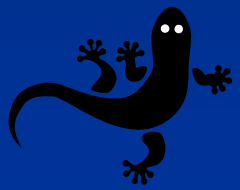
- Key habitat
- Conservation focus area



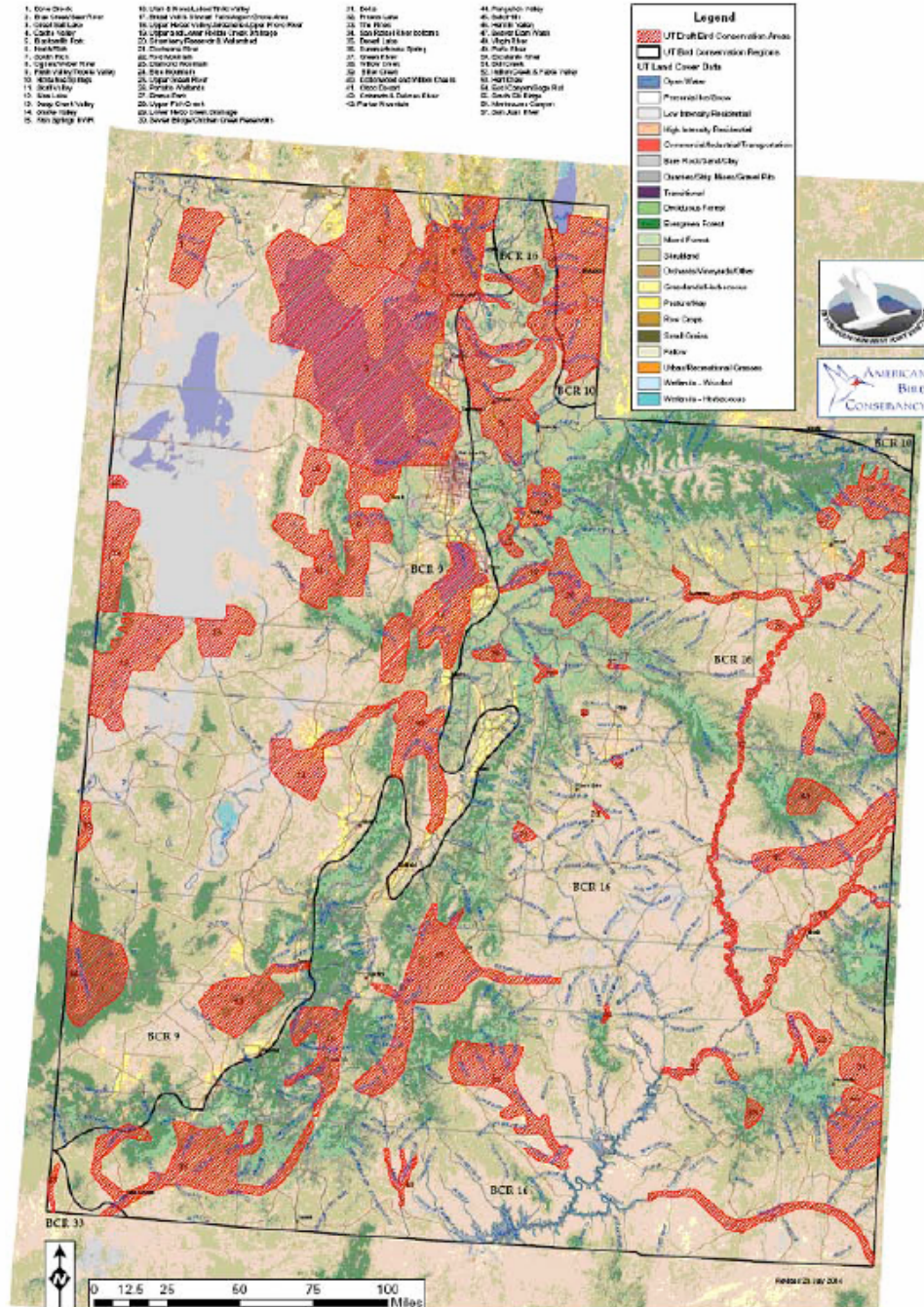


Utah: Mapped Priorities

- Bird habitat conservation areas (draft)



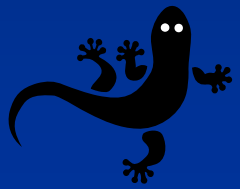
UT Draft Bird Habitat Conservation Areas with Land Cover





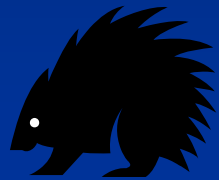
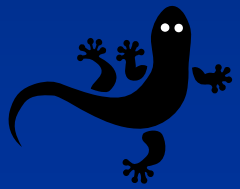
Colorado: Overview

- www.wildlife.state.co.us/WildlifeSpecies/ComprehensiveWildlifeConservationStrategy
- 205 at-risk species (no plants)
- Did not map priority habitats or focus areas



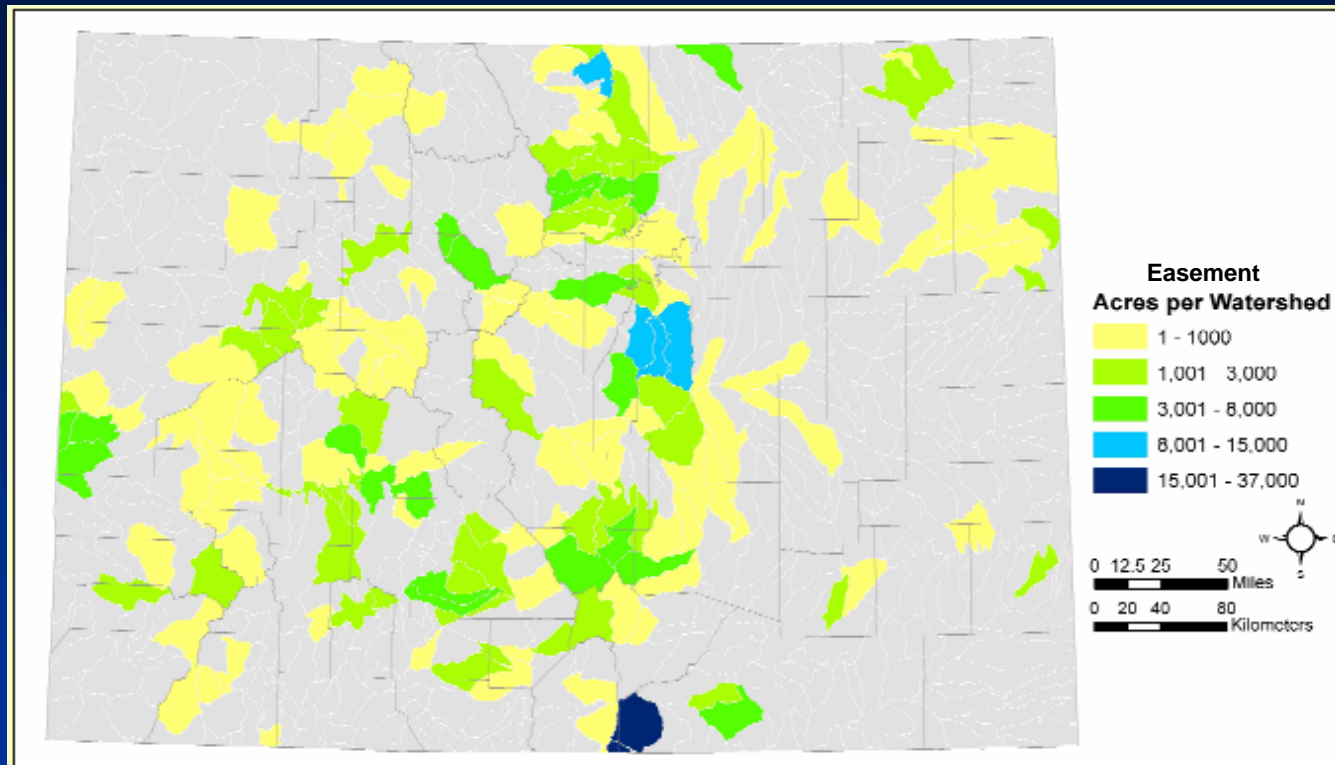
Colorado: Easements

- Local land trusts are listed as potential partners
- Easements = general tool for habitat conservation
- Easements = specific tool for numerous habitats
- Description of CoMaP...



