



# **A Balanced Approach to Ensuring Strong Farms, Clean Water**

**Presentation to National Pork Board and  
National Pork Producers Council  
Environmental Committees**

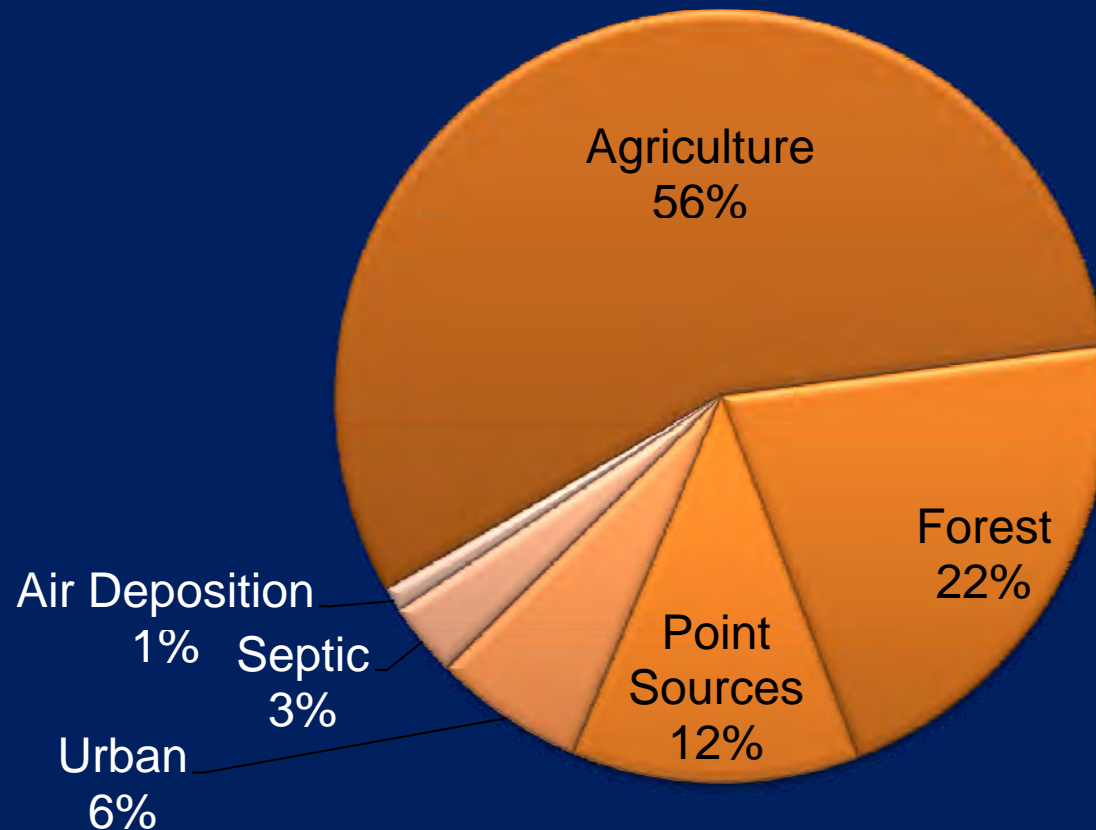
**August 17, 2011**

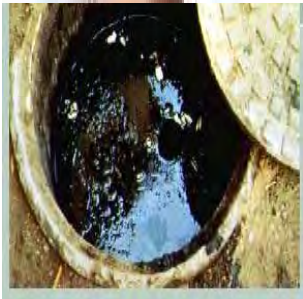
**Ms. Kyle J. Zieba  
EPA Region III, Water Protection Division**



# Introduction

# PA Nitrogen Delivered Loads to Chesapeake Bay





# Assistance for BMPs

# \$14.2 Million in ARRA funding through Pennvest, CBF

- 43 farms receiving 219 individual BMPs
- 16.5 miles of new forested buffers
- 11.1 miles of existing buffers receiving specific protection
- 82 acres of associated wetlands enhanced or restored
- creation of 124 jobs (full time equivalents for a year)
- Estimated reduction of 948,697 lb of Nitrogen yearly
- Estimated reduction of 295,910 lb of Phosphorus yearly
- Estimated reduction of 1,028 tons of sediment yearly
- Estimated 21,204 metric tons of carbon offsets yearly

**Farms with Ag BMPs Funded by ARRA/PENNVEST through Chesapeake Bay Foundation and Forested Buffers\* Funded by USDA's Conservation Reserve Enhancement Program**

