Appendix B: Public Workshop and Review Meeting Minutes

Popes Head Creek Watershed Study & Plan
Issues Scoping Forum Minutes

Date:	January 13, 2004	Time:	7:00 pm
Location:	Clifton Community Hall		
Recorder	Lynne Mowery, P.E.		
Meeting:	**Issues Scoping Forum**		

Project Team Attendees:	Paul Shirey, DPWES Matt Meyers, DPWES Shannon Curtis, DPWES Tim Lormand, AMEC Doug Moseley, AMEC David Bulova, AMEC Lynne Mowery, AMEC Matt Breen, AMEC Mark Preston, AMEC	Advisory Group Attendees:	Gary Anderson Todd Bolton Jeremy Epstein Cliff Fairweather Traci Goldberg Krystal Kearns George Jennings Donald Kelso John Lotito David Pena Greg Prelewicz Mervine Rosen David Schnare Marlae Schnare Charlie Smith Kevin Warhurst Bill Watts
Other Attendees:	Judith Anderson Nelson Barry Kate Bennett (VA DEQ) Anthony Cavallaro Jennifer Cooper (Times Community Newspaper) Jill Demello David Hill Bob Hillis Susan Jewell Harvey Johnson John Kershenstein Katherine Mull (NVRC) William Mullet Philip Ochs Steve Ochs		Don Parsons Dan Polsby Jan Rice Randy Rice Pat Riedinger Pete Rigby Trish Robertson Cindy Siegel Mark Siegel Michelle Stein G. Vannoy J. R. Vannoy Barbara Wigglesworth Richard Wigglesworth Jan Wood Jim Wood

Paul Shirey, Fairfax County DPWES, Stormwater Management Division, opened the meeting and introduced county staff, staff from AMEC Earth & Environmental, and staff from the Fairfax County Water Authority. He then provided a brief overview of the public involvement process and acknowledged members of the Citizens Advisory Committee.

Doug Moseley, AMEC Earth & Environmental, began by presenting the agenda and overview of the purpose of the meeting. He then presented background information on the Popes Head Creek watershed, including a virtual tour of the watershed to show the participants different development patterns in the watershed. This lead into a discussion in which participants were asked to describe what they value most about the Popes Head Creek watershed. Responses received included:

- It contributes to the water that we drink (i.e., Occoquan Reservoir)
- It has large amounts of open "green" spaces
- The watershed is very "picturesque"
- Hemlock Overlook Park and the connecting trail system
- Birds and animals that live here
- It is a "rural oasis" from the rest of more densely developed areas in northern Virginia
- The technical function of the natural drainage, including its natural cleansing functions
- Historic context of the watershed, especially around the historic town of Clifton
- Freshness of the air

Doug Moseley then shared the responses provided earlier by the Citizens Advisory Committee to show that the Citizen's Advisory Committee shared many of the same values as expressed by participants of the Issues Scoping Forum.

Paul Shirey then discussed the County's reasons for preparing the watershed plans throughout the County, including:

- To restore and protect the county's streams,
- To meet state and federal water quality standards by identifying strategies to prevent and remove pollution,
- To support Virginia's commitment 'Chesapeake 2000' to clean the Chesapeake Bay,
- To employ new technologies to replace current watershed management plans, and
- To take a comprehensive approach to addressing multiple regulations, commitments, and community needs.

Paul Shirey explained that based on the County's Stream Protection Strategy (SPS) study (2001), most of the watershed was classified as "Watershed Protection Areas", that is areas that have been minimally impacted by the effects of urbanization and should be protected to the greatest extent possible. Mr. Shirey then presented a summary of the SPS findings for the Popes Head Creek watershed, the most notable of which found that while fish populations in the Popes Head Creek watershed are among the most diverse in the County, the measures of aquatic insects were generally below

average. Since fish feed on aquatic insects, these two trends are at odds with each other. In addition, the SPS study found that stream bank instabilities and sediment deposition were key factors in the decline in the quality of aquatic habitat in the watershed.

Doug Moseley then presented a snapshot of findings from the County's Stream Physical Assessment, a follow-up study to the SPS study. He then presented a brief overview of what characterizes a "healthy stream," including:

- Vegetation to protect and stabilize banks and provide shade,
- Low amounts of pollution,
- Minimal in-stream sediment buildup,
- Viable habitat for fish, aquatic insects and wildlife, and
- An asset to the local community and the region at large.