Colorado: CoMaP

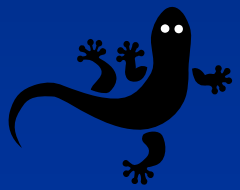
- Colorado Ownership Management and Protection
- Mapping the status and trends of Colorado's protected places



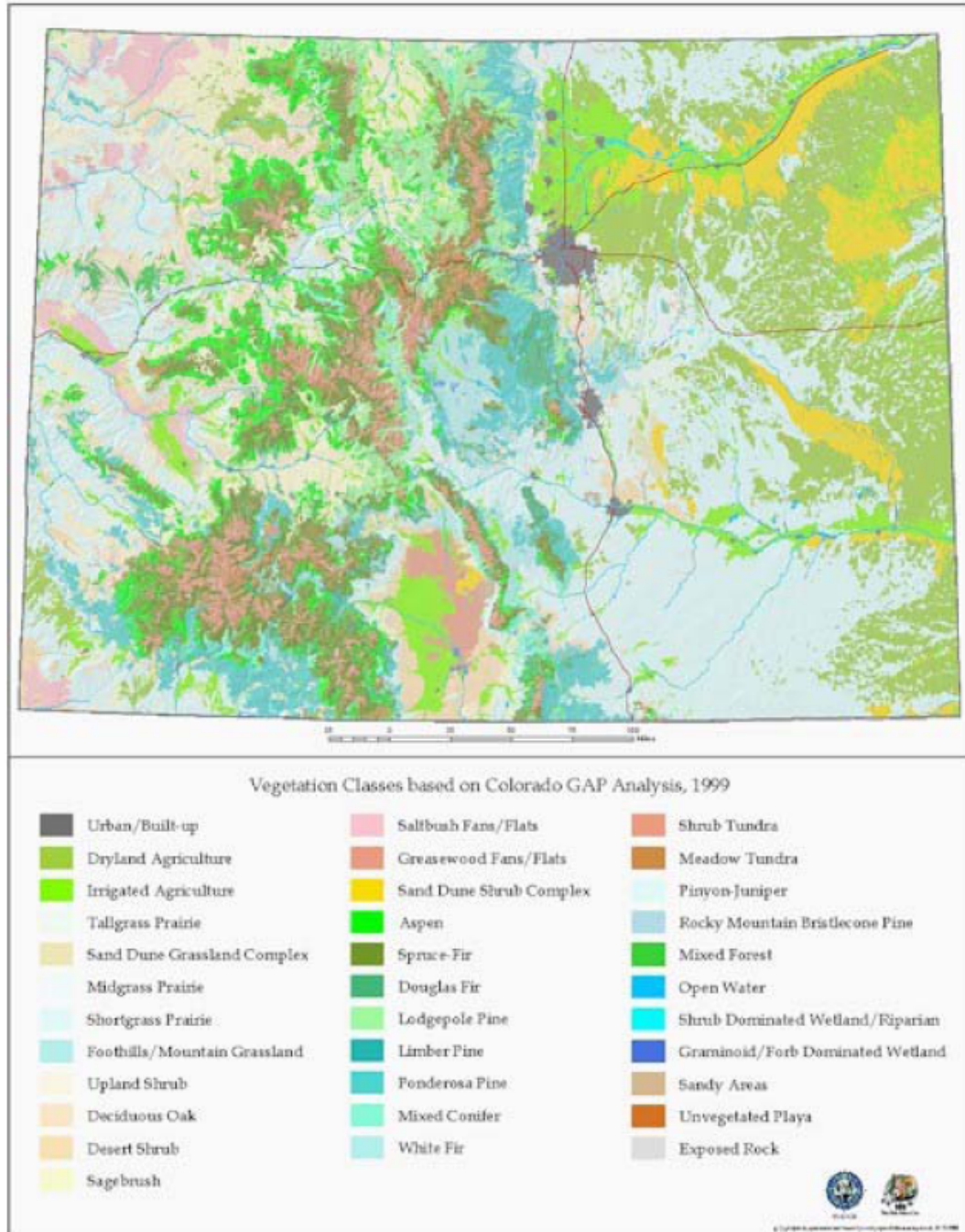


Colorado: Habitats

- Habitats mapped from vegetation
- No maps of priority habitats

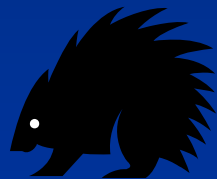
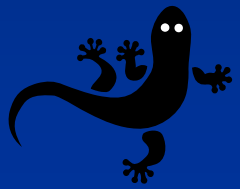


Location of Habitats in Colorado



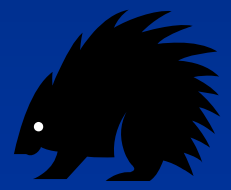
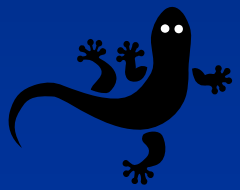
Colorado: Key Habitats

- Eastern Colorado plains habitats in poor condition
 - river and stream systems
 - riparian areas
 - tallgrass and midgrass prairie
- Others in poor condition
 - sagebrush
 - pinyon-juniper
 - ponderosa pine



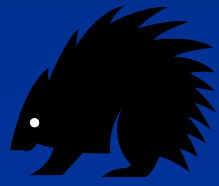
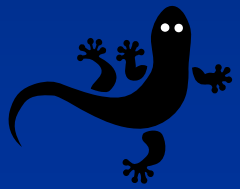
Arizona: Overview

- www.gf.state.az.us/w_c/cwcs.shtml
- 183 at-risk species (no plants)
- Mapped priority habitats



