



Montgomery County Planning Commission

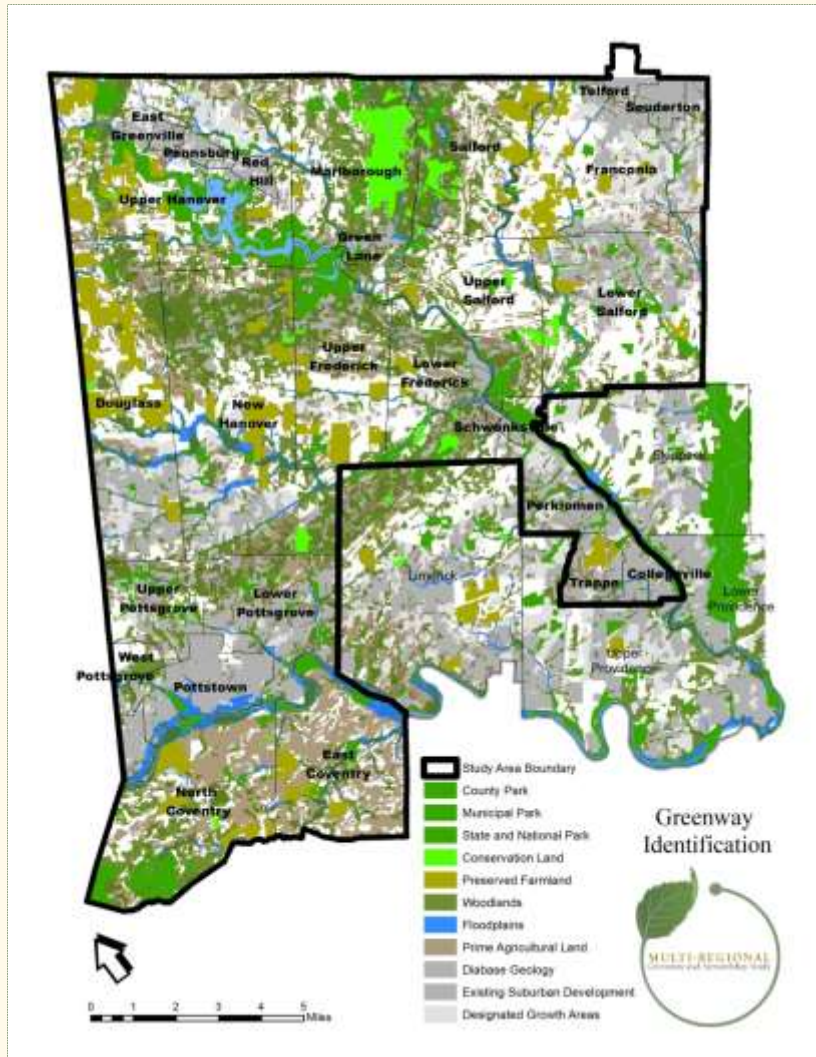
*Connecting People to Places*  
Southeastern PA Municipality Workshop  
**September 14, 2019**

# Natural Resource Greenways

- **What is a greenway?**
  - An interconnected system of public and private lands, benefitting from shared stewardship principles
- **Benefits of Greenways:**



# Why A Multi-regional Greenway?



- **Multi-regional Planning**
  - 4 Regional Planning Areas
  - 26 municipalities
  - 195 square miles (40% of the county)
  - 171,369 people and 66,276 housing units (2010)
  - 200,000 people and 79,841 housing units by 2030
- **Regional plans create framework for growth management**
  - Designated growth areas
  - Rural resource areas

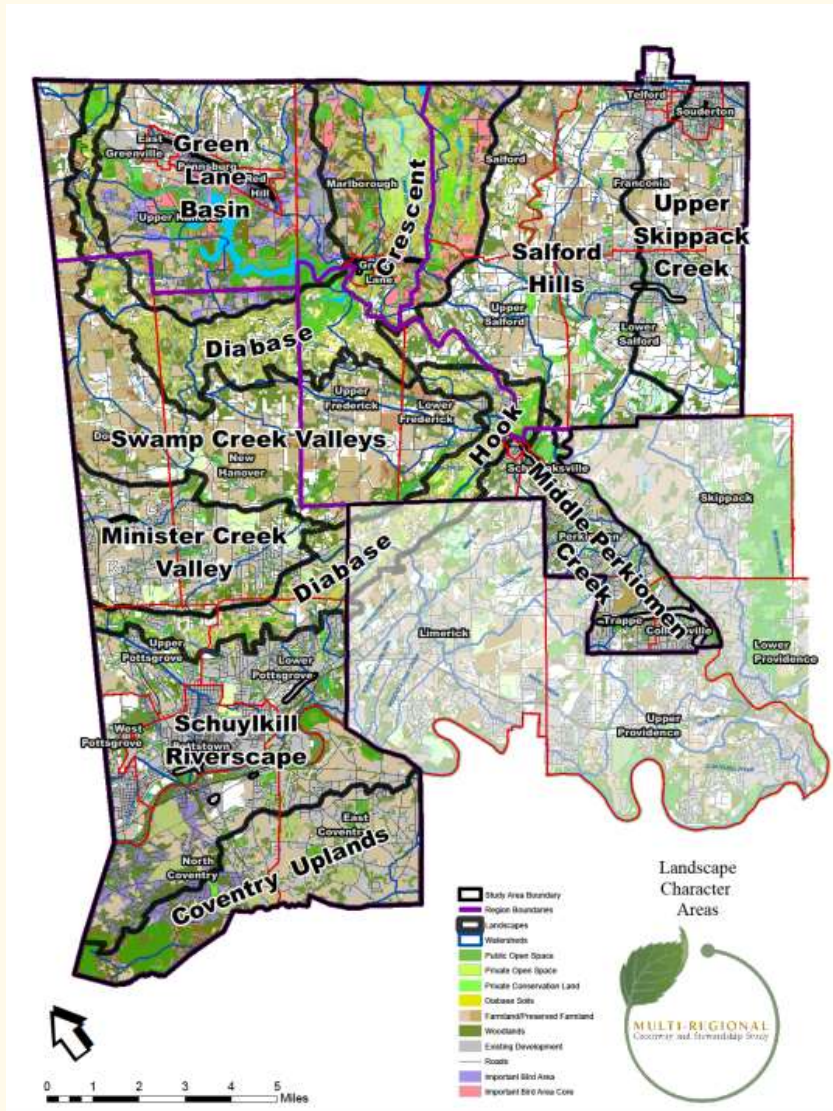
# Study Scope

## Overall Framework:

- **Types of Greenways:**
  - Natural Resource Greenways
  - Main Street/Village Greenways
- **Establishing Greenways**
  - Appropriate resource protection ordinances
  - Preservation through growth management
- **Managing Greenways**
  - Stewardship
    - Improving the management of public and private lands
    - Improving downtowns for economic development



# Rural Resource Greenways



- Established Landscape Character Areas
- Delineating Greenways
  - Protected lands
  - Primary resources (floodplains, wetlands and steep slopes)
  - Riparian areas
  - Continuous tree canopy
  - Priority management areas

