



Brandywine-Christina Healthy Water Fund Feasibility Study
Regional Advisory Panel Meeting
Meeting Summary

Longwood Gardens
Kennett Square, Pa.
May 30, 2014

Brandywine-Christina Healthy Water Fund

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Welcome and Introduction – Richie Jones, Delaware State Director, The Nature Conservancy

Brief introduction of the project team, Advisory Panel, and meeting attendees.

Richie reflected on the tremendous wealth of talent present and pointed out the need to apply this talent in the project work that lies ahead.

Richie provided a brief overview of his background:

I grew up on a farm about 10 miles from here. Doe Run flows through our farm. Doe Run is one of the only unimpaired waterways in the Brandywine-Christina watershed - only a small part is impaired. Two visionaries are largely responsible for that:

Lammot duPont - Brother of P.S. Dupont lived at Longwood. In the 1920s, Mr. duPont bought thousands of acres around Doe Run valley to run cattle. He picked this area because it was the cleanest source of Wilmington's drinking water. That was visionary. In the 1950s, Bob Kleiburg bought Mr. duPont's land for the King Ranch and he used it to fatten cattle after his trip from Texas. In the mid-80s, King Ranch decided to sell the property. Among the rumored buyers were the Walt Disney Company, who wanted to build an East Coast Disney World there, and a nuclear power company.

That's where the second visionary entered the picture - Frolic Weymouth. Frolic formed the Brandywine Conservancy in the late 60s. The Brandywine Conservancy helped pull together local land owners and put much of the King Ranch under conservation easements. Frolic understood back then that land protection was critical to healthy waters.

And that's why the Doe Run remains largely unimpaired today.

Of course there were many other visionaries along the way, some in this room. They've all done great work to protect the Brandywine-Christina. There has been a lot of progress in this watershed but there is still a long way to go.

Now there is a new visionary - the leadership of the William Penn Foundation. Nathan Boon will tell you a little more about the Foundation's unprecedented investment in eight subwatersheds in the Delaware River basin. William Penn is investing conservation measures designed to improve water quality in the watershed. William Penn is also investing in monitoring and floodplain work. All of these investments are critical. This is all moving us rapidly toward proving the efficacy of natural solutions to water quality and quantity challenges.

In closing, what do all three of these visionaries - Lammot duPont, Frolic Weymouth and William Penn have in common? They had big visions and the capital to back it up.

This project is part of the William Penn funded work in the Brandywine-Christina watershed. The charge is to conduct a feasibility study on market-based funding mechanisms for restoring the Brandywine-Christina watershed. More specifically, the project team will conduct a feasibility study of a "water

fund"—a vehicle through which downstream beneficiaries invest in upstream conservation for water quality. We have big aspirations - ones which we're fairly confident most of you share and they are as follows:

- Make the Brandywine-Christina the healthiest urban watershed on the East Coast.
- Restore it to swimmable, fishable and potable within a generation.
- Advance freshwater conservation on a national scale.
- Develop a holistic model that can be applied to watersheds throughout the Delaware Basin and across the country.

It's going to take a lot of financial resources. It's going to take more than what the William Penn Foundation has to invest and more than any one state or government has to invest. It is going to take a new business model, one that consolidates a variety of funding sources on both sides of the state line -- Delaware and Pennsylvania. It is going to require leveraging regulatory drivers and targeting conservation investments that produce scientifically measurable results. We'll be looking at cutting-edge capital sources, socially responsible investors, and impact investors.

These are big goals, and they're only achievable with the active involvement of people like you.

So what are we asking of you?

- We need your experience, wisdom and advice
- We need you to vet the process and assure transparency
- We need you to help us decide what is and what isn't feasible

It all comes down to relationships, so we're hoping you'll be able to get behind this project, point us to the right decision makers, act as ambassadors for us, and ultimately help us champion the project in your own spheres of influence. To be successful, we'll need robust strategies - financial, political, regulatory, public-relations, and community-outreach. The case studies show it can be done.

With your help, we can make it happen here!