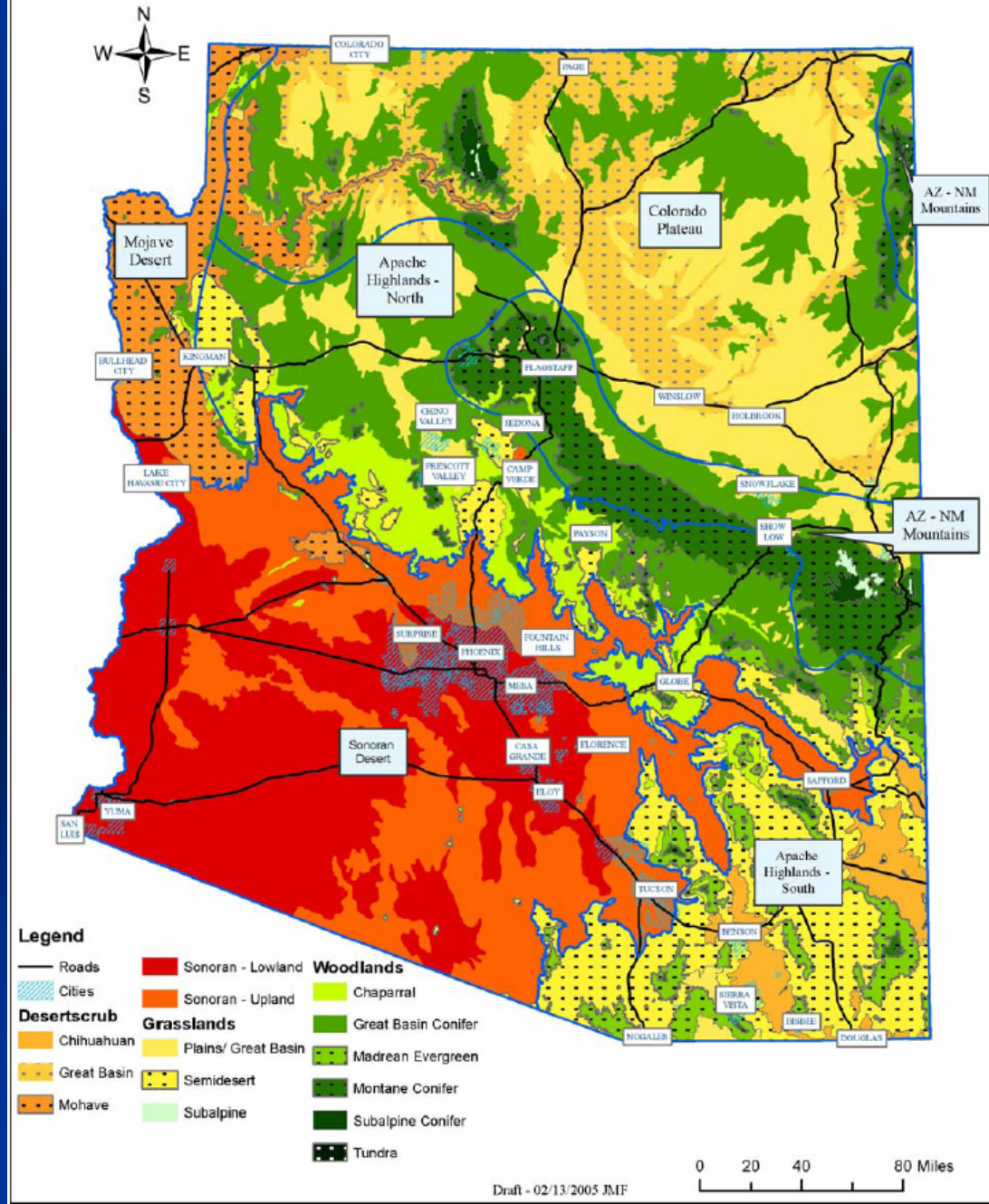
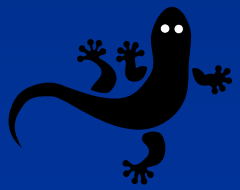
Arizona: Easements

- Numerous land trusts involved
 - Desert Foothills Land Trust
 - Diablo Trust
 - McDowell Sonoran Land Trust
 - Grand Canyon Trust
 - Rincon Institute
 - Rocky Mountain Elk Foundation
 - Southeast Arizona Land Trust
 - The Nature Conservancy
- Easements = general tool for habitat conservation
- Easements = specific tool to protect habitat from threats (urban growth, rural development, agricultural conversion)





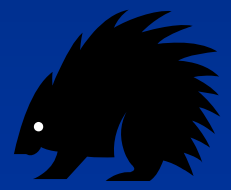
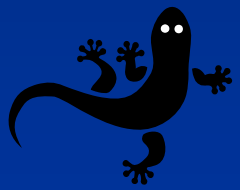
Arizona: 6 Ecoregions 17 Habitat Types





Arizona: Areas of Conservation Priorities

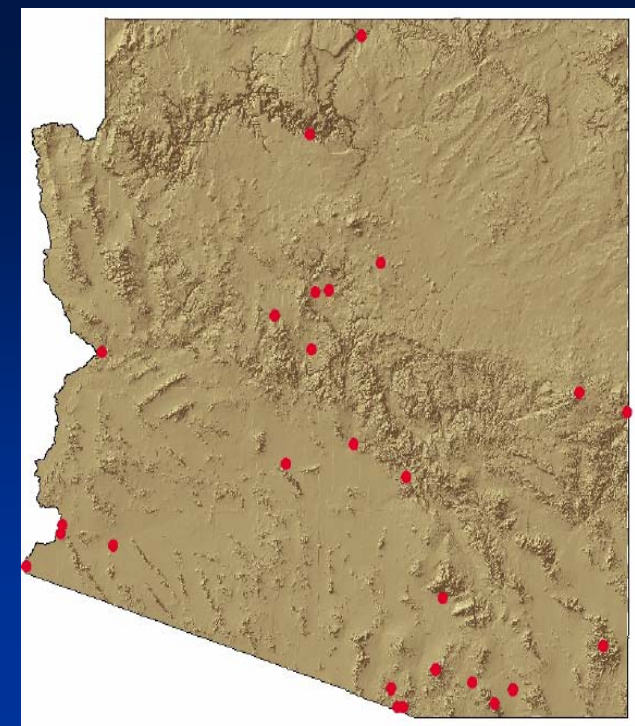
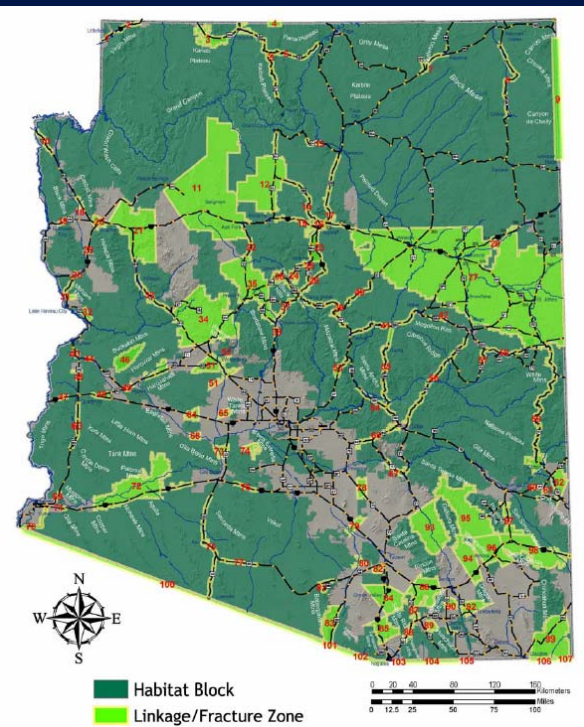
- Short term: use conservation priority areas from three partners
- Long term: develop integrated landscape approach





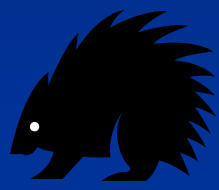
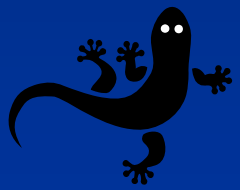
Arizona: Conservation Priority Areas

- Arizona Wildlife Habitat Linkages
- The Nature Conservancy: Ecoregional Priorities
- Arizona Important Bird Areas



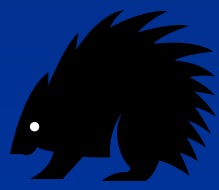
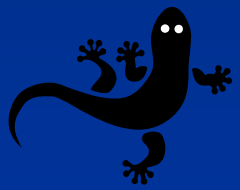
New Mexico: Overview

- <http://fws-nmcfwru.nmsu.edu/cwcs>
- 452 at-risk species (no plants)
- Mapped priority habitats and focal areas



New Mexico: Easements

- Large land trusts involved in developing plan:
 - The Nature Conservancy
 - Rocky Mountain Elk Foundation
- Use easements to protect riparian areas and other habitat connections

