

**Assessing Farm Bill Conservation Programs at the County-Level in the States
of the Delaware River Watershed:
Delaware, New Jersey, New York, and Pennsylvania**

by

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Executive Summary

KEYWORDS AND PROGRAMS: CONSERVATION; CONSERVATION RESERVE PROGRAM; CONSERVATION STEWARDSHIP PROGRAM; DELAWARE RIVER WATERSHED; ENVIRONMENTAL QUALITY INCENTIVES PROGRAM; WATERSHED

ABSTRACT: This report analyzes federal conservation program utilization data (FY 2017 data is used, the most recent year for which data is available) in the counties of the Delaware River Watershed in order to provide a better understanding of the conservation needs and opportunities of Watershed communities. This information is particularly salient given that the current Farm Bill, which is a complex package of legislation that controls and/or impacts every part of our food and farm systems, is set to expire on September 30, 2018. Advocates can leverage data on the current and potential impacts of federal conservation programs in the Watershed in order to advance policies and provisions in future farm bills that will help their communities to increase sustainability of agricultural lands and improve the health and longevity of the area's natural resources. Additionally, an understanding of program utilization is critical to improving implementation to leverage additional available funding for the Watershed.

EXECUTIVE SUMMARY:

USDA administers the nation's most extensive set of private lands conservation programs, constituting a \$6 billion annual investment. While on-farm conservation activities have helped protect natural resources, major challenges remain, particularly in areas like the Delaware River Watershed. According to a 2014 report by USDA's Natural Resources Conservation Service (NRCS), roughly 434,000 acres (51% of the cropped acres) in the Watershed have a high level of need for additional conservation treatment. The percentage of cropland requiring high or moderate treatment in the Watershed (73 percent) is high relative to the 11 other Watersheds analyzed as part of the NRCS study.

Given the enormity of agriculture's footprint in the United States, American producers have a huge role to play in sustaining our nation's natural resources – and the 2018 Farm Bill represents a not-to-be-overlooked opportunity to help producers achieve sustainability.

Summary findings on the use of key federal conservation programs in the counties of the Delaware River Watershed in FY 2017 are as follows:

Conservation Program	Funding to Delaware River Watershed	Notes/ Considerations
Agricultural Conservation Easement Program (ACEP)	1,936.8 ALE acres 43.6 WRE acres	Funding at the county level is not yet available due to the amount of time easements take to close
Conservation Reserve Program (CRP)	\$1,932,703	Total rental payments for <i>all</i> CRP in basin reflected. CREP-specific payment data is not available by county.
Conservation Stewardship Program (CSP)	\$1,539,882 in FY 2017 / \$7,699,410 over life of 5 year contracts	Total payments were estimated by multiplying FY 2017 acres enrolled by average payment rate (\$18/acre) by 5 years of payments for total contract funding
Environmental Quality Incentives Program (EQIP)	\$11,415,910	Not all funding goes towards management practices with direct water quality benefits
Regional Conservation Partnership Program (RCPP)	\$3,200,000 distributed amongst Watershed states	Requires additional analysis to examine which pieces of regional projects are impacting/ directly within the Watershed
Total	\$18,088,495 in FY 2017 programmatic funds; 1,980.4 acres in easement	Totals do not perfectly reflect all conservation funding to the Basin in FY 2017 because not all data was either available at the time of the report or available at the county-level

On first glance, the data on the Watershed's utilization of conservation programs can be somewhat misleading. For example, while counties in the Watershed leveraged large amounts of EQIP funding in FY 2017, it is important to acknowledge that not all of EQIP's allowed uses are created equal.

In addition to water quality and management activities like cover crops, conservation tillage, and filter strips, and conservation buffers, EQIP also funds structural activities including waste storage facilities for concentrated animal feeding operations (CAFOs) and large-scale irrigation equipment. Additional analysis to specifically examine funding for CAFO related activities versus management activities would therefore be helpful to better understand how much funding is truly benefiting the Watershed through conservation management activities. For example, across all counties in the basin, more than \$730,000 in EQIP funding went to waste storage facilities in FY 2017, thus providing funding to support CAFO infrastructure. An additional \$1,150,000 in EQIP funding went to support irrigation infrastructure. EQIP funding in the Watershed, therefore, is reflective of

national trends in that a significant portion of total EQIP funding goes to support these two objectives.

Looking at the data from both CSP and CCRP, we can see that the Watershed fails to truly capitalize on *comprehensive* conservation strategies (those that include the adoption of multiple, complementary activities). CSP and CCRP can be incredibly useful in the Watershed's water quality mitigation and long-term sustainability efforts by providing comprehensive conservation through whole farm contracts (CSP) and a wide range of beneficial water quality practices that are currently underutilized (CCRP).

Regarding ACEP and RCPP, stakeholder-level outreach is recommended to understand more fully the benefits these programs are currently delivering to the Watershed, and how – if at all – they could be better leveraged. ACEP participation overall is quite low in the Watershed counties with the exception of Kent County, which also received one-third of the total EQIP funding in the Watershed. Since Kent is not entirely located within the Watershed, it would be of interest to understand where in the county ACEP contracts are being utilized, and if they are being targeted toward Watershed remediation efforts. Finally, RCPP is shown to serve as an important conservation tool to the region. The program models valuable opportunities for the Watershed to continue to leverage the underlying farm bill funding, as it pulls a percentage of total funding from the underlying programs (EQIP, CSP, and ACEP) for farmers to use directly. The partnership model demonstrates the importance of bringing a wide range of stakeholders to the table.

Recommendations for building on this analysis over time:

In the compiling of this report, an overall lack of available and/or uniform data was an ongoing challenge. In order for stakeholders in the Delaware River Watershed to fully understand the use and impact of federal conservation programs in their region, NSAC offers the following recommendations:

1. **Stakeholders in the Basin should work with NRCS to improve basin-scale data availability.** In order to trace program utilization down to the watershed-level, it was necessary to request data at the county level and then calculate the sum of all relevant counties within the Delaware River Watershed. Even with these additional calculations, our conservation data was not as focused as we might have liked, given that some counties (primarily Kent) are not located completely within the Watershed. It is therefore not possible – at present – to get a perfectly accurate snapshot of program use within the Watershed without a Freedom of Information Act (FOIA) request. NRCS *does* monitor and work at the basin-scale; therefore it should be possible to obtain conservation program data at this level without filing a FOIA request. By more aggressively working with NRCS at both the local and national level, stakeholders can raise awareness within the organization regarding the need to address this data gap.
2. **Improve availability of conservation outcomes data through administrative and/or legislative reforms.** The conservation program data currently available (without a FOIA request) from NRCS can tell us about the number of contracts signed, dollars obligated, and acres enrolled within the region. NRCS can also detail specific conservation activities adopted within the region, however, they are not able to measure, evaluate, or report on specific conservation *outcomes* (e.g., improved water quality, reduced erosion). Although we can derive a basic level of understanding about the impacts of the programs and practices, it

is critical for several reasons that USDA be able to concretely measure program impact. Firstly, this data is critical to stakeholders who want to understand if and how a particular practice might work in their particular region or climate. A second key reason this data is important is that it would help to justify financial and policy support for conservation programs within Congress and within the Administration. There are currently efforts, both legislative and administrative, to improve USDA's ability to collect and analyze this type of conservation data. The 2018 Farm Bill represents an important opportunity for Congress to mandate that this information be collected in order to increase program efficiency, efficacy, and transparency. Following the farm bill's reauthorization, there are also ongoing opportunities to work with the Administration to advance non-legislative reforms that would make this type of data collection possible.

3. **Consider leveraged funding multi-year enrollment in future analyses.** In order to gain an even more comprehensive understanding of impact of these conservation programs in the Delaware River Watershed, future analyses should consider how much additional funding federal programs leveraged. Since several conservation programs leverage private funding as well as public (e.g., RCPP, matching funds for ACEP), it would also be valuable to examine how much funding is invested in conservation efforts from non-federal entities. Additionally, with FY 2018 as the final year authorized under the 2014 Farm Bill, there would be immense value in analyzing a comprehensive set of conservation use data spanning from FY 2014-2018. This type of multi-year analysis would give stakeholders in the Watershed a clear picture of the total dollars invested in conservation activities under the 2014 Farm Bill, as well as any reveal longer-term trends in participation rates.

CONCLUSIONS:

There are myriad factors that keep conservation programs from reaching their full potential, both at the national level generally and at the Watershed level specifically. One universal factor affecting federal program usage is the level and quality of outreach at the local level. The programs analyzed in this report are administered by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS). Some reports from organizations doing on-the-ground work in the Watershed region have indicated that the level and quality of outreach and assistance from local NRCS agents can vary widely from office to office.