He explained that the watershed plan is intended to help meet these overreaching objectives and reiterated to the participants that their input would be key to defining specific issues that the plan would address in order to preserve and protect healthy streams in the watershed and in some areas, focus on restoring streams that are impaired. Mr. Moseley then presented an overview of issues already discussed with the Citizens Advisory Committee. These issues include:

- Impervious Surfaces
- Sedimentation
- Stream Bank Stability
- Non-Point Source Pollution
- Flooding
- Stream Buffers
- Fecal Coliform Bacteria
- Stream Habitat

Participants were asked to add any other issues they thought were important in the watershed. Other issues that were brought up by the participants include:

- Groundwater supply and quality
- Point source pollution
- Funding of the Watershed Plan Recommendations
- Watershed to watershed analysis – make sure that plans and actions are mutually supportive
- Contribution of increased traffic on water and air quality
- A need to increase public participation – either in groups or as individuals
- The impacts of all terrain vehicles (ATV) on stream valleys
- Application of road de-icers
- Maintenance of utility easements and their impacts on stream buffers – the fact that ATV riders often ride in utility easements.
- Education about what a watershed is and how actions inter-relate to the watershed health
- Protection of adjacent wetlands especially ephemeral/vernal pools

Several questions were asked during and at the close of the presentation. These questions are summarized below.

1. How long before action occurs on plan recommendations?

   The plan would look at projects over a 20-year planning period. In general, implementation usually starts in the upper reaches of a watershed to realize positive impacts downstream. However, projects will be prioritized based on a number of factors including funding and benefits obtained (e.g. reduced erosion).

2. Who's responsibility is it to clear fallen trees out of the stream?

   Tree removal on private property is usually the responsibility of the property owner. The County may become involved if the fallen trees are blocking stream flow and creating a hazardous situation. Some trees fall into the stream as part of a natural process and these fallen trees provide important habitat. Large numbers of trees falling in a particular reach of stream can be a sign of stream bank instability.

3. Will the study be biased because of the unusually wet year we have had?

   The study will adequately consider the unusual rainfall conditions in 2003.

4. Is there a website to report problems?

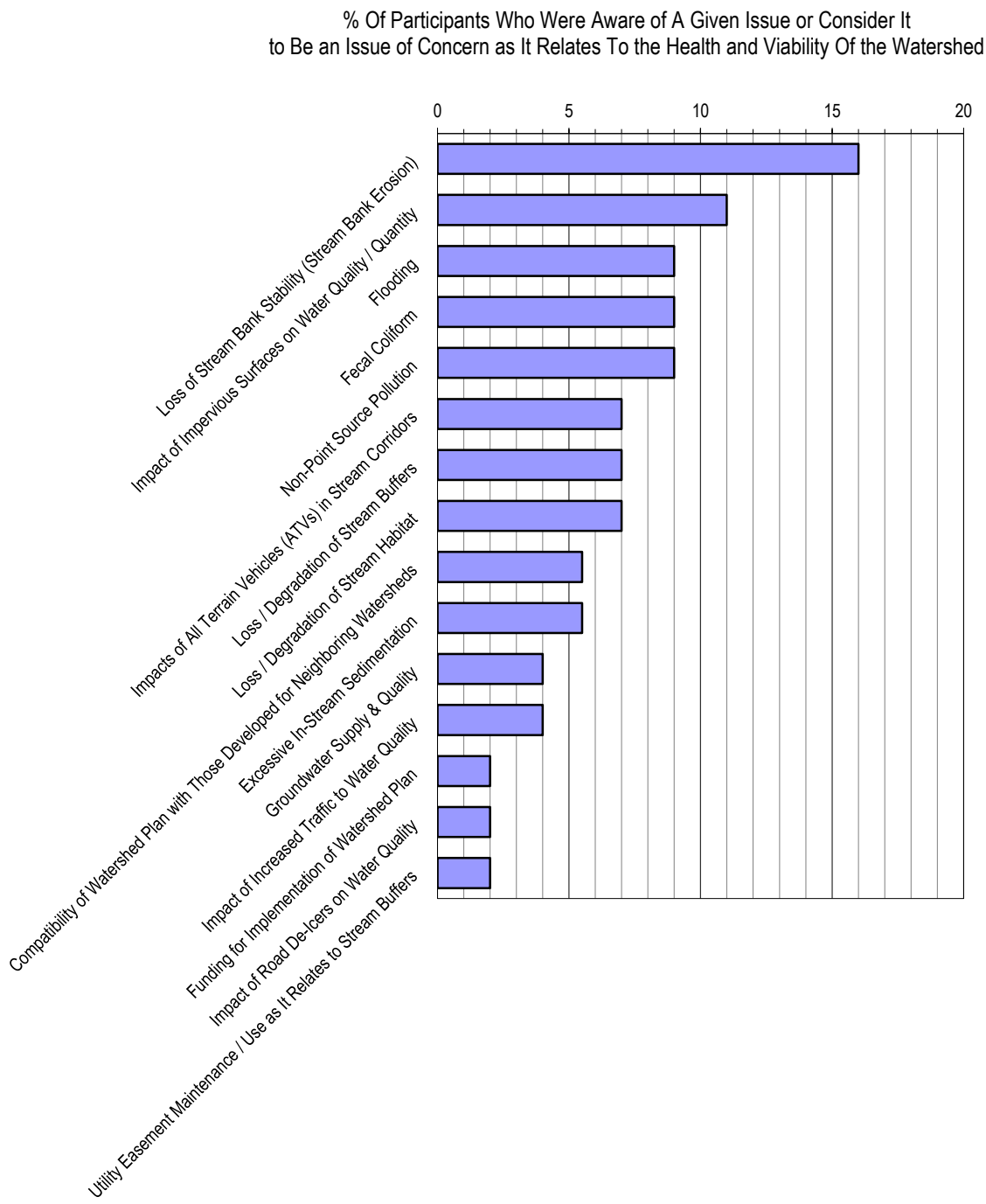
   The county has a website to support the watershed planning process. The address is www.fairfaxcounty-watersheds.net. To find the Popes Head Creek watershed website, select "Find a Watershed", and then using the locator map, pick the Popes Head Creek watershed. On the Popes Head Creek watershed web page is a button to "Comment on Your Watershed Plan". All information received via the website will be recorded and forwarded to the appropriate person for response.