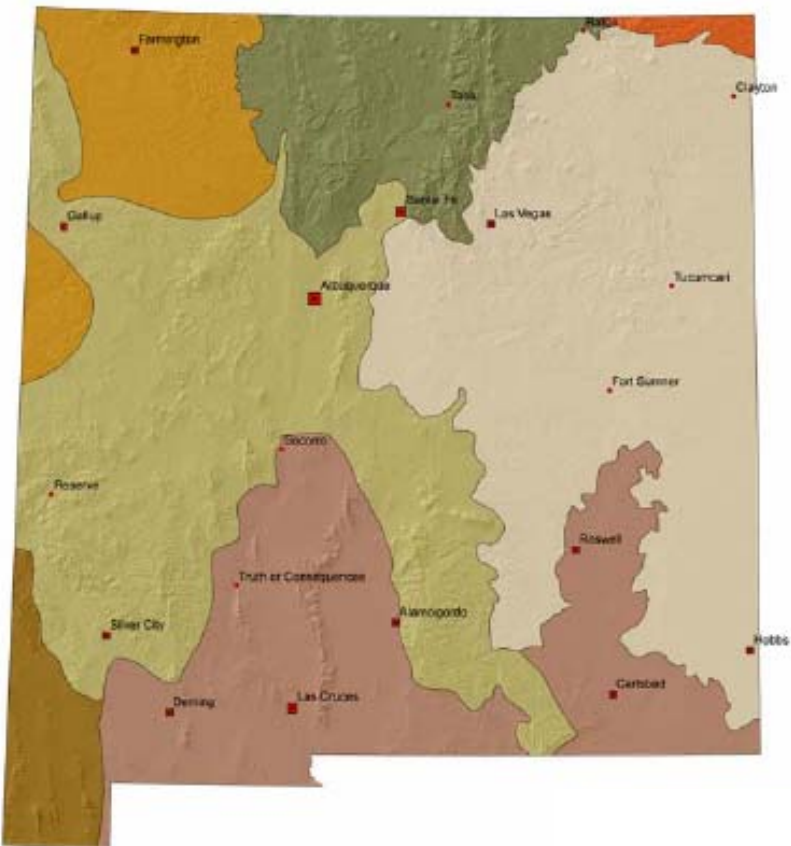




New Mexico:

7 Ecoregions

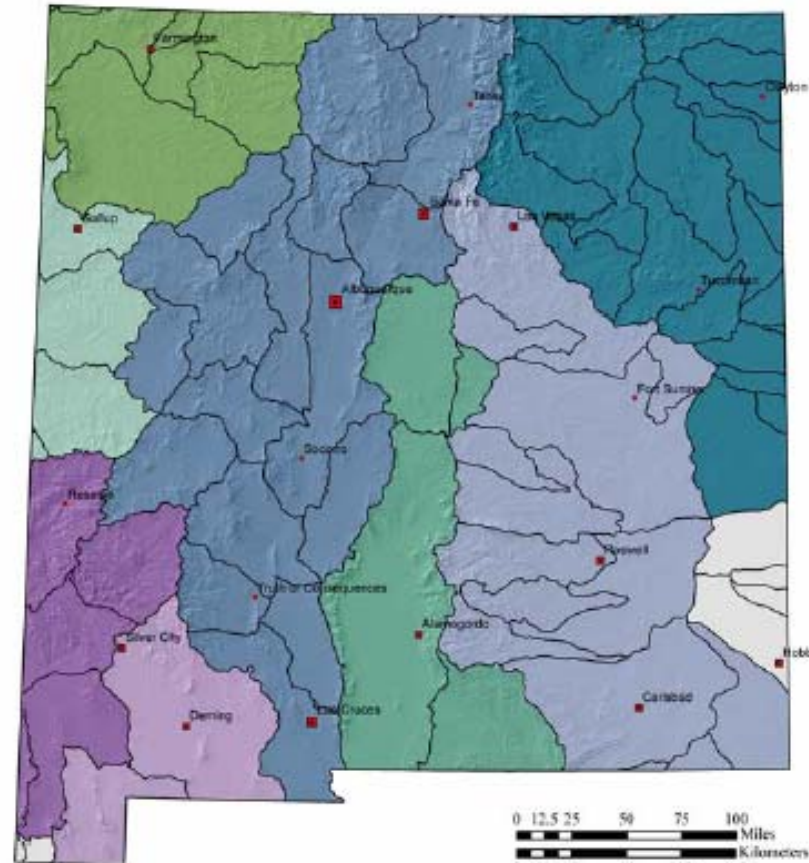
8 Watersheds



The Nature Conservancy Ecoregions

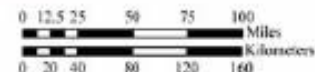
- Apache Highlands
- Arizona-New Mexico Mountains
- Central Shortgrass Prairie
- Chihuahuan Desert
- Colorado Plateau
- Southern Rocky Mountains
- Southern Shortgrass Prairie

The source of data is The Nature Conservancy. For information regarding methods, results, and data accuracy, refer to <<http://gis.tnc.org/>>.



Major Watershed Drainages

- Canadian
- Gila
- Mimbres
- Pecos
- Rio Grande
- San Juan
- Tularosa
- Zuni



General Information

- Hydrological Unit Codes (HUCs)
- No Key Aquatic Habitats

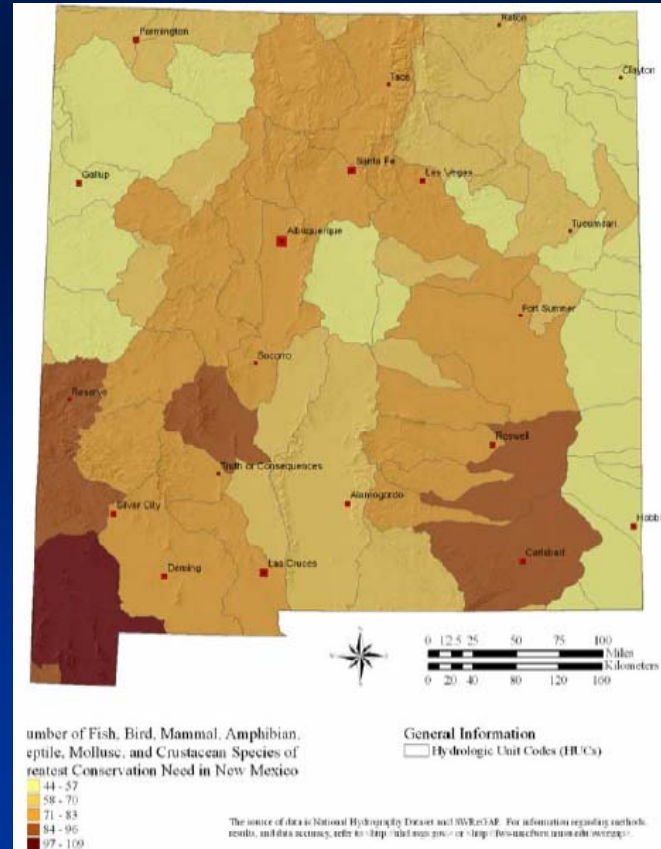
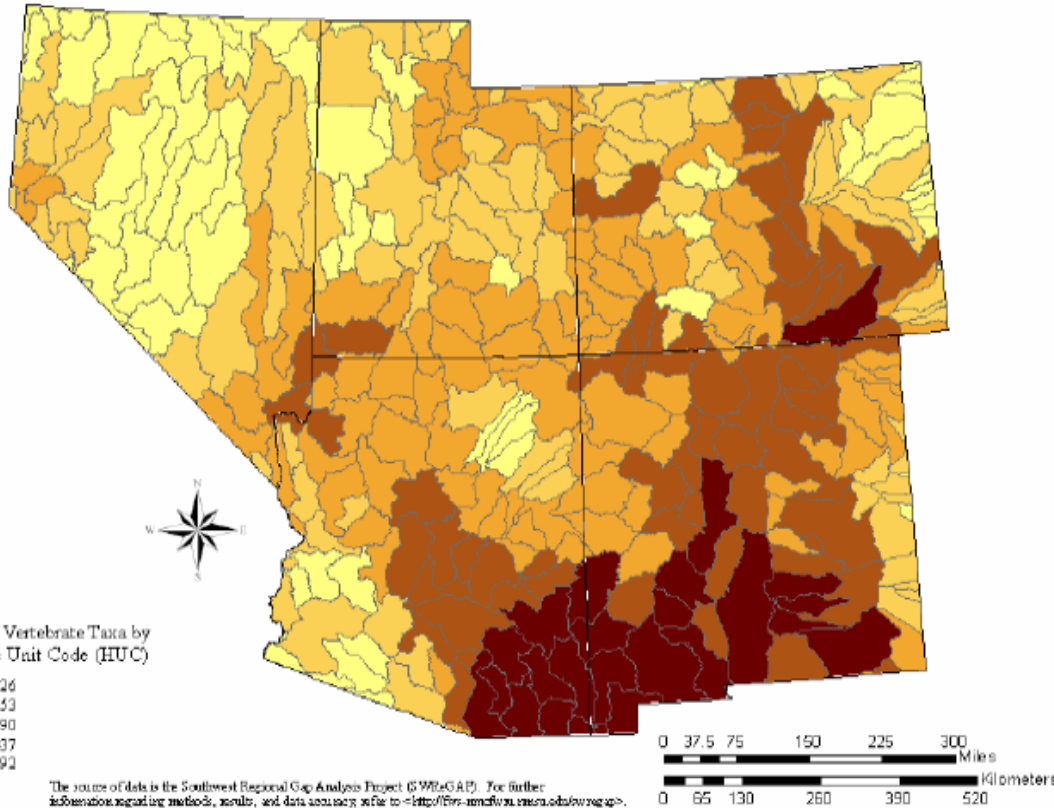
The source of data is the National Hydrography Dataset. For information regarding methods, results, and data accuracy, refer to <<http://nhd.usgs.gov/>>.