Collaborative outreach to NRCS by local producers and agriculture-focused organizations can help to address inconsistencies in state and local-level outreach. Oftentimes, making NRCS offices and agents aware of local interest in particular programs or practices can be enough to increase the level of program information and outreach offered. In some cases, however, a lack of resources or direction from agency or Administration leadership might be the cause of the problem. In this case, it is incumbent upon farm, food, and environmental organizations to amplify the work of NRCS through their own outreach and education efforts.

Education and engagement efforts from local and national stakeholder organizations is particularly needed given the current Administration's attempts to summarily dismantle many popular conservation programs; in particular, the Conservation Stewardship Program (CSP), which the Administration has been actively working to eliminate. CSP is currently underutilized in the counties of the Delaware River Watershed despite the environmental need for comprehensive remediation. Concerted outreach from conservation experts to local producers could not only help to increase Watershed-wide enrollment in comprehensive conservation activities, it would also help build support for the program as Congress debates the 2018 Farm Bill.

The 2018 Farm Bill matters for those in the Watershed because the decisions made as part of this legislative package will fundamentally affect the programs and practices available for producers looking to improve their soil health, maintain or restore their waterways, and increase environmental sustainability on their working lands. Those interested in engaging more deeply in the 2018 Farm Bill and in federal agricultural policy in general may be interested in membership with the National Sustainable Agriculture Coalition (NSAC). NSAC is a 30-year old coalition with over 120 members nationwide that leverages skilled policy analysis and robust grassroots engagement in order to advance federal policies that support sustainable agricultural systems. To learn more about NSAC membership and current efforts on the 2018 Farm Bill, visit: <http://sustainableagriculture.net>.

INTRODUCTION

In the first portion of the report, we provide a brief overview of each of the major farm bill conservation programs. We then examine challenges and opportunities for conservation programs in the upcoming 2018 Farm Bill, and conclude with a detailed analysis of conservation program utilization in key counties¹ of the Delaware River Watershed states: Delaware; New Jersey; New York; and Pennsylvania.

FARM BILL CONSERVATION PROGRAMS 101

The farm bill's conservation programs provide farmers, ranchers, and landowners across the country with a wide range of tools and incentives to conserve and enhance our shared natural resources. These voluntary programs offer both financial and technical assistance that supports participants in improving water quality, building soil health, enhancing wildlife habitat, and increasing the resilience of their own operations. Although most farmers understand and value the potential benefits of conservation activities, many do not have the technical skills or financial resources to undertake them – thanks to voluntary federal conservation programs, however, sustainability is within reach.

Federal conservation programs can be organized into several primary buckets – working lands conservation, land protection, and partnership programs. Working lands conservation programs include programs through which participants keep their land in agricultural production while simultaneously adopting and managing conservation activities on their land. Land protection programs include long-term contracts and easements to protect agricultural land, wetlands, grasslands, and highly erodible land. Partnership programs bring farmers together with the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and an outside partner so that together they can address a targeted resource concern in a particular region.

NRCS administers the majority of farm bill conservation programs; the Conservation Reserve Program (CRP) is the exception to this rule. CRP is administered by USDA's Farm Service Agency (FSA); NRCS oversees land eligibility determinations, conservation planning, and implementation on the ground. Key USDA conservation programs and their intended conservation impacts are outlined below:

- ***Conservation Stewardship Program (CSP)*** – CSP is the nation's largest working lands conservation program; currently, more than 70 million acres are enrolled nationwide. This program provides financial and technical assistance to help participants comprehensively enhance natural resources across their entire operation. CSP offers farmers the opportunity to earn payments for actively managing, maintaining, and expanding conservation activities like cover crops, rotational grazing, buffer strips, and more. CSP is unique in that eligibility is based on an applicant's level of stewardship at the time of application, as well as their commitment to address additional resource concerns over the course of a five-year contract. Participants in this program are eligible to renew their contracts for an additional five years, provided they have met the terms of the original contract and agree to maintain and expand their current conservation efforts.
- ***Environmental Quality Incentives Program (EQIP)*** – EQIP provides cost share assistance for farmers and ranchers to help them implement conservation practices on their working agricultural lands. EQIP reimburses participants for a percentage of the costs

(including costs associated with planning, design, materials, equipment, installation, labor, management, maintenance, training, and income foregone) of installing conservation practices. Participants can use EQIP to install management, vegetative, and structural practices – like improving irrigation efficiency, restoring pasture, or nutrient and pest management – on eligible agricultural land and nonindustrial private forestland. EQIP may reimburse up to 75% of the costs of conservation practices; socially disadvantaged, limited resource, beginning, and veteran farmer and ranchers are eligible for cost share rates of up to 90% of project costs. Additionally, EQIP includes an Organic Initiative, specifically targeting conservation support to certified and transitioning organic producers.

- ***Agricultural Conservation Easement Program (ACEP)*** – ACEP is a conservation easement program that was created in the last farm bill by combining three previously separate easement programs – the Wetlands Reserve Program (WRP), Grassland Reserve Program (GRP), and Farm and Ranch Lands Protection Program (FRPP). ACEP is now divided into two tracks: a wetland easement component, which largely mirrors the former WRP, and an agricultural land easement component, which largely retains the purposes and functions of the former GRP and FRPP. The purpose of the wetland easement component is to restore, protect, and enhance wetland values and functions on wetlands that have been in production. The agricultural land easement component of ACEP protects farms from development; this component is specifically designed to ensure farm viability for future generations, and to conserve grazing land, including rangeland, pasture, and shrub land. All agricultural land easement enrollments under ACEP must include a conservation plan to ensure that protecting and improving natural resources is a core component of agricultural land conservation.
- ***Conservation Reserve Program (CRP)*** – The primary purpose of CRP is to preserve and improve the quality of soil, water, and wildlife habitat by establishing long-term cover (primarily grasses and trees) on highly erodible land or land in need of conservation buffers that has previously been in row crop production. In exchange for cost-share and rental payments, farmers remove environmentally sensitive land from production and plant resource-conserving land cover. Within CRP, the Continuous CRP (CCRP) enrollment option provides significant conservation benefits. CCRP pays farmers to install partial field conservation practices, including conservation buffers to protect water quality as well as wildlife habitat. CCRP eligible practices include riparian buffers, wildlife habitat buffers, wetland buffers, filter strips, wetland restoration, grass waterways, shelterbelts, windbreaks, living snow fences, contour grass strips, salt tolerant vegetation, and shallow water areas for wildlife.
- ***Regional Conservation Partnership Program (RCPP)*** – Through RCPP, NRCS and its partners help producers install and maintain conservation activities that tackle priority natural resource concerns in a state or region. The 2014 Farm Bill created RCPP by consolidating four previously separate programs that had been focused on a specific region or water quality protection. RCPP differs from the programs above in that farmers and ranchers do not apply directly for funding, but rather partner entities (e.g., non-profit groups, conservation districts, farmer cooperatives, or other state or local agencies) submit proposals, and once NRCS selects proposals from the applicants, farmers and ranchers apply through NRCS to participate in an RCPP project. RCPP projects may focus on a specific

resource issue of heightened concern in a given watershed or region, or a given set of farmers within a state or area interested in pursuing innovative conservation objectives.

These farm bill conservation programs provide critical support to our nation's farmers and ranchers, and are a key resource in catalyzing the preservation and enhancement of natural resources.

TIMELY OPPORTUNITIES AND CHALLENGES: THE 2018 FARM BILL

Farm bill investment in conservation has come a long way since the first farm bills. In fact, between 1933 and 1985, there was no farm bill funding for conservation at all. The 1985 Farm Bill was the first to add a Conservation Title, and the first time conservation programs received direct farm bill funding. For decades, USDA conservation programs enjoyed broad support and repeated funding increases in farm bills. The 2014 Farm Bill marked the first time that the Conservation Title was cut since its creation over three decades ago; in total the bill cut roughly \$6 billion from conservation programs (factoring in automatic sequestration cuts). Since the passage of the 2014 Farm Bill, those cuts have severely hindered farmers' ability to access conservation support and implement conservation activities.

The 2014 Farm Bill will expire on September 30, 2018, and Congress is actively working to write a new bill before that deadline. Given the increasingly dire need for federal conservation programs created by global climate change and other challenges, the 2018 Farm Bill should re-elevate conservation programs and reinvest in our long-term agricultural sustainability. This bill represents a rare opportunity to reverse the shortsighted cuts of the 2014 Farm Bill and make much needed changes to programs that would increase accessibility and improve conservation outcomes.

