



**CONEWAGO CREEK**  
INITIATIVE



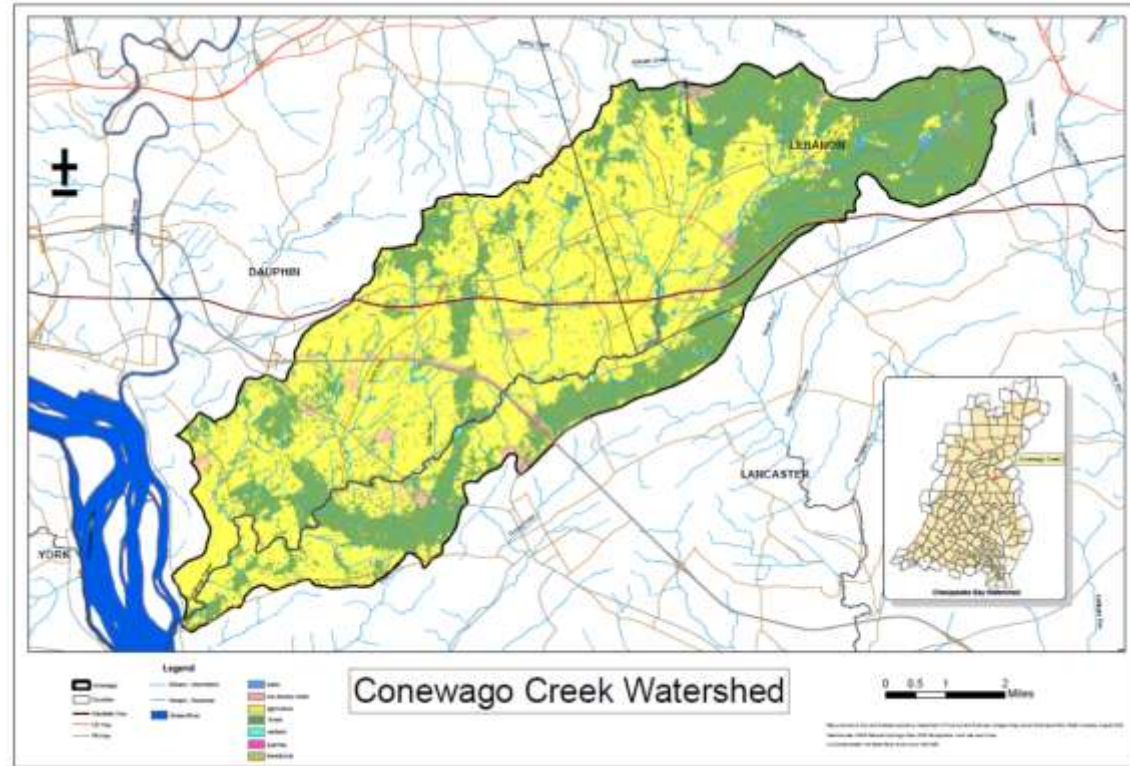
# Practices – Conservation Districts and Ag & NonAg Lands