Mew Mexico: Vertebrate Species Richness

- 5-state regional planning effort

- New Mexico

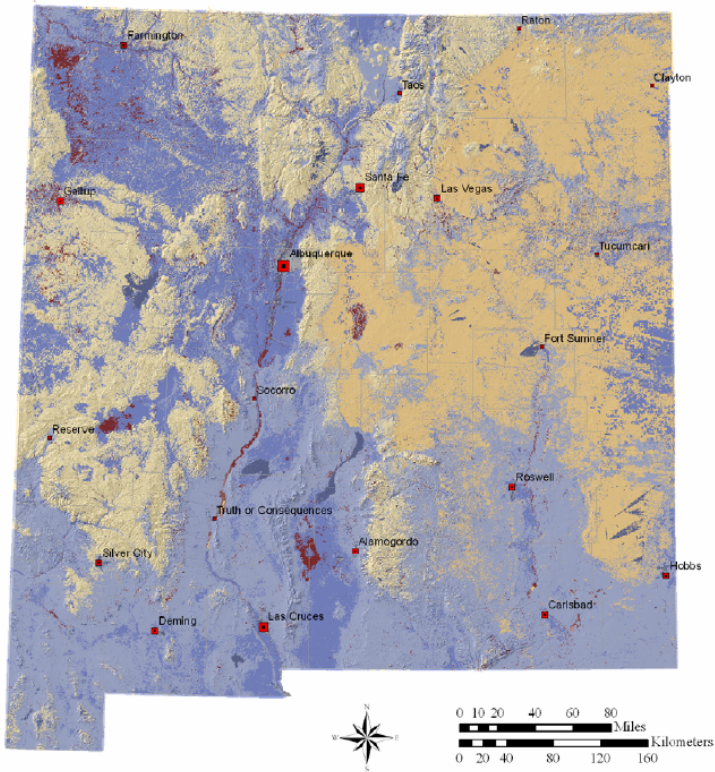




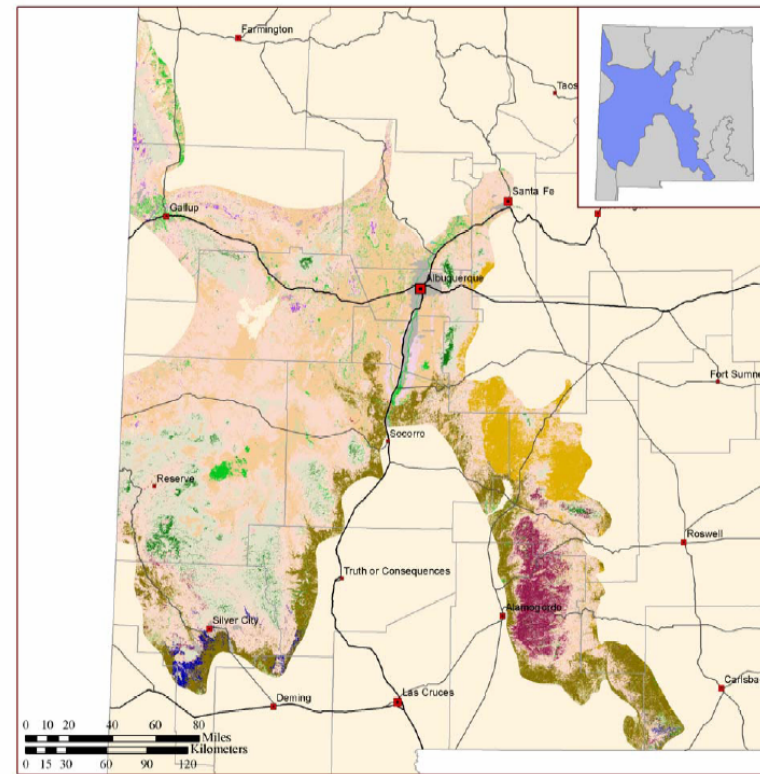
New Mexico: Key Habitats

- Magnitude of risk to key habitats

- Key habitats in each ecoregion



Synergistic Effects of Factors that Influence Habitat



Key Terrestrial Habitats

- Chihuahuan Semi-Desert Grassland
- Inter-Mountain Basins Big Sagebrush Shrubland
- Madrean Encinal
- Madrean Pine-Oak Conifer-Oak Forest and Woodland
- Riparian
- Rocky Mountain Alpine-Montane Wet Meadow
- Rocky Mountain Montane Mixed Conifer Forest and Woodland
- Western Great Plains Sandhill Shrubland
- Western Great Plains Shortgrass Prairie

Adjacent Landcover

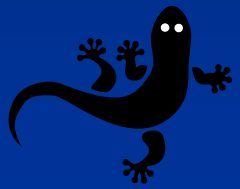
- Active and Stabilized Dunes
- Agriculture and Developed
- Open water
- Pinyon-Juniper/Juniper Savanna
- Recently Disturbed
- Rocky Mountain Forest and Woodland
- Scrub and Shrubland
- Steppe and Grassland

The source of data is the Southwest Regional Gap Analysis Project (SWReGAP). For information regarding methods, results, and data accuracy, refer to <http://sw-mcfrv1.unm.edu/swregap/>.

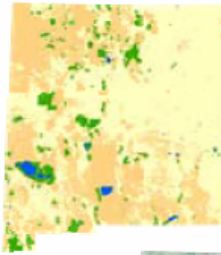


Mexico: Mapped Priorities

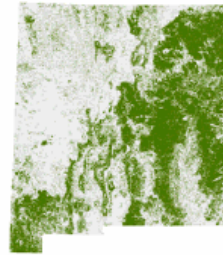
- Based on combining priorities from four maps



