REVOLVING WATER FUND

THE REVOLVING WATER FUND

An Innovative Model to Finance Fresh Water Conservation

RASCL
RESILIENT AND SUSTAINABLE COMMUNITIES LEAGUE

2021 SUMMIT: December 8, 2021

!2

IN PARTNERSHIP WITH:

The Nature Conservancy
STROUD WATER RESEARCH CENTER
UNIVERSITY OF DELAWARE
ECOMARKET SERVICES Environmental Markets. Simplified.
ESMC Ecosystem Services Market Consortium
WILLIAM PENN FOUNDATION
NRCS Natural Resources Conservation Service
NFWF
LONGWOOD foundation

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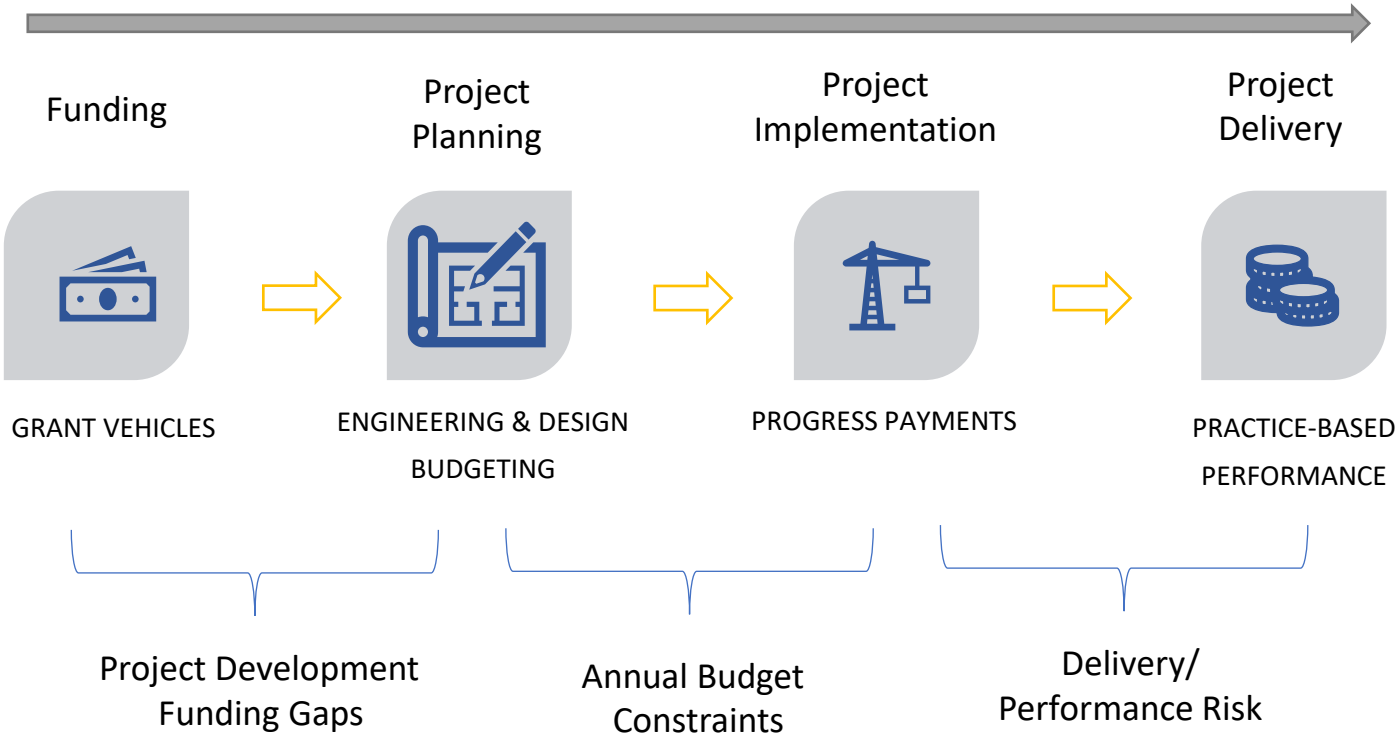
Mission

We work relentlessly and tenaciously to advance innovative finance solutions for sustained, scaled watershed conservation.

