

West Lampeter Township's Agricultural Conservation Practices Assessment for MS4 and TMDL Reporting

A Case Study

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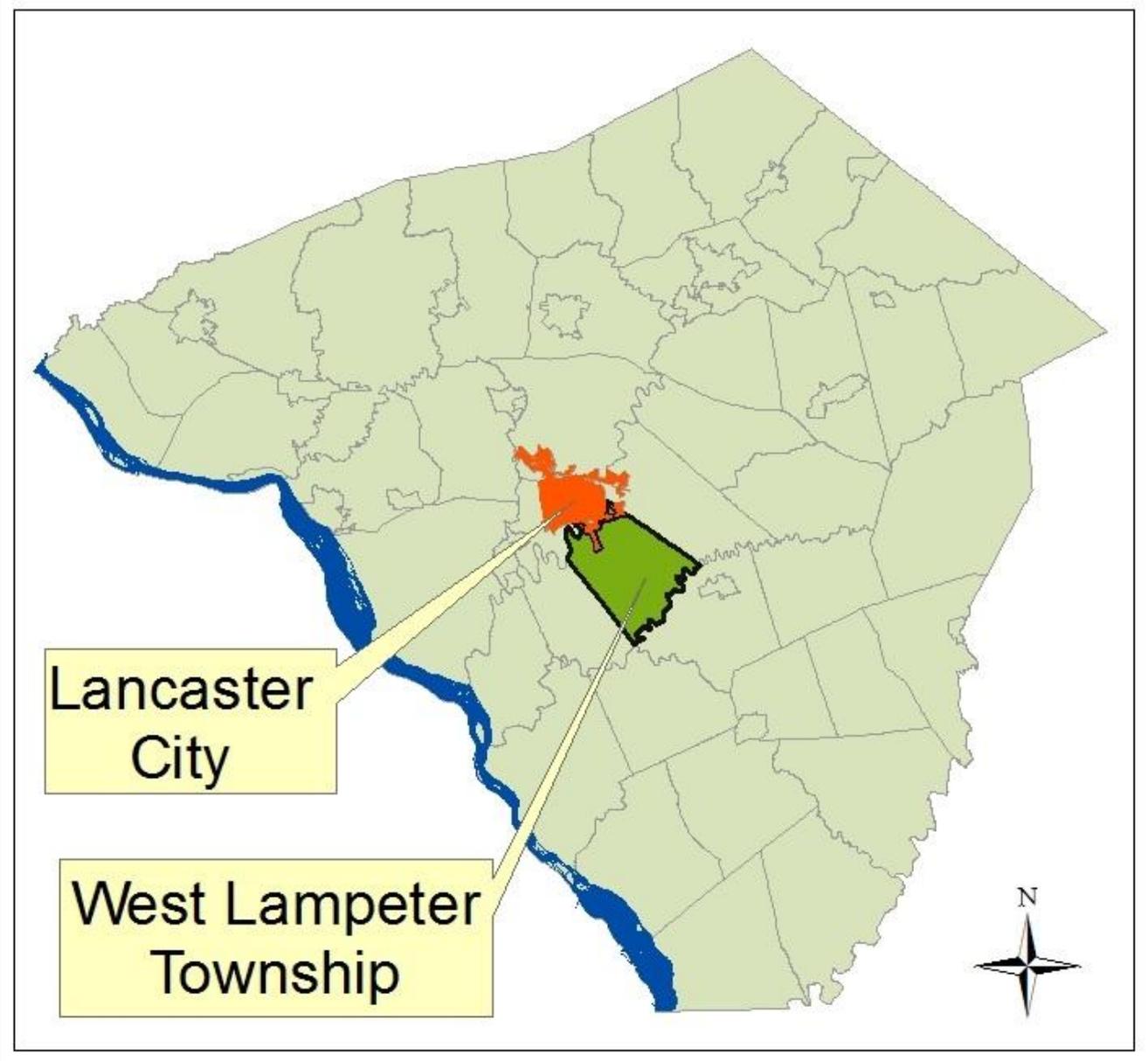
Coordinator