And if we do, it will be a legacy we can all be proud of!

So thanks again for participating.

Overview – Nathan Boon, William Penn Foundation

William Penn's mission focuses on the arts, education, and the environment in the Philadelphia region. William Penn works in thousands of square miles and hundreds of jurisdictions throughout the region. It

is a huge undertaking for the organization to decide how to allocate dollars that will have the greatest impact and will also have replication.

William Penn's goal with this initiative is to make a difference in water quality in the Brandywine-Christina watershed. They are focusing on a set of geographies, aligning work, and monitoring for changes.

The challenge is to reach across boundaries, work with stakeholders, and develop a new range of strategies to improve the watershed. The project team is being tasked with working with existing regulations and established mechanisms but to bring new ideas.

This Advisory Panel is a critical piece of the water fund feasibility study and it is important to get this group's input and recommendations as part of this feasibility study.

Vision – Jerry Kauffman, Director, University of Delaware, Water Resources Agency

The Brandywine-Christina watershed is the second largest watershed in the Delaware Estuary, and is one of only two watersheds in the 13,000 square mile Delaware Basin that crosses state boundaries. The watershed supplies 100 million gallons per day of drinking water to over half a million people in both states including over 60% of Delaware's drinking water. However, legacy pollutants, excess nutrients, failing septic systems, and urban runoff have rendered over half of the streams, rivers, and lakes in the watershed unsafe for swimming and fishing.

The Brandywine-Christina watershed is an economic engine for the region. Keeping the water clean and the watershed healthy ensures that the resources and character sustaining this value remain viable in the long-term. The watershed provides:

- (1) \$1.5 billion in direct economic activity from water supply, fish and wildlife, recreation, agriculture, etc.,
- (2) \$900 million in ecosystem goods and services from the value of habitat such as wetlands and forest with a net present value of \$29.5 billion over 100 years, and
- (3) 90,000 direct and indirect jobs accounting for \$3 billion in annual wages.

Grant Concept – Brian Boutin, Director of Conservation Programs, The Nature Conservancy, Delaware Chapter

The economic health of the region, and subsequently the quality of life of its citizens, is wholly tied to the health of the lands and waters within the BC basin. However, environmental degradation has led to the impairment of the vast majority of streams in the basin. These impairments range from excess nutrients to low dissolved oxygen to toxins to bacteria, with most associated with nonpoint sources.

For several decades, conservation organizations and multi-institutional partnerships have been working towards addressing the sources of impairment and restoring the health of the basin. Strategies have

included acquisition of conservation easements, implementation of agricultural BMPs, and restoring riparian buffers. However, a lack of a sustainable and substantial source of funding for conservation projects has hampered large-scale conservation efforts.

In light of this, the University of Delaware Water Resources Agency and the Delaware Chapter of The Nature Conservancy are conducting a feasibility study on the implementation of a Water Fund for the BC to provide that sustainable funding source. This year-long process includes a review of domestic and international watershed funding programs to identify case studies of financing options, completion of an alternatives analysis to refine financial approaches appropriate for the Brandywine-Christina watershed, and directed outreach to key beneficiaries to ensure the outcomes suit their needs. Ultimately the project team will develop financial and governance recommendations and implementation steps necessary to establish a pilot Water Fund in the Brandywine-Christina watershed by 2016.

We aim to leverage the expertise of this Advisory Panel to vet the approach of the feasibility study to ensure our process is well-informed, transparent, and representative of diverse interests in the watershed. We ask that each panel member provide the project team with frank feedback and opinions both during Advisory Panel meetings and in between and point us towards critical pieces of information where necessary.

While some of you on the Advisory Panel are familiar with the Water Fund concept, this may be new to others. Therefore, I want to touch briefly on what a Water Fund is and how they work.

- Water Funds are sophisticated financial tools that provide a multi-objective, long-term, sustainable solution to funding watershed-scale conservation.
- The funds provide an innovative way for businesses, governments, and communities to minimize water treatment costs, address stormwater regulations, and reduce the risk of flooding by proactively investing in the protection and restoration of natural areas that regulate the supply of clean water.
- They can be thought of as a partnership among participating institutions to promote and sustain watershed health, providing benefits to nature, communities, government, and business.

