

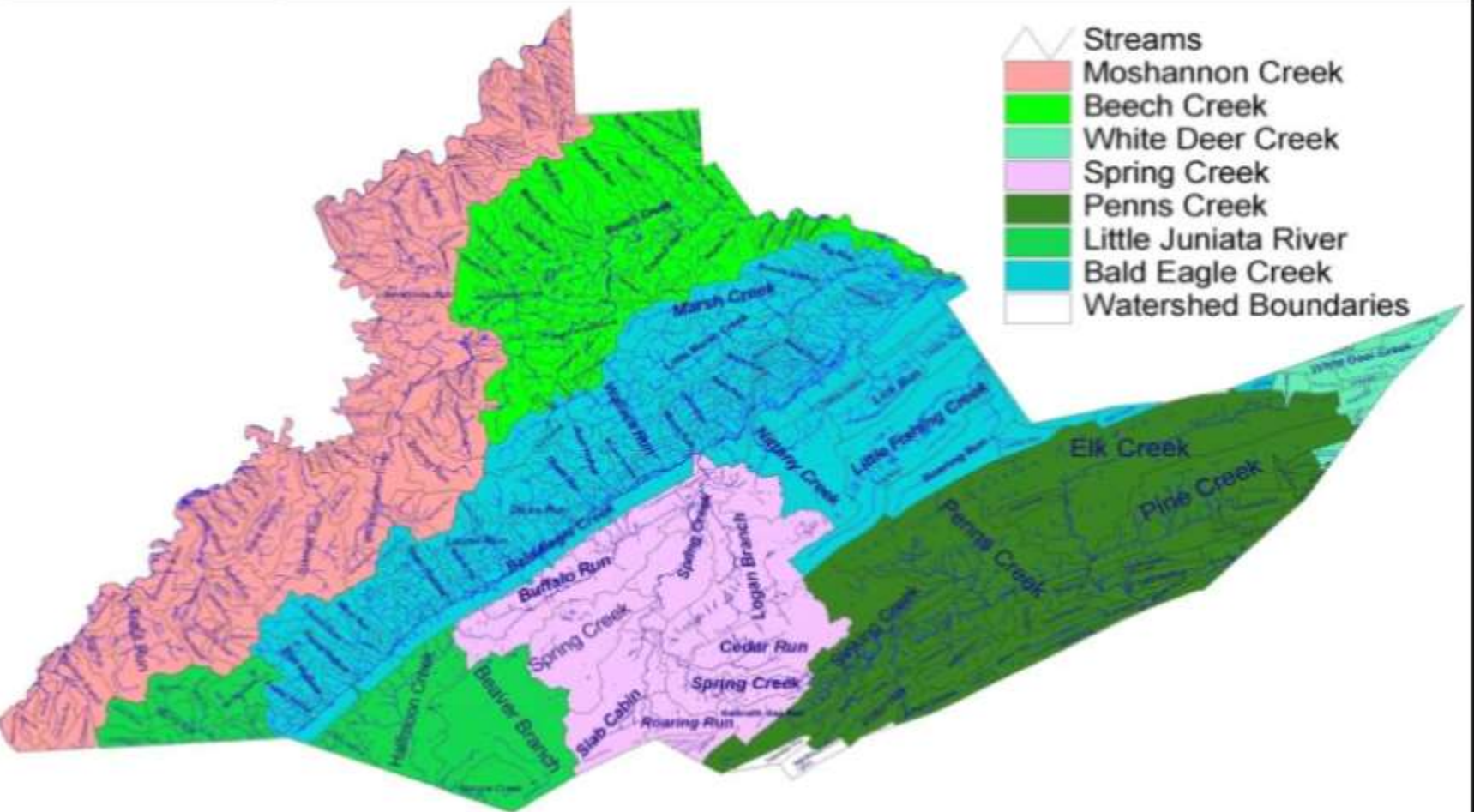
Conservation in Centre County

A Partnership Approach



Ann Donovan, Watershed Specialist
John Wataha, Ag. Conservation Technician
Centre County Conservation District

Centre County Watersheds





Many partners bring success to a project.







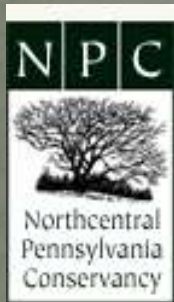


11/02/2009

Little Fishing Creek



PASEC



Cold Stream

Restoration Project

Wood Duck Chapter of
Trout Unlimited



Penns Creek

Kline Road Restoration



Bald Eagle

Bald Eagle Watershed Association

Top Right: Stere Buffer

Bottom Right: Brown
Restoration



PSU Center for Watershed Stewardship



Spring Creek

Talleyrand Park Committee

Top Right: 2009

Bottom Right: 2014



Spring Creek





Seven Willows
05/24/2009





Muddy Paws

Wetlands Restoration







Funding Sources Utilized

- Public grants
 - National Fish & Wildlife Foundation
 - Chesapeake Bay Special Projects Program
 - Resource Enhancement and Protection Program (REAP)
 - DEP Growing Greener-Environmental Stewardship & Watershed Protection Grants
 - DEP 319 Non Point Source Program
 - DEP-Streambank Fencing Program
 - Act 13 Marcellus Legacy Fund Programs (DCED /CFA)
 - Watershed Restoration & Protection
 - PennVest
 - FSA's Conservation Reserve Enhancement Program (CREP)
 - NRCS (EQIP) Environmental Quality Incentive Program
- Private grants and donations
- Professional and volunteer in-kind services
- Landowner contributions