Gap Status Codes



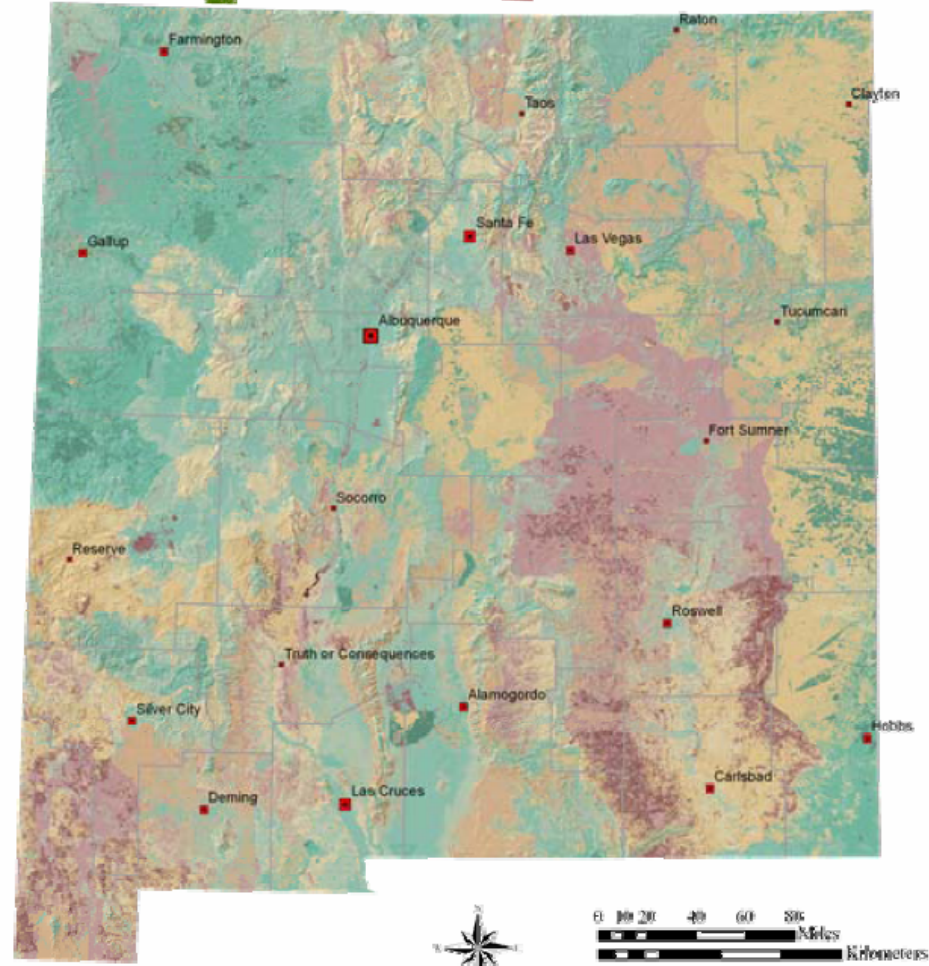
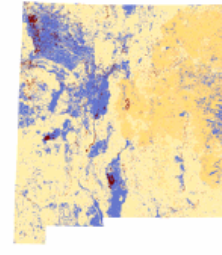
Key Habitats



SGCNs by HUC



Influencing Factors



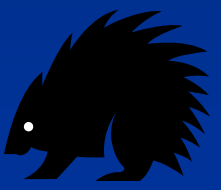
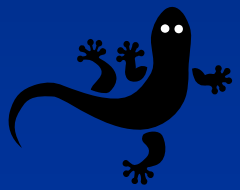
Key Areas to Assess for Conservation Efforts





Texas: Overview

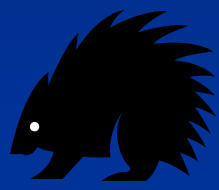
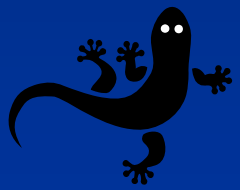
- www.tpwd.state.tx.us/business/grants/wildlife/cwcs
- 151 at-risk species (no plants)
- Priorities identified but not mapped



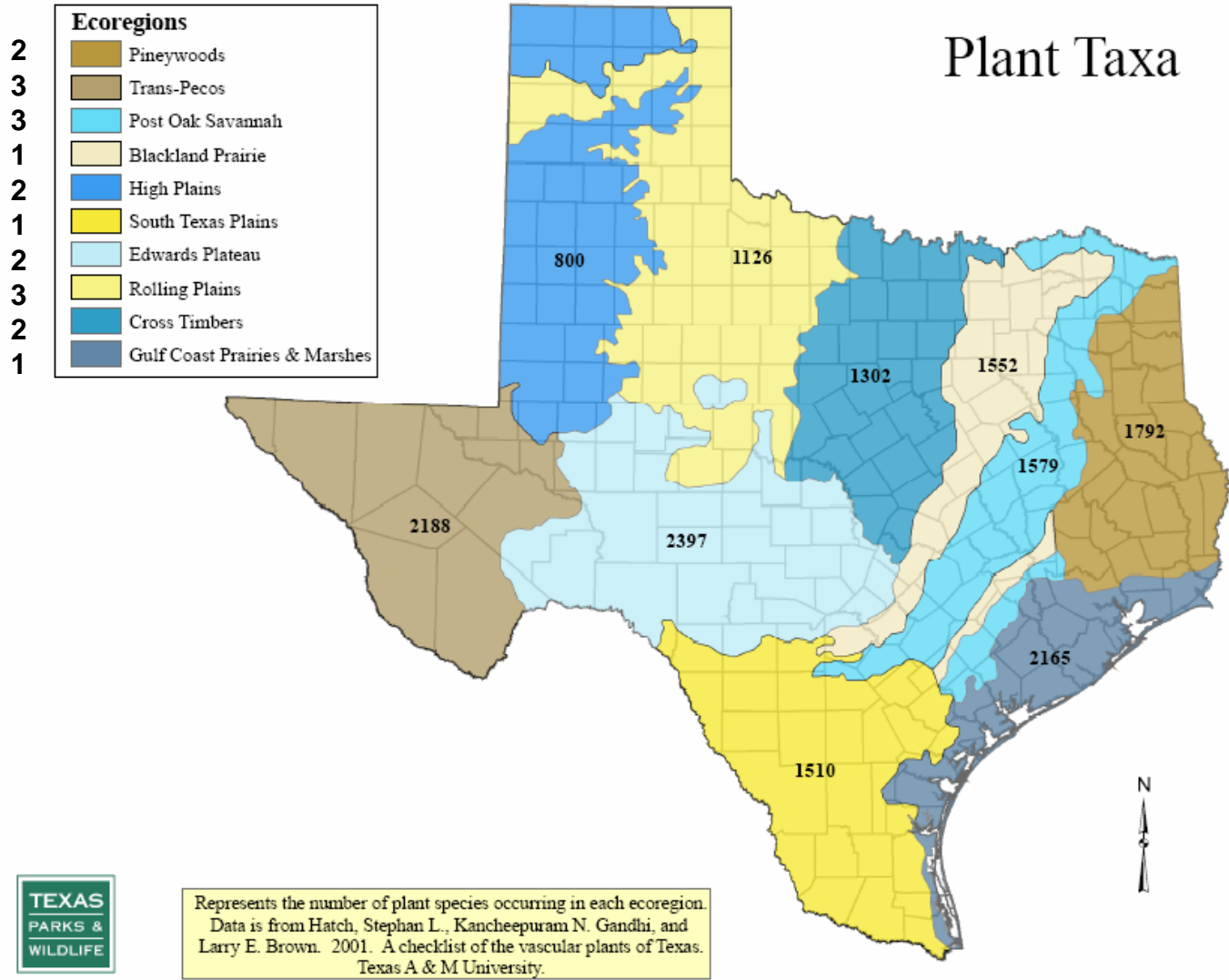


Texas: Easements

- Recognize and support the important role of land trusts in conserving wildlife habitat
- Partner with land trusts for access to easement lands for research, habitat management, and habitat conservation
- Work with developers to build on the most suitable land and conserve the best habitat via easements
- Trans-Pecos Ecoregion: “A new non-profit land trust, Frontera Land Alliance, has formed and is working on acquiring ecologically sensitive habitat. The organization needs support and funding.”