# Rural Resource Greenways

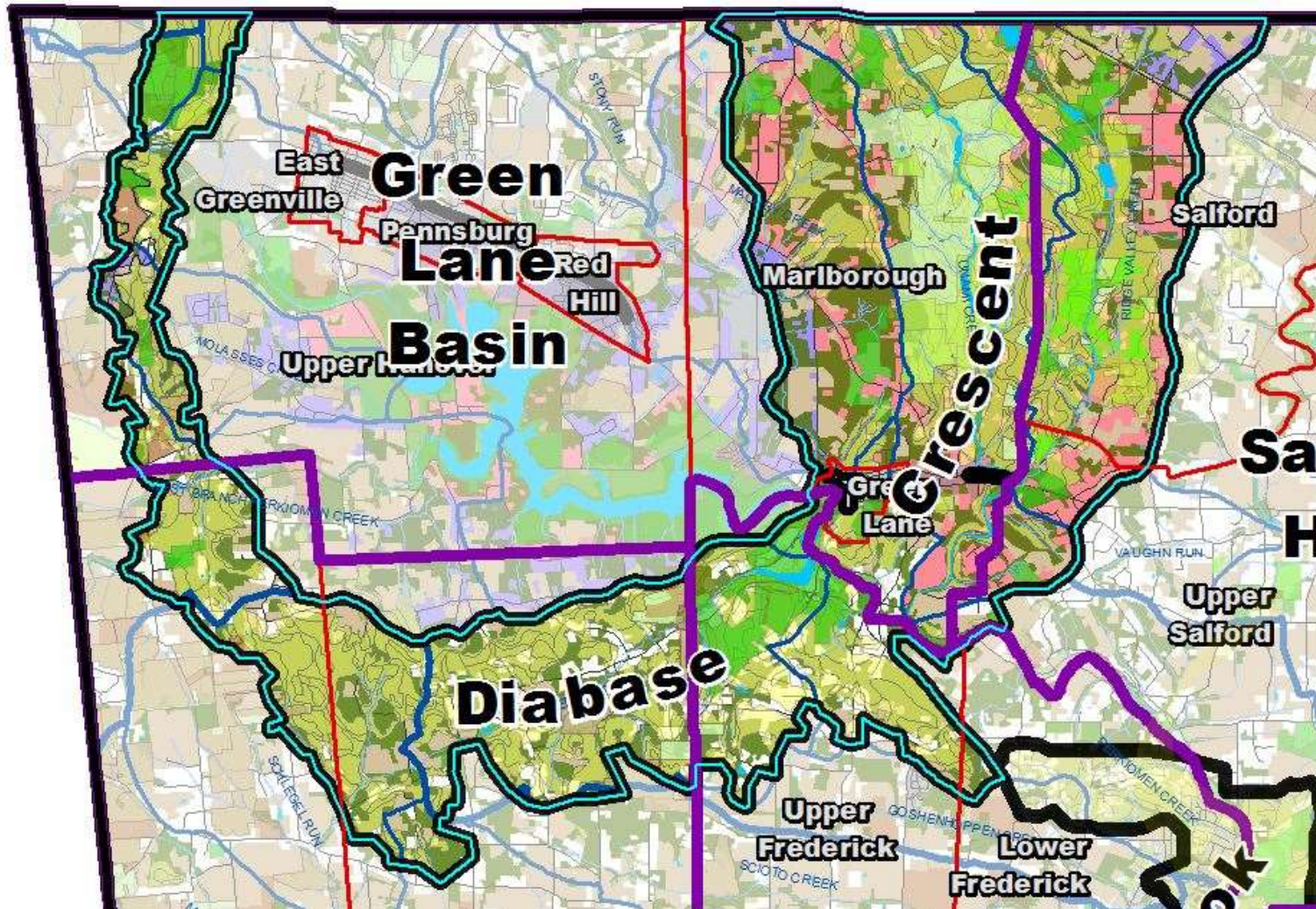


- **Priority Management Areas**

- **Greenways exist on both public and private lands**
- **Shared stewardship needed to maintain and enhance them**
- **Respectful of private landowners**
  - **All properties are part of a larger system**
  - **The degree landowners manage their property (or not) in a way that contributes to the greenway is their choice**
- **Use Growing Greener approach to delineation**
  - **Properties > 10 acres**
  - **Guidance on 50% of properties having concentrated resources**