To close the issues discussion segment, participants were asked to help validate the issues that were discussed as part of the presentation as well as those brought up by Forum participants. Participants were asked to identify issues that they were aware of or considered to be important to the health of the watershed. A tally of the responses received is presented on the graph on the following page.

Cliff Fairweather of the Audubon Naturalist Society gave a brief announcement about stewardship opportunities at the Webb Sanctuary, the formation of a Friends of Popes Head Creek group and a planned tour of the Popes Head Creek watershed.

The meeting was adjourned.

Popes Head Creek Issues Validation



Popes Head Creek Watershed Study & Plan
Community Watershed Forum Minutes

Date:	March 27, 2004	Time:	1:00 pm
Location:	Liberty Middle School		
Recorder	Lynne Mowery, P.E.		
Meeting:	**Watershed Forum**		
Project Team Attendees:	Fred Rose, DPWES Paul Shirey, DPWES Matt Handy, DPWES Shannon Curtis, DPWES Tim Lormand, AMEC Ed Beadenkopf, AMEC Doug Moseley, AMEC David Bulova, AMEC Lynne Mowery, AMEC Matt Breen, AMEC Mark Preston, AMEC Heather Bourne, Limno-Tech, Inc. Bill Nell, Wetland Studies & Solutions, Inc.	Advisory Group Attendees: Presenters:	Gary Anderson Todd Bolton Cliff Fairweather Traci Goldberg Mervine Rosen Charlie Smith Bill Watts Traci Goldberg, Fairfax County Water Authority Willie Woode, Northern Virginia Soil & Water Conservation District
Other Attendees:	Sharon Bulova, Braddock District Supervisor, Fairfax County Board of Supervisors Gerard Glaghan Bob Jordan		Thelma Mellender Joe Mellender Jean Phillipson Scott St. Clair Paul Stoney Chuck Wood

Braddock District Supervisor Sharon Bulova opened the meeting with remarks about the County's commitment to watershed planning.

Paul Shirey, Fairfax County DPWES, Stormwater Management Division, opened the first session of the forum on watershed problems by introducing project staff. He then provided a brief overview of the public involvement process and acknowledged members of the Citizens Advisory Committee. He then discussed the County's reasons for preparing watershed plans throughout the County, including:

- To meet state and federal water quality standards by identifying strategies to prevent and remove pollution,
- To support Virginia's commitment through the 'Chesapeake 2000' Agreement to clean the Chesapeake Bay, and
- To restore and protect the County's streams.

Traci Kammer Goldberg, Fairfax County Water Authority (FCWA), discussed the relationship between the Occoquan Reservoir and the Popes Head Creek watershed and why the FCWA is interested in the County's watershed planning effort. She discussed factors that affect the water treatment process (and costs): nutrients, such as nitrogen and phosphorus, sediment, and other contaminants. Nitrogen and phosphorus are key nutrients that can trigger algal blooms in the reservoir; phosphorus is the "limiting" nutrient, i.e., the nutrient that governs the frequency and severity of algal blooms. Algal blooms increase treatment costs. Therefore, to minimize the occurrence of algal blooms, FWCA monitors water quality in the reservoir and when required, applies an algaecide. The watershed planning efforts benefit the water supply because a decreased sediment load extends reservoir capacity, less pollutants provide better quality source water, and less nutrients produce less algae resulting in lower treatment costs.

Several questions were asked during and at the close of the Ms. Goldberg's presentation. These questions are summarized below.

5. Where does phosphorus come from?

   Some phosphorus is naturally occurring, but most of the phosphorus that pollutes reservoir is from nonpoint source pollution, primarily from over-fertilization on lawns or agricultural areas.

