United States Department of Agriculture

NRCS

Natural Resources Conservation Service
359 East Park Drive, Suite 2
Harrisburg, PA 17111

USDA

State Technical Committee
AGENDA
Thursday April 21, 2022

This meeting will be conducted via Microsoft Teams internet conferencing. The meeting link and a call-in telephone number is provided at the end of this document.

1:00 pm Welcome – Denise Coleman, NRCS State Conservationist

Presentations:

1:05 pm Dean Collamer, Chairman, Pennsylvania 4R Alliance

1:30 pm From Wetlands to Milkweed - USFWS Updates on the Bog Turtle and Monarch Butterfly – Nicole Ranalli, Endangered Species Biologist and Kathleen Patnode, Environmental Toxicologist, US Fish and Wildlife Service

2:00 pm **Technical Reports:**

- Engineering – Tim Peters, State Engineer
  - HPAI biosecurity
  - EWP CPI
  - Standards Review
- Ecological Sciences – Dan Ludwig, State Resource Conservationist
- Soil Surveys – Yuri Plowden, State Soil Scientist

2:30 pm Agricultural Conservation Easements Programs (ACEP) – Adam Dellinger, Program Analyst, Acting Easement Manager on Detail

2:40 pm Financial Programs:

- Update – Scott Heckman, Assistant State Conservationist for Programs
- Environmental Quality Incentives Program (EQIP) – Ryan Cornelius, EQIP Program Manager
- National Water Quality Initiative (NWQI), Conservation Stewardship Program (CSP), and Conservation Innovation Grants (CIG) – Ashley Lenig, Conservation Program Manager
- Regional Conservation Partnership Program (RCPP) – Justin Atkins, Acting RCPP Coordinator on Detail

4:00 pm Committee Input:

Do the State Technical Committee members have any suggestions for topics or agenda items for future meetings?

Dates for future State Technical Committee Meetings:

Tuesday, July 19, 2022
Wednesday, October 19, 2022
Thursday, January 19, 2023

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State Technical Committee

April 21, 2022

Meeting Notes

Denise Coleman, NRCS State Conservationist, Opened the meeting and welcomed all.

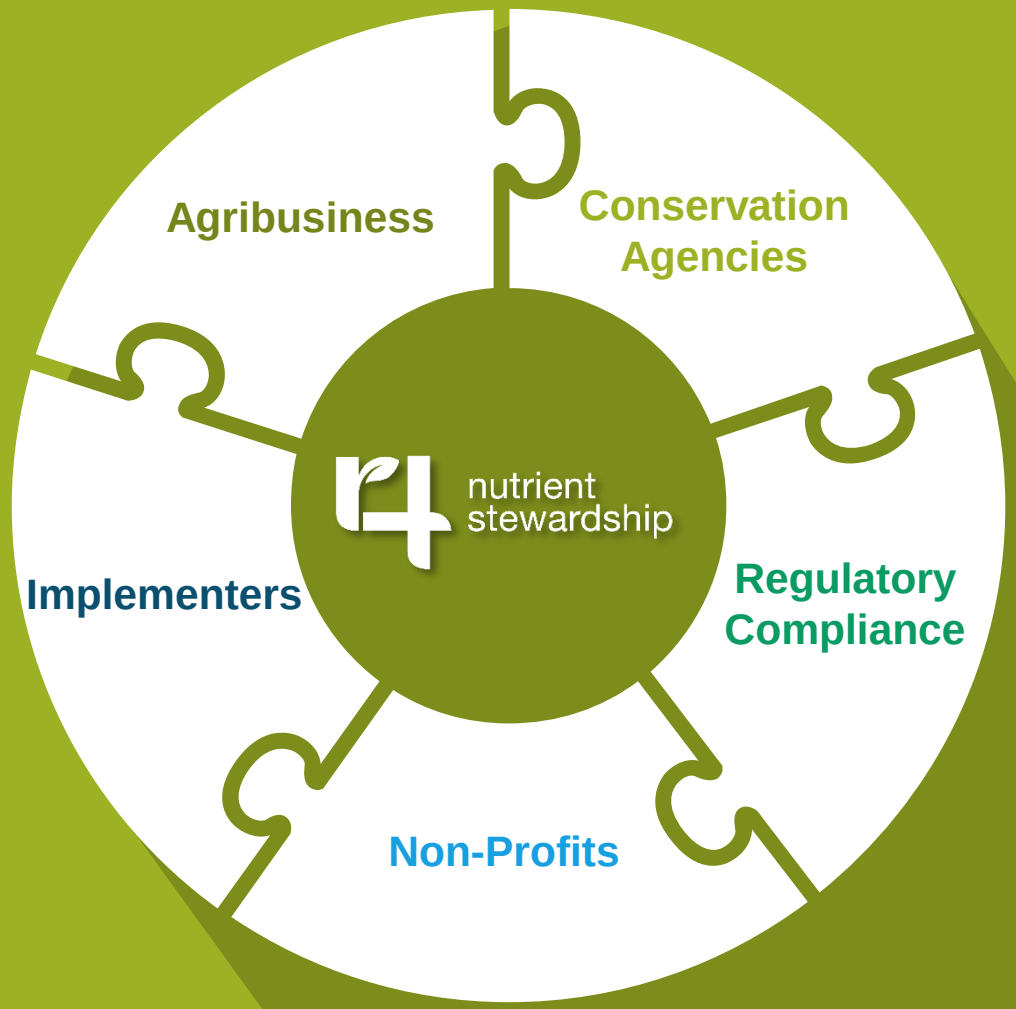
00/03/40 - Dean Collamer, Chairman of the Pennsylvania 4R Alliance was introduced. (See the attached hand-out.) He gave a quick background of the 4R Alliance accomplishments and noted the members if this industry-agency partnership. He described the mission of the Alliance being to emphasize the interconnectedness of 4R's as part of sustainable whole farm management practices; to collaborate with state and federal agencies around feasible policies and protocols; to encourage and expand voluntary, appropriate, innovative, science-based field adoption of 4R practices; to share cost effective 4R Nutrient Stewardship information; to communicate environmental quality successes and farm economic paybacks with respect to 4R practice implementation. He stated that the role of Agribusiness is to engage farmers in 4R nutrient stewardship. 4Rs is an enabler that allows groups to converse. Before 4Rs, it was us versus them. 4Rs allows everyone to work together towards a goal of advanced nutrient stewardship. The 4R Alliance was started in 2012 when agribusiness joined together. The Alliance received a NRCS Conservation Innovation Grant for education and outreach in 2013. In 2017, 4R was established as a member alliance within Mid-Atlantic 4R Association, partnered with the Nature Conservancy, receiving a NFWF grant to assess 4R use in Pennsylvania. Execution of the NFWF grant and development of priorities and organizational structure was accomplished during 2018 and 2019. He explained how Nutrient Stewardship products and practices are marketed, delivered and used by farmers. He described field testing and communicating the latest 4R Nutrient Stewardship results. He explained how Agribusiness engages growers with 4R Nutrient Management by focusing with farmers in products and practices. He discussed the linking 4Rs to PA NRCS Conservation programs. Back in 2012, our interest in partnering with the 4R Association is about more practical & clear how-to guidance. He explained what NRCS brings 84 years of experience as well as financial assistance to the partnership. He noted the economic criteria for practice adoption are increased production, reduced production costs, increased efficiency and improved sustainability. He went on to discuss the benefits of 4R Nutrient Management that includes the use of low disturbance manure injection, no-till crop management, cover cropping and soil health, and precision agriculture. He discussed the reasons for and the results of a Baseline Survey of 4R

practices in targeted Pennsylvania watersheds. He noted that on-farm data tells the story of what management practices farmers do every year that have a positive outcome on farm economics and water quality. He discussed 4R practices and water quality benefits in the Chesapeake Bay. He explained how to document 4R practices. He touched on developing goals for the Phase 3 WIP and noted that it was an early success. He reviewed the accomplishments 4R 2021 Split Application pilot program in Adams County. Adoption of split applications resulted in increased yields, increased nitrogen use efficiency and increased P removal.

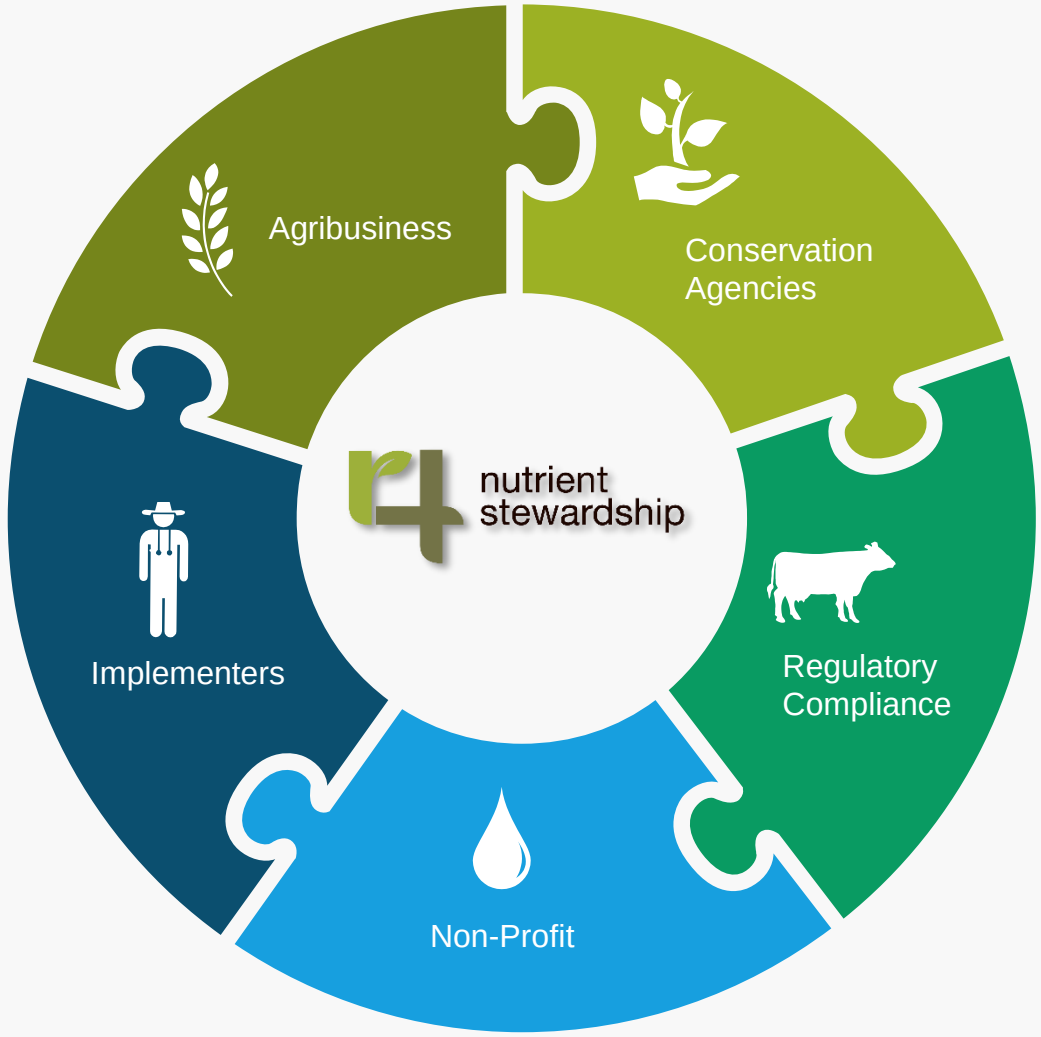
PA 4R Alliance

4R Nutrient Stewardship in the Chesapeake:

Partnerships to meet clean water goals



PA 4R Alliance

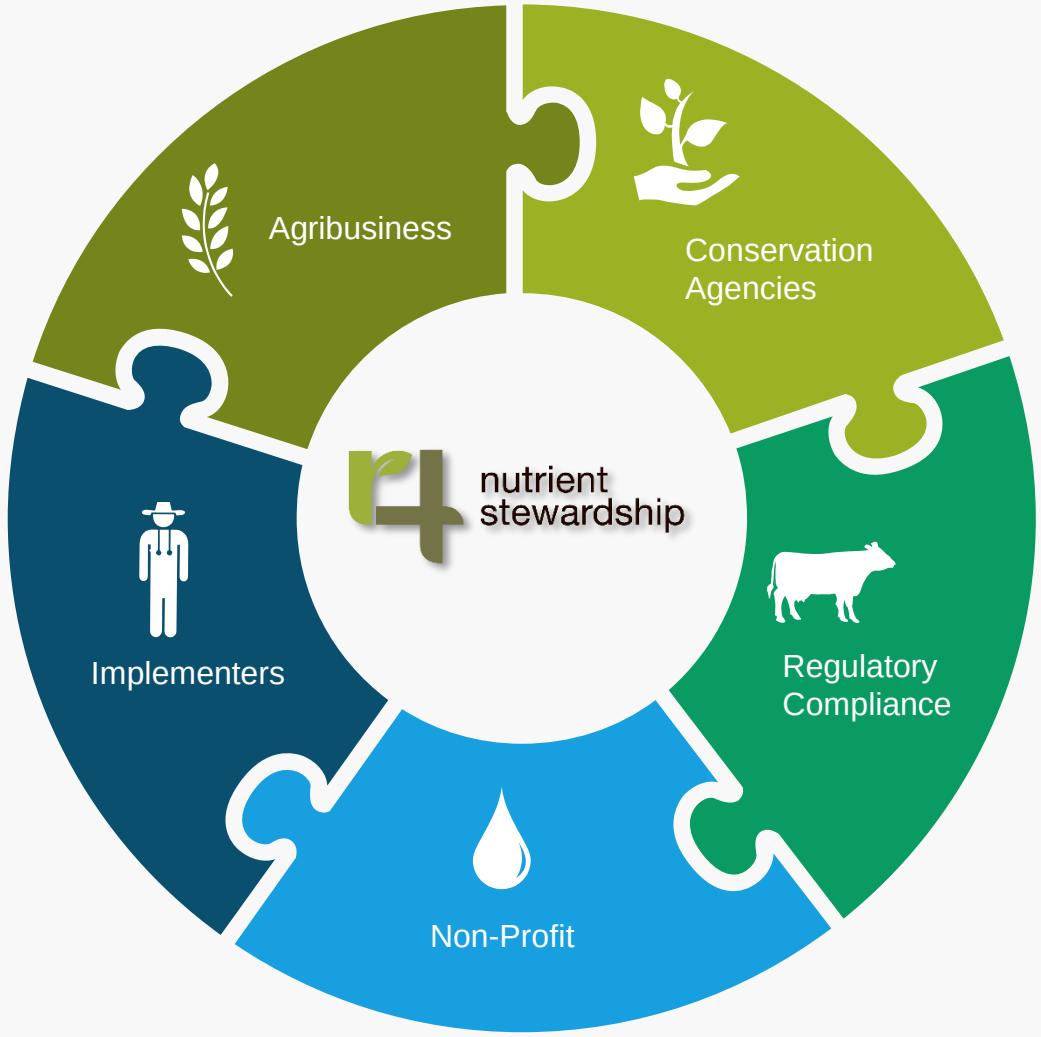


Industry-Agency partnership is key to success of the PA 4R organization

Chemgro SEEDS
PENNSTATE 1855
KOCH AGRONOMIC SERVICES
Timac AGRO USA
syngenta
FS GROWMARK
Pennsylvania Farm Bureau
NRCS Natural Resources Conservation Service
The Nature Conservancy Protecting nature. Preserving life.
PennAg LEADING TODAY'S AGRICULTURE
Rosetree Consulting Agricultural · Environmental
pennsylvania DEPARTMENT OF AGRICULTURE

Creation of a common language between stakeholders for consistent dialogue & progress

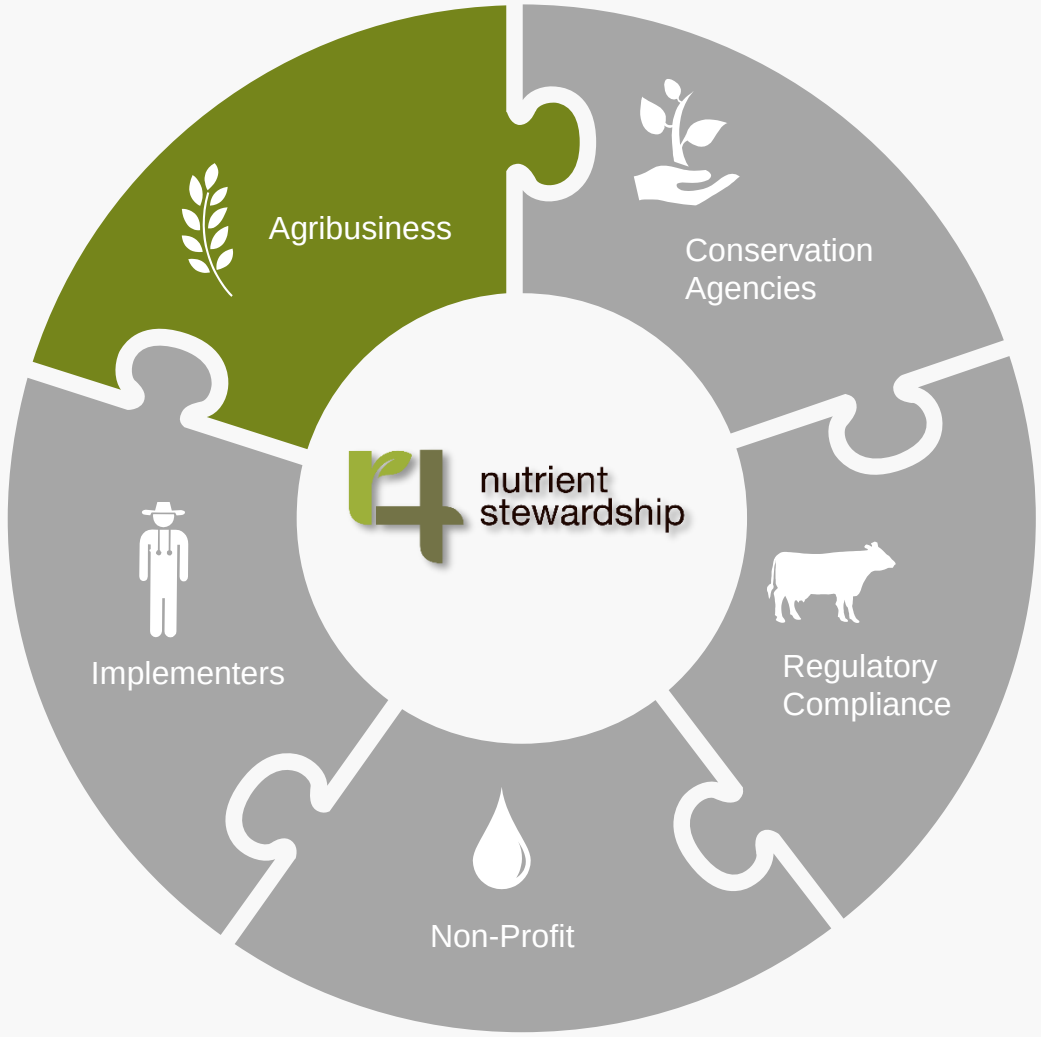
PA 4R Alliance



Our Mission

- Emphasize the interconnectedness of 4Rs as part of sustainable, whole farm management practices
- Collaborate with state and federal agencies around feasible policies and protocols
- Encourage and expand voluntary, appropriate, innovative, science-based field adoption of 4R practices
- Share cost effective 4R Nutrient Stewardship information
- Communicate environmental quality successes and farm economic paybacks with respect to 4R practice implementation

The Role of Agribusiness to Engage Farmers in 4R Nutrient Stewardship



"4Rs is an enabler that allows groups to converse. Before 4Rs, it was us versus them. 4Rs allows everyone to work together towards a goal of advanced nutrient stewardship."

Dean J. Collamer
Agronomist: Growmark, FS

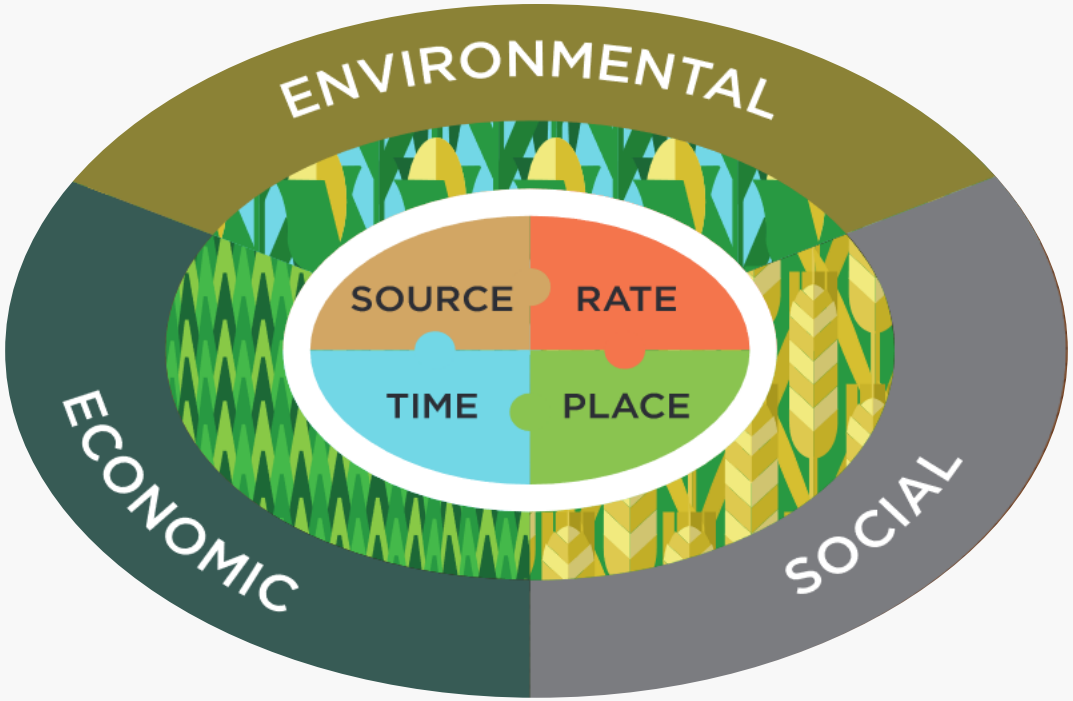
PA 4R History

2012 Agribusinesses joined together to bring alliance to PA

2013 Received NRCS Conservation Innovation Grant for education and outreach around 4Rs

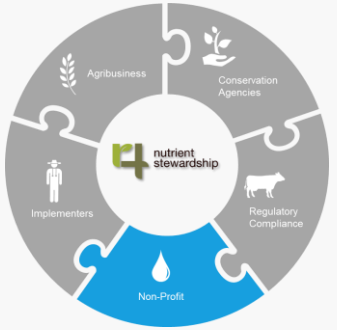
2017 Established as member alliance within Mid-Atlantic 4R Association, Partnered with the Nature Conservancy, Received NFWF grant to assess 4R use in PA

2018 & 2019 Execution of NFWF grant & development of priorities and organizational structure



PA 4R Alliance

DELAWARE
MARYLAND
4R Alliance

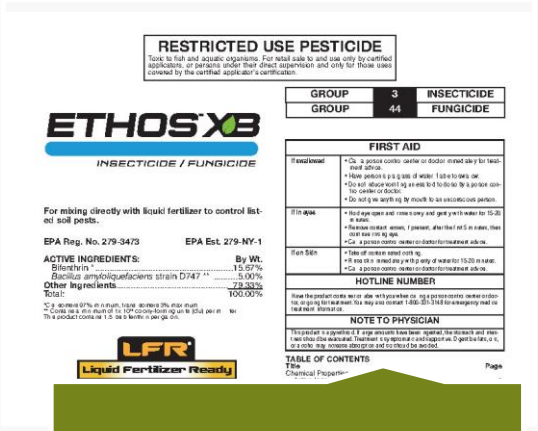


Nutrient Stewardship Products & Practices Marketed, Delivered and Used by Farmers

Crop Planning

Precision Ag Services

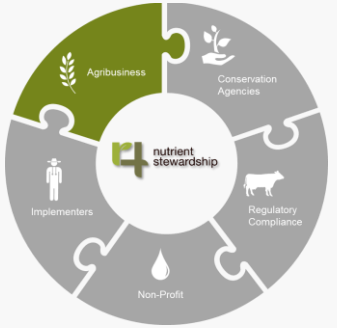
Plant Nutrients



Biologicals & Other

Crop Monitoring

Cover Crop Seed



Field Testing and Communicating Latest 4R Nutrient Stewardship Results

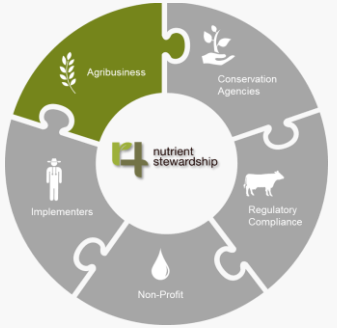
Agronomic Efficiency

Yield Increase/Unit of Plant Food Applied

Starter Fertilizer Placement Agronomic Efficiency for Phosphorus (Hershey, PA 2012)			
Method	**Yield Increase Over No Starter (lbs/A)**	**P Applied (lbs P2O5/A)**	**AE $\{(Y-Y_0)/F\}$**
Surface Broadcast	**437**	**60**	**7.3**
2x2 Band	**677**	**60**	**11.3**
Pop-up (In Furrow)	**515**	**12**	**42.9**

Take Home Message

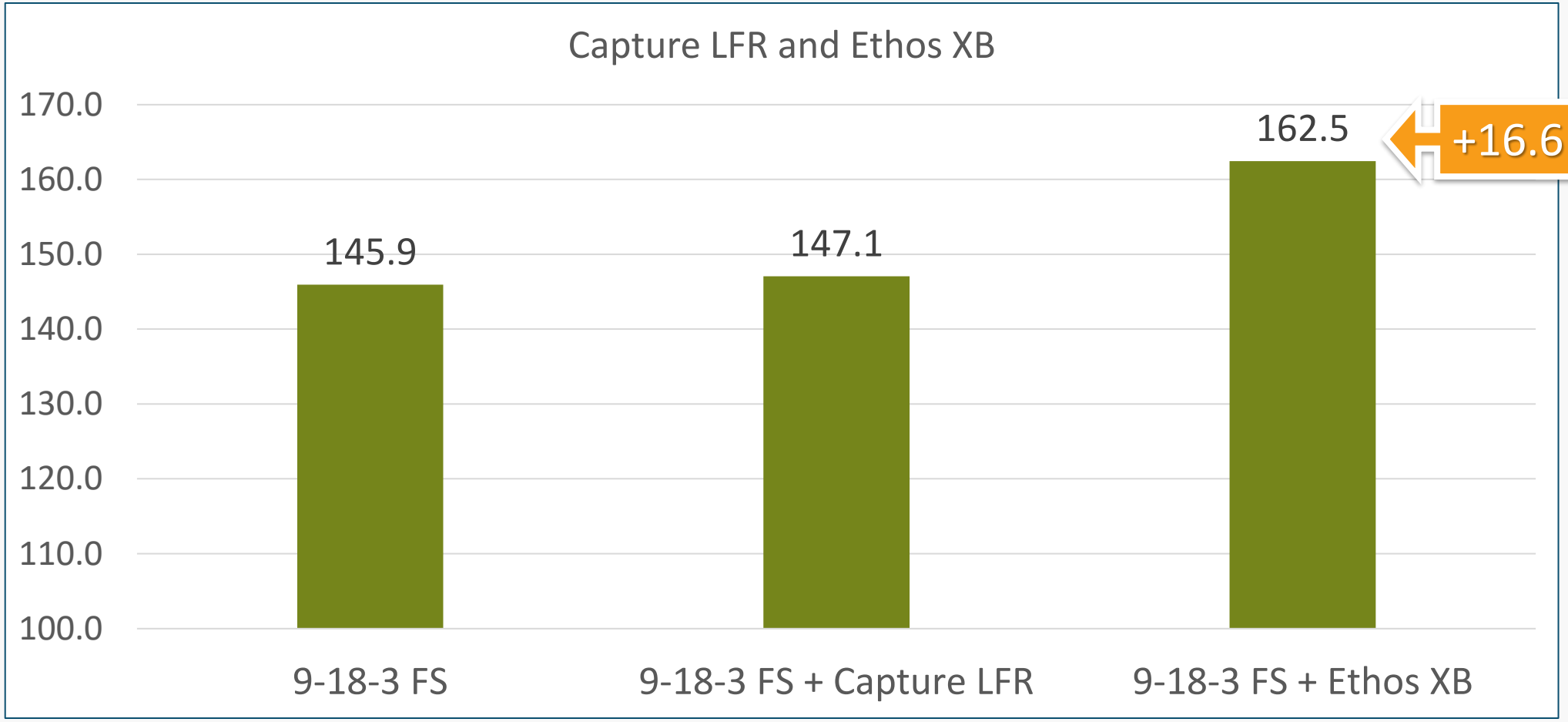
Placement Can Impact Rate:
We see an improved agronomic efficiency with 2x2 and pop-up placed starter fertilizers



Starter Fertilizer Additive with Biological (Ethos XB)

Capture LFR Insecticide + Biological fungicide

Easy to use, Liquid Fertilizer Ready



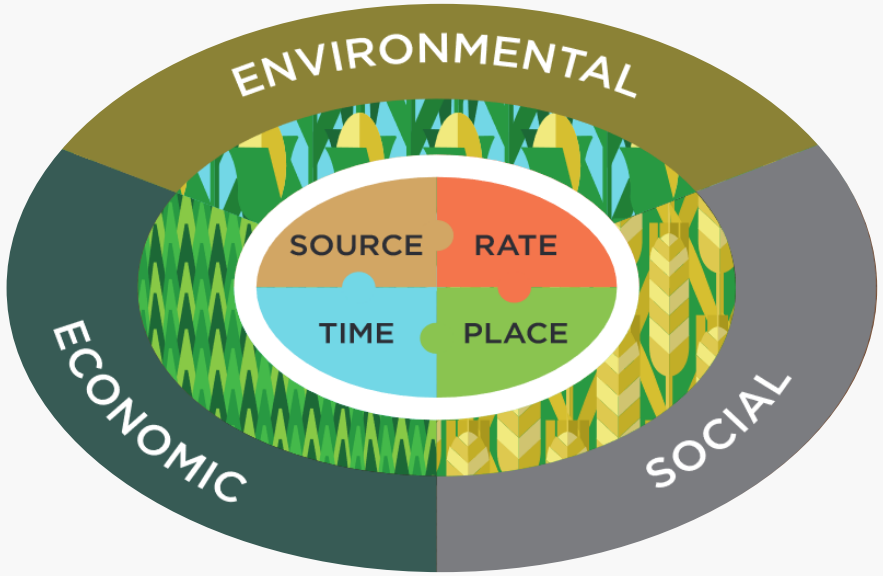
How Agribusiness Engages Growers with 4R Nutrient Stewardship

