

Using Green Infrastructure to Prevent Disease Vectors

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America's Partner in Conservation

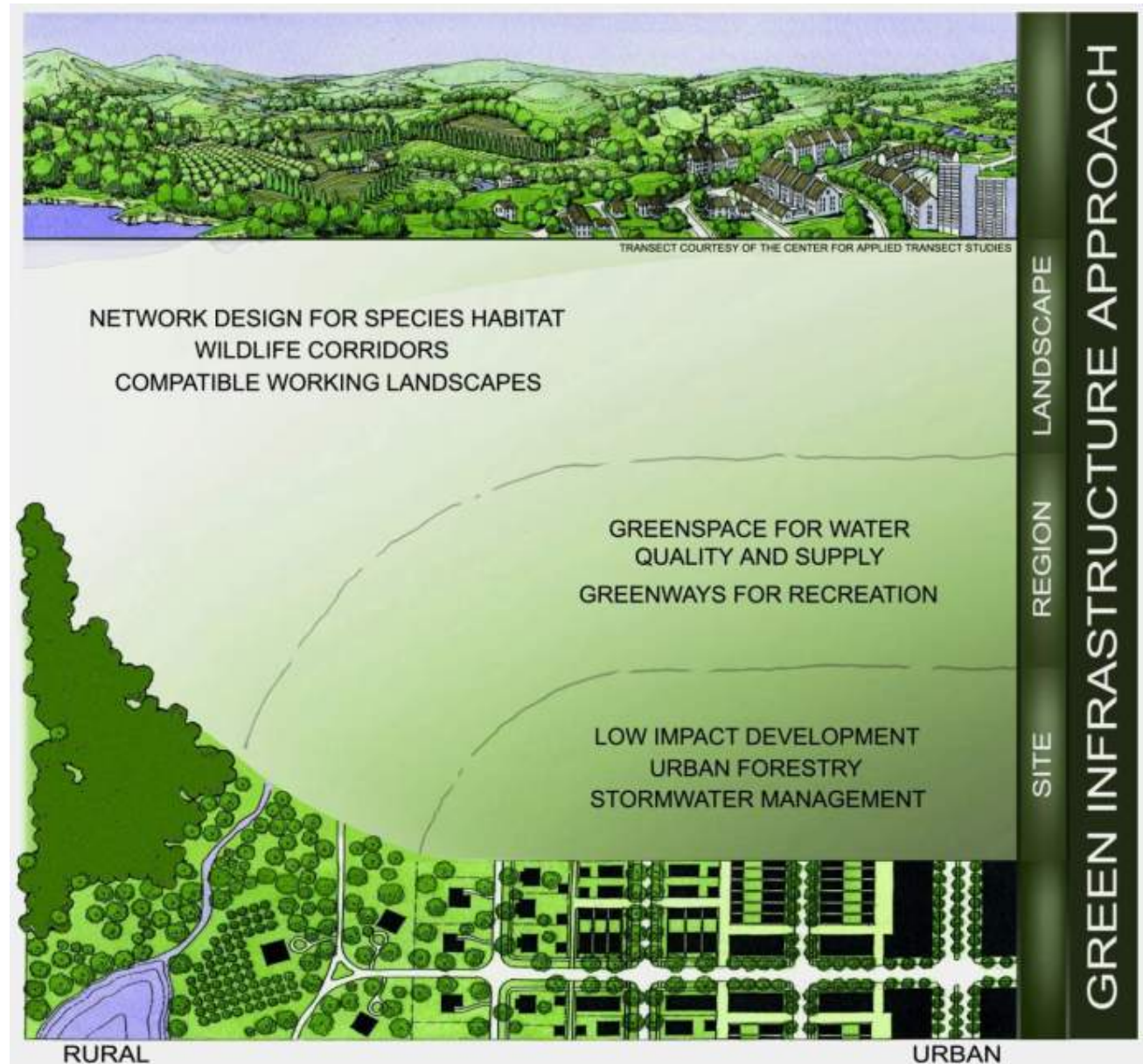


Creating, Enhancing and Preserving the Places that Matter

The Green Infrastructure Network

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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 Elements