Revolving **Water** Fund

Traditional Conservation Funding Distribution Systems

Pay-for-Practice System

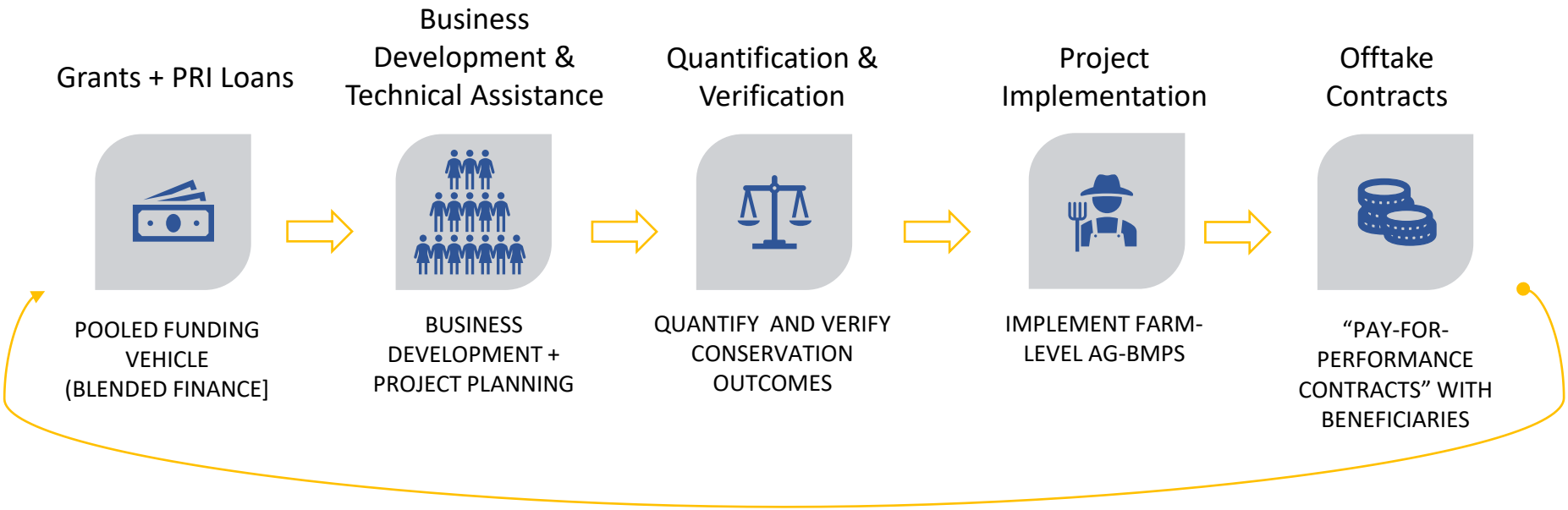


Traditional conservation funding systems can create velocity, scale and scope constraints.