6. Is the phosphorus bound (attached) to the sediment?

   Phosphorus exists in the soluble (dissolved) form as well as bound to sediment.

3. Has FCWA quantified the increased cost associated with treating water with higher phosphorus levels?

   No – because the levels of phosphorus change from year to year - no study of increased costs has been performed.

Doug Moseley, AMEC Earth & Environmental, presented on key watershed issues found in the Popes Head Creek watershed. These issues included:

- Urban hot spots, e.g. areas of with significant amounts of impervious surfaces that can result in increased runoff rates and volumes and degraded water quality;
- Stream buffer loss and stream bank erosion resulting from increased flows due to increased impervious surfaces and loss of stabilizing stream bank vegetation;
- Flooding due to increased flows as well as inadequate capacity of older bridges and culverts;
- Unauthorized dumping; and
- Potential future impacts to both stream flow and water quality.

Several questions were asked at the close of the Mr. Moseley's presentation. These questions are summarized below.

1. How much does the location of impervious surfaces matter – upstream vs. downstream?

   Upstream impervious surface usually have more impact. Water quality and quantity impacts in upper stream reaches (headwaters) affect a greater length of stream.

2. Do the water quantity increases include the impact of Best Management Practices (BMPs) that would be required by the county?

   No – the impacts of BMPs were not considered in this calculation. The impact of BMPs will be included in the evaluation of alternatives in the watershed plan development process.

4. What is the timeframe for the development shown in the future land use conditions maps?

   The data used were based on a 20-year planning window.

The participants were divided into breakout groups based on their location in the watershed. Participants were asked to respond to two questions:

- What similar problems or other problems have you witnessed in the watershed, if any? Describe.

- Where have you seen these problems? Please use the dots to mark the location on the maps.

Responses received included:

1. Popes Head Creek downstream of Colchester Road to around Sangsters Court: Horses in creek are contributing to stream bank erosion.
2. Popes Head Creek downstream of Clifton Road to 8 Acre Park: Severe erosion along Popes Head Creek.
3. Unnamed tributary to Popes Head Creek, South of Clifton: Tributaries are generally in good shape, with the exception of areas of erosion at two dirt road crossings within the electrical power line right-of-way.
4. New House Construction Uphill from Clifton Elementary School: Runoff and sediment from the construction of six (6) new houses is flowing into stream.
5. Town of Clifton: Leaking oil tanks.
6. Popes Head Creek near Bunnyman tunnel (Colchester Road and CSX Railroad): Illegal dumping in common in the area, causing culverts to clog and flood the road. Dumping of Christmas trees common. Area is a known teen hangout.
7. Popes Head Creek at Clifton Road: Road overtopped during storm after Hurricane Isabel.
8. Popes Head Creek at Chapel Road Park: Grass is mown short near Popes Head Creek. Area is also used for parking on Clifton Day
9. Piney branch near 2nd Street, South of Braddock Road: Unauthorized fill in floodplain. County is aware of the illegal fill and going through legal proceedings to resolve this issue. Majority of site is in the County's Chesapeake Bay Act Resource Protection Area.
10. Hunting: Hunters washing out deer carcasses in the stream, leaving entrails and other wastes behind. Hunting in area is usually with permission of property owner.
11. Dominion Virginia Power property: Large numbers of deer destroy the undergrowth / habitat for other wildlife.
12. All Terrain Vehicles (ATVs): ATV access is along power line easement. Some people described that new development in the area contributes to this problem i.e. a conflict between residents who have been in the area a long time and are used to riding across properties and new residents.

Doug Moseley, AMEC, opened the second session with an introduction to Best Management Practices (BMPs).

Heather Bourne, Limno-Tech, Inc., discussed BMPs for watershed management. This presentation included discussion of non-structural BMPs such as regulatory procedures, education and volunteer opportunities and structural BMPs such as dry ponds, wet ponds, pond retrofits, culvert retrofits, sand filters, manufactured BMPs and Low Impact Development (LID).

Willie Wood, Northern Virginia Soil and Water Conservation District (NVSWCD), discussed land management practices. He discussed the needs for a planned horse operation, composting, and good lawn care tips – including the use of iron instead of nitrogen fertilizers to "green" lawns.

Shannon Curtis, Fairfax County Department of Public Works and Environmental Services, discussed stream evolution. He discussed the stages streams go through while responding to increases in the hydrology of the watershed (increased stream flow).

Bill Nell, Wetland Studies & Solutions, Inc., presented on stream restoration. He discussed the goals of stream restoration, how stream restoration sites are chosen, and gave examples of representative stream restoration projects.

Doug Moseley closed Session 2 with a summary of BMPs discussed in the preceding presentations. He opened the panel for a Question and Answer session. The questions discussed are summarized below.