By using federal conservation program utilization in the counties of the Delaware River Watershed as a lens through which to understand conservation needs and outcomes, stakeholders across the region will be better positioned to shape the future of our shared natural resources at the state and local levels.

PROGRAM UTILIZATION IN THE WATERSHED COUNTIES

Given the unique water quality and natural resource challenges in the counties of the Delaware River Watershed, farm bill conservation programs serve as a critical source of support to farmers and ranchers in their management of our shared resources. Fiscal year (FY) 2017 is the most recent year that data is available on conservation program utilization from USDA; we are still in the midst of FY 2018, therefore final enrollment data will not be available until after the fiscal year ends.

FY 2018 is the final year that conservation programs are authorized under the 2014 Farm Bill; analysis of program utilization over the length of the last farm bill, therefore, will provide valuable insights on the funding levels and programmatic changes needed in the next bill.

Conservation Stewardship Program

The Conservation Stewardship Program's (CSP) footprint is immense – more than 70 million acres are enrolled across the country and over 700,000 acres are currently enrolled in the states of Delaware, New Jersey, New York, and Pennsylvania. Within these states, more than 12% of enrolled acres fall within the Delaware River Watershed.

Table 1. Total CSP Active Acres and Contracts as of FY 2017*

STATE	COUNTY	CURRENT TOTAL ACREAGE ENROLLED (CUMULATIVE)	CURRENT TOTAL CONTRACTS ENROLLED
Delaware	Kent	20,746.2	30
	New Castle	8,978.6	13
	Total	29,724.8	43
New Jersey	Burlington	1,895.7	5
	Cumberland	711.1	3
	Gloucester	99.5	1
	Mercer	131.0	3
	Salem	3,954.7	8
	Warren	1,268.5	5
	Total	8,060.5	25
New York	Delaware	6,291.8	23
	Sullivan	220.5	2
	Total	6,512.3	25
Pennsylvania	Berks	2,950.0	15
	Bucks	2,000.9	7
	Carbon	376.2	3
	Chester	3,472.7	12
	Delaware	1,315.8	1
	Lehigh	4,628.6	8
	Monroe	241.9	2
	Montgomery	159.5	1
	Northampton	1,843.2	7
	Pike	14,716.8	2
	Schuylkill	8,917.8	25
	Wayne	628.0	3
	Total	41,251.4	86
Grand Total		85,549.0	179

**Data reflects counties within the Watershed that have active CSP contracts*

Active enrollment within CSP changes each year as new participants enroll and current participants either choose to reenroll, or to let their contracts expire (CSP contracts operate on five-year terms). It is therefore valuable to examine snapshots of how many acres are enrolled at the program at any given time. In FY 2017, nearly 16,000 acres across the counties of the Watershed were enrolled into CSP – either through a new contract or a renewal of an existing contract that would have otherwise

expired. The chart below shows the number of contracts and acres enrolled in each Watershed county after the FY 2017 sign up. FY 2018 data will be available once the current fiscal year ends.

Table 2. FY 2017 Enrolled CSP Acres and Contracts

STATE	COUNTY	ACRES (TOTAL)	CONTRACTS (TOTAL)
Delaware	Kent	4,148.5	7
	New Castle	2,178.9	3
	Total	6,327.4	10
New Jersey	Burlington	534.5	2
	Cumberland	98.5	1
	Gloucester	99.5	1
	Mercer	14.8	2
	Salem	2,525.2	2
	Warren	110.9	1
	Total	3,383.4	9
New York	Delaware	1,690.5	6
	Sullivan	167.0	1
	Total	1,857.5	7
Pennsylvania	Berks	1,058.9	3
	Bucks	549.2	1
	Chester	12.9	1
	Lehigh	1,113.8	1
	Monroe	45.2	1
	Montgomery	159.5	1
	Schuylkill	1,338.8	5
	Total	4,278.3	13
Grand Total		15,846.6	39

The FY 2017 data provides valuable information regarding payments for CSP contracts within these counties. CSP payments are based on the participant's level of stewardship at the time of application, as well as the additional conservation activities that they take on to further address resource concerns over the life of the contract. Annual payments include three core components: payments for active management of ongoing conservation activities; additional activity payments; and supplemental payments for resource conserving crop rotations. Ongoing management payments include two different pieces: a payment of \$350 for each resource concern that is addressed on each land use, plus a per acre payment rate based on the land use. Finally, and of particular relevance to smaller acreage participants, CSP offers a minimum payment of \$1,500 per year.

Previously, annual payments had been consistent for each of the five years of a CSP contract. This consistency simplified data analysis because one could easily multiply and estimate total payments in

a given location over the life of cumulative five year contracts. Due to a program “reinvention” undertaken by NRCS, however, the payment structure was changed beginning in 2017 such that annual payments vary each year depending on which conservation activities are implemented at various times over the life of the contract.

The chart below illustrates FY 2017 payments that went to CSP participants (for all contracts currently enrolled) within the counties of the Delaware River Watershed. These payments represent just one year of the five-year payment stream for each CSP contract.

Table 3. FY 2017 CSP Obligations (\$)

STATE	COUNTY	OBLIGATIONS
Delaware	Kent	\$95,000.00
	New Castle	\$26,163.00
	Total	\$121,163.00
New Jersey	Burlington	\$7,618.00
	Cumberland	\$7,055.00
	Gloucester	\$1,500.00
	Mercer	\$3,611.00
	Salem	\$44,855.00
	Warren	\$1,976.00
	Total	\$66,615.00
New York	Delaware	\$59,413.00
	Sullivan	\$1,500.00
	Total	\$60,913.00
Pennsylvania	Berks	\$21,234.00
	Bucks	\$22,689.00
	Chester	\$2,106.00
	Lehigh	\$48,097.00
	Monroe	\$2,789.00
	Montgomery	\$5,683.00
	Schuylkill	\$34,811.00
	Total	\$137,409.00
Grand Total		\$386,100.00

In addition to assessing acres and obligations, it is also valuable to take a close look at which conservation activities were adopted through CSP within these states. CSP offers several different types of conservation activities for participants, including enhancements, bundles, and conservation practices. Enhancements are conservation activities that go above and beyond the requirements of regular conservation practices; these are also offered through EQIP. Bundles are groupings of conservation enhancements that NRCS feels may work well together to provide benefits when implemented together on particular types of farms. CSP offers higher level of financial assistance to

participants who utilize bundles as part of their efforts to encourage a holistic approach to conservation agriculture.

The charts below list the most popular enhancements utilized by contract holders within the Delaware River Watershed counties (grouped by state) as part of the FY 2017 sign up. Due to the timing of the FY 2017 sign up period, many contracts were not able to adopt new enhancements in time to be captured in this round of data. It is also important to note that not all of these activities were necessarily adopted in each of the included counties. Once FY 2018 information on CSP activity adoption is made available (and contract holders have had enough time to adopt new practices and have those changes recorded by USDA), we will be able to form a clearer picture of how contract holders are responding to the new CSP activity offerings.

Table 4. FY 2017 Top CSP Activities, Delaware

Improving nutrient uptake efficiency and reducing risks to air quality – emissions of GHGs
Reducing ozone precursor emissions related to pesticides by utilizing IPM PAMS techniques
Managing livestock access to streams/ditches/other water bodies to reduce pathogens in surface water
Maintaining and improving forest soil quality
Enhancing field borders to reduce water induced erosion along the edge(s) of a field

Table 5. FY 2017 Top CSP Activities, New Jersey

Critical Area Planting
Upland Wildlife Habitat Management
Mulching to improve soil health
Reducing ozone precursor emissions related to pesticides by utilizing IPM PAMS techniques
On-Farm Secondary Containment Facility

Table 6. FY 2017 Top CSP Activities, New York*

On-Farm Secondary Containment Facility
Cover Crop
Critical Area Planting

**Only three activities were recorded as used by Delaware and Sullivan county contract holders during this period*

Table 7. FY 2017 Top CSP Activities, Pennsylvania

Reducing risk of pesticides in surface water by utilizing precision pesticide application techniques
Reducing risks of nutrient losses to surface water by utilizing precision ag. technologies
Improving nutrient uptake efficiency and reducing risks to air quality – emissions of GHGs
Cover cropping to reduce water erosion
Improving nutrient uptake efficiency and reducing risk of nutrient losses to surface water

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) provides financial and technical assistance for participants to adopt individual conservation practices on their land in agricultural production. Approximately 170 conservation practices are available through EQIP, including management, vegetative, and structural practices. Additionally, EQIP provides funding support for conservation activity plans (CAPs), which are developed for producers to identify conservation practices that can address a specific natural resource need. Typically, these plans are targeted toward specific kinds of land (e.g., transitioning to organic, grazing land, and forest land). CAPs can also address a specific resource need, such as nutrient management. Within a CAP plan, producers can then apply for financial assistance to implement the need for conservation practices.