**PROJECT TOTALS**

44 farms

190 NRCS practice codes  
(some BMPs include multiple practice codes)


\$14.2 million total cost

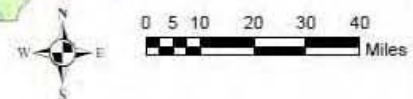
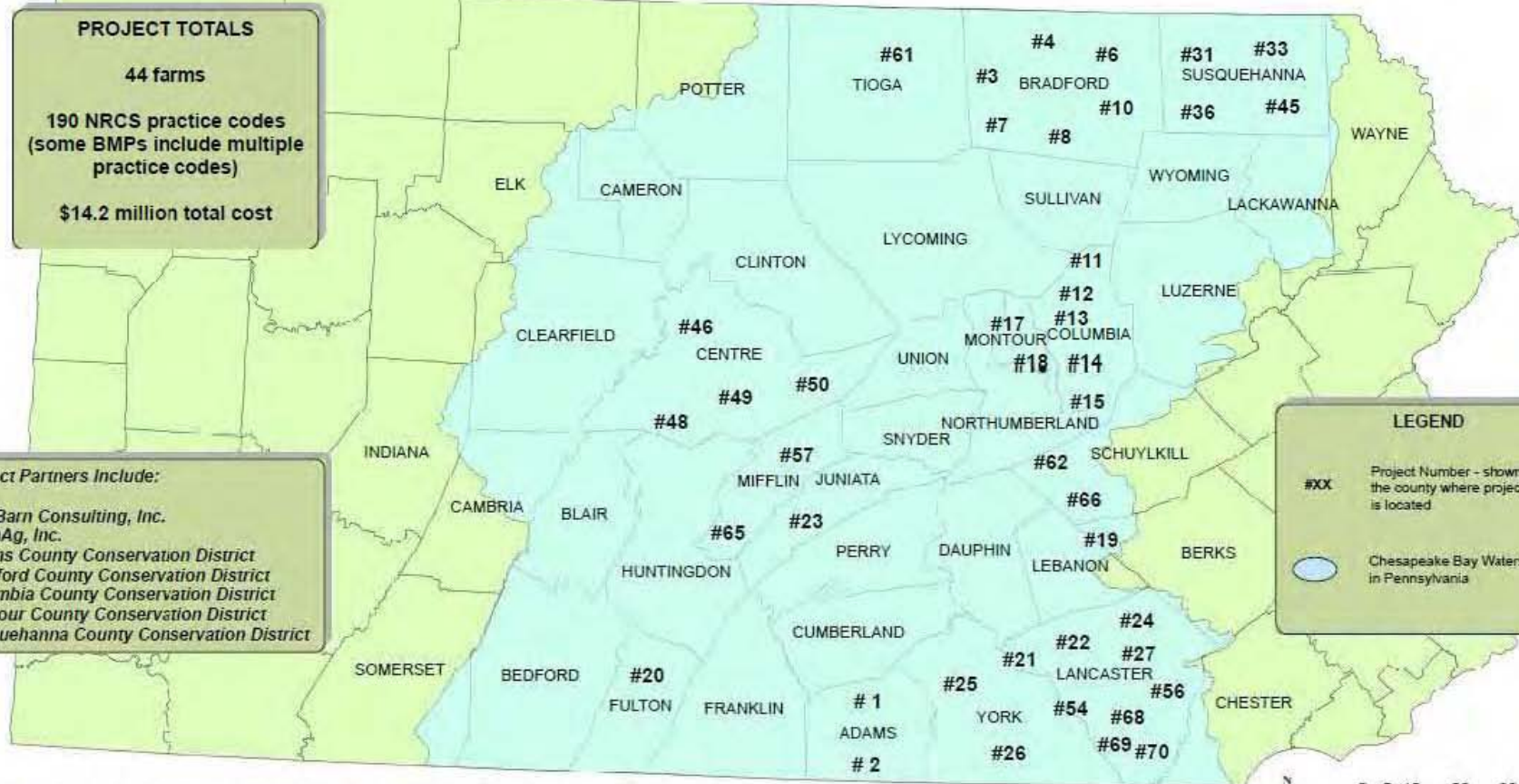
**Project Partners Include:**

Red Barn Consulting, Inc.  
TeamAg, Inc.  
Adams County Conservation District  
Bradford County Conservation District  
Columbia County Conservation District  
Montour County Conservation District  
Susquehanna County Conservation District

**LEGEND**

#XX Project Number - shown in the county where project is located

 Chesapeake Bay Watershed in Pennsylvania



\* CBF required landowners to restore or protect 35' minimum width forested buffers on all streams on the farm to participate in CBF's application to PENNVEST for ag BNP funds. Of 120 landowners interested, only three refused. All but two of the landowners in the final project list (44 farms) used CREP where buffer restoration was needed.