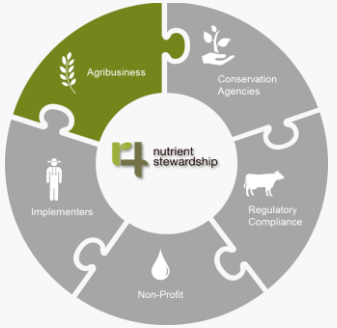
4R Focus with Farmers in Products & Practices

- Crop Nutrient and Overall Crop Management Approach
- Integration with Equipment & Technology Adoption

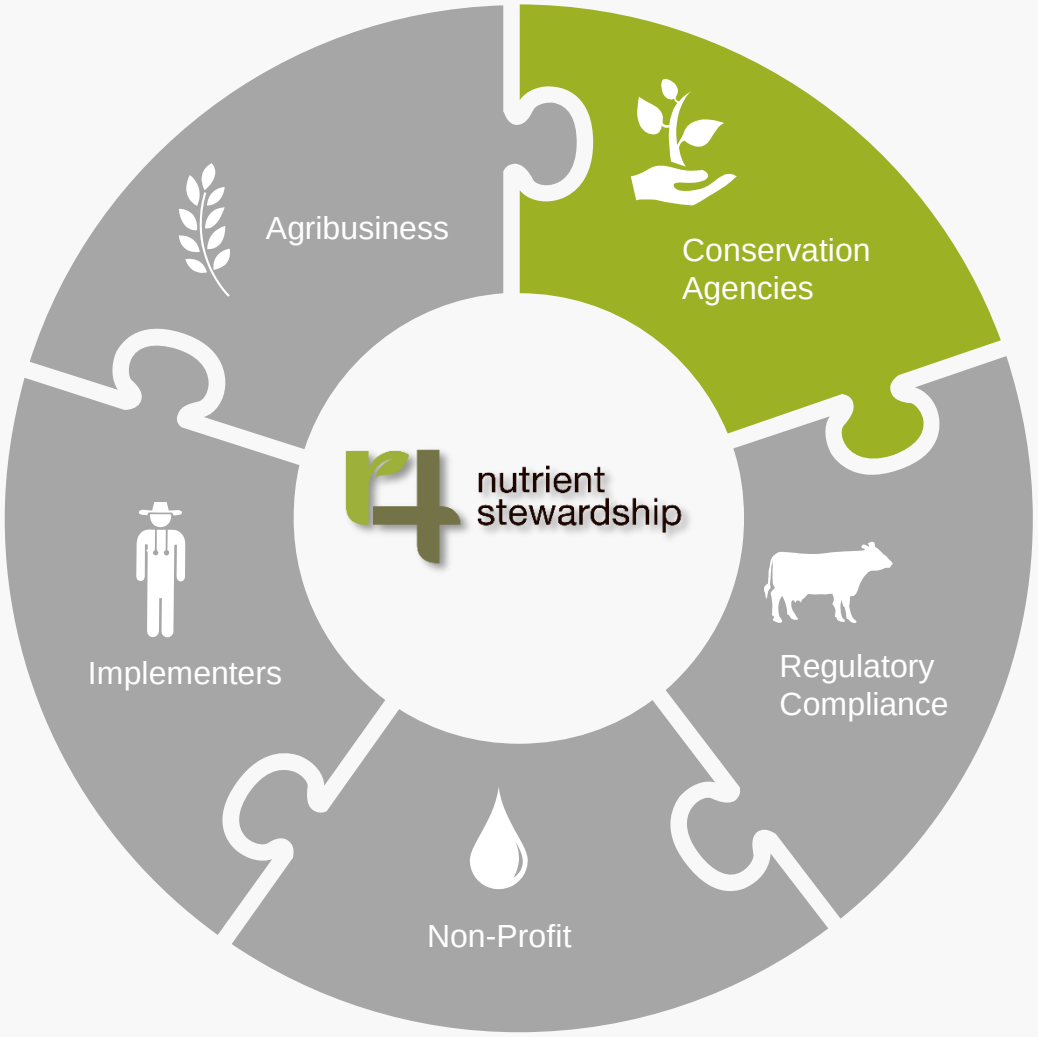
Use Source, Rate, Time & Place Specifics When Implementing BMPs

- Field Tested and Proven
- Nutrients + Biologicals + Biostimulants
- Yield, Economic Return (Grower)
- Environment/Social (Society)





Linking 4Rs to PA NRCS Conservation Programs



Our interest in partnering with PA4R and 4R Mid-Atlantic is about more:

- Practical and clear how-to guidance
- Innovation
- Delivery of technical services
- Conservation!

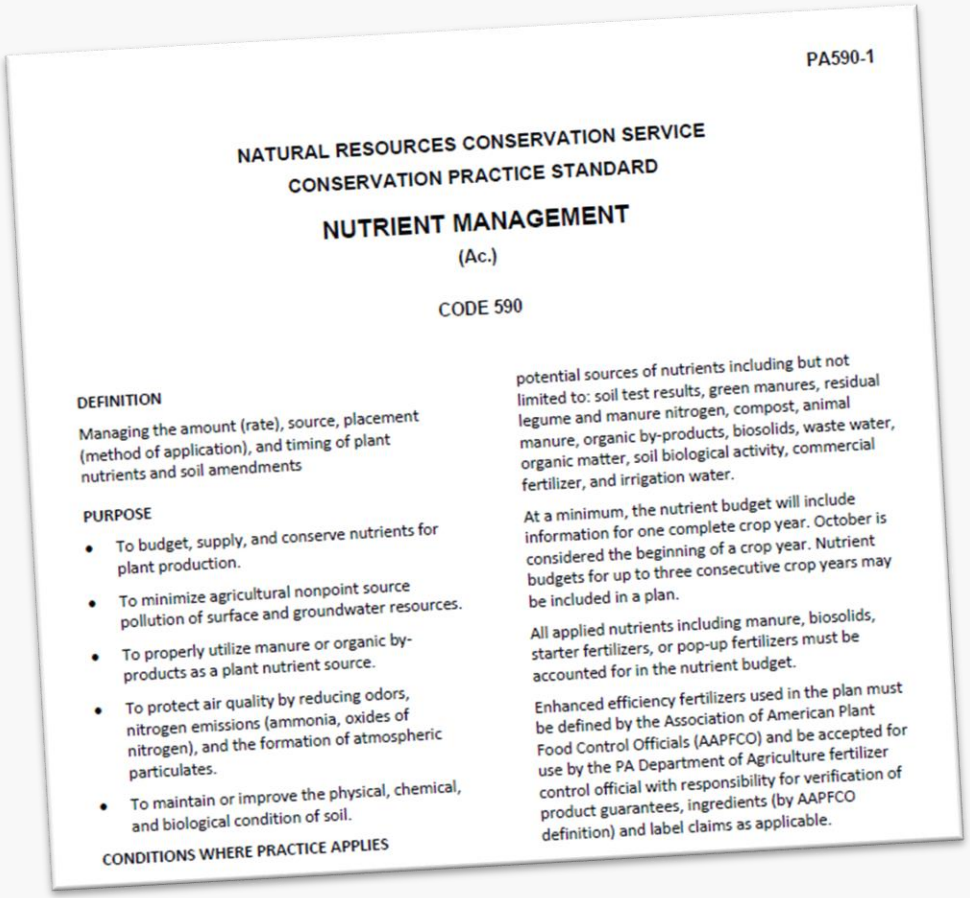
What NRCS brings to this partnership:

- A voluntary approach
- One on one help for site-specific systems
- 84 years of partnership experience
- Financial Assistance

Dan Dostie
State Resource Conservationist, PA NRCS

Our interest in partnering with the 4R Association is about more:

Practical & Clear How-To Guidance



PA590-1

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

NUTRIENT MANAGEMENT
(Ac.)

CODE 590

DEFINITION

Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments

PURPOSE

- To budget, supply, and conserve nutrients for plant production.
- To minimize agricultural nonpoint source pollution of surface and groundwater resources.
- To properly utilize manure or organic by-products as a plant nutrient source.
- To protect air quality by reducing odors, nitrogen emissions (ammonia, oxides of nitrogen), and the formation of atmospheric particulates.
- To maintain or improve the physical, chemical, and biological condition of soil.

CONDITIONS WHERE PRACTICE APPLIES

potential sources of nutrients including but not limited to: soil test results, green manures, residual legume and manure nitrogen, compost, animal manure, organic by-products, biosolids, waste water, organic matter, soil biological activity, commercial fertilizer, and irrigation water.

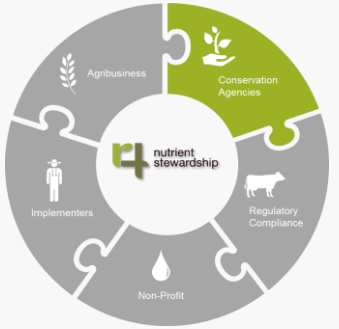
At a minimum, the nutrient budget will include information for one complete crop year. October is considered the beginning of a crop year. Nutrient budgets for up to three consecutive crop years may be included in a plan.

All applied nutrients including manure, biosolids, starter fertilizers, or pop-up fertilizers must be accounted for in the nutrient budget.

Enhanced efficiency fertilizers used in the plan must be defined by the Association of American Plant Food Control Officials (AAPFCO) and be accepted for use by the PA Department of Agriculture fertilizer control official with responsibility for verification of product guarantees, ingredients (by AAPFCO definition) and label claims as applicable.

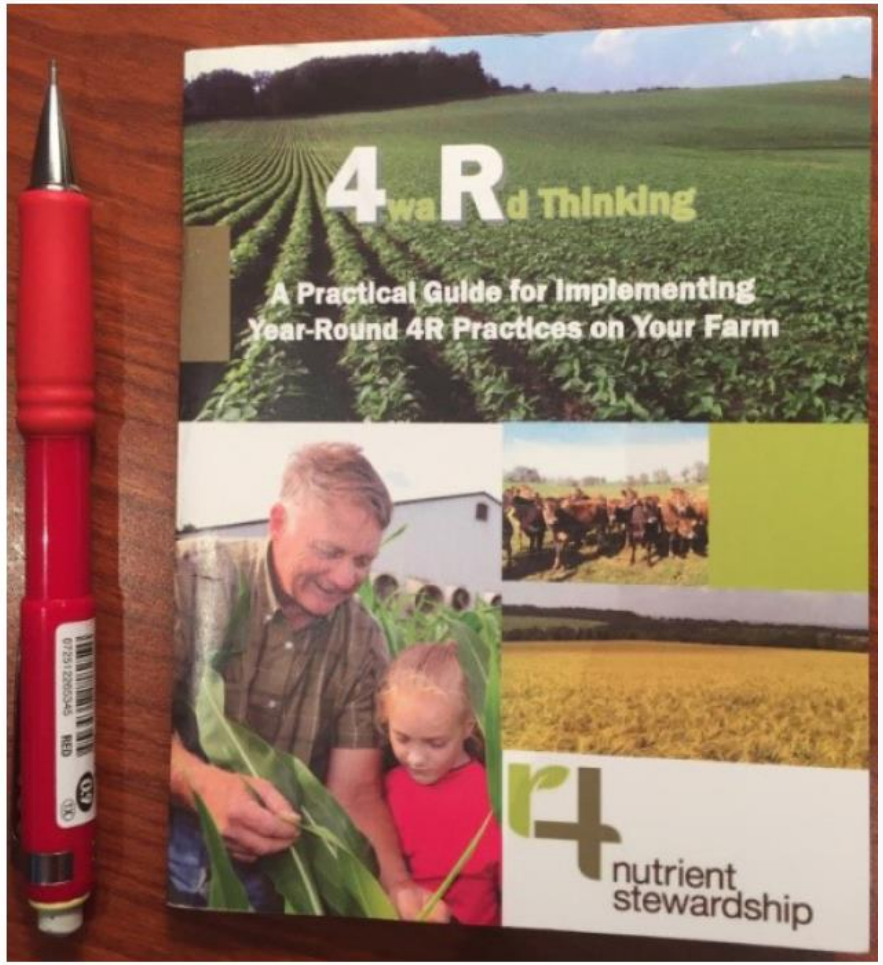
In March 2012 the PA NRCS 590 subcommittee recommended the formation of the PA 4R Alliance to work with farmers through a unified research and education strategy.

Founding members of the alliance provided practical suggestions to improve the NRCS Conservation Practice Standard Criteria adopted January 7, 2013.



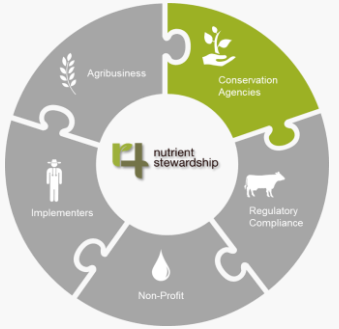
Our interest in partnering with the 4R Association is about more:

Innovation



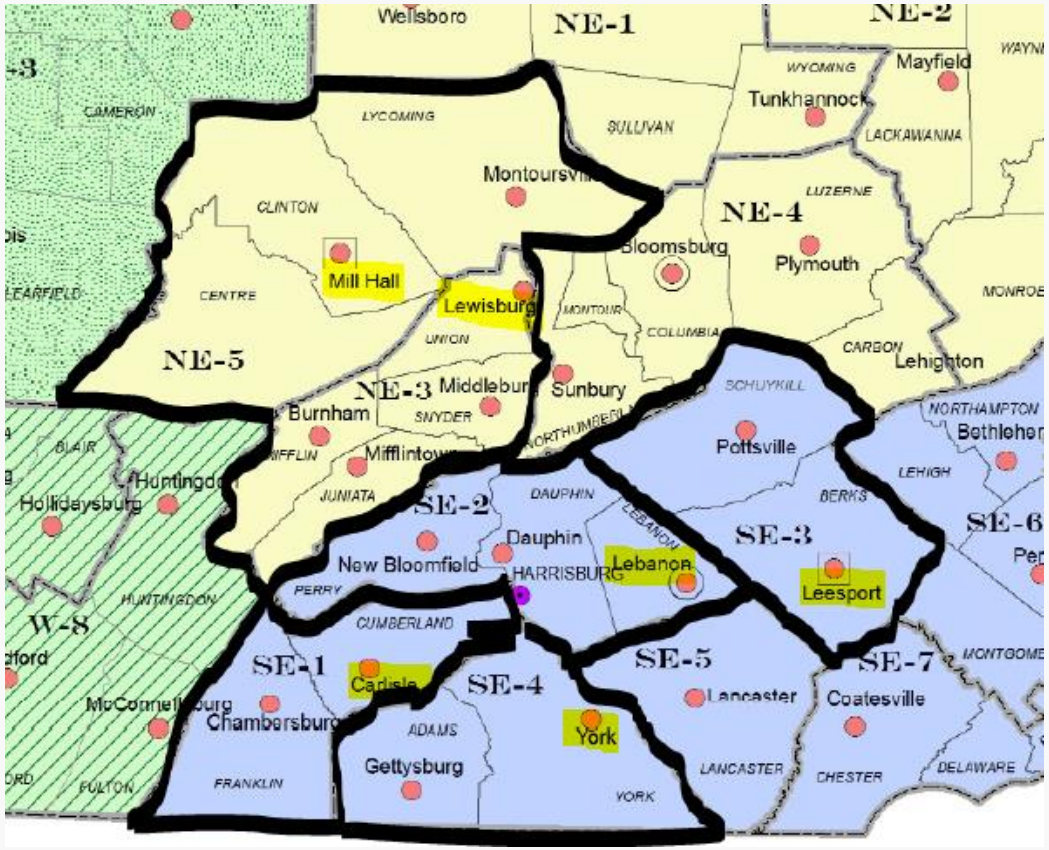
In September 2017 a three-year project funded by a NRCS Conservation Innovation Grant was completed. The project helped establish common language and facilitated dialogue among agricultural stakeholders across PA.

One of the communication products translated the 4R concepts into a plain language pocket guide of baseline, intermediate, and advanced level practices for use throughout the year.



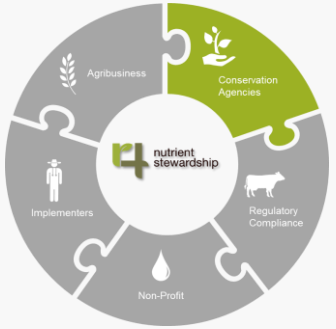
Our interest in partnering with the 4R Association is about more:

Delivery



Since October of 2017, NRCS offices in Lebanon, York, Cumberland, and Franklin counties have supported a NFWF funded project to reduce nutrient losses on farms in those counties.

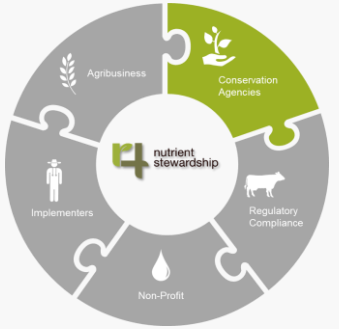
Through local leadership provided by the Conservation Districts, local stakeholders are convened to provide input into setting priorities for NRCS funding. Advice is also received by members of the State Technical Committee.



Our interest in partnering with the 4R Association is about more:

Conservation!

"Partnering with agribusinesses in local communities throughout the Mid-Atlantic region will expand the delivery of technical services and financial assistance and increase the sustainability of farming operations while conserving natural resources for future generations living in one of the most densely populated and productive landscapes on the planet." – Denise Coleman, June 20, 2019



What NRCS brings to this partnership is:

Key principles for voluntary conservation on private lands:

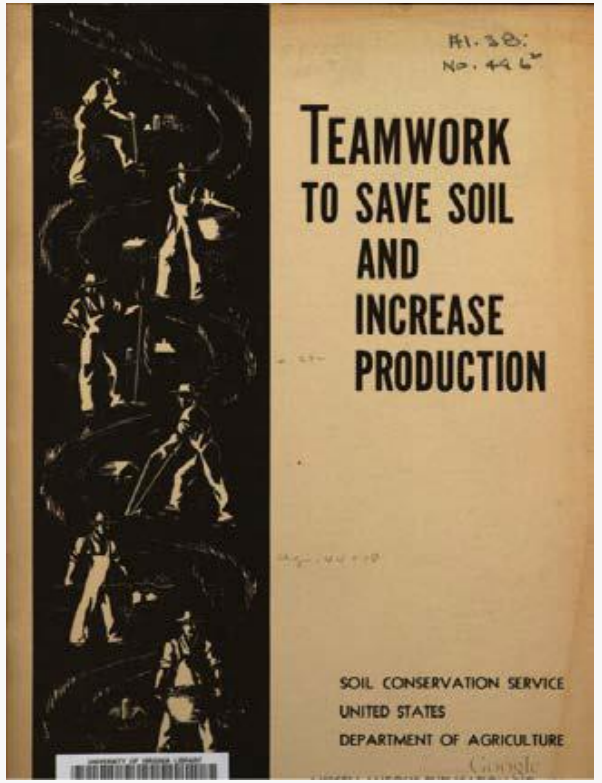
1. Engage with the land user to see firsthand the natural resource challenges and opportunities.

2. Good science must be the foundation.

3. Natural resources concerns cannot be treated in isolation as they are all interdependent.

4. Coordinated action on a watershed- or landscape-scale sustains the greatest conservation outcomes.

5. Local leadership is critical to successful achievement of desired conservation outcomes.



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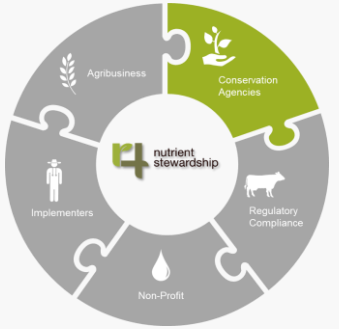
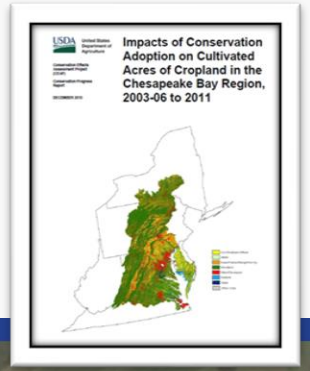
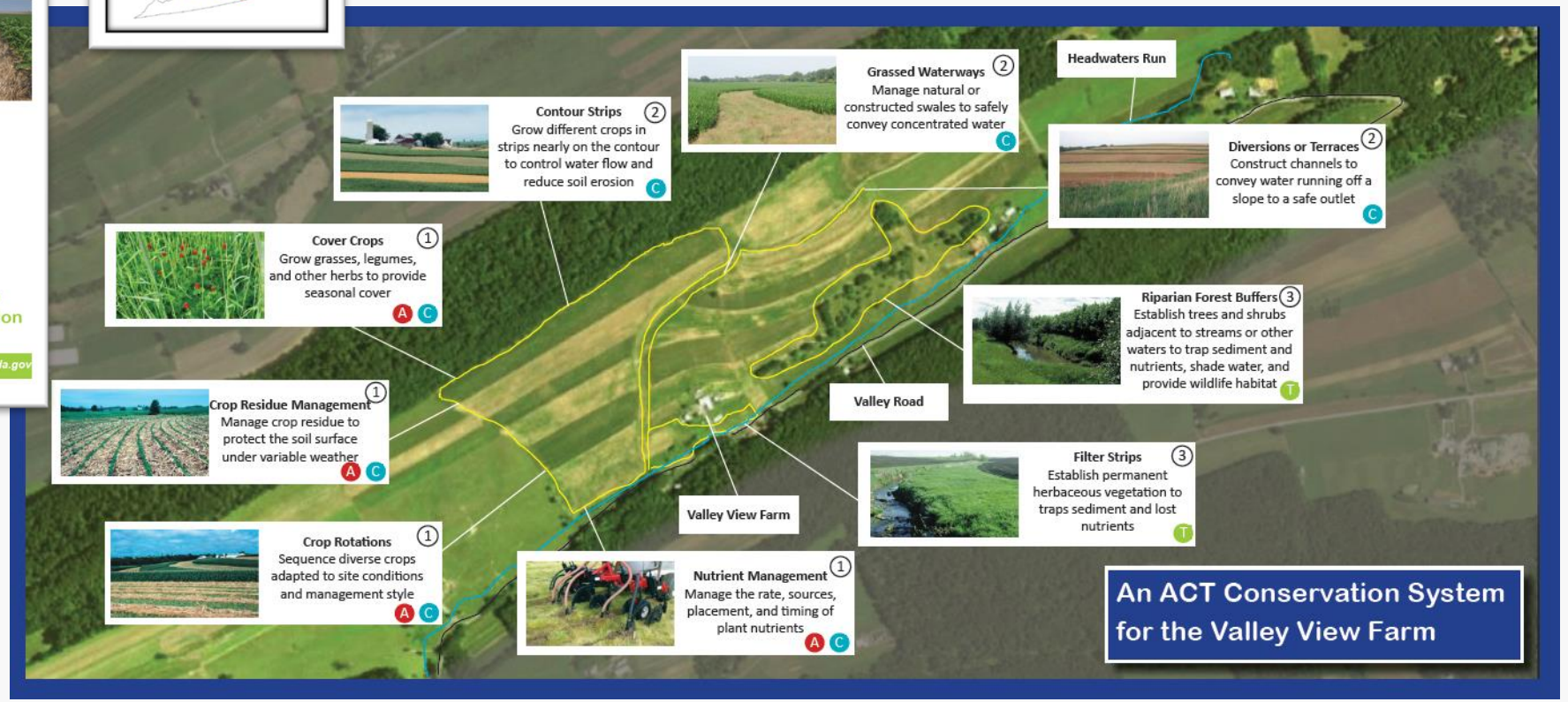
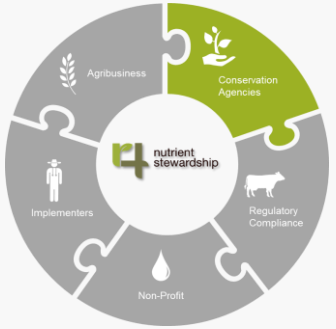


What NRCS brings to this partnership is:

One-on-one help for site-specific systems:



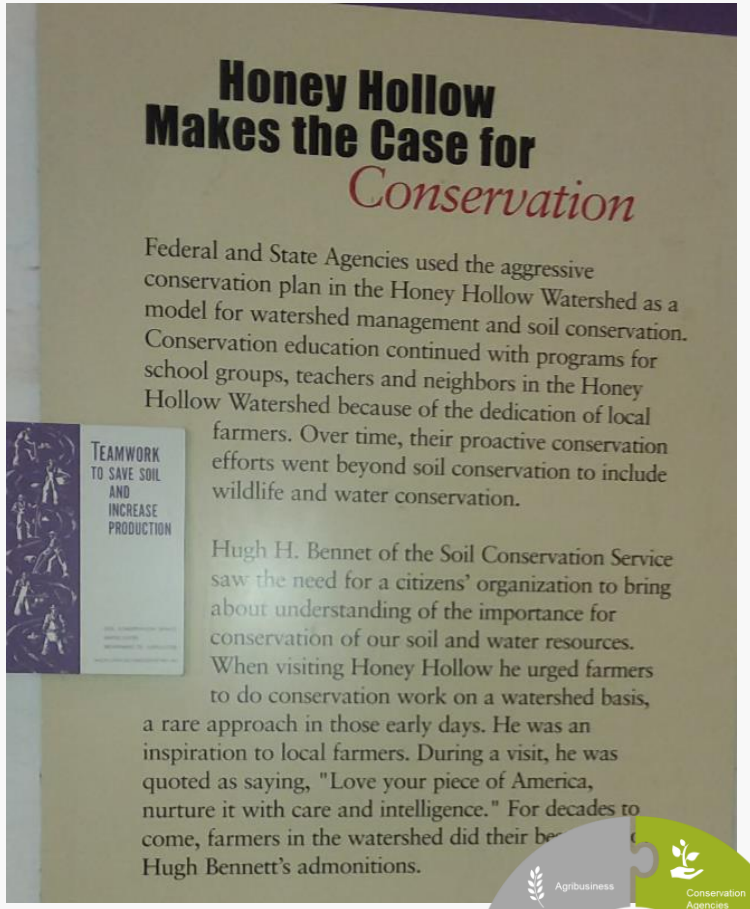




What NRCS brings to this partnership is:

84 years of partnership experience!

- From Honey Hollow Watershed in Bucks County, PA to today's Regional Conservation Partnership Program, NRCS has mobilized people to come together for conservation.
- Partnerships multiply investments to reach common conservation goals.
- They bring innovation, new ideas, resources and local expertise to solve problems.



Honey Hollow Makes the Case for *Conservation*

Federal and State Agencies used the aggressive conservation plan in the Honey Hollow Watershed as a model for watershed management and soil conservation. Conservation education continued with programs for school groups, teachers and neighbors in the Honey Hollow Watershed because of the dedication of local farmers. Over time, their proactive conservation efforts went beyond soil conservation to include wildlife and water conservation.

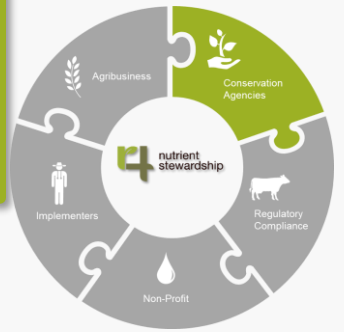
TEAMWORK TO SAVE SOIL AND INCREASE PRODUCTION

Hugh H. Bennet of the Soil Conservation Service saw the need for a citizens' organization to bring about understanding of the importance for conservation of our soil and water resources. When visiting Honey Hollow he urged farmers to do conservation work on a watershed basis, a rare approach in those early days. He was an inspiration to local farmers. During a visit, he was quoted as saying, "Love your piece of America, nurture it with care and intelligence." For decades to come, farmers in the watershed did their be[illegible] Hugh Bennett's admonitions.

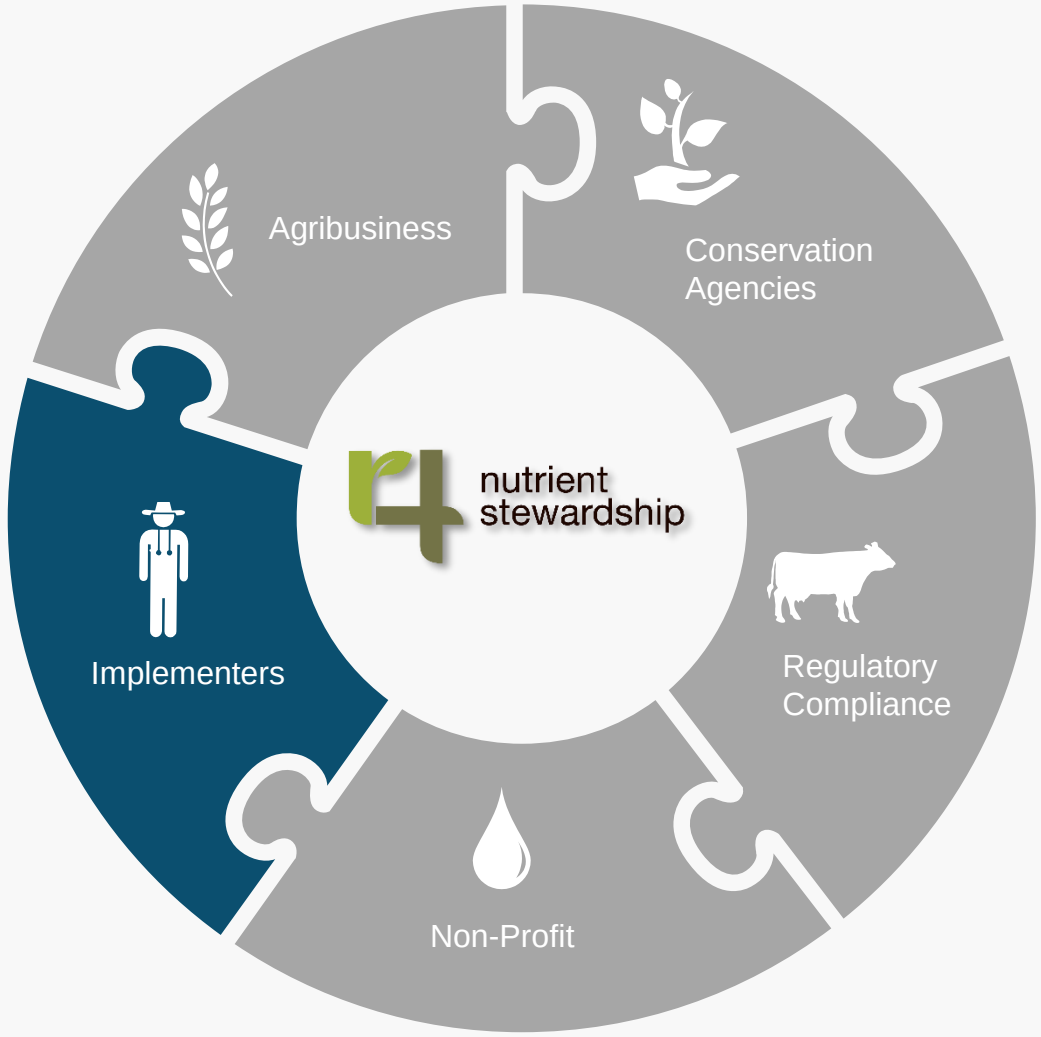
What NRCS brings to this partnership is:

Financial Assistance

Code 590 Nutrient Management Practices (Land Application)		
Basic Nutrient Management (Non-Organic and Organic)	$6 – 28	AC
Precision-Nutrient Management	$39-50	AC
Improving Nutrient Uptake Efficiency	$11	AC
Adaptive Management (use efficiency field trials)	$2,025.98	EA



4R Practices for the Conservation Implementer's Playbook



"4Rs is how we get things done – it's implementation. It's a critical component of most in-field practices."

