

Healthy Watersheds, Healthier Communities

Fairfax County Stormwater Planning Division

Minutes Pohick Creek Draft Watershed Plan Forum

Tuesday, July 27, 2010
Sangster Elementary School, Springfield VA

Meeting Attendees	
WAG Members	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Fred Rose
Chris Landgraf, Fort Belvoir DPW	Shannon Curtis
Kelly Meadows, Lake Braddock Community Association	Chad Grupe
General Public	PBS&J (engineering consultant)
Approximately 30 persons, including two representatives of Supervisors' offices (Rosemary Ryan, Braddock; Marlae Schnare, Springfield)	Laura Chap
	Terry Suehr
	Jeremy Reideman
	Lindsay Parker
	Jeremy Hassan
	Waterford Inc. (public involvement consultant)
	Beth Offenbacher
	Paul Coelus
	Roger Taylor

The meeting convened at 7:05 pm with welcome comments by public involvement consultant Beth Offenbacher.

Fred Rose (Chief, Watershed Planning & Assessment Branch) offered some introductory comments, then described the background and history of the watershed planning process over the past few decades. He noted that the Watershed Plan is a concept-level document: it represents *opportunities* for the County to make improvements, but funding for any particular project will be competitive and it is unlikely all the proposed projects will be accomplished.

Shannon Curtis acknowledged the important role that the Watershed Advisory Group has played in the plan development. He provided a watershed planning primer to ensure that everyone in the audience understood the basic principles and terminology of watershed planning. He noted that the science of watershed planning has evolved over the last several decades, and the techniques used to manage stormwater today are different than those used, say, in the 1970's.



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Laura Chap (PBS&J) described the process of preparing the draft plan from an engineering perspective, including field investigation, water quality and quantity modeling, and the ranking of subwatersheds within the Pohick Creek watershed and the county overall. Terry Suehr (PBS&J) followed with a more detailed explanation of several project examples. Laura Chap then described the project prioritization process. The draft watershed plan includes 90 proposed projects in the 10-year group, and the team has rank-ordered these based on several criteria.

At the conclusion of the presentation, Shannon Curtis reviewed the several ways members of the public can submit comments on the draft plan, including phone, fax, mail, email, and via a form on the County website. The public comment period will run for 30 days following the date of the forum.

Following the presentation, county staff and consultants fielded questions and comments about individual proposed projects at several stations around the room.

The meeting adjourned at 9:00 pm.

The following is a summary of the questions asked and comments made by members of the audience and the answers provided by county staff and consultants. The identities of the persons asking and answering the questions are not included. This is not a verbatim transcript.

Q: Is there federal grant money available for any of these projects?

A. Yes, and we do look for those funding opportunities. For example, Fairfax County has received some grants for projects on certain dams. However, the grant process is competitive; we can apply for such funding but we cannot rely on it.

Q. Are wet ponds supposed to be maintenance free? Some of the proposed projects have areas (sediment bays) that look like they'll require frequent maintenance.

A. This type of wet pond is actually *designed* for maintenance, but for easy maintenance. The forebays collect sediment, which must be removed, but it's much easier to clean a small forebay on a regular basis than dredge the entire pond.

Q: Given the current budget situation, what's the likelihood of funding all 90 proposed projects [on the 10-year list]?

A: At present, we do not have the level of funding needed to complete all 90 projects, even over a period of 10 years. So it's unlikely they will all be done. Moreover, although the plan provides a priority order for the projects within this watershed, they will compete for funding county-wide. In addition, the funds available for projects will vary from year to year, so it's hard to say when (or if) any particular project might be done.



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Q: From the project descriptions, it appears that some of the existing facilities have not been maintained. Where will the money come from to maintain the *new* infrastructure?

A: Since the County has dedicated a penny of the tax rate [\$0.01 per \$100 assessed value on real estate], recently increased to 1.5 cents, the additional funds have allowed us to catch up to some degree on the overdue maintenance. We will continue to use some of this funding for maintenance of existing and new infrastructure. In addition, some of the new projects are lower maintenance than existing facilities, so that will help keep costs down.

Q: Are other counties organized the same way? How much of the planning is mandated by the federal government?

A: Well, every land area comprises one or more watersheds, but each jurisdiction may do watershed planning differently. However, the *modeling* used in watershed planning is generally the same throughout the country. The federal government requires only that watershed planning be done (for example, as part of the permitting process); it doesn't specify how it is to be done, so individual states and counties may have different processes.

Q: Why is none of the project scoring and prioritization qualitative? And does anyone actually monitor water quality?

A: Both the "benefits" section of the draft plan and the description of individual projects contain some discussion of qualitative benefits. In addition, qualitative results are imbedded in the overall goals. As to monitoring, both the state and private citizens continually monitor water quality. Keep in mind that this is a long-term investment. We arrived at the current state over a period of centuries; it will take time to make improvements. In addition, we're dealing with the variability inherent in natural systems.

Q: If the County accepts federal funds, at what point will there be regulations that control individual homeowner behavior; for example, "you will have a rain barrel" or "you will reduce the size of your lawn."

A: First of all, the amount of money we receive from the federal government is small in comparison to other sources. Second, the draft plan contains nothing at all like the kind of individual mandates you're referring to. Finally, while the government has authority under the Clean Water Act to direct results, it cannot direct the states how to achieve those results.