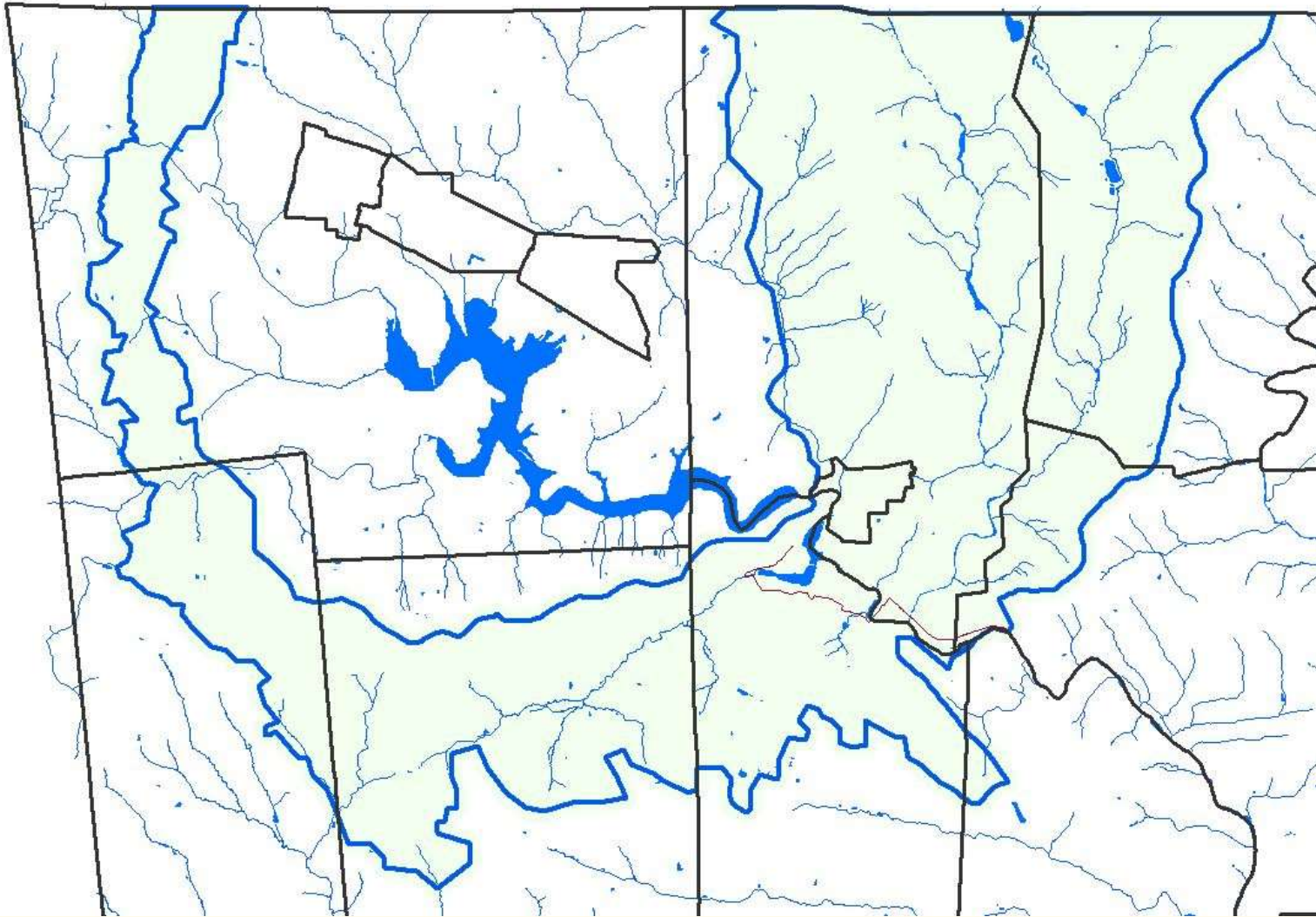


# Rural Resource Greenways

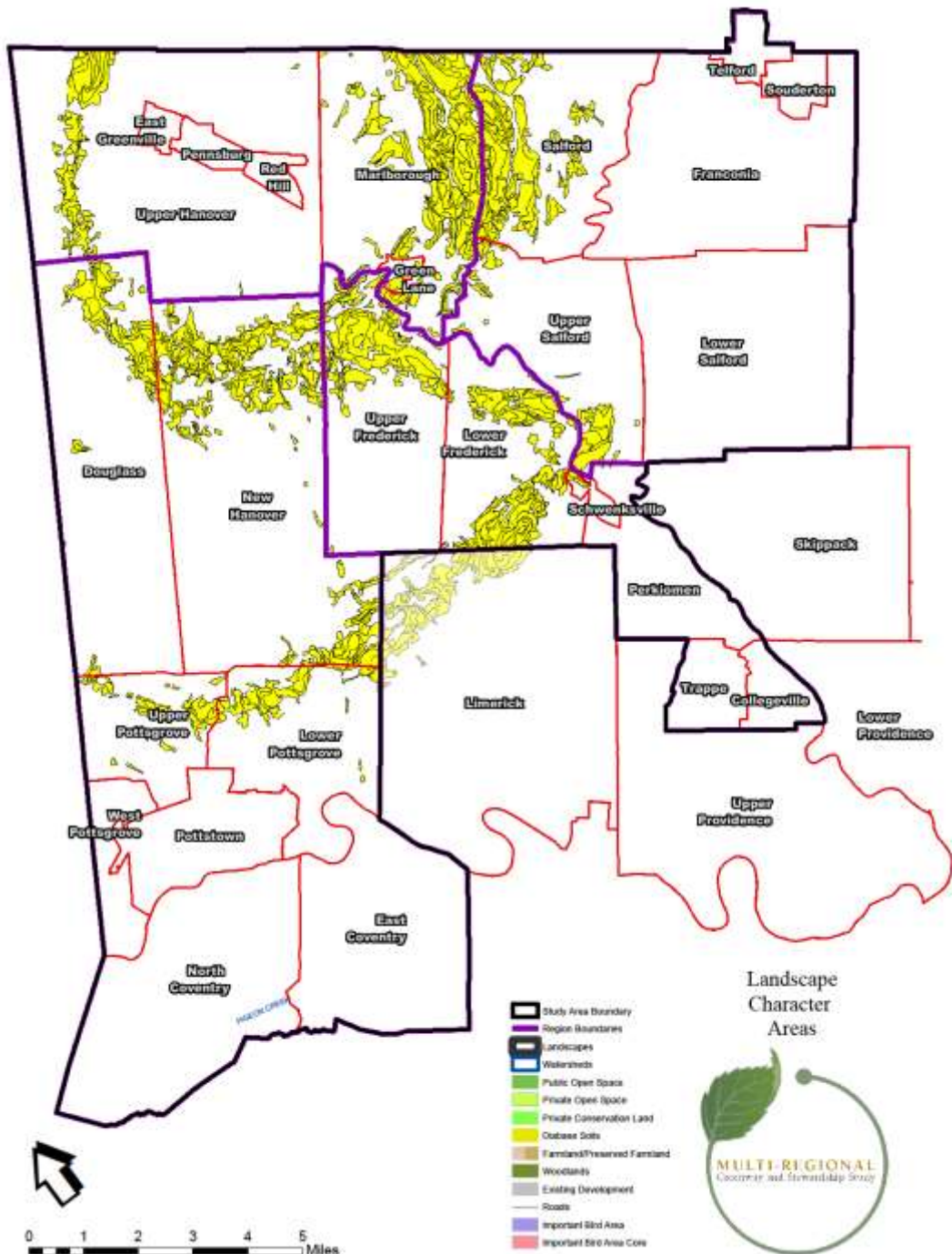




# Rural Resource Greenways

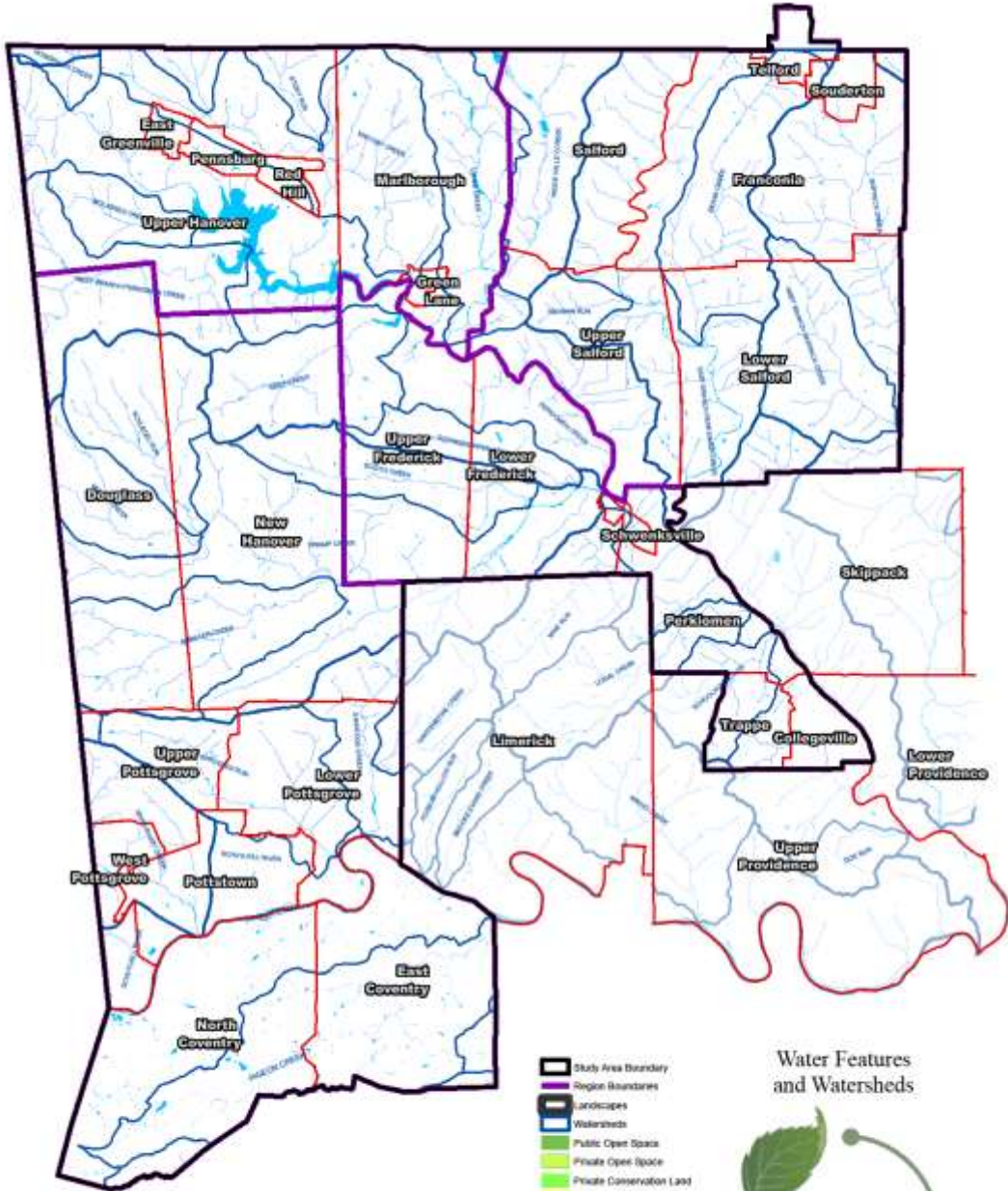






### Landscape Character Areas

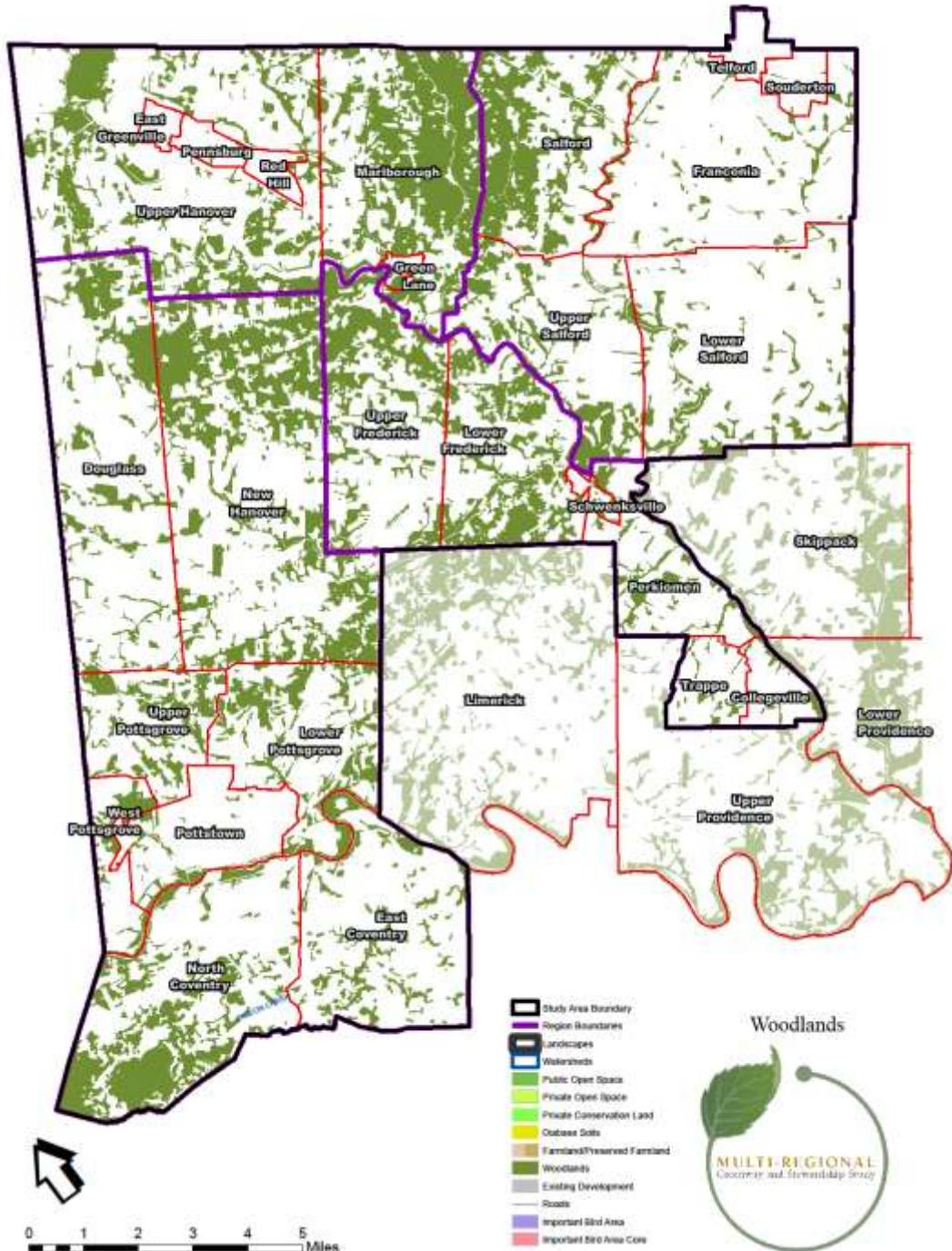




### Water Features and Watersheds







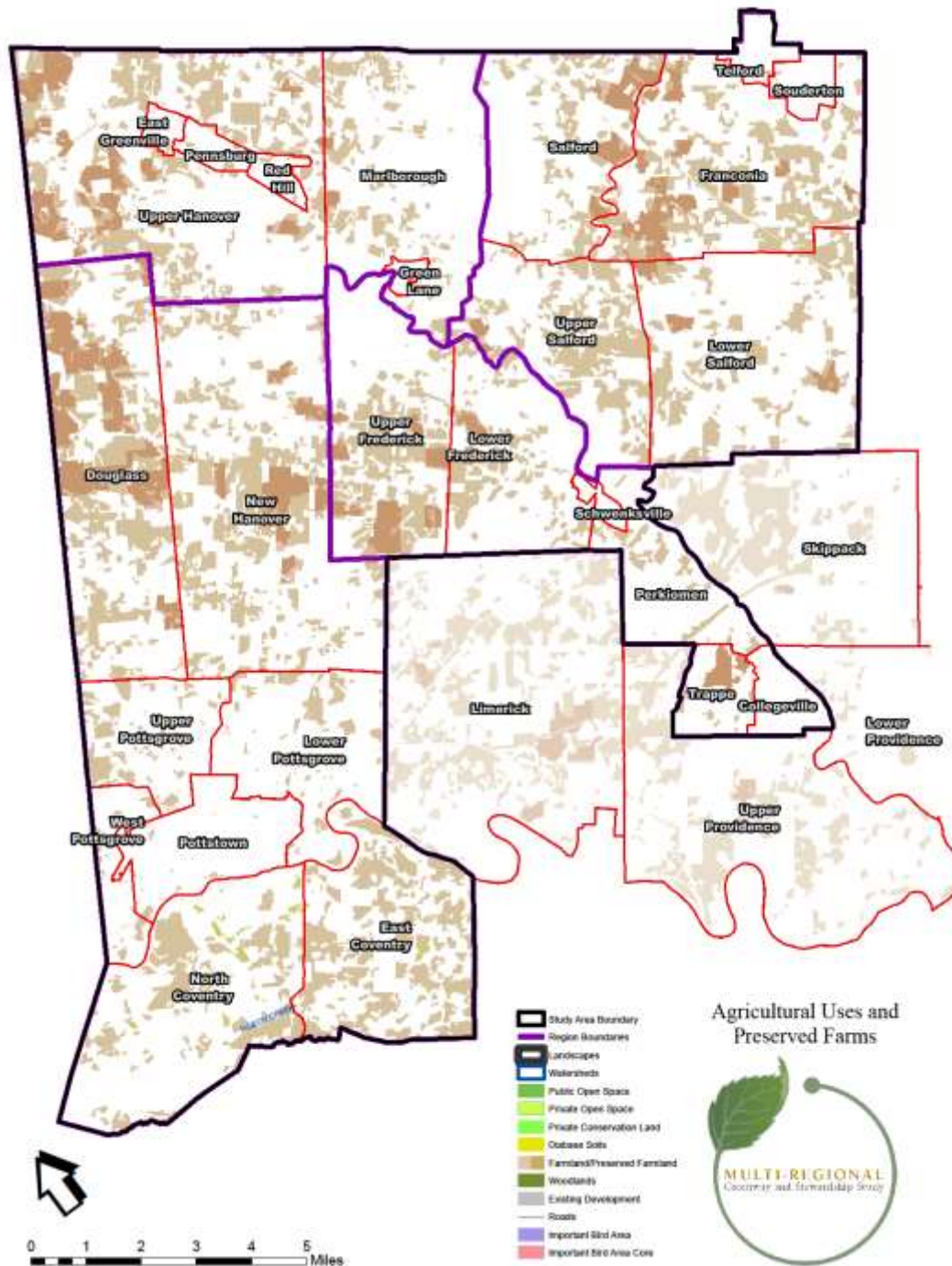
Woodlands

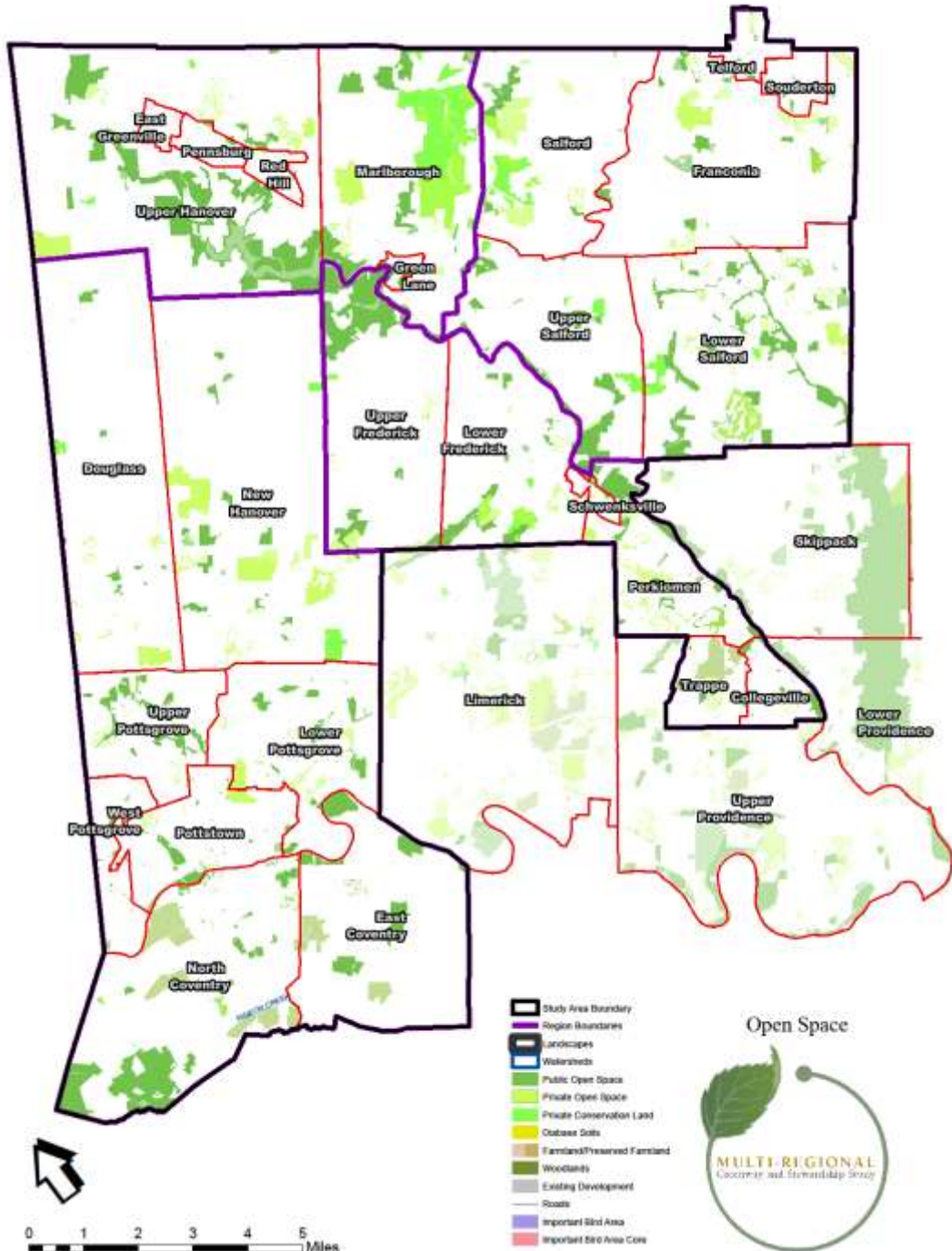


MULTI-REGIONAL  
