

**Urban Forestry Commission**  
**April 25, 2013**  
**Meeting Summary**

**Attendance**

Dean Amel  
Larry Finch  
Steve Campbell  
Mikaila Milton  
Paul Campanella  
Caroline Haynes  
Nora Palmatier  
Edward Hilz  
Janet Nuzum  
Elizabeth Rives

**State and County Staff**

Vincent Verweij, DPR  
Alonso Abugattas, DPR  
Jim McGlone, VDOF

**Guests**

Brooke Alexander

Dean Amel announced that Paul is officially added to the UFC Commission. Paul has worked in ecology and natural resources management and obtained a PhD from Syracuse in Forestry. Paul performed research with Smithsonian in Panama, Columbia and Peru and worked on bio-medical research in Panama through the World Bank and USAID. He later became head environmentalist of the Panama Company.

The Urban Forestry Commission is looking for a replacement for Mary Ann Lawler.

The letter to the board regarding VDOT's activities along Route 50 was approved and has been sent to the County Board.

**Public Comment**

Brooke Alexander is researching options for VDOT's mitigation of the Route 50 tree removal.

**Trees for the Bay Presentation by Jim McGlone**

This presentation was previously given at the Urban Forest Roundtable. Jim put this together for the benefit of water quality and the Bay, specifically Bay TMDL and pollutants.

Stormwater Management has three areas of focus: air quality, stream erosion and nutrient processing.

How do trees manage stormwater? As you increase impervious surface, you decrease infiltration and evapotranspiration. Reduction in evapotranspiration is also important in Bay pollution.

Most of the work is done through interception and evaporation. Soil and leaf litter will hold water, as well. Water is held in contact with mineral soil and roots hold and absorb water. This is why, in an urban area, you get more significant runoff than in a forest. Deciduous forest intercepts 13% of stormwater.

In an urban setting, you still intercept significant amounts of water. A 20 inch red maple can intercept almost 6,000 gallons of water a year.

Dean: What if the red maple was in a tree pit? Answer from Jim: Most of the effect is from interception, but the nutrient processing and capture would be reduced.

What drives this issue is leaf area index (LAI). This is the measure of square meters of leaf area over a square meter of ground.  $M^2/M^2$ .

In a healthy forest, the LAI is 6-7. When you lose the understory, it goes down to 4-5. Significant aspects of this stormwater interception are destroyed by deer.

Riparian buffers. Traditionally, 100 feet is the width of riparian buffers. The Benefits are: biological energy, shade to the stream, filtration of pollution and slowing of water. 99% of water is treated by a 100 ft forested buffer. The problem is that in Arlington, we circumvent the trees and riparian buffer (usually noted as the Resource Protection Area) in stormwater management.

Mikaila: How would you solve this with grey infrastructure? Jim: By using an even spreader ditch, perpendicular to the forest/stream.

Air pollution: A lot of our water pollution comes from our air pollution. Air pollution deposits on surfaces, and washes into our water through rain. Reducing air pollution can help reduce water pollution. Trees help treat air pollution through direct absorption. This can damage trees, unfortunately.

Shade and energy: In the summer, deciduous trees reduce heat; in the winter, they reduce wind. This reduces energy usage, reducing air and water pollution.

Nitrogen comes from all kinds of sources; most phosphorus comes directly through streams. The biological energy provided by trees helps treat these pollutants. Traditionally, nitrogen came from natural sources, until we learned to extract it from the air. Most of the natural nitrogen cleaning in streams comes from pockets in stream beds. Leaf litter helps provide biological energy that drives the food web in lower-order streams. This helps process the nutrients before they hit the Bay. Maples and dogwoods degenerate quickly, all the way up through the oaks to the sycamore, which help provide year-round energy.

Sediment loading is affected by trees. Trees reduce the discharge intensity and quantity to the stream. The energy put into the streams has to be balanced by increased scouring or other degradation. The incised streams require either stream restoration, or they will scour out a lower floodplain in longer term.

Larry commented: Some sections of Donaldson Run had to be redone for these reasons. Construction errors led to bankfull depths exceeding those called for in the stream design. To avoid scouring of the streambed, those sections were reconstructed to meet design specifications.

Jim: Once fine sediments fill in the gaps in a streambed's base, the stream loses its capacity to work on the nutrients. Leaves run off, instead of staying in the stream, preventing the powering of the stream's processing capacity. Bacteria need carbon to do this. If we shade out all the grass, we don't need to fertilize the grass.

