National Association of Conservation Districts

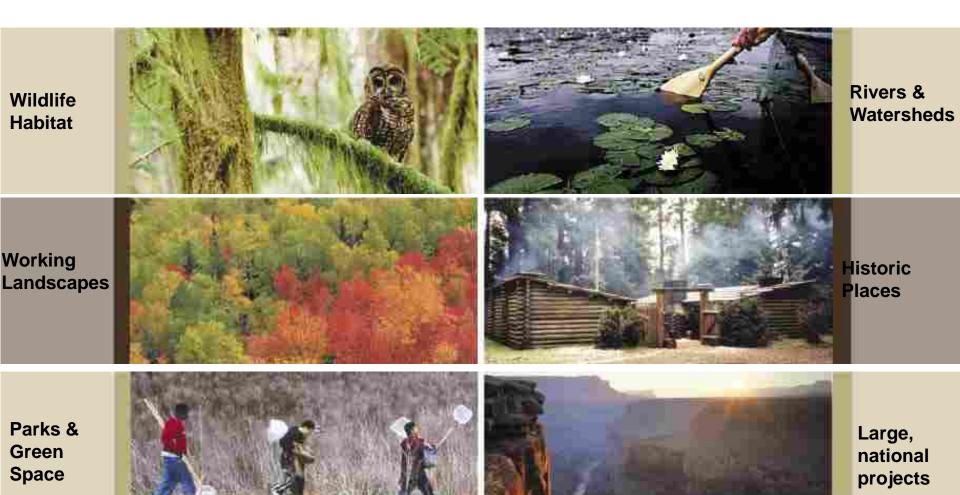
Kris Hoellen
Vice President, Sustainable Programs
The Conservation Fund
September 19, 2013