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The notes below reflect questions and comments made at the breakout stations following the conclusion of the formal presentation:

C: [Project No. PC9705] This is a new storage and treatment area. I'm concerned about whether you'll cut down trees to do this project, whether the water will create an area for mosquitoes to breed, and whether it will be a safety hazard to neighborhood children, who walk through this area on their way to the pool and use the slope for sledding in the winter.

Q: [Project No. PC9705] Is a goal of this project water *quality* improvement, or just quantity—that is, controlling flow into the stream?

A: This outfall improvement project is primarily aimed at managing stormwater quantity. The existing structure allows too high a flow rate, which contributes to stream erosion. The proposed project would reduce the flow rate. Indirectly, this also helps improve water quality.

Q: [General] How is subwatershed sequencing incorporated in the plan, or in project rankings?

A: The draft plan does not attempt to do that at the level of individual subwatersheds (or WMAs, watershed management areas). The question of project sequencing—whether one project ought to be done before another—was considered at the watershed level. However, when an individual project is funded, we can review the proposed projects nearby to determine whether sequencing should be addressed.

C: [Projects No. PC9120, PC9118] I'm concerned the pond retrofit will cause pond boundaries to expand, encroaching on properties to the north and south and possibly reducing property values. I'm also concerned about the possible loss of trees as part of the construction process; I hope the county tries to minimize such loss. Finally, please contact us [the local homeowners association] before the project begins.

C: This was very educational. I'm delighted to know the plan is underway, and impressed with the management and organization of the watersheds. Also, I'm pleased to have had the opportunity to get local, neighborhood questions answered.



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Healthy Watersheds, Healthier Communities

Fairfax County Stormwater Planning Division

Minutes

Pohick Creek Watershed Advisory Group (WAG)

Meeting #1 - Orientation

Tuesday, December 9, 2008

Fairfax Co. Government Center, Conference Room #4

Meeting Attendees	
Members of the Public	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Fred Rose
John Harris, Kings Park West	Shannon Curtis
Rob Hartwell, Hartwell Environmental Fund/Mt. Vernon-Lee Chamber	
George Jennings, George Mason University	
Robert Jordan, PRGC	PBS&J
Chris Landgraf, Fort Belvoir	Trish Hennessy-Webb
John Levtov, Christopher Consultants	Karlee Copeland
Kelly Meadows, Lake Braddock Community Association	
Ron Marlow, Burke Presbyterian Church	Waterford Inc.
Mike McCaffrey, Hidden Pond Nature Center	Beth Offenbacher
Ed Miller, Kings Park West	Paul Coelus
Jim Pomeroy, Hidden Pond Nature Center	
Susan Susa, Friends of Hidden Pond / Pohick S. V.	

The meeting convened at 7:10 pm. Following welcome comments by county staff and public involvement consultant Beth Offenbacher (Waterford Inc.), all attendees introduced themselves.

County staff and consultants then gave a series of presentations as follows:

- Shannon Curtis, Fairfax County, outlined the purpose and history of the county's watershed planning process and reviewed the proposed timeline for the Pohick Creek Watershed Plan.
- Fred Rose, Fairfax County, discussed the policy issues involved in the planning process.
- Beth Offenbacher described the role of the Watershed Advisory Group and WAG participation guidelines.
- Trish Hennessy-Webb, PBS&J (engineering consultant) reviewed the Pohick Creek Watershed Workbook and described the types of projects that can be found in a watershed plan.



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- Beth Offenbacher presented the Watershed Management Plan goals and objectives and reviewed the timeline from Watershed Workbook to Draft Plan.

The presentations were followed by a question and answer period moderated by Beth Offenbacher.

The following is a summary of the questions asked by members of the public and the answers provided by county staff and consultants. The identity of the persons asking and answering the questions is not included. This is not a verbatim transcript.

Q: Will the WAG's recommendations go to the Planning Commission or the Board of Supervisors?

A: Both. They'll also go to the Engineering Standards Recommendation Committee.

Q: Will WAG meetings be 2 hours long? Will materials be given to the members in advance or just at the meeting?

A: Yes, the meetings will be 2 hours. In some cases, but not all, materials will be distributed in advance.

Q: Must the WAG work within a particular framework of cost?

A: Not so much cost; more a projected number of projects for each watershed. The total cost may vary by watershed. In the first round of watershed planning (now completed), we looked at 20-year costs of implementation. In the second round, we'll be changing to a 10-year implementation schedule. We may also look at 20-year projects, but won't price them as precisely as 10-year projects.

Q: How long does the current one-penny dedicated tax last?

A: The Board of Supervisors must approve it every year. The amount of revenue it generates varies from year to year. For example, it generated about \$17.9M in the first year, \$20M in the second year, \$22-23M in the third year, and \$23M in the fourth year.

Q: There are supposed to be ten regional ponds in Pohick Creek. How many have been built?

A: About four have not yet been built. Part of the current watershed planning project is evaluating whether to create one larger pond or several smaller ones.

Q: You referred to an assessment on developers. What is that?

A: We assess a "pro rata share" on new development to cover that development's share of impact on the watershed as measured by the amount of impervious area. The rates vary by watershed, and the funds collected must be used within that watershed and within 12 years.