If you engineer a solution, you don't get the other benefits of trees.

End of presentation.

Questions: Are enough engineers hearing this? Jim is showing this to the as many engineers as he can.

Dean: Clarify TMDL (Total Daily Maximum Load). Jim explained the requirements for TMDL reduction.

Can this be used to stop VDOT cutting down trees? The state can do this. States have to come up with a plan to achieve TMDL targets. The WIP requires individual localities to come up with reduction plans. No final numbers are done yet. MS4 is related, but separate.

Dean: Can we use this to require homeowners to maintain trees? Jim: no, but there are BMPs that require maintenance.

Nora: Are there maps of utilities and stormwater? Vincent: yes, the stormwater department can provide this information.

### **Tree species list discussion**

Vincent: Questions were raised by Karen Kumm on a number of tree species that were eliminated from the recommended street tree species for hardiness and aesthetically pleasing trees: Chinese Elm, Golden Rain Tree, Pagoda Tree. The last two have become invasive. Chinese elm is becoming an issue, but it is a hardy tree and will survive in difficult areas. Siberian elm has become highly invasive, therefore we anticipate Chinese elm to develop the same characteristics, and local naturalists have found it in sensitive natural areas.

Chinese elm seeds are wind-blown, which increases the likelihood of spreading. The upside is that they will survive anywhere (even when used for pit bull practice, as is common in New York City). Chinese elm has not become as invasive as others such as Norway maple. There exists a concern that it will become more invasive over time. We don't expect to have budget to manage invasive tree species, since removal is significantly more costly than removal of herbaceous or vine species. We need to be looking at more preventative action. Vincent has increased the list by adding more hardy tree species to the list. He started off with native species, and then added trees with salt tolerance and shade tolerance. The city of Washington, DC is trying out every

species of tree, and research has shown many natives are very hardy in tough situations. Vincent has done extensive research and feels the list is appropriate for our community.

Mikaila: What is your experience with Zelkovas?

Vincent: The older trees are beginning to girdle themselves, which is not always a nursery issue. Some trees do it naturally if put in wrong space. The tree is still on the list, because it does not show invasive tendencies, and although they do have a short lifespan, show little hazard tendencies, and significant hardiness to urban soils.

Jim noted his experience with older Zelkovas as street trees dying off en masse.

Dean (reading from Karen's notes): Karen argued that we have few urban-tolerant species, and the Chinese elm fills a niche of being a tolerant, upright, well-branched species. Karen questioned the invasive tendencies. The U.S. Forest Service suggested contacting local extensions. Vincent has asked around with local naturalists, including Alexandria and DC naturalists, and Chinese elm has been found to escape cultivation.

Vincent: We have seen it spread into the local parks, and local naturalists recommend against its use, for this reason. Likewise, other windblown, heavily spreading species (such as non-native maples and the Siberian elm) have started invading our parks, as well.

Nora requested a definition of street trees

Vincent: These are more urban, site-planning type trees. They are trees requiring formal shape and urban toughness. We also have other cultivars with more columnar growth patterns, also starting at 3 inch caliper. Lots of the oaks fit the needs of street trees, which is why many of the oaks made it to the street tree list. He may consider removing cherrybark oak, per Jim's suggestion. Some of the hardiest species are the river birch and the baldcypress, which can be used successfully as street trees. This is not a prescriptive list – it is a recommended list. The Arlington County will include the statement, "If other tree species are preferred, contact Urban Forester for consultation."

Mikalia: This is a good compromise.

Paul: The list shows good species diversity.

Jim: Why is the American hornbeam not on the list?

Vincent: The branches are too wide-spread at a low height to be effective as a street tree (at 3.5 inch caliper)

Jim: Staghorn sumac may also be useful

Vincent: Yes, but not for street tree usage, as the form tends to be more informal and gnarly.

Kirsten: Can this list be used publicly?

Vincent: Only for street trees.

Vincent researched a wide range of resources, including those that describe trees that can be used in stormwater planting pits.

Larry: I have almost always agreed with Karen, but I feel Vincent has done a good job of researching the lists. We can always add to this list if this is not broad enough.

### **Approval of Minutes**

Draft minutes from the March 28, 2013, UFC meeting were approved with minor edits.