Our Mission



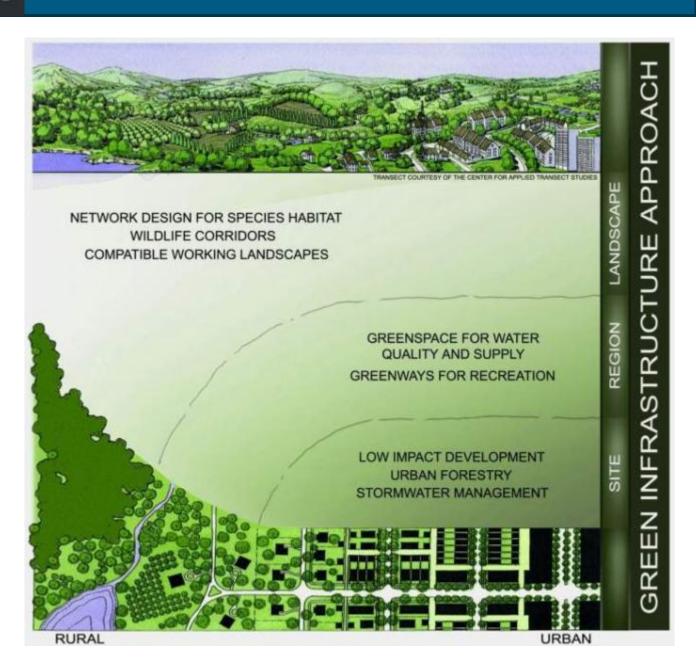
Land & Water Conservation



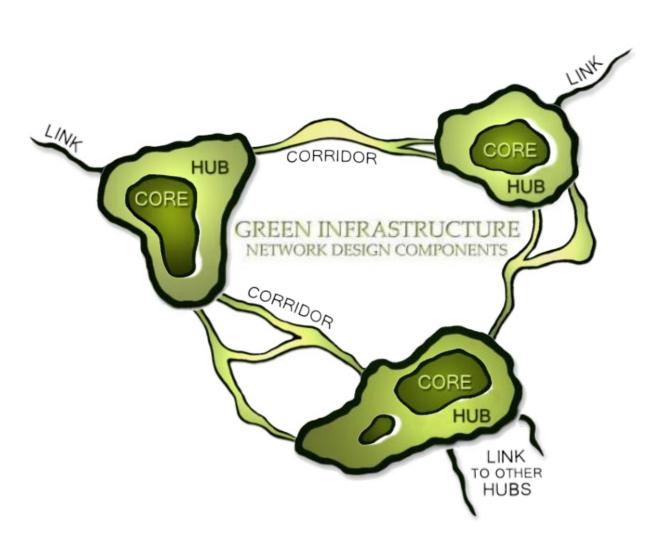
CONSERVATION FUND

The Green Infrastructure Network

A strategically planned and managed network of natural lands, working landscapes, and other open spaces that conserves ecosystem values and functions and provides associated benefits to human populations.



Green Infrastructure Network Features



Cores:

- Contain fully functional natural ecosystems
- Provide high-quality habitat for native plants and animals

Hubs:

 Slightly fragmented aggregations of core areas, plus contiguous natural cover

Corridors:

- Link core areas together
- Allow animal movement and seed and pollen transfer between core areas

Sites:

 Important microhabitats not captured by network thresholds and criteria

Green Infrastructure Design Elements

Natural Ecosystem Values and Functions

<u>Attributes</u>	Examples of places	Examples of functions
Ecological communities	Parks, preserves, and reserves	Protect and restore native plants and animals
Fish and wildlife resources	Wildlife refuges, game reserves, wildlife corridors. Streams, lakes	Provide habitat for wildlife, support migration,
Watersheds and water resources	Riparian lands, wetlands, groundwater recharge	Protect and restore water quality, aquatic habitat
Working landscapes with ecological values	Forestlands, rangelands, and farmlands with native habitat, working lands with restoration potential	Habitat for fish and wildlife, connecting and/or buffering network components

Green Infrastructure Design Elements

Associated Benefits to Human Populations

<u>Attributes</u>	Examples of places	Examples of functions provided
Recreation and health resources	Parks, greenways, trails	Encourage exercise, connect with nature, disease vector prevention
Cultural resources	Historic/interpretive sites, outdoor classrooms	Preserve link to natural and cultural heritage
Growth pattern and community character	Greenbelts, scenic vistas, viewsheds, greenways	Guide patterns of growth, foster community
Water resources	Wetlands, floodplains	Protect water quality and quantity, manage stormwater
Working lands with economic values	Farms, orchards, ranches, managed forests	Protect working lands as a business, maintain rural character

A Science-Based Process that Brings

Together:

- ✓ Natural resource, land planning and built infrastructure professionals
- ✓ Elected and appointed officials
- ✓ The interested public







- ✓ A program
- ✓ A short-term solution
- ✓ An isolated effort
- ✓ No growth or anti-development
- ✓ "Green" engineered structures



The Green Infrastructure Approach





Green infrastructure helps us answer...

Which lands to conserve?



• Where to permit development?





Where to build roads and utilities?



• Where & how to select mitigation projects?

Green infrastructure benefits...

•Proactive
not reactive;

- Systematic not haphazard;
- Multi-functional not Single Purpose;
- Multiple Scales not Single Scale, and
- Scientifically defensible, transparent decision-making process

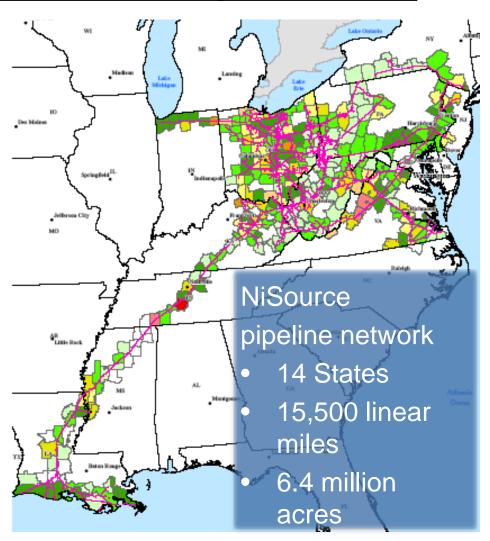
GI Network, Decision Trees & Optimization