Revolving Water Fund Conservation Distribution System

Revolving **Water** Fund

New Non-Profit "Blended" *Green Infrastructure Development Fund*

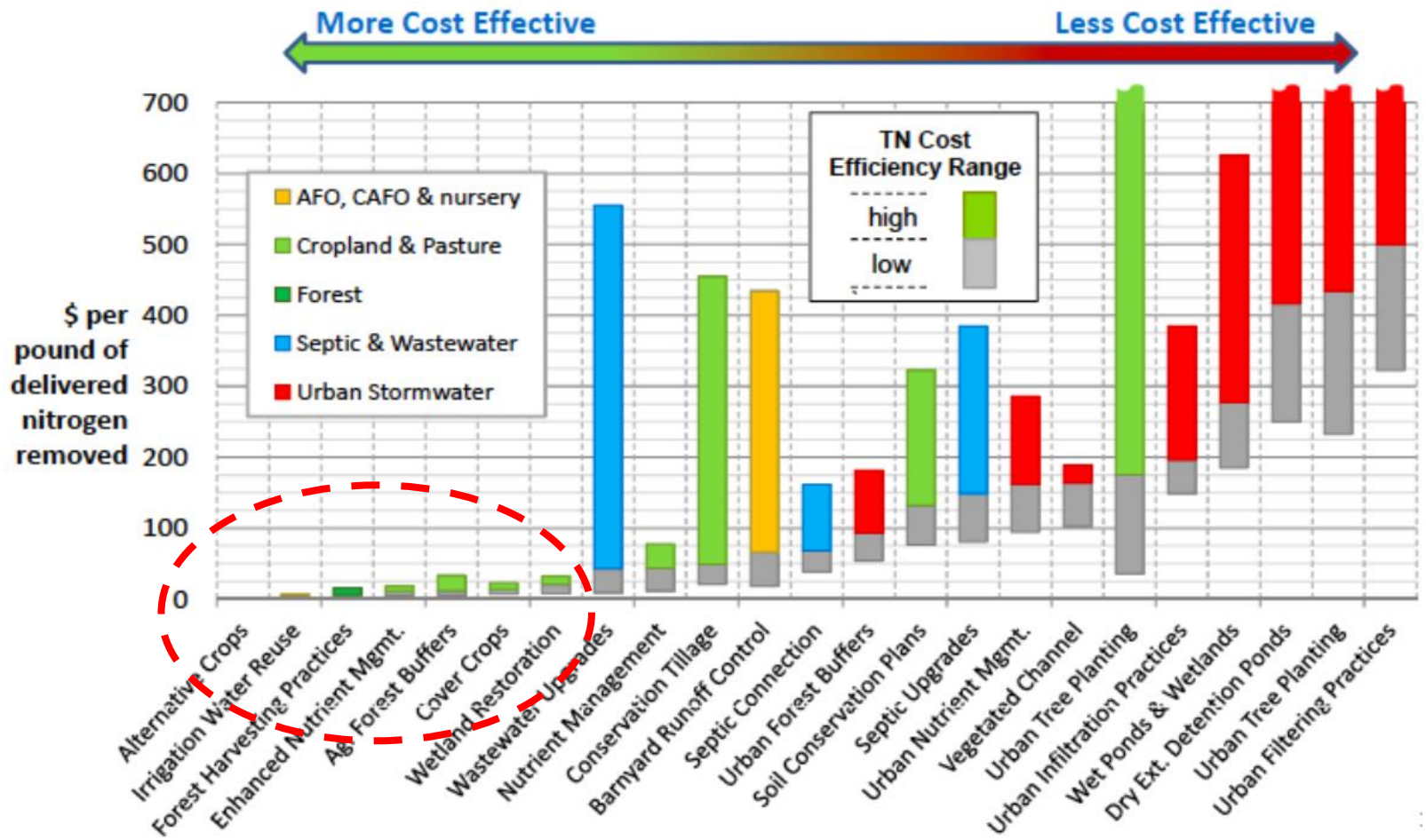


Revolving Water Fund Strategy: ***create a market mechanism to expand the velocity, Scale and efficacy of water conservation activities across a watershed.***

