

New York State Payment for Ecosystem Services Initiatives

Updated July 2023

Payment for Ecosystem Service (PES) programs have been implemented in a variety of domestic and international contexts. This document outlines the current state of PES programs in New York State (NYS) including three examples of PES related programs and three PES programs which are in early development or piloting stages. The program summaries and definitions will be used as a resource for CCE Educators and stakeholders across the state who are interested in learning more about existing programs and opportunities to engage in program development. This is a living document and will be updated as programming progresses across the state. Contact Jenna DeRario, the Payment for Ecosystem Service Educator at Cornell Cooperative Extension Tompkins County, at jd965@cornell.edu, with any questions.

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Defining Payment For Ecosystem Service Programs

Payment for Ecosystem Service (PES) Programs are land use sustainability initiatives that can incentivize and reward land managers for the environmental benefits that they provide the broader community through their land management, such as increased flood and drought resiliency; improved soil health and biodiversity; and reduced greenhouse gas emissions, erosion and water pollution. In these programs, the beneficiaries of an ecosystem service make payments to the provider of that service. PES programs are commonly defined as:

1. a voluntary transaction where
2. a well-defined ecosystem service (or a land use likely to secure that service)
3. is “bought” by a (minimum of one) ecosystem service buyer
4. from a (minimum of one) ecosystem service provider; if and only if
5. the service provider secures ecosystem service provision (conditionality).¹

Currently, there are several regionally-specific NYS PES initiatives which have varying program parameters and design. All of these programs have been developed in specific geographic areas at a highly localized level. The Climate Leadership and Community Protection Act (CLCPA)’s Final Scoping Plan includes a recommendation to ‘Establish a Payment for Ecosystem Services Program.’ The full recommendation is provided below:

AF15. Establish a Payment for Ecosystem Services Program

Currently, farmers and forest landowners do not capture direct financial benefits from generating ecosystem services through their existing land management techniques. Agricultural and forested lands implementing conservation BMPs provide countless environmental benefits for surrounding communities including improved water quality, climate mitigation, carbon sequestration, increased biodiversity, and pollinator services. Establishing a payment for ecosystem services mechanism to provide a new structure for establishing and maintaining practice systems that reduce GHG emissions and sequester carbon in addition to providing other environmental benefits would provide additional incentives to farmers and forest landowners. A payment for ecosystem services program can be designed through existing programs and frameworks to address multiple services and evolve with changing needs and priorities of the State. This strategy supports the implementation of other strategies in this sector that rely on increased adoption of regenerative agricultural practices.

¹ Fripp, Emily (2014). Payments for Ecosystem Services (PES): A practical guide to assessing the feasibility of PES projects. https://www.cifor.org/publications/pdf_files/Books/BFripp1401.pdf

- **Dedicate funding:** AGM and DEC should establish funding for a payment for ecosystem services program to be developed for agricultural producers and forest landowners.
- **Develop and design program:** AGM, SWCC, and DEC should research and design a payment for ecosystem services approach that will sustain our natural capital; provide ecosystem services of water quality, flood resilience, and climate stability; and include fair compensation for program participants.
- **Conduct outreach:** AGM, SWCC, and DEC should conduct education and outreach regarding payment for ecosystem services programs and benefits to local communities.
- **Pilot payment for ecosystem services program:** AGM, SWCC, and DEC should pilot a payment for ecosystem services program for agricultural producers and forest landowners to ensure continued implementation of practices or actions that lead to increased ecosystem services.²

² Climate Action Council (2022). Scoping Plan Full Report.
<https://climate.ny.gov/-/media/project/climate/files/NYS-Climate-Action-Council-Final-Scoping-Plan-2022.pdf>

List of Abbreviations

ES: Ecosystem Services

AGM: New York State Department of Agriculture & Markets

PES: Payment for Ecosystem Services

SLWAP: Skaneateles Lakes Watershed Agricultural Program

SWCC: Soil and Water Conservation Committee

SWCD: Soil and Water Conservation District

WAC: Watershed Agricultural Council

Key Terms

Ecosystem Services are any positive benefits that ecosystems provide to humans. The Millenium Ecosystem Assessment (MA) identified four categories of ecosystem services:

1. *Provisioning*: Any benefit to people that can be extracted from nature i.e. food, fuel, fiber, drinking water, natural gas, oil, plants for medicinal benefits.
2. *Regulating*: Any benefit that is provided by an ecosystem process that moderates natural phenomena i.e. pollination, decomposition, water purification, erosion and flood control, carbon storage and climate regulation.
3. *Cultural*: Any non-material benefit that contributes to the development and cultural advancement of people i.e. recreation, spiritual and religious, aesthetic, sense of place, and cultural heritage.
4. *Supporting*: The processes that sustain ecosystems themselves and people i.e. photosynthesis, nutrient cycling, the creation of soils, and the water cycle.³

Payment for Ecosystem Service (PES) Programs are land use sustainability initiatives that can incentivize and reward land managers for the environmental benefits that they provide the broader community through their land management, such as increased flood and drought resiliency; improved soil health and biodiversity; and reduced greenhouse gas emissions, erosion and water pollution.