Lancaster Farmland

Trust

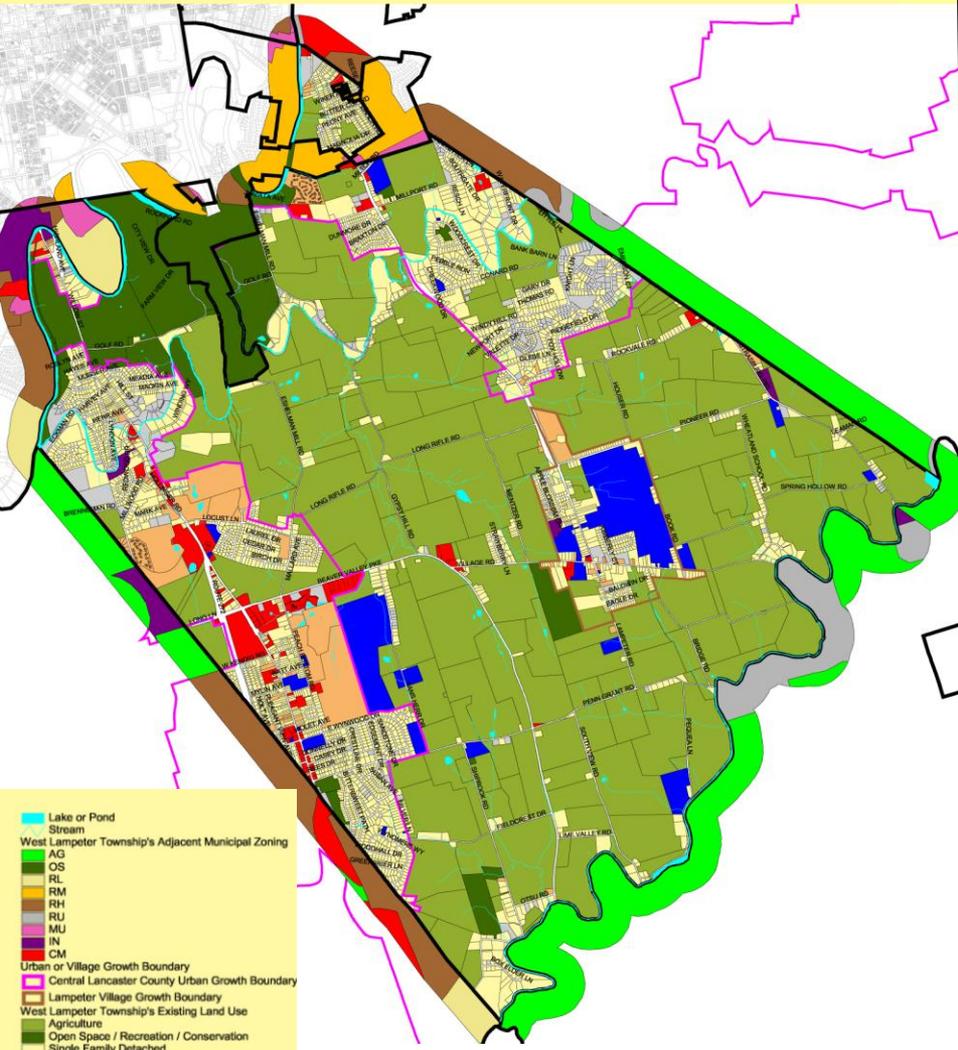


West Lampeter Township: A Context

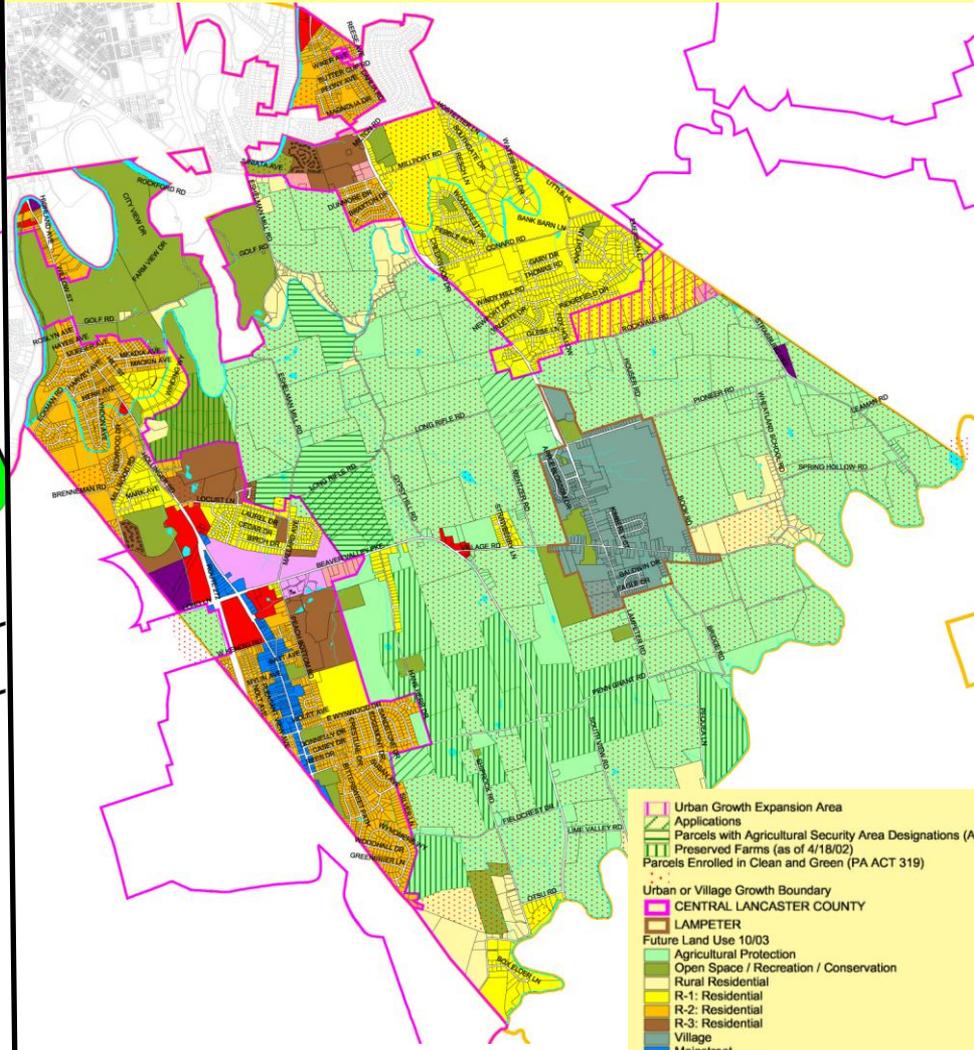


West Lampeter Township: A Context

Adjacent Zoning and Existing Land Use
West Lampeter Township, Lancaster County