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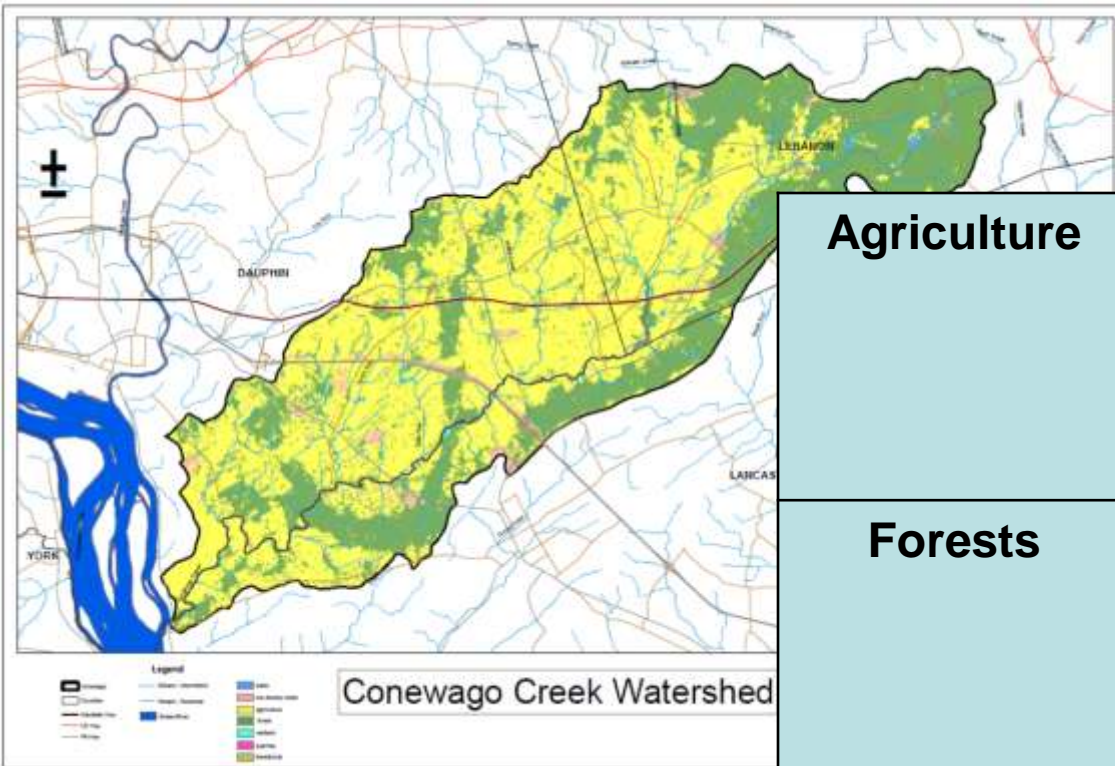
*Conserving Natural Resources for Our Future*

# Conservation District Roles

- Dauphin County Conservation District – lead facilitator on behalf of three counties
  - Dauphin Co,  
Lancaster Co,  
Lebanon Co



# Conservation District Target Audiences



## **Agriculture**

Target ex: 50% increase in nutrient and conservation plan development, review, and implementation

## **Forests**

Target ex: 50% increase in forest stewardship plan development and adoption of management measures

## **Residential**

Target ex: 100% participation in the local septic system improvement program



# The Farm Survey - Overview

- Districts developed and conducted farm-by-farm survey of ag operations in the Watershed to:
  - Establish a baseline of current practices
  - Evaluate existing compliance with federal and state water quality requirements
  - Identify the need or opportunity for new or updated plans and placement of BMPs.



# The Farm Survey – Overview cont'd

- The survey provided a mechanism for conservation district staff to:
  - Engage with producers
  - Acknowledge the work that had already taken place
  - Identify areas for improvements
- *All essential to the goals of the partnership.*



# The Farm Survey - Numbers

- Of the 225 farms across the three county-watershed area
  - 90% of the farms participated
- The survey provided a snapshot of basic, farm-level information about current plans
  - conservation, manure management, and nutrient management



# The Farm Survey - Findings

## Conservation Plans

- More than half (59.1%) of the agricultural producers in the Conewago Watershed indicated that they had a conservation plan.

County	Number of Farms	Number of Farms with Conservation Plans	Percent of Farms with Conservation Plans
Dauphin	109	82	75.2%
Lancaster	60	19	31.7%
Lebanon	56	32	57.1%
Total	225	133	59.1%





# The Farm Survey - Findings

## Utilization of No-Till

- Of the 200 agricultural operations that grew crops (including forages), 156 (78%) utilized no-till. Of the 12,185 owned and rented acres planted in crops, 6,997 acres (57%) were planted utilizing no-till.

County	Operations Utilizing No-Till	Number of Acres Planted Utilizing No-Till	Total Owned and Rented Cropped Acres	Percent No-Till of Total Owned and Rented Cropped Acres
Dauphin	81	4,758	7,601	62.6%
Lancaster	20	620	1,650	37.6%
Lebanon	55	1,619	2,934	55.2%
Total	156	6,997	12,185	57%



# The Farm Survey - Findings

## Cover Crops

- Of the 200 operations that grew crops, 83 (41.5%) grew cover crops (three operations grew both early and late cover crops).