Eric Rosenbaum
Sr. Agronomist, Rosetree Consulting, LLC
Executive Director, PA4R Alliance

Economic Criteria for Practice Adoption

4R Nutrient Management

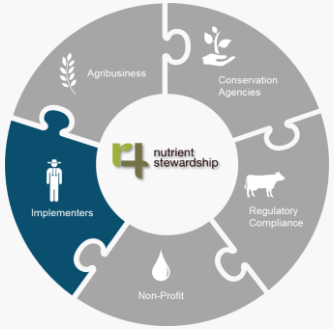
- 4R Nutrient Management Works When…
  - Implemented Conservation Plan
  - Manure Analysis & Calibration
  - Soil Testing
- For Our (4R) Benefit
  - Increasing Manure Nutrient Retention
  - Non-nutrient practices that influence nutrient use efficiency
- Impact to Water Quality
  - *Avoid* unnecessary applications and *Control* nutrient movement

Increase Production ✓

Reduce Production Costs ✓

Increase Efficiency ?

Improve Sustainability ✓



Low Disturbance Manure Injection

- 4R Manure Injection Works When…
  - Manure Analysis are available
  - Revised Regulatory Plans in place
  - In-season nitrogen availability is calculated

- 4R Benefit

  (Rosetree Consulting Client data)
  - $2 to $6 savings per 1000 gal of manure applied vs surface application
  - 25-35% reduction in phosphorus index scoring

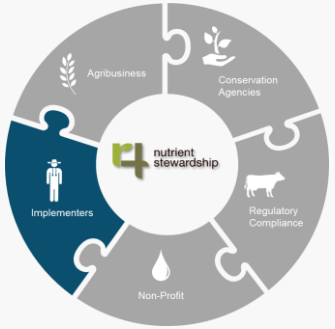
- Impact to Water Quality
  - *Avoid* nutrients in surface runoff
  - *Avoid* volatilization losses
  - *Control* nutrient movement

Increase Production ✓

Reduce Production Costs ?

Increase Efficiency ?

Improve Sustainability ✓



No-Till Crop Management

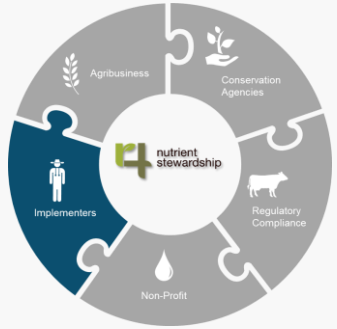
- Road to success was long and bumpy
  - Industry-wide efforts to ensure success
- 4R No Till Management works when…
  - Agronomic Fundamentals are in place
  - Soil Testing is modified
  - Starter / At Planting Fertilizer Applications
- 4R Benefit
  - Fundamental Shift in Nitrogen Applications
  - Early Season Fertility Source & Placement
  - Transitioning & Maintaining Soils
- Impact to Water Quality
  - *Avoid* erosion
  - *Control* nutrient movement

Increase Production

Reduce Production Costs

Increase Efficiency

Improve Sustainability



Cover Cropping & Soil Health

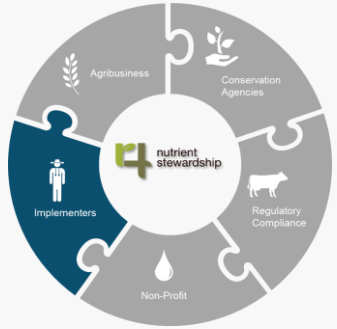
- Developed out of a need to address in-field issues and concerns
  - Unprecedented group effort
- 4R Soil Health Works When…
  - Agronomic Fundamentals & Soil Testing
  - Precision Ag is Incorporated
  - Carbon effect is managed
  - Nitrogen contributions are quantified
- 4R Benefit
  - Increase soil resiliency
  - Increase soil biology & bio-diversity
  - Reduced pesticide & fertilizer use
- Impact to Water Quality
  - *Avoid* over-application of nutrients
  - *Control* nutrient & soil movement

Increase Production ?

Reduce Production Costs ?

Increase Efficiency ?

Improve Sustainability ✓



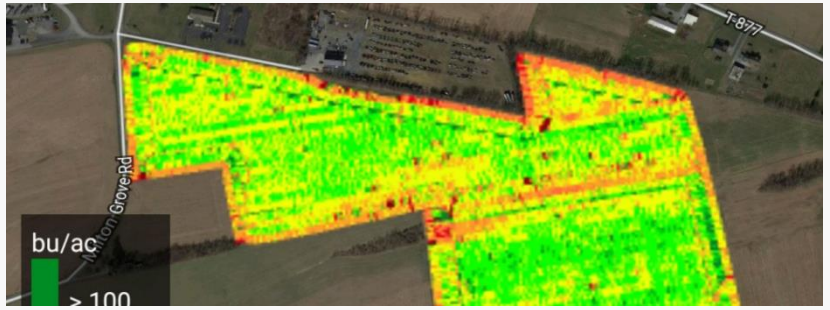
Precision Agriculture

- Adopted out of a need to manage at the sub-field level

- 4R Interactions and Tools
  - Advanced Soil Testing
  - Variable Rate Applications
  - Intensification vs Mitigation

- 4R Benefit
  - Nitrogen Modelling
  - Use Yield Monitor Data to identify underperforming areas

- Impact to Water Quality
  - *Avoid* overapplication
  - *Avoid* underperformance
  - *Avoid* ecologically sensitive areas

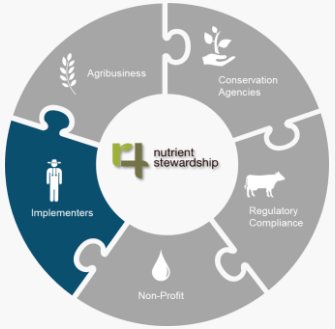


Increase Production

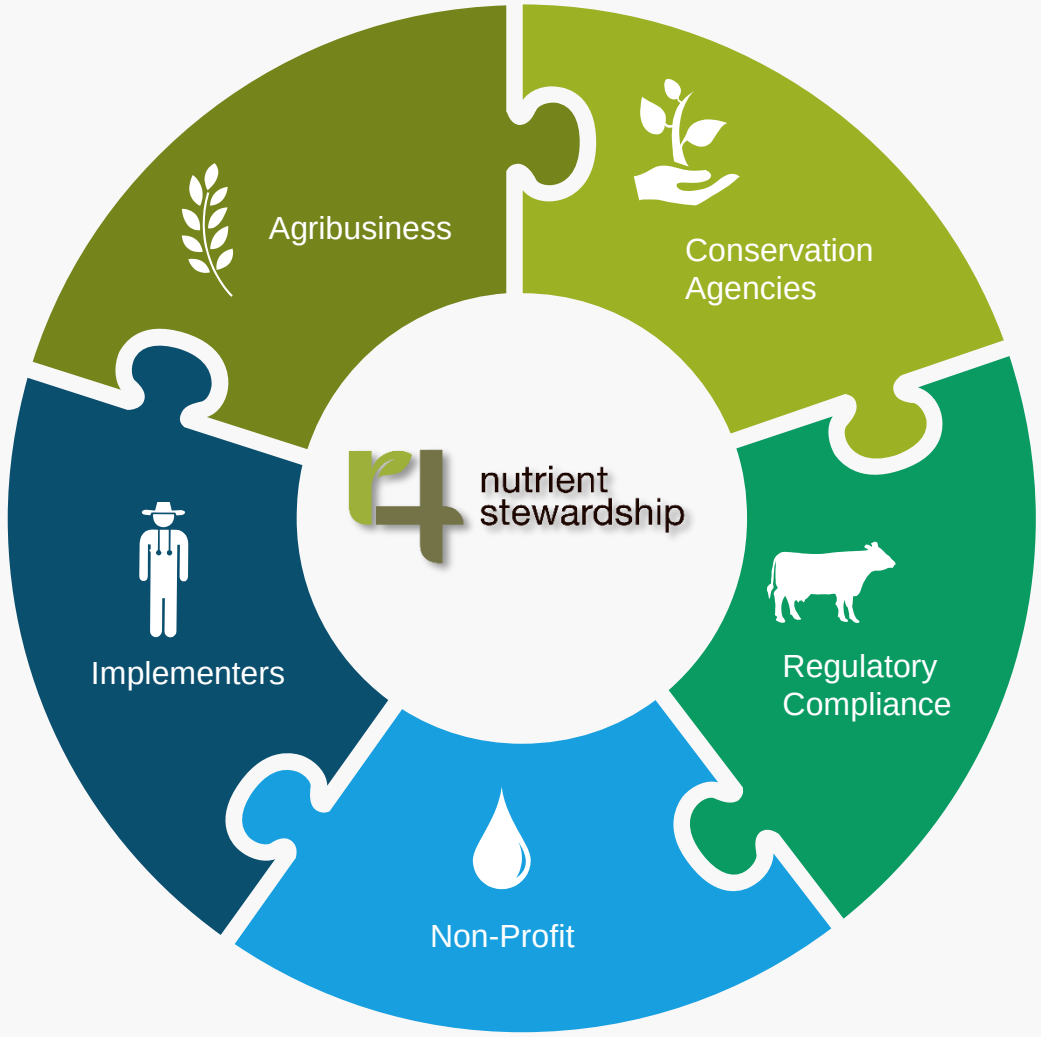
Reduce Production Costs

Increase Efficiency

Improve Sustainability



Baseline Survey of 4R Practices in Targeted Pennsylvania Watersheds: Tracking and Opportunities



"On-farm data tells the story of what management practices farmers do every year that have a positive outcome on farm economics and water quality."

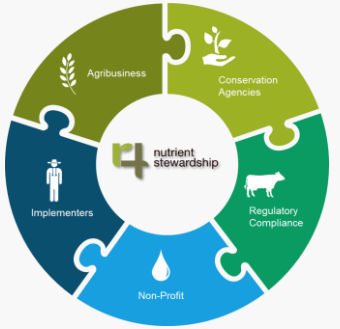
PennState
College of Agricultural Sciences

Matt Royer

Penn State University

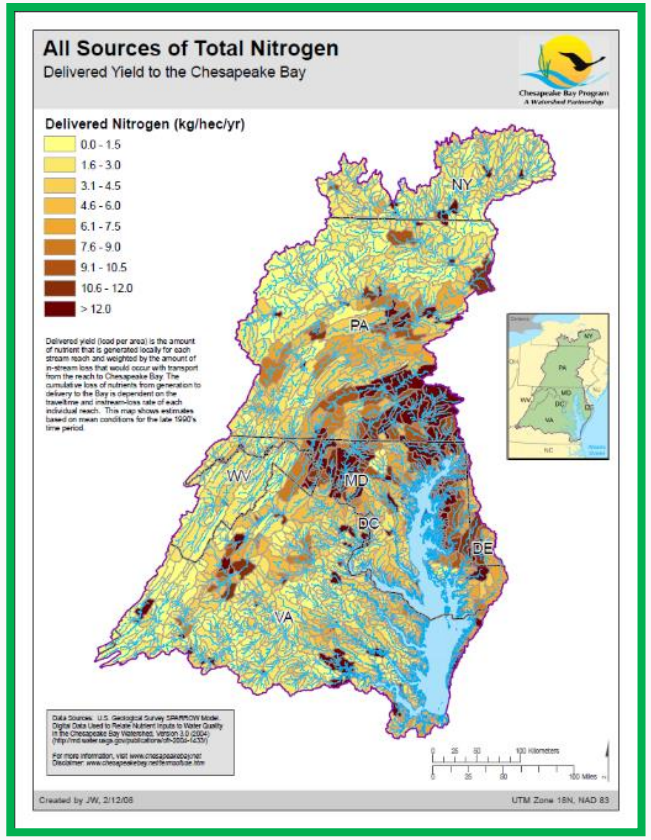
Why a 4R Survey?

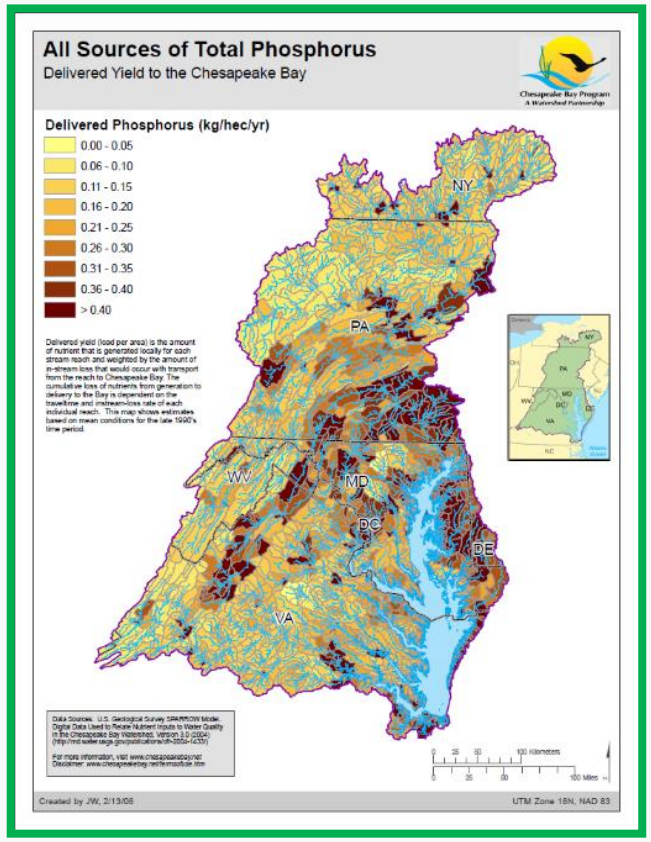
- To find out what farmers are doing
- To get farmers credit for what they are doing (Chesapeake Bay TMDL)
- To help improve methodologies for verification
- To increase adoption of 4Rs

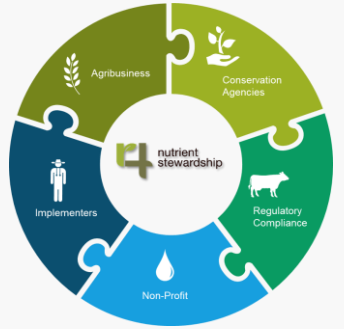


4R Practices and Water Quality Benefits: A Chesapeake Bay Context

- TMDL required reductions in N and P loads to the Bay
- PA has reduced P loads by 2.3 million lbs/yr since 1985, but still has 25% of the way to go by 2025 (0.7 mill lbs/yr)
- PA has reduced N loads by 15 million lbs/yr since 1985, but still has 70% of the way to go by 2025 (34 mill lbs/yr)





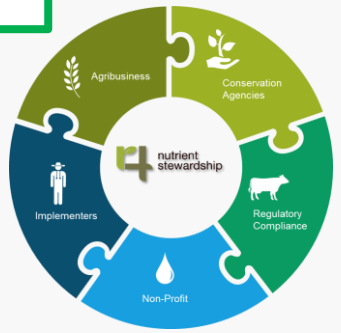


4R Practices and Water Quality Benefits: "Supplemental" N NM Recognized by Chesapeake Bay Program

- N Rate Supplemental NM:
  - Rate <LGU recommendations
  - Split applications resulting in lower-than-planned applications
  - Applications using variable rate goals
- N Placement Supplemental NM
  - Inorganic N injected/incorporated
  - Setbacks from surface waters
- N Timing Supplemental
  - Split applications across growing season

Chesapeake Bay Program

Science. Restoration. Partnership.

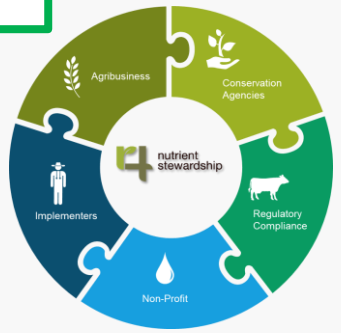


4R Practices and Water Quality Benefits: "Supplemental" P NM Recognized by Chesapeake Bay Program

- N Rate Supplemental NM:
  - Manure applications based on annual crop removal of P rather than N
  - Rate <LGU recommendations
  - Applications using variable rate goals
- N Placement Supplemental NM
  - Inorganic P injected/incorporated
  - Setbacks from surface waters
- N Timing Supplemental
  - Split applications across growing season

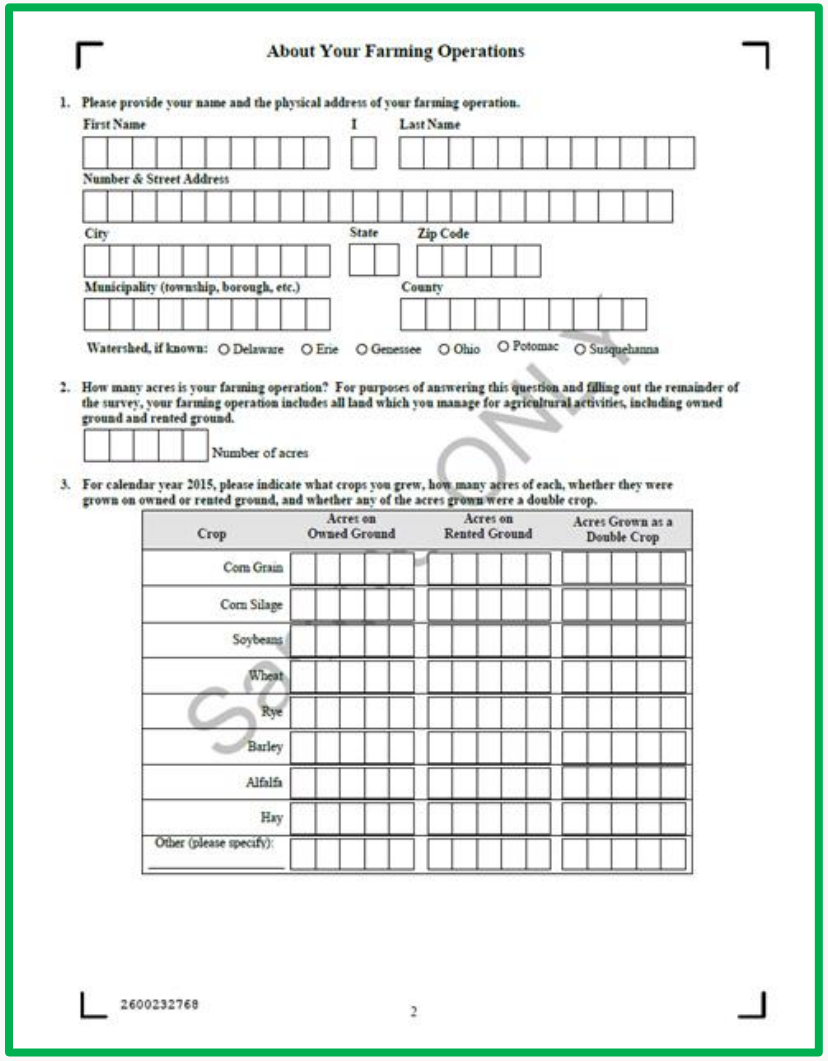
Chesapeake Bay Program

Science. Restoration. Partnership.



How to Document 4R Practices, a Classically “Voluntary” Practice

- PA has a challenge of documenting “voluntary,” “non-cost shared” practices
- 2016 Farmer Survey (PSU)
  - 6,782 farmers responded
  - Self reporting/verification protocol approved by CBP
  - Thousands of practices reported, including nearly 100,000 ac of N “Precision NM”
- Follow similar methodology, working with consultants/agribusiness



About Your Farming Operations

1. Please provide your name and the physical address of your farming operation.

First Name | I | Last Name

Number & Street Address

City | State | Zip Code

Municipality (township, borough, etc.) | County

Watershed, if known: ○ Delaware ○ Erie ○ Genessee ○ Ohio ○ Potomac ○ Susquehanna

2. How many acres is your farming operation? For purposes of answering this question and filling out the remainder of the survey, your farming operation includes all land which you manage for agricultural activities, including owned ground and rented ground.

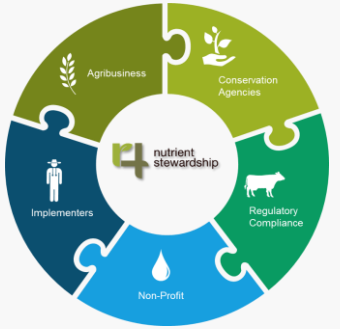
Number of acres

3. For calendar year 2015, please indicate what crops you grew, how many acres of each, whether they were grown on owned or rented ground, and whether any of the acres grown were a double crop.

Crop	Acres on Owned Ground	Acres on Rented Ground	Acres Grown as a Double Crop
Corn Grain			
Corn Silage			
Soybeans			
Wheat			
Rye			
Barley			
Alfalfa			
Hay			
Other (please specify):			

2600232768 2

PennState College of Agricultural Sciences



How to Document 4R Practices, a Classically "Voluntary" Practice

Winter 2018-2019

- Rosetree survey in Swatara Creek (Lebanon/Berks Cos)

Late Summer 2019

- PSU farm visits to verify data

Fall 2019

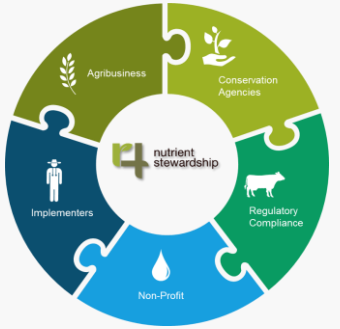
- Refine survey based on lessons learned

Winter 2019-20

- Implement in survey in Potomac watershed (Franklin Co)

2020

- Develop report recommending methodology for documenting Supplemental N & P Nutrient Management watershed wide

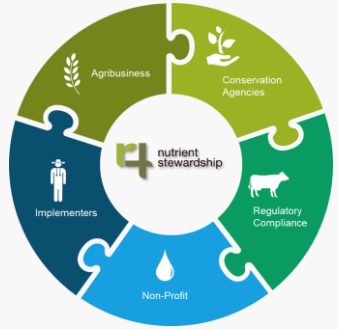


Developing Goals for the Phase 3 WIP: An Early Success

- Phase 3 Ag Workgroup Draft Recommendations: 64,000 ac of 4Rs
- Input at PA in Balance Conference Feb 2019 from many stakeholders to increase 4R goals
- 4R Alliance presented preliminary survey results from Swatara Creek:
  - Depending on which “R” and which crop grown, 15% - 60% of farmers surveyed using some form of creditable 4R practice
- Phase 3 WIP Ag Workgroup Revised Recommendations increased goals to 332,000 ac of 4Rs*

*These are recommendations only. WIP has not yet been finalized.


Agricultural Best Management Practices for
PENNSYLVANIA
Clean water Great for PA Good for the Bay
Pennsylvania is working with neighboring states to clean up our shared waters that run to the Chesapeake Bay. This effort is the Phase 3 Watershed Implementation Plan (Phase 3 WIP). The state believes that the path to success starts locally. Farmers have an important role to play.
This document summarizes seven farm practices that reduce nitrogen and phosphorus pollution. Goals, cost estimates, and pollution reduction forecasts are included for each practice.
Agricultural Compliance
Action: Develop and use Agricultural Erosion and Sediment Control (Ag E&S) Plan or conservation plan, manure management or nutrient management plan, and barnyard runoff controls.
Nitrogen runoff reduced by 3,113,000 lbs/yr or 15% of PA's Goal
Phosphorus runoff reduced by 236,000 lbs/yr or 12% of PA's Goal
Soil Health
Action: Use crop and soil management practices that improve long-term soil health and productivity.
Nitrogen runoff reduced by 7,689,000 lbs/yr or 15% of PA's Goal
Phosphorus runoff reduced by 327,000 lbs/yr or 16% of PA's Goal
Expanded Nutrient Management
Action: Non-manured farms develop & use nutrient management plans and precision nutrient management practices.
Nitrogen runoff reduced by 317,000 lbs/yr or 2% of PA's Goal
Phosphorus runoff reduced by 44,200 lbs/yr or 2% of PA's Goal
Manure Storage Facilities
Action: Install and use manure storage systems that meet state and federal standards.
Nitrogen runoff reduced by 7,058,000 lbs/yr or 13% of PA's Goal
Phosphorus runoff reduced by 303,900 lbs/yr or 15% of PA's Goal
Precision Feeding
Action: Use precision feed management to reduce nitrogen and phosphorus in manure.
Nitrogen runoff reduced by 610,000 lbs/yr or 1% of PA's Goal
Phosphorus runoff reduced by 61,200 lbs/yr or 3% of PA's Goal
DRAFT - February 5, 2019



PA 4R Alliance

NFWF Grant

- Barriers to 4R Adoption
- 4R Assessment
- Split Application Study
- Manure Transport Exchange
- Partnership Growth

ADAMS COUNTY SPLIT N
2021 PILOT PROJECT

Funding for this project was provided by National Fish & Wildlife Foundation and a PA WIP III Implementation Grant

11 FARMS | 2,436 ACRES

Co-operators reimbursed $15 / A
for implementing additional split N application

Participant Criteria:

- **Corn Acres**
  - Minimum Enrollment – 40 Acres
  - Maximum Enrollment – 400 Acres

- **Willingness to:**
  - Optimize Split Applications of Nitrogen based on site-specific conditions and yield goals
  - Split apply nitrogen on enrolled corn acres to meet supplemental nutrient management criteria for nitrogen
  - Provide a comparison check strip where all N is applied up front
  - Share production information & yield data

- **Current regulatory compliance** on enrolled acres

ADAMS COUNTY SPLIT N
2021 PILOT PROJECT

Funding for this project was provided by National Fish & Wildlife Foundation and a PA WIP III Implementation Grant

PA 4R Alliance

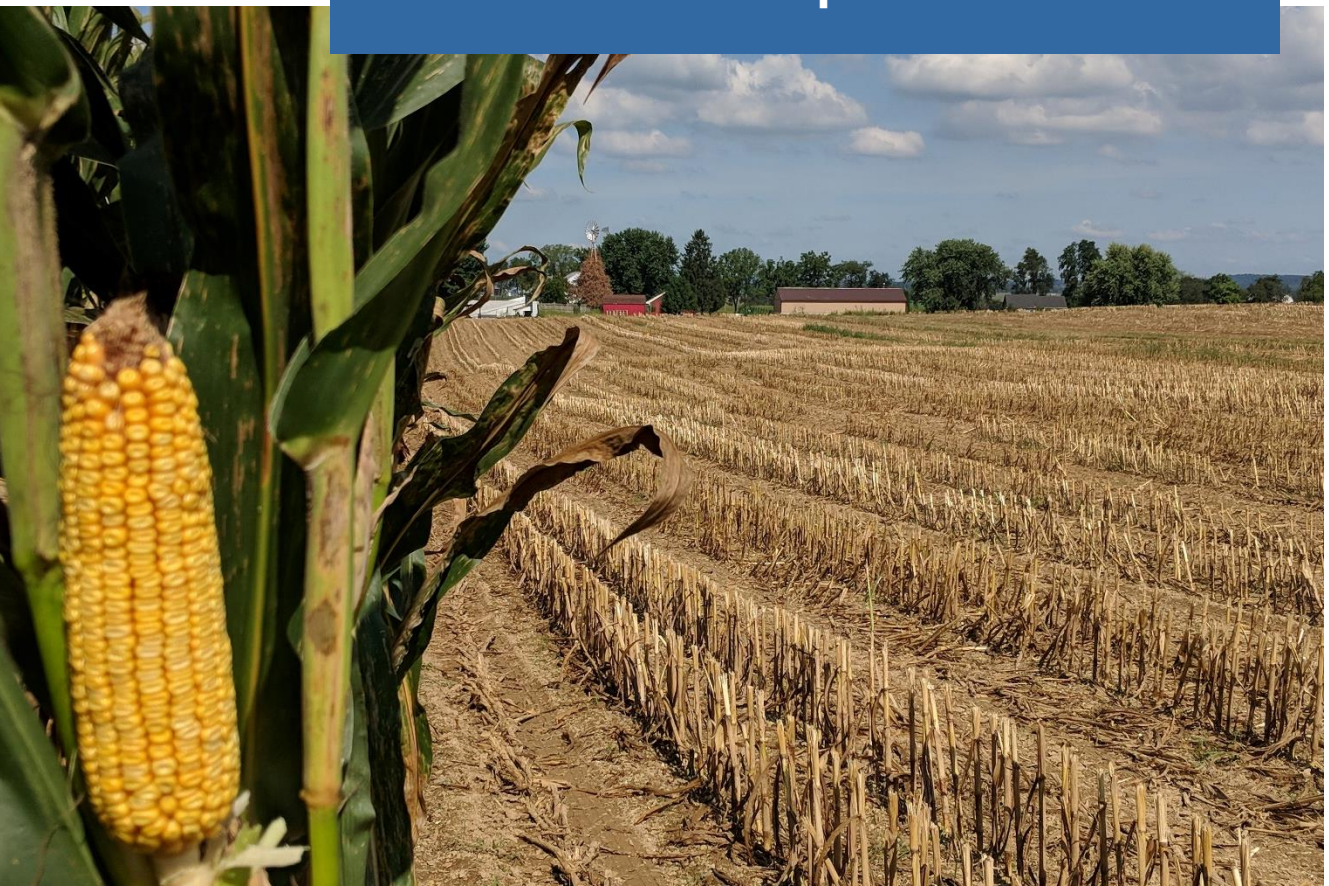
11 FARMS | 2,436 ACRES

Co-operators reimbursed $15 / A
for implementing additional split N application

17.6 bu / A

ADAMS COUNTY SPLIT N
2021 PILOT PROJECT

Funding for this project was provided by National Fish & Wildlife Foundation and a PA WIP III Implementation Grant