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Q: Are there any types of the projects the county won't do?

A: All projects must be consistent with the county's goals and objectives. Also, we can't spend a large amount of money on any project that's principally in a private area, since that would appear to use tax dollars for private benefit. We will also use computer modeling to quantify the benefits from each project. Generally speaking, preference will go to projects that provide the greatest benefit for the money spent.

Q: Are all dams in the watershed structurally sound, or are dam projects to be considered in this program?

A: The state has recently increased the regulatory requirements on dams, so we'll be doing rehabilitation work on some of them to meet these requirements. But dams provide regional benefits; this program is focused more on local benefits.

Q: It sounds like you're looking to do about 150 projects in this watershed. Is the WAG supposed to come up with, say, 300 projects and then narrow the list down to 150?

A: No, we'll generate a list of projects based on the modeling currently being done. The projects will focus on flooding, channel erosion, pollutant load, and other issues.

Q: The midsection of Pohick Creek has run dry twice in the last 10 years, but it shouldn't be a seasonal stream. Why is that?

A: There's a lot of sediment upstream. Also, some large storm sewer lines may actually intercept some groundwater and discharge it elsewhere, reducing the flow in parts of Pohick Creek. We can look at that issue in this WAG.

Q: Are we to be reactive or proactive in setting policy?

A: The policy was actually set in the first round of planning, so this group will be following it rather than setting new policy. This WAG will be identifying projects to address known problems.

Q: Some projects may have "synergy" if done together. Will that be taken into account? And how do we quantify non-structural projects?

A: Yes, non-structural projects are more difficult to quantify, but we do have a requirement to include some non-structural projects. Overall benefits of these projects tend to be more visible at the county or watershed level, harder to see at the watershed management area (WMA) and subwatershed level. Also, it's important to look at upstream projects before downstream.

The meeting adjourned at 9:00 pm.



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Healthy Watersheds, Healthier Communities

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Minutes

Pohick Creek Watershed Advisory Group (WAG)

Meeting #2

Wednesday, March 4, 2009

West Springfield Elementary School

Meeting Attendees	
WAG Members	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Fred Rose
George Jennings, George Mason University	Shannon Curtis
Gerry Kirwin, Lake Braddock Community Association	Chad Grupe
Chris Landgraf, Fort Belvoir DPW	Darold Burdick
John Levtov, Christopher Consultants	PBS&J (engineering consultant)
Ron Marlow, Burke Presbyterian Church	Trish Hennessy-Webb
Ed Miller, Kings Park West	Terry Suehr
Elizabeth Morrissey, Heritage Square	Waterford Inc. (public involvement consultant)
John Morrissey, Heritage Square (Alternate)	Beth Offenbacher
Duane Murphy, Southport HOA	Paul Coelus
Jim Pomeroy, Hidden Pond Nature Center	

The meeting convened at 7:10 pm with welcome comments by county staff and public involvement consultant/moderator Beth Offenbacher (Waterford Inc.).

County staff and consultants then gave a presentation following the established agenda:

- Shannon Curtis, Fairfax County, presented the county-wide goals and objectives of the watershed plan.
- Trish Hennessy-Webb, PBS&J, reviewed the subwatershed characterization and ranking process (which is still being conducted) and described the problem areas identified so far. She presented examples of color-coded maps of the watershed, which provide a visual representation of the relative conditions in each subwatershed.
- Following a break, Trish Hennessy-Webb described various watershed restoration strategies, including references to problem areas and possible solutions. She concluded with a review of the next steps for the Watershed Advisory Group.
- Each segment of the presentation included an opportunity for questions and comments by the WAG members.

The meeting adjourned at 9:00 pm.



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The following is a summary of the questions asked by members of the WAG and the answers provided by county staff and consultants. The identities of the persons asking and answering the questions is not included. This is not a verbatim transcript.

Q: What does “hydrology” mean in the context of watershed planning?

A: It refers mainly to the management of runoff—that portion of rainfall which does not infiltrate into the ground. One of the principal objectives of watershed planning and stormwater management is to reduce the amount of runoff.

Q: Where are impact indicators measured—at the level of the individual stream or lake?

A: It depends on the indicator. Some are measured directly at the stream or lake level. Some are modeled. Some are evaluated annually; others at more frequent intervals.

Q: Are we being asked to look at only the areas of greatest impact/highest priority—the “red” areas on the maps—or the entire watershed?

A: The WAG can consider projects in all areas. However, we need to balance the resources required for any project—restoration of a particular area, for example—with the expected benefits. As a practical matter, projects in the red areas are likely to have greater positive impacts downstream.

Q: You’ve talked about upstream vs. downstream, but I don’t have a good feel for where those areas are.

A: The three main streams in the Pohick Creek watershed are Pohick Creek at the top, Middle Run, and South Run, all of which drain into the Potomac. The direction of flow is from north to south, so an area to the north is upstream of an area to the south. Areas closest to the Potomac are farthest downstream.

Q: Please explain how erosion cuts into stream beds but then stabilizes.

A: Erosion is caused by a greater flow of water than the stream can naturally handle. The increased flow is from stormwater runoff, which is generally attributable to development. When we talk about a streambed stabilizing, there is an assumption that whatever was causing the excess water flow has been corrected. Otherwise, erosion will continue. Stabilization may take a decade or more to achieve, even after the upstream cause has been corrected.