Revolving Water Fund

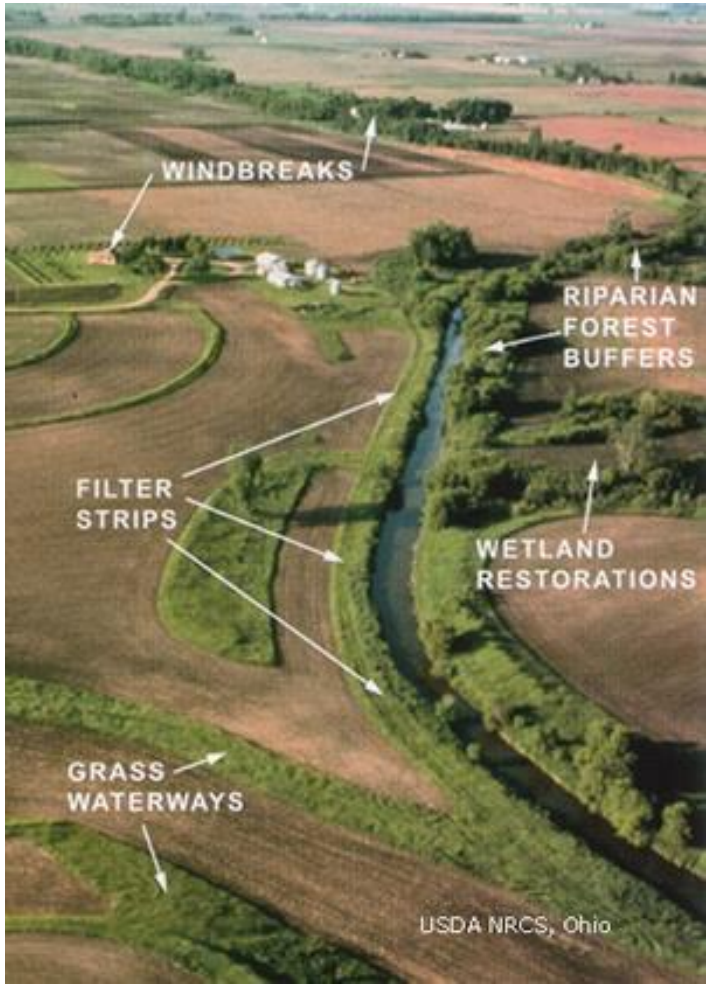
Revolving Water Fund BMP Approach

As a Category, Ag-BMPs are more cost effective per pound of pollution reduction than Urban BMPs



Revolving **Water** Fund

Revolving Water Fund Approach



Revolving Water Fund Approach

Revolving **Water** Fund

(1) Quantification Methodology

EIU Calculation Methodology	Outside Urban Area	Inside Urban Area
1. Drainage Area Inputs	✓	✓
2. Starting Load	✓	✓
3. Baseline BMP Inputs	✓	✓
4. Baseline Load (%)	✓	✓
5. Voluntary BMP Inputs	✓	✓
6. Post-Voluntary BMP Load (%)	✓	✓
7. Threshold Inputs	✓	—
8. Post-Threshold Load (%)	✓	—
9. Delivery Ratio*/Reserve (10%)	✓	✓
10. Load Reduction - Planning Area	✓	✓

*Delaware municipalities only

(2) Regulatory Compliance Protocols

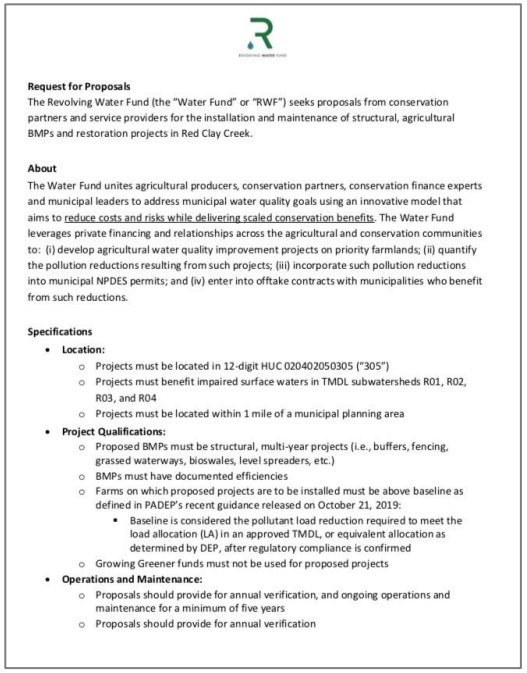
pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Regulatory "offsets" formally Integrated into PADEP MS4 guidance for first time.

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DNREC actively developing offset guidance in collaboration with RWF.

(3) Developed RFP and Conservation Project Pipeline Based on Cost/Benefit analysis and market priorities



Request for Proposals

The Revolving Water Fund (the "Water Fund" or "RWF") seeks proposals from conservation partners and service providers for the installation and maintenance of structural, agricultural BMPs and restoration projects in Red Clay Creek.