### **Tree canopy fund selection criteria**

Larry noted that TCF selection criteria include civic associations with tree canopy below the County average. He thought the criteria should also include the area (not the percentage) of tree canopy loss in civic associations, because this is the best available indicator of the actual tree loss – and the need for planting new trees. Larry suggested making presentations on the TCF for civic associations with the greatest loss of canopy cover.

Vincent: I'm open to doing more outreach on canopy loss. I will do some more research and work with non-profits in getting the word out.

### **VDOT Letter**

Brooke Alexander: Two points were made at a meeting she held with VDOT. Senior level VDOT employees mentioned that the mounds of dirt were put in place because the soil was not structural. The easiest solution was to dump it in the cloverleaf, on top of the trees. Not mentioned was what was going to be done with the cement. Lack of coordination with the county may need to be mentioned in the UFC letter to the County Board. The letter may need to reflect steps forward. Jim asked where they took the trees they took out (unclear). Dean wants to make sure we save the last remaining loop.

### **Staff Reports**

Vincent Verweij:

#### Tree signs

Arbor Day Tree City USA signs will be put up at two entrances to the county, at the entrance from Fairfax County on Columbia Pike, and a to-be-determined entrance from Washington, DC.

## Budget

The budget was discussed. There was a question from Janet on why funding for invasives control was not made permanent. Vincent answered that it may appear inappropriate to make spending permanent in a tight budget year.

## Commission Member Reports

### **Natural Resources Joint Advisory Group – Caroline Haynes.**

Department of Parks and Recreation Director Jane Rudolph attended the April 1 NRJAG meeting and heard an overview of the progress to date on implementation of the Natural Resources Management Plan (NRMP). NRJAG members emphasized the need for adequate funding in order to fully implement the NRMP.

Neal Sigmon provided an update on the Four Mile Run restoration project and the difficulty in moving forward on the plan until issues with the Corps of Engineers can be addressed. Caroline is interested in getting an update from Neal on this project prior to departure of Neal and Mary Ann to North Carolina. It was suggested to have an update at the next meeting.

### **Park and Recreation Commission – Caroline Haynes**

Many commission members were present for the County Board meeting Tuesday where the Bill Thomas Awards for Outstanding Park Volunteers were given to Steve Young for his leadership in invasives removal and to the Friends of Gulf Branch for their work in supporting the nature center. The Board also recognized the many contributions of Neal Sigmon and Mary Ann Lawler over many years. The awards were followed by a reception honoring the recipients.

Jason Papacosma provided a presentation on DES storm water management and the impending update of the MS-4 permit. There was discussion about the potential impacts and opportunities on park projects in the process of meeting the new TMDL targets. The issue was also raised about possible opportunities with APS properties in light on the school expansion but Jason was not optimistic that would yield many results.

Brian Stout, Federal Legislative Liaison for Arlington County provided an update on the County's response to the Arlington National Cemetery Millennium project. He noted that the county provided comments on both the original EA and the revised EA, and staff continues to have serious objections to the current design. He noted the limited opportunities to push for additional design changes but noted that other organizations are working to raise the profile on this issue to push for further changes. Arlington County is one of the signatories on the Memorandum of Agreement and the hope is that we might be able to delay finalizing this document until some of the issues raised are addressed. (Caroline will have additional updates

on this with respect to some of the other organizations involved in this project on Thursday evening.)

**Budget:** The FY 14 budget adopted by the County Board on Saturday increased the tax rate by 3.5 cents to cover many of the proposed cuts in the County Managers budget including community policing, firefighters, childcare specialists, and affordable housing. Many of the proposed cuts to natural resources programs were restored (Natural Resource Specialist position at Long Branch Nature Center, Nature Center Hours, tree maintenance and watering and one-time funding for invasive plant removal), along with restoration of funding for teen and youth programs. In addition, \$2 million in one-time funding will be directed to replenish the land acquisition fund. Commission members noted the lack of progress on the development of a land acquisition policy and the general frustration on this issue.

**Planning Activities** – Karen Kumm Morris: No updates.

**Public Facilities Review Committee** – Ed Hilz. Met on April 17. Discussion on Ashlawn and Williamsburg School. Consultant gave a list of trees for planting. The Urban Forester (Vincent) will be contacted about species. Ashlawn talked about use permits, mostly. Two sections of use permits: tree protection and replacement, landscape plan and standards. Mentioned the issue on maintenance. Schools is reluctant to tie themselves to maintenance. Chair of PFRC proposed a maintenance language. Mikaila mentioned using sprinkler systems. Ed suggested this language needs to go to the county board/school board discussion.

