

Brandywine Christina Healthy Water Fund

Draft Business Plan

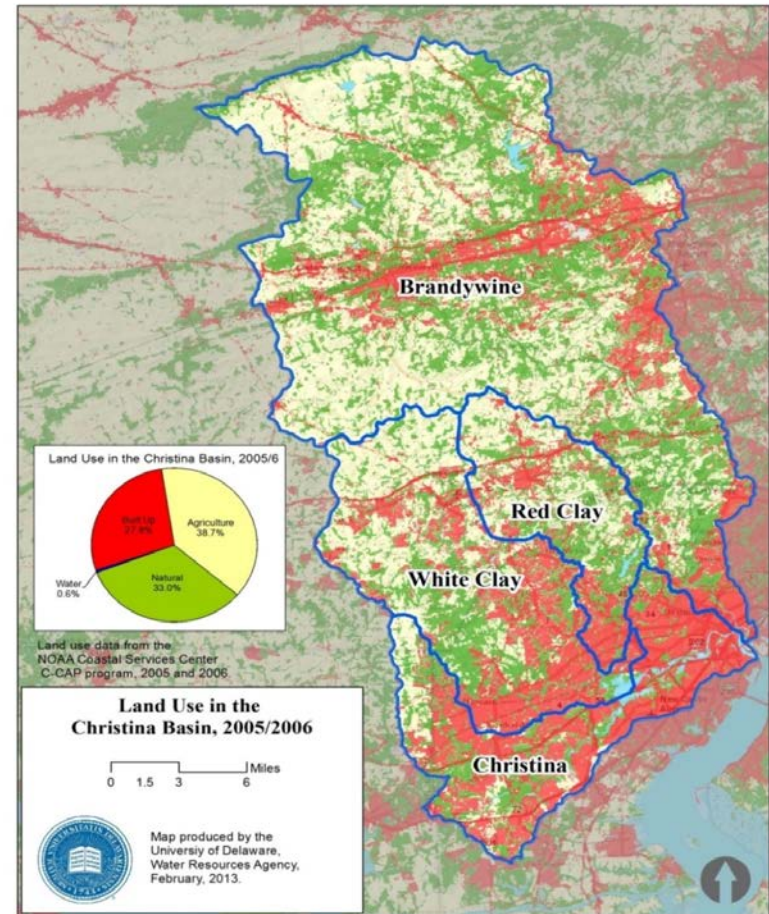
Presented to

The William Penn Foundation

February 2017

The Brandywine Christina

- Two states (DE & PA) – evenly split amongst agriculture, urban and natural lands
- Highly productive small farms in major-metro food-shed
- Drinking water for 600,000 people – Six surface withdrawals
- Majority of watershed “impaired” under CWA: TMDL and MS4s
- Farms yield significant sediment and nutrient reductions
- Meeting the TMDLs in PA and DE will require millions of dollars in investment



Goal

To create an innovative conservation-finance vehicle that will restore the Brandywine-Christina watershed to fishable, swimmable, potable status in an accelerated timeframe.

Objectives

Create an independent business organization that serves as a vehicle for pooling and leveraging capital in the Brandywine-Christina to deliver:

1. Prioritization, strategic concentration, and increased scale of projects with Cluster Partners;
2. Accelerated restoration by advancing capital to farms; and,
3. Sustainable funding source for restoration.



Operations

- An independent business organization.
- Dedicated staff to facilitate partner projects and cultivate sustainable funding streams.
- Governing body to provide guidance and expertise in aligning restoration with beneficiaries.
- Facilitate projects and accelerate scale of implementation that would not have occurred without the activities of the Fund.

Water Fund Business Strategy

Capitalization

Start Up Phase (0-1yr.)