# \$5.83 million to PA through NFWF Grants

- 116,160 linear feet of livestock exclusion fencing installed
- 138,072 linear feet of riparian stream buffer (min 35ft width) restored
- 31,967 acres of BMPs put into practice on ag lands
- 772 acres converted to rotational grazing
- 127.5 acres of wetland improved/restored/created

# \$9.28 million to PA through CBPO

- Funding to conservation districts for technical assistance
- BMP Implementation
  - 4,000 acres of no-till / year
  - 1,000 acres of precision agriculture / year
  - 9,000 acres of cover crops / year
  - 50 acres of rotational grazing / year
  - 5 miles of stream bank fence installed / year
- Compliance Assurance
  - 225 – 450 ag inspections / year
  - 50 – 100 compliance actions / year



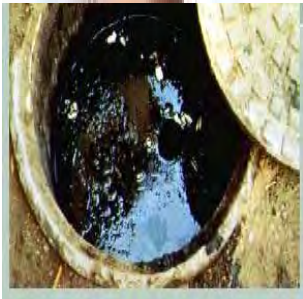


# Compliance Assistance and Outreach





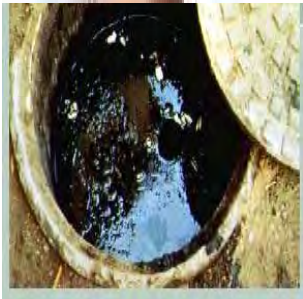




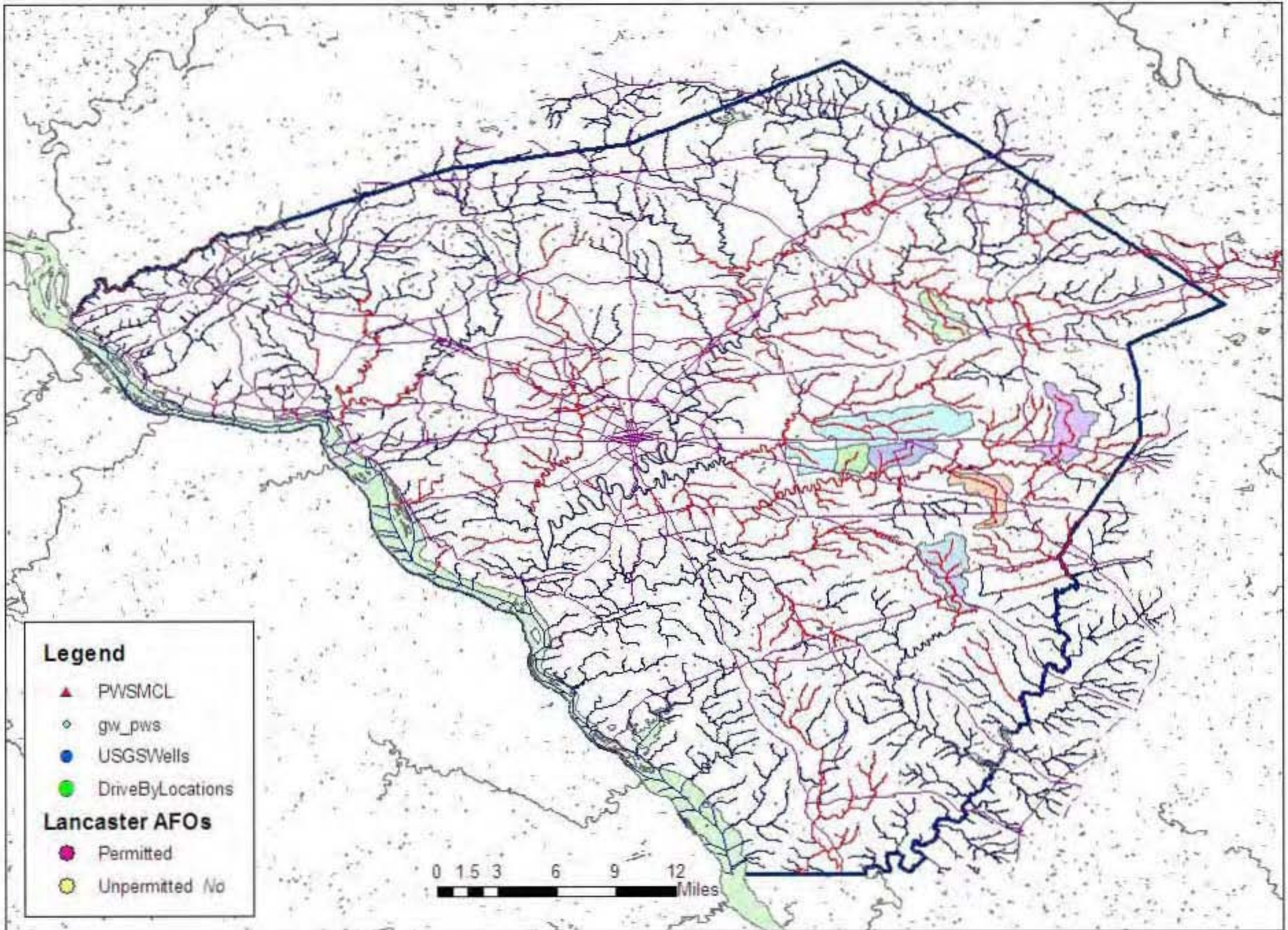
# Inspections

# Targeting Methodology

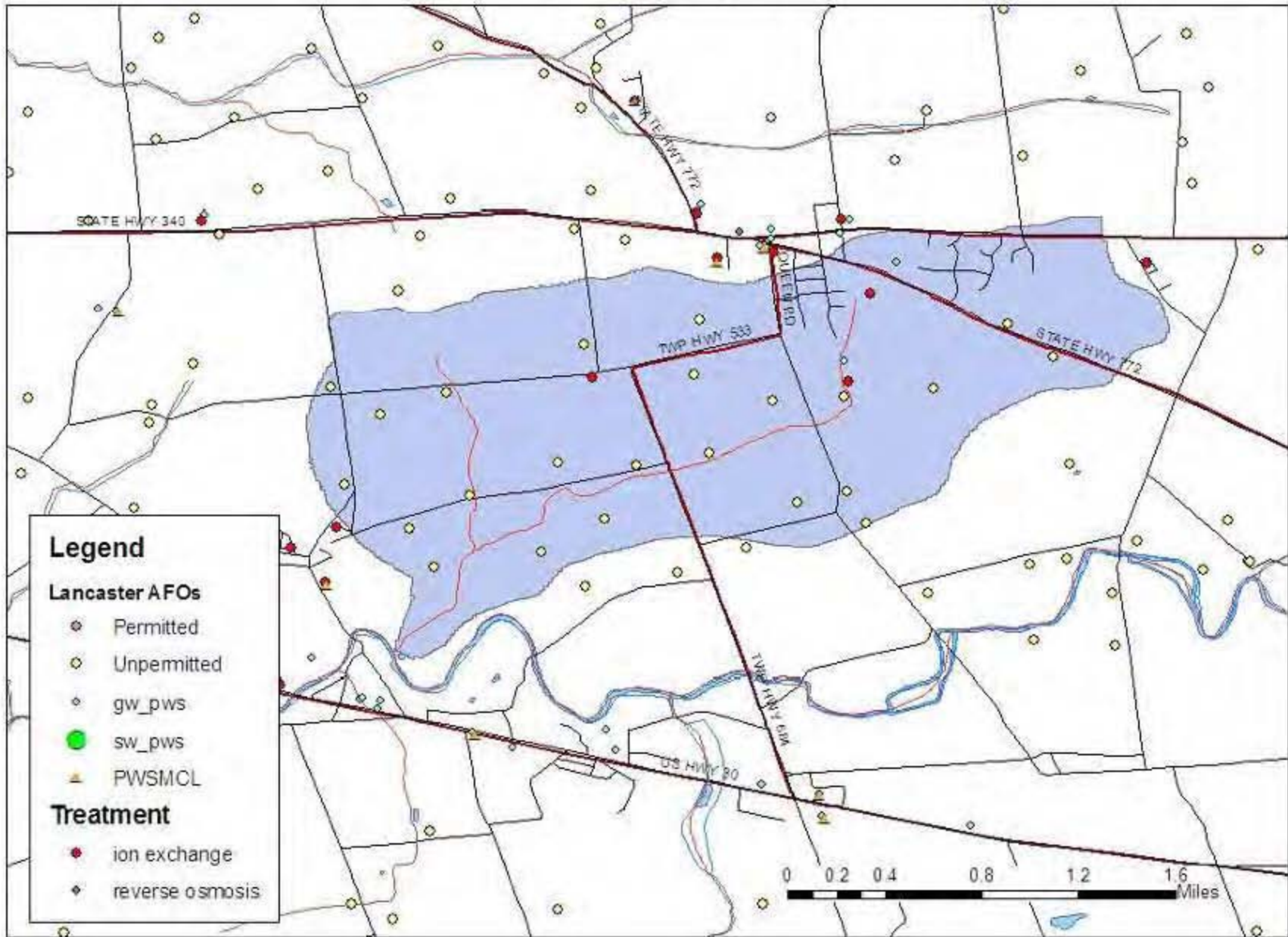
- Sub-watersheds at headwaters with TMDLs
- Ratio of square miles / miles of impaired streams / number of animal feeding operations
- Public Water Systems with treatment for nitrate removal as an indicator
- Nitrate Maximum Contaminant Level violations