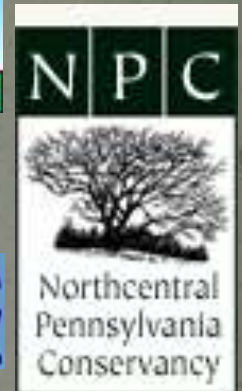
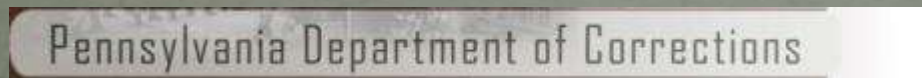
Partners

- Natural Resources Conservation Service
- Chesapeake Bay Foundation
- ClearWater Conservancy
- US Fish and Wildlife Service
- PA Fish & Boat
- PA Department of Environmental Protection
- Watershed Associations

Partners



Landowners



Centre County PaSEC

Lock Haven University



Private Industries



Spring Creek WRMP



Central Pa Institute of Science and Technology
County School Districts



Partners

Municipalities

PENNSTATE



College of
Agricultural
Sciences



UNIVERSITY AREA JOINT AUTHORITY



Anonymous Grants



Common agricultural problems

- Lack of required plans
 - Agricultural Erosion & Sedimentation Control Plan or a Conservation Plan
 - For all tillage operations including no till
 - Manure Management Plans
 - For all livestock operations
 - Act 38 Nutrient Management Plan
 - For all CAOs or CAFOs
 - Comprehensive Nutrient Management Plan
 - Includes Conservation Plan, Engineer Inventory & Evaluation Report and Nutrient Management Plan
 - Required when seeking NRCS funding

Common agricultural problems

- Lack of adequate manure and water management
 - **Runoff from Animal Concentration Areas**
 - Keep clean water clean (e.g., gutters on barns, stabilized walkways, upslope water diversions, downslope vegetated filter areas)
 - **Inappropriate manure application to crop fields**
 - Proximity to environmentally sensitive areas
 - Winter application
 - (is allowed but must meet certain criteria)
 - Over application of nutrients
 - (exceeds plant uptake)



Common agricultural problems

- Unrestricted livestock access to waterways
 - Sedimentation, nutrification and poor in-stream habitat



Common agricultural problems

- Destabilized stream banks and stream channels
 - Unrestricted livestock access
 - Cropping/tilling adjacent to stream
 - Removal of riparian buffer
 - Sedimentation and poor in-stream habitat



Common agricultural problems

- Removal of riparian buffers along streams and other sensitive areas (e.g., sinkholes)



Little Fishing Creek Watershed

Growing Greener / ClearWater Conservancy / DEP
Streambank Fencing

Before

After



Little Fishing Creek Watershed

Before

After



Little Fishing Creek Watershed

Before

After



Little Fishing Creek Watershed Amish Farm

Funding Source: 319 / Landowner / REAP



Little Fishing Creek Watershed

CREP /NFWF /319



Little Fishing Creek Watershed CREP/NFWF/319

Before



After



Penn Creek Watershed
Penns Valley Conservation Association
Chesapeake Bay Special Projects
NFWF / REAP

Before



After



Elk Creek Watershed Amish Farm

Funding Source: Growing Greener



Elk Creek Watershed Amish Farm Barnyard Improvements



Elk Creek Watershed Amish Farm

Additional Storage added to avoid winter spreading.

Storage placed in crop fields for easy access.



Elk Creek Watershed—Amish Dairy

**Eroded waterway into
sinkhole**



Stabilized Waterway



Elk Creek Watershed
Amish Dairy
DEP Streambank Fencing Program
Penns Valley Conservation Association
Growing Greener

Stream Crossing Before



Stream Crossing After



Elk Creek Watershed—Amish Dairy

Edible Buffer



Halfmoon Creek Watershed Projects For 2015



Halfmoon Creek Watershed

DEP Streambank Fencing
ClearWater Conservancy
Chesapeake Bay Special Projects
US Fish & Wildlife



Halfmoon Creek

2015 Project

Funding Sources: Growing Greener / Act 13 / ClearWater
Conservancy NFWF Grant



Halfmoon Creek



Halfmoon Creek



Halfmoon Creek Watershed Project For 2015

Funding Sources: Growing Greener / EQIP /
Clearwater Conservancy Private Grants



Partnerships on neighboring farms



PENNVEST

- Four projects in 4 different watersheds
- Halfmoon Creek/ Spring Creek/ Cedar Run / Marsh Creek
- Each project included treating runoff from large ACAs
- Engineering, administrative & construction costs for the four projects exceeded 2 million dollars
- Projects included 3 Dairy and 1 Beef operations
-

PENNVEST PROJECT

Runoff from sacrifice lot impacting Cedar Run

150 heifers / dry cows

44' x 216' Roofed HUA

Manure storage under HUA



PENNVEST

Before –Runoff from four acre ACA enters road ditch / culvert pipe / Halfmoon Creek



After–Cows under roof , manure collected and stored. Little impact to Halfmoon Creek.



PENNVEST PROJECT

75 cow/calf operation

40' x 144' Roofed Heavy Use Area

40' x 80' Roofed Manure Stack



PENNVEST PROJECT

Runoff from sacrifice lot impacts Ramola Branch

Winter Sacrifice Lot

40' x 168' Roofed HUA

40' x 96' Manure Stacking



PENNVEST PROJECT

Ditch caused by
diversion outlet



Pipe into plunge pool



Ann Donovan, Watershed Specialist John Wataha, Ag Conservation Technician

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Thank you.