About

The Water Fund unites agricultural producers, conservation partners, conservation finance experts and municipal leaders to address municipal water quality goals using an innovative model that aims to reduce costs and risks while delivering scaled conservation benefits. The Water Fund leverages private financing and relationships across the agricultural and conservation communities to: (i) develop agricultural water quality improvement projects on priority farmlands; (ii) quantify the pollution reductions resulting from such projects; (iii) incorporate such pollution reductions into municipal NPDES permits; and (iv) enter into offtake contracts with municipalities who benefit from such reductions.

Specifications

- **Location:**
  - Projects must be located in 12-digit HUC 020402050305 ("305")
  - Projects must benefit impaired surface waters in TMDL subwatersheds R01, R02, R03, and R04
  - Projects must be located within 1 mile of a municipal planning area
- **Project Qualifications:**
  - Proposed BMPs must be structural, multi-year projects (i.e., buffers, fencing, grassed waterways, bioswales, level spreaders, etc.)
  - BMPs must have documented efficiencies
  - Farms on which proposed projects are to be installed must be above baseline as defined in PADEP's recent guidance released on October 21, 2019:
    - Baseline is considered the pollutant load reduction required to meet the load allocation (LA) in an approved TMDL, or equivalent allocation as determined by DEP, after regulatory compliance is confirmed
  - Growing Greener funds must not be used for proposed projects
- **Operations and Maintenance:**
  - Proposals should provide for annual verification, and ongoing operations and maintenance for a minimum of five years
  - Proposals should provide for annual verification

(4) Developed Pilot "Offtake" Contracts (Compliance)

Kennett Township

East Marlborough Township

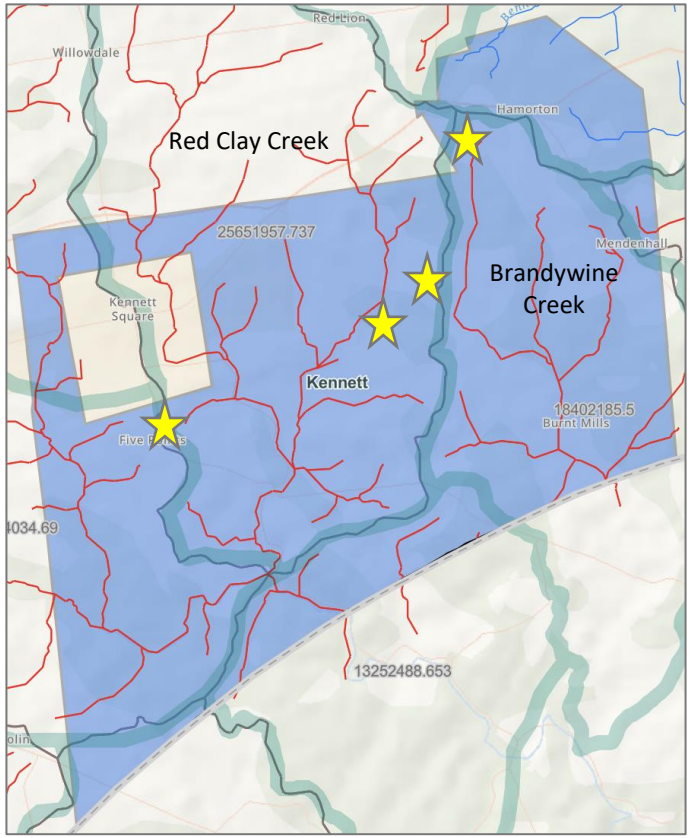
Newark Delaware

$500k cumulative value

(5) Advancing Voluntary "Offtake" Contracts

Revolving **Water** Fund

Kennett Township, PA Pilot



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Conservation Outcomes

- 9 Structural Best Management Practices Installed
- 11+ Tons of Sediment prevented from entering waterways each year
- 118 Lbs of Nitrogen and 16+ lbs of Phosphorous prevented from entering waterways each each