- Hire staff
- Develop Fund administration, project implementation process, contracting in consultation with Cluster Partners
- Continuous activity supporting each stage

Deployment

Proof of Concept (Yrs. 1-3)

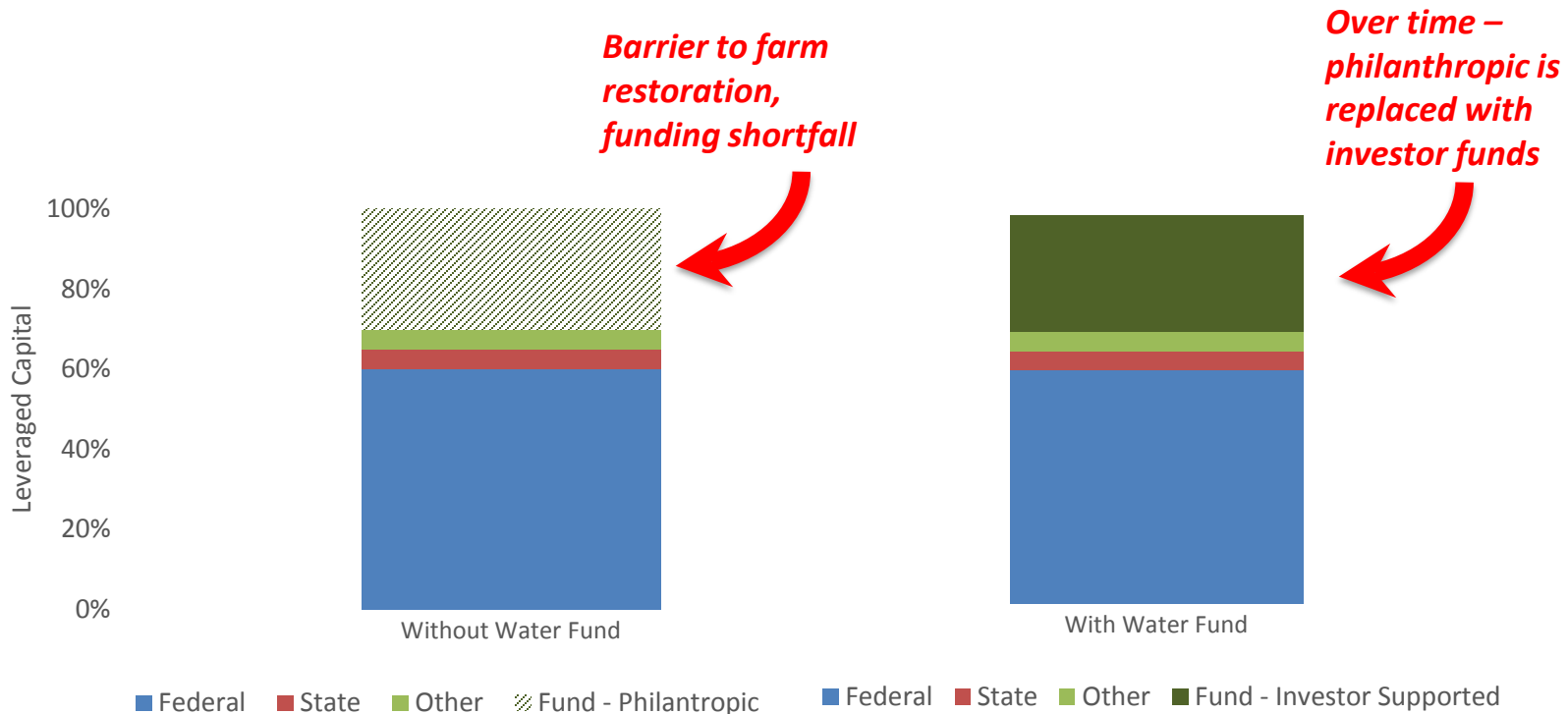
- Deploy capital to restoration activity
- Measure & report impact
- Refine growth strategy based on performance
- Continuous activity adapting to investor and fund growth requirements

Fund Growth

Mature Phase (Yrs. 4+)

- Transition to sustainability
- Introduce activities that generate revenue
- Develop and implement pay for performance and environmental bond models