NiSource

- Natural gas transmission company
- Operation and maintenance activities impact endangered species

U.S FWS

- Enforce Endangered Species
 Act
- Streamline project review while enhancing species protection



NiSource Green Infrastructure Project Project Components:

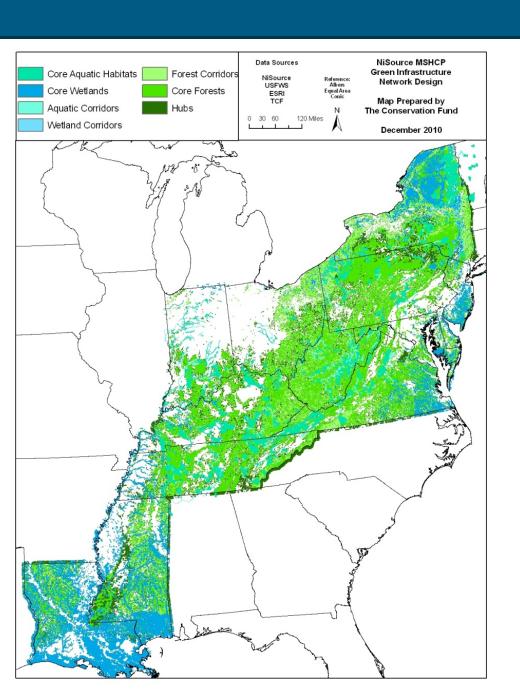
- Assess endangered species impacts across the entire pipeline network over the long-term
- Develop Multiple Species Habitat Conservation Plan
- Utilize **green infrastructure** approach to implement strategic mitigation



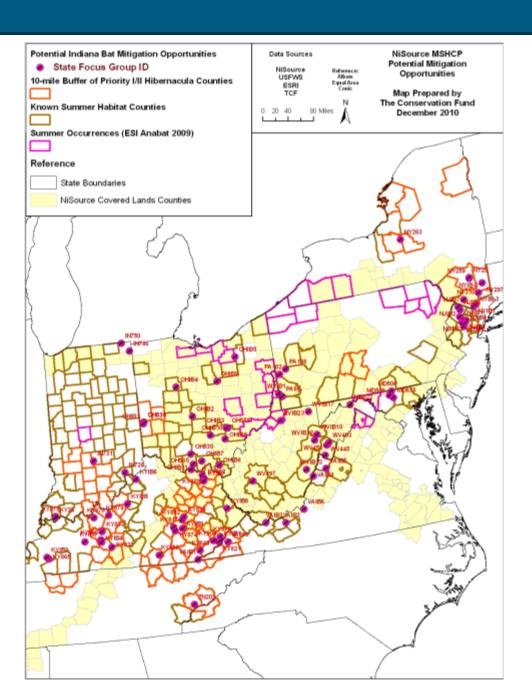




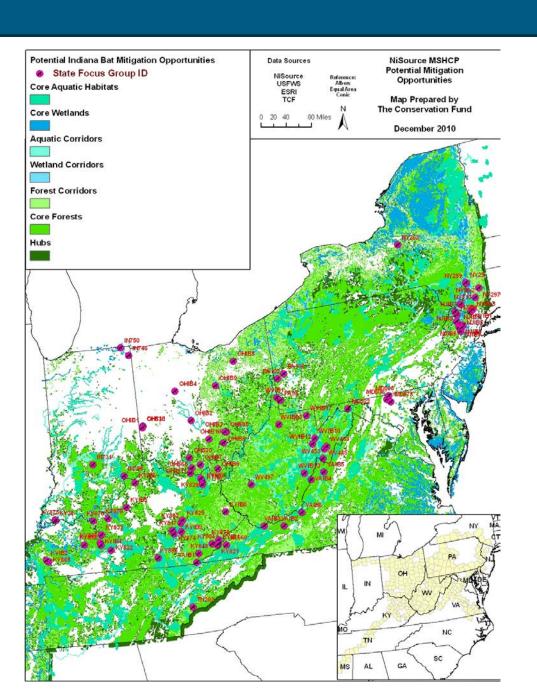
Identify a NetworkDesign



Identify MitigationOpportunitiesSpatially



Identify the
 Mitigation
 Opportunities within
 the Context of a
 Spatially Explicit
 Network Design