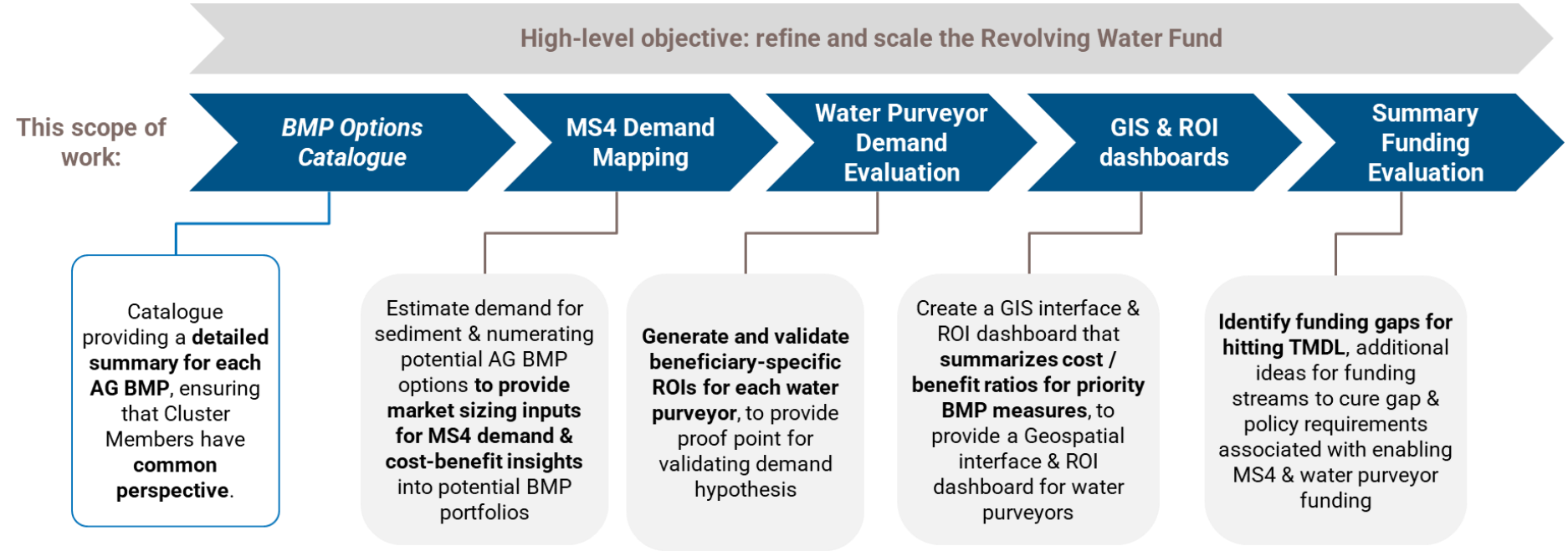
Contractual Outcomes

- First Contract Signed in Pennsylvania
- 2 Contracts valued at $183,000 for current permit cycle
- 2 5-year maintenance contract valued at almost $14,000

"The team at Kennett Township worked with the specialists at the Revolving Water Fund to bring this model to life in a way that is beneficial to municipal governments in Pennsylvania who face mounting pressure and costs to build out their Municipal Separate Storm Sewer Systems (MS4) plans. We are very proud to be the first municipality in Pennsylvania to pioneer this program" - Eden Ratliff

Revolving **Water** Fund

Business Case Analysis



i2 The Nature Conservancy PEGASYS CHANGING LIVES CHANGING WORLDS

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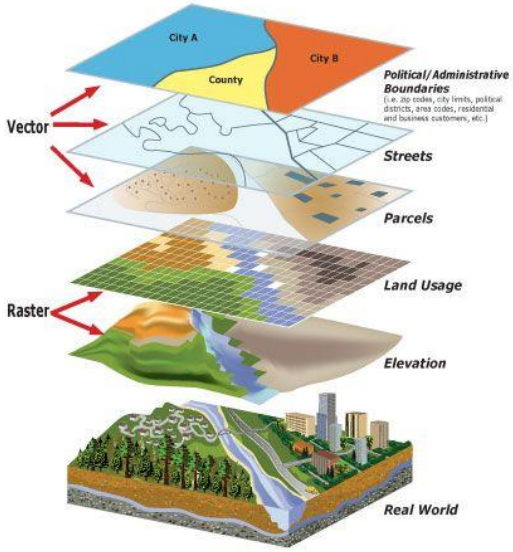
Business Case Analysis



Step 1: Geospatial maps of baseline information

- Overall study area
- Landuse-Landcover
- Hydrography
- Climatic variables
- Infrastructure etc.

