



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

Mount Cuba Center
Hockessin, Delaware
September 18, 2014

Brandywine-Christina Healthy Water Fund

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

Richie Jones provided a brief introduction of the project team, Advisory Panel, and meeting attendees.

Thank you for the group's participation in this the second of two very important meetings of the Brandywine-Christina Healthy Water Fund Regional Advisory Panel.

Thank you to Mount Cuba for hosting the event at such a beautiful and important site.

Richie provided a brief overview of the project and the project goals, including:

- This work is part of the William Penn Foundation's cluster work in the Brandywine-Christina,
- This project is focused on the feasibility of a market-based funding model,
- The project work is focused on: efficiencies in investments, attracting new investments, and prioritizing projects based on the highest-best return.

Update from May 30th Regional Advisory Panel Meeting – Brian Boutin, Director of Conservation Programs, The Nature Conservancy, Delaware Chapter

Brian Boutin discuss the action items requested by the Advisory Panel at the first meeting (May 30th) to describe the project team's progress on these items/requests.

Action

Map High priority areas

Response

Presented in the benefit/cost analysis discussion led by Jerry Kauffman during this meeting.

Action

Review existing plans

Response

The team reviewed seven existing management plans, the summary of the findings from these plans is included in the September 18th meeting materials (page 6 and 7).

Action

Define a unifying driver

Response

This is in process through the stakeholder interviews that are being conducted by the project team.

Action

Itemize existing funding

Response

In process.

Action

Develop a communications and marketing plan

Response

The project team is inventorying existing communications through other organizations; the information will be included in planning for the continuation of this project.

Stakeholder Interview Process Update – Ellen Kohler, Conservation Coordinator, The Nature Conservancy, Delaware Chapter

Ellen Kohler discuss the stakeholder interview process that is being conducted to gather information for the development a Brandywine-Christina Healthy Water Fund.

The process began by identifying stakeholders throughout the watershed, drawing from other watershed projects and planning processes. The list included more than 250 entities.

The list was then separated into sectors –

- governmental bodies/ public agencies;
- drinking water purveyors;
- wastewater dischargers;
- private commercial/business interests;
- nonprofits;
- colleges and universities;
- chambers of commerce;
- agricultural organizations; and
- electric and gas utilities.

In the next step, the team reviewed the water withdrawal information for the watershed. The largest water withdrawers in this watershed are the water purveyors and Arcelor Mittal.

As we saw with the case studies, water purveyors and large water users have been key stakeholders in many of these projects. We discussed at the meeting in May that several water purveyors in the Brandywine-Christina watershed are already investing in watershed restoration projects. The interview process will include the largest water users in the watershed.

In this watershed, there is an opportunity for strategic collaboration with stormwater managers/MS4 permittees in the Brandywine-Christina watershed. Many are beginning to plan for implementation of permit requirements. It is known there is overlap between projects that protect drinking water and projects designed to address stormwater problems. There are efficiencies to be achieved in that area of overlap. The interview process will also include interviewing stormwater managers.

The list of initial stakeholder interviews to be completed in this first phase of the project includes:

- City of Wilmington
- City of Newark
- Aqua PA
- PA American

- United Water
- Downingtown Municipal Water Authority
- Arcelor Mittal
- CTIP (Christina Basin TMDL Implementation Plan)
- New Castle County
- DeIDOT

Through the interviews, the interviewers are looking for common interests and priorities, a willingness to consider investments in watershed restoration, and a commitment to continue to participate in the process as we move forward with the project.

We developed a set of interview questions to shape the discussion but we do not intend to limit the discussion to these topics; and we adjust the questions as appropriate for each stakeholder. The questions focus on the stakeholders' concerns, priorities and preferences. Examples include:

- What are the water quality problems in the Brandywine-Christina that most affect you right now? What about within the next 10 years?
- What approaches to improving water quality in the Brandywine-Christina do you believe have the most promise?
- What is the most important consideration among these three in terms of your preferences – cost reduction, regulatory compliance or economic development/return?

Two team members attend each interview. After the interview, notes from the discussion are compared among the team members and shared with the stakeholder to confirm accuracy. The information gathered from the interview will be compiled and shared with all those interviewed. The final plan is to invite these key stakeholders to a joint meeting with this regional advisory panel in January 2015 to hear draft recommendations and provide comments.

To date, two interviews have been completed and confirmation of the additional interviews with other key stakeholders are in process. The two interviews completed were with the City of Wilmington and the City of Newark – both are already investing in watershed restoration and both have verbally committed to partner with us as we continue this process.