Leveraging Cluster Partner watershed funding

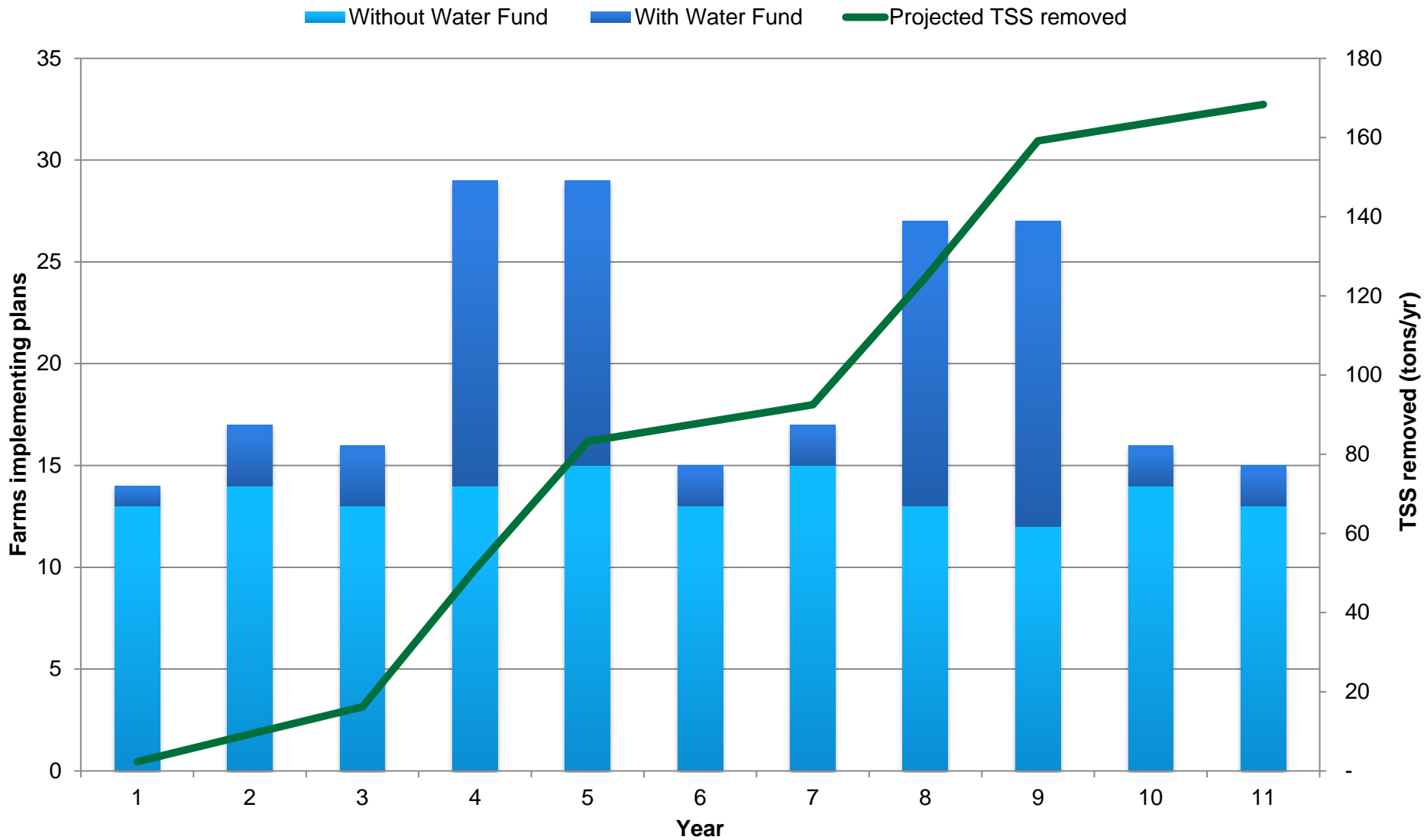


Water Fund Services

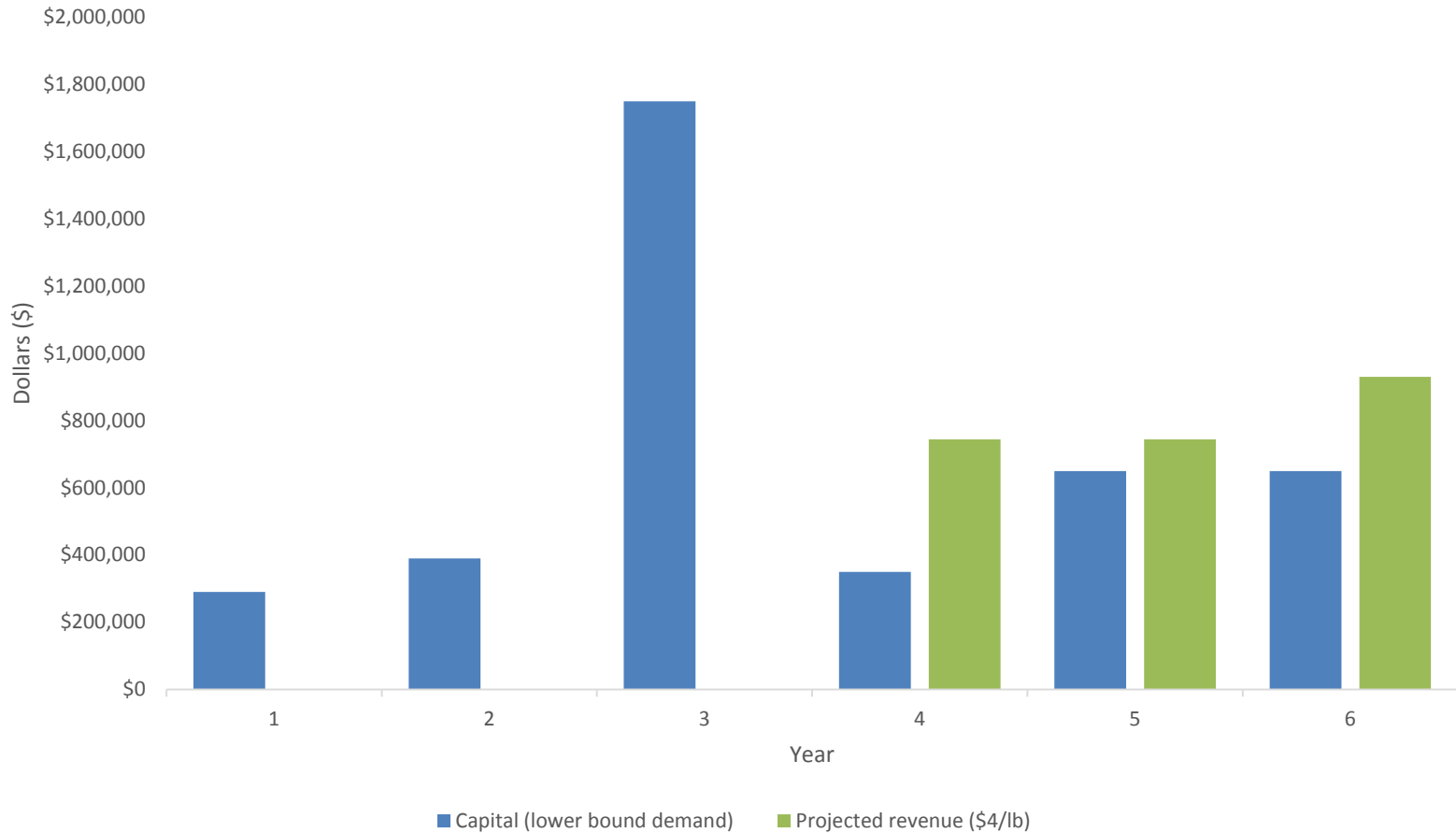
- Provide verified, maintained, and cost-effective sediment reductions that meet the specific needs of payors:
 - MS4: permit obligations
 - Water providers: operating costs reductions and risk mitigation
- TSS removal and accounting has to align with demand and provide value to water providers