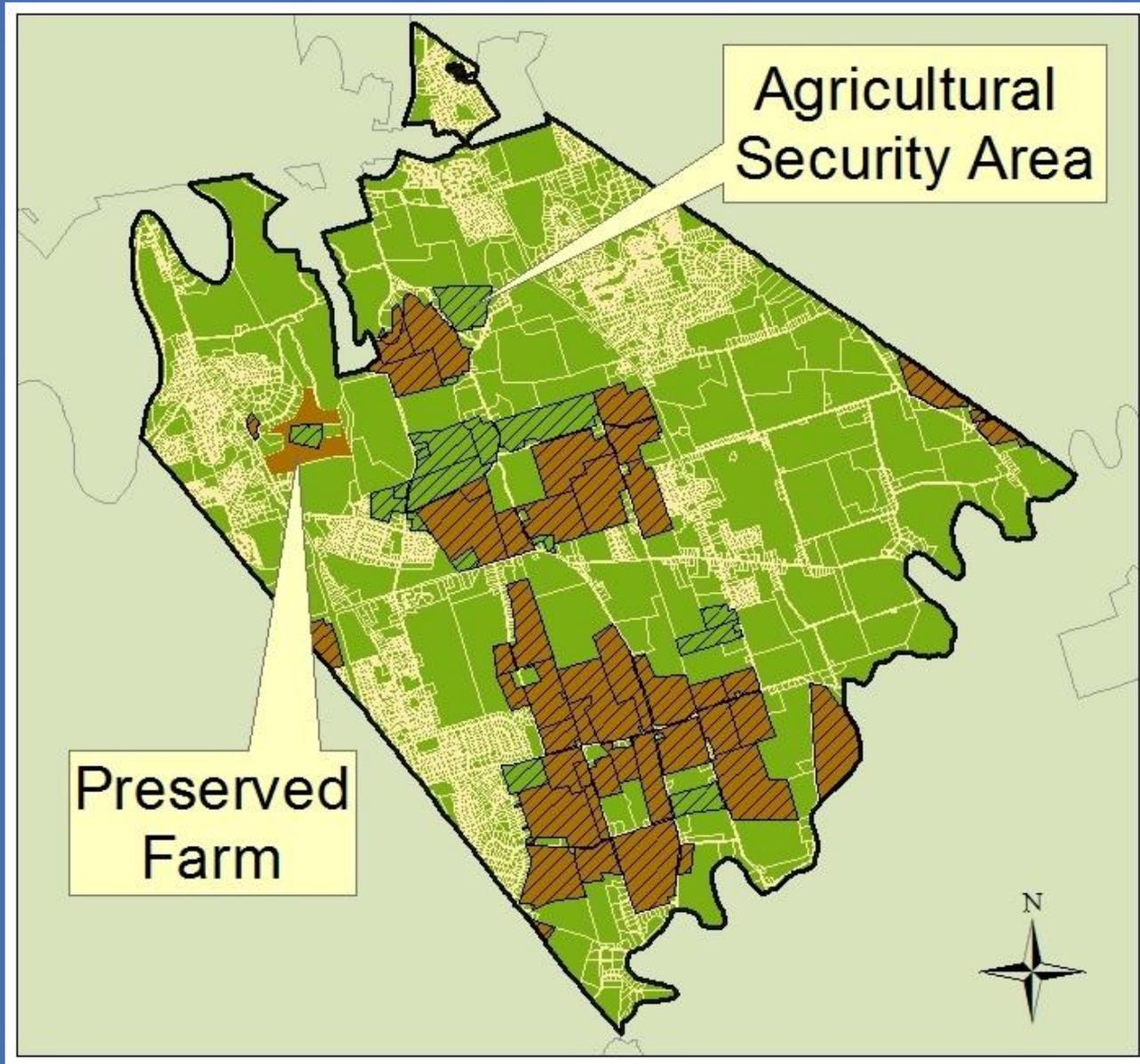


Future Land Use
West Lampeter Township, Lancaster County



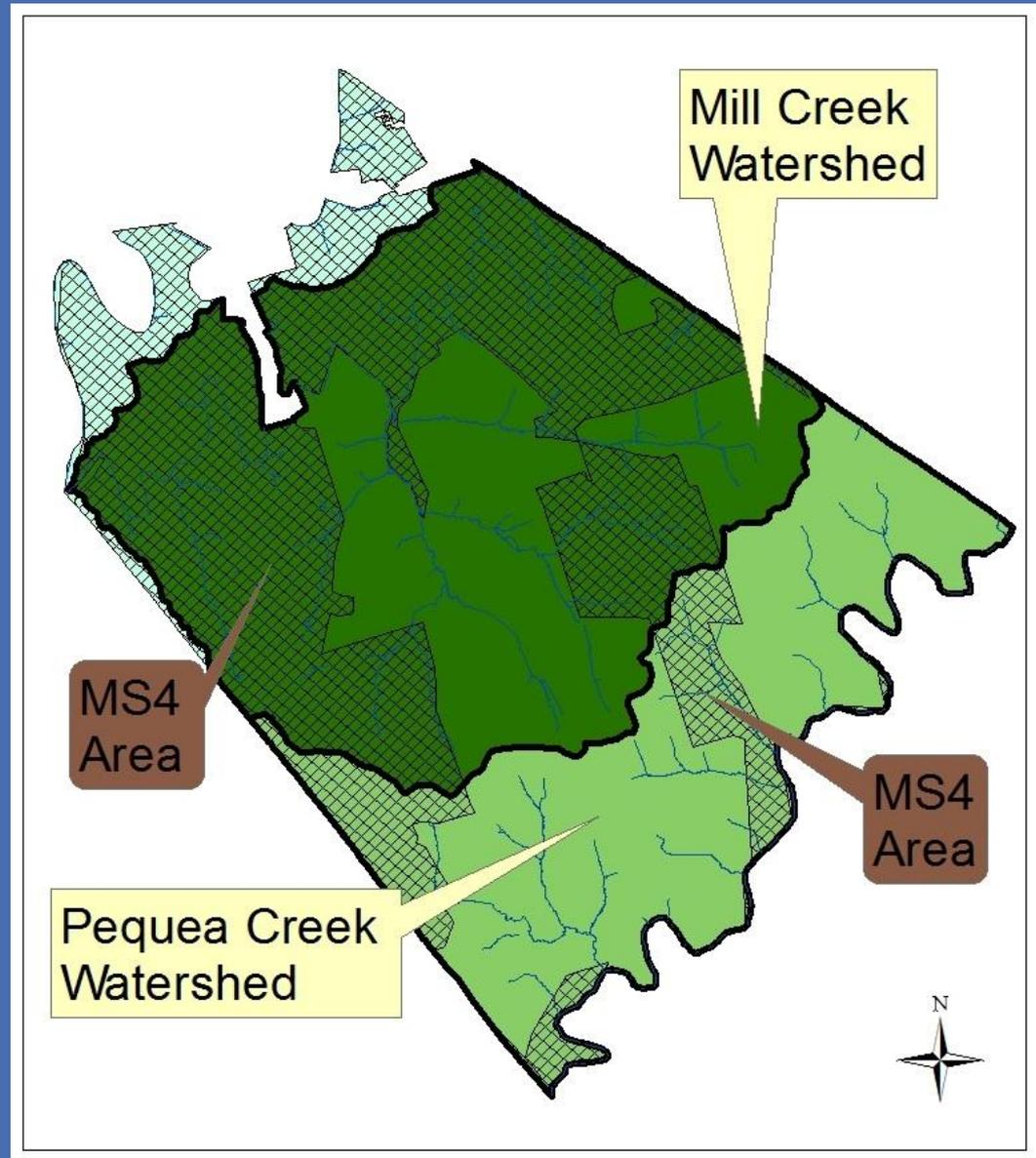
****From 2003 Comprehensive Plan****

West Lampeter Township: A Context



West Lampeter's MS4 Permit and TMDL Plan

- Notice of Intent for renewal of MS4 Permit Submitted to PA DEP in Sept. 2012
- Requires Township to provide a MS4 Total Maximum Daily Load (TMDL) Plan to achieve the required reductions outlined in TMDL Plan for Pequea Creek (2006)
 - **Phosphorus** Reduction **57%**
 - **Sediment** Reduction **83%**