1. What resources are there for stream restoration, rain gardens and rain barrels for the private homeowner? Are there lists of plants that work well in these areas?

   Judy Okay (703-324-1480), Virginia Department of Forestry and the Fairfax County Urban Forestry Division (703-324-1770) are good resources for information concerning planting for stream buffers. Cliff Fairweather of the Audubon Naturalist Society suggested the use of native plants because they are more suited to the soils and climate and thus have a greater chance of survival. Willie Wood, NVSWCD, said his department is also available to assist homeowners. Also, NVSWCD is currently holding a native seedling sale in which homeowners can purchase seedlings for restoring stream buffers.

2. At what stage does stream restoration make sense?

   Because stream restoration attempts to help restore the stream equilibrium, upstream land uses should be somewhat stable. If upstream land use changes result in increased stormwater runoff, then the changed conditions may cause the stream restoration to fail.

   Access to the site is important. If the stream is eroded in a forested area, the clearing for construction access may result in even more stream buffer and stream bank degradation.

3. Have the LID techniques been tested in Piedmont soils (soils that are mostly clay – less infiltration capacity)?

   The County has done a study of the soils in subwatersheds – ranking them based on suitability for LID practices. Soil amendment may be required in some areas to make the LID techniques function correctly.

The participants were asked to respond to three questions:

What approaches would work best in your area?

What, if any, approaches would you discard?

What, if any, approaches have we left out?

Responses received included:

1. Emphasis should be on protecting existing high quality streams including smaller tributary stream.

2. Education is critical component but is particularly difficult in this watershed due to low density. Ideas for education include:

   - Form "Friends of Popes Head Creek" group
   - Coordinate existing organizations and activities that could be used to support stream buffer and stream channel protection and restoration activities.
   - Develop a targeted campaign to inform residents of the need to protect and restore stream corridors. An example was given of a "Pesticide Free" campaign that was undertaken in Chevy Chase, MD.
   - Identify options for signs/advertising where people congregate.

3. What resources are available from the County? The County is a big driver as far as feasible solutions.

   - The County may have some funding available through pro rata share program. County has recognized the need for a more stable and reliable source of funding.

4. What types of support are available to help individual homeowners implement watershed solutions such as riparian planting, rain gardens, and rain barrels?

   - Help is available through the Northern Virginia Soil and Water Conservation district. Other sources should be researched and made available to homeowners.

5. Would the County consider a program to provide incentives for wise RPA buffer use/restoration, especially to offset loss of property rights? Some ideas included:

   - Using a reward system to achieve goals, for example, tax incentives/lower assessments for protecting buffers/establishing easements

   - Use a "credits" type approach that would also apply to other land management activities outside of the RPA.

6. Any watershed education and outreach program needs to make homeowner activities, such as riparian planting, easy, quick, and practical.

   - Acknowledge and encourage that homeowner activities can be accomplished in small "bites" or steps. For example, restoring a stream buffer could be accomplished over several years by planting a few native seedlings every year.

   - Encourage citizen involvement by promoting activities that are easy to carryout.

- Develop a “one stop shopping” approach when promoting homeowner / business activities. Homeowners / businesses will be less likely to play a part in implementing watershed improvements if they have to search for information on how to do it.

- Provide information on landscapers that can help with water-friendly lawn care.

- Link homeowner / business actions with what the cumulative watershed benefits could be.

- Better advertising existing resources/information such as State and County lists of water friendly lawn care companies and sources of native species.

- Investigate how demand for water friendly services and products can be increased.

The forum was adjourned.

Popes Head Creek Watershed Study & Plan
Draft Watershed Plan Review Workshop

Date:	October 28, 2004	Time:	7:00 pm
Location:	Clifton Elementary School		
Recorder	Curt Ostrodka		
Meeting:	**Watershed Forum**		
Project Team Attendees:	Jimmie Jenkins, DPWES Paul Shirey, DPWES Shannon Curtis, DPWES Tim Lormand, AMEC Doug Moseley, AMEC Lynne Mowery, AMEC Curt Ostrodka, AMEC Joanne Reker, AMEC	Advisory Group Attendees:	Gary Anderson Cliff Fairweather Donald Kelso Wilma Kime Jim McIntyre Ron Nix Greg Prelewicz Mervine Rosen Charlie Smith Charles Smith Bill Watts
Other Attendees:	Larry Beeson Brian Schultz Linda Clary Paul Jensen Jane McWilliams Hal Moore Tamara Moore Gary Pisner		Diane Polsby Pat Riedinger Cathy Roth Dave Sittler Michelle Stein Ian Thompson Barbara Wigglesworth

Jimmie Jenkins, Director of Public Works and Environmental Services, opened the meeting and thanked all for attending. He recognized the Citizens Advisory Committee (CAC) for volunteering their time and contributing to the draft watershed plan. He stressed the importance of public involvement in watershed planning.