In general, Water Funds invest in conservation of watersheds in order to improve or maintain water quality and/or quantity, ecosystem biodiversity, and human well-being and quality of life. However, these approaches to watershed conservation do not stand alone. Water Funds aim to compliment and build upon existing watershed investments and partnerships by providing a mechanism to leverage new and existing resources to achieve a common goal. The Water Fund model is based on investment in watershed services (IWS) principles which incentivizes beneficiaries of the resource to make strategic investments in the watershed. These beneficiaries are often not well represented in existing funding streams or in some cases are not well connected with each other. Public and private partnerships are established early in the process to ensure the needs and desires of a broad range of stakeholders are well represented. The mechanism by which funds are generated can vary widely and can include:

- Corporate contributions,
- User fees,
- Polluter fees,

- Government funding, and
- Other mechanisms but often include multiple revenue sources.

As investments are gathered, a multi-institutional governing board, generally comprised of entities that contribute money to the fund or have particular influence in the watershed, use the results of scientific models to guide funding to locations that maximize the return on investment in the watershed (environmental, economic and social).

Key features of water funds include:

- Ecosystem services mechanisms that include people and nature;
- Sustainable financial mechanisms with transparent management;
- Multi-stakeholder institutional mechanisms including public and private partnerships;
- Concrete, science-based conservation actions to generate services and conservation benefits;
- and
- Accountability system to ensure delivery of services and protection of natural ecosystems.

Review of Case Studies – Ellen Kohler, Conservation Coordinator, The Nature Conservancy, Delaware Chapter

In conducting our case study research, we drew from many different sources, compiling a list of approximately 300 water fund programs from around the world. For our purposes today, we selected 14 representative programs. They are in the chart on page 8 of the meeting materials. In selecting these programs, we focused on programs that:

- Had been up and running for a while,
- Were watershed-based,
- Had readily accessible information about their revenue stream, and
- Helped represent the variety of possible elements found in these programs.

These are not the only examples we intend to consider during the feasibility study process. Also, the information collected to date has come from internet resources. We will be contacting individuals directly involved in the creation and implementation of some of these programs to learn from their experience and to get more details about the program's current status.

In our review of these 14 programs and other case studies, we identified six themes. They are listed on page 9 in the meeting materials. I would like to briefly discuss each of these themes in the context of the extended case studies included the materials.

Theme 1: Developing Strong Public-Private Partnerships

For this theme, we will look at the New York City Source Water Protection Program in the Catskills and Delaware watersheds in New York. The city gets 90 percent of its drinking water from the Catskills and Delaware watersheds. In the 1990s, the quality of its drinking water supply was declining. The city was seeking ways to avoid building a \$8 billion drinking water filtration plant. To do that, it had to get a filtration avoidance determination from EPA.

One part of the city's multi-pronged strategy was implementation of new non-point source regulations in the Catskills and Delaware watersheds. These are agricultural areas and the farmers in the watersheds did not like the proposed regulations. Some representatives from the agricultural community proposed to meet the water quality goals by working with farmers on whole farm plans. This group formed what is now the Watershed Agricultural Council (WAC). State and federal regulators agreed to give the approach a chance.

Whole farm plans address environmental concerns to protect water resources without negatively impacting the farm business objectives. Farmers get payments to implement projects required in the plans. Where possible, Natural Resource Conservation Service programs provide cost-share funding; the remainder of the funding for implementation of the plans comes from the city.

Initially, the WAC got 85 percent of farmers to adopt whole farm plans. Now they have 93 percent enrolled in this program. The acreage enlisted in whole farm plans is in addition to the 156,690 acres acquired or under easement through the city's land preservation strategy. EPA has stated that NYC's 2002 renewal of the filtration avoidance determination was dependent in part on its strong relationship with WAC and other partners.