# Lancaster County



# Watson Run





# Watson Run

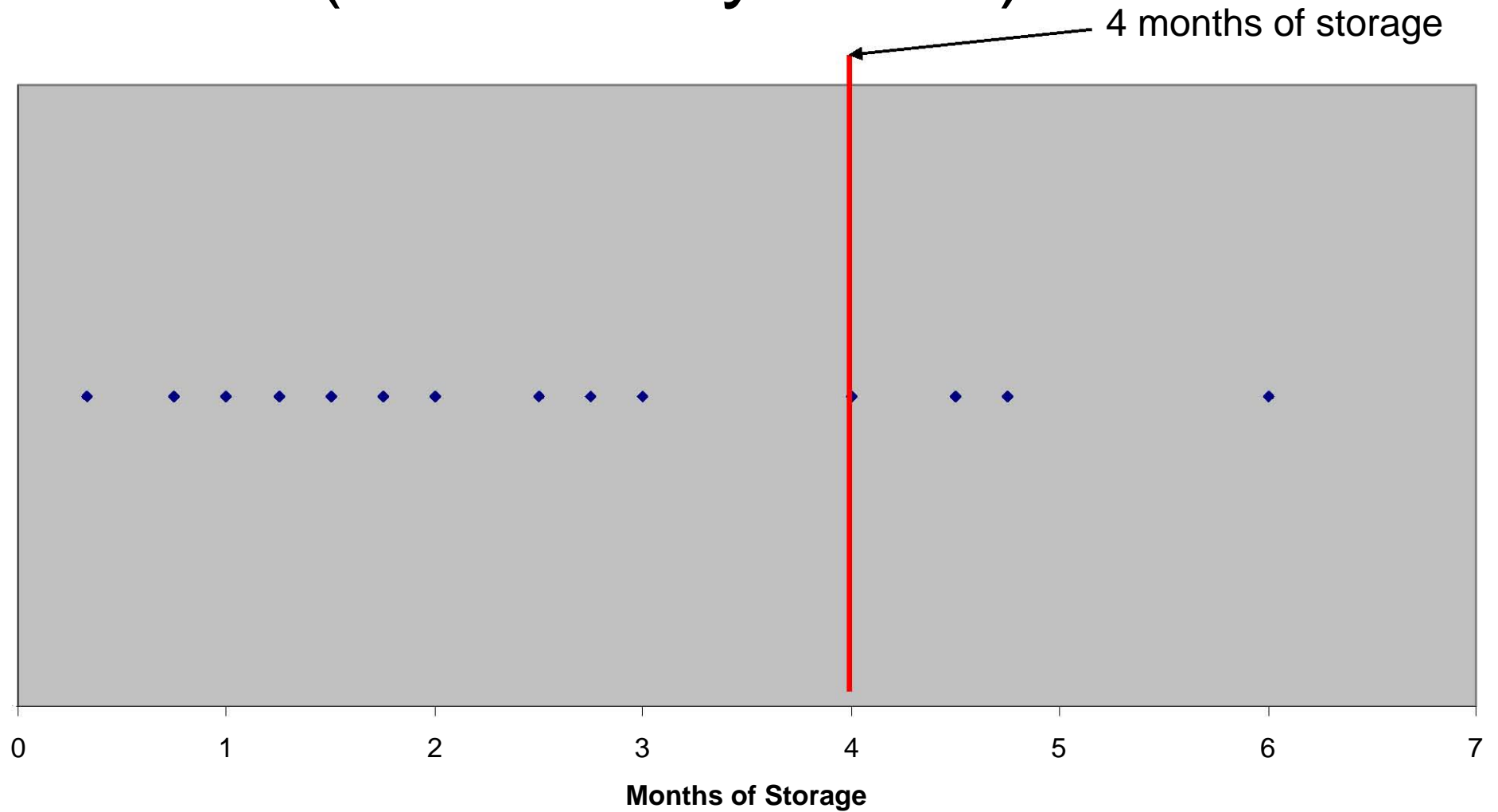
- Area of watershed: 2.74 sq. mi.
- 3.31 miles of impaired stream
  - Source: Agriculture
  - Causes: Nutrients, Organic Enrichment/  
Low D.O., Siltation
- 25 Potential AFOs, no permitted CAFOs
- Density of Potential AFOs – 9.12 per sq. mi.
- 5 PWSs, 4 with treatment systems
- TMDL requires reduction of 1,720 lbs/yr Phosphorus and 715 tons/yr of Sediment