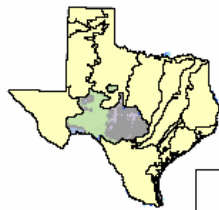


Texas: 10 Ecoregions

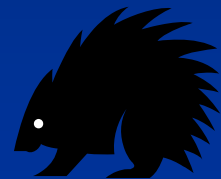
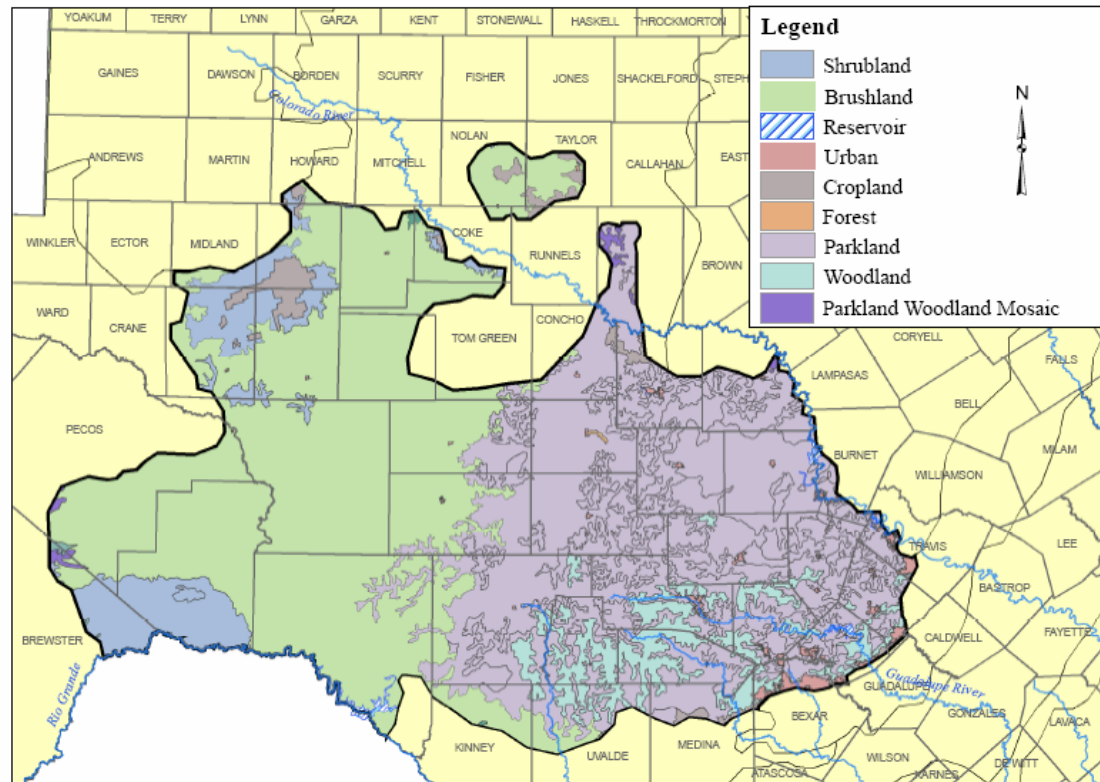


Texas: Priority Habitats

- Habitats mapped for each ecoregion
- Priority habitats identified but not mapped

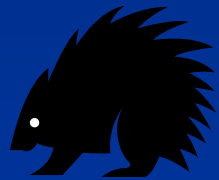
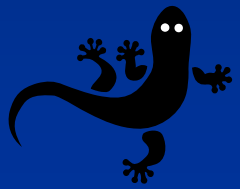


Edwards Plateau Ecoregion



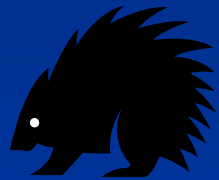
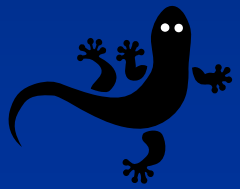
Oklahoma: Overview

- www.wildlifedepartment.com/CWCS.htm
- 246 at-risk species (no plants)
- Key habitats (Conservation Landscapes) identified but not mapped

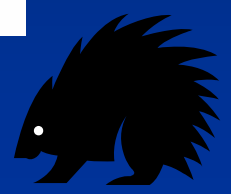
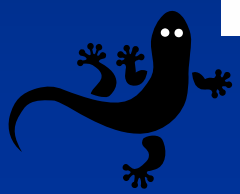
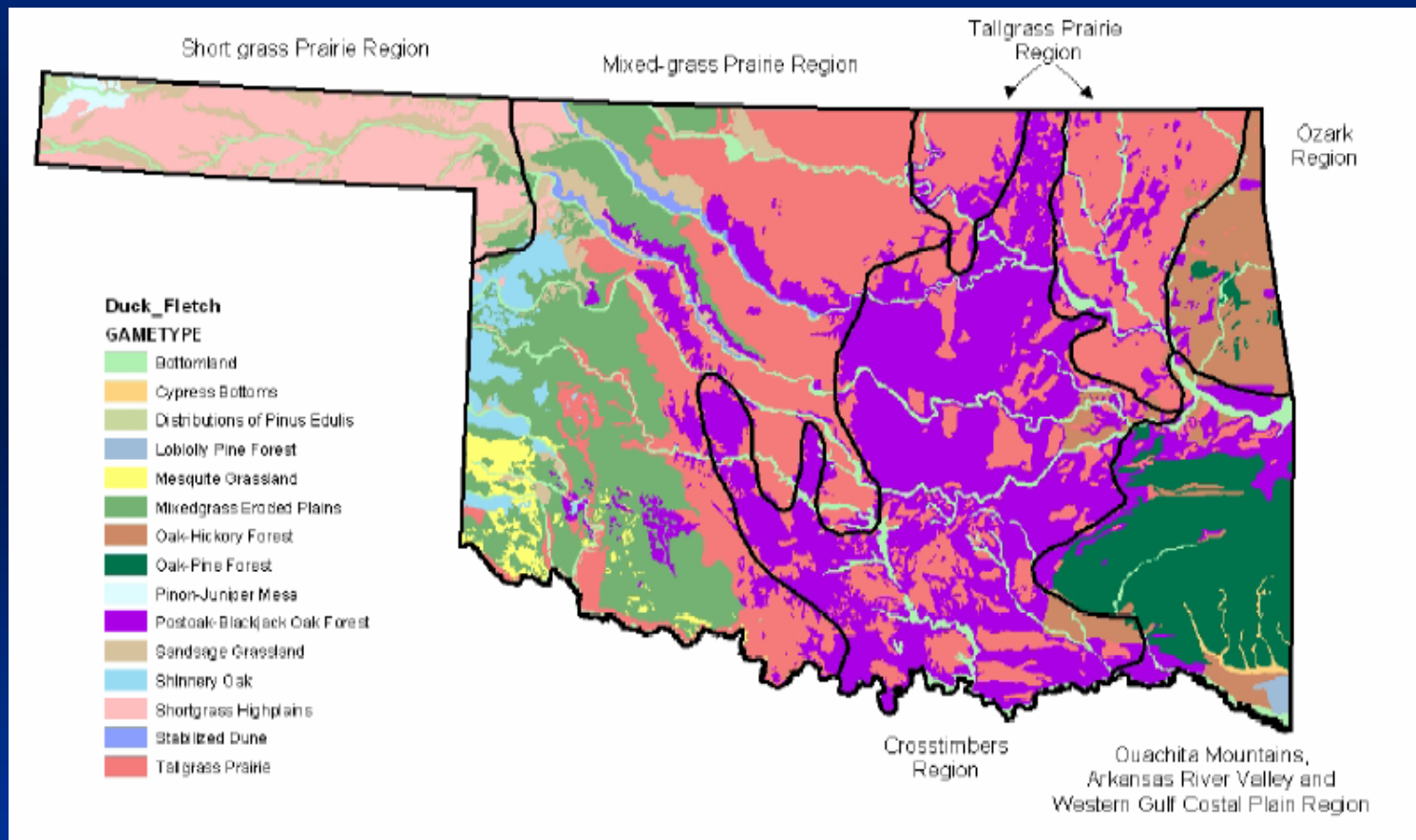