Q: Are there areas within Pohick Creek that members of our group can see to get a first-hand look at what restoration does?

A: Yes, we can identify examples of restoration, and also areas in need of restoration. If there’s sufficient interest we can arrange a tour, perhaps between WAG meetings. These areas may not all be within this watershed.

Q: What’s the difference between a wet pond and a dry pond?

A: Dry ponds mainly control stormwater quantity, not quality. They provide a means of collecting the first runoff so it doesn’t all flow directly into streams, but have little impact on water quality. Wet ponds do both, since the aquatic vegetation in wet ponds absorb some of the pollutants in stormwater.



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Q: Have all the Regional Ponds been built?

A: No. A few were built, but not all. After some were built, there was a realization that they look great from a regional perspective, but in practice may be too large for local communities and may not be the most desirable solution.

Q: Is there a timeline for doing this—for the process we're engaged in?

A: The deadline for completing the watershed plan is the end of this year, so we'll have several more WAG meetings between now and October. We'll also have another public meeting when the plan is written in draft form. As far as the projects themselves go, we'll divide them into 10-year projects and 25-year projects. While the current economic situation raises concerns about the county's budget, we must focus on needs rather than on whether any project is financially feasible at the moment.

Q: Do you think you'll get a dedicated funding source?

A: It's being discussed.

Q: Fairfax County is so highly developed right now; we're trying to fix problems that have resulted from past development. How much information and insight do you have for future development and growth?

A: We're focusing on current conditions now, but our modeling will take into account any expected development or redevelopment. The good news is that most future development is likely to be redevelopment, which gives us the opportunity to improve stormwater management in that location. We're now more aware of controls that need to be implemented than we were 30-40 years ago, so we can include such controls in any "area redevelopment."

Q: Are you looking at "synergy" between multiple projects in the same area? What about partnering with other organizations, such as nonprofits or homeowners associations, which might be interested in helping with projects, either through labor or funding?

A: Yes, we will consider "suites" of projects where the effect of one is enhanced by another. But we must always consider the balance of cost and benefit, and we don't want to spend too much in any one location. As for partnering with other organizations, that is probably best addressed in the implementation phase rather than the planning phase.



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Healthy Watersheds, Healthier Communities

Fairfax County Stormwater Planning Division

Minutes Pohick Creek Watershed Advisory Group (WAG) Meeting #3

Tuesday, May 26, 2009
West Springfield Elementary School

Meeting Attendees	
WAG Members	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Shannon Curtis
George Jennings, George Mason University	Chad Grupe
Bob Jordan, Potomac Riverways	Darold Burdick
Chris Landgraf, Fort Belvoir DPW	
John Levtov, Christopher Consultants	PBS&J (engineering consultant)
Ron Marlow, Burke Presbyterian Church	Trish Hennessy-Webb
Sarah Mayhew, Middleridge Civic Assoc.	Terry Suehr
Kelly Meadows, Lake Braddock Community Association	
Ed Miller, Kings Park West	Waterford Inc. (public involvement consultant)
John Morrissey, Heritage Square (Alternate)	Beth Offenbacher
Duane Murphy, Southport HOA	Paul Coelus
Jim Pomeroy, Hidden Pond Nature Center	

The meeting convened at 7:05 pm with welcome comments by county staff and public involvement consultant/moderator Beth Offenbacher (Waterford Inc.).

County staff and consultants then gave a presentation following the established agenda:

- Shannon Curtis, Fairfax County, reviewed the timeline for the Watershed Advisory Group process and described the plans for a field trip to visit several sample projects.
- Trish Hennessy-Webb and Terry Suehr, PBS&J, introduced the first group of 102 potential projects in the Pohick Creek watershed and reviewed several illustrative examples in detail.
- Beth Offenbacher, Waterford, led a roundtable discussion of the WAG's next steps.
- Each segment of the presentation included an opportunity for questions and comments by the WAG members.

The meeting adjourned at 8:40 pm.



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The following is a summary of the questions asked by members of the WAG and the answers provided by county staff and consultants. The identities of the persons asking and answering the questions are not included. This is not a verbatim transcript.

Q: Will there be any prioritization of projects at this point?

A: No, we're just looking for feedback on each project standing alone. Don't compare the projects relative to each other.

Q: [Regarding the photos in the presentation illustrating project #66, stream restoration] What is the time between the two photos? How long does it take to complete a project like this?

A: The construction component would take about 6 months, but it can take 1-2 years for the plants to become established; longer, of course, for trees.

Q: Was the Kingstowne restoration a count project?

A: Yes, in partnership with the Army Corps of Engineers, the US Natural Resources Conservation Service (NRCS), the Northern Virginia Soil and Water Conservation District, Friends of Huntley Meadows and other community organizations.

Q: None of the projects in this first group is near my organization, so I don't know whether my comments would be helpful.

A: In a sense, you speak for the entire watershed, so you can comment on any project about which you have feedback. But you don't need to comment on all 102 projects.

Q: What about areas of the watershed for which there's no representative on the WAG?

A: If there are projects outside your particular area you'd like to comment about, we can provide as much information as you'd like to help you understand the project.