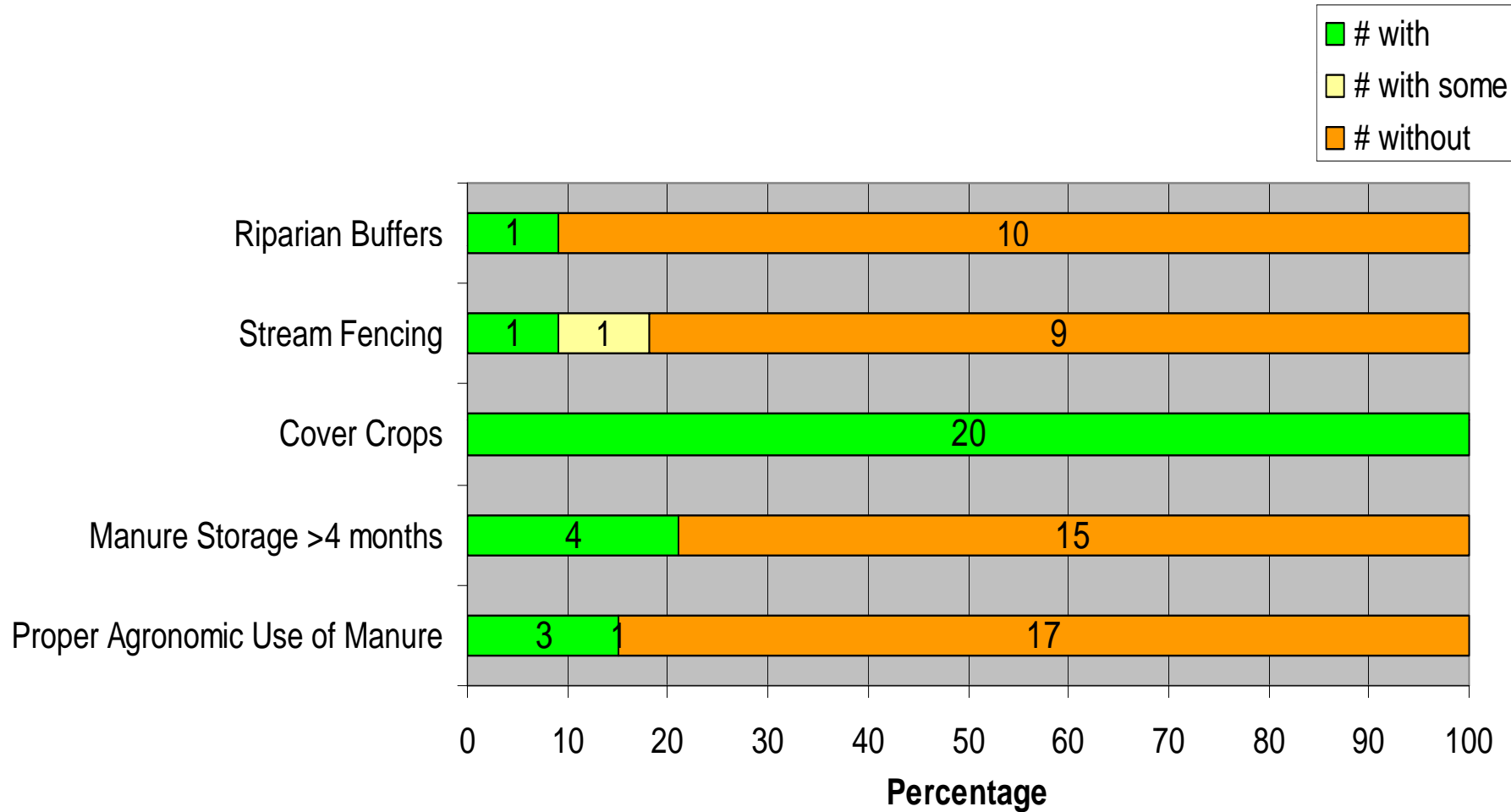


# Findings