Natural Ecosystem Values and Functions

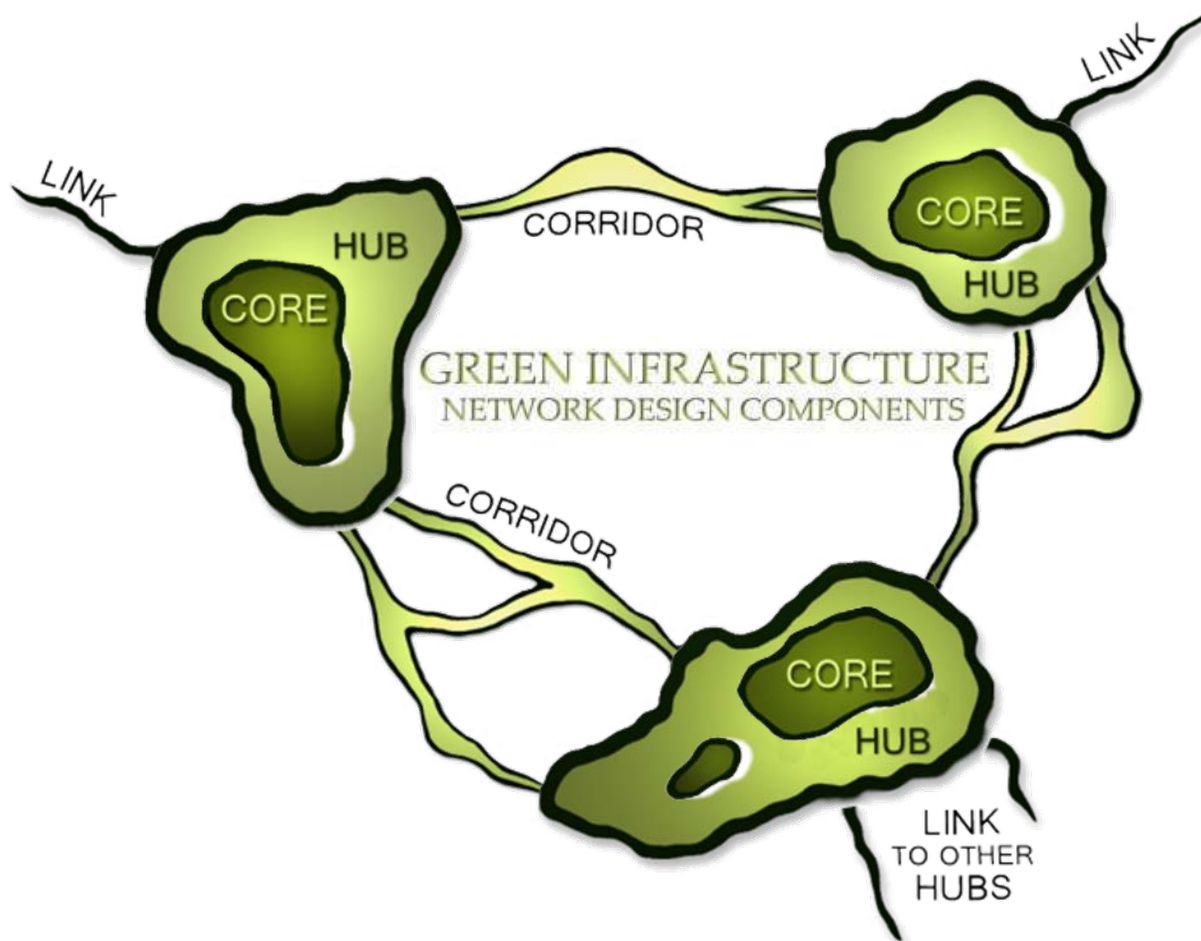
Attributes	Examples of places	Examples of functions
Ecological communities	Parks, preserves, and reserves	Protect and restore native plants and animals
Fish and wildlife resources	Wildlife refuges, game reserves, wildlife corridors. Streams, lakes	Provide habitat for wildlife, support migration,
Watersheds 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 Network Elements

Associated Benefits to Human Populations

Attributes	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

Green Infrastructure Network Design Framework



Core Areas:

- 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

Benefits of Green Infrastructure

Value of Hubs, Cores, Corridors

- Reduces habitat fragmentation and patch isolation of natural systems
- Preserves interior habitat and reduces edge habitat
- Improves resiliency from disturbances and climate change
- Provides a framework for habitat restoration and enhancement
- Provides efficient way to protect ecosystem services



Ecosystem services (Costanza, 1997)

- Clean air and water
- Carbon sequestration & wood products
- Water supply and hydrologic regulation
- Flood protection and storm water management
- Erosion control and sediment retention
- Regulation of water temperature
- Fish and wildlife habitat
- Recreation
- Soil and peat formation
- Pest control and pollination
- Genetic information and biological diversity
- Savings in community services

Green Infrastructure Connection to Health

Network Design

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Urban Green | Active Living | Local Food | Flood Control

Green Infrastructure Connection to Disease Vectors

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Make the environment less suitable for tick survival and tick hosts

The Green Infrastructure Approach

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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 is...

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

Leaders in Green Infrastructure: Conservation Leadership Network

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UPCOMING COURSES:

Strategic Conservation Planning Using a Green Infrastructure Approach

September 26-29, 2011

NCTC in Shepherdstown, WV

Green Infrastructure Community of Practice:

<http://www.greeninfrastructure.net/>