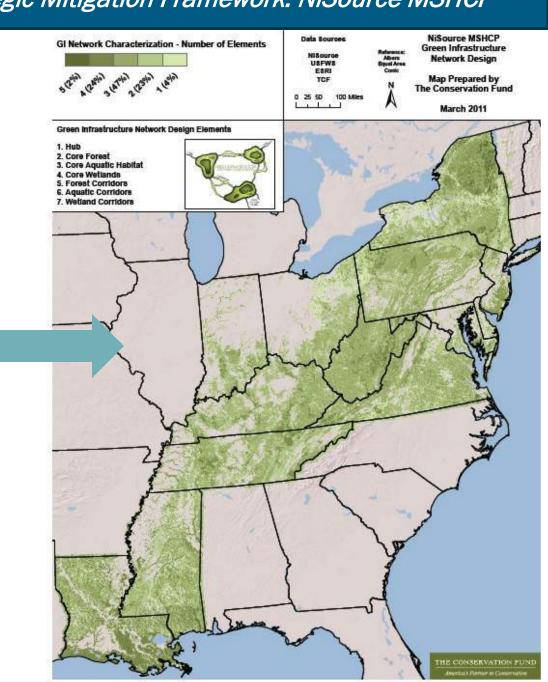


Strategic Mitigation Framework: NiSource MSHCP

- Provides a <u>framework for</u>

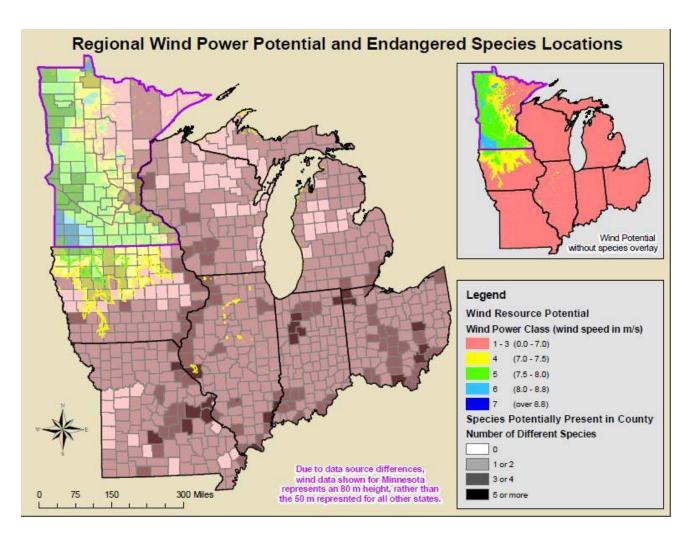
 conservation and recovery
 actions of species across the

 HCP area extending beyond covered lands
- Evaluates potential mitigation opportunities within a strategically planned, interconnected network using consistent methodology & criteria
- Identifies other <u>ecosystem</u>
 <u>benefits</u> associated with
 potential mitigation projects



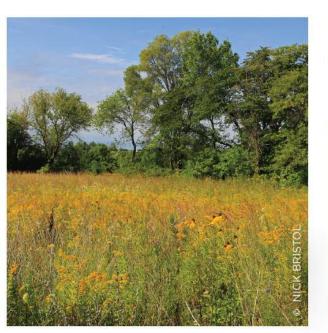
Strategic Mitigation Framework: Midwest Wind MSHCP

- 8 states (FWS Region 3)
- Section 6 grant to develop green infrastructure network and mitigation framework using NiSource model

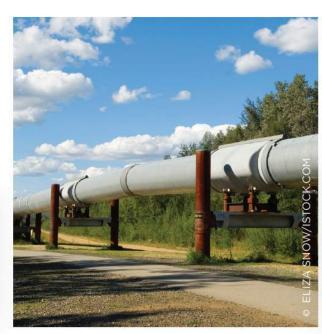


Benefits of Strategic Mitigation Framework

- Identifies <u>best</u> projects for implementation
- Holistic, regional approach
- Science based process
- Conservation and restoration
- Strategic use of industry mitigation dollars, leverage other funds
- Adaptable to multiple rules/frameworks HCP, Corps, others...
- More predictability & certainty, business & regulatory