N APPLICATIONS

	Control	+ Split
pop-up fertilizer	0	0
2x2 starter	0	0
legume history	0	0
manure history	20	20
planned manure	0	0
pre-emerge	130	65
sidedress	0	68
Total	**150**	**153**
Yield	**160**	**194**
NUE	**0.94**	**0.79**
Increase in NUE		**16%**

ADAMS COUNTY SPLIT N
2021 PILOT PROJECT

ECONOMICS

	Control	+ Split
Total Revenue	**$972.80**	**$1,179.52**
Nitrogen Fertilizer Cost / A	$80.17	$91.27
Nitrogen Fertilizer Cost / bu	$0.50	$0.47
Increase in Revenue		18%
Decrease / bu in Fertilizer Costs		6%

Economic Assumptions:
- $370 – UAN Pricing June 2021
- $6.08 – Corn Price November 1, 2021

N APPLICATIONS

	Control	+ Split
pop-up fertilizer	0	0
2x2 starter	0	0
legume history	0	0
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ADAMS COUNTY SPLIT N
2021 PILOT PROJECT

PHOSPHORUS IMPACT OF A NITROGEN PRACTICE

- Increased P removal by 8.8 lbs/A

N APPLICATIONS

	Control	+ Split
pop-up fertilizer	0	0
2x2 starter	0	0
legume history	0	0
manure history	20	20
planned manure	0	0
pre-emerge	130	65
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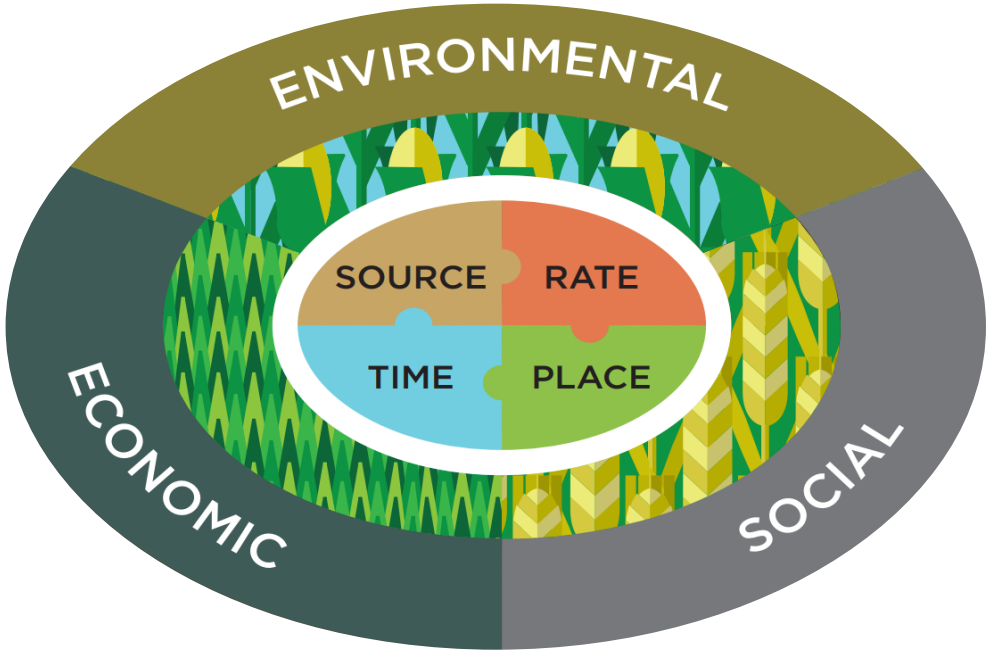
Total	**150**	**153**
Yield	**160**	**194**
NUE	**0.94**	**0.79**
Increase in NUE		**16%**

PA 4R Alliance

AGRONOMIC BMPS MOVE THE NEEDLE ON WATER QUALITY

Adoption of Split Applications…

- Increases Yield
- Increases Nitrogen Use Efficiency
- Increases P removal



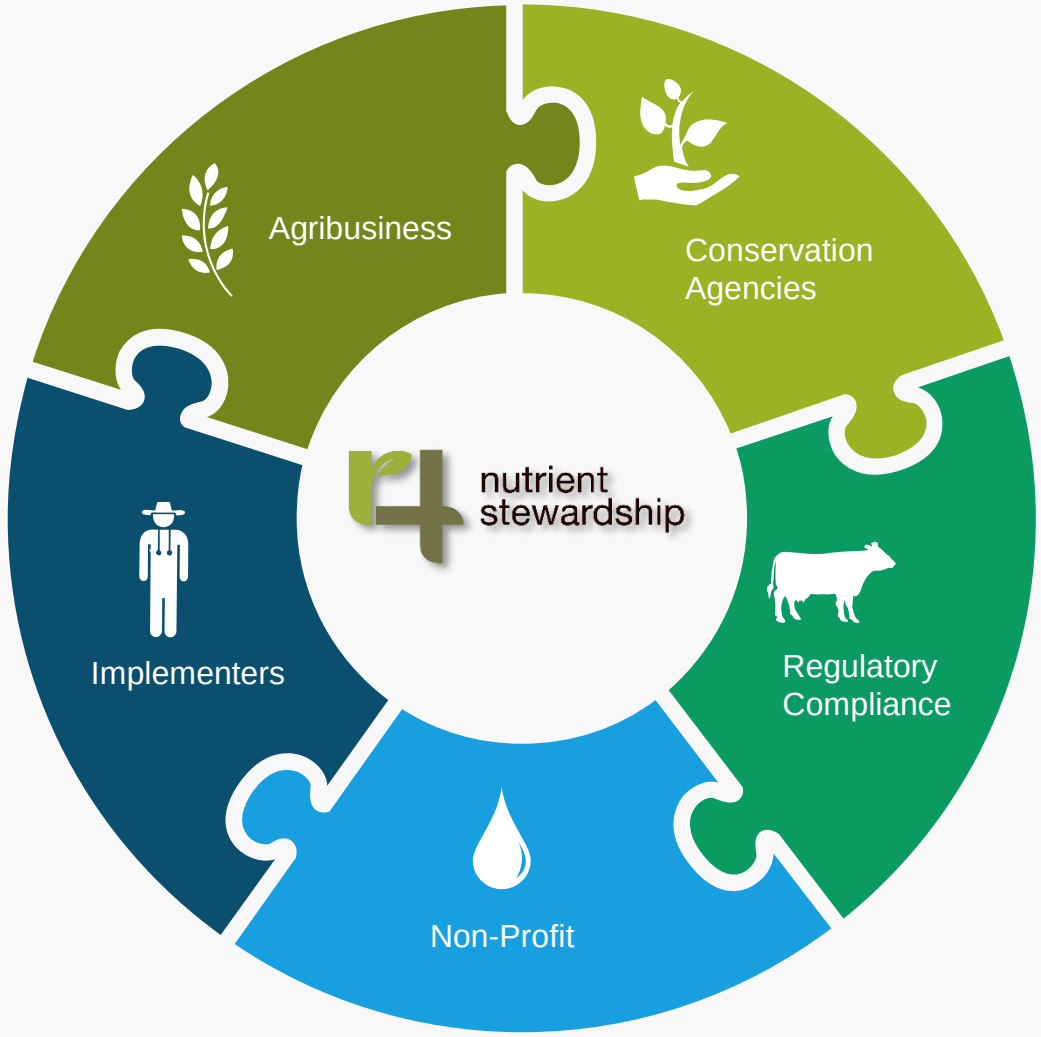
What does your organization need for consistent messaging on Split-Applications??

PA 4R Alliance

Engaging Growers with 4R Nutrient Stewardship

- 4R Focus with Farmers in Products and Practices
  - Approach to Crop Nutrients and Overall Crop Management
  - Integration with Equipment & Technology Adoption
  - Room for Greater 4R Practice Adoption & Credit by Bay Model
- Use Source, Place, Rate, and Time specifics when implementing BMPs
  - Field Tested and Proven
  - Nutrients + Biologicals + Biostimulants + other inputs
  - Yield, Economic Return (Grower)
  - Environment/Social (Society)

Complementary inputs can impact nutrient uptake and use



Questions & Conversation

For more information:
www.4Rmidatlantic.com

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Brian.Campbell@tnc.org

Eric Rosenbaum, PA4R Executive Director
EricRosenbaum@rosetreeconsulting.com

Dean Collamer, PA 4R Alliance Advisory Board Chair
Dcollamer@growmarkfs.com

00/53/28 – Nicole Ranalli, Endangered Species Biologist of the US Fish and Wildlife Service was introduced and provided a presentation "From Wetlands to Milkweed". (See attached hand-out.) Nicole started off with an update on the Bog Turtle recovery efforts. The species as was listed in 1997 as threatened by a 4D rule for Northern Population. The 4D rules were associated with two things, the transfer of turtles out of roads and light to moderate livestock and grazing was not prohibited. She indicated that she was going to cover the recovery objective and go over the recovery results of the plan. The recovery objective (2001 Recovery Plan) was to protect and maintain the northern population of this species and its habitat, enabling the eventual removal of the species from the Federal List of Endangered and Threatened Wildlife and Plants status. The recovery criteria included: to establish long range protection for at least 185 populations distributed among 5 recovery units; monitoring at 5 year intervals over a 25 year period shows that these 185 populations are stable or increasing; illicit collection and trade no longer constitute a threat to the species survival; and long-term habitat dynamics, at all relevant scales are sufficiently understood to monitor and manage threats to both habitats and turtles, including succession, invasive wetland plants, hydrology and predation. She discussed the Bog Turtle Northern Population Range and the projected recovery goals that have been established. She continued by reviewing the establishment of NRCS involvement and the target areas of the project. She reviewed the Apodaca 2021 Report – Rangewide Analysis. She reviewed her Pennsylvania-centric Analysis. Of the 58 easements in Pennsylvania totaled, 25 WRE in the Susquehanna/Potomac Recovery Unit with 15 easements directly protecting portions of Bog Turtle core sights. In the Delaware Recovery Unit, there were 31 WRE total with 15 easements directly protecting portions of Bog Turtle core sights. She reviewed the Erb 2019 Bog Turtle Easement Plan. The plan ranked and identified core habitat, populations and metapopulations for Bog Turtles, important habitat corridors were identified, needed strategies for recovery were prioritized and action plans were developed. She reviewed the accomplishments of NRCS contribution to the recovery effort and what next steps are planned. Nicole then switched to discussion of the Monarch Butterfly. She noted that the Monarch was assessed for protection

under the Endangered Species Act in December 2020, also that its status will be reviewed yearly until it is no longer a candidate. The species is known to exist within all counties of Pennsylvania. She discussed the locations of Monarch populations throughout the world. She discussed the annual census data concerning the Monarch overwintering in Mexico. She noted the existence of the NRCS-USFWS Fact Sheets covering the Monarch and that they are constantly being updated as new information is available. Kathleen Patnode, an Environmental Toxicologist with the US Fish and Wildlife Service was introduced and proceeded to discuss recent research of the declining populations of Monarchs. She noted the indirect effects of fertilizer on Monarchs, stating that Nitrogen and Phosphorus effects the milkweed leaves that is a natural host plant for their eggs and caterpillars. She continued to provide information concerning the effects of pesticides on Monarchs. She discussed climate effects on Monarchs. She discussed reasons for the decline of North American Monarchs, and noted that climate change effects the Monarch via impacts to habitat, and via non-habitat mediated effects. These accounted for 25% of their decline. She concluded her presentation by stating that biologist working on Monarch protection should be considering microhabitats in addition to landscape scale when designing habitat projects as a means of compensating for weather-related stresses.

From Wetlands to Milkweed - USFWS Updates on the Bog Turtle and Monarch Butterfly

Photo Credit: Kelly Nail

Kathleen Patnode and Nicole Ranalli
U.S. Fish and Wildlife Service
Pennsylvania Field Office

Bog Turtle ESA Listing

1997 Federal listing
Threatened with 4(d) Rule for Northern Population

- Section 4(d) of the ESA allows the USFWS to establish special regulations for threatened (not endangered) species
- Take the place of the normal protections of the ESA and may either increase or decrease the ESA's normal protections.

<u>Two 4(d) rules pertain to BT</u>

1) Transferring individuals from roads to immediately adjacent habitat

2) Light to Moderate Livestock Grazing


USFWS


https://www.crops.org/news/science-news/reed-canarygrass-environmental-foe-cattle-food/

Bog Turtle Recovery Plan, Conservation Plan, and Analysis of NRCS Programs and Practices

- 2001 Recovery Plan
- Apodaca (2021) Report on NRCS Rangewide Contributions
- 2019 Conservation Plan- funded by Competitive State Wildlife Grant

Recovery Objective (2001 Recovery Plan)

Protect and maintain the northern population of this species and its habitat, enabling the eventual removal of the species from the Federal List of Endangered and Threatened Wildlife and Plants

Recovery Criteria from Recovery Plan (2001)

1. Long-range protection is secured for at least **185 populations distributed among 5 recovery units**

2. Monitoring at 5-year intervals over a 25-year period shows that these 185 populations are stable or increasing

3. Illicit collection and trade no longer constitute a threat to the species' survival

4. Long-term habitat dynamics, at all relevant scales, are sufficiently understood to monitor and manage threats to both habitats and turtles, including succession, invasive wetland plants, hydrology, and predation

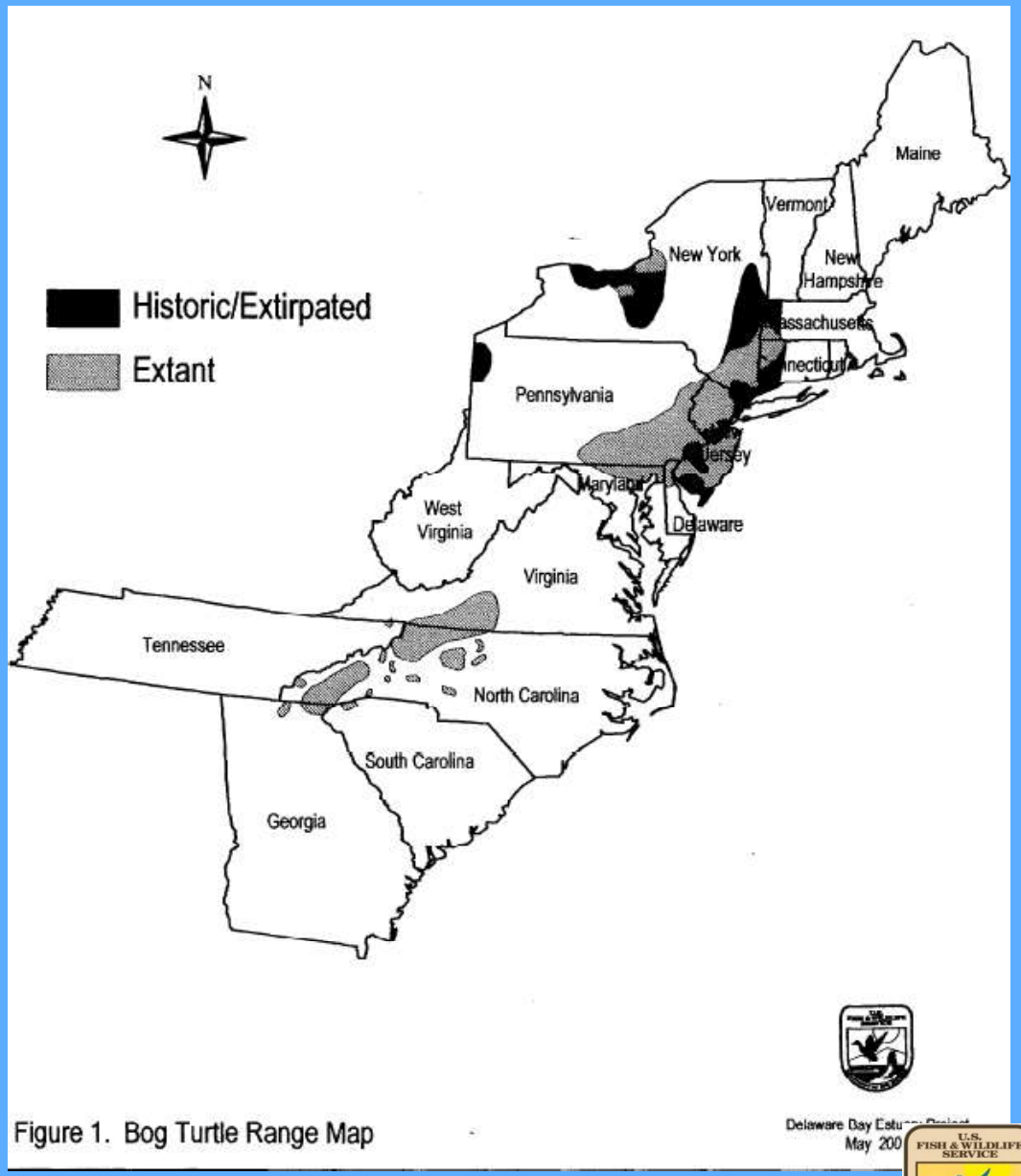


Figure 1. Bog Turtle Range Map

Delaware Bay Estuary Project
May 200

Bog Turtle Northern Population Range (Map Erb 2019) with Recovery Goals Added

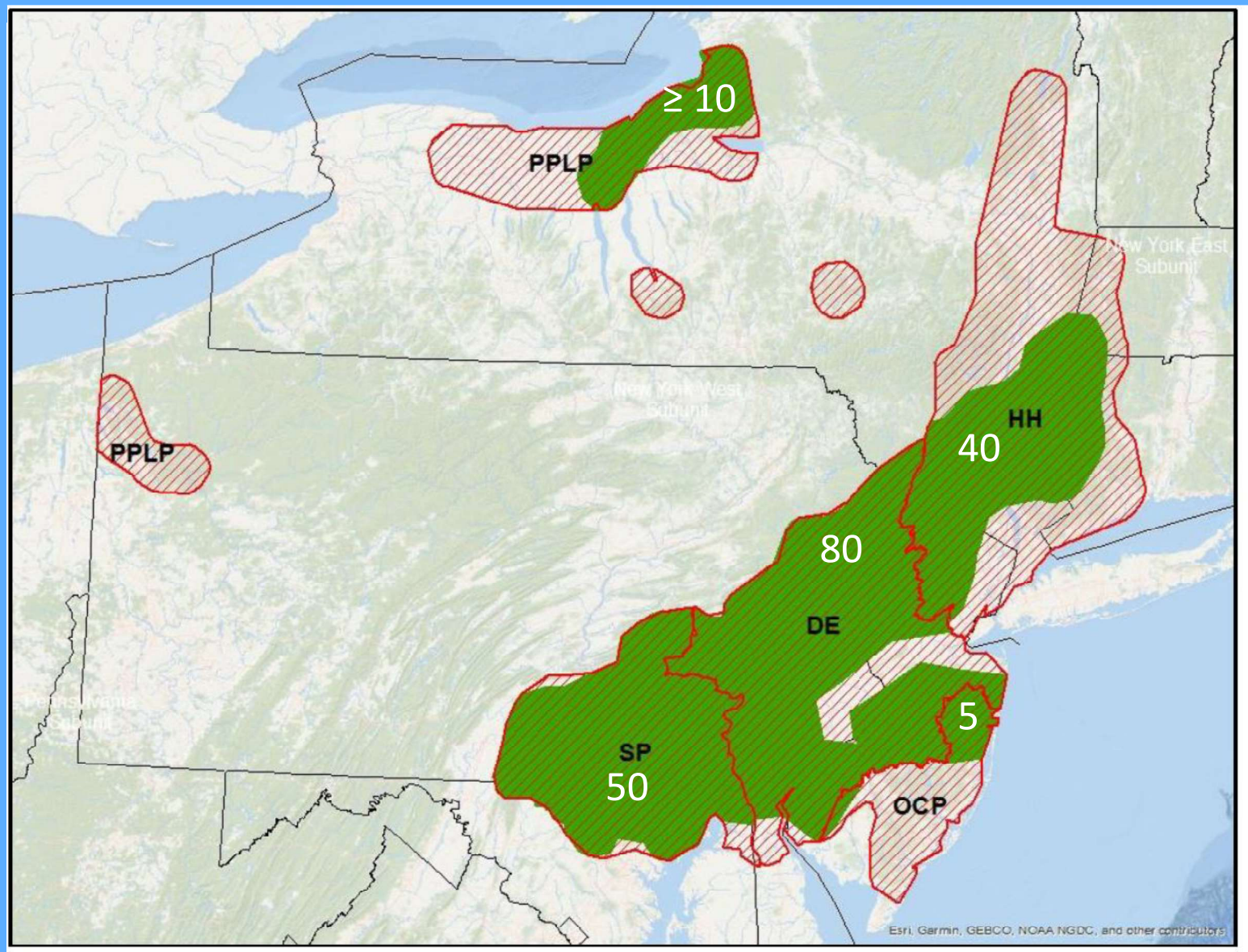


Figure 2. Historical (red hatch) and current (green) Bog Turtle Northern population range including the Delaware (DE), Hudson-Housatonic (HH), Outer Coastal Plain (OCP) Prairie Peninsula-Lake Plain (PPLP), and Susquehanna-Potomac (SP) Recovery Units.

NRCS Working Lands For Wildlife

- Partnership started in 2012
- Former Wetlands Reserve Program and current Agricultural Conservation Easement Program (ACEP) - Wetland Reserve Easements (WRE)
- The target areas: Maryland, Delaware, Pennsylvania, New York, New Jersey, Connecticut, and Massachusetts
- NRCS will start offering the opportunity to expand conservation efforts to Virginia, North Carolina, and Tennessee (southern range of the species)

Apodaca 2021 Report - Rangewide Analysis

- **82** easements were procured within 300 meters of a known bog turtle occurrence (at least one turtle documented in the last 20-years)
- Report states this is **80** unique locations
- Totaled over **29,000-acres**
- **70** easements are within 300-2000-meters from a known bog turtle occurrance
- **307** easements between 2 and 10-Km of known bog turtle occurance

Number of Easements per State (Apodaca 2021)

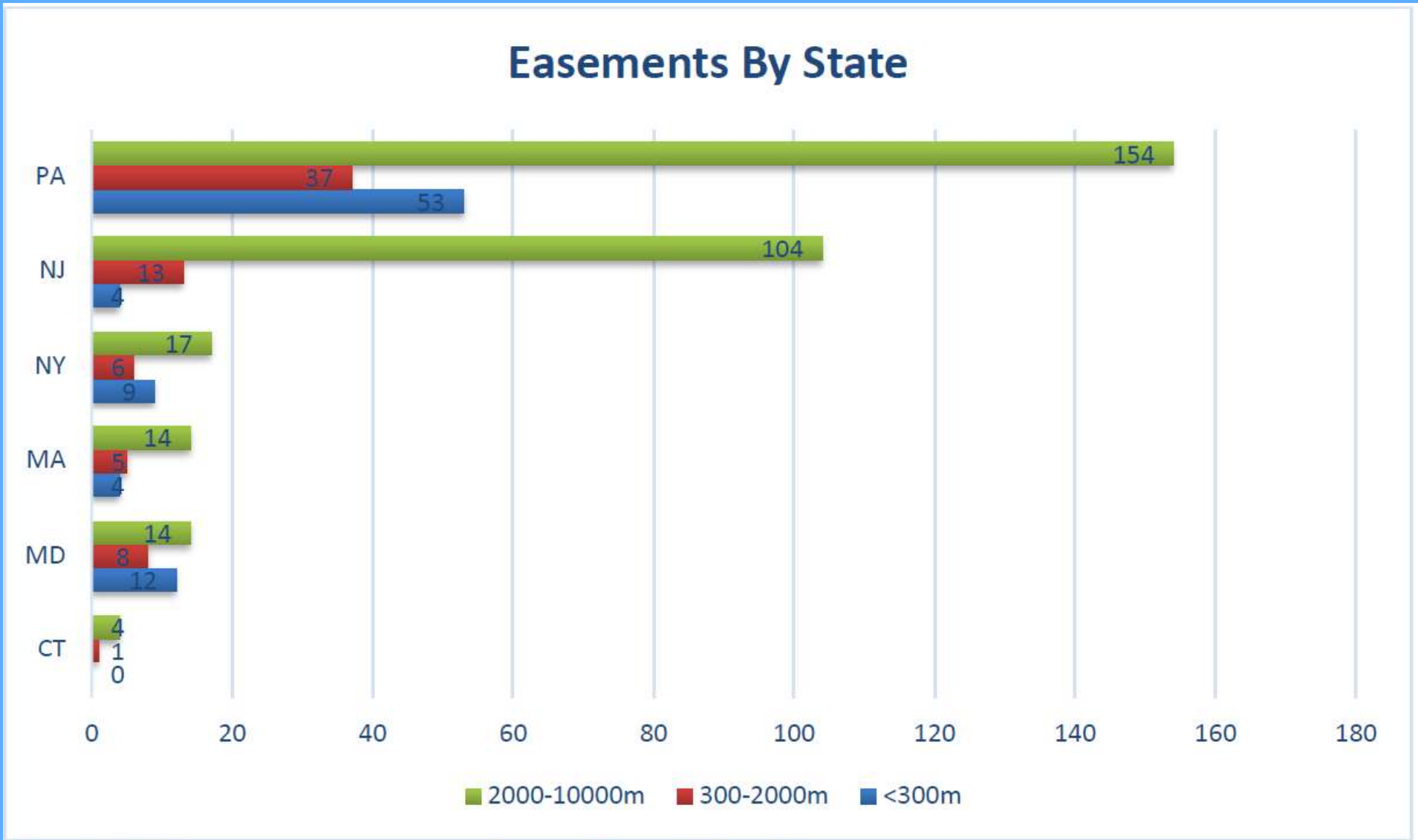


Figure 3. NRCS easements near extant bog turtle populations by state.

Rangewide Easement Distribution by Recover Unit (Apodaca 2021) With 2001 Recovery Plan Population Goals Added

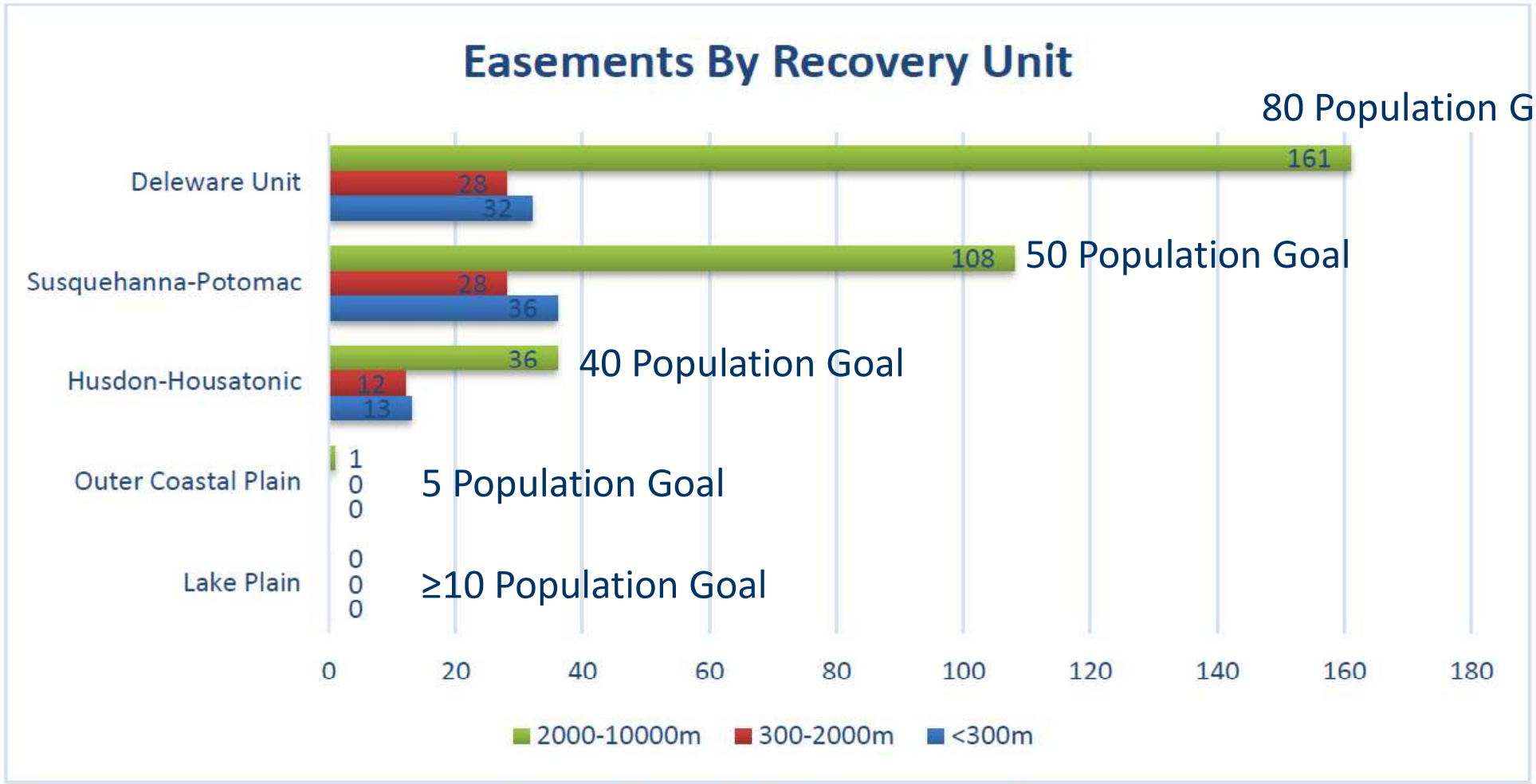


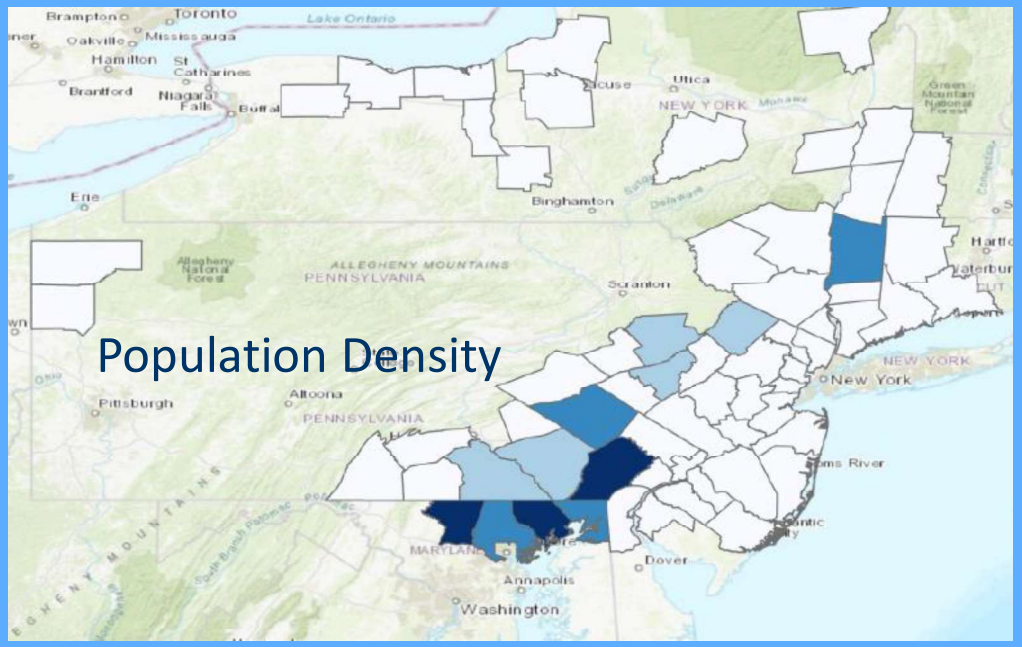
Figure 2. NRCS easements near extant bog turtle populations by recovery unit.