Cooperative and Stewardship Study



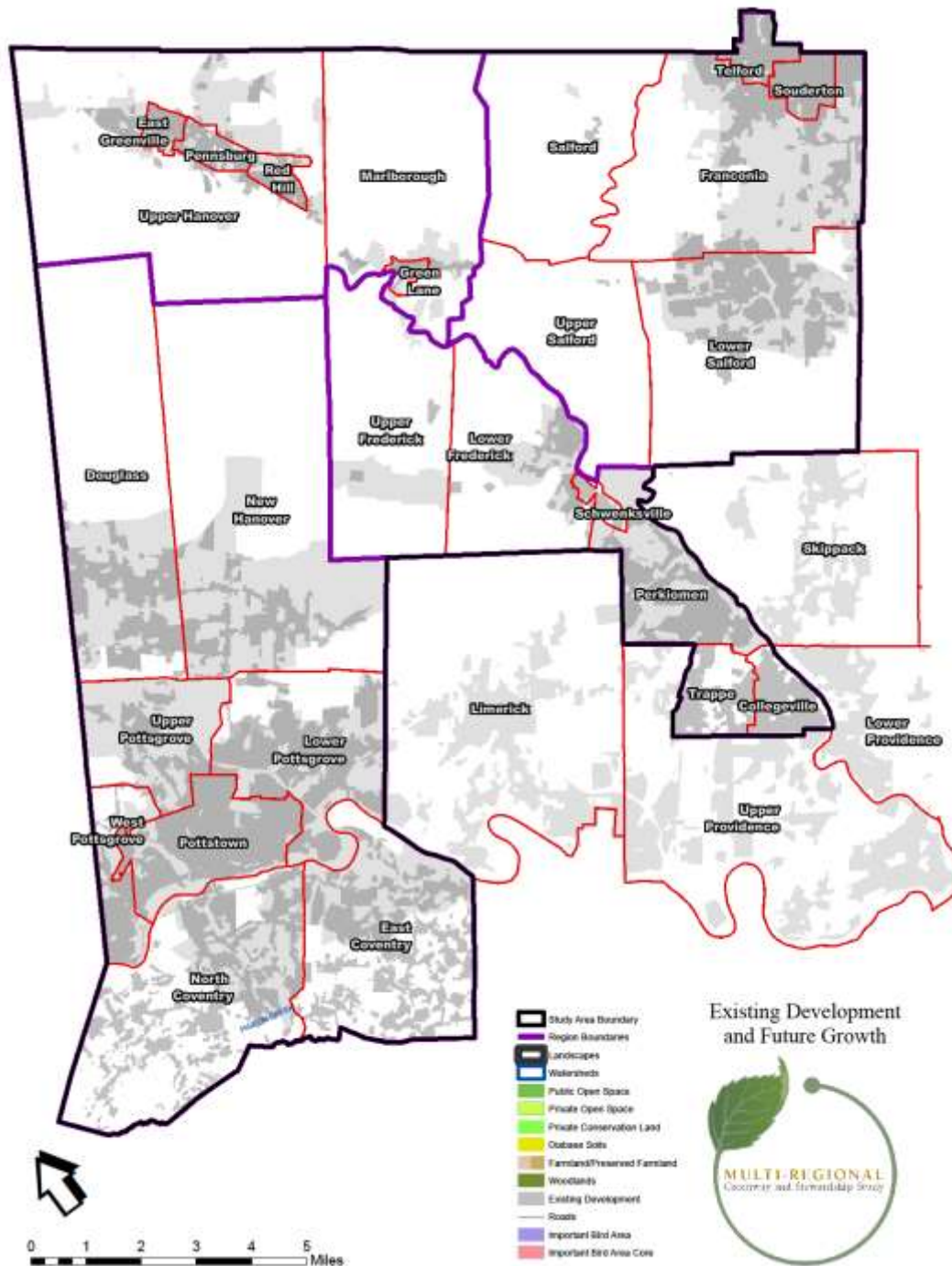




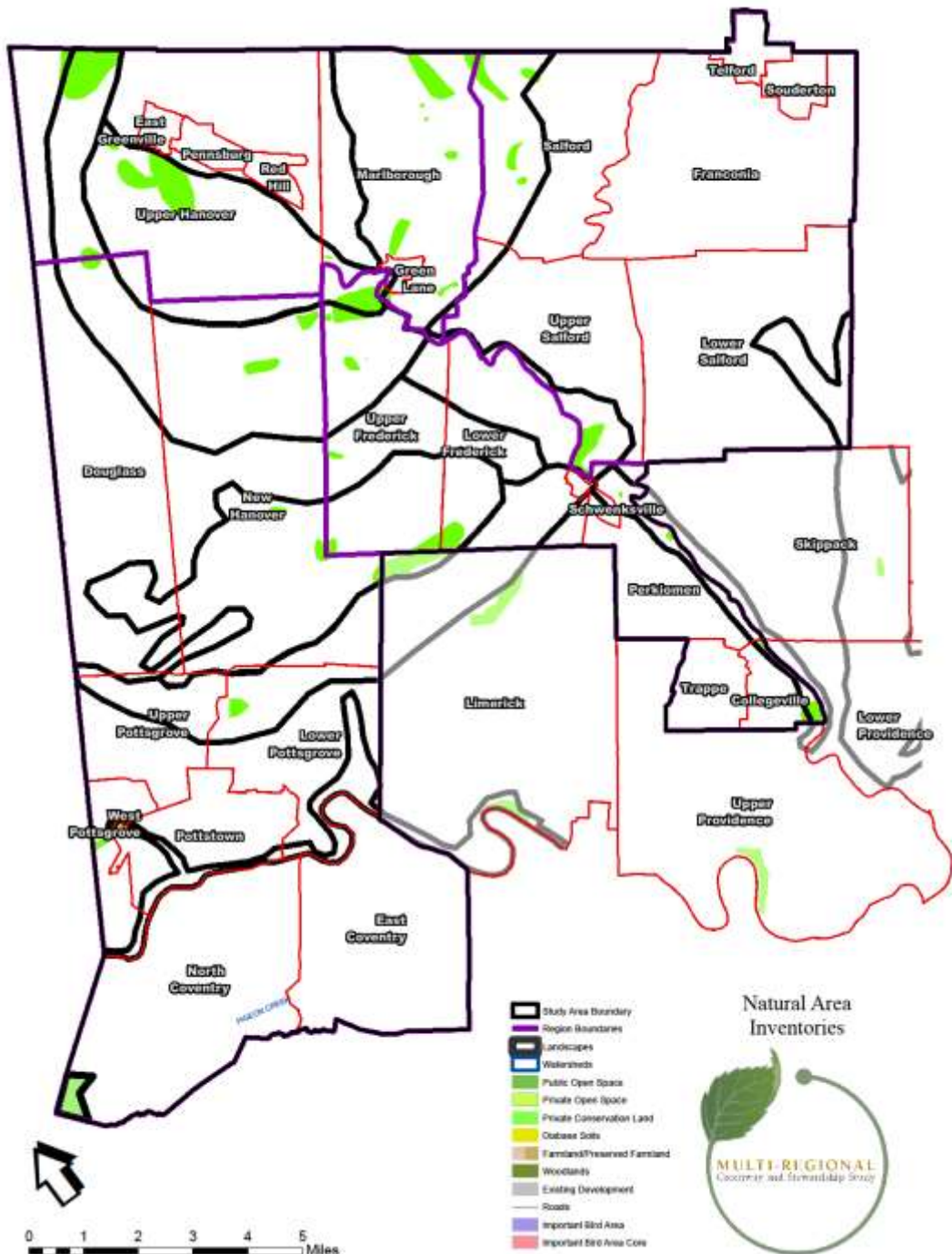


### Open Space







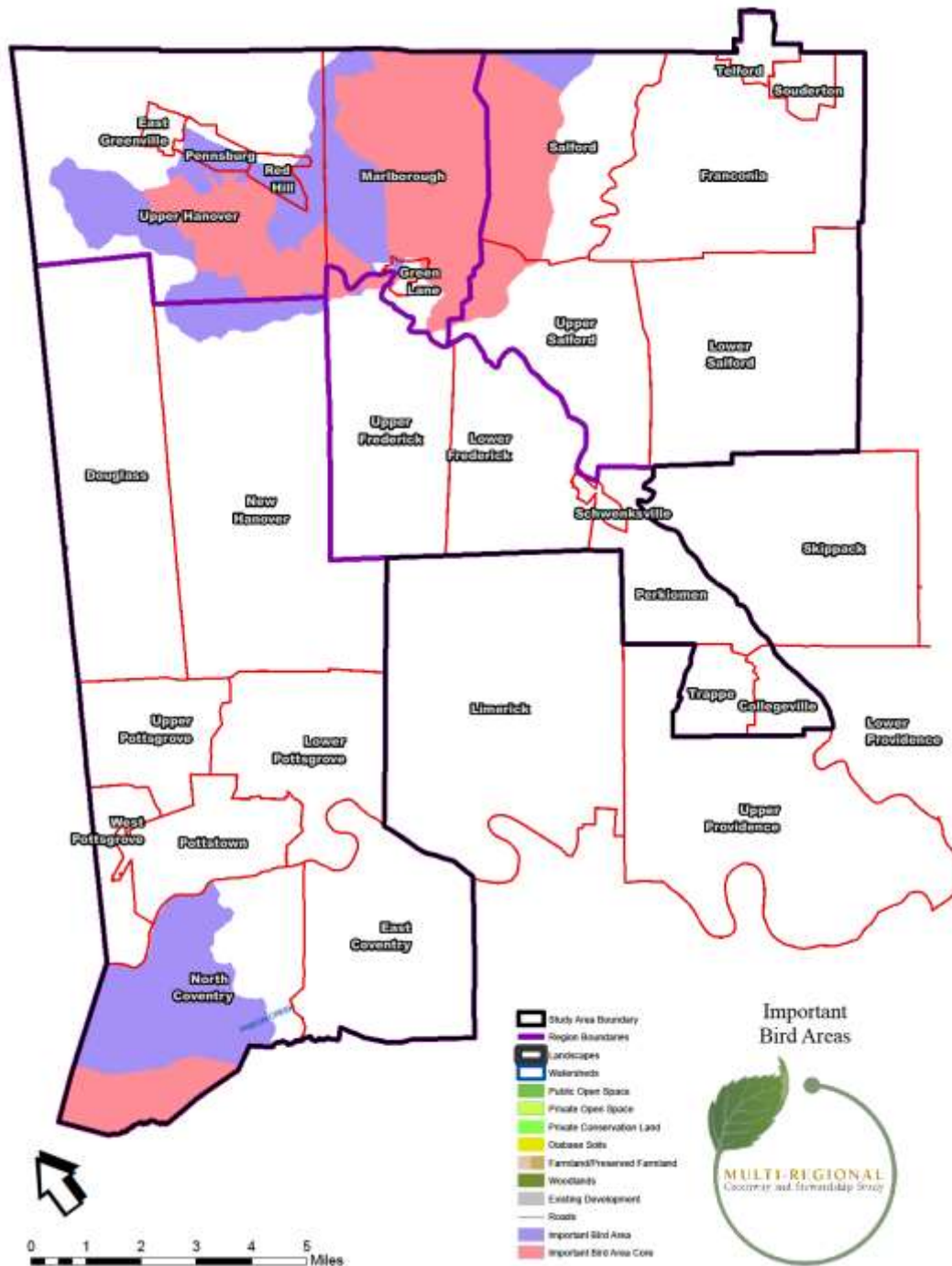


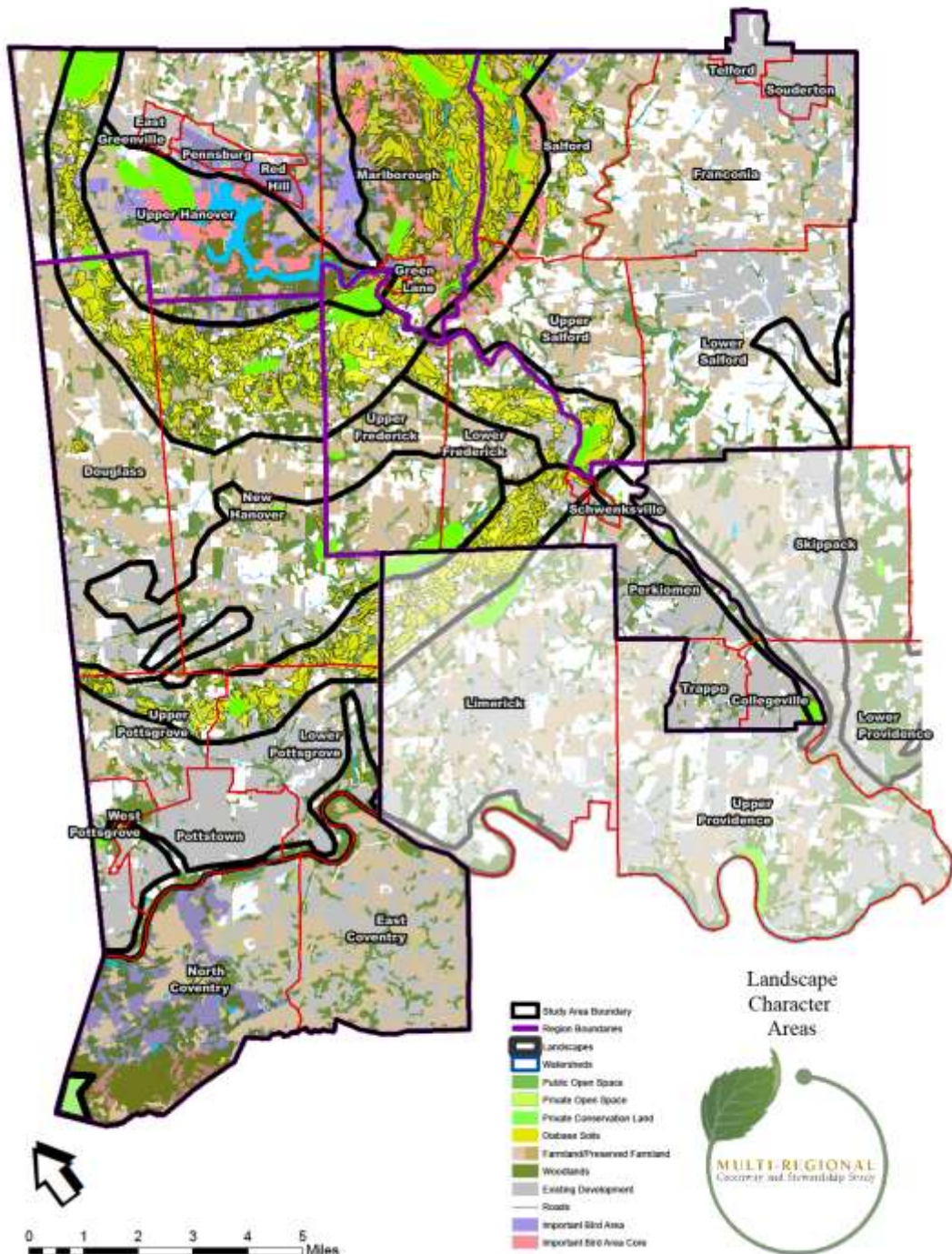
### Natural Area Inventories



- Study Area Boundary
- Region Boundaries
- Landscapes
- Watersheds
- Public Open Space
- Private Open Space
- Private Conservation Land
- Outback Soils
- Farmland/Preserved Farmland