- **Performance-Based PES programs** (or Outcomes-Based) pay land managers for quantifiable environmental outcomes, rather than specific practices. In these programs, land managers choose conservation actions which maximize their environmental improvements. For example, land managers could be paid for the pounds of phosphorus runoff reduced from their land. In this scenario, reductions could be quantified using an environmental model with land management inputs.
- **Practice-Based PES programs** ‘set standards for and assign payment rates to specific conservation practices.’ Land managers are paid for a portion or whole cost to implement a specific practice on their land. Environmental outcomes are not quantified in these programs. This has historically been the approach of most conservation programs⁴.

For the purposes of the report, **Regenerative Agriculture** is defined as a commitment to the following principles of soil health: least disturbance of the soil, keeping the ground covered,

³ Millenium Ecosystem Assessment Board (2005). Ecosystems and Human Well-being: A Framework for Assessment, Chapter 2 Ecosystems and Their Services.

<https://www.millenniumassessment.org/documents/document.300.aspx.pdf>

⁴ Delta Institute, Winrock International, et.al (2016). Pay-for-Performance Conservation: A How to Guide. <https://winrock.org/wp-content/uploads/2016>

diversity in plant and animal species, keeping living roots in the soil as much as possible, and the importance of integrating animals.⁵

⁵ Guo, M. (2021). Soil Health Assessment and Management: Recent Development in Science and Practices. *Soil Systems*, 5(4), 61. <https://doi.org/10.3390/soilsystems5040061>.

New York State PES Initiatives (Performance-Based)

Finger Lakes Payment for Ecosystem Services Pilot Program

Background

Location	Tompkins County
Program Administrator	Cornell Cooperative Extension Tompkins County
Year Started	2022
Project Collaborators	NYTCA, Hudson Carbon, TC SWCD

Program

Program Description	Started in 2021, the Finger Lakes PES pilot program is working to lay the groundwork for equitable PES programs that support land managers to provide environmental benefits, improve farm viability and public health, and increase climate resiliency.
Practice or Performance-Based Program	Performance
Ecosystem Services Measured or Modeled	Carbon in soils and aboveground woody biomass, available water holding capacity, water quality (reductions in phosphorus and nitrogen runoff), GHG fluxes, biodiversity
Conservation Practices Required	No requirements for practice implementation

Participants

Current Number of Participants	6
Program Participants Description	Majority BIPOC/beginning farmers; early adopters of regenerative agriculture; mixed vegetable, agroforestry and pastured livestock operations

Average Size of Participating Farm	35.25 acres (mean), 15.5 acres (median)
Accepting Applications for New Participants (Y/N)	N

Payment System

Average Payment	Pilot farmers are currently paid for their participation, not for measured ES.
Project Funding Source	Park Foundation, Edwards Mother Earth Foundation, State 224 Funding (salary support)

Additional Information

Website: <https://cctompkins.org/agriculture/payment-for-ecosystem-services>

The Finger Lakes PES Program works with a group of regional stakeholders, known as the Finger Lakes PES Work Team, which advises the program’s development. This group meets monthly and welcomes new participants. Contact Jenna DeRario, Payment for Ecosystem Services Educator at CCE Tompkins, for more information about the program.

New York Outcomes Fund

Background

Location	Great Lakes basin, Lake Ontario watershed
Program Administrator	Cornell University, Atkinson Center for Sustainability
Year Started	2023
Project Collaborators	NYS Corn and Soybean Growers Association, Soil and Water Outcomes Fund

Program

Program Description	The New York Outcomes Fund is a payment for outcomes program designed to provide you with all the technical assistance and financial support you need to scale conservation practices on your farm.
Practice or Performance-Based Program	Performance-Based
Ecosystem Services Measured or Modeled	Carbon sequestration and soil health, water quality improvement, biodiversity and habitat protection
Conservation Practices Required	To qualify for enrollment, your farm fields must be in an eligible Great Lakes watershed county, you must be ready to adopt at least one new conservation practice, your field must be Highly Erodible Lands (HEL) and Wetlands compliant, and you must enter past and proposed practice information and field boundaries on our enrollment forms.

Participants

Current Number of Participants	<i>Not Available</i>
Program Participants Description	<i>Not Available</i>

Average Size of Participating Farm	<i>Not Available</i>
Accepting Applications for New Participants (Y/N)	Y, until the program's yearly acreage limits are reached

Payment System

Average Payment	\$31/acre
Project Funding Source	Great Lakes Protection Fund

Additional Information

Website: <https://www.nyoutcomesfund.com/>

Acres that are enrolled in government cost-share programs are not eligible to enroll in the NY Outcomes Fund.