Paul Shirey, Fairfax County DPWES, Stormwater Management Division, opened the first session of the forum on watershed problems by introducing project staff and reviewing the evening's agenda. He also reviewed the project status, and discussed the next steps that will be occurring in the upcoming months, including:

- Public review period (ending on November 30)
- Final draft plan review workshop (scheduled for Winter 2005)
- Final plan completion (scheduled for Spring 2005).

Mr. Shirey noted that the draft plan is approximately 50% complete, and that the projects that are presented at this stage are conceptual, or at the "planning level" only. The

estimated costs are preliminary orders of magnitude and will be fine tuned as the process moves forward.

Presentation of the Draft Watershed Plan

Mr. Moseley, AMEC Earth & Environmental, Inc., provided a brief overview on watershed planning and the importance of the public involvement process. He described the Popes Head Creek Watershed as relatively pristine area compared to other areas in the County, but noted that some areas are currently degraded and could potentially worsen in the future. He encouraged citizens to use the project webpage to check for upcoming events, documents, and other updates.

Mr. Shirey then discussed the County's reasons for preparing watershed plans throughout the County, including:

- To meet state and federal water quality standards by identifying strategies to prevent and remove pollution;
- To support Virginia's commitment through the 'Chesapeake 2000' Agreement to clean the Chesapeake Bay;
- To replace the current watershed management plans from the 1970s; and
- To take a comprehensive approach to addressing multiple regulations, commitments, and community needs.

Mr. Moseley then described the draft watershed plan Goals, Objectives, and Actions. The plan is based upon three overall Goals, with specific Actions to carry out the strategies of the plan. The Goals are as follows:

- Goal A: Protect and improve the ecological health of Popes Head Creek and its tributaries.
- Goal B: Have a well informed community that is actively involved in watershed stewardship.
- Goal C: Continue to maintain the Occoquan Reservoir as a clean and sustainable source of potable water for Fairfax County.

Mr. Moseley proceeded to describe each Action of the draft plan, and provided an example for each type of project, including stormwater pond retrofits, Low Impact Development projects, stream restoration, culvert retrofits, road crossing replacements, and dump site removal or maintenance activities.

Discussion

Mr. Moseley then opened up the floor for participant questions. One participant asked who will pay for the proposed projects. Mr. Shirey stated that Fairfax County will include the structural projects as part of their Capital Improvement Project list; other projects may be jointly funded by a partnership between the County and private parties.

One participant requested the definition of the Resource Protection Area (RPA). Mr. Curtis, DPWES, stated that the RPA was legally defined by the Chesapeake Bay Act as a 100-foot buffer that surrounds bodies of water. The purpose of the RPA is to protect water quality, and it is illegal to clear or develop land within its boundaries under most conditions.

One participant asked if hiking or horse trails have an impact on streams. Mr. Moseley stated that hiking and horse trails do have a small impact on streams, but it is generally a much lower impact than the use of All Terrain Vehicles (ATVs). The Chesapeake Bay Act defines hiking and horseback riding as a passive use, while the use of ATVs is an active and more destructive use. Mr. Moseley noted that the Chesapeake Bay Act does not preclude a landowner from maintaining their property with an ATV, but it does limit the type and intensity of recreational uses.

One participant asked how projects will be prioritized and ranked. Mr. Lormand, AMEC Earth & Environmental, Inc., responded that a three-tiered prioritization is in progress. The CAC will help the project team determine the final ranking and order of implementation.

One participant inquired about state regulations for gas stations. Mr. Shirey stated that the regulation of gas stations is beyond the scope of this watershed plan. Mr. Moseley stated that the plan could consider leaking gas tanks if they were recognized as a specific, project related issue.

One participant asked why Fairfax County had not contributed funds to stormwater management facilities in new subdivisions in the past. Mr. Shirey stated that new developments are required to install their own stormwater management facilities built to current standards. The proposed projects in the draft plan involve the retrofit of older ponds that are not performing to the current standards.

One participant asked if rain gardens would be included in the plan. Mr. Moseley stated that bioretention areas, or rain gardens, are featured and proposed for many of the subdivisions that do not currently have water quality controls.

One participant asked if the Popes Head Creek Watershed is part of the “downzoned” area. Mr. Moseley stated that approximately 86% of the watershed was rezoned in 1982 to allow a maximum of one dwelling unit per five acres.

One participant asked how the project team identified stream sections for restoration projects. Mr. Lormand stated that the project team performed their own field reconnaissance while also utilizing the results of the 2001 Stream Physical Assessment that evaluated 800 miles of streams in Fairfax County.

One participant asked what effects exotic species, such as bamboo, have on stream habitat. Mr. Moseley stated that exotic species can out-compete and choke out native vegetation. Not all exotic species should be labeled as “bad”, but in general they are not as ideal as native species, as they do not provide the same level of nutrient uptake or wildlife habitat.