Long Term Projected Market Impact



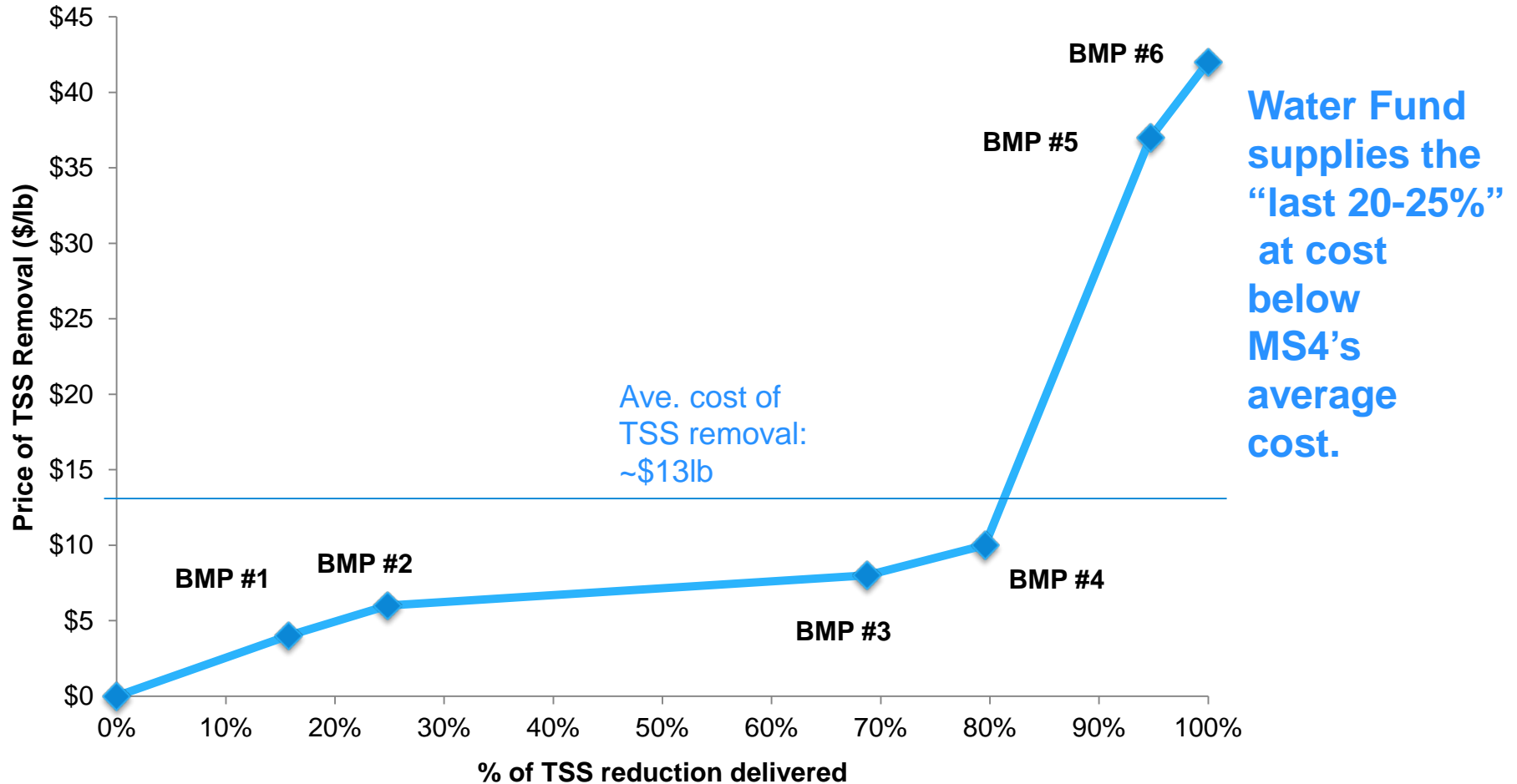
Forecasted Water Fund Capital and Revenue Projection



Projected demand for TSS

Payor	Target Pollutant	Quantity Demanded	Price (\$/lb)	Risk & Uncertainties
MS4 (PA & DE)	<ul style="list-style-type: none">TSS	<ul style="list-style-type: none">90 - 230+ tons/yr.	<ul style="list-style-type: none">\$4-\$5	<ul style="list-style-type: none">Regulatory driversPossible demand for TN or TP – issue of stackingPossible quantity demand
Water Providers (Private & Public)	<ul style="list-style-type: none">TSS	<ul style="list-style-type: none">50+ tons/yr.	<ul style="list-style-type: none">\$4-\$5	<ul style="list-style-type: none">Measuring impact on operating expensesAllowed recovery through ratesPossible demand for bacteria