To give you a fuller sense of how the WAC has evolved, I'd like to share its vision for 2014:

We will start a 5-year commitment to conserve an additional 10,000 acres of farm and forest, as well as pilot a new Forest Conservation Easement initiative that will focus on water-quality through working landscapes. We will rollout a robust regional watershed education program that will span both watersheds . . . Finally, we will continue to grow and emphasize our regional efforts to support working landscapes and "buy local" initiatives.

Theme 2: Leveraging State, Federal, and Private Foundation Funding

For this theme, we are going to consider two case studies: the Rhode Island Water Resources Board and the Truckee River Fund.

The Rhode Island Water Resources Board demonstrates the role states can play in leveraging funds. The board is charged with protecting and conserving the state's water resources while providing for economic development. It has the power to issue revenue bonds to carry out its water supply mission. Since 1991, the board has administered a state surcharge on water customers. Approximately 36 percent of the funds from the surcharge are designated for watershed protection. The majority of the protection funds have been used for land acquisition, protecting 2410 acres.

Rhode Island is not alone in providing state- level dedicated watershed protection funding. Other examples include the North Carolina Clean Water Management Trust Fund, the Minnesota Clean Water

Fund, the Oregon Water Enhancement Board grant program, and the Pennsylvania Growing Greener grant program.

The Truckee River Fund demonstrates the role of local funding. It was established in 2004 by the Truckee Meadows Water Authority (TMWA), a regional water authority that operates in a watershed that crosses the Nevada/California border. Because the watershed includes multiple jurisdictions, it is difficult for one entity to implement improvement projects. The TMWA started the fund explicitly to enable local organizations and agencies to be in a better position to get matching funds and develop partnerships with other public agencies. The utility asserts that the fund makes good business sense because leveraging funds means that the utility's customers spend less money to protect the Truckee River and its watershed.

The fund has a simple structure. The utility commits 2 percent of its annual budget to the fund. It is managed by a community foundation. The fund advisors are separate from the TWMA. The TMWA board makes final determinations on what projects are funded. Over 10 years, 101 projects have been funded.

Theme 3: Adopting a Conservation or Strategic Plan

Theme 4: Champions and Carriers/Stewards

I am going to use one case study to discuss these two themes. By "champion," I mean a local leader who was a robust supporter of the proposed program with key stakeholders. By carriers or stewards, I mean those government or organizational staff members who helped put all the pieces of the program together and shepherded it through the design, development, adoption and implementation phases.

Let's consider the Upper Neuse River Clean Water Initiative in the Raleigh/Durham area of North Carolina. The initiative had a champion in the mayor of Raleigh, Charles Meeker. He founded the initiative in response to increasing development and resulting threats to water quality in his community. Because of these threats, Raleigh was considering building a new water filtration system, estimated at \$150 million. He convened a group of local government officials to discuss a partnership approach and he worked with his council to get the initial \$500,000 seed money approved for the initiative.

One of the first tasks the initiative tackled was the adoption of a conservation plan. It was developed with the help of a technical team and stakeholder input. The plan prioritizes parcels for acquisition based on their ability to help protect water quality. The plan helped demonstrate to residents the connection between upstream and downstream communities.

The initiative's program activities now include adoption of best management practices on private forest lands in addition to land acquisition. Steady funding comes from a watershed protection fee on water bills for Raleigh and Durham residents.

Theme 5: Starting with Seed Money and Maturing into Identification of Steady Funding Source

The Conserve to Enhance program in Tucson, Arizona has an innovative approach to developing seed money. The model for the program was developed by the University of Arizona's Water Resources Research Center. Tucson Water, the city utility, has set up a donation structure such that money saved by customers through water conservation is donated to the Conserve to Enhance program. The utility's monthly bill also includes a voluntary check-off for the program. It started in 2011 and has generated

\$40,000. The funds have been used to support local watershed restoration projects. That may not sound like a lot, but as we have seen, a little can go a long way.

Theme 6: Adapting to the Setting

FONAG in Quito, Ecuador is a mature program. It has an established governance structure, it has multiple partners, and it has a mature funding structure with the dedicated revenue stream from the utility as well as contributions from water users such as the electric company and the Andean Ecuador Brewery. The fund uses interest from its endowment of \$8 million to pay for projects.