Within Delaware, New Jersey, New York, and Pennsylvania, participation within EQIP has remained relatively steady over the past 8 years; this is reflective of larger enrollments trends under the 2008 and 2014 Farm Bills. The most recent EQIP sign up period, FY 2017, provides insight as to the number of participants within each of the Watershed counties within the states, as well as the amount of funding obligated to participants. The chart on the following page illustrates funding and contracts within each of the Watershed counties in FY 2017. In total, more than \$11.4 million in EQIP funding went to contracts within the Watershed counties over this period.

Table 8. FY 2017 EQIP Contracts and Funding

STATE	COUNTY	CONTRACTS	FUNDING (\$)
Delaware	Kent	51	\$3,507,762.37
	New Castle	36	\$685,315.99
	Total	87	\$4,193,078.36
New Jersey	Burlington	19	\$627,581.53
	Cumberland	10	\$566,558.96
	Gloucester	14	\$770,816.57
	Mercer	10	\$166,251.00
	Salem	36	\$1,907,877.91
	Sussex	15	\$59,118.02
	Warren	28	\$449,764.45
	Total	132	\$4,547,968.44
New York	Delaware	6	\$36,064.00
	Sullivan	7	\$188,813.00
	Total	13	\$224,877.00
Pennsylvania	Berks	24	\$1,114,144.34
	Bucks	1	\$11,593.63
	Chester	9	\$765,921.00
	Delaware	1	\$2,419.00
	Lehigh	2	\$42,255.00
	Monroe	3	\$140,665.00

	Montgomery	2	\$35,562.00
	Northampton	3	\$99,023.00
	Pike	2	\$102,250.61
	Schuylkill	5	\$83,222.33
	Wayne	7	\$52,931.24
	Total	59	\$2,449,987.15
Grand Total		291	\$11,415,910.95

Among the counties of the Watershed, the ratio of contracts received to funds received as compared to totals in each Watershed state varied. In Delaware, 41% of contracts in the state and 51% of total dollars obligated went to counties within the Delaware River Watershed, in New Jersey Watershed counties received 60% of contracts and 86% of funds, in New York 4% of contracts and 2% of funds, and in Pennsylvania 12% of contracts and 10% of funds. In both Delaware and New Jersey, Watershed counties received a percentage of state funding that significantly outstripped the percentage of contracts they received. This is a positive sign that the Watershed's resource concerns are being targeted and prioritized in these states. In New York and Pennsylvania, where percentage of funding received was not more than percentage of contracts received, the discrepancy was relatively low (4% vs. 2% and 12% vs. 10%, respectively).

EQIP payments are based on a cost share rate for the specific practices adopted. Payment rates vary significantly, depending on whether the practice is a management or vegetative change, or a structural activity that includes significant reimbursement costs for materials and equipment.

The charts below illustrate the amount of funding allocated to the top practices adopted under the FY 2017 sign up period within the Watershed counties.

Table 9. FY 2017 Delaware Top EQIP Practices*

PRACTICE	COUNTY	SUM OF PLANNED AMOUNT (ACRES)	SUM OF FINANCIAL ASSISTANCE
Cover Crop	Kent	9,020.4	\$598,804.00
	New Castle	3,943.4	\$270,298.00
	Total	12,963.8	\$869,102.00
Roofs and Covers	Kent	15.0	\$556,722.08
	New Castle	1.0	\$33,136.00
	Total	16.0	\$589,858.08
Heavy Use Area Protection	Kent	72,344.0	\$216,753.84
	New Castle	20,809.0	\$64,947.00
	Total	93,153.0	\$281,700.84
Waste Storage Facility	Kent	8.0	\$259,658.00
	New Castle	1.0	\$14,364.00
	Total	9.0	\$274,022.00
Amendments for the Treatment of Agricultural Waste	Kent	480.0	\$81,798.00
	New Castle	9.0	\$44,616.00
	Total	489.0	\$126,414.00
Grand Total		106,630.8	\$2,141,096.92

**Data reflects counties that adopted EQIP contracts*

Table 10. FY 2017 New Jersey Top EQIP Practices*

PRACTICE	COUNTY	SUM OF PLANNED AMOUNT (ACRES)	SUM OF FINANCIAL ASSISTANCE
Sprinkler System	Burlington	45.2	\$62,932.46
	Cumberland	74.5	\$136,498.39
	Gloucester	188.3	\$172,205.00
	Salem	281.5	\$367,373.00
	Total	589.5	\$739,008.85
Cover Crop	Burlington	238.9	\$10,000.07
	Cumberland	2,092.3	\$150,095.00
	Gloucester	4,176.6	\$304,924.00
	Salem	50.0	\$4,135.70
	Warren	739.4	\$46,276.00
	Total	7,297.2	\$515,430.77
Irrigation Pipeline	Burlington	200.0	\$1,136.00
	Cumberland	2,960.0	\$33,652.47
	Gloucester	5,264.0	\$41,430.00

	Salem	11,188.0	\$135,679.00
	Total	19,612.0	\$211,897.47
Irrigation System, Microirrigation	Burlington	12.5	\$19,994.00
	Gloucester	62.4	\$83,580.00
	Salem	69.5	\$95,421.00
	Total	144.4	\$198,995.00
Roofs and Covers	Burlington	1.0	\$11,964.00
	Gloucester	1.0	\$7,068.00
	Salem	3.0	\$76,571.00
	Warren	2.0	\$101,376.00
	Total	7.0	\$196,979.00
Grand Total		27,650.1	\$1,862,311.09

**Data reflects counties that adopted EQIP contracts*

Table 11. FY 2017 New York Top EQIP Practices*

PRACTICE	COUNTY	SUM OF PLANNED AMOUNT (ACRES)	SUM OF FINANCIAL ASSISTANCE
High Tunnel System	Delaware	6,320.0	\$28,992.00
	Sullivan	5,000.0	\$24,702.00
	Total	11,320.0	\$53,694.00
Roofs and Covers	Sullivan	4.0	\$53,517.00
Waste Storage Facility	Sullivan	2.0	\$47,885.00
Forest Stand Improvement	Sullivan	20.7	\$21,407.00
TA Design	Sullivan	13.0	\$14,334.00
Grand Total		11,359.7	\$190,837.00

**Data reflects counties that adopted EQIP contracts*

Table 12. FY 2017 Pennsylvania Top EQIP Practices*

PRACTICE	COUNTY	SUM OF PLANNED AMOUNT (ACRES)	SUM OF FINANCIAL ASSISTANCE
Waste Storage Facility	Berks	1.0	\$61,401.00
	Chester	6.0	\$347,033.00
	Total	7.0	\$408,434.00
Cover Crop	Berks	1,294.8	\$97,632.00
	Chester	369.9	\$11,640.00
	Lehigh	653.4	\$42,255.00
	Monroe	1,138.2	\$60,000.00
	Northampton	1,511.4	\$97,728.00
	Schuylkill	857.4	\$66,519.00
	Wayne	0.6	\$48.00
	Total	5,825.7	\$375,822.00
Heavy Use Area Protection	Berks	30,716.0	\$83,228.00
	Chester	36,200.0	\$181,083.00
	Total	66,916.0	\$264,311.00
Brush Management	Berks	25.9	\$5,417.00
	Chester	117.5	\$45,498.00
	Monroe	50.0	\$17,621.00
	Pike	26.3	\$9,268.65
	Total	219.7	\$77,804.65
Trails and Walkways	Berks	3,389.0	\$56,227.00
	Chester	835.0	\$15,700.00
	Total	4,224.0	\$71,927.00
Grand Total		8,694.0	\$230,927.30

**Data reflects counties that adopted EQIP contracts*

Adoption of EQIP practices within the Watershed counties reflects a trend that we also see across the country – the most frequently adopted practices include some management or vegetative practices (such as cover crop or brush management), but also structural and equipment practices that support irrigation infrastructure or concentrated animal feeding operations (such as waste storage facilities). Through the farm bill, as well as through administrative reform proposals, NSAC will continue to advocate for increased adoption and utilization of management practices that focuses EQIP more on the higher scoring management and vegetative conservation practices that will improve the program’s net environmental impact.