County	Operations Planting Early Cover Crop	Operations Planting Late Cover Crop	Total*
Dauphin	30	14	44
Lancaster	7	8	15
Lebanon	21	6	27
Total	58	28	86

\* Note: Three farms planted early and late cover crops.



# The Farm Survey – Establishing Priorities

- The conservation districts evaluated findings, and established priorities for action:
- Priority 1
  - Farmers who requested technical assistance from the Conservation District are automatically assigned priority 1 status.
  - Operations considered to be proactive in seeking voluntary compliance and are most likely to be successful in implementation and sustenance of practices.



# The Farm Survey – Establishing Priorities

- *Priority 2*
  - Operations that either lacked conservation plans or had outdated ones are assigned as priority 2 operations.
  - Through Farm Bill EQUIP and Chesapeake Bay Watershed Initiative (CBWI) funds, federal support for development of a conservation plan is more readily available for operations.
  - In addition, Pennsylvania's revised Chapter 102 Erosion and Sedimentation Control requirements are fulfilled through the development and implementation of a Conservation Plan.



# The Farm Survey – Establishing Priorities

- *Priority 3*

- Operations that lacked Nutrient Management or Manure Management Plans.
- The resources available to complete Nutrient Management and Manure Management plans are allocated differently than the conservation plans.

- *Priority 4*

- All other operations.
- This group is encouraged and invited to identify technical assistance needs on their farms.



# Adoption of Practices— BMPs installed

<b><u>Conservation Practice</u></b>	<b>Unit</b>	<b>FY 2004-09 Baseline</b>	<b>FY 2010-11 New</b>	<b>Total</b>	<b>% Change from Baseline</b>
<b>Waste Storage Facility</b>	<b>Number</b>	<b>2.0</b>	<b>2.0</b>	<b>4.0</b>	<b>100%</b>
<b>Residue &amp; Tillage Management</b>	<b>Acres</b>	<b>757</b>	<b>1,268</b>	<b>2,024</b>	<b>168%</b>
<b>Cover Crop</b>	<b>Acres</b>	<b>113</b>	<b>106</b>	<b>219</b>	<b>94%</b>
<b>Diversion</b>	<b>Feet</b>	<b>700</b>	<b>2,410</b>	<b>3,110</b>	<b>344%</b>
<b>Fence</b>	<b>Feet</b>	<b>15,035</b>	<b>4,991</b>	<b>20,026</b>	<b>33%</b>
<b>Riparian Forest Buffer</b>	<b>Acres</b>	<b>70</b>	<b>11</b>	<b>81</b>	<b>16%</b>
<b>Grassed Waterway</b>	<b>Acres</b>	<b>8</b>	<b>8</b>	<b>16</b>	<b>104%</b>
<b>Access Road</b>	<b>Feet</b>	<b>30</b>	<b>1,055</b>	<b>1,085</b>	<b>3,517%</b>



# Adoption of Practices— BMPs installed

<b><u>Conservation Practice</u></b>	<b>Unit</b>	<b>FY 2004-09 Baseline</b>	<b>FY 2010-11 New</b>	<b>Total</b>	<b>% Change from Baseline</b>
<b>Animal Trails and Walkways</b>	<b>Feet</b>	<b>494</b>	<b>562</b>	<b>1,056</b>	<b>114%</b>
<b>Stream Crossings</b>	<b>Number</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>75%</b>
<b>Structure for Water Control</b>	<b>Number</b>	<b>1</b>	<b>17</b>	<b>18</b>	<b>1700%</b>
<b>Terrace</b>	<b>Feet</b>	<b>1,910</b>	<b>21,612</b>	<b>23,522</b>	<b>1,132%</b>
<b>Subsurface Drain</b>	<b>Feet</b>	<b>5,590</b>	<b>11,358</b>	<b>16,948</b>	<b>203%</b>
<b>Watering Facility</b>	<b>Number</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>133%</b>
<b>Underground Outlet</b>	<b>Feet</b>	<b>305</b>	<b>9,588</b>	<b>9,893</b>	<b>3,144%</b>