Brandywine-Christina Benefit-Cost Analysis – Jerry Kauffman, Director, University of Delaware, Water Resources Agency

Detailed information from Jerry Kauffman's discussion can be found in his PowerPoint and in the meeting materials (page 8-14) at the following link:

<http://www.wra.udel.edu/brandywine-christina-healthy-water-fund/>

Next Steps – Ellen Kohler, Conservation Coordinator, The Nature Conservancy, Delaware Chapter

Ellen Kohler briefed the group on the upcoming actions of the project team. They include the following:

1. Complete initial stakeholder interviews with the large water users and the stormwater managers.
2. Compile information from those interviews to share with the stakeholders interviewed.
3. Amend the benefit-cost analysis based on comments and feedback.
4. Begin to frame recommendations for the next phase of the project which will be shared with stakeholders interviewed and regional advisory panel members.

Advisory Panel Discussion – Advisory Panel

Discussion on the Benefit-Cost Analysis

- Do not just use land use for the agriculture loads, try to identify /incorporate land treatment so there is a better picture of the current loads. NRCS data is a good source, extrapolate from this. Try to acknowledge that work has been done since the TMDLs.
 - *Response:* Using the water quality monitoring data may be the best approach.
- Mapshed is a good resource, there is 2010/2011 1-meter resolution.
- The length of the forest buffer width for N reduction is critical. What was used in the HSPF or Sparrow model?
- Numbers for the TMDLs are not accurate. The TMDLs should be used as guideline not absolute numbers, use them as a framework, need to fix impairment map because it should not be based on the TMDLs.
 - *Response:* Need to rely more heavily on water quality monitoring data. Collectively all actions are reflected in the water quality data.
- Adjust with the timeframe so that the numbers aren't so daunting and are more achievable. Create intermediate milestones.
- Numbers in the maps and charts are based on the 1998 impaired streams map. The current map will be three times as impaired as the 1998 map. This begs the question, is clean water affordable?
 - *Response:* This data is being used as a starting point. Further refinement can be conducted as the project evolves.
- There are additional benefits to using the TMDLs.
- Achieving the sediment and N TMDL will go a long way to taking streams off the impaired list.
 - *Response:* Need to consider preservation and protection.
- Need to remember that if you are developing a fee structure through water purveyors, you don't have 100% of the population because a large percentage of the population is served by private wells. In addition, you are asking the same people to pay for stormwater. There is competition for funding. All the funding is coming from the same pockets. This goes back to the importance of marketing, it is critical to market and communicate with the public. Effectiveness of mass media campaigns are the biggest bang for the buck.

- *Response:* The majority of these campaigns start with a voluntary effort to get the process going and once they are established and can show successes others join on.
- May be important to revisit the TMDLs, come up with different allocations. Specify time-frame, revisit, reframe. States have the discretion to modify the TMDLs without re-doing them.

Discussion Related to Project Communication

- Farms contribute significant loads of pollution but they are also a preferred land use over development. It is critical that the message isn't farms are the problem because they are better than development. Pollution levels will be much worse if everything is urbanized. Messaging with the public needs to focus not on the negative aspects of farming but on the good it provides too.
 - *Response:* Conversations with the agriculture community need to start with the good things they are doing. Messaging is important. Farmers play an important role. It may be useful to use the data to show the increase in loads if farms were urbanized.
- Farmers are a huge asset, it may be beneficial to come up with LEED type certification for farmers that are doing the right thing. Farmers can market themselves that way.
- Some possible approaches : incentivized BMPs; excellent O & M and effectiveness rewarded with payments; farmers opt into O & M program but reduces their payment
- Education with farmers along with monitoring to help them make the connection between BMPs and water quality
- Effective mass media education could be biggest bang for the buck in this watershed

General Discussion

- It's critical to consider the situation with the MS4s. For the MS4 regulations you can only give credit in the regulated area. Not in place so reduced load must happen solely in MS4 area. Urbanized area only certain portion of the Basin. Do not have flexibility to go where problem is , hop across regulated boundary.
- There are multiple entities looking at needs to fund clean water compliance
- Unassessed areas on Jerry's maps – not no load reduction just not assessed.
- EPA Representative discussed the option of pursuing watershed permits and an overlay permit. If a concept plan is developed it can be taken to EPA for review and discussion. The Chesapeake Bay Program is using a watershed overlay for nutrients. You can develop an overlay for one nutrient or one subject area.
- It is important to recognize that you don't trade upstream and downstream compliance.
- Investing upstream will benefit downstream.
- Sparrow model has been updated, 2000-MS4 data
- Lower portion of the basin- how are we addressing toxics? Is this a project limitation? Need talking points around this because elected officials are concerned about toxics in the Christina. If the water fund is not addressing toxics, how do you handle this? Fishable/swimmable is not attainable if toxics aren't considered.
- Looking for local dedicated funding sources?
 - *Response:* this funding will supplement funding or be used as a cost-share approach.
- Has a priority area been identified yet?
- *Response:* priority areas have not been identified yet, that is part of this process.
- Develop a good model for funding and financing and use this for things not tied to the TMDL.