- Woodlands
- Existing Development
- Roads
- Important Bird Area
- Important Bird Area Core

0 1 2 3 4 5 Miles



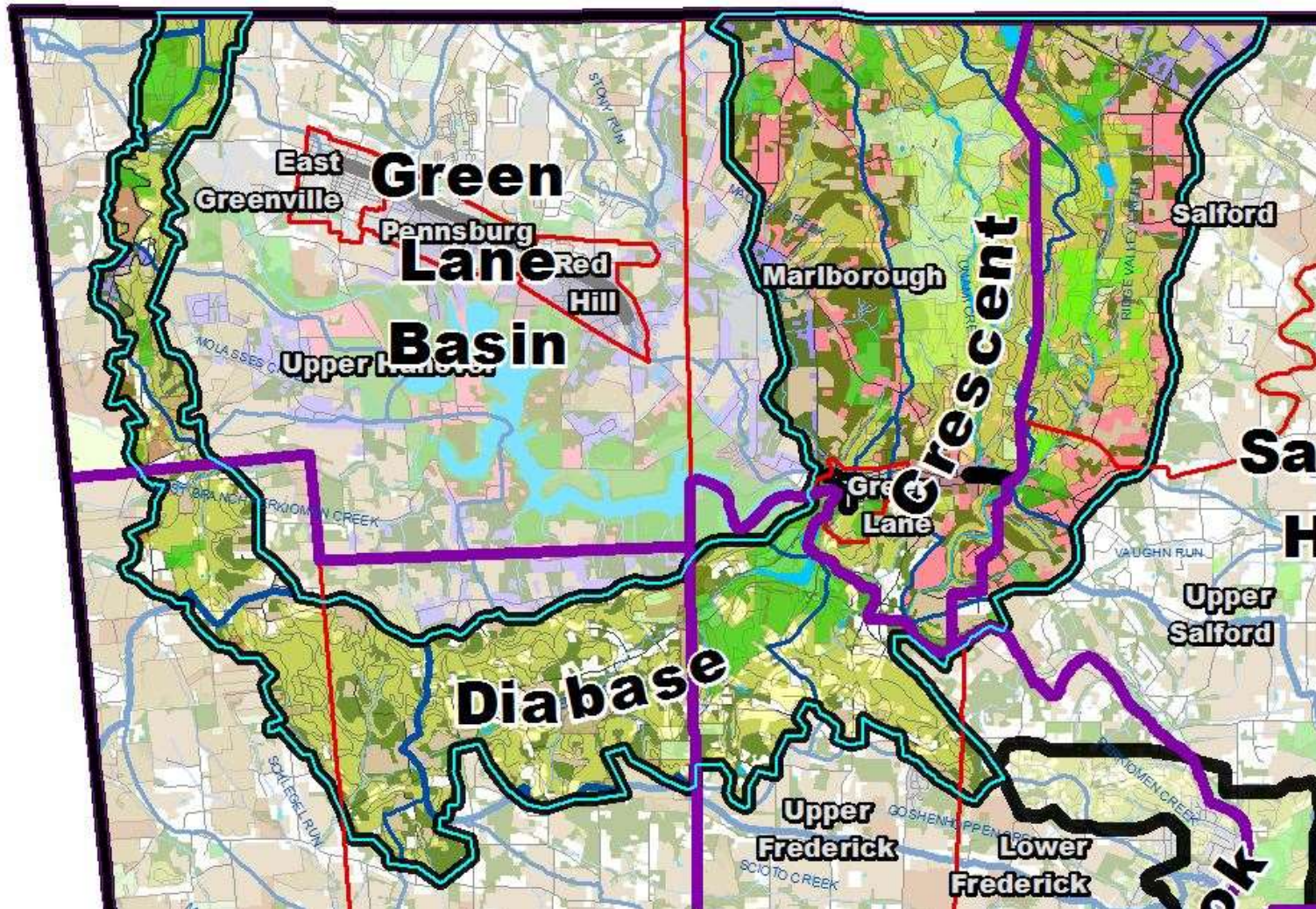


0 1 2 3 4 5 Miles





# Rural Resource Greenways





# Natural Resource Greenways

- **Building the Greenway**

- **Landowner Stewardship Zones**

- Use landscape priorities
- Parcel analysis
- Contiguous greenway
- Consider developable areas
- Stewardship guidance