Q: There's no cost analysis attached to any of the proposed projects. That could be a criterion we consider when trying to recommend priorities.

A: That will come later. We'll identify "planning level" cost estimates, which are ballpark figures. For now, we want feedback without regard to cost.

Q: At this level of planning, have you taken into account who owns the land: county, park, commercial, HOA, private, etc.?

A: Not at this stage, but as we narrow down the universe of projects, we'll consider ownership and whether we have or can obtain easements/access.



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Q: What do you use for these overhead images—Google Earth, or do you have specific coordinates?

A: Some of the images in this presentation are from Google Earth and are used as illustrative purposes only. The County owns a very rich set of GIS data and some imaging capability, the County mapping and imaging data was used in identifying the projects. As shown on a few of the slides, the County data can “zoom” into specific sites.

Q: My group is asking questions like, “What’s an RPA [resource protection area]? What does restoration mean?”

A: To maintain consistency in language, you might direct them to the County’s website. The County has extensive information like this on our webpage. In addition, we can provide you with a “Watershed 101” primer. The Watershed 101 presentation provides a basic understanding of a watershed and highlights some standard language used throughout the process.

Q: When you start prioritizing projects, will you give specifics, such as “100 yards” of stream restoration at site X? Also will you consider the impact of one project on another. For example, if you slow velocity upstream with one project, it may obviate the need for two downstream projects.

A: Yes, we’ll certainly consider which projects yield the most “bang for the buck.” As to quantifying the specifics of each project, we’ll get more detail (especially for linear and buffer projects) when we get into the field and proof the projects. As part of the field visits the County has developed a form which will capture the details of the site.

Q: There are six flood control dams in this watershed. How you are considering these in the planning process? They provide a lot of volume control.

A: Yes, they provide volume control, but were not designed to provide water quality benefits. So we’re considering some dry pond for specific source control and water quality improvements. The big ponds control a lot of flood volume, but little control over velocity—there’s still erosion occurring between them.

Q: In the presentation you say “continue to identify projects.” Are you still looking for help [from the WAG] with that? For example, Lake Braddock Secondary School is planning a cistern.

A: We have taken the WAG’s comments so far and used them in developing this first group of projects, but we’re still open to additional ideas, especially at parks and schools.

Q: Is reduction of streamwater temperature one of the considerations in improving habitat?

A: This issue has been raised previously and addressed however, as a byproduct of some of the stream restoration and other projects identified, the stream temperatures could be reduced but this is not the primary benefit identified and it is not tracked.



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Q: If I want to bring in a nonprofit organization that wants to partner with the County on small projects, how do I do that?

A: Contact our office. It's important to get these groups and projects identified, however we ask that the WAG members focus on the projects and once all the projects are identified then we will work with groups for implementing some of the smaller projects.

Q: In an early slide you showed phosphorus as a pollutant. Where is it coming from (fertilizer?), and can't we convince the source to use less of whatever is causing it?

A: There are many sources of phosphorus, so it's important to realize it's not a simple matter of reducing fertilizer use. Institutional & Industrial land uses in general produce phosphorus. Vehicles and roadways create a lot of it, too. Some large landowners, such as George Mason University, are taking steps to reduce the generation of phosphorus runoff.



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Healthy Watersheds, Healthier Communities

Fairfax County Stormwater Planning Division

Minutes

Pohick Creek Watershed Advisory Group (WAG)

Meeting #4

Tuesday, July 21, 2009

Fairfax County Government Center

Meeting Attendees	
WAG Members	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Shannon Curtis
Bob Jordan, Potomac Riverways	Chad Grupe
Chris Landgraf, Fort Belvoir DPW	Heather Ambrose
John Levtov, Christopher Consultants	
Ron Marlow, Burke Presbyterian Church	PBS&J (engineering consultant)
Sarah Mayhew, Middleridge Civic Assoc.	Trish Hennessey-Webb
Kelly Meadows, Lake Braddock Community Association	Terry Suehr
Ed Miller, Kings Park West	
	Waterford Inc. (public involvement consultant)
	Beth Offenbacher
	Paul Coelus

The meeting convened at 7:10 pm with welcome comments by county staff and public involvement consultant/moderator Beth Offenbacher (Waterford Inc.).

Beth Offenbacher summarized the feedback received from the Watershed Advisory Group on the first set of proposed projects (numbers 1-102). *See the meeting handout "Pohick Watershed Advisory Group Responses to Comments, Projects 1-102."*

She then facilitated a discussion with WAG members about the second set (project numbers 103-244) based on appropriateness and knowledge of existing stakeholder concerns. WAG members are requested to submit comments on the second set of candidate projects by Tuesday, August 11, 2009.

Trish Hennessey-Webb (PBS&J) described the project prioritization criteria and categories. Approximately 100 of the projects will fall into the 10-year category; the remainder will be in the 25-year category. *See the meeting handout, "Overview of Project Prioritization."*

Shannon Curtis (Fairfax County) and Trish Hennessey-Webb reviewed the timing and content of the next two WAG meetings. County staff would like to get the WAG's feedback on the final project list before it is released to the general public.



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Each segment of the meeting included an opportunity for questions and comments by the WAG members.

The meeting adjourned at 8:50 pm.