PEQUEA CREEK WATERSHED

Legend

Streams

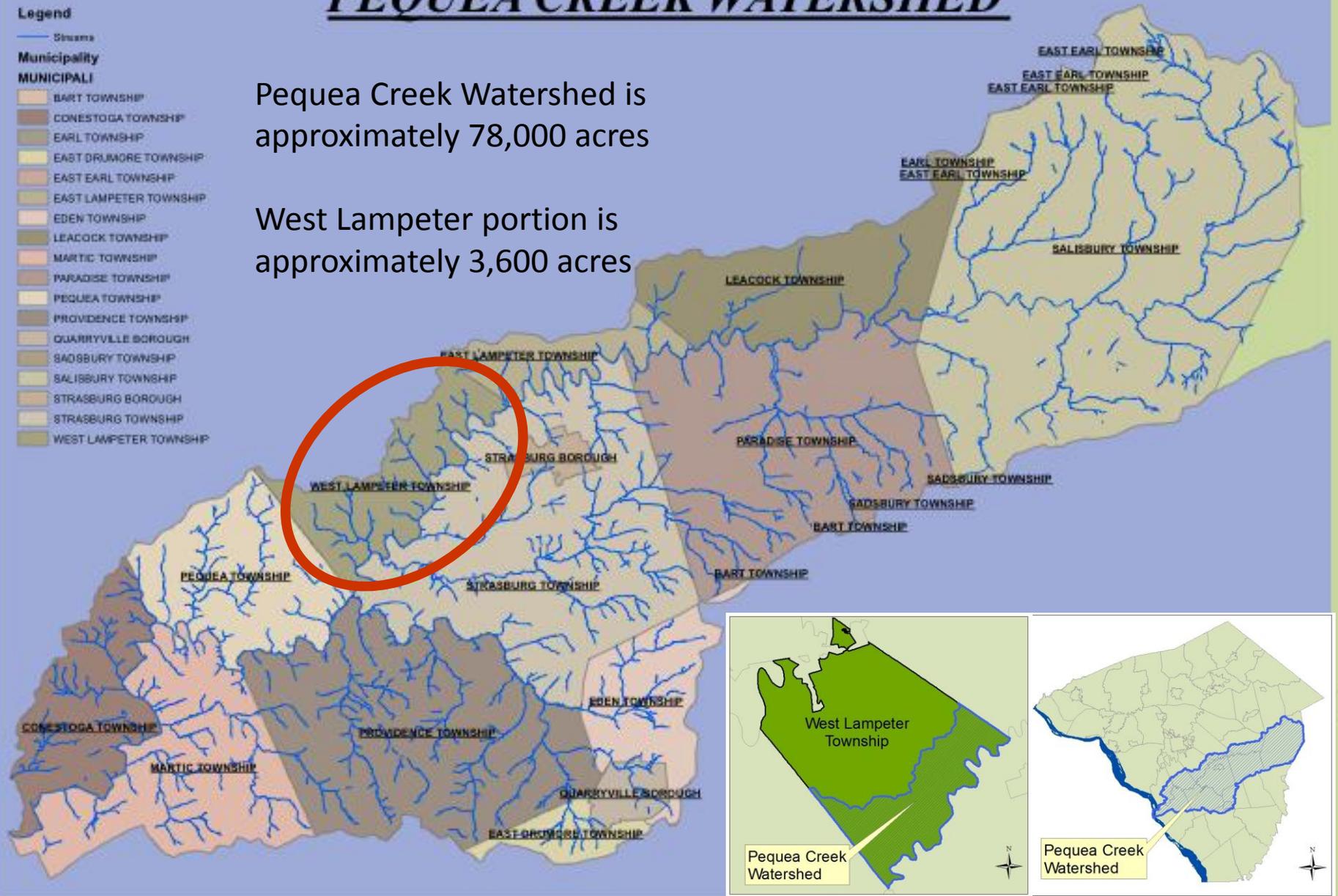
Municipality

MUNICIPALITY

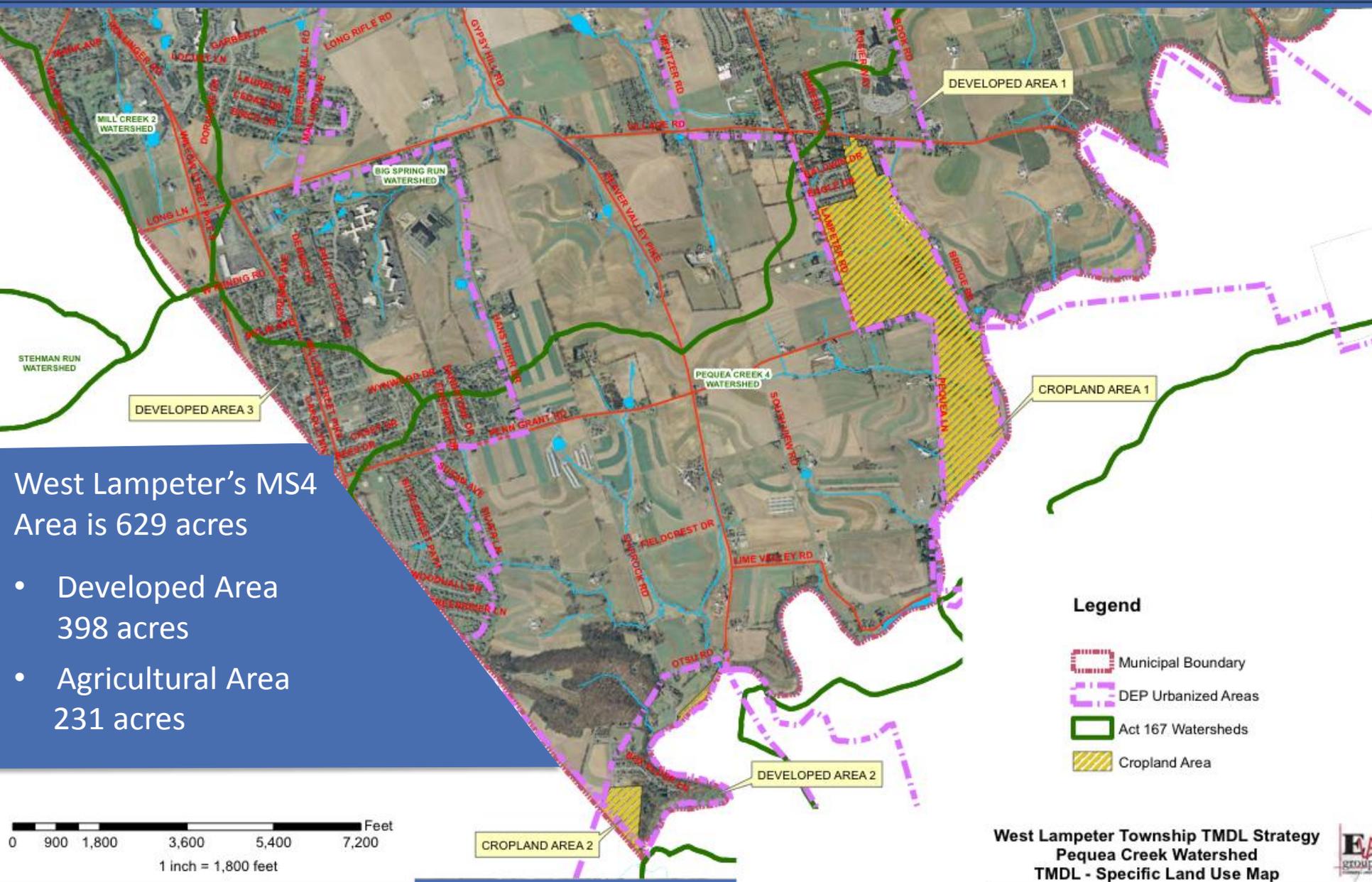
- BART TOWNSHIP
- CONESTOGA TOWNSHIP
- EARL TOWNSHIP
- EAST DRUMORE TOWNSHIP
- EAST EARL TOWNSHIP
- EAST LAMPETER TOWNSHIP
- EDEN TOWNSHIP
- LEACOCK TOWNSHIP
- MARTIC TOWNSHIP
- PARADISE TOWNSHIP
- PEQUEA TOWNSHIP
- PROVIDENCE TOWNSHIP
- QUARRYVILLE BOROUGH
- SADSURY TOWNSHIP
- SALISBURY TOWNSHIP
- STRASBURG BOROUGH
- STRASBURG TOWNSHIP
- WEST LAMPETER TOWNSHIP