Breakout Stations

The meeting participants were then split into three groups to examine projects at three different parts of the watershed. Participants were asked to become familiar with the recommendations for where they live, provide comments on the draft recommendations, provide additional approaches to consider, and to provide information on additional problem locations.

Station One (East of Fairfax County Parkway) Comments

Dot #1 (north of Braddock Road and southeast of Andes Drive): There was concern about future development of George Mason University on the southeast side of Andes Drive. Fill from George Mason University has caused a swamp-like condition in this area also.

Dot #2 (south of Braddock Road, east of Braddock Knoll Way): One participant observed that the stormwater management pond at this location is not functioning properly.

Dot #3 (west of Fox Chapel Road, south of Braddock Road): One participant reported erosion at 4808 Fox Chapel Road; the erosion has increased in the last three years as a new school has been built.

Station Two (West of Fairfax County Parkway, East of Colchester Road) Comments

Dot #1 (near CC-MN-1): There is a horse manure mound at Colchester Road and Castle Creek Tributary 1.

Dot #2 (Kings Color and end of cul de sac): One participant noted that there usually a large pile of salt used snow removal at the end of the cul de sac; they inquired if salt runoff has a detrimental effect on water quality. Grass clippings are piled into the tributary here. There is ATV access at this point.

Project ID PB-LIDB-5 (Fairfax Hunt): One of the adjacent homeowners was in favor of a small scale raingarden that limits the removal of existing vegetation. He noted that the soil near the proposed project location may have poor percolation, but the existing vegetation may currently be providing some water quality and retention benefits.

Station Three (West of Colchester Road) Comments

Project ID CC-ST-1 (Wycklow Drive): The property owner stated that he is in favor of protecting the stream, but does not want a large and thick tree buffer obstructing his view. He would prefer a small buffer that is composed primarily of bushes and ground cover, but not large trees. He noted that downstream property owner installed riprap to armor the banks, and that the upstream owner has denuded stream banks.

General Comments:

- Create a system of guidelines to clean up streams clogged with debris that create unsanitary conditions.
- Fairfax County should not solely pay for projects on private property, such as the Merrifield Garden Center. A partnership or cost-sharing program with private owners would be a more equitable method of funding the projects.
- Flooding at Chapel Road and Cold Point Road is a problem. Can a culvert be installed?
- *Action B2.1:* Develop educational materials for owners of large lots (five or more acres). The existing materials describe how to care for smaller lots, typically quarter acre in size; these brochures and materials may not be appropriate for most of the properties in the watershed.
- *Goal C:* Coordinate with Prince William County and the State of Virginia to develop a regional approach for protecting the Occoquan Reservoir. Fairfax County is trying to do their part to protect the health of the reservoir, but it is still being negatively impacted by pollutant sources in Prince William County.
- *Chapter Five:* Fairfax County should develop a policy that encourages high density development near transit centers (transit oriented development). This will reduce greenfield development and suburban sprawl.

The workshop was adjourned at 9:00 p.m.

Popes Head Creek Watershed Study & Plan
Final Draft Watershed Plan Review Workshop

Date:	April 12, 2005	Time:	7:00 pm
Location:	Clifton Elementary School		
Recorder	Lynne Mowery		
Meeting:	**Final Draft Review Workshop**		
Project Team Attendees:	Carl Bouchard, DPWES Paul Shirey, DPWES Kate Bennett, DPWES Shannon Curtis, DPWES Doug Moseley, AMEC Lynne Mowery, AMEC Curt Ostrodka, AMEC Joanne Reker, AMEC	Advisory Group Attendees:	Cliff Fairweather George Jennings III Mervine Rosen Charlie Smith Bill Watts
Other Attendees:	George Baker Joseph Baldino Harrison Glasgow Barb Harrison		Marguerite Mott Bill Schechter John Scipel David Watkins

Introduction

Paul Shirey, Fairfax County Public Works and Environmental Services, opened the meeting and thanked all for attending. He and Carl Bouchard, DPWES, introduced the project staff and recognized the Citizens Advisory Committee (CAC) for volunteering their time and contributing to the final draft watershed plan.

Kate Bennett, DPWES, opened the first session of the forum by reviewing the evening's agenda. She then covered the basics of watershed science and why public involvement is an important component of watershed planning in Fairfax County. She described the Popes Head Creek Watershed as one of the healthier watersheds in the County, but noted that portions of the watershed are currently designated as Restoration Area Level I, areas with fair biological conditions and less than 20% imperviousness that are beginning to show signs of degradation. The watershed plan will help to prevent further degradation of these areas to Restoration Level II, areas characterized by more than 20% imperviousness, significantly impacted instream habitat conditions and substantially impacted biological communities. Ms. Bennett stated that public comments on the Final Draft plan are due by May 12, 2005, and should be e-mailed to

curt.ostrodka@amec.com. She encouraged citizens to use the project web site to check for upcoming events, documents, and other updates.