In the table below, we examine the cumulative adoption of key types of EQIP conservation practices in the Watershed counties during FY 2017. The data (delineated in terms of number of acres enrolled in each type of practice) show that the protection and enhancement of water and soil quality were top concerns for producers in these states. For example, across the Watershed counties, EQIP supported the adoption of roughly 27,000 acres of cover crops in FY 2017 – nearly 30% of total cover crop adoption under EQIP in the Watershed states.

Table 13. FY 2017 EQIP Practices Protecting and Enhancing Water and Soil Quality

STATE	COUNTY	COVER CROP ACRES	CONSER-VATION COVER ACRES	PRESCRIBED GRAZING ACRES	NUTRIENT MANAGEMENT ACRES
Delaware	Kent	9,020.4	2.3	0.0	1,149.6
	New Castle	3,943.4	6.8	0.0	976.5
	Total	12,963.8	9.1	0.0	2,126.1
New Jersey	Burlington	238.9	13.9	119.1	0.0
	Cumberland	2,092.3	2.5	0.0	0.0
	Gloucester	4,176.6	1.0	31.6	90.0
	Salem	50.0	0.0	0.0	474.9
	Warren	739.4	1.5	14.5	110.9
	Total	7,297.2	18.9	165.2	675.8
New York	Sullivan	0.0	0.0	0.0	346.8
	Total	0.0	0.0	0.0	346.8
Pennsylvania	Berks	1,294.8	11.5	159.8	2,727.0
	Bucks	0.0	0.0	4.7	0.0
	Chester	369.9	0.0	0.0	192.5
	Lehigh	653.4	0.0	0.0	0.0
	Monroe	1,138.2	0.0	0.0	0.0
	Montgomery	0.0	0.0	58.6	0.0
	Northampton	1,511.4	0.0	0.0	0.0
	Schuylkill	857.4	2.5	0.0	152.1
	Wayne	0.6	1.5	54.8	0.0
	Total	5,825.7	15.5	277.9	3,071.6
Grand Total		26,086.7	43.5	443.1	6,220.3

Regional Conservation Partnership Program

The Regional Conservation program (RCPP) differs from the previously highlighted conservation programs because RCPP projects are awarded to eligible entities (e.g., non-profit groups, conservation districts, farmer cooperatives, or other state or local agencies) first, and then farmers and ranchers are invited to apply to participate in an approved project.

Since the adoption of the 2014 Farm Bill, NRCS has awarded 22 projects with either Delaware, New Jersey, New York, or Pennsylvania as the lead state. Combined, these projects represent a \$50.5 million investment in joint conservation efforts within the region. Partners in RCPP projects bring an array of financial and technical contributions to the table, including cash contributions and one-on-one technical assistance with planning, management, and engineering activities. RCPP aims to leverage partner contributions to double the federal conservation investment. NRCS expects to release the Announcement of Program Funds (APF) for FY 2019 in late summer 2018.

The chart below illustrates the number of awards and NRCS funding by state between 2014 and 2018 (data for these awards is not available at the county level; however at least 7 RCPP projects during these years are clearly identifiable as Delaware River and Bay oriented – see Table 15).

Table 14. RCPP Awards (millions \$) by Lead State, 2014-2018

STATE	TOTAL		2014-2015		2016		2017		2018	
	#	\$	#	\$	#	\$	#	\$	#	\$
Delaware	5	\$3.57	1	\$.60	1	\$1.00	2	\$.95	1	\$1.02
New Jersey	5	\$3.53	1	\$.70	1	\$.70	1	\$.64	2	\$1.49
New York	6	\$11.60	1	\$1.50	3	\$8.30	1	\$1.21	1	\$.59
Pennsylvania	6	\$31.86	3	\$21.50	0	0	1	\$.39	2	\$9.97
Total	22	\$50.57	6	\$24.30	5	\$10.0	5	\$3.20	6	\$13.10

The Delaware River Watershed Working Lands Conservation Protection Partnership (DRWWLCP), which the William Penn Foundation was instrumental in establishing, was awarded in the first round of RCPP projects (2014-2015). This project focused in on target areas (aka “cluster areas”) within the Delaware River Watershed in New Jersey, including the Highlands Cluster and the Kirkwood Cohansey Aquifer Cluster. This proposal was one of the first multi-state RCPP projects selected for funding, and was established with a five-year \$13 million agreement. Within these areas, farmers and landowners were able to apply for funding through EQIP or ACEP to receive funding for conservation activities as part of the project. Additionally, to complement the implementation of conservation systems through NRCS, the National Fish and Wildlife Foundation and the Open Space Institute administered competitive grants and capital programs to support restoration and land protection projects.

The impetus for this project originated from a rigorous watershed-wide assessment and prioritization process that was initiated by key stakeholders in the Delaware River Basin in 2012 and led by the William Penn Foundation. The data in this report will hopefully provide insights similar to that of the DRWWLCP, which the Foundation and its partners will be able to use to further target resources and actions within the region.

Details on each of the Watershed's 22 funded RCPP projects are outlined in the chart below:

Table 15. RCPP Project Descriptions, 2014-2018

LEAD STATE	LEAD PARTNER	AMOUNT	GRANT TYPE	AWARD TITLE	PARTNERS	YEAR
Delaware	Sussex Conservation District	\$600,000	State Funding	Watershed Channel Restoration Projects in Sussex County, Delaware	5	2014-2015
New Jersey	New Jersey Conservation Foundation	\$700,000	State Funding	Delaware Bay Soil and Water Quality Protection Initiative	10	2014-2015
New York	Greater Adirondack Resource Conservation and Development Council, Inc.	\$1,500,000	State Funding	Greater Adirondack Agricultural Environmental Enhancement Program	9	2014-2015
Pennsylvania	American Farmland Trust	\$13,000,000	National Funding	Delaware River Watershed Working Lands Conservation and Protection Partnership	27	2014-2015
Pennsylvania	National Fish and Wildlife Foundation	\$7,000,000	CCA	Comprehensive Watershed Conservation in Dairy and Livestock Landscapes of the Chesapeake Bay	20	2014-2015
Pennsylvania	Stroud Water Research Center	\$1,500,000	State Funding	Productive Farms and Clean Streams for Berks and Chester Counties	13	2014-2015
Delaware	Sussex Conservation District	\$1,000,000	State Funding Pool	Assisting Beginning Farmers with Poultry HQ BMPs	8	2016
New Jersey	New Jersey Water Supply Authority	\$700,000	State Funding Pool	Raritan Basin Partners for Source Water Protection	3	2016
New York	New York State Soil & Water Conservation Committee	\$3,000,000	CCA	Genesee River Sediment and Phosphorus Reduction	4	2016
New York	Tioga County Soil & Water Conservation District	\$4,100,000	CCA	Upper Susquehanna Agricultural BMP Implementation	2	2016
New York	Watershed Agricultural Council of the NYC Watersheds, Inc.	\$1,200,000	State Funding Pool	Enhancement to the NYC Watershed Ag. Program	1	2016

Delaware	Cost-share Opportunities for Beginning Farmers	\$475,300	State	Kent Conservation District	4	2017
Delaware	Energize Delaware Farm Energy Efficiency Program	\$475,300	State	Delaware Sustainable Energy Utility	1	2017
New Jersey	Whole Farm Systems Conservation Trial	\$644,000	State	New Jersey State Agriculture Development Committee	5	2017
New York	Agricultural Stewardship in the Peconic Estuary	\$1,212,000	State	Suffolk County - Department of Economic Development & Planning	10	2017
Pennsylvania	Soil Health: Improving Land, Water and Profitability	\$396,800	State	Chesapeake Bay Foundation	8	2017
Delaware	Protecting DE Bay & Inland Bays with Cover Crops	\$1,020,000	State	Sussex Conservation District	6	2018
New Jersey	Columbia Dam Removal & Restoration on Paulins Kill	\$567,000	State	The Nature Conservancy	3	2018
New Jersey	Black River Greenway – Soil and Water Protection	\$922,000	State	New Jersey Conservation Foundation	12	2018
New York	East of Hudson Watershed Water Supply Protection	\$590,000	State	Watershed Agricultural Council	3	2018
Pennsylvania	CCCD Partnership for Chesapeake Bay Water Quality	\$3,600,000	CCA	Chester County Conservation District	10	2018
Pennsylvania	Implementing BMP's & CNMP's on PA Preserved Farms	\$6,370,000	CCA	Pennsylvania Department of Agriculture-Bureau of Farmland Preservation	3	2018

Conservation Reserve Program

Note: USDA's Farm Service Agency (FSA) administers the Conservation Reserve Program (CRP) and has typically posted monthly CRP reports online. These reports detail changes to CRP enrollment, including targeted initiatives, across the country. After nearly a year delay, and following many requests from NSAC, FSA finally released updated CRP data in June 2018. While this is important step forward for gaining a snapshot of where enrollment stands at the national and state levels, FSA has yet to update the county enrollment reports. NSAC will continue to urge FSA to update all reports regularly in order to provide data in a transparent, accurate, and timely manner. The data below reflects the most recent CRP enrollment information available at this point.