**E2C2** – No report. No updates

**Champion Trees Committee** – Dean Amel. The alternate-leaved dogwood became the state champion. Alonso noted the spicebush may be dying. At the time of the meeting, a new state champion pin oak was being verified at the Army Navy Country Club.

**Tree Stewards** – Nora Palmatier. TS held their graduation party last night and we have 15 new TreeStewards. They told us of their plans to start volunteering with Arlington's Patrick Wegeng, RIP, and John Noelle as well as in their neighborhoods.

Next Monday, May 1, Paul Revell (VDOF) representing Trees Virginia Tree Stewards will be in Arlington to congratulate the new members. Paul is working on a MOU at the state level between the Extension and TS chapters.

**Tree Canopy Fund** – Nora Palmatier. TS will be volunteering with the April 29 orientation on the TCF. It's this Monday night, Fairlington Community Center, from 7-9 PM. Three of the new members will be TCF coordinators, as well as many returning to meet with applicants.

The Remove Ivy from Trees campaign continues to be used. Signal Mountain, TN called yesterday saying they were using the Power point and flyers, but wanted permission to change the drawing to what they have. Of course permission was given as long as they send us a copy so we can borrow it also.

**Ballston Pond Stakeholders Committee** – No updates.

**Boathouse Planning** – No updates. Next meeting will have a presentation on the boathouse. UFC is looking for someone to take over reporting on this issue.

**Neighborhood Conservation Advisory Committee** – Elizabeth Rives. There was a presentation by the staff from the BikeArlington and WalkArlington programs. Several years ago, all NC neighborhoods had to submit a list of the missing sidewalks in their NC area. This information has been sitting around for a while. Although providing sidewalks is important to promote walking in Arlington, completing these missing sidewalks is not a goal of the WalkArlington program because no significant resources are available to so.

**Columbia Pike Form Based Code Advisory Working Group** – Steve Campbell. There were two meetings of the Columbia Pike Neighborhoods Area Plan Form-Based Code Advisory Working Group in April. Among other topics, streetscape/trees was discussed at the 4/3 meeting, and open space/natural areas at the 4/11 meeting.

-the 4/3 meeting: The only new potentially significant development to report was a comment by a citizen member of AWG that the community had wanted minimum sidewalk widths of 6 feet in all Plan areas. Only the 54' wide street-space in the FBC draft specifies 5' sidewalks (and 7' wide tree planting strips/tree pits). An increase in sidewalk width usually would negatively impact tree planting strip width. One of the lead consultants, Geoff Ferrell, said he will attempt to increase sidewalk width without narrowing the tree soil area.

-the 4/11 meeting (presentation attached): Urban plazas, Miniparks, and Neighborhood Parks were discussed and many questions remain. To be determined are the minimum % of pervious area for each park category; the maximum % of space to be taken up with amenities; and who will be responsible for designing, developing and maintaining these areas (the County or the developer).

Natural areas were also mentioned, and may or may not be regulated by the Form-Based Code. These areas will be 'minimally' developed, with no more than a pedestrian path, interpretive signage, and trash receptacle(s) added. County ownership or control will be either through easements or by outright purchase. Either way, oversight will be provided by the County's Natural Resource Manager. Any areas or issues not covered in the FBC would refer back to the County's general standards for guidance.

**Northern Virginia Urban Forestry Roundtable** – **Jim McGlone**. Topic for next roundtable: Nuts and bolts of urban forestry. Advances in tree planting and tree growing. Root washing demonstration. Casey trees will present. Merrifield farms will present on underused native trees.

**Virginia Department of Forestry** – **Jim McGlone**. A new forester for the NOVA team was hired. It was a promotion, so that still leaves a hole.

**Arlington Public Schools (APS)** – Jim Meikle. Arbor Day was held on April 23 at Drew Model School.



**Virginia Cooperative Extension (VCE)** – Kirsten Buhls. Master Gardeners took a tree from the tree distribution and made a video of bare root tree planting.

April 30<sup>th</sup>: Capital region invasive pest symposium. “How are jurisdictions using volunteers in invasive plant management?”

**New Business**

Caroline Haynes is still working on the Arlington National Cemetery expansion issue.