Pricing TSS service on MS4 sample urban abatement curve



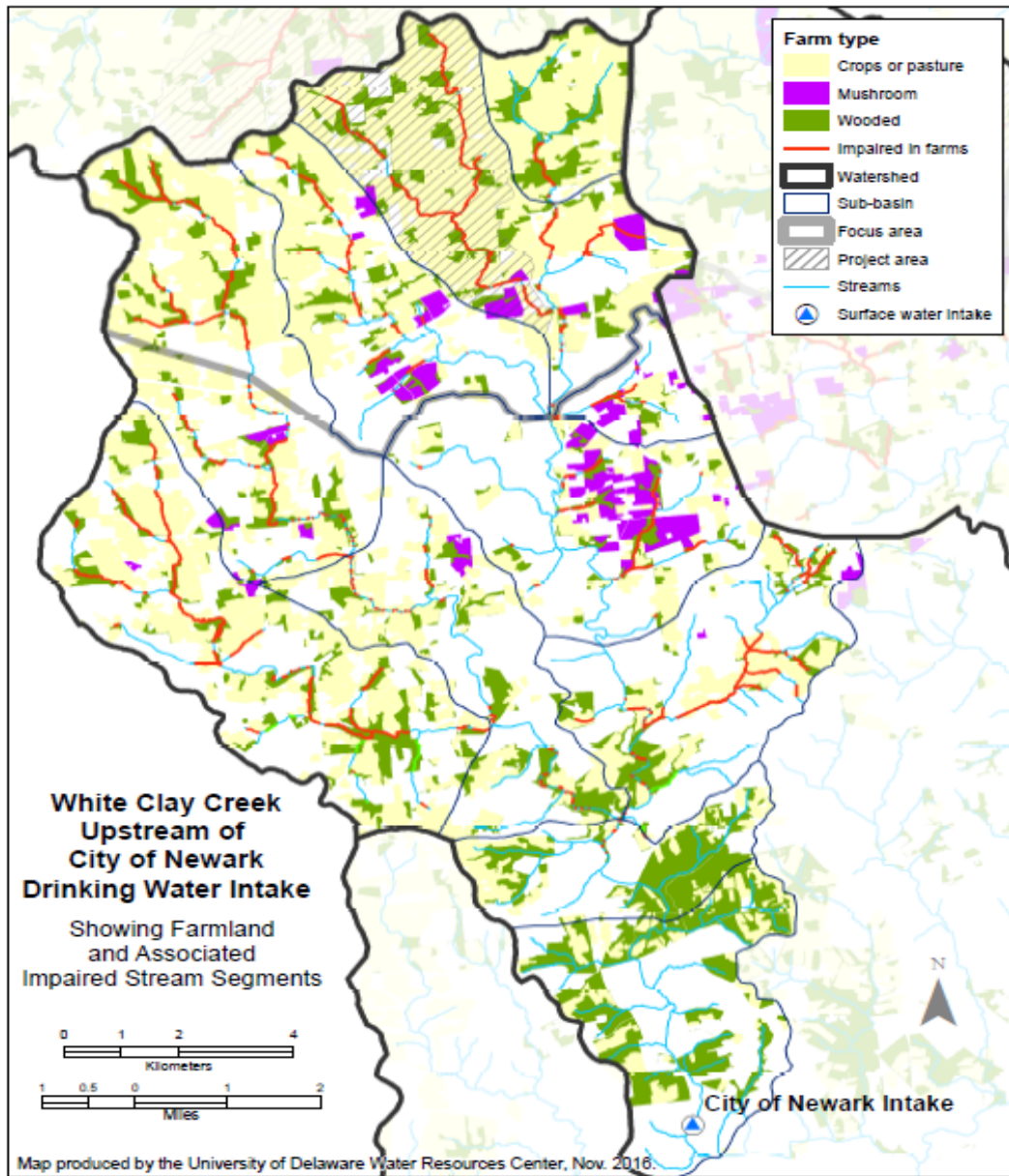
Water Fund Investors: Road Map

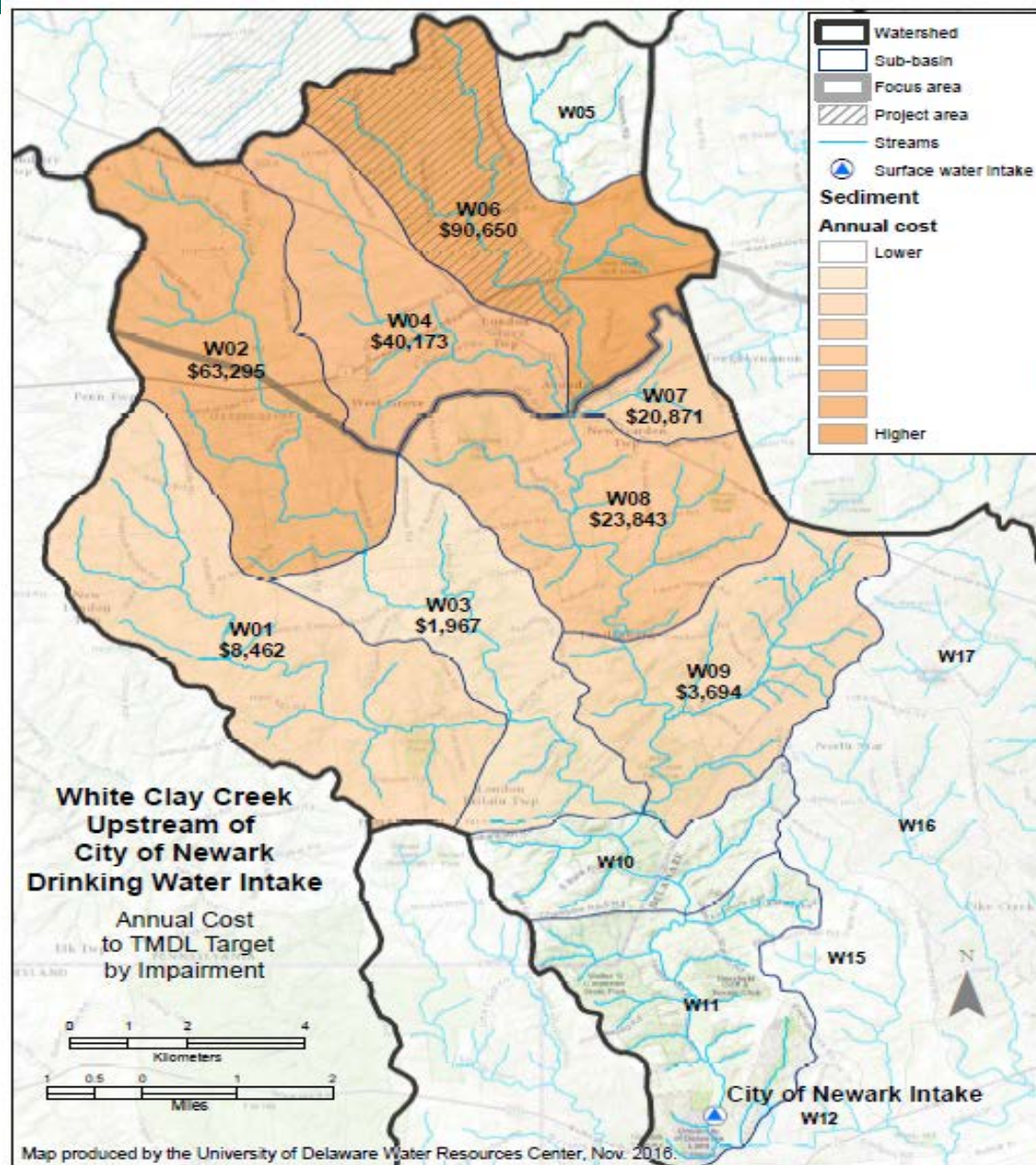
	Start Up Phase	Proof of Concept	Mature Phase
Target Investors	<ul style="list-style-type: none"> • William Penn • City of Newark • Suez* • City of Wilmington* • DuPont 	<ul style="list-style-type: none"> • William Penn • USDA – NRCS • Partner stacking 	<ul style="list-style-type: none"> • Impact investors • State revolving funds • Foundations
ROI	<ul style="list-style-type: none"> • No return promised 	<ul style="list-style-type: none"> • Environmental ROI 	<ul style="list-style-type: none"> • Financial ROI
Timing	<ul style="list-style-type: none"> • Yr 0 - 1 	<ul style="list-style-type: none"> • Yr 1 - 3 	<ul style="list-style-type: none"> • Yr 3 & 4+
Capital Needed	<ul style="list-style-type: none"> • Committed: \$50,000 • Seeking: \$240,000 	<ul style="list-style-type: none"> • Seeking: \$3.4 million to launch mature phase 	