While the majority of acres in CRP are enrolled through the general sign up, the Continuous CRP (CCRP) provides an invaluable resource for targeting conservation efforts and protecting water quality within the Delaware River Watershed and across the country. CCRP pays farmers to install targeted, partial field conservation practices on the most environmentally sensitive lands. This enrollment option includes conservation buffer practices (filter strips, riparian buffers, grass waterways, grass strips, saturated buffers, and the like), as well as the Conservation Reserve Enhancement Program (CREP), Farmable Wetland Program (FWP), State Acreage for Wildlife Enhancement (SAFE) initiative, and other special initiatives. CREP facilitates agreements between states and USDA to pay farmers to address regionally targeted conservation concerns; SAFE is an initiative aimed at providing financial and technical assistance to farmers and ranchers who implement a variety of practices that conserve high priority wildlife species; and FWP helps producers manage certain types of wetlands and install wetland buffer areas.

Within the states of the Delaware River Watershed, farmers and ranchers far more heavily participate in CCRP than they do within General CRP. More than 166,000 acres have been enrolled in CCRP (including CREP) within the Watershed states as of September 2017, compared to only 24,500 acres enrolled through general CRP. Unfortunately, data that is disaggregated by CRP and CCRP enrollment acres is not available at the county level – only cumulative program data is available by county, except in the case of expiring acres (see Table 18). The following chart (Table 16) shows cumulative CRP (General and Continuous) enrollment in the Watershed counties as of FY 2017; currently more than 15,000 acres are enrolled in CRP across these counties.

Table 16. FY 2017 CRP Acres (General and Continuous)

STATE	COUNTY	ACRES	RENTAL PAYMENTS
Delaware	Kent	1,676.9	\$236,648
	New Castle	373.8	\$43,137
	Total	2,050.6	\$279,785
New Jersey	Burlington	5.3	\$820
	Cumberland	330.0	\$36,078
	Gloucester	66.3	\$7,493
	Mercer	77.5	\$5,462
	Salem	779.2	\$86,193
	Sussex	14.2	\$1,307
	Warren	143.4	\$12,180

	Total	1,415.9	\$149,533
New York	Delaware	2,398.5	\$276,471
	Sullivan	43.7	\$3,518
	Total	2,442.2	\$279,989
Pennsylvania	Berks	3,476.3	\$563,548
	Bucks	10.5	\$1,180
	Carbon	544.1	\$1,180
	Chester	846.5	\$200,477
	Lehigh	12.6	\$796
	Monroe	1.1	\$49
	Montgomery	380.9	\$17,922
	Northampton	32.0	\$1,557
	Schuylkill	3,311.4	\$347,723
	Wayne	829.6	\$88,964
	Total	9,445.0	\$1,223,396
Grand Total		13,042.5	\$1,932,703

**Data reflects counties that adopted CRP activities*

CCRP includes several different components, many of which provide significant benefits for water quality and other natural resource concerns. CREP, which is one component of CCRP, is of particular significance to the Delaware River Watershed states. Under a CREP agreement, states work with USDA and producers to address locally targeted resource concerns. Pennsylvania leads the country in terms of the number of acres in CREP with 142,777 acres enrolled as of September 2017.

The following chart illustrates the number of CREP contracts and acres enrolled within the states of the Watershed (data by county for CREP is not currently available):

Table 17. FY 2017 CREP Contracts and Acres by State

STATE	CONTRACTS	FARMS	ACRES	ANNUAL RENTAL	PAYMENT PER ACRE
Delaware	327	201	3,570	\$487,000	\$136.41
New Jersey	242	153	774	\$111,000	\$143.99
New York	1,166	838	14,049	\$1,934,000	\$137.64
Pennsylvania	8,769	5,867	142,777	\$17,871,000	\$125.17
Total	10,504	7,059	161,170	\$20,403,000	\$135.80

CCRP also offers partial field conservation buffer enrollments directly to farmers, without going through a CREP, through which participants can install and maintain conservation buffers to protect sensitive acreage, water quality, and stream and streamside wildlife habitat. The following chart illustrates the number of acres cumulatively enrolled as of FY 2017 in key conservation practices through CCRP in each of the four states within the Watershed:

Table 18. FY 2017 CCRP Practices by Acres Enrolled*

STATE	COUNTY	F.S. ¹	R.B. ²	G.W. ³	C.G.S. ⁴	T.P. ⁵	W.R. ⁶	MARGINAL PASTURE BUFFERS		P.H. ⁷
								WILD LIFE	WET LAND	
Delaware	Kent	255.9	13.4	0.0	0.0	777.7	117.2	0.0	0.0	1.0
	New Castle	165.6	6.8	6.1	0.0	15.1	0.0	0.0	0.0	0.0
	Total	421.5	20.2	6.1	0.0	792.8	117.2	0.0	0.0	1.0
New Jersey	Burlington	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
	Cumberland	51.0	37.9	15.2	0.0	0.0	0.0	0.0	0.0	13.7
	Gloucester	23.1	4.4	12.5	0.0	0.0	0.0	0.0	0.0	0.0
	Mercer	0.0	7.4	0.0	0.0	31.8	0.0	0.0	0.0	0.0
	Salem	244.8	178.2	88.4	0.6	16.3	0.0	0.0	0.0	0.0
	Sussex	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Warren	8.3	18.5	22.3	0.0	0.0	0.0	0.0	0.0	0.0
	Total	339.4	246.4	143.7	0.6	48.1	0.0	0.0	0.0	13.7
New York	Delaware	2.5	2,323.9	0.0	0.0	0.0	0.0	0.0	53.6	0.0
	Sullivan	0.0	33.9	0.0	0.0	0.0	0.0	0.0	4.4	0.0
	Total	2.5	2,357.8	0.0	0.0	0.0	0.0	0.0	58.0	0.0
Pennsylvania	Berks	24.6	287.5	3.7	0.0	53.2	34.1	30.5	7.4	0.0
	Bucks	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	Carbon	0.0	3.6	0.5	0.0	0.0	0.0	10.4	0.0	0.0
	Chester	5.7	355.7	25.1	0.0	11.5	0.0	2.0	0.0	0.0
	Lehigh	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0
	Monroe	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
	Montgomery	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
	Northampton	0.0	0.7	7.7	0.0	0.0	0.0	0.0	0.0	0.0
	Schuylkill	57.6	412.3	31.6	12.6	10.4	16.8	6.8	2.0	0.0

¹ FILTER STRIPS

² RIPARIAN BUFFERS

³ GRASS WATERWAYS

⁴ CONTOUR GRASS STRIPS

⁵ TREE PLANTINGS

⁶ WETLAND RESTORATION

⁷ POLLINATOR HABITAT

	Wayne	0.0	345.9	2.1	0.0	0.0	0.0	50.4	0.0	0.0
	Total	87.9	1,405.6	78.4	12.6	77.0	50.9	100.1	9.4	0.0
Grand Total		851.3	4,030.0	228.2	13.2	917.8	168.1	100.1	67.4	14.7

**Data reflects counties that adopted CCRP activities*

Also included within CCRP is the Grasslands Initiative, which helps grass-based livestock operations conserve and enhance their lands. Grassland enhancement and preservation efforts generate widespread benefits for priority wildlife species, as well as for water filtration, flood mitigation, soil health, and carbon sequestration. Of the four states in the Watershed, Pennsylvania is the only state with any acres enrolled in the Grasslands Initiative – one contract totaling 53 acres.

CCRP enrollment is at an all-time high nationally, however, land still continues to expire from the program at a steady rate. The exiting of acres does not point to disinterest in the program, however. Instead, it reflects the fact that a new class of 10- to 15- year contracts expires each year.