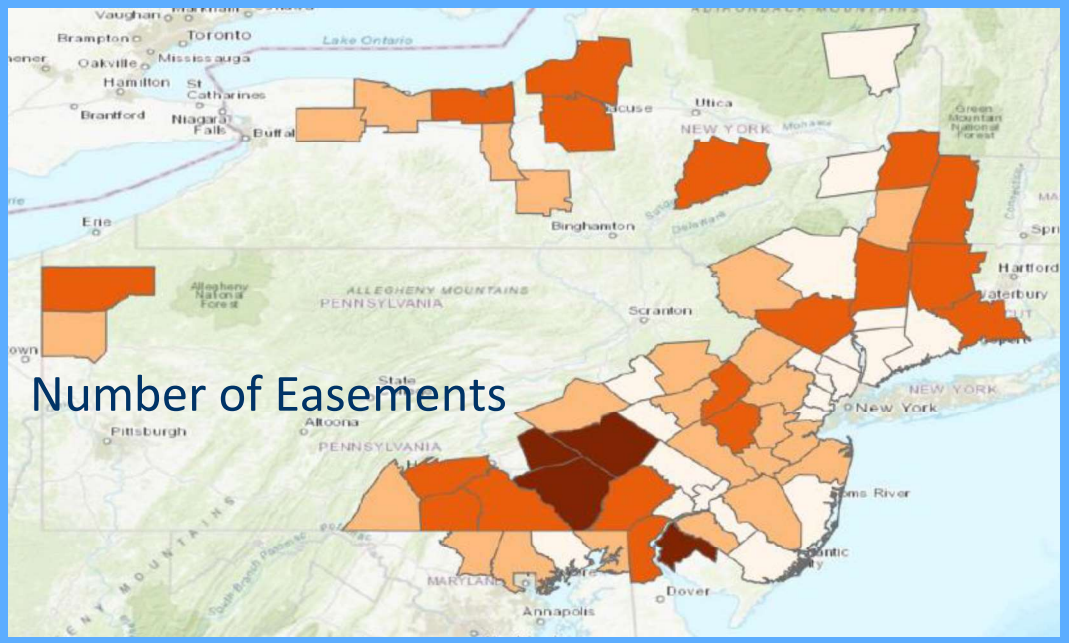
Rangewide Management Practices in bog turtle Habitat (Apodaca 2021)

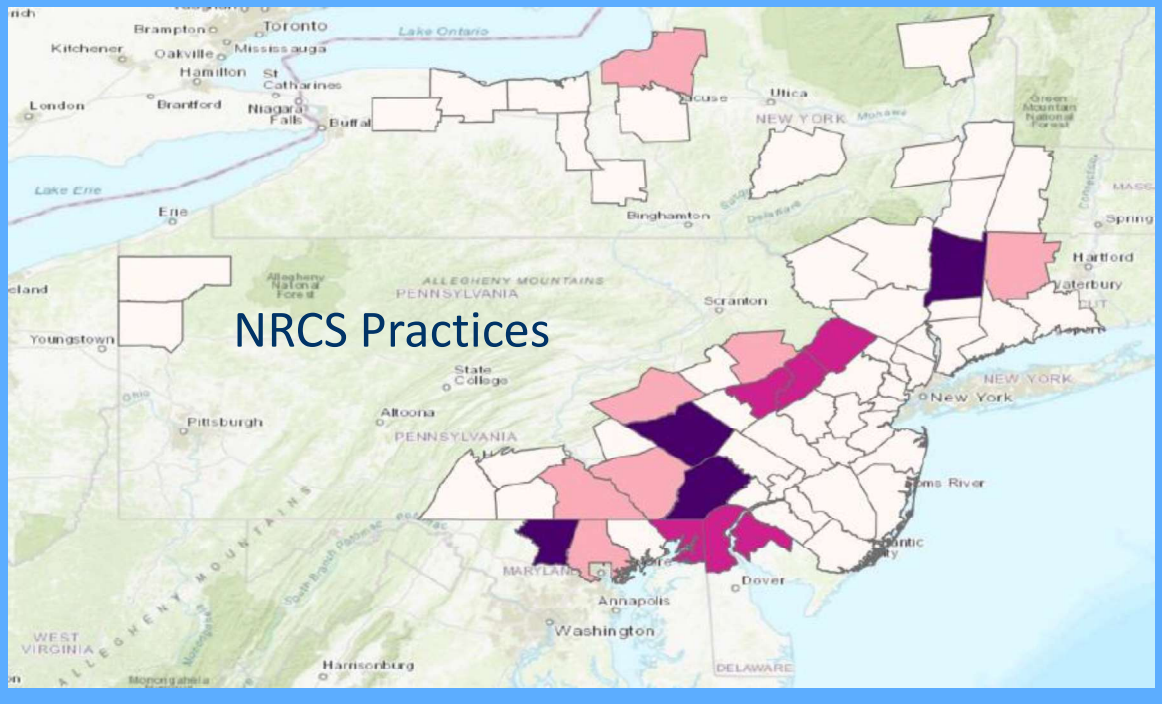
Table 1. Management practices employed in bogs with extant populations.

Practice	# of sites
Access Control	1
Conservation Cover	4
Brush Management	30
Critical Area Planting	1
Early Successional Habitat Development/Management	10
Herbaceous Weed Treatment	18
Riparian Forest Buffer	2
Riparian Herbaceous Cover	1
Prescribed Grazing	2
Upland Wildlife Habitat Management	14
Restoration of Rare or Declining Natural Communities	21
Wetland Enhancement	18
Wetland Restoration	6
Wetland Wildlife Habitat Management	5
Grand Total	**129**

Bog Turtle Population Density Vs Easements Vs Practices Per County (Apopka 2021)







Pennsylvania-centric Analysis

Susquehanna/Potomac Recovery Unit

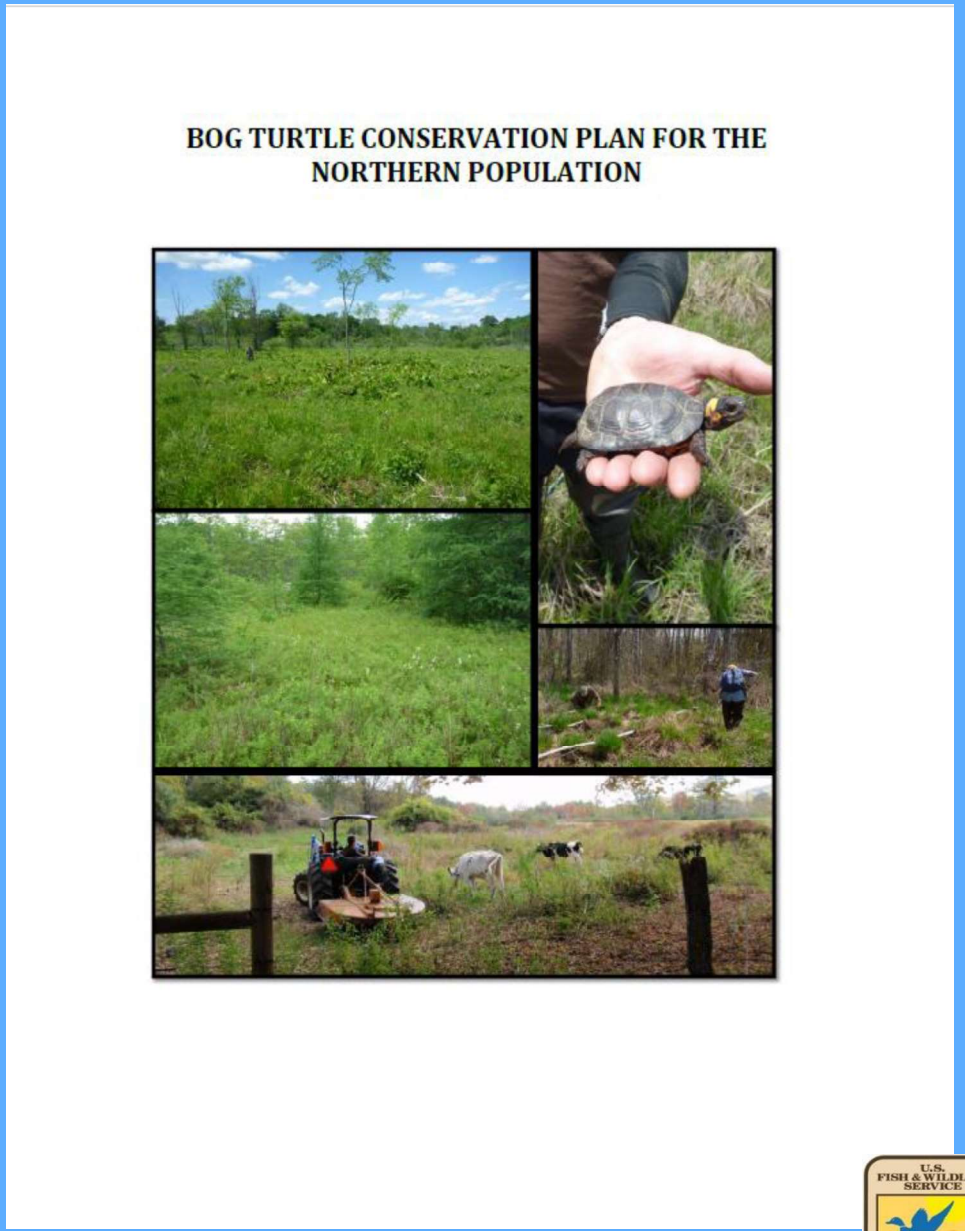
- 25 WRE total
- 15 easements are directly protecting portions of bog turtle core sites

Delaware Recovery Unit

- 31 WRE total
- 15 easements are directly protecting portions of bog turtle core sites

Bog Turtle Conservation Plan (Erb 2019)

- Ranked and identified core habitat, populations and metapopulations for bog turtles
- Important habitat corridors were identified and mapped for the purpose of improving/maintaining metapopulation dynamics for all extant metapopulations
- Prioritized strategies needed for recovery of the species
- Developed Recovery Unit Action Plans



Populations Statistics (Erb 2019) Informing 5-year Review

- Estimated range reduction 39% of the northern population within the past 30 years (Erb 2019)
- 176 of 508 extant populations in the northern range are fully or partially protected (Erb 2019)
- Data like these will be used to determine the 3 Rs (Resiliency, Redundancy, Representation)

Table 5. Number of extant populations by viability ranking category for each of the five Bog Turtle recovery units including the Delaware (DE), Hudson-Housatonic (HH), Prairie Peninsula-Lake Plain (PPLP), Outer Coastal Plain (OCP), and Susquehanna-Potomac (SP) units.

	Good	*Fair*	*Poor*
DE	21	48	150
HH (PA)	30 (12)	30 (29)	67 (84)
PPLP	3	2	0
OCP	0	1	3
SP	24	53	68
Total (PA)	78 (5)	134 (15)	288 (33)

NRCS Contribution to Bog Turtle Recovery in PA

Thus Far

- NRCS is an essential partner
- PA NRCS was a leader in the WRE acquisition effort
- Easements specific to Bog turtles are located within each recovery Unit in PA
- 30 easements directly protect portions of BT populations in PA
- Many NRCS practices contribute to habitat restoration and maintenance in bog turtle habitat
- Easements and Practices are appropriately focused on counties with higher bog turtle density

Next Steps

- Programmatic Biological Opinion to better facilitate restoration and maintenance in and near bog turtle wetlands
- Continue to work toward protecting wetlands within prioritized metapopulations – reference the 2019 BT Conservation Plan
- Potentially expand long-term monitoring (Criteria 2) to some of the other WRE sites in PA
- USFWS 5-year review upcoming

MONARCHS

MONARCH 101 and LATEST FINDINGS

Nicole Ranalli and Kathleen Patnode
U.S. Fish and Wildlife Service
Pennsylvania Field Office

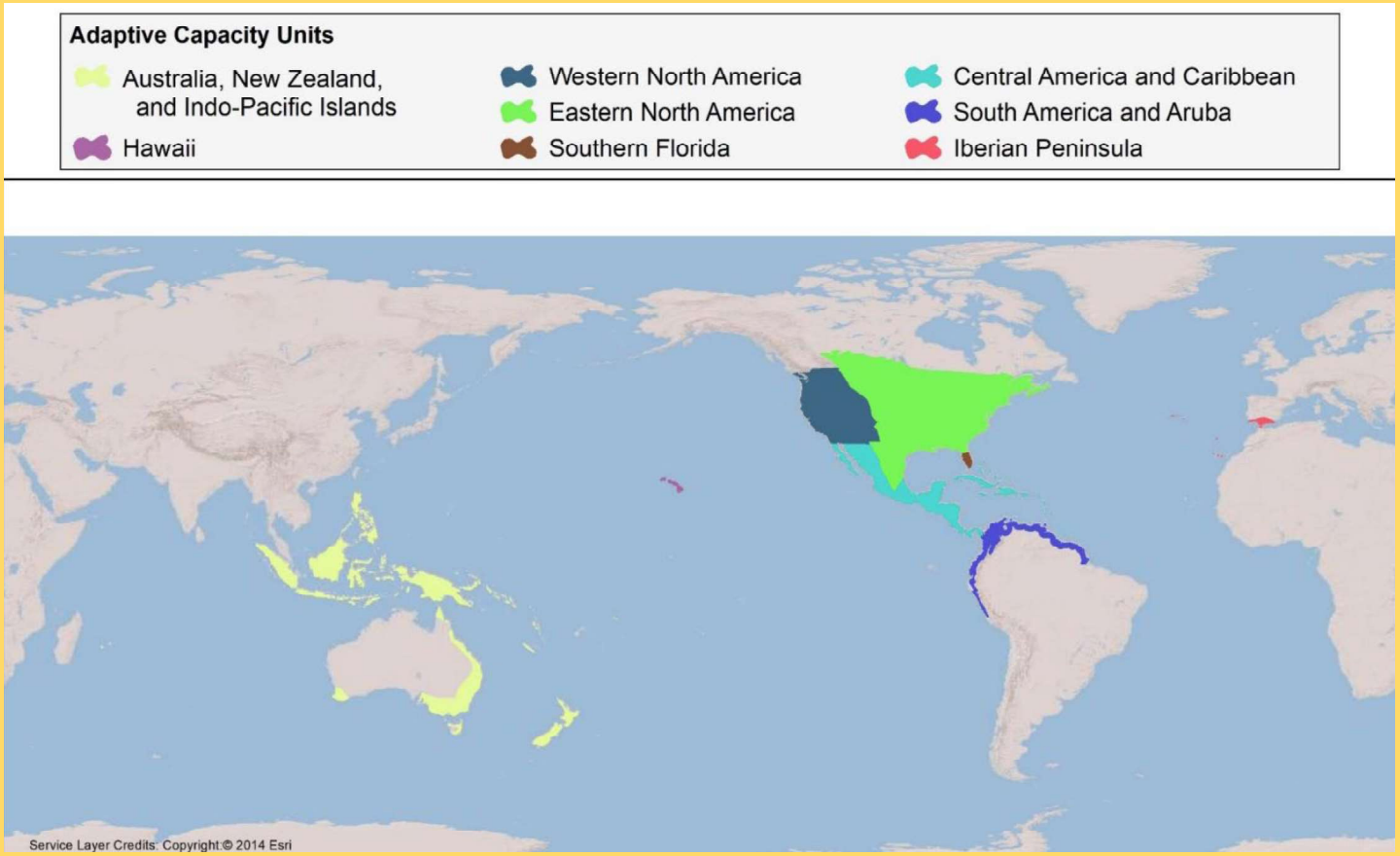
Monarch *(Danaus plexippus)* – USFWS Review

- Assessed for protection under the Endangered Species Act
- December 2020 finding
- *Candidate Species*
- Status will be reviewed each year until it is no longer a candidate
- Species known within all counties in PA


Photo Credit: Kelly Nail

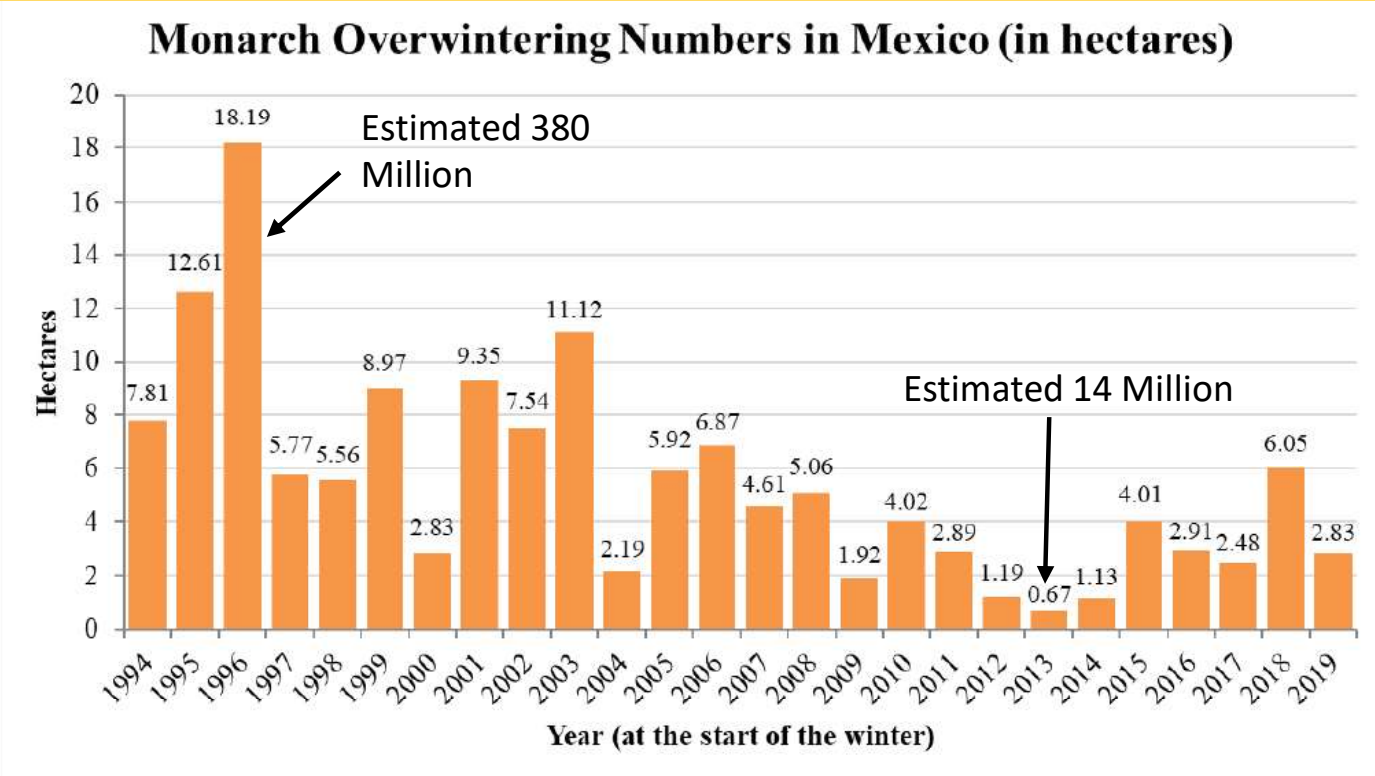
https://www.fws.gov/species/monarch-danaus-plexippus

Monarch Populations



U.S. Fish and Wildlife Service. 2020. Monarch (*Danaus plexippus*) Species Status Assessment Report. V2.1 96 pp + appendices.

Annual Census Data for Eastern Population



U.S. Fish and Wildlife Service. 2020. Monarch (*Danaus plexippus*) Species Status Assessment Report. V2.1 96 pp + appendices.

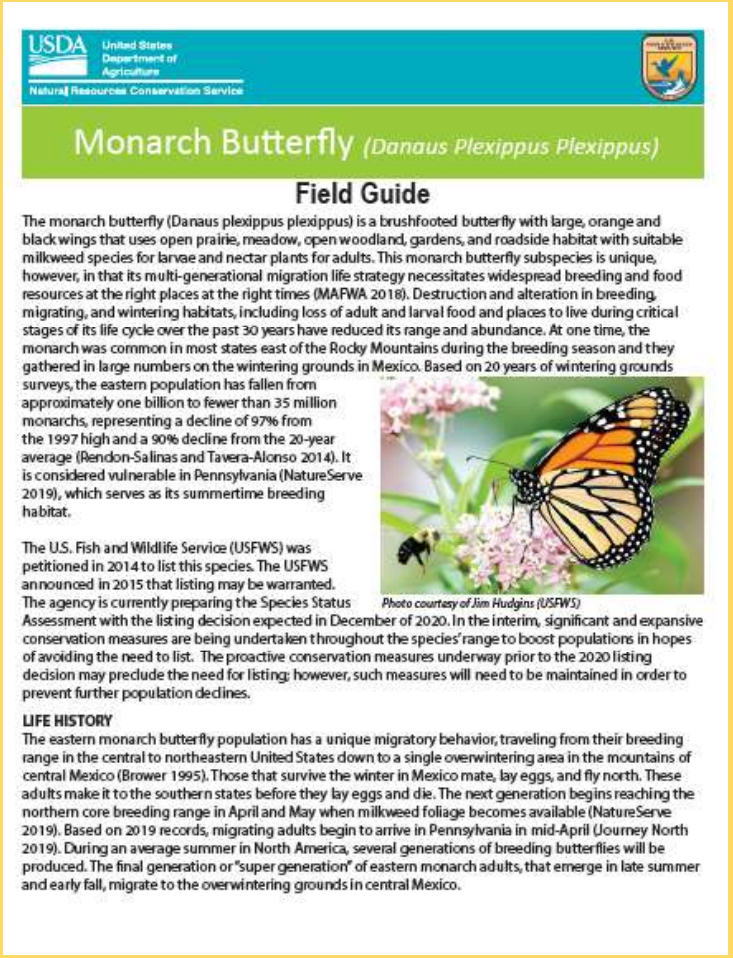
NRCS-USFWS FACT SHEETS

BIOLOGISTS

- SPECIES INFORMATION
- LIFE CYCLE
- HABITAT REQUIREMENT
- PLANT LISTS
- HABITAT RESTORATION
- LONG TERM MAINTENANCE
- REFERENCES

LANDOWNERS

- SIMILAR, BUT WITH LESS DETAILS



USDA United States Department of Agriculture
Natural Resources Conservation Service

Monarch Butterfly *(Danaus Plexippus Plexippus)*

Field Guide

The monarch butterfly (Danaus plexippus plexippus) is a brushfooted butterfly with large, orange and black wings that uses open prairie, meadow, open woodland, gardens, and roadside habitat with suitable milkweed species for larvae and nectar plants for adults. This monarch butterfly subspecies is unique, however, in that its multi-generational migration life strategy necessitates widespread breeding and food resources at the right places at the right times (MAFWA 2018). Destruction and alteration in breeding, migrating, and wintering habitats, including loss of adult and larval food and places to live during critical stages of its life cycle over the past 30 years have reduced its range and abundance. At one time, the monarch was common in most states east of the Rocky Mountains during the breeding season and they gathered in large numbers on the wintering grounds in Mexico. Based on 20 years of wintering grounds surveys, the eastern population has fallen from approximately one billion to fewer than 35 million monarchs, representing a decline of 97% from the 1997 high and a 90% decline from the 20-year average (Rendon-Salinas and Tavera-Alonso 2014). It is considered vulnerable in Pennsylvania (NatureServe 2019), which serves as its summertime breeding habitat.

Photo courtesy of Jim Hudgins (USFWS)

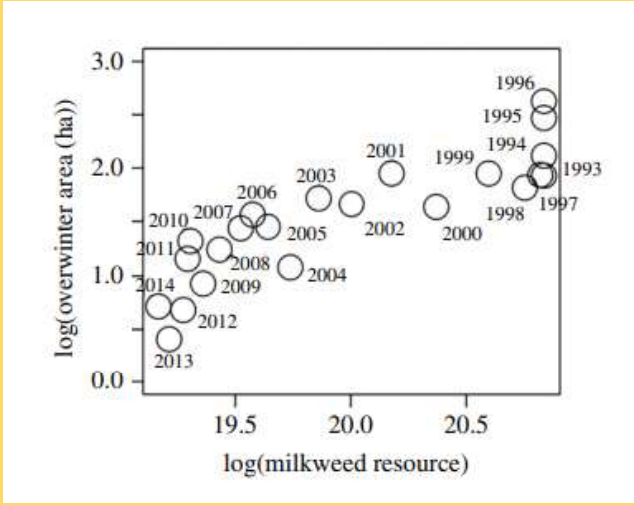
The U.S. Fish and Wildlife Service (USFWS) was petitioned in 2014 to list this species. The USFWS announced in 2015 that listing may be warranted. The agency is currently preparing the Species Status Assessment with the listing decision expected in December of 2020. In the interim, significant and expansive conservation measures are being undertaken throughout the species' range to boost populations in hopes of avoiding the need to list. The proactive conservation measures underway prior to the 2020 listing decision may preclude the need for listing; however, such measures will need to be maintained in order to prevent further population declines.

LIFE HISTORY

The eastern monarch butterfly population has a unique migratory behavior, traveling from their breeding range in the central to northeastern United States down to a single overwintering area in the mountains of central Mexico (Brower 1995). Those that survive the winter in Mexico mate, lay eggs, and fly north. These adults make it to the southern states before they lay eggs and die. The next generation begins reaching the northern core breeding range in April and May when milkweed foliage becomes available (NatureServe 2019). Based on 2019 records, migrating adults begin to arrive in Pennsylvania in mid-April (Journey North 2019). During an average summer in North America, several generations of breeding butterflies will be produced. The final generation or "super generation" of eastern monarch adults, that emerge in late summer and early fall, migrate to the overwintering grounds in central Mexico.

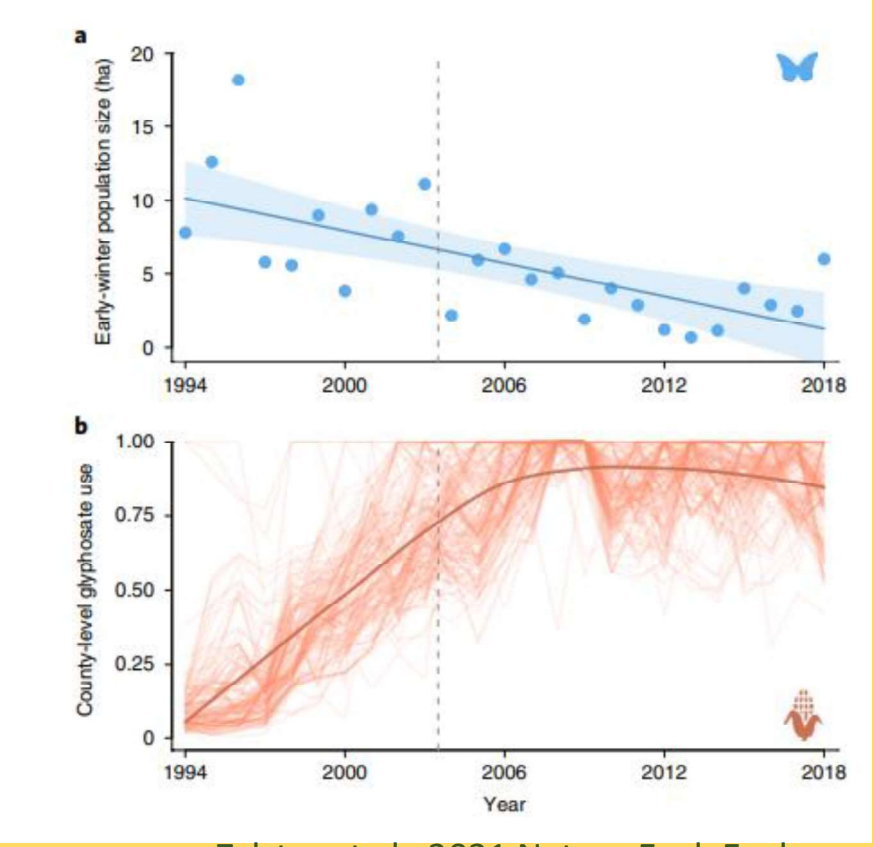
GLYPHOSATE INDIRECT EFFECTS

- DECLINE IN OVERWINTERING POPULATION IN MEXICO
- INCREASE IN PROPORTION OF CORN AND SOYBEANS TREATED WITH GLYPHOSATE



Thogmartin et al. 2017 Royal Soc. Open Sci.