# Community-based BMPs

## Stormwater BMP Prioritization

Iterative approach to identify and prioritize upland BMP candidates parcels

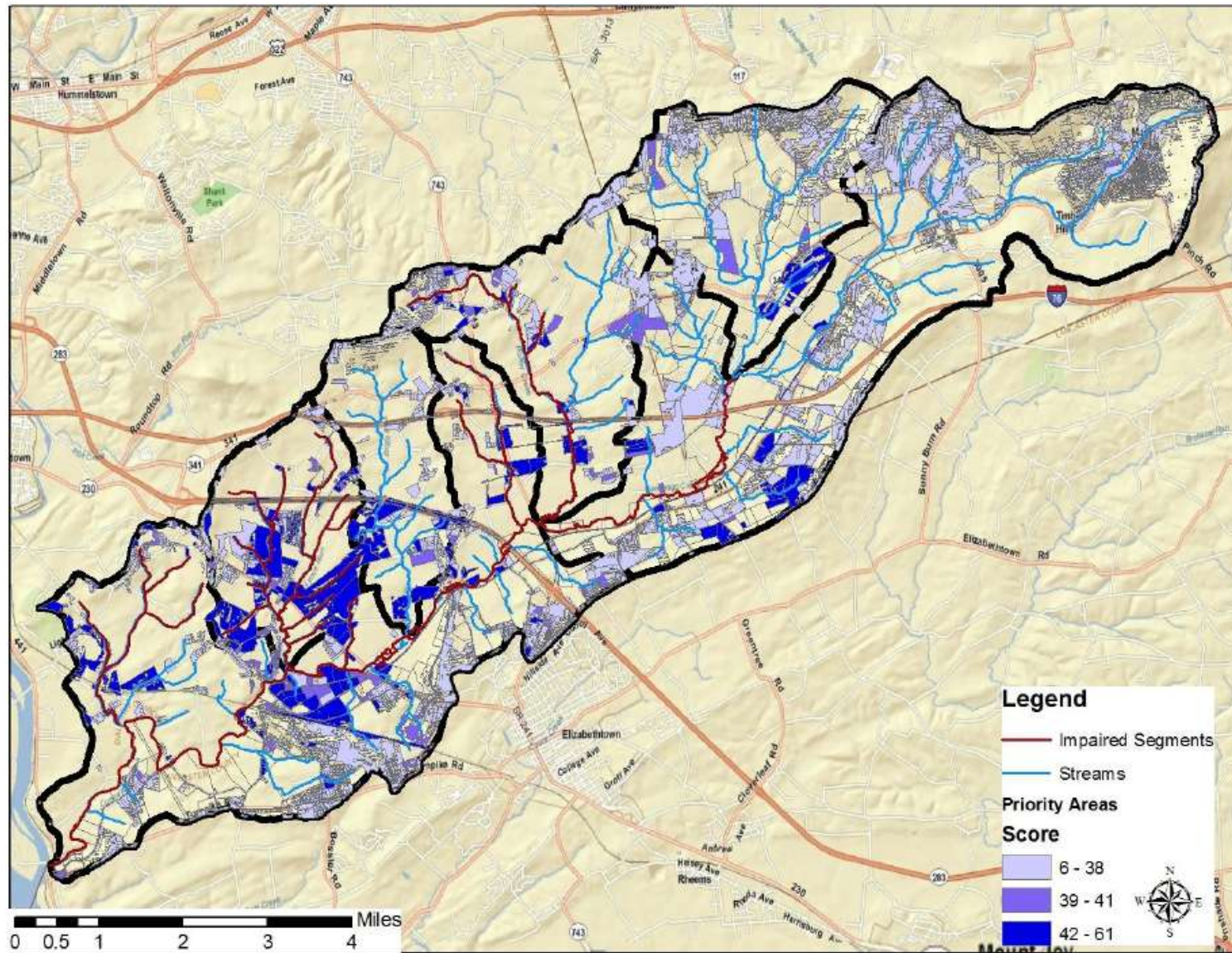


Source: A. Molloy, TetraTech





# Priority Parcels



Source: A. Molloy,  
TetraTech