- Recommend conservation subdivision



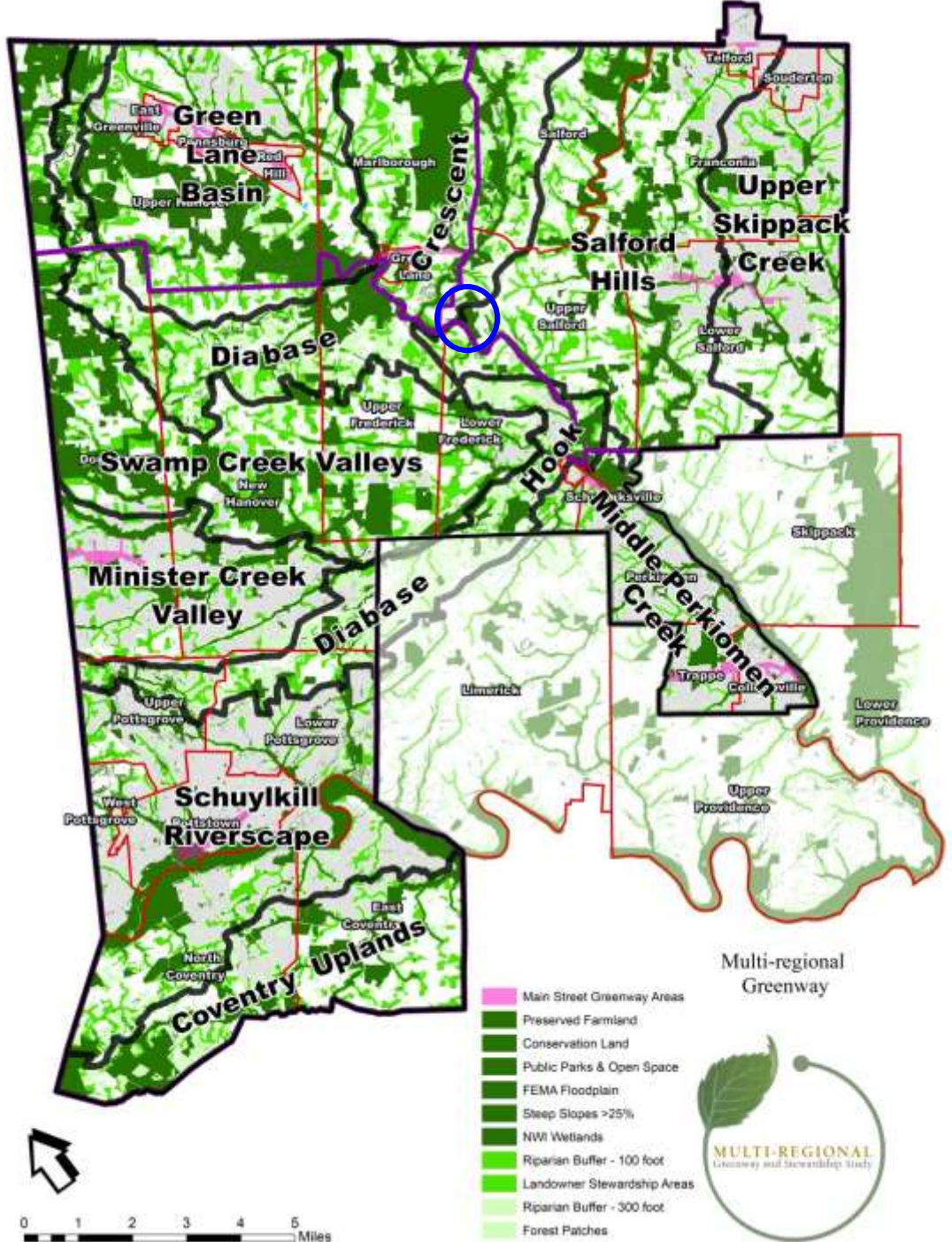
# Natural Resource Greenways



## • Building the Greenway

- The greenway area on each property, when combined with all the others, creates a network throughout the community
  - Municipal guidance during review of a subdivision/land development
  - Guidance for park acquisition
  - Help with grants
  - Guidance for trail locations
  - Stewardship guidance