The following is a summary of the questions asked and comments made by members of the WAG and the answers provided by county staff and consultants. The identities of the persons asking and answering the questions are not included. This is not a verbatim transcript.

Q: Is a bioswale the same as a bioretention area?

A: They're similar. They use the same plantings, but a bioswale does not stop the flow of stormwater but provides some water quality and quantity benefits and can be used along roadways and around schools. With a bioretention area, stormwater remains at that location.

Q: Is there a way to get more precise location information about the proposed projects? It's hard for us to know exactly where a project is based on the information given.

A: Not at this point. The planning hasn't gotten to that level of detail yet. Most of the planning so far has been done with GIS and maps, not individual site visits (although we did conduct a windshield tour). Before identifying specific locations, we'll have to look at issues such as property ownership, access, and easements. However, if there are particular projects you're interested in, we could give you more details, or we can give you WMA-level maps to show the approximate locations on a larger scale.

Q: Is flooding a concern only in the areas where obstructions are noted?

A: No, those are just the areas where we've identified a specific cause of flooding. We'll also look at flooding caused by general conditions, such as increased development.

Q: When green roofs are evaluated, are back-end costs and savings considered, such as building heating and cooling costs, replacement cost cycles of a standard roof, and maintenance costs? Or do you only consider stormwater control?

A: We do look at those factors, but for the watershed management plan, the focus is on stormwater management. In addition, most green roofs add significant weight, and require structural modifications to the building and are not necessarily the best alternative for a particular site.

Q: In the case of green roofs, would money from other departments (e.g., schools) get moved to your department to cover the costs?

A: Our costs are only for planning. The construction costs of a green roof would be borne by the department whose building it is.



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Q: Where does outreach and education fit into the proposed projects?

A: The County currently has a strong educational and outreach program. With these proposed projects, we are not at the stage where we can identify a specific project and use it to create a specific educational program. This can be addressed after the watershed plan is approved by the Board of Supervisors, however we can include a note to specific projects if an educational opportunity arises from the project.

Q: Does the county code prohibit blowing grass clippings into the road—where they will end up in the storm drains? I often see people blowing grass and leaves into the road, and these end up in streams, where they can cause obstructions and also increase nitrogen and phosphorus load.

A: We will verify the specifics of this issue.

[There followed a discussion of the county's yard waste program, in which homeowners can place yard waste in special brown bags for composting separate from ordinary trash.]

Q: Have you looked at all the privately owned shopping areas for project opportunities??

A: Generally older shopping centers present good opportunities for retrofit projects, however, retrofit opportunities would be completed when redevelopment occurs. The County can not mandate the private owner to build a project on their site; however we can examine upstream and downstream from these properties and evaluate project opportunities. Newer shopping centers generally meet the current stormwater management requirements.

Q: What is the county's opinion on street sweeping? It seems to be focused on industrial areas.

A: There is a general sense that street sweeping is a valuable tool for stormwater management and should be done more. It has been focused on industrial areas more than residential areas because of the nature and amount of debris found in those areas.

Q: What about excluders and trash traps? They would help keep debris out of the storm sewer system.

A: True, but they present maintenance issues as well. And they're most useful in commercial areas, yet we can't make owners of existing properties install them.

There followed a discussion about the use of pervious pavement (concrete and asphalt). The University of New Hampshire has conducted some long-term studies and published them online; the University of North Carolina has also conducted studies. It was noted that there are design constraints on how pervious pavement can be used, and long-term maintenance questions and costs need to be considered. Pervious pavement is about 25% more expensive than ordinary pavement and requires regular sweeping or vacuuming to prevent siltation (clogging).



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Q: I don't see any discussion of trees and reforestation as a stormwater management tool.

A: We are looking at resource protection areas (RPAs), most of which are well forested. The county has had a contract for buffer restoration and is reprocurring those services later this year. These kinds of projects are good opportunities for the use of volunteer labor (organizations such as the Boy Scouts, Fairfax ReLeaf, etc.)

Q: I don't see many on-stream projects (restoration, obstruction removal) in the lower part of the county.

A: In that part of the watershed, the streams tend to be larger (main stems) and flush well. There is less need for such projects there. You can find more information in the stream physical assessment (SPA), which is available on the county website.

Q: I've found that people are supportive of projects to remove obstructions (e.g., fallen trees) and regrade banks.

Q: Yes, but you'll have a big educational issue when you start restoring streams in people's back yards and they see the kind of construction that actually entails.

A: Your point is well taken. We've learned some good lessons from some recent stream restorations in Reston.

Q: Will a project's usefulness as an educational tool be used as a criterion?

A: Not exactly. We'll try to capture that information when we develop the details of a project, but this is a subjective criterion and can not be quantified throughout the County and therefore is not used as one of the criterion. It will be more of a "note" applicable to that project.