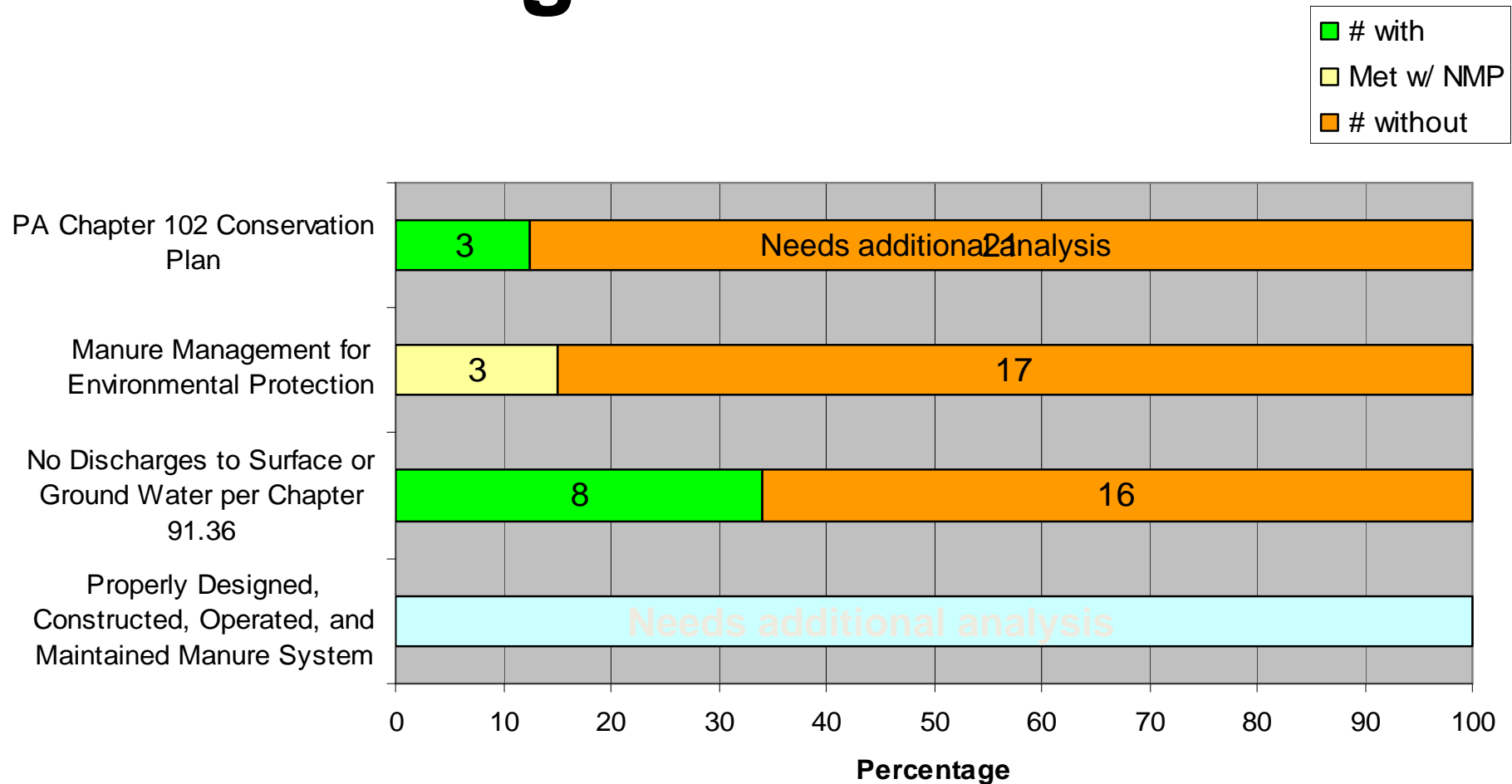
# Months of Manure Storage (on 19 dairy farms)