The charts below illustrate expiring acres from CCRP within the Delaware River Watershed counties and full state expiration data as of September 2017:

Table 19. Expiring CCRP Acres

STATE	COUNTY	2016	2017	2018	2019	2020	2021	2022	2023	2024+
Delaware	Kent	587.6	207.9	178.3	152.1	113.5	200.6	71.1	91.4	296.8
	New Castle	75.7	7.5	12.8	9.7	11.7	24.8	52.6	93.5	2.2
	Total	663.3	215.4	191.1	161.8	125.2	225.4	123.7	184.9	299.0
New Jersey	Burlington	0.0	2.6	0.6	0.0	0.0	2.1	0.0	0.0	0.0
	Cumberland	14.3	8.7	0.0	49.7	6.2	24.3	84.8	14.0	88.4
	Gloucester	0.0	0.0	0.8	0.0	0.6	21.5	6.2	4.4	18.0
	Mercer	0.0	0.0	0.0	0.3	0.0	0.0	16.1	4.9	22.4
	Salem	29.7	27.5	49.3	35.0	183.6	37.3	108.4	41.2	157.0
	Sussex	0.0	0.0	4.2	4.0	0.0	0.0	6.0	0.0	0.0
	Warren	4.3	2.2	20.0	2.5	22.6	13.4	10.2	35.9	26.3
	Total	48.3	41.0	74.9	91.5	213.0	98.6	231.7	100.4	312.0
New York	Delaware	629.0	218.3	163.6	261.7	158.3	132.2	173.8	56.7	703.2
	Sullivan	17.5	0.0	0.0	2.9	0.0	0.0	0.0	0.0	4.4
	Total	646.5	218.3	163.6	264.6	158.3	132.2	173.8	56.7	707.7
Pennsylvania	Berks	88.6	72.2	430.5	1,142.4	18.1	99.3	688.8	129.2	579.4
	Bucks	1.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
	Carbon	51.6	0.5	301.4	134.2	10.4	0.0	0.0	0.0	97.6
	Chester	307.4	127.1	150.7	25.2	40.2	62.1	202.8	44.5	136.2
	Lehigh	2.4	3.3	0.0	0.0	0.0	0.5	1.7	0.0	0.0
	Monroe	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
	Northampton	1.4	0.0	1.2	0.0	0.0	5.9	0.6	0.0	1.4
	Schuylkill	125.6	185.1	414.8	188.6	34.7	679.6	389.9	221.8	415.6

	Wayne	26.8	0.5	40.6	203.3	224.3	27.0	112.7	167.6	40.1
	Total	604.9	388.7	1,340.3	1,693.7	327.7	874.7	1,396.5	563.1	1,270.3
Grand Total		1,963.0	863.4	1,769.9	2,211.6	824.2	1,330.9	1,925.7	905.1	2,588.9

Table 20. Expiring General CRP Acres*

STATE	COUNTY	2016	2017	2018	2019	2020	2021	2022	2023	2024+
Delaware	Kent	0.0	0.0	20.2	0.0	37.8	0.0	5.9	0.0	0.0
	New Castle	0.0	80.7	0.0	0.0	30.8	0.0	0.0	39.1	0.0
	Total	0.0	80.7	20.2	0.0	68.6	0.0	5.9	39.1	0.0
New Jersey	Cumberland	0.0	52.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Mercer	0.0	33.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Salem	79.1	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Warren	0.0	9.7	14.7	0.0	0.0	0.0	0.0	0.0	0.0
	Total	79.1	113.1	14.7	0.0	0.0	0.0	0.0	0.0	0.0
New York	Delaware	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sullivan	9.4	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0
	Total	9.4	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0
Pennsylvania	Berks	0.0	165.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Bucks	0.0	0.0	0.0	0.0	0.0	14.3	0.0	10.2	0.0
	Chester	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Lehigh	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0
	Northampton	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0
	Schuylkill	52.9	256.1	255.5	66.7	1.4	20.0	0.0	0.0	0.0
	Total	64.3	421.9	255.5	66.7	1.4	65.6	0.0	10.2	0.0
Grand Total		152.8	615.7	290.4	66.7	75.4	65.6	5.9	49.3	0.0

**Data reflects counties that adopted CRP activities; counties with zero expiring acres omitted*

Participants with expiring land have the choice between returning their land to production, or reenrollment in CCRP. Providing the proper outreach and incentives to encourage more producers to re-enroll sensitive areas (e.g., riparian areas and prime wildlife habitat) through the continuous sign-up is something on which NSAC has been actively working with FSA for the last several years.

In May of 2017, however, USDA froze all new enrollments into CCRP through the remainder of FY 2017 – with the exception of new CREP agreements and the Grasslands Initiative. Until June 2018, FSA remained unable to accept any new enrollments into CCRP, excluding CREP and Grasslands Initiative enrollments. NSAC was extremely concerned by the decision to freeze enrollments, and thus we were pleased when FSA reopened enrollment in June 2018 for CCRP. Among the practices available through this most recent sign-up (#51), NSAC was glad to see that conservation activities like filter strips, riparian buffers, grass waterways and bioreactors have been included. These targeted practices are critical for helping farmers limit nutrient runoff from their lands and improve

neighboring water quality. These practices in particular are critical for address water quality in the Delaware River Watershed.

Agricultural Conservation Easement Program

Within the four states of the Delaware River Watershed, more than \$13.6 million in funding through the Agricultural Conservation Easement Program (ACEP) was awarded to protect agricultural land and wetland restoration and protection in FY 2017. Of the 16 easements awarded within counties in the Watershed in FY 2017 for which county data is available, fourteen were Agricultural Land Easements (ALE), and two were Wetland Reserve Easements (WRE). The chart below illustrates the split between ALE and WRE in FY 2017 among those counties with available data.

Table 21. FY 2017 ALE/WRE Easements and Acres*

STATE	COUNTY	ALE EASEMENTS	WRE EASEMENTS	ALE ACRES	WRE ACRES
Delaware	Kent	7	1	971.2	17.0
	New Castle	1	0	190.6	0.0
	Total	8	1	1,161.7	17.0
New Jersey	Salem	3	0	382.1	0.0
Pennsylvania	Berks	0	1	0.0	26.6
	Chester	3	0	393.0	0.0
	Total	3	1	393.0	26.6
Grand Total		14	2	1,936.8	43.6

**ACEP funding obligations at the county level for these counties are not available yet due to the extended timeframes most easements take to close*

Conservation activities included within agricultural land easements, as well as the restoration, protection, and enhancement of wetlands, can provide significant water quality benefits to ecosystems across the states of the Watershed. These activities can be particularly impactful in densely populated areas where sprawl and development pose threats to preserving agricultural land; in these areas, easements play a critical role in ensuring the continued productivity and protection of agricultural land. Additionally, wetlands and grasslands provide a wide range of ecological benefits such as water filtration, flood mitigation, and carbon sequestration.

Organic Participation

While no single farm bill conservation program is focused solely on organic agriculture, some of the aforementioned programs provide targeted support for certified organic producers, as well as those in process of transitioning to organic production. Organic production and practices can significantly contribute to improved water quality by reducing inputs on land in agricultural production. Additionally, soil health co-benefits obtained through organic agriculture also contribute to improved water quality through the increasing of water retention and decreasing of erosion.

Organic and transitioning participants are tracked within both EQIP and CSP. Within EQIP, certified organic and transitioning to organic participants have the option to compete within the Organic Initiative – a separate and smaller funding pool, but within which they are subject to a lower

payment limitation. Additionally, starting in FY 2016, NRCS began tracking organic and transitioning participants who opted to enroll in General EQIP rather than the Organic Initiative.

We are still working to obtain from NRCS specific participation rates within the EQIP Organic Initiative by state, including a clear distinction between and separate metrics for certified and transitioning participants. Based on the preliminary information we have obtained, it appears that participation within the Organic Initiative has declined over time. We expect that this is the result of the lower payment limit with EQIP's Organic Initiative, which encourages organic farmers to apply for EQIP outside of the Organic Initiative, as well as due to limited outreach at the state level. NSAC is actively working to address both of these barriers through our farm bill efforts, as well as through administrative reform.

The charts below break down organic participation within the Watershed in CSP and EQIP by state – at this point data at the county level is not available.