OVERWINTERING POPULATION SIZE RELATIVE TO MILKWEED ABUNDANCE



Zylstra et al. 2021 Nature Ecol. Evol.

FERTILIZER INDIRECT EFFECTS

NITROGEN

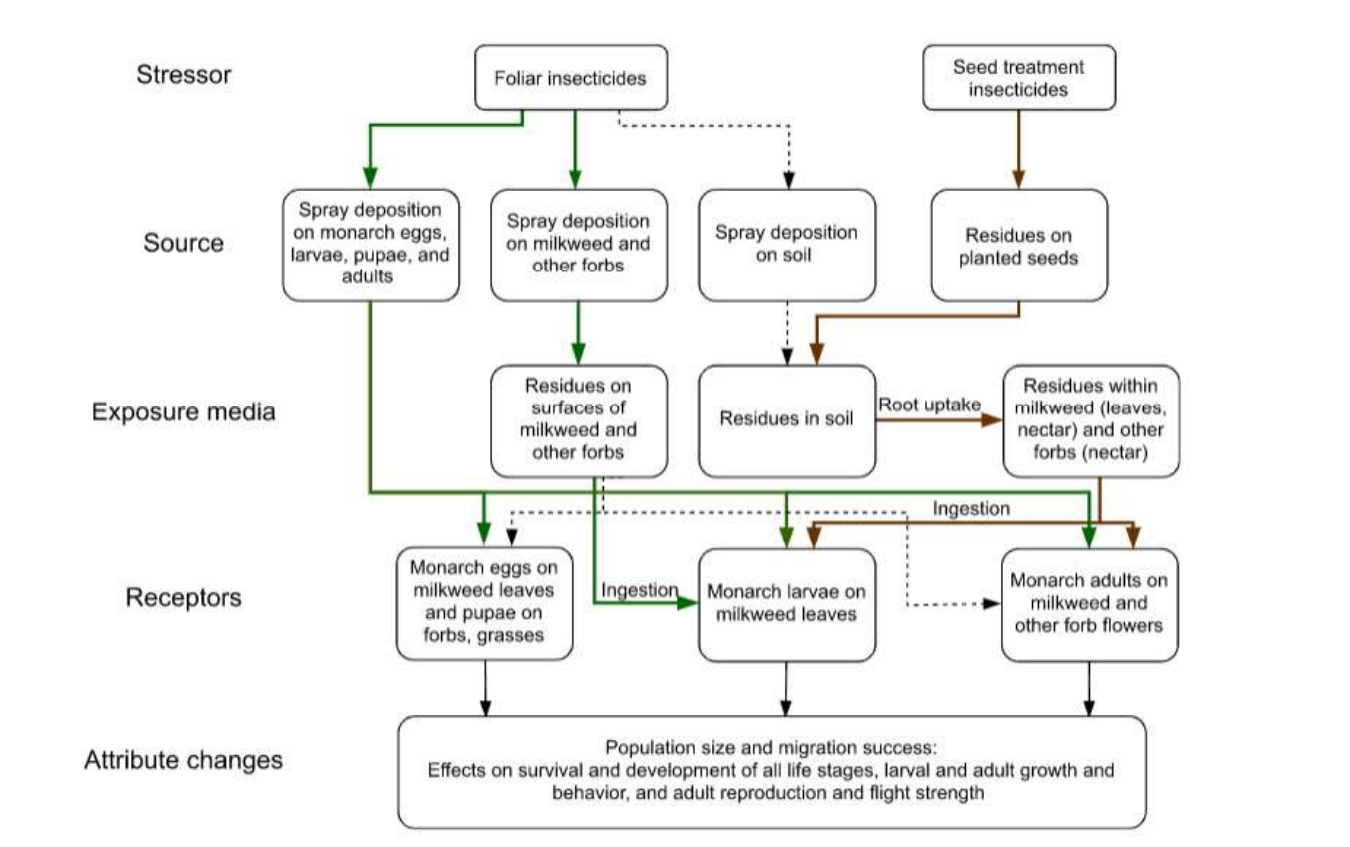
- High N increases toxicity of milkweed leaf cardenolides
- Decreases growth of larvae

PHOSPHORUS

- High P increases latex in milkweed leaves
- Decreases larval growth

Malcolm 2018. Annual Review of Entomology

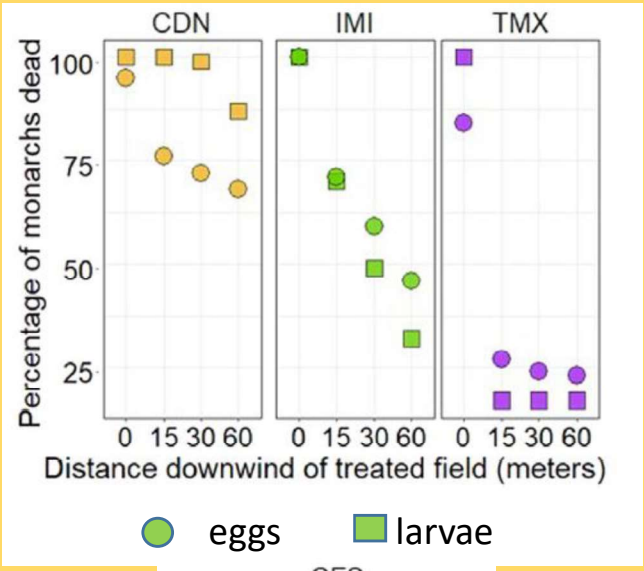
MONARCH PESTICIDE EXPOSURE PATHWAYS



PESTICIDE DIRECT EFFECTS

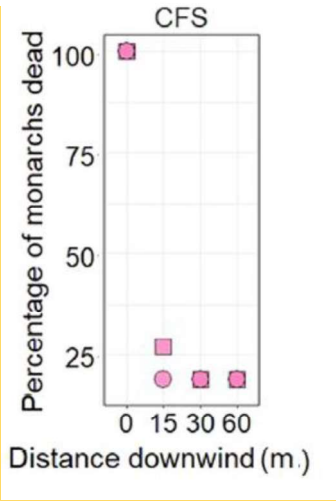
NEONICOTINOIDS

- **~100% corn seeds & 50% soybeans treated**
- **Up to 4 ppb in milkweed on corn field edges**
- **Detected in up to 75% of milkweed bordering corn and soybean**
- **Sublethal effects on monarch larvae at 1 ppb**
- **Single soil treatment results in >6,000 ppb in milkweed flowers - no larvae survived after 14 days of exposure**
- **Seed treatments cause no significant risk to monarchs**
- **Buffer zones of 60 m are effective in reducing mortality for imidacloprid (IMI) and thiamethoxam (TMX), but clothianidin may require extensive buffers**



ORGANOPHOSPHATES (chlorpyrifos; CFS)

- **Primarily used on soybeans, fruit/nut trees, & vegetables**
- **Less toxic to eggs, larvae and adults; no effect on adult emergence at exposures tested**
- **Buffers up to 60 m ineffective for aerial applications**
- **Buffer zones >15 m for ground applications are effective at reducing risks to monarchs**

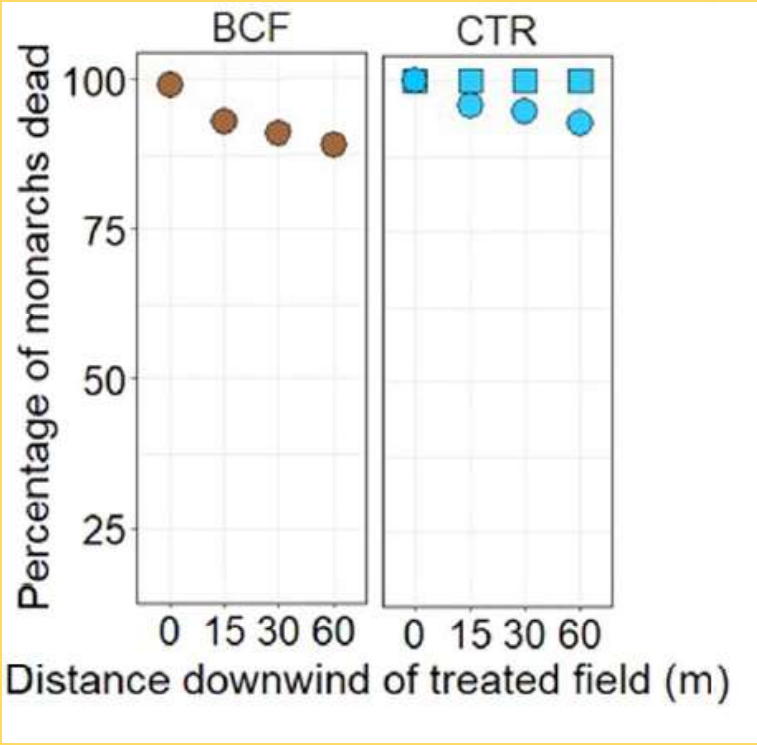


Malcolm 2018. Annual Review of Entomology; AgInfomatics 2017; Olaya-Arenas and Kaplan 2019; Krishnan et al. 2021

PESTICIDE DIRECT EFFECTS

CHLORANTRANILIPROLE (CTR)

- **Labeled for use on fruits, vegetables, potatoes, ornamentals, turf**
- **Extremely toxic to monarch eggs, larvae, pupae, and adults**
- **50-500x more toxic to monarchs than neonicotinoids**
- **Risk models predict toxicity to eggs and to larvae at 60 m from aerially and high-boom treated fields**
- **No studies of CTR-treated seeds are available**
- **Establishing monarch habitat close to CTR-treated crops may not be beneficial**



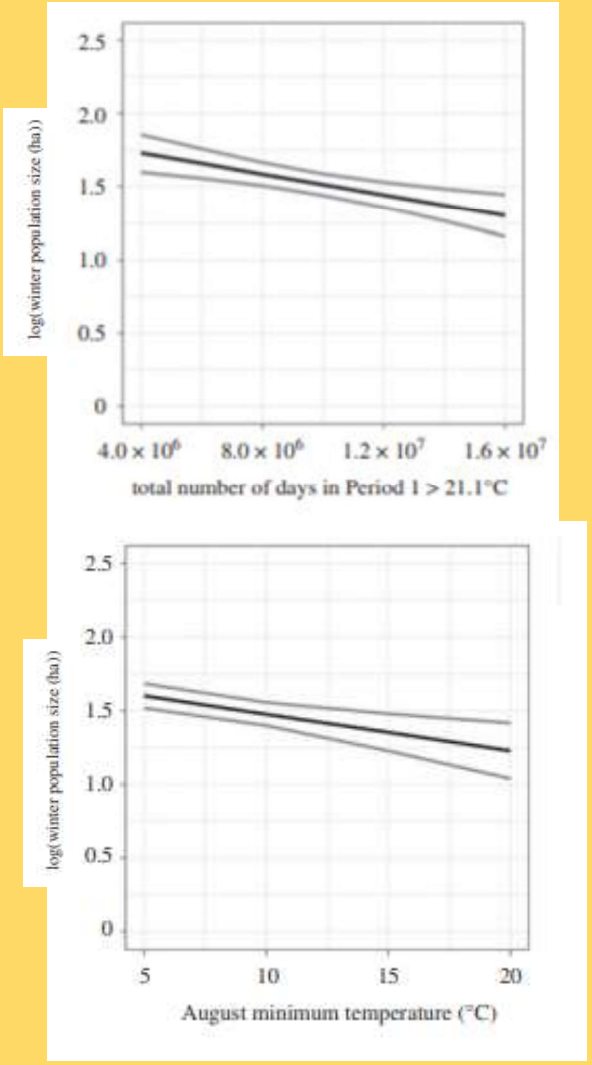
SYNTHETIC PYRETHROIDS (beta-cyfluthrin; BCF)

- **Sunflower, corn, soybean, wheat – 50-70%**
- **Reduce larvae survival at 0.1% of approved application rate**
- **Extremely toxic to monarch eggs, pupae & adults; larvae not tested**
- **Risk models predict toxicity to eggs from aerially and high-boom treated fields**
- **Establishing monarch habitat close to BCF-treated crops may not be beneficial**

Krishnan et al. 2021;

CLIMATE EFFECTS

- **OVERWINTERING POPULATION IN MEXICO RELATIVE TO**
  - **Total Days >21.1°C**
  - **August minimum temperature**
- **INCREASING NEGATIVE EFFECT OF CLIMATE CHANGE**



Thogmartin et al. 2017 Royal Soc. Open Sci.

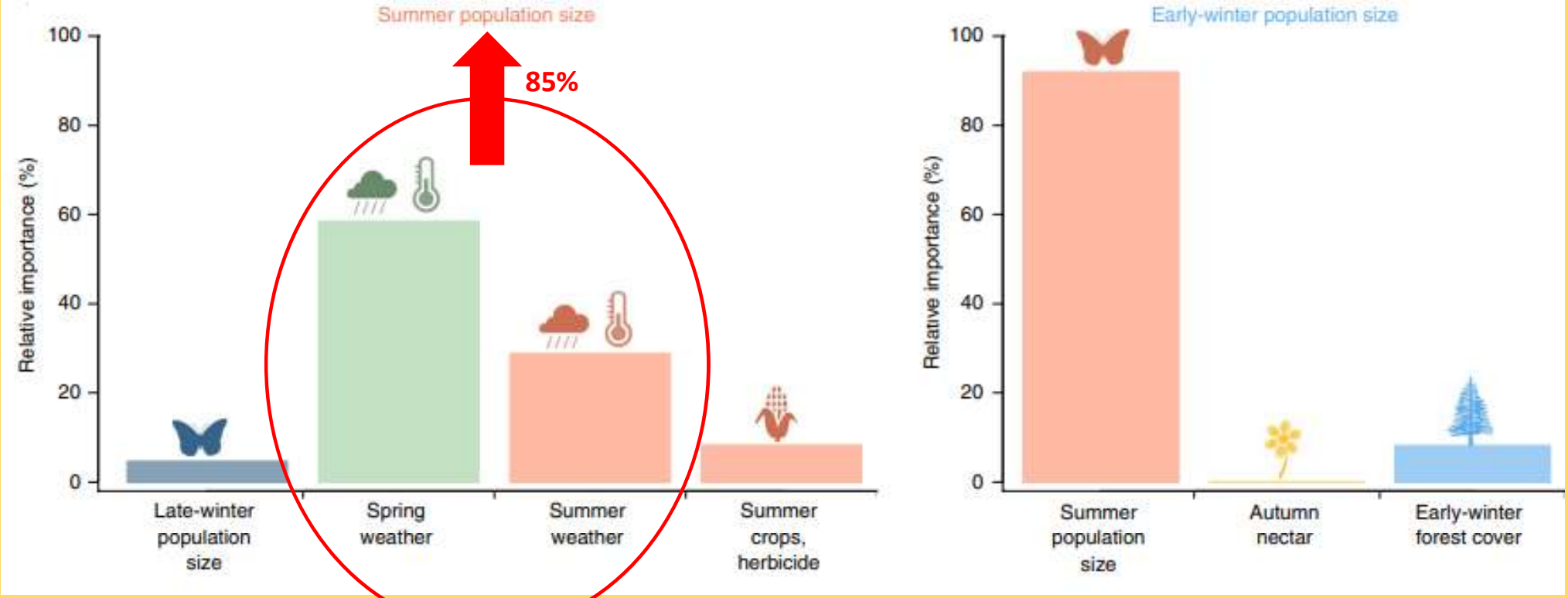
Decline of North American Monarchs

Influence	Rank	% Contribution
Availability, spatial distribution, and quality of milkweed	1	22 (15-25)
Availability, spatial distribution, and quality of nectar resources (breeding)	2	18 (13-20)
Insecticides	3	18 (15-22)
Climate change effects via impacts to habitat	4	17 (10-19)
Availability and quality of overwintering habitat	5	16 (12-18)
Climate change via non-habitat mediated effects	6	8 (3-14)
All others	7	4 (0-7)

25%

U.S. Fish and Wildlife Service. 2020. Monarch (*Danaus plexippus*) Species Status Assessment Report. V2.1 96 pp + appendices.

STRESSOR IMPORTANCE BY SEASON



Zylstra et al. 2021. Nature Ecol. Evol.

Questions?

Photo Credit USFWS

01/19/58 – Tim Peters, NRCS State Engineer was introduced and provided updates in the area of Engineering. (See attached hand-out.) Tim started his presentation with information concerning recent reports of Highly Pathogenic Avian Influenza. He discussed actions being taken by NRCS and its representatives. Those being: Suspended poultry visits, case by case requirements and measures that must be followed when work must continue. He explained the role that NRCS is taking to assist the Lead Organizations in the effort to contain the disease. The bottom line being that NRCS representatives do not want to add to the spread of this infectious disease from farm to farm. He then discussed the NRCS role in the Emergency Watershed Protection Program (EWPP). He stated that for the continuous process improvement, NRCS brought in two moderators from Texas to assist and support us. Together, we spent a week focusing on identifying issues and challenges, suggesting solutions, working on a new process for the EWP Program for Pennsylvania, and working on supporting tools, sponsoring guides, and training material. We are ultimately working to complete projects quicker with less staff time involved. He noted that we are currently working on supporting documentation for sponsors, a program NRCS funded by 75 percent and the remaining 25 percent by a prospective sponsor for after the construction is completed. We are also working on developing training material for our own people and supporting documents to help with the various stages of the process. Continuing on, he reminded the Committee members that we have sent out several practices for review and that any comments, additions are due back to our office by the 18th of May. He continued to review those proposed practices.

State Technical Committee Meeting April 2022 ENGINEERING

Tim Peters, PE

Highly Pathogenic Avian Influenza

NRCS

- Suspended Poultry Visits
- Case by Case when work must continue
  - Landowner Involvement
  - Avoiding birds, little, mortality
  - Disposable Tyvek suits
  - Washing Clothing, Vehicles, Equipment
  - Boot Wash and Disinfection

Emergency Watershed Protection Program

Continuous Process Improvement

- Week focused on identifying issues and suggesting solutions
- Working on a new process for the EWP program
- Working on supporting tools, sponsor guides, training material, etc

Standards Update

Out for Review with comments due 5/18/22

- 371 Air Filtration and Scrubbing
- 430 Irrigation Pipeline
- 432 Dry Hydrant
- 442 Sprinkler System
- 449 Irrigation Water Management
- 554 Drainage Water Management
- 558 Roof Runoff Structure
- 570 Stormwater Runoff Control
- 591 Amendments for Treatment of Agricultural Waste

Thank you

Tim Peters, PE

Tim.Peters@usda.gov

717-237-2212

01/30/56 – Dan Ludwig, NRCS State Resource Conservationist, provided an update on Technological Sciences. The biggest item being the completion of Boot Camp 1 and we are gearing up for Boot Camp 2 next week. We have experienced challenges during the past week, especially with rescheduling forum site visits for that training due to HPAI (Highly Pathogenic Avian Influenza). But we overcame that challenge and are able to move on with the training. Concerning Practice Standards, we will probably be releasing the PA Revision to Practice 382, the Fencing Standard at the July STC (State Technical Committee) Meeting. He indicated that Susan Parry our Grassland Specialist is working on that, and there will be a few more ready later in October now that National is working on that went through the National Register Review, so 2023 looks like it is going to be a busy year for Standards updates. He also remarked on the effects of the 4R's of Nutrients in relation to the Monarch Butterfly, and its effects on the milkweed plants. A study has found that there's been overall increases in subsurface nitrogen and soluble phosphorus losses. Really our soils haven't changed, but that No-Till and cover crops have also increased infiltration. And so essentially these losses can be attributed to the overall adoption of No-Till and also a large swing in the change of production acres of the corn and beans and fewer acres of wheat. The other interesting thing is the amount of acres that receive manure have increased substantially over time and one of the things that the study found is that it is linked to producers and operator not making a switch and finding the value of the nutrients to be beneficial over it just being a waste disposal problem. Even though soil testing on croplands has increased, especially on acres receiving manure, the increased application rates of the nutrients and the perceived nutrient availability of the manure still presents an issue. So overall acres receiving both manure, commercial fertilizer is almost twice the acres receiving only commercial fertilizer and third higher than acres receiving the manure alone. Another interesting thing is that although there has been a lot of stool testing, actual testing of the manure for nutrient values has not followed suit. So what they found is less than 50 percent for the acres receiving manure did not have the manure analyzed for nutrient content. So therefore, over 50 percent of the acres did not have enough information to establish proper application rates for

minimizing those potential losses for accumulation of phosphorus, and basically the study showing that they've unknown as to why producers may apply additional commercial fertilizer, which may not be needed for crop production. As we know and can see that the application of addition of commercial fertilizer isn't that added operational cost and also can contribute to an increase in potential losses. There is a need to better understand the nutrient content of manure and the availability for crop production. We are going to challenge our staff to really start looking and working with our producers to identify nutrient application, especially through manure. There have been some changes to our programs in relation to the transition to organic. This year they added a concept that they call CEMA (Conservation Evaluation Management Activities), two of which pertain to soil health. CEMA 216 which is for soil health testing and CEMA 217 which is for nutrient and soils testing. So we are going to challenge our staff to see how we can increase acres, increase operators that will start doing testing coupling that with their manure in their nutrient management. Denise Coleman added, that in the concentration of animals and more concentration of livestock. As we concentrate livestock, we remove that livestock away from pastured animals to putting them into our steps where the manure goes into a tank versus being spread out like in a lot of great systems that we also want to promote. We are also looking at grazing to address this as we do not want to lose the inroads that we have gained already through No-Till and through soil health and putting cover crops on the landscape. But we do want to take it that step further and get more precision out there on doing soil and nutrients testing. Also nationwide, we are planting a lot of corn. The market is up and it is creating producer to support more corn, thus more nitrogen on the field.

01/40/38 – Yuri Plowden, NRCS State Soil Scientist was not able to attend the meeting today, so Dan Ludwig reported for her. Yuri is working with the PA Soil Health Coalition on a promotion titled the "Soil Your Undies Challenge". (See attached hand-out.) It was started by NRCS in the state of Oregon. Pennsylvania NRCS took the lead on this promotion statewide and partnered with a company called "The Big Favorite". This company produces organic cotton and they have agreed to provide cotton underwear to the field offices to get out to the farms for the promotion. The whole promotion is about soil health. If we have good soil, nutrient, good biological activity, those microbes in that living system will actually break down in the degrade and eat up those that cotton that makes up these undies. The farmers will plant a pair of new cotton underwear in a hole about 3 inches deep in the site that they are curious about and lay them flat and cover them over with soil. They will wait at least 60 days before gently unearthing them. This gives the soil microbes time to do their job. They are asked to send us a photo and a little info about their experiment to pa-nrcs-publicinfo@usda.gov and their location will be put on the information map. The promotion is to launch in early June. Handouts have been provided to every NRCS Field Office. The "Soil Your Undies" challenge provides a fun way to talk about Soil Health. The buried underwear will be tracked on a map and will include pictures with permissions.

PENNSYLVANIA SOIL HEALTH COALITION

Brought to you by the PA Soil Health Coalition and the Big Favorite.

PA Coalition members are a who's who in PA Ag including:

PA NRCS	TNC
Stroud	CBF
PACD	PDA
PSU Extension	PANTA
Capital RC&D	SWCS
PA-GLC	State Cons Comm
PASA	Steve Groff CC
Rodale	4R alliance

1. "Plant" a pair of new, cotton underwear in a hole about 3 inches deep in the site you're curious about and lay them flat. Cover them and don't forget to mark the spot you planted!

2. Wait at least 60 days before you gently unearth them. This gives your soil microbes time to do their job.

3. Send us a photo and a little info about your operation to pa-nrcs-publicinfo@usda.gov and we'll put your undies on the map!

https://go.usa.gov/xtyJv

The QR code will take you to a sign up page that will have links to more soil health information.

Stay tuned!

- Plan is to launch in early June
- Have handouts in every field office.
- Soil Your Undies Challenge provides a fun way to talk about soil health.
- Buried underwear will be tracked on a map – no PII; will include pictures with permissions

PENNSYLVANIA SOIL HEALTH COALITION

01/44/42 – Ryan Cornelius, NRCS Environmental Quality Incentives Program (EQIP) Manager was introduced and provided an update on EQIP-CIC (Environmental Quality Incentives Program - Conservation Incentives Contracts). (See attached hand-out.) He indicated that we are well underway working on contracting across all of EQIP and AMA (Agricultural Management Assistance Program). We have a new program that we are introducing this year called EQIP-CIC. EQIP CIC was authorized by the 2018 Farm Bill to provide technical and financial assistance to producers for the implementation, adoption, management, and maintenance of incentive practices that effectively address at least one eligible priority resource concern. He indicated that last year Pennsylvania was considered for the program, however it was run as a pilot program and only offered in four western states. Pennsylvania has been identified as a High Priority Area (HPA) and the focus for FY22 is on Climate Smart Agriculture including soil health and carbon sequestration. EQIP-CIC can be a steppingstone for producers between EQIP classic and eventually the Conservation Stewardship Program. CSP requirements and enhancements will not be required or available in FY22. He stated that agriculture producers, landowners, non-industrial private forestland are eligible to apply for EQIP-CIC. Eligible land includes cropland, pastureland, and non-industrial private forestland, also socially disadvantaged, beginning, and limited resource and veteran farmers. The applicant must control or own eligible land, comply with AGI provisions and be in compliance with the highly erodible land and wetland conservation requirements. He indicated that 5 percent of the EQIP general allocation will be reserved for this program. He listed the EQIP-CIC practices that are eligible for FY22 which focus on Soil Health. The one practice that will be primary will be Cover Crops where we have a $20,000 per year cap. He discussed the features of the EQIP CIC program. He described what being a High Priority Area means to Pennsylvania involves. Land use will be cropland, pasture and forestry. The resource concerns as being: Soil quality limitations; field, sediment, nutrient and pathogen loss; degraded plant condition; and terrestrial habitat. The timeline for the program is: January 20th when sign-up began; April 1st as being the sign-up deadline; May 16th is the ranking deadline and August 30th as the contract obligation deadline. He then

provided an update summary of the EQIP Cover Crop Initiative, indicating that 38 contracts have been obligated, with almost $1 million obligated that covered 18,408 acres (6,800 acres being treated) covering 8 Counties in Pennsylvania. He reminded the committee of the upcoming timeline and important dates concerning EQIP-AMA. He also reviewed the completion of the CARP (Coronavirus Agricultural Relief Payments) assistance program. He noted that he was unsure if the program would be extended at this point. The assistance program was geared to assist producers to continue the completion of projects in dealing with the price spikes caused by COVID-19.

EQIP - Conservation Incentive Contracts (EQIP-CIC)

What is EQIP CIC:

- The 2018 Farm Bill authorized NRCS to provide technical and financial assistance to producers through EQIP-CIC for the implementation, adoption, management, and maintenance of incentive practices that effectively address at least one eligible priority resource concern.

- Last year PA was considered for EQIP CIC...., however, it was only offered in 4 western states as a pilot.

- Priority Resource Concerns within a State-identified High Priority Area (HPA). The focus for FY22 in Pennsylvania is on Climate Smart Agriculture including Soil Health and Carbon Sequestration. EQIP-CIC **can be** a steppingstone for producers between EQIP classic and eventually the Conservation Stewardship Program.

- CSP requirements and enhancements will **NOT** be required or available in FY22.

Who is Eligible, like regular EQIP:

Agricultural producers, landowners, non-industrial private forestland are eligible to apply for EQIP-CIC. Eligible land includes cropland, pastureland, non-industrial private forestland.

Socially disadvantaged, beginning, and limited resource and veteran farmers.

Applicants must:

- Control or own eligible land.
- Comply with AGI provisions.
- Be in compliance with the highly erodible land and wetland conservation requirements.

EQIP CIC Allocation:

- PA needed to reserve 5% of the EQIP general allocation or $200,000, whichever is greater for FY2022. For PA, that will be $1.126 million.

- However, PA will have the flexibility to roll unused funds back to the EQIP general fund.

FY2022 EQIP-CIC Eligible Practices

Code	Practice	Unit	Lifespan
216	Soil Health Testing	No	1
217	Soil and Source Testing for Nutrient Management	No	1
328	Conservation Crop Rotation	Ac	1
329	Residue and Tillage Management, No Till	Ac	1
338	Prescribed Burning	Ac	1
340	Cover Crop	Ac	1
368	Emergency Animal Mortality Management	No	1
449	Irrigation Water Management	Ac	1
484	Mulching	Ac	1
528	Prescribed Grazing	Ac	1
554	Drainage Water Management	Ac	1
590	Nutrient Management	Ac	1
591	Amendments for Treatment of Agricultural Waste	Au	1
592	Feed Management	Au	1
595	Pest Management Conservation System	Ac	1
644	Wetland Wildlife Habitat Management	Ac	1
645	Upland Wildlife Habitat Management	Ac	1
647	Early Successional Habitat Development-Mgt	Ac	1

Note: 368 - Emergency Animal Mortality Management, this practice to be used in response to a catastrophic event and also needs to be approved by the State Conservationist.

Annual Practice Cap for 340 Cover Crops - $20,000

EQIP CIC Features:

- Require producers to address at least one priority resource concern during the contract period.
- Have an initial length of 5 years.
- In Protracts, the expiration date will be manually set to reflect a length of 5 years.
- Have a payment limitation of $200,000 for the life of the 2018 Farm Bill which expires in 2023.

Example: High Priority Area (HPA) – State of Pennsylvania

Land Use: Cropland, Pasture, Forestry

Resource Concern(s):

- Soil quality limitations
- Field, Sediment, Nutrient, and Pathogen Loss
- Degraded Plant Condition
- Terrestrial habitat

Note: other landuses will be included for those eligible practices offered to address the resource concern(s).

EQIP CIC Timeline & important dates:

- Original Announcement, January 20th. EQIP-CIC sign-up began.
- April 1st
  Application Sign-up Deadline.
- May 16th
  Ranking Deadline.
- August 30th:
  Contract Obligation Deadline.

Summary of EQIP Cover Crop Initiative (CCI)

Total # Contracts Obligated: 38
Total obligated: $999,913 (We were allocated $1,000,000)
Total Treated acres: 6,809.4 acres
Total Cover Crop acres contracted: 18,408 acres (This differs from treated acres because cover crop maybe be contracted for up to 3 years)

County	# of Contracts	Acres Treated	Total Cover Crop Acres Contracted	Obligated
Bedford	16	2222 ac	6393.3 ac	$376,719
Bradford	1	100 ac	300 ac	$16,419
Columbia	2	349.2 ac	1025.7 ac	$52,608
Fulton	3	180 ac	540.0 ac	$34,626
Indiana	3	1258.5 ac	2053.5 ac	$113,889
Lancaster	5	1009.4 ac	3030.6 ac	$120,982
Northampton	8	1690.3 ac	5064.9 ac	$284,670

EQIP/AMA Upcoming timeline & important dates:

- May 2nd
  Statewide Fund Pools Ranking Deadline.