Presentation of the Final Draft Watershed Plan

Doug Moseley, AMEC Earth & Environmental, Inc., described the final draft watershed plan Goals, Objectives, and Actions. The plan is based on three overall Goals, with specific Actions to carry out the strategies of the plan. The Goals are as follows:

- Goal A: Protect and improve the ecological health of Popes Head Creek and its tributaries.
- Goal B: Have a well informed community that is actively involved in watershed stewardship.
- Goal C: Continue to maintain the Occoquan Reservoir as a clean and sustainable source of potable water for Fairfax County.

Mr. Moseley described the changes made to the plan since the November 2004 draft plan review workshop, including new stormwater pond retrofit projects and Low Impact Development projects in neighborhoods that lack water quality controls.

Mr. Moseley described the benefits of fully implementing the plan. According to the water quality computer models developed by AMEC, Total Suspended Solids will be reduced by 8.64%, Total Phosphorus will be reduced by 3.1%, and Total Nitrogen will be reduced by 2.72%. The Piney Branch and Popes Head 2 Subwatersheds both show above average pollutant reductions. This is important because these subwatersheds have “fair” site condition ratings (from the 2001 Stream Protection Strategy); the other subwatersheds in Popes Head Creek have “good” or “excellent” site condition ratings. The project team also found that the proposed projects will increase the Stream Condition Index (SCI) rating for streams in Popes Head Creek, thereby improving overall stream health. The SCI is based upon five different variables: Instream Habitat, Channel Alteration, Riparian Buffer, Channel Incision, and Bank Erosion.

Mr. Shirey noted that the benefits accrued to Popes Head Creek would extend beyond pollutant reductions. He stated that habitat protection and an increased environmental awareness in the community are benefits that are not easily quantified, but are still very important.

Mr. Moseley then discussed the importance of the plan. Popes Head Creek is a major tributary of the Occoquan Reservoir, which is a primary source of drinking water for Fairfax County. Implementation of the plan will also put Fairfax County in a position to meet water quality regulatory requirements, including the Potomac River Tributary Strategy, the Popes Head Creek Total Maximum Daily Load, and the State Occoquan Watershed Policy.

Mr. Moseley then described the prioritization process used to rank projects within the watershed. Five different weighted categories were used to rank each project:

- Board of Supervisors’ Adopted Priorities
- Direct Regulatory Contribution

- Public Support
- Effectiveness/Location
- Ease of Implementation

The projects were then placed into one of five groups, each of which spans five years. The total plan implementation timeframe is 25 years. Projects with high prioritization rankings, such as stormwater pond retrofits in the headwaters, were placed into the first five year grouping. The CAC assisted the project team in the prioritization process, with the following considerations factoring into the final implementation schedule

- Dump sites are to be prioritized when highly visible and if they present an immediate water quality threat.
- Stream restoration sites are to be prioritized if there are no upstream headwaters projects to implement first.

Discussion

Mr. Moseley then opened up the floor for participants' questions. One participant asked if the plan will be static, or if it will be updated over time. Mr. Bouchard stated that the County will re-examine and update the plan over its 25 year lifespan. The updates may occur every five to ten years. The plan is intended to be a "living document."

One participant asked how the plan will be funded. Mr. Shirey stated that Fairfax County's FY2006 Budget has dedicated $17.9 million for stormwater management, which includes the development and implementation of watershed plans. The County also has Pro Rata Share funds available.

One participant asked if the County would monitor the progress of the watershed plan to determine if there have been improvements. Mr. Shirey stated that the County will continue its water quality monitoring efforts, which will provide a measure of water quality improvements.

Cliff Fairweather of the Audubon Naturalist Society (ANS) announced that he is looking for citizen volunteers to participate in the ANS volunteer stream monitoring program. Interested citizens should speak with Mr. Fairweather or visit the ANS website.

Breakout Stations

The meeting participants were then split into three groups to examine projects planned for three different parts of the watershed. Participants were asked to become familiar with the proposed projects near where they live, provide comments on the final draft recommendations, provide any additional approaches to consider, and to provide information on problem locations not addressed by the plan.

Station One (East of Fairfax County Parkway) Comments

- No Comments

Station Two (West of Fairfax County Parkway, East of Colchester Road) Comments

- No Comments

Station Three (West of Colchester Road) Comments

- Erosion is a concern on the Popes Head Creek mainstem near the intersection of Newman Road and Bluff Ridge.
- Some homeowners stack firewood near the stream. When it overtops the banks, debris is swept downstream, which blocks the culverts and causes road flooding.

The workshop was adjourned at 9:00 p.m.