Perhaps most importantly, the program design shows a deep understanding of the setting. The fund was developed to help address land conversion in and near the protected areas of the upper watersheds that provide Quito's drinking water. As a result of diminishing soil productivity, local people were starting to move into these areas and convert forests or natural grasslands to agricultural uses. The land conversion resulted in sediment and flow issues.

In recognition of this setting, one of the stated goals of the fund is to improve and/or maintain human well-being and quality of life for upstream communities. The main beneficiaries of program activities are the local communities close to the water resources. At the same time, the program helps link the citizens of Quito to their water supply.

Adapting to the setting can take several forms. Some programs have developed in response to a triggering event – like forest fires in western states that leave watersheds vulnerable to heavy sedimentation after storms. Others develop in response to a regulatory driver. Common federal regulatory drivers include maintaining a filtration avoidance determination and complying with the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) under the Safe Drinking Water Act, and complying with permit requirements for point and non-point sources and meeting total maximum daily load (TMDL) allocations under the Clean Water Act.

Existing Regional Initiatives

Now I'd like to turn to some initiatives already under way within the Brandywine Christina watershed. This is not a comprehensive review; we are still collecting information. These initiatives echo the six themes.

- In 2010, the City of Wilmington adopted its Source Water Protection Plan. The city has committed \$279,850 for source water protection projects since its adoption.
- United Water, which is a private water purveyor in the White Clay Creek watershed. It is committing \$700,000 from 2012 through 2017 to watershed restoration projects as part of its LT2 permit.
- Delaware implemented a voluntary tax check off for the benefit of the White Clay Creek. It has generated \$11,000 in revenue since 2011.
- Christina TMDL Implementation Plan (CTIP) is a partnership of local organizations and 33 local governments. It has leveraged approximately \$150,000 from the City of Wilmington and Pennsylvania local governments to bring in \$3 million, mostly from Growing Greener, for 7 restoration projects in the Brandywine-Christina watershed.

- Victory Brewing founded the Headwaters Grant Program. They pledge 1 cent from every Headwaters Pale Ale sold goes into the grant.
- DuPont developed Clear into the Future. The initiative is working with the community to preserve the Delaware Estuary. The initiative is “striving to secure a healthy future for the living and working river.” It provides grants for research and restoration projects in the estuary, including the Brandywine-Christina basin.
- In addition to all the great work of land conservancies in the area in preserving land, Chester County began the Brandywine Headwaters Preservation Program in 2010. The County describes the program as an effort “to increase the number of partners, further leverage limited public funds, and promote water quality improvements and permanently preserve land.” The program uses the agricultural priority areas set out in Wilmington’s Source Water Protection Plan to determine eligibility for the funding.

What is already happening in the watershed is really exciting. The question moving forward is how best to keep that momentum going and build on it.

Resources:

Internet repositories of payment for watershed services programs, investment in watershed services programs, and water funds:

The Conservation Gateway – www.conservationgateway.org

The Conservation Registry – www.conservationregistry.org

Reports reviewing payment for watershed services programs, investment in watershed services programs, and water funds

Genevieve Bennett, Nathaniel Carroll, and Katherine Hamilton. (2013). *Charting New Waters: State of Watershed Payments 2012*. Washington, DC: Forest Trends. Available online at <http://www.ecosystemmarketplace.com/reports/sowp2012>.