Roeliff Jansen Kill (Roe Jan) Watershed PES Pilot

Background

Location	Roe Jan Watershed, Columbia County
Program Administrator	<i>TBD</i>
Year Started	2023
Project Collaborators	Cary Institute, Hudson Carbon, Scenic Hudson

Program

Program Description	<i>TBD</i>
Practice or Performance-Based Program	<i>TBD</i>
Ecosystem Services Measured or Modeled	<i>TBD</i>
Conservation Practices Required	<i>TBD</i>

Participants

Current Number of Participants	<i>TBD</i>
Program Participants Description	<i>TBD</i>
Average Size of Participating Farm	<i>TBD</i>
Accepting Applications for New Participants (Y/N)	<i>TBD</i>

Payment System

Average Payment	<i>TBD</i>
Project Funding Source	<i>TBD</i>

Additional Information

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PES Related Programming in NYS

Hudson Valley Carbon Farming Project

Background

Location	Dutchess County, Columbia County, Orange County, Sullivan County, Ulster County
Program Administrator	AGM
Year Started	2020
Project Collaborators	SWCC, with on the ground support from SWCDs

Participants

Current Number of Participants	~20 farms
Program Participants Description	Growers throughout the five counties
Average Size of Participating Farm	<i>Pending</i>

Program

Program Description	\$400,000 for May 2020 – December 2023. Pilot project to implement regenerative agricultural practices on farms in the Hudson Valley. Promotion and outreach of the benefits of regenerative agriculture and soil health practices through field demonstrations, virtual outreach events, and multi-media communication tools.
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Payment System

Project Funding Source	NYS
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Additional Information

<p>Updates from the field: https://www.youtube.com/playlist?list=PLhPLYNMOAW6NdNR0uDnymK_uMqU3riHVy</p>

New York City Watershed Agricultural Council

Background

Location	New York City Watersheds (Catskill/Delaware and Croton)
Program Administrator	Watershed Agricultural Council
Year Started	1993
Project Collaborators	Local Cornell Cooperative Extensions, county SWCDs, USDA NRCS

Participants

Current Number of Participants	<i>Pending</i>
Program Participants Description	<i>Pending</i>
Average Size of Participating Farm	<i>Pending</i>

Program

Program Description	<p>‘For over 20 years, the Watershed Agricultural Council (WAC) has played a critical role in identifying and implementing environmental protection and economic viability initiatives related to working landscapes within the New York City’s watersheds. In the 23 years since its founding, WAC has grown and matured. It oversees more than 350 active whole farm plans and has completed over 1300 forest management plans. Its conservation footprint includes 25,000 acres of conservation easements, over 120,000 acres of managed forest acreage and more than 165,000 acres of farmland. WAC’s annual budget is more than \$15 million and it has a staff of nearly 50 employees and 24 subcontracted staff.’⁶</p>
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⁶ See the Watershed Agricultural Council’s 2016 Strategic Plan for more information at https://www.nycwatershed.org/wp-content/uploads/pdfs/2016_WACStrategicPlan.pdf

Payment System

Project Funding Source	NYC Department of Environmental Protection
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Additional Information

Website: https://www.nycwatershed.org/
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Skaneateles Lakes Watershed Agricultural Program (SLWAP)

Background

Location	Skaneateles Lake Watershed
Program Administrator	Onondaga County SWCD
Year Started	1994
Project Collaborators	SWCDs and Cornell Cooperative Extension Associations of Cortland and Cayuga counties, USDA NRCS

Participants

Current Number of Participants	38 ⁷
Program Participants Description	Farms located in the watershed are eligible to join. SLWAP works with participants through all five tiers of the whole farm planning process.
Average Size of Participating Farm	No public information is available for average farm size. Reports detail that 29,061 total acres have been included in whole farm plans across the watershed.

Program

Program Description	The City of Syracuse established the Skaneateles Lake Watershed Agricultural Program (SLWAP) in 1994, as an alternative to a costly filtration system required by the 1986 Amendments to the Safe Drinking Water Act. SLWAP is a voluntary program spearheaded by the Onondaga County Soil and Water Conservation District, and serves portions of Onondaga, Cortland, and Cayuga Counties within the watershed. SLWAP served as a pilot for the Agricultural Environmental
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⁷ Participants must meet the definition of a ‘farm’ to participate. SLWAP defines a ‘farm’ as ‘land used in a single farming operation for the production for sale of crops, livestock or livestock products of an average (over the past two years) gross sales of \$10,000 or more.’

	<p>Management program (AEM) statewide by producing the Whole Farm Plan.</p> <p>Our mission To carry out a cost-effective, innovative program for the farming community that upholds the high drinking water quality standards of Skaneateles Lake.</p> <p>Our vision The Skaneateles Lake watershed will be an environmentally sound region, where a viable agricultural industry and others benefiting from the lake work together harmoniously to improve and maintain a high standard of water quality.</p>
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Payment System

Project Funding Source	City of Syracuse
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Additional Information

Website: https://www.ocswcd.org/slwap.html
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