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Healthy Watersheds, Healthier Communities

Fairfax County Stormwater Planning Division

Minutes

Pohick Creek Watershed Advisory Group (WAG)

Meeting #5

Wednesday, March 10, 2010

Sangster Elementary School, Springfield VA

Meeting Attendees	
WAG Members	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Shannon Curtis
Bob Jordan, Potomac Riverways	Darold Burdick
Gerry Kirwin, Lake Braddock Community Association	Chad Grupe
Chris Landgraf, Fort Belvoir DPW	
John Levtov, Christopher Consultants	PBS&J (engineering consultant)
Ron Marlow, Burke Presbyterian Church	Laura Chap
Sarah Mayhew, Middleridge Civic Assoc.	Terry Suehr
Ed Miller, Kings Park West	
Jim Pomeroy, Hidden Pond Nature Center	Waterford Inc. (public involvement consultant)
	Beth Offenbacher
	Paul Coelus

The meeting convened at 7:10 pm with welcome comments by county staff and public involvement consultant/moderator Beth Offenbacher (Waterford Inc.).

Beth Offenbacher facilitated a discussion with WAG members about the second set of candidate projects (numbers 103-244) based on feedback the group had provided. *See the meeting handout "WAG Comments on Projects 103-244."*

Laura Chap (PBS&J) gave an overview of the project prioritization process. In general, the County is looking to clean up the worst areas and address the worst sources. Additionally, upstream projects and projects that are easier to implement will be given higher priority.

The top 90 structural projects will be ranked and placed in the 10-year plan; the remaining projects will be placed in the 25-year plan. For each project in the 10-year group, an individual fact sheet will be prepared with a project description, map, and planning-level cost estimate. Nonstructural projects will be on separate lists and may not be ranked at this time. The current list is preliminary and based on the technical criteria; hydrological modeling must still be done, WAG comments, and general public input (from the upcoming public forum) must still be considered.



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After some additional modeling the project team will finalize the proposed rankings and develop a draft Watershed Management Plan. It is anticipated this will be ready for the sixth WAG meeting, probably in May 2010. Approximately a month later (June 2010), a public forum will be held to collect general public comment on the draft WMP and project rankings. The WMP will be revised as needed then presented to the County Board.

Prior to the public forum, all landowners adjacent to proposed projects will be notified by mail. The mailing will identify the specific project near that property and will provide a website address where the landowner can find more information.

Each segment of the meeting included an opportunity for questions and comments by the WAG members.

Also, WAG members are asked to provide Beth Offenbacher with any comments or questions they might have on the project rankings no later than Wednesday, March 24.

The meeting adjourned at 8:40 pm.

The following is a summary of the questions asked and comments made by members of the WAG and the answers provided by county staff and consultants. The identities of the persons asking and answering the questions are not included. This is not a verbatim transcript.

Q: Were the comments made by WAG members “actionable”?

A: Yes. Based on the group’s comments, some projects were clarified, and in at least one instance a project was deleted.

Q: [A member asked for more information about project 174, LID bioswale at Lakeside Park.]

A: Upon review, we decided it would be better to substitute a buffer restoration for the structural project previously considered at that location.

Q: Have many of the pervious pavement projects been removed from the candidate list?

A: Some pervious pavement projects were ruled out after we physically inspected the site. For example, a project might have been initially been considered based on aerial photographs, but then physical inspection revealed that the slope was too great to make the project feasible. In other instances the pervious pavement might have been combined into another project.

Q: Will non-structural projects be ranked?

A: We’re still evaluating that. A major challenge is that it’s much more difficult to quantify non-structural projects.



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Q: The inverse relationship between project scoring and project ranking is a bit confusing. The worst areas receive low scores when you evaluate individual projects based on the scoring criteria, but then when you rank them for priority purposes, those projects get high scores (for higher priority).

A: We understand that can be confusing. We'll be sure to include an explanation of how the rankings were determined.

Q: What factors go into the criterion "best professional judgment"?

A: We considered comments from WAG members and our observations from site visits. For example, a site visit might have revealed information about the project's context that was not apparent from the initial modeling, and in context the project might be considered inappropriate or lower in priority.

Q: How does projected population growth factor in?

A: We evaluated/considered land use (zoning) projections in the County's comprehensive plan when we applied the various criteria.

Q: How flexible will the plan be to accommodate potentially more stringent requirements from the U.S. Environmental Protection Agency regarding the Chesapeake Bay?

A: The County will have a centralized watershed management system to keep track of such information and assess whether/how the watershed plans need to be updated or changed. We'll have the ability to adjust project rankings "on the fly" based on changed criteria. [Because this system has not yet been implemented, it will not be discussed in the draft plan.]

Q: Will projects be required to meet new standards that might be issued after the EPA issues its new rules for the Chesapeake Bay?

A: We anticipate, based on historical practice, that any new standards will be applicable to new development and redevelopment but will not normally apply to existing development.

Q: How does a stormwater pond remove nitrogen and phosphorus from stormwater?

A: By retaining stormwater for an extended period of time, a pond allows sediments to settle to the bottom of the pond; these sediments will include pollutants. There will also be some plant uptake of dissolved nutrients. Grasses and other wetland plants take up the nutrients in order to grow, and animals eat those plants, keeping the nutrients in the biocycle rather than allowing them to drain into the bay.

Q: Do you measure nutrient removal through monitoring?

A: In an area as large as Fairfax County, monitoring would be very expensive. Instead, we use well-established models to calculate the amount of nutrients removed by various means such as stormwater ponds.