Oklahoma: Easements

- Purchase easements adjacent or close to public lands
- Easements listed as a tool to conserve specific habitats, by ecoregion
- Monitoring for success includes tracking numbers and acres of easements



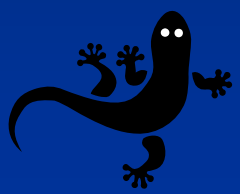
Oklahoma: Ecoregions and Habitats





Oklahoma: Conservation Areas

- From TNC portfolio sites for each ecoregion



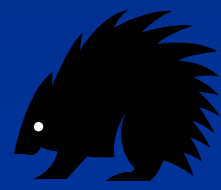
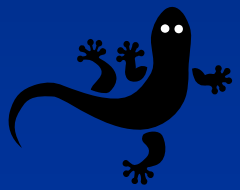
Oklahoma Chapter Portfolio of Conservation Areas
Central Mixed-grass Prairie Ecoregion





For States w/o Mapped Priorities

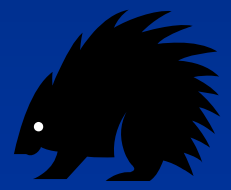
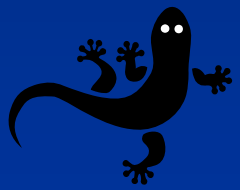
- The Nature Conservancy – ecoregion priorities
www.nature.org
- NatureServe – ecosystem / rare species data
www.natureserve.org
- Audubon – Important Bird Areas
www.audubon.org/bird/iba
- Gap Analysis Program (GAP)
<http://gapanalysis.nbii.gov>





Funding for Biodiversity Conservation

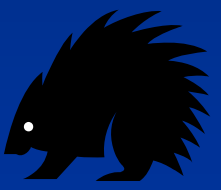
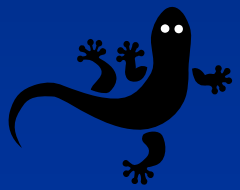
(Federal Programs)





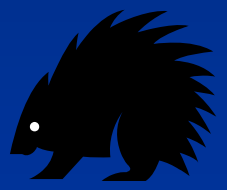
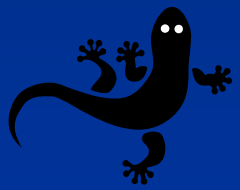
Information and links to federal conservation incentive programs:

www.biodiversitypartners.org/incentives



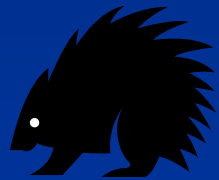
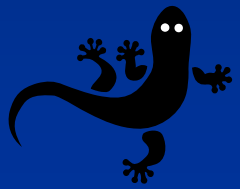
Federal Incentive Programs

- 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

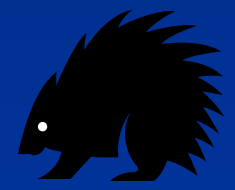
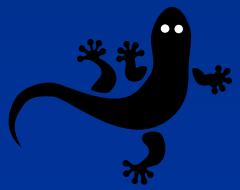




Easement Programs (not NRCS)



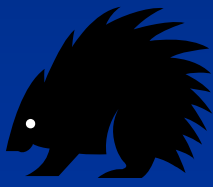
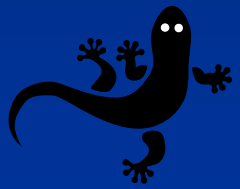
- Healthy Forests Reserve Program (HFRP; USFS / NRCS)
 - Forests with at-risk species
 - 10, 30, 99 year easements
- Forest Legacy Program (FLP; USFS / states)
 - Environmentally sensitive forest land
 - Permanent easement or acquisition
- Landowner Incentive Program (LIP; USFWS / states)
 - Listed and 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

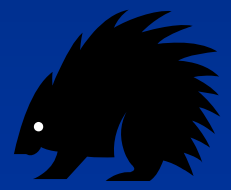
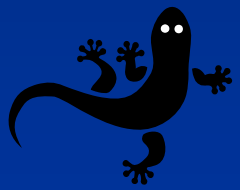




Cost Share Programs (USFWS)



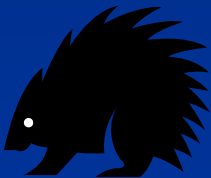
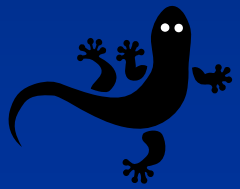
- North American Wetlands Conservation Act Grants Program (NAWCA)
- Partners for Fish and Wildlife (PFW)
- Private Stewardship Program (PSP)



Cost Share Programs (USFS)

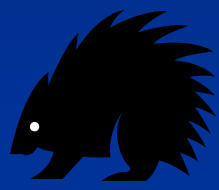
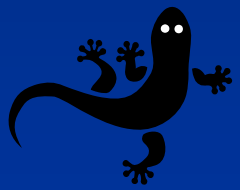


- Forest Land Enhancement Program (FLEP)
- Healthy Forests Reserve Program (HFRP)



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

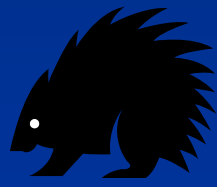
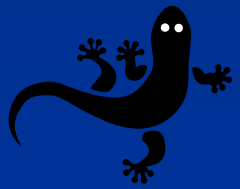




Stewardship Programs (NRCS)

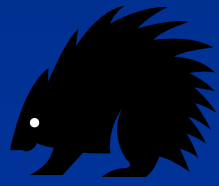
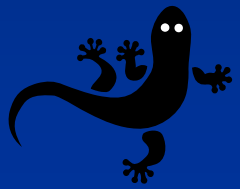


- Conservation Security Program (CSP)
 - Rewards ongoing stewardship on producing land
 - Whole-farm approach
 - Available to all producers (any size, crop)
 - Offered by watershed
 - Tier III requires wildlife component



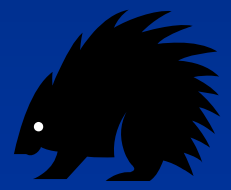
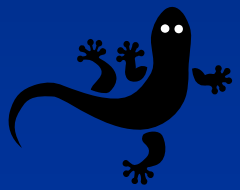
Challenges

- 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





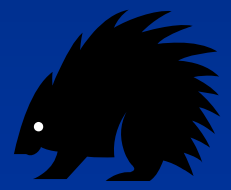
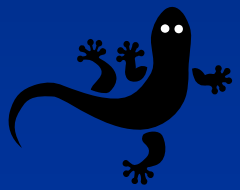
Future Opportunities





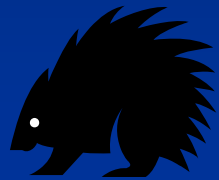
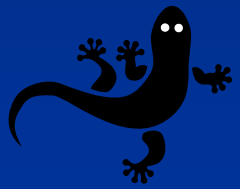
Opportunities

- Partnerships with State Wildlife Action Plans
- NRCS State Technical Advisory Committees
 - Is a local land trust on yours?
- 2007 Farm Bill Reauthorization



Living Lands Opportunities (2006 – 2008)

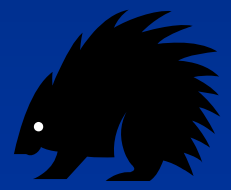
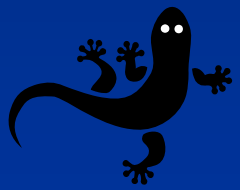
- Case studies
- Pilot projects – funding, assistance
- Trainings – Rally, Leadership Courses
- Revolving fund for up-front cost of restoration
- Other web resources – sample easement language, sample conservation plans, links to other





Closing Thoughts on Biodiversity Conservation...

- Identify local priorities based on landscape-level priorities
- Restoration and management may be needed
- Living Lands Project: assistance and resources





**Questions?
Comments?**

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