- What is the cost of improvement, how long will it take to show improvement in water quality based on the actions taken?
 - *Response:* A Stroud study shows a 5-8 year lag time for BMP benefits to be demonstrated on the ground. There is a long lag due to the complex geology of this area and can take up to 10 years or more. There is a lag in functionality in BMPs that get put on the ground. For example forest buffers have a lag due to the time it takes for them to get established.
- It is important to consider the particle sizes of sediment that the BMP is intended to capture, for example, silts and clays are most damaging and also difficult to remove. Buffers/buffer width; a 30 feet-wide forest buffer on a small stream removes 64% of the sediment. If you are to increase the buffer to 100 feet the efficiency will increase to 84% removal. The buffer does not capture the silts and clays until it is 100 feet in width so less than 100 feet is not taking out the devastating particle size. There is a much greater return for the last 70 feet of a buffer. In the NY drinking water system silts and clays are a very big concern for the water supply. Silts and clays don't settle and the cost of building a treatment plant to treat the silts and clays is very costly so there is a very large advantage to removing them at the source with buffers.
- The DRBC has worked on a PCB TMDL.
- It is critical to consider both preservation and conservation practices.
- How can funding address O&M on existing BMPs. It is important to shed more attention on what's already in the ground which will get a big return if there is focus on this.
- Currently the cost relationship is 80/20 for cost-share. Farmers can typically come up with that 20%. Need to address 80% not the 20% coming from the farmer.
- Staffing of the conservation districts may be a limiting factor.
- Who is going to pay for the local match? Programs now are starting to look for local match that is not available.
- Need numbers to back up the methods of protection that are being implemented. What are the existing BMPs doing? What is the existing benefit?
- Trading and offsets are an option.
- It will be successful if you can show that it's good business sense for the farmers. For example, no till conservation has been adopted for that reason.
- There has been resistance of the PA municipalities to get a joint MS4 permit.
- It is critical to work on a watershed basis, MS4 permits aren't written this way, need to use watershed efficiencies because jurisdictions can't meet the permit requirements without working on a watershed-level.

General Project Team Responses

- What a process could be and what data is available is the intent of the work in years two and three.
- There are multiple goals of the water fund: economic, social, and restoration goals. There are also a lot of constituencies of water quality that are of interest in addressing. The TMDL is a starting point, the stakeholders and interview discussions will define what the water quality goals are and the best way to address them.
- What is the best mechanism for delivering O&M? Is creating a work force to do this an option?
 - *Advisory panel response:* Conservation district staff should be doing O&M but there is not enough time and DEP enforcement needs to be stronger, this would go a long way with O&M. A work force would work for O&M but training would be required.

- A selling point of the contributions is leverage. This will be a voluntary approach.

General reaction to the project, is this moving in the right direction:

- Unit cost would be a great way to go, a good message for the public, not overwhelming with huge and costly goals.
- Come up with a system that can incentivize- get the farmers to implement and also to perform O&M. Current programs, like CREP, don't have incentives to go above and beyond, come up with something that incentivize the farmer who is doing good; skin in the game so they want less sediment going into the waterway.
- When a farmer sells his development rights, there is an annual monitoring component. There is a need for an education campaign on monitoring. The preservation component will include this monitoring component.
- Actions implemented with the water fund money, is there required protection? If it is disturbed or not maintained, will the recipient of the money have to give money back?
 - *Response:* The grantor can put stipulations on the funding, speaking to specific BMPs, there will need to be certain criteria and the grantee will have to develop this criteria.
- Program administration and monitoring, this will need to be another component that will need funding. What/who is the entity that is holding the money?
 - *Response:* In years two and three, the project team will be identifying the legal and regulatory terms. There will be an agreed upon structure and group of investors. There will be a firm, a board of directors an executive director, or a host agency. All of these details will depend on how the fund is developed.
- How will MS4s work into this, using the water-purveyor model will leave these groups out of the project.
- There will be issues with trying to cross the state line with the model.
- What is needed to get the municipalities on board is very difficult, need to look into a business-model that will serve the variety of entities in the two states with different entities. The team will need to develop a program that will do this.
 - *Response:* PDE and DRBC are two interstate organizations that can serve as models. DRBC can be the bank and get money from people with a permit or docket. This does not include the stormwater component.
- How to get the money out of people's pockets is critical.