Pequea Creek Watershed is approximately 78,000 acres

West Lampeter portion is approximately 3,600 acres



West Lampeter Township's TMDL Strategy for the Pequeea Creek Watershed

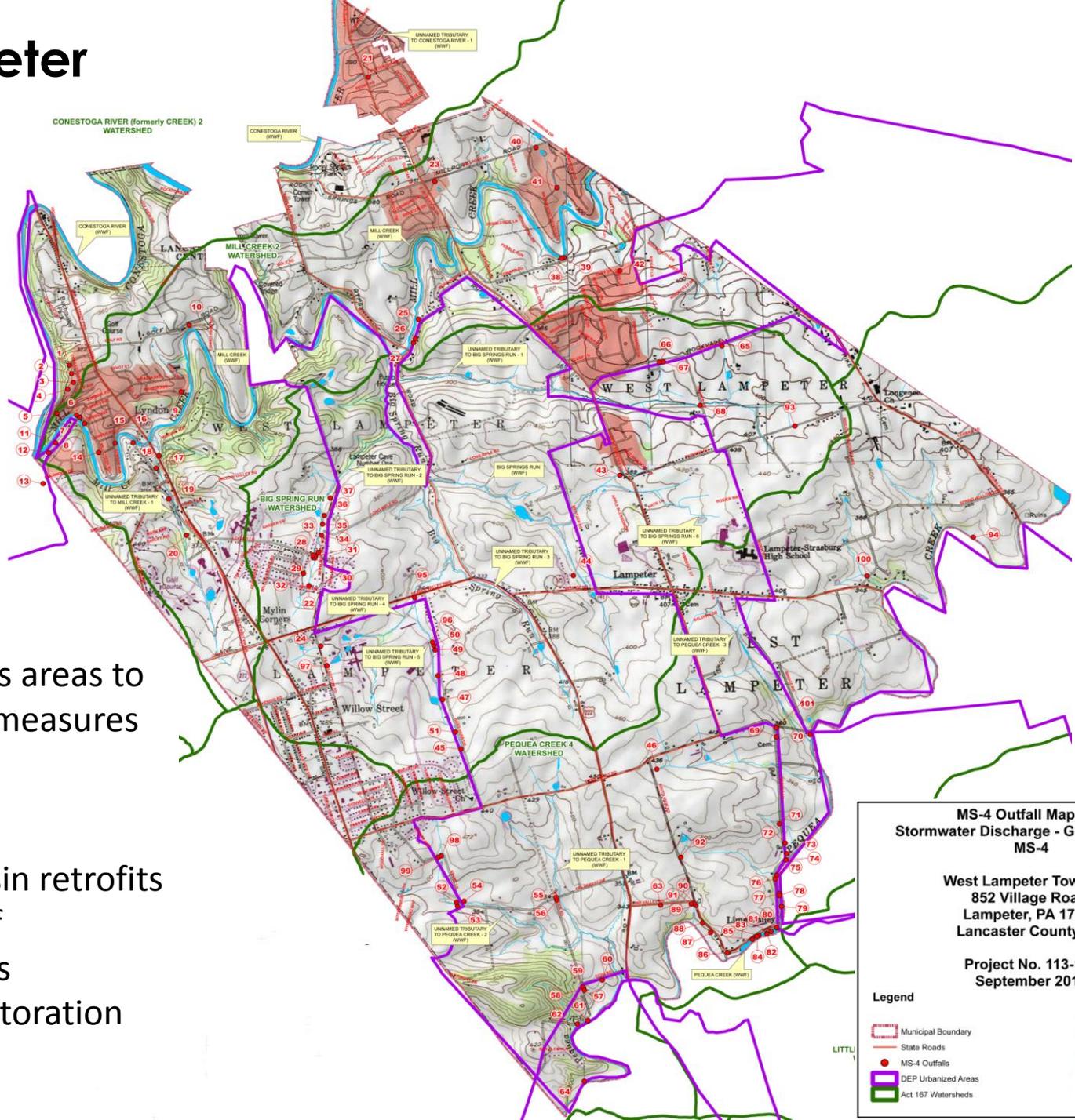


West Lampeter's MS4 Area is 629 acres

- Developed Area 398 acres
- Agricultural Area 231 acres



West Lampeter TMDL Strategy



MS-4 Outfall Mapping
Stormwater Discharge - General Permit
MS-4

West Lampeter Township
 852 Village Road,
 Lampeter, PA 17537
 Lancaster County, PA

Project No. 113-134
September 2012

Legend

- Municipal Boundary
- State Roads
- MS-4 Outfalls
- DEP Urbanized Areas
- Act 167 Watersheds

EA
group, inc.
 ENGINEERS - LANDSCAPE ARCHITECTS

Offices in Gettysburg & Stone College, Pennsylvania
 (717) 226-2275 fax (717) 226-2276
 www.ea-group.com

TMDL Plan identifies areas to implement control measures and BMPs

- Riparian Buffers
- Storm Water Basin retrofits
- Disconnection of Impervious Areas
- Stream Bank Restoration

Agriculture: A Different Way to Approach Water Quality From a West Lampeter Township Supervisor's Perspective

- West Lampeter's current and future land use
- Rising maintenance costs for existing (and future) infrastructure
- Agriculture is an important industry to the township and the county



What is the West Lampeter Township BMP (Best Management Practice) Assessment Project?

A partnership between West Lampeter Township and Lancaster Farmland Trust to cost-effectively improve local water quality through baseline documentation, education and outreach to West Lampeter Township farmers.

Scope includes visiting all of West Lampeter Township's ag-use properties 10 acres or more to get a baseline of the following:

- In compliance?
- Document BMPs
- Listen and understand farmers' concerns



Lancaster Farmland Trust's Organizational Approach to Farmers

LFT is uniquely positioned to perform education, outreach, and documentation assessments because:

- Specialize in agriculture and conservation planning
- Trained in “boots on the ground” work
- Cater primarily to the plain-sect community
- Take the “kitchen table” approach, focus on building trust and relationships with farmers



BMP Assessment Methodology

*Gathering information on
conservation practices*



The Process

1. **Public Outreach: Farmer Meeting**
2. **Follow-up Letter**
3. **On-Farm Visits Scheduled (February through October)**
4. **During the visit**
 - Speak with operator
 - Visits as short as 10 minutes