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Healthy Watersheds, Healthier Communities

Fairfax County Stormwater Planning Division

Minutes Pohick Creek Watershed Advisory Group (WAG) Meeting #6

Tuesday, July 13, 2010
Sangster Elementary School, Springfield VA

Meeting Attendees	
WAG Members	Fairfax Co. Stormwater Planning Division
Patrick Gloyd, Burke Centre Conservancy	Shannon Curtis
George Jennings, George Mason University	Darold Burdick
Chris Landgraf, Fort Belvoir DPW	Chad Grupe
Ron Marlow, Burke Presbyterian Church	Erin Abrahams
Kelly Meadows, Lake Braddock Community Association	
	PBS&J (engineering consultant)
	Laura Chap
	Terry Suehr
	Waterford Inc. (public involvement consultant)
	Beth Offenbacher
	Paul Coelus

The meeting convened at 7:05 pm with welcome comments by county staff and public involvement consultant/moderator Beth Offenbacher. Shannon Curtis (Fairfax Co.) thanked the advisory group members for their service and asked them to continue their efforts at disseminating this information to the community.

Laura Chap (PBS&J) reviewed the stages of development of the draft plan and gave an update on the rankings: the cost/benefit analysis and the additional hydrologic and hydraulic modeling for the 10-year group, as well as an overview of the draft plan.

Beth Offenbacher led a roundtable discussion on the current version of the draft plan, a copy of which had been given to the WAG members following the last meeting.

Finally, the team reviewed the next steps in the process. The Draft Plan Forum will be held on July 27, 2010. Landowners adjacent to all projects in the 10-year group have been sent postcards informing them of the meeting. There will be a 30-day public comment period following the meeting; a link to the comment form will be posted on the County website.

The meeting adjourned at 8:30 pm.



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The following is a summary of the questions asked and comments made by members of the WAG and the answers provided by county staff and consultants. The identities of the persons asking and answering the questions are not included. This is not a verbatim transcript.

Q: What are the differences in the hydraulic modeling versus the hydrologic modeling?

A. Hydrologic modeling determines the flows in the streams over various storm events. Hydraulic modeling uses these flows (in this case the peak of these flows) to determine river levels for these events.

Q. How will the document be organized for the public? I understand the county is considering organizing the projects by project number. People in the community like being able to look at the list by Watershed Management Area (WMA).

A. We'll likely organize it by project number, although if we hear differently then it might change. We are trying to make it easy for people who may not understand what a WMA is to navigate the document.

Comment: The draft plan is well organized and easy to follow, especially the fact sheets on individual projects. The maps are easier to read.

Q: The public may not be interested in how costs were developed [on each fact sheet]. How is cost being used in the rankings?

A: Those are order-of-magnitude costs, which may change once more detailed information about the project is considered. Project cost was used in the cost-benefit analysis, to adjust the rankings to favor lower-cost projects.

Q: When you note the funding on the fact sheets, you also show the kind of owner. Are you going to indicate who pays for it?

A. The county will pay for those projects. If there are instances where the project is on private property, there may be an easement or other kind of support that is provided by the owner.

Staff comment: These projects will compete with other watersheds for funding, and with other needs (such as repair of existing systems). So the project ranked #1 in Pohick Creek may not get done until, say, 50 others are done in other parts of the county, depending on priorities.

Q: One of my co-workers was a member of another WAG about 7 years ago, and has seen no activity on projects in that watershed. The County should consider how stakeholders will react in the long-term if we have a plan but then there's no visible movement on any projects. You may want to include in your public presentation some examples of projects that have actually been done in other watersheds.

A: That's a good idea. We'll include examples of projects already completed in the County, particularly ones that members of the public can actually look at if they want to.



Q: How was the cutoff of 90 (or so) projects made? Is there an expectation that all 90 will be completed within 10 years?

A: In general terms, this was done based on the average number of projects done in other watersheds. But we need to manage expectations. We have to give the Board of Supervisors our work plan each year, which includes our proposed list of projects to be performed that year. Many things can change which can impact which projects we decide to do. For example, EPA mandates could cause us to change the relative priority of various projects.

Q: What is the next step after the final plan is adopted? Does your office then do the construction?

A: It stays in our branch, but there's a different division that handles implementation.

Q: Do they have a point of contact for non-structural projects?

A: The implementation division is more geared to engineering and construction, so for non-structural projects it's probably best to deal with our division (the planning division).

Q: Project No. PC9127 is a dry pond retrofit next to a school on Burke Center Parkway. I assume the project in this draft plan is above and beyond the work currently being done at that location (installation of a maintenance road, clearing the dam face, etc.).

A: Most likely, but we'll confirm that. The current work probably relates to access issues.

Q: One of the stated objectives is to improve diversity of native plants and animals in the County. I didn't see anything in the draft plan that would specifically accomplish that.

A: The plan uses the terms "goals" and "objectives" differently. We don't tie objectives to specific projects, so the description of an individual project would not normally discuss how it does or doesn't contribute to achieving an objective. However, in planning projects we do keep these objectives in mind. So, for example, in a project that requires new plantings, we would use native species. But that isn't spelled out in the draft plan.

Comment: Then it would be helpful to include in the draft plan a paragraph or two which discuss how the projects collectively address those objectives.

Q: How can community organizations get involved by providing volunteer labor for non-structural projects?

A: For buffers and obstruction removal projects, there is an established process in which the County gives a contract to an organization, which then manages the volunteer labor. The County may provide certain materials and guidance.