# Chesapeake Bay BMPs



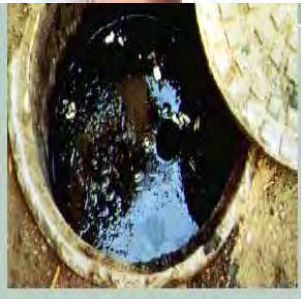
# Compliance with PA Regulations\*



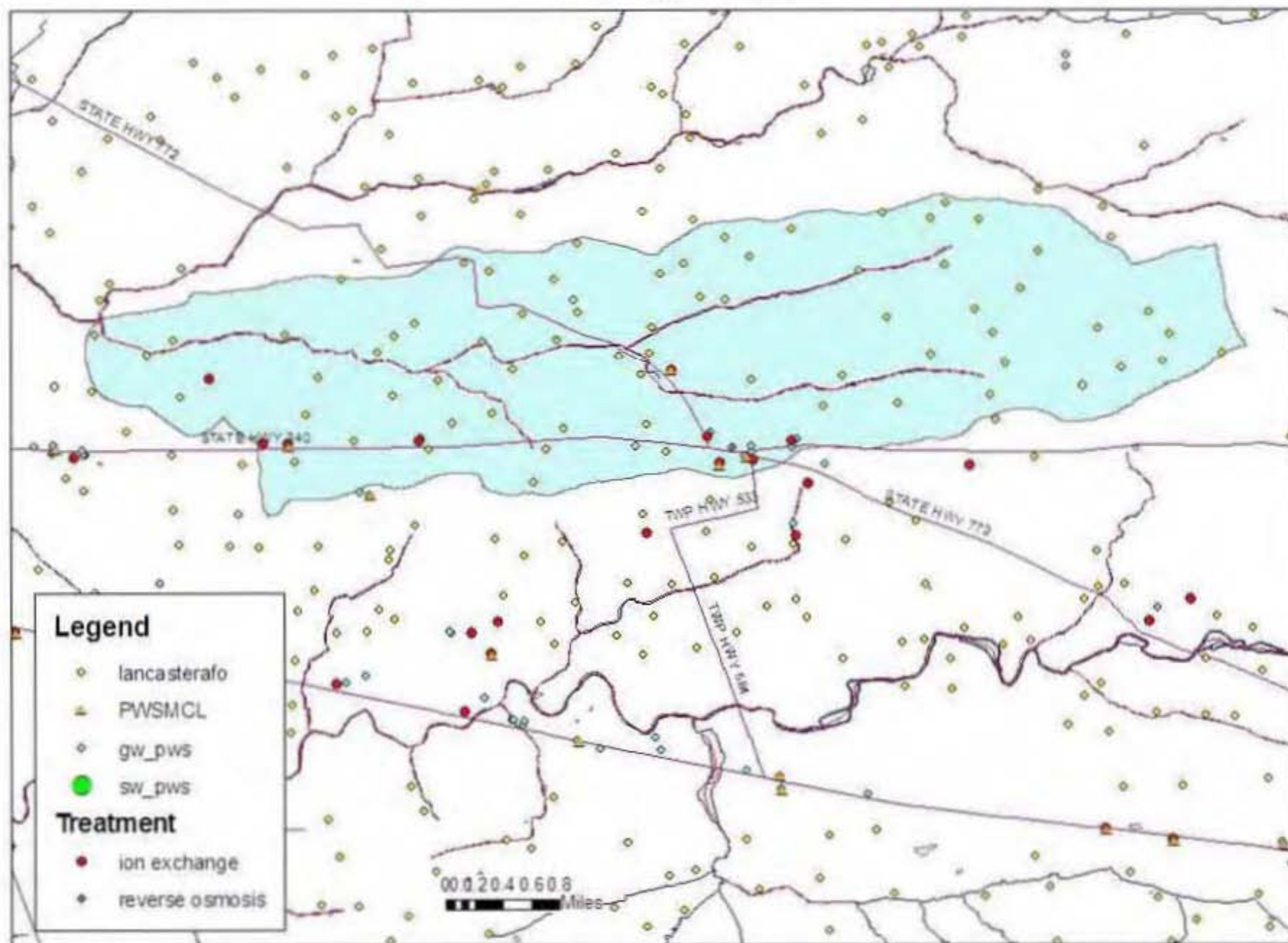
\*Based on Pennsylvania Clean Streams Law, Title 25, Chapter 91.36, Chapter 102 and related guidance including PADEP's Manure Management Manual and PA Technical Guide

# Drinking Water Sampling Results

- Sampled 19 out of 24 farm wells
- 9 out of 19 contained total coliform bacteria
- 6 out of 19 contained E. coli
- 16 out of 19 exceeded the MCL for nitrate\*
  - Ranging from 11 to 43 mg/L; Avg. 19.2



# Muddy Run



# Muddy Run

- Area of watershed: 8.84 sq. mi.
- 8.66 miles of impaired stream
  - Source: Agriculture
  - Causes: Nutrients, Suspended Solids
- 88 Potential AFOs, no permitted CAFOs
- Density of Potential AFOs = 9.95 per sq. mi.
- 15 PWSs, 10 with treatment systems







# Plan to Meet Muddy Run TMDL

- 35% Cover Crops
- 10% Conservation Tillage
- 50% Stripcropping/Contour Farming
- 51% NMPs
- 30% Grazing Land Management implemented
- Nearly 7 miles of Stream Bank Vegetation
- 7 miles of Stream Bank Fencing
- 2 miles of Stream Bank Stabilization

# Outcomes

- 75% compliance with state requirements
- 4 check inspections
- 2 referrals to DEP
- 1 state action



# Nickel Mines/ Meetinghouse Creek





# Coordination on CAFOs

- Negotiated agreement between EPA and DEP
- Targeted large CAFOs in Franklin, York, Lebanon, and Adams counties
- 5 inspections through September 2011
- Meeting with conservation district staff
- Follow- up discussion on issues, enforcement actions and lessons learned















# Take Home Messages

- Multi-program, balanced, flexible approach
- Financial, outreach and compliance assistance to all producers
- Partnering with local organizations
- Everyone must do their part
- Equitable, level playing field

# Questions/Discussion