Assessment Sheet

West Lampeter BMP Inventory

Date: _____

Owner Information

Landowner: _____

Operator: _____

Farm Address: _____

Phone number: _____

Tillable acreage: _____

Pequea Watershed Millcreek Watershed

Status of Plan

Ag E&S Plan Conservation Plan/CNMP No Plan

Date of Plan: _____

Name on Plan: _____

Cropping rotation in plan: _____

Rotation meets 'T': yes no

Structural/'built' BMPs implemented: _____

Manure Storage

Nutrient Mgmt Plan Date _____ Manure Mgmt Plan Records No Plan

May be eligible for Nutrient Credit Trading

Farm Operation and BMPs

Cropping rotation: _____

Crops in a given year

Crop _____ Acres _____

Crop _____ Acres _____

Crop _____ Acres _____

no-till acres _____

min till acres _____

cover crop acres _____

significant residue acres _____

terraces feet _____

waterways feet _____

contouring acres _____

other

Future Improvements

Being done _____ Potential for high impact _____

Results

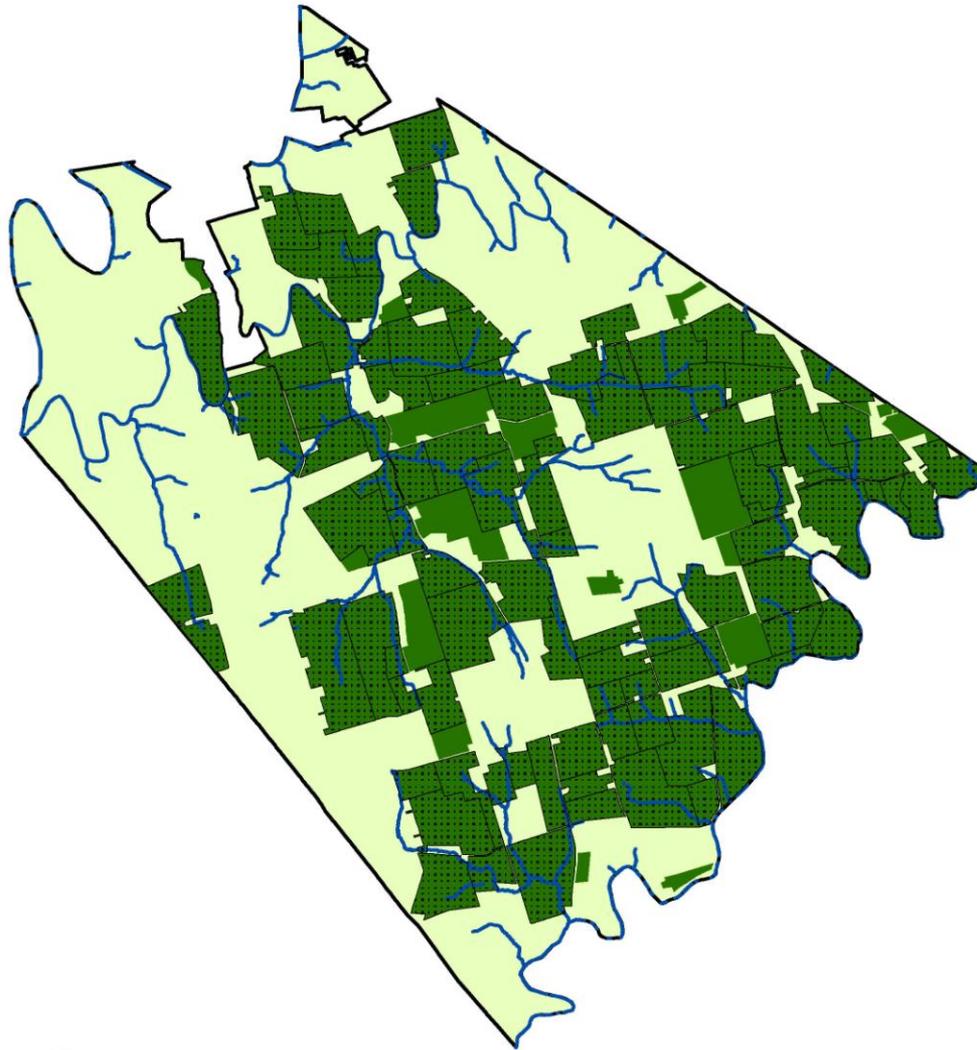
Quantitative

- 66 of 93 properties visited, totaling 2,053 acres (about 75% complete)
- About 50% of landowners are in compliance with state regulations
- 52 of 66 properties have areas that are within 100 feet of a stream



West Lampeter Township Site Visits

Properties that are within 100 feet of a stream



Produced by Lancaster Farmland Trust
GIS Data Courtesy of Lancaster County
Geographic Information Systems Department
October 9, 2013

Results

Qualitative

- Created a Baseline of ag Conservation Practices
- Documented Numerous 'volunteer' Conservation Practices
- Analysis of parcels for potential implementation
- Venue for conversation



What are We Learning?

Challenges and Opportunities



Opportunities

- Agriculture is still the largest land use in the township – green infrastructure can be a plausible option based on land availability
- Most farms are within 100 feet of a stream, demonstrating ag is on the “front lines” of water quality protection
- Landowners may be receptive to green infrastructure investment if grant \$\$ is available....at the right level.

What are We Learning?

Challenges and Opportunities



Challenges

- Continued apprehension from the farming community about government involvement
- Alignment of a willing **property owner** with the **appropriate property** at the **opportune time** for a green infrastructure project
- Getting buy-in from local officials and local residents to invest in green infrastructure – fiscal impact analysis?

Based on the Assessment, Possible Next Steps for West Lampeter Township



Questions?