Terhi Majanen, Rachel Friedman, and Jeffrey C. Milder (2011). *Innovations in Market-Based Watershed Conservation in the United States: Payments for Watershed Services for Agricultural and Forest Landowners*, Washington DC: Ecoagricultural Partners. Available online at http://ecoagriculture.org/publication_details.php?publicationID=362

American Water Works Association and The Trust for Public Land (2004), *Source Water Protection Handbook: Using Land Conservation to Protect Drinking Water Supply*, Washington DC: American Water Works Association and The Trust for Public Land. Available online at <http://www.tpl.org/source-protection-handbook>. Caryn Ernst, author; Kim Hopper and David Summers, editors (2004). *Protecting the Source: Land Conservation and the Future of America’s Drinking Water*, Washington DC: The Trust for Public Land and American Water Works Association. Available online at

http://www.tpl.org/sites/default/files/cloud.tpl.org/pubs/water-protecting_the_source_final.pdf

Todd Gartner, James Mulligan, Rowan Schmidt, and John Gunn, editors (2013). Natural Infrastructure: Investing in Forested Landscapes for Source Water Protection in the United States. Washington DC: World Resources Institute; Tacoma, WA: Earth Economics; Manomet, MA: Manomet Center for Conservation Sciences. Available online at <http://www.wri.org/publication/natural-infrastructure>.

Next Steps – Richie Jones, Delaware State Director, The Nature Conservancy, Delaware Chapter

Jerry Kauffman and his team will be conducting an alternatives analysis of the various funding mechanisms that have been successfully employed. The project will also identify key stakeholders and develop an interview protocol for engaging them.

The goal will be to assess critical ecosystems in the watershed most in need of restoration and improvement.

Team members will be reaching out to you shortly to gather your thoughts one-on-one after this meeting.

We will be aiming to meet with you again in early September to review these subjects and get more feedback.

But for now we're hoping to get your feedback on the questions listed in the Agenda - page one of booklet.

Advisory Panel Discussion – Advisory Panel

General thoughts:

- Need a refined sense of what the needs of the watershed are in terms of finances and numbers. For example taking the existing plans that are out there and seeing how much needs to be invested in this watershed.
- Need to identify for what/why money is being raised? Is it to improve water quality (and what piece: bacteria, toxics, DO, etc?), to decrease flooding, to conserve land, etc. Clearly define the goods and services we are marketing.
- Need a strong communication and marketing plan.
- Need stakeholder involvement.
- Need to key in on who the beneficiaries are.
- Is it possible to fund multiple things, for example storage, restoration, etc.?
- Successful water funds need a dedicated funding stream from public entities because it serves as a base of ongoing support. It is critical to figure out this balance. Support from the legislators

is a critical need to establish a base before going out to private financiers. The base funding is the critical mass.

- There are a number of objectives that need a unified driver (all these case studies have that). This fund will need a unified statement driver.
- User fees/tax rates – these are not uniform across the watersheds. The bi-state watershed is unique to this process, the governance structure is critical.
- Need geographic integrity, watershed-wide, consider that there is a city at one end of the watershed and not at the other. Equity across geography is critical.
- \$15-16 million is currently needed in the Brandywine-Christina for toxics alone. There are also stormwater needs and other water resource needs; there are a lot of funding needs in this watershed.
- There is a wide variety of programs in the basin, careful not to create a fund that removes existing funding programs. Itemize the existing funding programs.

What is missing:

- Participation from the agriculture community early on in the process is important. Do not invite them to the table too late in the process because there is sensitivity to this.
- Is the City of Wilmington missing from the Advisory Panel?
- Need further research on the case studies, identify the mistakes that have been made, are there local connections in any of the case studies, what are the managements issues, what are the problems associated with working on a watershed basis?
- Regarding the case studies identify the lessons learned in each case study, for example there are no local people in the New York City case study, look into this. Are there management problems with water funds? Are the other funds monitoring the success of the money? Don't repeat the mistakes of other water funds.
- There is a lot of information for funding needs in the watershed (for example New Castle Conservation District has hundreds of assessment with identified needs). Need to generate a real number for what's needed in the watershed (using existing plans (wastewater, drinking water, etc.).
- Capital budget plan, wastewater, drinking water facilities, non-point source projects – there are requirements/plans that say what's needed in investments/capital projects. This is the nut, what we are trying to aggregate funds for. Management/flood is a huge issue downstream those capital needs are really expensive.
- Identify water quality information before meetings with key stakeholders; map them and identify high priority issues/areas
- Outcomes – we need a fine point on what needs to happen to get to swimmable, fishable, potable
- It is important to demonstrate how a certain amount of dollars can translate to an amount spent on in the ground projects, for example the EPA's Targetted Watershed Initiative Grant (TWIG) implemented in the Christina Basin had approximately 3:1 ratio for match to funds provided.
- Consider allowing trading into this feasibility study.