Nashville

 Nashville needs to be a city for families." Karl Dean Inaugural Address September 21, 2007

• "Green space and open space are a quality of life issue, an environmental issue and an economic issue," Karl Dean, January 7, 2010

Central Indiana Land Trust:



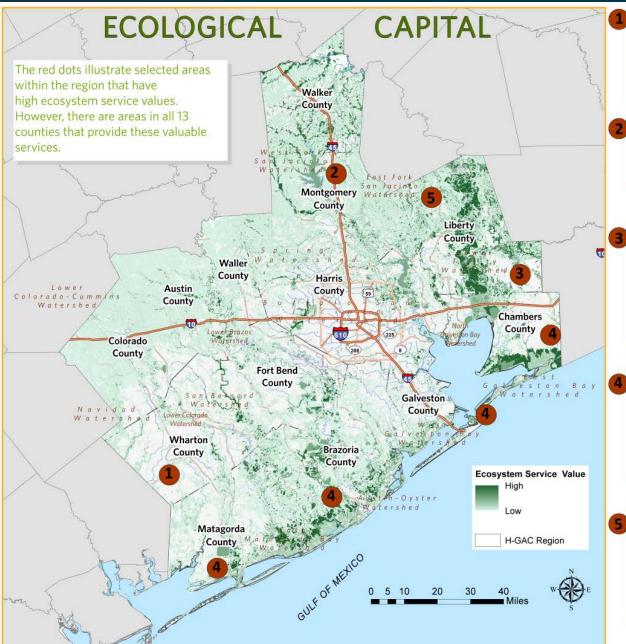
Milwaukee Metropolitan Sewerage District Conservation Plan

- Identifies and protects undeveloped sites to protect from future flooding
- Define development through conservation investments





Green Infrastructure Plan Example: Houston-Galveston



- Water Quality: In Wharton
 County, riparian lands are
 providing valuable nitrogen
 removal services that help clean
 the water.
- Air Quality: In Montgomery
 County, heavily forested areas help
 purify the air.
- Water Supply: Chambers and Liberty Counties store water. The regions gets drier as you move westward towards the line where evaporation exceeds precipitation. This is exacerbated by drought.
- Stormwater Regulation/Flood Protection/ Erosion Control: All coastal counties, including Chambers County, offer protection against tidal and stormwater flooding.
- Carbon Sequestration: The Trinity
 River bottomlands and wetlands of
 Liberty County capture carbon.
 These areas also provide numerous
 other benefits to society and
 wildlife..

Potential Implementation Scenarios

Planning

 A county uses the GI tools in its Comprehensive Plan update and/or its Development Review Process

Development

• Developer uses the tools to ID best orientation for a planned subdivision

Transportation

• DOT uses the tools to help identify best new alignment for a road

Land Trust

 A land trust uses tools to prioritize key agricultural lands for protection

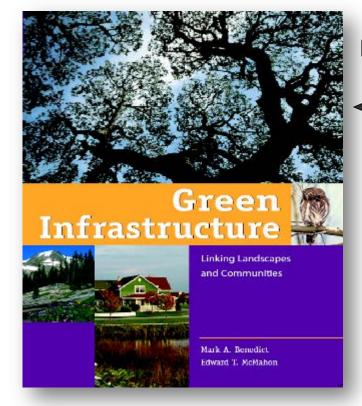
Public Land Manager

 A public land manager uses tools to make resource management decisions

Conservation Districts

• A District uses the tools to engage local people in natural resource management.

Resources



Read the Book







RESULTS		
Acres Protected to Date	7 million	
Fair Market Value	\$5 billion	
Conservation Programs	96%	
Fundraising Costs	1%	

RECOGNITION		
A+ Rating	American Institute of Philanthropy	
Four Star Rating	Charity Navigator	