- May 16th
  Remaining Fund Pools Ranking Deadline.

Questions?

01/55/21 – Ashley Lenig, NRCS Conservation Program Manager was introduced and provided updates on CIG (Conservation Innovation Grants), CSP (Conservation Stewardship Programs) and EQIP-NWQI (Environmental Qualitative Innovation Program-National Water Quality Initiatives). She announced the closing of PA CIG Funding Opportunity, USDA-NRCS-PA-CIG-22-NOFO0001147 on April 14, 2022. 7 applications for that funding opportunity have been received prior to closing. She noted that PA CIG priorities included: Soil Health, Water Quality, Urban Farming, Non-industrial Private Forestland (NIPF), Carbon Sequestration and Legacy Sediment. Moving on to CSP, she indicated that the CSP Classic preparations are underway. She is working on the activity list and enhancement worksheets and intends to work on developing rankings and guidance in the coming months. She noted that EQIP-NWQI work continues in the 5 watersheds that includes Warrior Run, Upper Kishacoquillas, Upper Yellow and Beaver Creeks, Swatara Creek and Maiden Creek. She indicated that the NWQI rankings are out. She noted some significant updates that give additional credit for resource concern affecting water quality. Regarding NWQI funding, she stated that in FY 2020 NRCS funded 33 projects for $3.7 million, in FY 2021, 14 projects amounting to $1.4 million. For FY 2022, the initial allocation is set at $884 thousand, however we have requested an additional $3 million from watershed budgets. Presently we have 22 NWQI applications in the state. She discussed the Swatara Creek NWQI Successes in the reduction of turbidity. In closing, she discussed the FY 2021 Annual Accomplishments Report that explains in detail the Swatara Creek Watershed.

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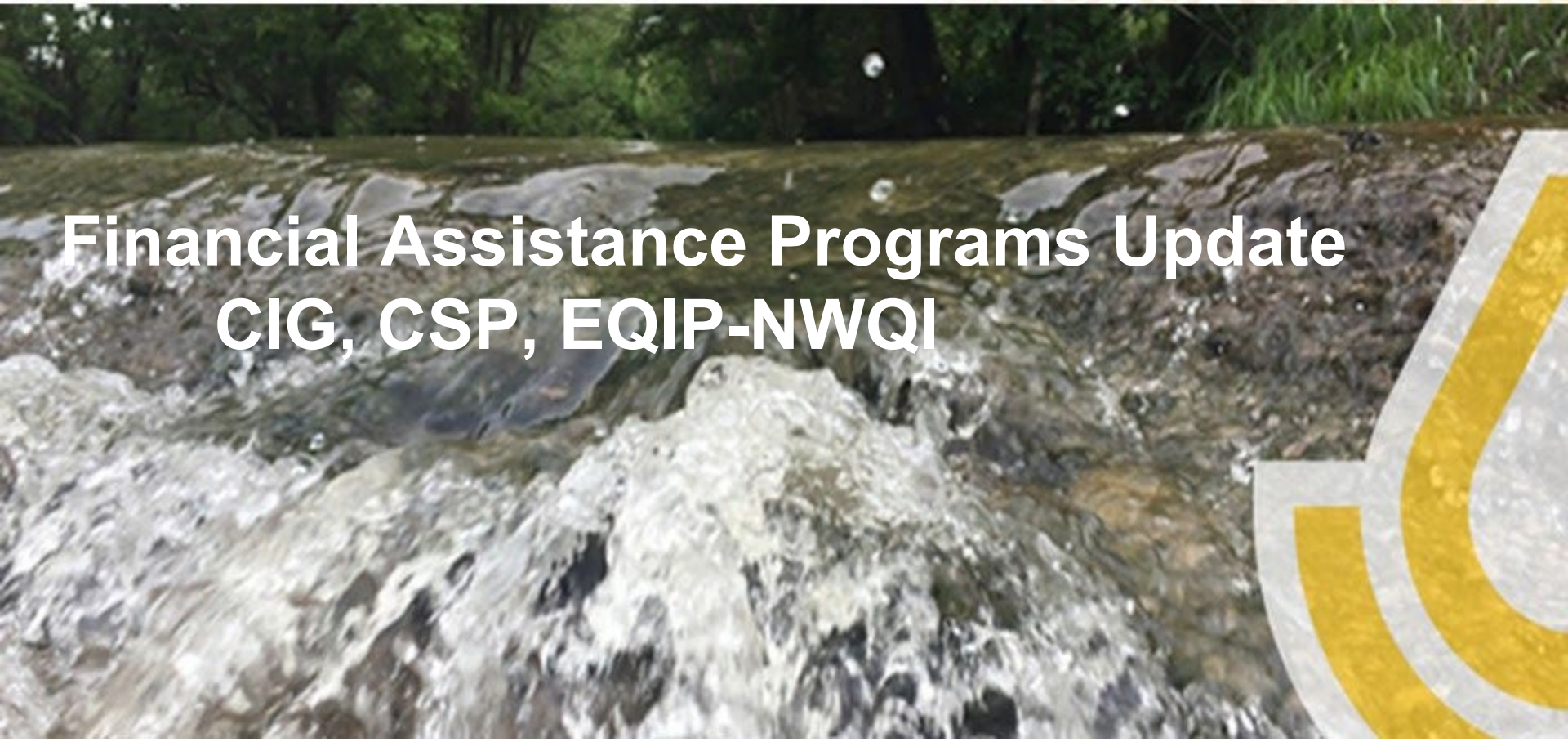
PA NRCS Programs Team



Financial Assistance Programs Update
CIG, CSP, EQIP-NWQI

Pennsylvania State Technical Committee Meeting
Ashley Lenig, Conservation Program Manager

April 21, 2022

Natural Resources Conservation Service

nrcs.usda.gov/

Presentation Outline

Conservation Innovation Grants (CIG)

- FY2022 Notice of Funding Opportunity

Conservation Stewardship Program (CSP)

- Preparing for CSP Classic

National Water Quality Initiatives (EQIP-NWQI)

- Success story sheet from Swatara Creek

FY2022 Conservation Innovation Grants

PA CIG Notice of Funding Opportunity

USDA-NRCS-PA-CIG-22-NOFO0001147

closed at 11:59 pm on April 14, 2022.

FY2022 Conservation Innovation Grants

PA CIG Priorities:

- Soil Health
- Water Quality
- Urban Farming
- Non-industrial Private Forestland (NIPF)
- Carbon Sequestration
- Legacy Sediment

Conservation Stewardship Program

CSP Classic preparations underway

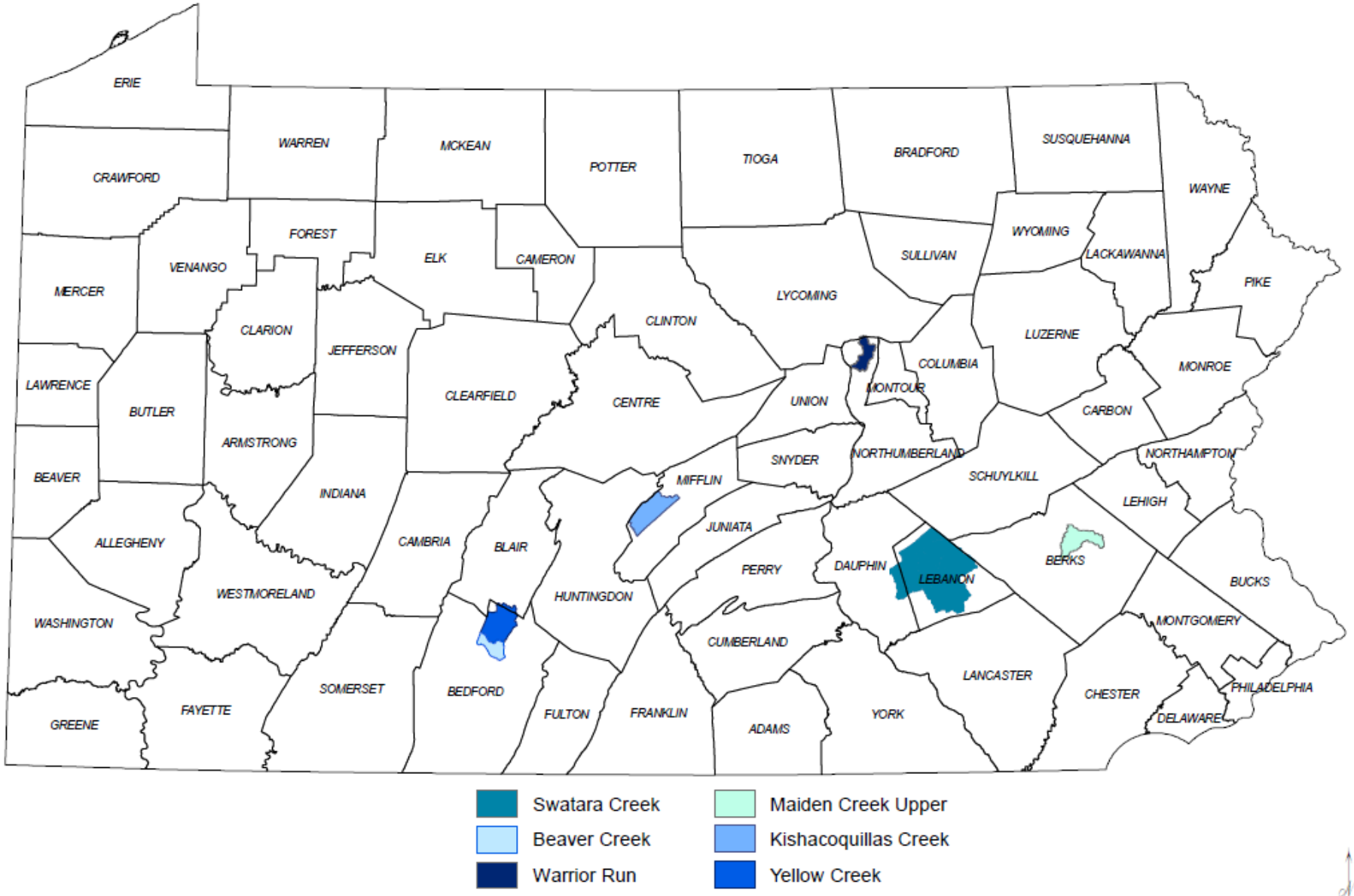
- Pennsylvania Activity List
- Pennsylvania Enhancement Jobsheets
- Intend to work on developing rankings and guidance in the coming months.

National Water Quality Initiative

EQIP – NWQI work continues in 5 watersheds.

- **Warrior Run**
- **Upper Kishacoquillas Creek**
- **Upper Yellow and Beaver Creeks**
- **Swatara Creek**
- **Maiden Creek**

NWQI Watersheds



USDA

January 2019

NWQI Ranking

Section: Program Questions		
Question	**Answer Choices**	**Points**
Is the producer a Limited Resource Farmer based on the USDA online self-determination tool?	YES	10
	NO	0
Will the applicant implement core conservation practices within a quarter mile of a stream or water body that is threatened (i.e., Ag Impaired, receives significant runoff of excess nitrogen or phosphorous) and on the EPA 303(d) list? (Geospatial Answered)	Will the applicant implement core conservation practices within a quarter mile of a stream or water body that is threatened (Ag Impaired)?	0
	Otherwise	0

Section: Program Questions		
Question	**Answer Choices**	**Points**
Is the applicant applying one or more of the following core practices (313, 316, 317, 327, 328, 329, 330, 332, 340, 342, 355, 360, 366, 386, 390, 391, 393, 395, 410, 412, 436, 449, 472, 528, 554, 561, 575, 580, 590, 600, 612, 629, 634, 635, 638) within quarter mile of a stream or water body that is threatened?	YES	20
	NO	0
(Select ONE) Is a resource concern affecting water quality within (choose only one answer):	100 feet of a stream, well, wetland, sinkhole or other water body whereas the applicant will address the concern by implementation of practices contained in the application?	70
	200 feet of a stream, well, wetland, sinkhole or other water body whereas the applicant will address the concern by implementation of practices contained in the application?	50
	300 feet of a stream, well, wetland, sinkhole or other water body whereas the applicant will address the concern by implementation of practices contained in the application?	25
	More than 300 feet of a stream, well, wetland, sinkhole or other water body whereas the applicant will address the concern by implementation of practices contained in the application?	0
Is the land located within a zone of protection (Surface Water Protection Areas and Groundwater Protection Areas)?(Geospatial Answered)	Zone A	100
	Zone B	75
	Zone C	50
	Otherwise	0
Is participant seeking funds from EQIP to cover costs for an expansion to the operation, more than what is needed to address existing resource concerns?	YES	-100
	NO	0

Section: Resource Questions		
Question	**Answer Choices**	**Points**
Does the PLU intersect the critical source area layer(s) for NWQI watersheds? (Geospatial answered)	Does the PLU intersect the critical source area layer(s) for NWQI watersheds?	80
	Otherwise	0
Is the program application for development of a stand-alone Conservation Planning Activity (CPA), Design and Implementation Activity (DIA), Conservation Evaluation and Monitoring Activity (CEMA) or a combination of these? If answer is Yes, then answer No to all remaining Program questions. If the answer is No, proceed with evaluation to address the remaining questions in the Program Questions section.	YES	120
	NO	0
Is the majority of the land included in the application located in the map units that Pennsylvania NRCS has identified as having poorly or somewhat poorly drained soils (High Runoff Soils PA map layer)? (Geospatial answered)*	Yes	0
	Otherwise	0

Section: Resource Questions		
Question	**Answer Choices**	**Points**
Is the applicant applying one or more of the following practices (327, 329, 330, 340, 362, 386, 390, 391, 393, 412, 512, 528, 585, 590, 600) to reduce surface runoff from poorly or somewhat poorly drained soils (High Runoff Soils PA map layer)? *	YES	15
	NO	0
Is the majority of the land included in the application located in the map units that Pennsylvania NRCS has identified as having high leaching potential soils? (Geospatial answered)*	Is the land included in the application comprised high leaching potential soils?	0
	Otherwise	0
Is the applicant applying one or more of the following practices (327, 340, 386, 390, 391, 393, 512, 528, 561, 590, 635) in a land unit that contains high leaching potential soils to reduce nutrient or pesticide movement? *	YES	15
	NO	0
Does this program application include the implementation of a system of conservation practices that address the NWQI primary resource concerns? *	YES	10
	NO	0
Is there an existing Riparian Forest Buffer (minimum width 35 feet) on all streams on the project area, or will the applicant establish these forest buffers within the contract? *	YES	15
	NO	0
Is there an existing Riparian Herbaceous Cover (minimum width 35 feet) on all streams in the project area, or will the applicant establish these herbaceous buffers within the contract? *	YES	10
	NO	0
Is gully erosion or severe rill erosion present and will be addressed by proposed contract implementation? *	YES	5
	NO	0
(Select One) Does the applicant have (choose only one answer):*	A fully developed CNMP with a site inventory and evaluation (I and E) to handle manure and wastewater storage and treatment (if needed) and a phosphorus based nutrient management plan?	20
	A Prescribed Grazing (528) plan including an Inventory and Evaluation (I and E) for the	10

NWQI Funding

- FY 2020 - funded 33 for $3,708,515
- FY 2021 - funded 14 for $1,383,397

- FY2022 – Initial Allocation $883,546
  - $3M original request from watershed budgets
  - Requested $2,000,000 in March to fund applications in these watersheds
  - 22 NWQI applications in the state.

Sharing Small Successes

USDA United States Department of Agriculture

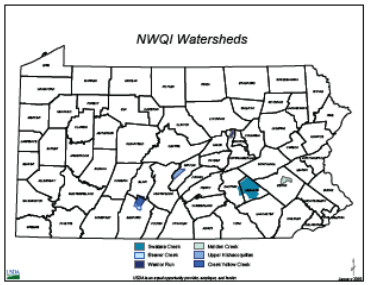
Swatara Creek NWQI Successes

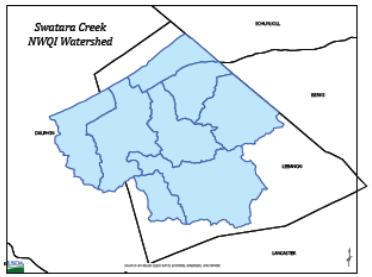
The USDA Natural Resources Conservation Service's (NRCS) National Water Quality Initiative (NWQI) is improving water quality in five watersheds across the state. The Swatara Creek NWQI is one of two watersheds in the state focused on improving sources of drinking water. When source water, whether ground or surface water, is protected from pollution, it remains cleaner and requires less treatment to ensure that safe drinking water standards are met.

The primary water suppliers within this watershed are the Pennsylvania American Water Company (PAWC), City of Lebanon Authority (CLA), Fredericksburg Water Authority (FWA), Quentin Water Company (QWC) and West Lebanon Township (WLT). These suppliers account for 98 percent of the population on community water supplies.

NWQI funds are available through the Environmental Quality Incentives Program (EQIP) to assist landowners in installing conservation practices on the landscape that will prevent excessive amounts of nutrients and sediments from reaching the state identified ag impaired streams. NRCS has conducted NWQI outreach in the area; but due to COVID restraints over the past two years, it has been challenging. For 2021, most outreach was accomplished via in-person personal contact versus large-scale workshops. Local NRCS staff participated in three events to make the public aware of the Swatara Creek NWQI, reaching approximately 350 individuals. They included a PSU Crops Day, Fulton Bank Ag Lenders Annual Appreciation Day, and the Susquehanna River Basin Commission Regional Annual Meeting.

Despite the challenges previously mentioned, the following work was done in the watershed.





OUTPUT	2020	2021	TOTALS
Conservation plans written	30	18	48
Contracts signed	10	10	20
Contract dollars committed	$1,618,747	$811,117	$2,429,864
Acres Treated	1,849.7	1,014.5	2,864.2

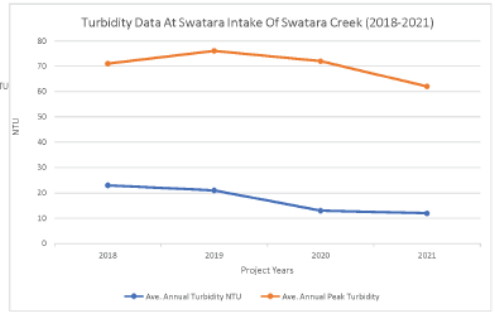
In addition to the NRCS measured outputs, water quality outcomes were measured by partners.This year (2021) was the third year of implementation for the Swatara Creek NWQI project. While total precipitation and number of peak storm events were both near average, there was a significant reduction in turbidity measurements during these peak storm events. Peak storm events represent the time in which conservation efforts are most easily identified as contributing factors to improvement in water quality. A 10 percent reduction of average annual peak turbidity by the third year of the project was set as a goal in the Watershed Assessment Plan for Swatara Creek (2019). The data demonstrates success in meeting this benchmark showing a 13-percent reduction since 2018. While there may be additional contributing factors to this water quality improvement, the evidence is quite clear that positive progress has been made.

SWATARA CREEK NWQI APPLIED PRACTICE HIGHLIGHTS

Practice	Amount	Unit	Resource Concern Addressed
Access Road	844.0	Ft	Gully erosion
Diversion	3,116.0	Ft	Gully erosion
Fence	20,916.0	Ft	Inadequate feed and forage
Heavy Use Area Protection	25,102.0	SqFt	Excess nutrients to surface water
High Tunnel System	3,363.0	SqFt	Undesirable plant productivity and health
Nutrient Management	590.1	Ac	Nutrients transported to surface water
Subsurface Drain	5,082.0	Ft	Sheet and rill erosion
Trails and Walkways	9,892.0	Ft	Sheet and rill erosion
Underground Outlet	7,480.0	Ft	Excess nutrients to surface water
Waste Storage Facility	18.0	No	Nutrients transported to surface water

SWATARA CREEK NWQI PLANNED PRACTICE HIGHLIGHTS

Practice	Amount	Units	Resource Concern Addressed
Cover Crop	609.0	Ac	Aggregate instability
Diversion	5,020.0	Ft	Gully erosion
Fence	16,702.0	Ft	Inadequate feed and forage
Heavy Use Area Protection	17,502.0	SqFt	Excess nutrients to surface water
Lined Waterway or Outlet	858.0	Ft	Gully erosion
Livestock Pipeline	11,160.0	Ft	Inadequate water
Nutrient Management	3,455.2	Ac	Nutrients transported to surface water
Prescribed Grazing	369.5	Ac	Inadequate feed and forage
Roofs and Covers	17.0	No	Nutrients transported to surface water
Terrace	8,475.0	Ft	Sheet and rill erosion



	Ave. Annual Turbidity	Ave. Annual Peak Turbidity
	NTU	
2018	23	71
2019	21	76
2020	13	72
2021	12	62

	# Peak Storm Events	Total Annual Precipitation	Reduction in Ave. Annual Peak Turbidity
		Inches	
2018	20	67	x
2019	17	48	7%
2020	10	38	1%
2021	14	46	-13%
Ave.	15	50	

PENNSYLVANIA
Natural Resources Conservation Service
www.pa.nrcs.usda.gov

 February 2022

FY 2021 Annual Accomplishments Report

ENHANCING WATER QUALITY

SOURCE WATER PROTECTION EFFORTS REDUCE SEDIMENT DELIVERY IN SWATARA CREEK WATERSHED

By Mike Snyder, NRCS

In 2019, a partnership with the Pennsylvania American Water Company (PAWC) and NRCS was awarded a National Water Quality Initiative project covering the Dauphin and Lebanon County portions of the Swatara Creek Watershed. This source water protection initiative prioritizes the implementation of conservation practices on agricultural operations which comprise nearly 50 percent of the 264 square mile watershed that contributes to the Hershey/ Palmyra Municipal Water Supply. Over 60 percent of streams in this watershed are designated as being impaired by agriculture according to the Pennsylvania Department of Environmental Protection. Water quality data is collected and analyzed for changes in turbidity measured at the PAWC intakes on the lower Swatara and Manada Creeks.

As the installation of conservation practices ramps up in the second year of implementation, NRCS is seeing successful projects on the landscape that have great potential to reduce both sediment and nutrient delivery to surface waters. Focusing on reducing erosion, which would most dramatically impact turbidity, NRCS has tackled several examples of remedying gully erosion in cropland. In FY21, 4.3 acres of grassed waterways were installed along with their supporting practices such as diversions, terraces, and subsurface drains. These grassed waterways alone can be attributed to correcting an estimated 265 tons of historical erosion that was delivered to surface water.

In addition to sediment pollution in the watershed, nutrients remain a significant challenge as well for water suppliers. The need to upgrade waste management systems and improve livestock management are costly investments for many agricultural producers given today's markets. This year NRCS has invested in excess of $500,000 to address nutrient delivery to ground and surface water through the installation of five waste storage facilities, two roofs, 6,400 square feet of concrete heavy use areas, two waste transfer systems, and over 500 acres of nutrient management implementation.

Grassed waterways, along with supporting practices, were installed to correct an estimated 265 tons of historical erosion that was delivered to surface water in the Swatara Creek Watershed.

There is plenty of more work to be done. Ten new contracts were approved for over $800,000 treating resource concerns on more than 1,000 acres in this fiscal year. 1,700 feet of terraces/diversions, 1.9 acres of grassed waterways, 19 waste storage facilities, 17 roofs, 22,000 square feet of concrete heavy use areas, 255 acres of cover crops, 125 acres of prescribed grazing, 1,000 acres of nutrient management implementation, and more are planned in the upcoming year with the hope of seeing tangible water quality benefits for source water protection.

Questions?

Comments?

Ashley Lenig
Conservation Program Manager (CSP, CIG, NWQI)
ashley.lenig@usda.gov

02/02/30 – Justin Atkins, Acting NRCS RCPP Coordinator, was introduced and gave un update on RCPP (Regional Conservation Partnership Program). (See the attached Hand-out.) He started off by describing the purpose of RCPP is to promote coordination of NRCS conservation activities with partners that offer value-added contributions. To co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges. We currently have two versions of RCPP, the 2014 Farm Bill version that was attached to EQIP and the 2018 Farm Bill version. Currently we have two existing projects that are active under the 2014 Farm Bill, and we are still taking applications for this year under that bill. Under the 2018 Farm Bill, RCPP became a stand-alone program and we have quite a few Farm Bill projects that we are working on. He proceeded to discuss the details and current progress of the projects. Those being the Kittatinny Ridge Conservation Landscape project, the Ag BMP implementation in Chesapeake Bay which is land management based; the Buffalo Creek Watershed Conservation Alliance which is an Entity held easement and land management based; the Lancaster's Common Agenda for Clean Water, which is land management based; the Turkey Hill Clean Water Partnership, which is land management based; and we have one Alternative Funding Arrangement (AFA RCPP) 2021 approved proposal (Problematic Partnership Agreement) still being negotiated. He discussed the RCPP 2022 contracting timelines, noting the screening deadline being April 15th of this year, the Ranking deadline being May 16th and the obligation deadline as being August 30th of this year. He stated that a total of 5 Land Management Contracts were obligated under the Buffalo Creek Watershed Conservation Alliance Agreement in 2021 that totaled $77 thousand. A total of 5 contracts were obligated under the Ag BMP Implementation in the Chesapeake Bay amounting to $897 thousand. As for FY 2022 proposals, we had a proposal deadline of April 13, 2022 and have received 2 applications to evaluate and review, and we have just started that process. In summary, he discussed the different RCPP resources that are available that include the National Webpage that gives an overview and general details of the program. The Pennsylvania Webpage provides sign-up periods, application forms as well as other details of the requirements of the program.

Regional Conservation Partnership Program (RCPP) Update

PENNSYLVANIA STATE TECHNICAL COMMITTEE MEETING

JUSTIN ATKINS (ACTING PA RCPP COORDINATOR)

What is RCPP?

- Promotes coordination of NRCS conservation activities with partners that offer value-added contributions
- Co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges

RCPP Projects In Pennsylvania

RCPP-EQIP 2014 Farm Bill Active Projects (Taking applications in FY 2022)

- Implementing Conservation Practices and CNMPs on PA Preserved Farms
- CCCD Partnership for Chesapeake Bay Water Quality

RCPP 2018 Farm Bill Projects

- Kittatinny Ridge Conservation Landscape ID # 1847 (Entity Held Easement Based)
- Ag BMP Implementation in Chesapeake Bay ID#1934 (Land Mgt Based)
- Buffalo Creek Watershed Conservation Alliance ID# 2035 (Entity Held Easement and Land Mgt Based)
- Lancaster's Common Agenda for Clean Water ID# 2437 (Land Mgt Based)
- Turkey Hill Clean Water Partnership ID # 2513 (Land Mgt Based)
- Have one Alternative Funding Arrangement (AFA RCPP) 2021 Approved Proposal; Programmatic Partnership Agreement still being negotiated.

RCPP 2022 Contracting Timelines (RCPP-EQIP & RCPP Land Mgt)

- Screening Deadline 4/15/22
- Ranking Deadline 5/16/22
- Obligation Deadline 8/30/22

Land Management Contracts Obligated in Fiscal Year 2021

- A total of 5 contracts were obligated under the Buffalo Creek Watershed Conservation Alliance Agreement (Covering Butler and Armstrong County) totaling $77,104.00

- A total of 5 contracts were obligated under the Ag BMP Implementation in Chesapeake Bay (Covering Berks County) totaling $897,370.00

RCPP Fiscal Year 2022 Proposals

- Proposal Deadline was 4/13/22 to submit.
- PA received two applications for FY 2022.

- Successful RCPP Projects embody 4 core principles
- 1. Impact:
- 2. Partner Contributions
- 3. Innovation
- 4. Partnerships and Management
- CCA vs State/Multi State

RCPP Resources

- National Webpage
- https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/
- Gives an overview and general details of the program

- PA Webpage
- https://www.nrcs.usda.gov/wps/portal/nrcs/detail/pa/programs/farmbill/rcpp/?cid=nrcseprd429822
- Signup periods, application forms, etc.

Questions?

CONTACT INFORMATION:

JUSTIN.ATKINS@USDA.GOV (717) 237- 2229

02/12/04 – Adam Dellinger, Acting NRCS Easement Manager was introduced and provided an update on the Pennsylvania NRCS Easement Program. (See attached Hand-out.) He started his presentation on the subject of Farmland Preservation. He reported that the ACEP-ALE (Agricultural Conservation Easement Program) (Agricultural Land Easements) program was allocated $1.1 million for FY 2022. Round 2 application cutoff was March 1st and we received 7 applications for farms totaling 525 acres for which approximately $735 thousand was requested in NRCS funds. He indicated rank projects will continue until funds run out and are being considered on when the application was submitted, how much funding was remaining and how many applications were received. He stated that we are currently working with partners on 3 RCPP projects implementing conservation practices and CNMPs (Comprehensive Nutrient Management Plans) on Pennsylvania preserved farms. PDA (Pennsylvania Department of Agriculture) is the Lead Partner and the project area covers Franklin, Adams, York, Cumberland, Perry and Dauphin Counties. We are processing 3 applications that would preserve 524 acres through this project. The second RCPP project is the Kittatinny Ridge Conservation Landscape project. Again, PDA is the lead partner and the project area is the Kittatinny Ridge Landscape in the Chesapeake Bay Watershed. The application cutoff dates for the year have passed and the 5 applications received would preserve about 621 acres. The third project is the Buffalo Creek Watershed Conservation Alliance and the Audubon Society of Western Pennsylvania is the lead partner. Applications have been accepted from farms located within the Buffalo Creek Watershed in Armstrong County. The funding announcement was posted this week and the application deadline is set for May 31st, 2022. Moving to Wetland Easements, WRE (Wetland Reserve Easement) Pennsylvania has been allocated $518 thousand for FY 22. Round 2 application cutoff was March 1st and we are currently processing 6 applications. State Office staff has conducted one site visit in April and have 2 visits planned in May to look at site suitability. Concerning Forest Easements, the HFRP (Healthy Forests Reserve Program) is a program to assist landowners in restoring, enhancing and protecting forestland resources on private lands, and funding is targeted to protect and improve critical habitat for the Indiana bat. 2 applications have been received from Adams

and Centre Counties, and the State Office Staff will visit the areas in early May to determine site suitability. As far as Easement Monitoring, we are responsible for onsite and offsite monitoring of 264 easements in FY 22, and we will review and catalog 480 additional easement monitoring reports from farmland preservation easement partners also.