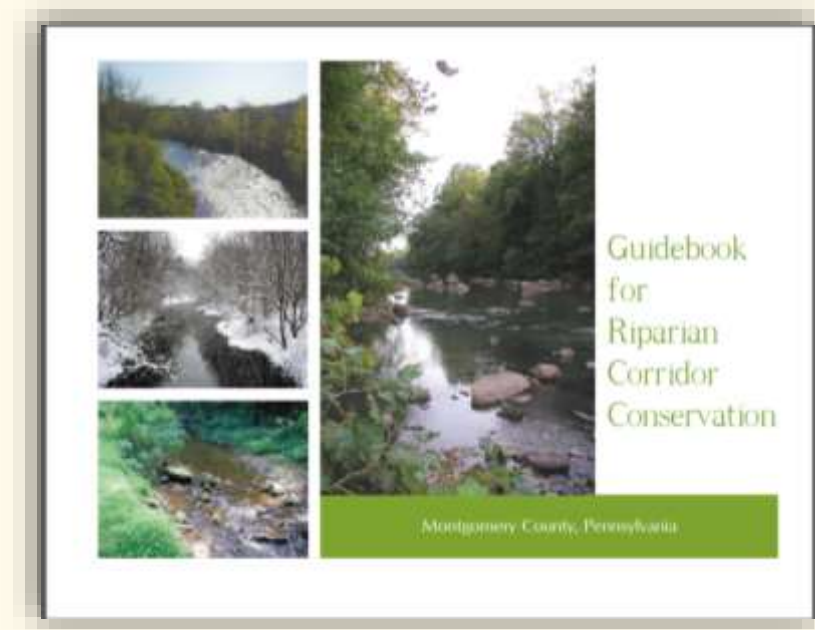
# Natural Resource Greenways

## Strategic Framework:

- **Conserving Greenways**
  - **Appropriate resource protection ordinances**
    - Riparian buffers
    - Floodplain conservation
    - Stormwater management
    - Landscaping requirements
  - **Growth management**
    - Conservation subdivision
- **Managing Greenways**
  - **Stewardship**
    - Land Management on public and private lands

# Riparian buffers

- **Surface water feature and minimum corridor width for perennial streams:**
  - **Zone 1: 25 feet from defined stream edge**
  - **Zone 2: 50 feet from the outer edge of Zone 1, or equal to the extent of the 100-year floodplain, or 25 feet beyond the outer edge of a wetland along the stream, whichever is greater.**
- **Total minimum width of Zones 1 & 2 = 150 feet plus the width of the stream.**
- **Similar regulations for intermittent streams, wetlands and ponds**

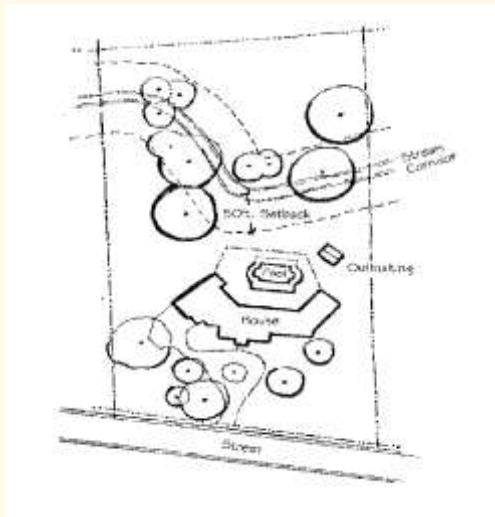




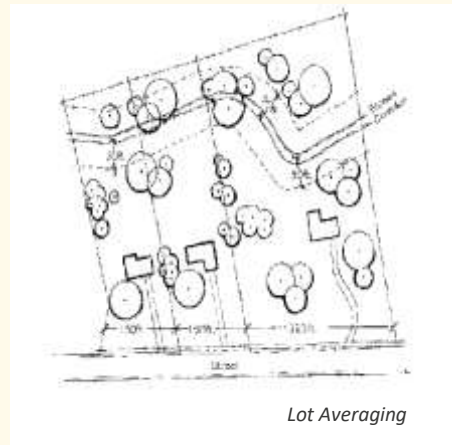
# Floodplain conservation

## High Standards (it's a model)

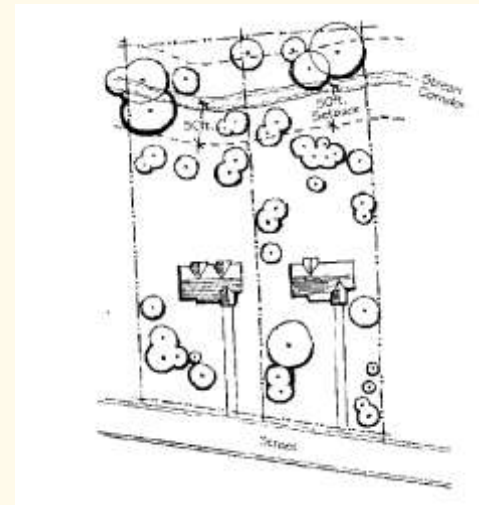
- Exceeds FEMA minimum requirements
- Prohibits construction and fill in the floodplain except by variance



Locate improvements outside the Floodplain



Lot averaging accommodates the meandering stream



Deep, narrow lots avoid the floodplain

# Stormwater and landscaping requirements

## Stormwater

Naturalizing basins  
Meadows and Trees

## Landscaping

Buffers  
Open space requirements  
Open space treatment



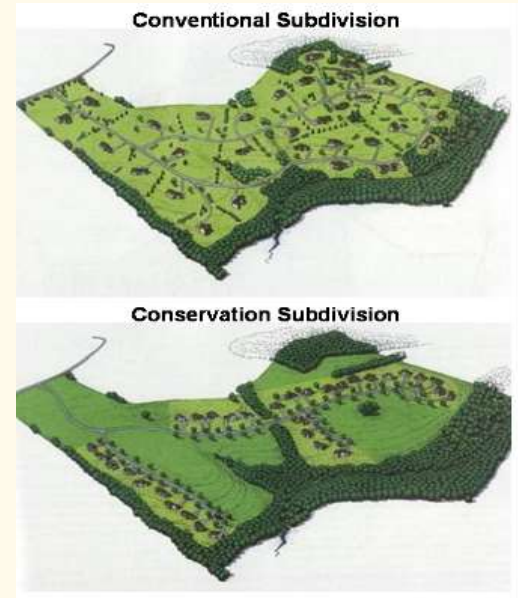
# Conservation subdivision

- No increase in number of lots
- Lot size reduction (2 acre lot : ¼ acre lot)
- Each lot has direct access to preserved open space

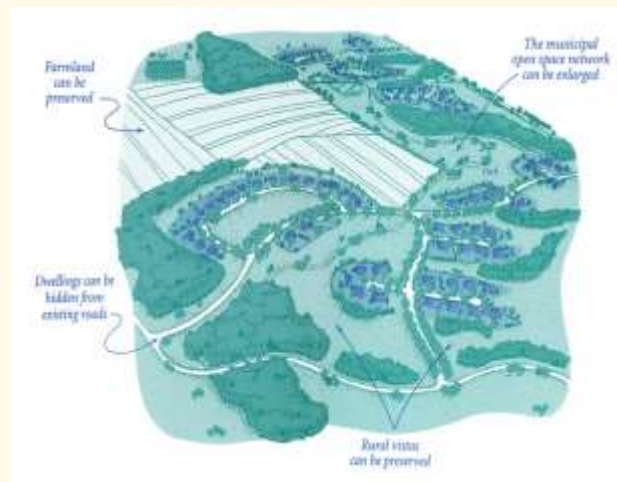
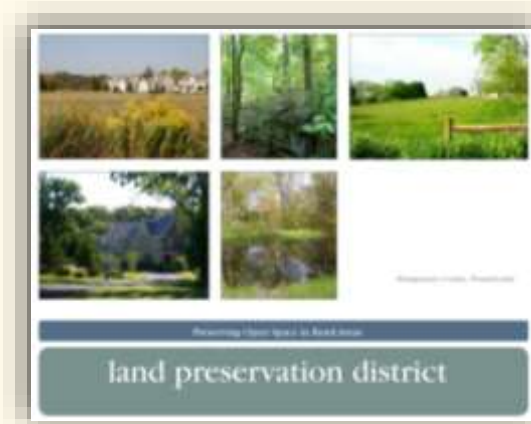
## Process:

- Resource areas delineated and preserved
- Housing sites identified
- Lot lines and roads added

Municipality requires connectivity of adjacent open space parcels through zoning



Randall G. Arendt's Conservation Design for Subdivisions





# Main Street Greenways



## Recommendations Include:

- Sidewalks, crosswalks, bump-outs, ADA ramps
- Street trees and streetscape treatments
- Stormwater BMPs, including rain gardens, and vegetated swales

# Main Street Greenways

- **Linear features - street trees, streetscapes**
- **Crosswalks and pedestrian amenities**
- **Vegetation is a unifying feature**



# Main Street Greenways

- **Trees can't always fit in the space – parking, visibility.**
- **Vegetation to identify the corridor**
- **“Green relief”**
- **Stormwater BMPs, including rain gardens, and vegetated swales**





# Main Street Greenways



# Main Street Greenways





# Main Street Greenways

- Can improve safety where corridors cross roads

*Before*





# Main Street Greenways

*After*



# Stewardship Assessments (NLT)

- **NLT conducted assessments of 36 municipal sites and Green Lane Park**
- **Prepared reports for each park assessment and a management plan for Green Lane Park**
- **Developed a Stewardship Guidebook to be used by municipalities and private landowners**

# Municipal Site Assessments

MONTGOMERY COUNTY GREENWAY AND STEWARDSHIP STUDY  
Interim Municipal Stewardship Assessments

CENTRAL PENNSYLVANIA VALLEY  
**HUNSBERGER WOODS**  
Collegeville, Berks County



Hunsberger Woods (±11 acres) contains forests, a forest seep wetland, and a terrestrial meadow. An unnamed first-order tributary to Perkiomen Creek flows across the property. Hunsberger Woods was partially cleared for agriculture prior to 1937; a riparian buffer was left intact along much of the stream. The property is used for passive recreation. Paved and mown trails are established and connect to the Perkiomen Trail that runs between the two property parcels.

**Notable Features**

1. Good species diversity in mature red oak forest
2. First-order stream
3. Floodplain forest with herbaceous wetlands
4. Potential education use

**Notable Stewardship Issues**

1. Overabundant deer
2. Invasive Plants
3. Attractive structures (dam, springhouse)
4. Soil erosion



Lesser calandria, an invasive species, dominates the herbaceous layer in this Sycamore-Box Elder Floodplain Forest.

This eroded trail is recommended for closure to reduce stream sedimentation.

Natural Lands

1

## Stewardship Assessments:

- 36 sites assessed across 4 regions, variety of uses and types of vegetation
- Built and natural resources
- List of dominant vegetation
- Stewardship priorities
- Implementation schedule
- Features and issues map
- Photographs





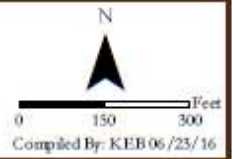
Features and Issues		Management Units	
	Hunsberger Woods		Pond
	Dam		Gully Erosion
	Debris		Spring House
	Grass Parking Lot		Streambank Erosion
	Hazard Tree		Trail Erosion
	Perkiomen Trail		Terrestrial Forest (MU1)
	Waterways		Palustrine Forest (MU2)
			Terrestrial Herbaceous Opening (MU7)
			Herbaceous Wetland (MU8)

1. 2015 aerial photography from DIVSPC  
 2. Parcel boundaries, roads, and stream from Montgomery County  
 3. Symbolology from Maps Icon Collection  
<https://mapsicons.mapsprunki.com>

Disclaimer: This map is not a survey. The information presented with this map is meant to assist Natural Lands Trust, Inc., describe the placement of certain retained, reserved, or excluded rights and to calculate acreage figures. Property boundaries, while approximate, were established using the best available information, which may have included: survey, tax maps, field mapping using GPS, and/or orthophotos. Natural Lands Trust, Inc., makes no representation as to the accuracy of said property lines (or any other lines), and no liability is assumed by us on or of reliance thereon. Use of this map for other than its intended purpose requires the active consent of Natural Lands Trust, Inc.

**Natural Lands**  
 1031 Palmer's Mill Road, Media, PA 19063  
 610-353-5587 | natlands.org

**Stewardship Features and Issues**  
 Hunsberger Woods (+/-29 acres)  
 Tax ID: 040001399055; 040000535001  
 Collegeville, Montgomery County, PA



# Municipal Site Assessments

## Recommendations Include:

- Specific issues
- Applicability
- Recommendations
- Seasons/timing
- Who implements

STEWARDSHIP PRIORITIES AND IMPLEMENTATION SCHEDULE					
priority <sup>1</sup>	stewardship issues	mgmt unit	stewardship recommendations <sup>2</sup>	season/duration	to be implemented by <sup>3</sup>
1	Deer Management	All MUs	Implement a Deer Management Program	Anytime	Municipal Staff
			Monitor for deer impacts	Anytime	Municipal Staff
1	Invasive Plant Control Program	All MUs	Create an Invasive Species Management Program	Anytime	Municipal Staff
1	Hazard Trees	MU1	Identify and remove hazard trees	Anytime	Contractor or Municipal Staff
			Conduct monitoring annually and after severe storms	Yearly	Municipal Staff or Contractor
1	Property Boundary Establishment and Monitoring		Survey and post boundaries	Anytime	Municipal Staff
			Monitor boundaries	Yearly	Municipal Staff or Volunteers
1	Emerald Ash Borer	MU1, MU2	Monitor for Emerald Ash Borer	Anytime	Contractor or Municipal Staff
			Contact the Bureau of Forestry for recommendations for ash treatment	Anytime	Municipal Staff
			Identify and treat or remove ash trees	Anytime	Contractor
			Replant vegetation in areas of ash mortality	Fall	Municipal Staff or Volunteers
1	Spotted Lanternfly	MU1, MU2	Monitor for Spotted Lanternfly	October–May	Contractor or Municipal Staff
			Remove tree-of-heaven and create trap trees	Removal – see Invasive Species Management below Trap Trees – early Spring	Contractor or Municipal Staff
			Explore other control options as needed such as tree banding or egg scraping.	Dependent on control option	Municipal Staff or Contractor
1	Community Prioritization for Invasive Species Removal	All MUs	Prevent invasive plants from moving into the Terrestrial Meadow (MU7)	See individual invasive species	Municipal Staff, Contractor, or Volunteers
			Control invasive plants in the Red Oak-Mixed Hardwood Forest (MU1)	See individual invasive species	Municipal Staff, Contractor, or Volunteers
			Control invasive plants in the Sycamore–Box-Elder Floodplain Forest (MU2)	See individual invasive species	Municipal Staff, Contractor, or Volunteers
			Control invasive plants in the Skunk-Cabbage Forest Seep (MU8)	See individual invasive species	Municipal Staff, Contractor, or Volunteers

<sup>1</sup> 1 = high priority; 2 = medium priority. It should be noted that actual implementation order will depend on priority ranking and availability of resources; this is only a recommendation for the order of implementation.

<sup>2</sup> Recommendations are listed in priority order.

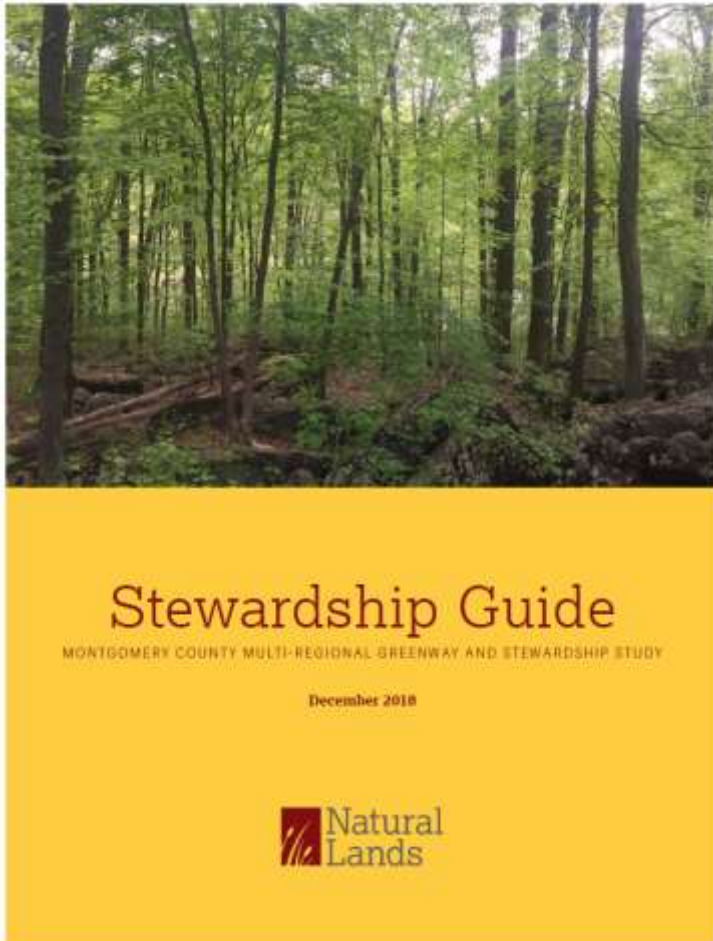
<sup>3</sup> Must have PA Pesticide Applicator Certification to apply herbicides on public property.







# Stewardship Guide



## Guide for Municipalities, Property Owners

- Landscape features: forest, shrublands, meadows
- Trails, lawn and landscaped areas
- Active recreation areas
- Agricultural lands
- Invasive plants, exotic pests
- Water quality
- Wildlife Management
- Issues – fragmentation, climate change, hazard trees, erosion



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