What are the best pathways to success:

- Must use the existing resources, expertise, and momentum occurring in this watershed. This project can't just be a dumping ground for money.
- Don't just end up with a report, need momentum, an involved group, vested interest in the process and plan.

- Any market has a good sense of what is being bought and sold. There is an inequality because it is really hard to quantify ecosystem services. Make sure there is not an inconsistency on what we are buying/selling?
- The approach needs to make good business sense – with the farmers, the stakeholders, the public, and the investors. Important feature is mutual benefits, understanding the benefits to those who participate, what made this worth it to them?
- Need general theme but different stories, need a sense of place, for example Wilmington paying a farmer gives a sense of place. Visions of success need to translate to on the ground.
- Think of this as a journey; don't try to be excellent try to be better. Grow/learn/modify as we go.
- Massive marketing/communication strategy is necessary- this is being learned in Delaware with the Clean Water Initiative state-wide.
- Need to connect people to their local resource-reach people so that they can make that connection. Consider it will come down to people/public their desire, everyone has something.
- Maryland has focused on the Chesapeake Bay. This is a unifying siren for that part of the world. Need something similar.
- Consider the differences between a partnership of shared interests with a partnership driven by financial incentives; could include different set of players
- Getting people who aren't interested to become interested, can do this through financial incentives/disincentives. For example in Philadelphia, getting stormwater contributors to pay to help City with their stormwater problem so that the City doesn't have to pay.
- Identify a group of people that want to continue work on this, make this the key objective. This project shouldn't just end with a report; need relationships to continue this not just a report.
- Define the needs early in the process
- These are regulated waterways. There are a lot of organizations working in this watershed and who know the area and the needs. Map the high priority areas/problems and bring this to the stakeholders so that there is background information provided before we go out to the public with these ideas.

What are the likely barriers that will be encountered and how might they be overcome:

- The agriculture conservation districts were formed to connect farmers. A farmer does a project then you go back and everything is reversed or not maintained/taken care of. Need boots on the ground to work on this type of stuff. Farmers are critical, not easy to do, need relationship/connections to develop a strong relationship.
- The ag community has a high sensitivity of not being around the table. You need to avoid a pre-conceived approach that they weren't involved in the process at the beginning. Need to really consider bringing them to the table sooner rather than later.
- Multiple jurisdictions – governance structure could prove difficult
- Addressing geographic equality
- There is a credibility issue, need to establish credibility when working with the agriculture community as well as the public in regard to what the money is needed for and how it will be spent.
- Need to look at resilience and water quality at the same time. Water quality doesn't seem to resonate with the public.
- There are multiple dimensions of water quality (bacteria, nutrients, toxics, DO, etc.). What is most important? "Water quality" is an umbrella placeholder for a tough discussion of what's critical to address.

- There is a lot of good science data that doesn't make good business sense for a farmer, for example raising buffer distance from 15-25 ft to 100 ft. If we don't consider the farmer's business you will be stopped before you go.
- Avoid inconsistent valuation, this project needs to make sure there is consistent valuation so that it makes good business sense to implement practices or give to the fund as well as it makes it worthwhile to participate in the fund.
- Need to tip the scale so it's worth ecological health for conservation practices on farms (i.e. increase financial incentives).
- Science-based decision makers are important. Stakeholders are important but when you talk to stakeholders, in this case you have a goal (fishable, swimmable, potable), comments from stakeholders may not achieve that. Determine why do you want stakeholders involved.

Action items:

- Provide the Advisory Panel with a scope of work for the project.
- It would be helpful for the project team to educate the group (the Advisory Panel) on where/what the needs are in the Brandywine-Christina. The needs must be in line with and tailored to the conservation/protection plans that exist.