USDA

United States Department of Agriculture

PA NRCS Easement Program Update

Adam Dellinger

State Technical Committee Meeting

4/21/22

Natural Resources Conservation Service

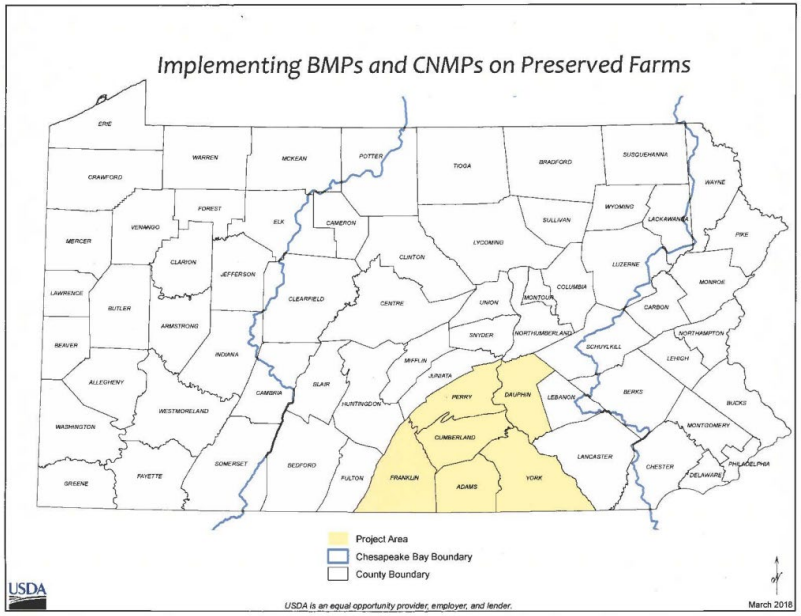
nrcs.usda.gov/

Farmland Preservation

- **ACEP-Agricultural Land Easements (ALE)**
  - Allocated $1.1M for FY22
  - Round 2 application cutoff was March 1
  - Received 7 applications for farms totaling 525 acres
    - Around $735K in NRCS funds requested
  - Rank projects until funding runs out - based on when the application was submitted, how much funding remains, and how many applications were received.

Farmland Preservation

- **RCPP - Implementing Conservation Practices and CNMPs on Pennsylvania Preserved Farms**
  - PDA - lead partner
  - Project area covers Franklin, Adams, York, Cumberland, Perry, and Dauphin Counties
  - Processing 3 applications that would preserve 524ac through this project



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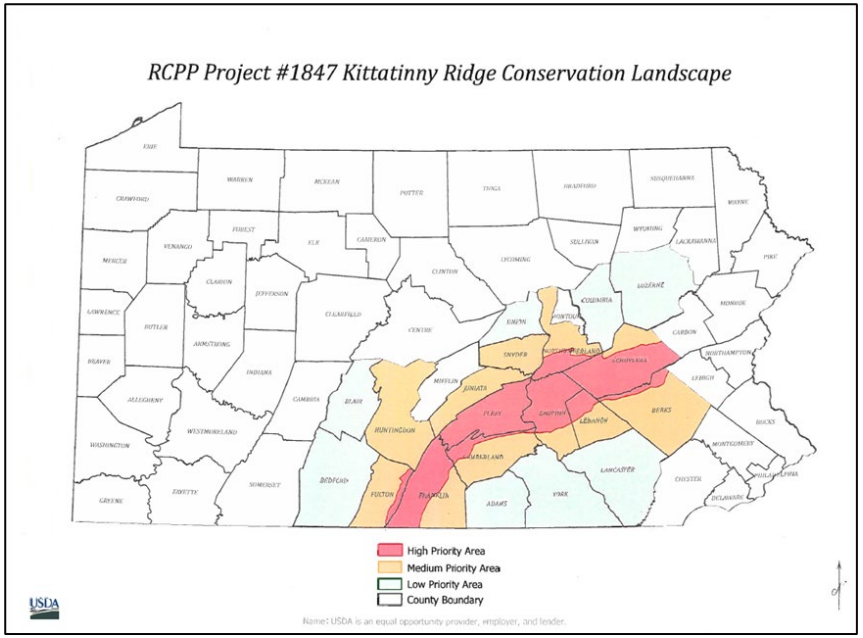
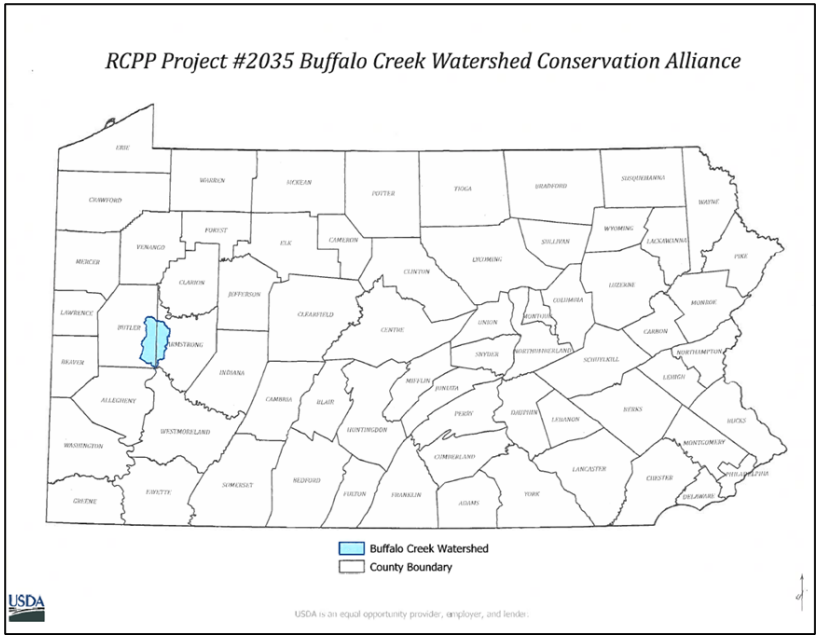
Farmland Preservation

- **RCPP - Kittatinny Ridge Conservation Landscape**
  - PDA - lead partner
  - Project area is the Kittatinny Ridge landscape in the Chesapeake Bay Watershed
  - Application cutoff dates for this year have passed
  - Processing 5 applications that would preserve 621ac



Farmland Preservation

- **RCPP - Buffalo Creek Watershed Conservation Alliance**
  - Audubon Society of Western Pennsylvania - lead partner
  - Applications accepted from farms located within the Buffalo Creek Watershed in Armstrong County
  - Funding announcement posted this week, and the application deadline is May 31st, 2022



Wetland Easements

- **ACEP-Wetland Reserve Easement (WRE)**
  - PA NRCS allocated $518K for FY22
  - Round 2 application cutoff was March 1, and we are currently processing 6 applications
  - State Office staff conducted one site visit in April, and have 2 visits planned in May to look at site suitability

Forest Easements

- **Healthy Forests Reserve Program (HFRP)**
  - Program to assist landowners in restoring, enhancing, and protecting forestland resources on private lands
  - HFRP funding is targeted to protect and improve critical habitat for the Indiana bat
  - Received 2 applications from Adams and Centre Co.
  - State Office staff will visit these sites in early May to determine site suitability

Easement Monitoring

- PA NRCS is responsible for onsite and offsite monitoring of 264 easements in FY22
- Review and catalog 480 additional easement monitoring reports from farmland preservation easement partners

Contact Information

Please reach out with any questions

Adam Dellinger

Acting Easement Program Coordinator

adam.dellinger@usda.gov

717-237-2206

02/20/29 – Denise Coleman, NRCS State Conservationist took a few moments to thank our guest speakers for their informative presentations and also to thank Susan Marquart, Assistant State Conservationist for Partnerships for her hard work in setting up and managing the State Technical Committee Meetings. She also stated that NRCS representatives are currently working on our next 5-year Strategic Plan, indicating that many of the subjects discussed today will be incorporated into that 5-year plan. She indicated that we will be going out to stakeholders in the next upcoming months to interview them to get input and insight on priorities and issues in Pennsylvania that we should coordinate and put into our next Strategic Plan. The Strategic Plan is very important because it sets the stage for the next Farm Bill for us. There are a lot of people who ask if a particular watershed can be examined, about species of concern and the like. Also we have a lot of demands from people looking at opportunities to use Farm Bill Programs across the state, and so we take this opportunity with the Strategic Plan to go in and get not only the kind of a course to set the direction for where we are going to in the next 5 years on land uses across the state, whether it be forestry, pasture or farmland use or to target and set priority areas based on that. We make an effort to do things for the long haul, not just flash in the pan. So if you have anything to offer in that respect, please participate by talking to one of the consultants for the Strategic Plan, we would like to know your thoughts on what our future directions should be.

Denise noted that the next State Technical Committee Meeting will be held on Tuesday, July 19th at 1pm.

There being no further business to conduct, the meeting was adjourned.

	Full Name
1	Atkins, Justin
2	Boger, Jared
3	Brenda Shambaugh
4	Brown, Karl
5	Cornelius, Ryan
6	Davis, Johanna
7	Dean Druckenmiller
8	Dellinger, Adam
9	Dimka She/Her (Guest)
10	Evans, Ted
11	Hebelka, Joseph
12	Kinney, Timothy
13	Kurt Wagner, PA Rural Water
14	Lenig, Ashley
15	Marel King
16	Marquart, Susan
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State Technical Committee

April 21, 2022

Meeting Notes

Denise Coleman, NRCS State Conservationist, Opened the meeting and welcomed all.

00/03/40 - Dean Collamer, Chairman of the Pennsylvania 4R Alliance was introduced. (See the attached hand-out.) He gave a quick background of the 4R Alliance accomplishments and noted the members if this industry-agency partnership. He described the mission of the Alliance being to emphasize the interconnectedness of 4R's as part of sustainable whole farm management practices; to collaborate with state and federal agencies around feasible policies and protocols; to encourage and expand voluntary, appropriate, innovative, science-based field adoption of 4R practices; to share cost effective 4R Nutrient Stewardship information; to communicate environmental quality successes and farm economic paybacks with respect to 4R practice implementation. He stated that the role of Agribusiness is to engage farmers in 4R nutrient stewardship. 4Rs is an enabler that allows groups to converse. Before 4Rs, it was us versus them. 4Rs allows everyone to work together towards a goal of advanced nutrient stewardship. The 4R Alliance was started in 2012 when agribusiness joined together. The Alliance received a NRCS Conservation Innovation Grant for education and outreach in 2013. In 2017, 4R was established as a member alliance within Mid-Atlantic 4R Association, partnered with the Nature Conservancy, receiving a NFWF grant to assess 4R use in Pennsylvania. Execution of the NFWF grant and development of priorities and organizational structure was accomplished during 2018 and 2019. He explained how Nutrient Stewardship products and practices are marketed, delivered and used by farmers. He described field testing and communicating the latest 4R Nutrient Stewardship results. He explained how Agribusiness engages growers with 4R Nutrient Management by focusing with farmers in products and practices. He discussed the linking 4Rs to PA NRCS

Conservation programs. Back in 2012, our interest in partnering with the 4R Association is about more practical & clear how-to guidance. He explained what NRCS brings 84 years of experience as well as financial assistance to the partnership. He noted the economic criteria for practice adoption are increased production, reduced production costs, increased efficiency and improved sustainability. He went on to discuss the benefits of 4R Nutrient Management that includes the use of low disturbance manure injection, no-till crop management, cover cropping and soil health, and precision agriculture. He discussed the reasons for and the results of a Baseline Survey of 4R practices in targeted Pennsylvania watersheds. He noted that on-farm data tells the story of what management practices farmers do every year that have a positive outcome on farm economics and water quality. He discussed 4R practices and water quality benefits in the Chesapeake Bay. He explained how to document 4R practices. He touched on developing goals for the Phase 3 WIP and noted that it was an early success. He reviewed the accomplishments 4R 2021 Split Application pilot program in Adams County. Adoption of split applications resulted in increased yields, increased nitrogen use efficiency and increased P removal.

<u>00/53/28</u> – <u>Nicole Ranalli</u>, Endangered Species Biologist of the US Fish and Wildlife Service was introduced and provided a presentation "From Wetlands to Milkweed". (See attached hand-out.) Nicole started off with an update on the Bog Turtle recovery efforts. The species as was listed in 1997 as threatened by a 4D rule for Northern Population. The 4D rules were associated with two things, the transfer of turtles out of roads and light to moderate livestock and grazing was not prohibited. She indicated that she was going to cover the recovery objective and go over the recovery results of the plan. The recovery objective (2001 Recovery Plan) was to protect and maintain the northern population of this species and its habitat, enabling the eventual removal of the species from the Federal List of Endangered and Threatened Wildlife and Plants status. The recovery criteria included: to establish long range protection for at least 185 populations distributed among

5 recovery units; monitoring at 5 year intervals over a 25 year period shows that these 185 populations are stable or increasing; illicit collection and trade no longer constitute a threat to the species survival; and long-term habitat dynamics, at all relevant scales are sufficiently understood to monitor and manage threats to both habitats and turtles, including succession, invasive wetland plants, hydrology and predation. She discussed the Bog Turtle Northern Population Range and the projected recovery goals that have been established. She continued by reviewing the establishment of NRCS involvement and the target areas of the project. She reviewed the Apodaca 2021 Report – Rangewide Analysis. She reviewed her Pennsylvania-centric Analysis. Of the 58 easements in Pennsylvania totaled, 25 WRE in the Susquehanna/Potomac Recovery Unit with 15 easements directly protecting portions of Bog Turtle core sights. In the Delaware Recovery Unit, there were 31 WRE total with 15 easements directly protecting portions of Bog Turtle core sights. She reviewed the Erb 2019 Bog Turtle Easement Plan. The plan ranked and identified core habitat, populations and metapopulations for Bog Turtles, important habitat corridors were identified, needed strategies for recovery were prioritized and action plans were developed. She reviewed the accomplishments of NRCS contribution to the recovery effort and what next steps are planned. Nicole then switched to discussion of the Monarch Butterfly. She noted that the Monarch was assessed for protection under the Endangered Species Act in December 2020, also that its status will be reviewed yearly until it is no longer a candidate. The species is known to exist within all counties of Pennsylvania. She discussed the locations of Monarch populations throughout the world. She discussed the annual census data concerning the Monarch overwintering in Mexico. She noted the existence of the NRCS-USFWS Fact Sheets covering the Monarch and that they are constantly being updated as new information is available. Kathleen Patnode, an Environmental Toxicologist with the US Fish and Wildlife Service was introduced and proceeded to discuss recent research of the declining populations of Monarchs. She noted the indirect effects of fertilizer on Monarchs, stating that Nitrogen and Phosphorus effects the milkweed leaves

that is a natural host plant for their eggs and caterpillars. She continued to provide information concerning the effects of pesticides on Monarchs. She discussed climate effects on Monarchs. She discussed reasons for the decline of North American Monarchs, and noted that climate change effects the Monarch via impacts to habitat, and via non-habitat mediated effects. These accounted for 25% of their decline. She concluded her presentation by stating that biologist working on Monarch protection should be considering microhabitats in addition to landscape scale when designing habitat projects as a means of compensating for weather-related stresses.

01/19/58 – Tim Peters, NRCS State Engineer was introduced and provided updates in the area of Engineering. (See attached hand-out.) Tim started his presentation with information concerning recent reports of Highly Pathogenic Avian Influenza. He discussed actions being taken by NRCS and its representatives. Those being: Suspended poultry visits, case by case requirements and measures that must be followed when work must continue. He explained the role that NRCS is taking to assist the Lead Organizations in the effort to contain the disease. The bottom line being that NRCS representatives do not want to add to the spread of this infectious disease from farm to farm. He then discussed the NRCS role in the Emergency Watershed Protection Program (EWPP). He stated that for the continuous process improvement, NRCS brought in two moderators from Texas to assist and support us. Together, we spent a week focusing on identifying issues and challenges, suggesting solutions, working on a new process for the EWP Program for Pennsylvania, and working on supporting tools, sponsoring guides, and training material. We are ultimately working to complete projects quicker with less staff time involved. He noted that we are currently working on supporting documentation for sponsors, a program NRCS funded by 75 percent and the remaining 25 percent by a prospective sponsor for after the construction is completed. We are also working on developing training material for our own people and supporting documents to help with the various stages of the process. Continuing on, he reminded the Committee members that we

have sent out several practices for review and that any comments, additions are due back to our office by the 18th of May. He continued to review those proposed practices.

01/30/56 – Dan Ludwig, NRCS State Resource Conservationist, provided an update on Technological Sciences. The biggest item being the completion of Boot Camp 1 and we are gearing up for Boot Camp 2 next week. We have experienced challenges during the past week, especially with rescheduling forum site visits for that training due to HPAI (Highly Pathogenic Avian Influenza). But we overcame that challenge and are able to move on with the training. Concerning Practice Standards, we will probably be releasing the PA Revision to Practice 382, the Fencing Standard at the July STC (State Technical Committee) Meeting. He indicated that Susan Parry our Grassland Specialist is working on that, and there will be a few more ready later in October now that National is working on that went through the National Register Review, so 2023 looks like it is going to be a busy year for Standards updates. He also remarked on the effects of the 4R's of Nutrients in relation to the Monarch Butterfly, and its effects on the milkweed plants. A study has found that there's been overall increases in subsurface nitrogen and soluble phosphorus losses. Really our soils haven't changed, but that No-Till and cover crops have also increased infiltration. And so essentially these losses can be attributed to the overall adoption of No-Till and also a large swing in the change of production acres of the corn and beans and fewer acres of wheat. The other interesting thing is the amount of acres that receive manure have increased substantially over time and one of the things that the study found is that it is linked to producers and operator not making a switch and finding the value of the nutrients to be beneficial over it just being a waste disposal problem. Even though soil testing on croplands has increased, especially on acres receiving manure, the increased application rates of the nutrients and the perceived nutrient availability of the manure still presents an issue. So overall acres receiving both manure, commercial fertilizer is almost twice the acres receiving only commercial fertilizer and

third higher than acres receiving the manure alone. Another interesting thing is that although there has been a lot of stool testing, actual testing of the manure for nutrient values has not followed suit. So what they found is less than 50 percent for the acres receiving manure did not have the manure analyzed for nutrient content. So therefore, over 50 percent of the acres did not have enough information to establish proper application rates for minimizing those potential losses for accumulation of phosphorus, and basically the study showing that they've unknown as to why producers may apply additional commercial fertilizer, which may not be needed for crop production. As we know and can see that the application of addition of commercial fertilizer isn't that added operational cost and also can contribute to an increase in potential losses. There is a need to better understand the nutrient content of manure and the availability for crop production. We are going to challenge our staff to really start looking and working with our producers to identify nutrient application, especially through manure. There have been some changes to our programs in relation to the transition to organic. This year they added a concept that they call CEMA (Conservation Evaluation Management Activities), two of which pertain to soil health. CEMA 216 which is for soil health testing and CEMA 217 which is for nutrient and soils testing. So we are going to challenge our staff to see how we can increase acres, increase operators that will start doing testing coupling that with their manure in their nutrient management. Denise Coleman added, that in the concentration of animals and more concentration of livestock. As we concentrate livestock, we remove that livestock away from pastured animals to putting them into our steps where the manure goes into a tank versus being spread out like in a lot of great systems that we also want to promote. We are also looking at grazing to address this as we do not want to lose the inroads that we have gained already through No-Till and through soil health and putting cover crops on the landscape. But we do want to take it that step further and get more precision out there on doing soil and nutrients testing. Also nationwide, we are planting a lot of corn. The market is up and it is creating producer to support more corn, thus more nitrogen on the field.

01/40/38 – Yuri Plowden, NRCS State Soil Scientist was not able to attend the meeting today, so Dan Ludwig reported for her. Yuri is working with the PA Soil Health Coalition on a promotion titled the "Soil Your Undies Challenge". (See attached hand-out.) It was started by NRCS in the state of Oregon. Pennsylvania NRCS took the lead on this promotion statewide and partnered with a company called "The Big Favorite". This company produces organic cotton and they have agreed to provide cotton underwear to the field offices to get out to the farms for the promotion. The whole promotion is about soil health. If we have good soil, nutrient, good biological activity, those microbes in that living system will actually break down in the degrade and eat up those that cotton that makes up these undies. The farmers will plant a pair of new cotton underwear in a hole about 3 inches deep in the site that they are curious about and lay them flat and cover them over with soil. They will wait at least 60 days before gently unearthing them. This gives the soil microbes time to do their job. They are asked to send us a photo and a little info about their experiment to pa-nrcs-publicinfo@usda.gov and their location will be put on the information map. The promotion is to launch in early June. Handouts have been provided to every NRCS Field Office. The "Soil Your Undies" challenge provides a fun way to talk about Soil Health. The buried underwear will be tracked on a map and will include pictures with permissions.

01/44/42 – Ryan Cornelius, NRCS Environmental Quality Incentives Program (EQIP) Manager was introduced and provided an update on EQIP-CIC (Environmental Quality Incentives Program - Conservation Incentives Contracts). (See attached hand-out.) He indicated that we are well underway working on contracting across all of EQIP and AMA (Agricultural Management Assistance Program). We have a new program that we are introducing this year called EQIP-CIC. EQIP CIC was authorized by the 2018 Farm Bill to provide technical and financial assistance to producers for the implementation, adoption, management, and maintenance of incentive practices that effectively address at least one eligible priority resource concern. He

indicated that last year Pennsylvania was considered for the program, however it was run as a pilot program and only offered in four western states. Pennsylvania has been identified as a High Priority Area (HPA) and the focus for FY22 is on Climate Smart Agriculture including soil health and carbon sequestration. EQIP-CIC can be a steppingstone for producers between EQIP classic and eventually the Conservation Stewardship Program. CSP requirements and enhancements will not be required or available in FY22. He stated that agriculture producers, landowners, non-industrial private forestland are eligible to apply for EQIP-CIC. Eligible land includes cropland, pastureland, and non-industrial private forestland, also socially disadvantaged, beginning, and limited resource and veteran farmers. The applicant must control or own eligible land, comply with AGI provisions and be in compliance with the highly erodible land and wetland conservation requirements. He indicated that 5 percent of the EQIP general allocation will be reserved for this program. He listed the EQIP-CIC practices that are eligible for FY22 which focus on Soil Health. The one practice that will be primary will be Cover Crops where we have a $20,000 per year cap. He discussed the features of the EQIP CIC program. He described what being a High Priority Area means to Pennsylvania involves. Land use will be cropland, pasture and forestry. The resource concerns as being: Soil quality limitations; field, sediment, nutrient and pathogen loss; degraded plant condition; and terrestrial habitat. The timeline for the program is: January 20th when sign-up began; April 1st as being the sign-up deadline; May 16th is the ranking deadline and August 30th as the contract obligation deadline. He then provided an update summary of the EQIP Cover Crop Initiative, indicating that 38 contracts have been obligated, with almost $1 million obligated that covered 18,408 acres (6,800 acres being treated) covering 8 Counties in Pennsylvania. He reminded the committee of the upcoming timeline and important dates concerning EQIP-AMA. He also reviewed the completion of the CARP (Coronavirus Agricultural Relief Payments) assistance program. He noted that he was unsure if the program would be extended at this point.

The assistance program was geared to assist producers to continue the completion of projects in dealing with the price spikes caused by COVID-19.

01/55/21 – Ashley Lenig, NRCS Conservation Program Manager was introduced and provided updates on CIG (Conservation Innovation Grants), CSP (Conservation Stewardship Programs) and EQIP-NWQI (Environmental Qualitative Innovation Program-National Water Quality Initiatives). She announced the closing of PA CIG Funding Opportunity, USDA-NRCS-PA-CIG-22-NOFO0001147 on April 14, 2022. 7 applications for that funding opportunity have been received prior to closing. She noted that PA CIG priorities included: Soil Health, Water Quality, Urban Farming, Non-industrial Private Forestland (NIPF), Carbon Sequestration and Legacy Sediment. Moving on to CSP, she indicated that the CSP Classic preparations are underway. She is working on the activity list and enhancement worksheets and intends to work on developing rankings and guidance in the coming months. She noted that EQIP-NWQI work continues in the 5 watersheds that includes Warrior Run, Upper Kishacoquillas, Upper Yellow and Beaver Creeks, Swatara Creek and Maiden Creek. She indicated that the NWQI rankings are out. She noted some significant updates that give additional credit for resource concern affecting water quality. Regarding NWQI funding, she stated that in FY 2020 NRCS funded 33 projects for $3.7 million, in FY 2021, 14 projects amounting to $1.4 million. For FY 2022, the initial allocation is set at $884 thousand, however we have requested an additional $3 million from watershed budgets. Presently we have 22 NWQI applications in the state. She discussed the Swatara Creek NWQI Successes in the reduction of turbidity. In closing, she discussed the FY 2021 Annual Accomplishments Report that explains in detail the Swatara Creek Watershed.

02/02/30 – Justin Atkins, Acting NRCS RCPP Coordinator, was introduced and gave un update on RCPP (Regional Conservation Partnership Program). (See the attached Hand-out.) He started off by describing the purpose of RCPP is to

promote coordination of NRCS conservation activities with partners that offer value-added contributions. To co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges. We currently have two versions of RCPP, the 2014 Farm Bill version that was attached to EQIP and the 2018 Farm Bill version. Currently we have two existing projects that are active under the 2014 Farm Bill, and we are still taking applications for this year under that bill. Under the 2018 Farm Bill, RCPP became a stand-alone program and we have quite a few Farm Bill projects that we are working on. He proceeded to discuss the details and current progress of the projects. Those being the Kittatinny Ridge Conservation Landscape project, the Ag BMP implementation in Chesapeake Bay which is land management based; the Buffalo Creek Watershed Conservation Alliance which is an Entity held easement and land management based; the Lancaster's Common Agenda for Clean Water, which is land management based; the Turkey Hill Clean Water Partnership, which is land management based; and we have one Alternative Funding Arrangement (AFA RCPP) 2021 approved proposal (Problematic Partnership Agreement) still being negotiated. He discussed the RCPP 2022 contracting timelines, noting the screening deadline being April 15th of this year, the Ranking deadline being May 16th and the obligation deadline as being August 30th of this year. He stated that a total of 5 Land Management Contracts were obligated under the Buffalo Creek Watershed Conservation Alliance Agreement in 2021 that totaled $77 thousand. A total of 5 contracts were obligated under the Ag BMP Implementation in the Chesapeake Bay amounting to $897 thousand. As for FY 2022 proposals, we had a proposal deadline of April 13, 2022 and have received 2 applications to evaluate and review, and we have just started that process. In summary, he discussed the different RCPP resources that are available that include the National Webpage that gives an overview and general details of the program. The Pennsylvania Webpage provides sign-up periods, application forms as well as other details of the requirements of the program.

02/12/04 – Adam Dellinger, Acting NRCS Easement Manager was introduced and provided an update on the Pennsylvania NRCS Easement Program. (See attached Hand-out.) He started his presentation on the subject of Farmland Preservation. He reported that the ACEP-ALE (Agricultural Conservation Easement Program) (Agricultural Land Easements) program was allocated $1.1 million for FY 2022. Round 2 application cutoff was March 1st and we received 7 applications for farms totaling 525 acres for which approximately $735 thousand was requested in NRCS funds. He indicated rank projects will continue until funds run out and are being considered on when the application was submitted, how much funding was remaining and how many applications were received. He stated that we are currently working with partners on 3 RCPP projects implementing conservation practices and CNMPs (Comprehensive Nutrient Management Plans) on Pennsylvania preserved farms. PDA (Pennsylvania Department of Agriculture) is the Lead Partner and the project area covers Franklin, Adams, York, Cumberland, Perry and Dauphin Counties. We are processing 3 applications that would preserve 524 acres through this project. The second RCPP project is the Kittatinny Ridge Conservation Landscape project. Again, PDA is the lead partner and the project area is the Kittatinny Ridge Landscape in the Chesapeake Bay Watershed. The application cutoff dates for the year have passed and the 5 applications received would preserve about 621 acres. The third project is the Buffalo Creek Watershed Conservation Alliance and the Audubon Society of Western Pennsylvania is the lead partner. Applications have been accepted from farms located within the Buffalo Creek Watershed in Armstrong County. The funding announcement was posted this week and the application deadline is set for May 31st, 2022. Moving to Wetland Easements, WRE (Wetland Reserve Easement) Pennsylvania has been allocated $518 thousand for FY 22. Round 2 application cutoff was March 1st and we are currently processing 6 applications. State Office staff has conducted one site visit in April and have 2 visits planned in May to look at site suitability. Concerning Forest Easements, the HFRP (Healthy Forests Reserve Program) is a program to assist landowners in restoring, enhancing and protecting forestland resources

on private lands, and funding is targeted to protect and improve critical habitat for the Indiana bat. 2 applications have been received from Adams and Centre Counties, and the State Office Staff will visit the areas in early May to determine site suitability. As far as Easement Monitoring, we are responsible for onsite and offsite monitoring of 264 easements in FY 22, and we will review and catalog 480 additional easement monitoring reports from farmland preservation easement partners also.

<u>02/20/29</u> – <u>Denise Coleman</u>, NRCS State Conservationist took a few moments to thank our guest speakers for their informative presentations and also to thank Susan Marquart, Assistant State Conservationist for Partnerships for her hard work in setting up and managing the State Technical Committee Meetings. She also stated that NRCS representatives are currently working on our next 5-year Strategic Plan, indicating that many of the subjects discussed today will be incorporated into that 5-year plan. She indicated that we will be going out to stakeholders in the next upcoming months to interview them to get input and insight on priorities and issues in Pennsylvania that we should coordinate and put into our next Strategic Plan. The Strategic Plan is very important because it sets the stage for the next Farm Bill for us. There are a lot of people who ask if a particular watershed can be examined, about species of concern and the like. Also we have a lot of demands from people looking at opportunities to use Farm Bill Programs across the state, and so we take this opportunity with the Strategic Plan to go in and get not only the kind of a course to set the direction for where we are going to in the next 5 years on land uses across the state, whether it be forestry, pasture or farmland use or to target and set priority areas based on that. We make an effort to do things for the long haul, not just flash in the pan. So if you have anything to offer in that respect, please participate by talking to one of the consultants for the Strategic Plan, we would like to know your thoughts on what our future directions should be.

Denise noted that the next State Technical Committee Meeting will be held on Tuesday, July 19th at 1pm.

There being no further business to conduct, the meeting was adjourned.