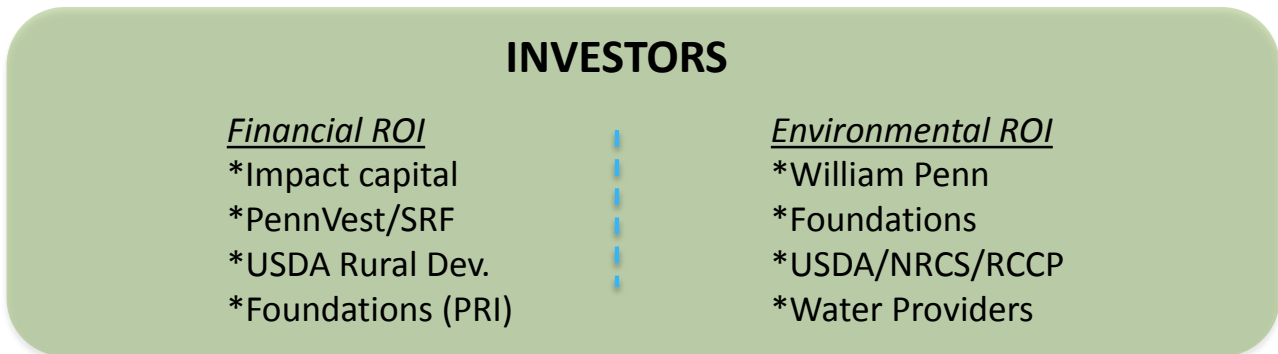
* Preliminary discussions indicate up to \$60,000 combined

Services: performance targets

Year	Target	Annual TSS Reductions	Outcomes
0 - 1	1 farm	<ul style="list-style-type: none">• 50 acres treated• 2.25+ tons	<ul style="list-style-type: none">• Identify pipeline• Establish prioritization process• Develop contracting templates
2 - 3	3-18 farms	<ul style="list-style-type: none">• 200+ acres treated• 25+ tons	<ul style="list-style-type: none">• Address regulatory barriers• Cultivate payor base
4+	Manage 42-70 farms	<ul style="list-style-type: none">• 2,100 – 3,500 acres treated• Deliver 75 – 90 tons of TSS removal/yr.	<ul style="list-style-type: none">• Financially sustainable by Yr. 5, with investors & payors• Generating annual revenue stream of \$450,000-\$600,000





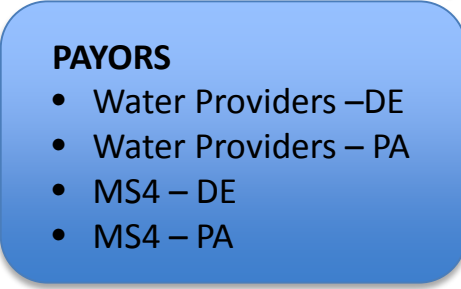


Different types of investors with different desired returns



Purchase pollution reductions

Farm restoration with Cluster Partners



Future sources of funding – based on fee for service



Reflects Fund prioritization & is adaptive over time



Challenges

Water Fund faces three challenges to effective and successful implementation:

1. Sufficient capitalization to adequately resource activities and staff.
2. Providing recognized, streamlined, and efficient process to partners.
3. Navigating regulatory uncertainties to generate sustained revenue.

Concluding Remarks

- Independent business structure to attract investment capital
- Proof of concept phase will provide scalable process
- Capital in year 3 will build inventory for full scale implementation
- Projected financial sustainability achieved
 - Transition from grant to investor capital
 - Established revenue stream

Thank you

Questions?