Step 2: Geospatial mapping of overall potential investment (BMPs) areas

- Map agricultural areas and refine Ag areas (where BMPs can be implemented)
- Overlay impaired streams to identify priority farms that need BMPs
- Select catchments upstream of water intake points

Conservation Innovation Fund

Revolving **Water** Fund

WILLIAM PENN FOUNDATION · LONGWOOD foundation · NFWF

AGUA FUND, INC. · IMPACTASSETS INVEST WITH MEANING

$10mn Blended Finance
Conservation Innovation Fund

Project Development and Implementation across target sub-watersheds in the Mid-Atlantic

Purchase of Quantified Pollution Reductions under Pay-for-Performance and Corporate Contracts

Expansion
Phase I

Priority Conservation projects with high quantified conservation outcomes (Sediment, Nutrients, Carbon)

- Public Sector (MS4) Municipalities/Counties
- Public Sector Purchase Pools (USDA/EPA/State- TMDL)
- Corporate Supply Chain (Ag/Water/Transportation)

Conservation Innovation Fund

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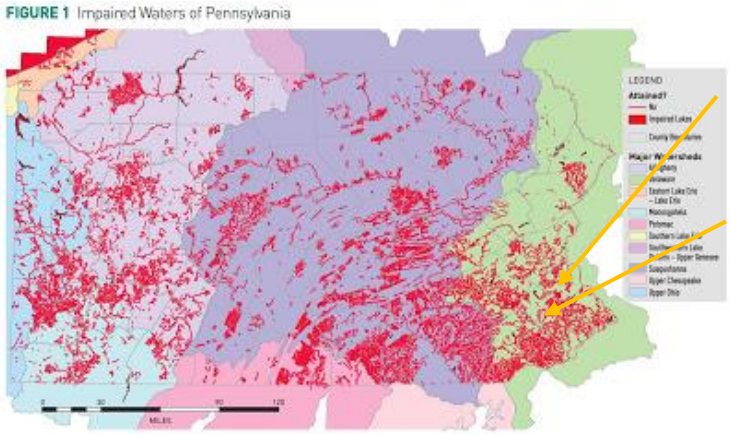
Priority sub-watersheds in the Delaware River watershed

Source: Delaware River Watershed Initiative

Source: Wikipedia; National Hydrography Dataset

Priority sub-watersheds in the Chesapeake Bay watershed



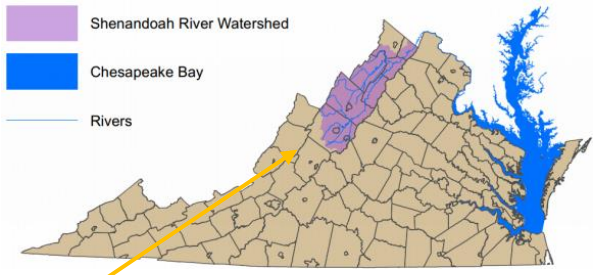
Source: PA Environmental Digest; Chesapeake Bay Foundation

Brandywine-Christina Watershed (Delaware River Watershed)

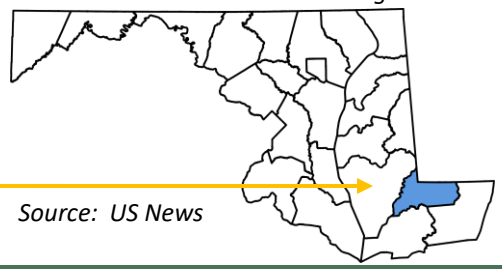
Lancaster County (Chesapeake Bay Watershed)

Shenandoah Valley (Chesapeake Bay Watershed)

Wicomico County (Chesapeake Bay Watershed)



Source: CleanStream.org



Source: US News

Revolving **Water** Fund

Replicability & Scalability

Replicable across high run-off watersheds in the Mid-Atlantic and Mid-West United States.

Revolving **Water** Fund

More Information

See www.revolvingwaterfund.com/news

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Join us to fuel a new model for funding conservation.

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