Table 22. CSP Organic and Transition

STATE	CSP – ORGANIC		CSP – TRANSITION	
	CONTRACTS	ACRES	CONTRACTS	ACRES
Delaware	0	0	0	0
New Jersey	1	100	0	0
New York	7	5,323	2	340
Pennsylvania	3	671	1	4
Total	11	6,094	3	344

Table 23. EQIP Organic and Transition

STATE	EQIP – ORGANIC		EQIP – TRANSITION	
	CONTRACTS	DOLLARS	CONTRACTS	DOLLARS
Delaware	1	\$131,788	3	\$44,532
New Jersey	1	\$6,818	3	\$17,885
New York	18	\$879,469	17	\$482,480
Pennsylvania	12	\$664,038	12	\$322,060
Total	32	\$1,682,112.77	35	\$866,957.68

CRP also offers an organic-specific option through the Organic Buffers Initiative as a result of NSAC's advocacy. This new initiative allows organic and transitioning participants to enroll conservation buffers, including any eligible CCRP practice, which provide critical conservation benefits and can also help protect organic farms against pesticide drift or genetic drift. Depending on a particular operation's needs, enrollment in the Organic Buffers Initiative could include the installation of filter strips, riparian buffers, windbreaks, upland buffers, pollinator habitat, and more. The initiative is still too new to have generated any relevant data yet, but it may become an important factor over time.

Measurement and Evaluation of Programs Outcomes

The data provided in this report can help advocates and producers to better understand the adoption and utilization of major farm bill conservation programs within the counties of the Delaware River Watershed, and hopefully to then use those insights to inform their own advocacy and outreach. Given the still rudimentary levels of data collection on conservation programs at the federal level, however, agencies like NRCS remain unable to quantify the impact of their conservation investments in terms of environmental outcomes. Without this type of data, conservation programs remain vulnerable and subject to attack by critics who claim that their impacts are not worth the funds provided.

NSAC is actively working to improve data collection on conservation in the 2018 Farm Bill so that these critical conservation programs will be better insulated from attacks, and so that the programs themselves can improve their outreach and performance.

To date, NRCS has taken some action toward better data collection through the Conservation Effects Assessment Project (CEAP), which measures and models the conservation of natural resources on a landscape scale. In 2014, NRCS published a CEAP report, [*Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Delaware River Basin*](#), which provides valuable insight as to the adoption of key conservation practices (though not focused solely on those adopted through federal conservation programs or even NRCS conservation activities). At the time the study was conducted, the CEAP report indicated that farmers were making progress in terms of conservation practice adoption, but there was still significant need for additional treatment. NRCS found there was a high level of need for conservation treatment on areas where nutrient and sediment loss was greatest: some 434,000 acres (or 51% of the cropped acres in the region) had a high level of need for additional conservation treatment. They also found that there was a 44% reduction in sediment loss, and a 33% reduction in nitrogen lost from runoff, through conservation treatment, illustrating an opportunity and need to further understand the direct correlation between specific conservation activities and environmental outcomes.

The information collected by NRCS through this report and other analyses is useful in understanding conservation on a landscape or watershed scale, and NRCS has taken steps to understand the adoption of conservation practices specifically within the Delaware River Watershed. As noted, however, they still lack the data to explain and quantify the environmental benefits obtained through the adoption of those practices.

RECOMMENDATIONS FOR BUILDING ON THIS ANALYSIS OVER TIME:

In the compiling of this report, an overall lack of available and/or uniform data was an ongoing challenge. In order for stakeholders in the Delaware River Watershed to fully understand the use and impact of federal conservation programs in their region, NSAC offers the following recommendations:

1. **Stakeholders in the Basin should work with NRCS to improve basin-scale data availability.** In order to trace program utilization down to the watershed-level, it was necessary to request data at the county level and then calculate the sum of all relevant counties within the Delaware River Watershed. Even with these additional calculations, our conservation data was not as focused as we might have liked, given that some counties

(primarily Kent) are not located completely within the Watershed. It is therefore not possible – at present – to get a perfectly accurate snapshot of program use within the Watershed without a Freedom of Information Act (FOIA) request. NRCS *does* monitor and work at the basin-scale; therefore it should be possible to obtain conservation program data at this level without filing a FOIA request. By more aggressively working with NRCS at both the local and national level, stakeholders can raise awareness within the organization regarding the need to address this data gap.

2. **Improve availability of conservation outcomes data through administrative and/or legislative reforms.** The conservation program data currently available (without a FOIA request) from NRCS can tell us about the number of contracts signed, dollars obligated, and acres enrolled within the region. NRCS can also detail specific conservation activities adopted within the region, however, they are not able to measure, evaluate, or report on specific conservation *outcomes* (e.g., improved water quality, reduced erosion). Although we can derive a basic level of understanding about the impacts of the programs and practices, it is critical for several reasons that USDA be able to concretely measure program impact. Firstly, this data is critical to stakeholders who want to understand if and how a particular practice might work in their particular region or climate. A second key reason this data is important is that it would help to justify financial and policy support for conservation programs within Congress and within the Administration. There are currently efforts, both legislative and administrative, to improve USDA's ability to collect and analyze this type of conservation data. The 2018 Farm Bill represents an important opportunity for Congress to mandate that this information be collected in order to increase program efficiency, efficacy, and transparency. Following the farm bill's reauthorization, there are also ongoing opportunities to work with the Administration to advance non-legislative reforms that would make this type of data collection possible.
3. **Consider leveraged funding multi-year enrollment in future analyses.** In order to gain an even more comprehensive understanding of impact of these conservation programs in the Delaware River Watershed, future analyses should consider how much additional funding federal programs leveraged. Since several conservation programs leverage private funding as well as public (e.g., RCPP, matching funds for ACEP), it would also be valuable to examine how much funding is invested in conservation efforts from non-federal entities. Additionally, with FY 2018 as the final year authorized under the 2014 Farm Bill, there would be immense value in analyzing a comprehensive set of conservation use data spanning from FY 2014-2018. This type of multi-year analysis would give stakeholders in the Watershed a clear picture of the total dollars invested in conservation activities under the 2014 Farm Bill, as well as any reveal longer-term trends in participation rates.

CONCLUSIONS

There are myriad factors that keep conservation programs from reaching their full potential, both at the national level generally and at the Watershed level specifically. One universal factor affecting federal program usage is the level and quality of outreach at the local level. The programs analyzed in this report are administered by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS). Some reports from organizations doing on-the-ground work in the Watershed region have indicated that the level and quality of outreach and assistance from local NRCS agents can vary widely from office to office.

Collaborative outreach to NRCS by local producers and agriculture-focused organizations can help to address inconsistencies in state and local-level outreach. Oftentimes, making NRCS offices and agents aware of local interest in particular programs or practices can be enough to increase the level of program information and outreach offered. In some cases, however, a lack of resources or direction from agency or Administration leadership might be the cause of the problem. In this case, it is incumbent upon farm, food, and environmental organizations to amplify the work of NRCS through their own outreach and education efforts.

Education and engagement efforts from local and national stakeholder organizations is particularly needed given the current Administration's attempts to summarily dismantle many popular conservation programs; in particular, the Conservation Stewardship Program (CSP), which the Administration has been actively working to eliminate. CSP is currently underutilized in the counties of the Delaware River Watershed despite the environmental need for comprehensive remediation. Concerted outreach from conservation experts to local producers could not only help to increase Watershed-wide enrollment in comprehensive conservation activities, it would also help build support for the program as Congress debates the 2018 Farm Bill.

The 2018 Farm Bill matters for those in the Watershed because the decisions made as part of this legislative package will fundamentally affect the programs and practices available for producers looking to improve their soil health, maintain or restore their waterways, and increase environmental sustainability on their working lands. Those interested in engaging more deeply in the 2018 Farm Bill and in federal agricultural policy in general may be interested in membership with the National Sustainable Agriculture Coalition (NSAC). NSAC is a 30-year old coalition with over 120 members nationwide that leverages skilled policy analysis and robust grassroots engagement in order to advance federal policies that support sustainable agricultural systems. To learn more about NSAC membership and current efforts on the 2018 Farm Bill, visit: <http://sustainableagriculture.net>.



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ⁱ Counties assessed for the purposes of this report include those located within the Delaware River Watershed: Berks (Pennsylvania); Bucks (Pennsylvania); Burlington (New Jersey); Camden (New Jersey); Carbon (Pennsylvania); Chester (Pennsylvania); Cumberland (New Jersey); Delaware (Pennsylvania); Delaware (New York); Gloucester (New Jersey); Kent (Delaware); Lehigh (Pennsylvania); Mercer (New Jersey); Monroe (Pennsylvania); Montgomery (Pennsylvania); New Castle (Delaware); Northampton (Pennsylvania); Philadelphia (Pennsylvania); Pike (Pennsylvania); Salem (New Jersey); Schuylkill (Pennsylvania); Sullivan (New York); Sussex (New Jersey); Warren (New Jersey); Wayne (Pennsylvania).