



Micro-Pools

A Fairfax County, VA
Publication, December 2011

Once established, a micro-pool provides wildlife habitat and green space as pictured on the right. Frequently, educational signs are installed at the site.

Fairfax County Photo.



A micropool is a shallow, permanent pool of water installed at the bottom of a detention basin that allows the basin to perform as a man-made wetland. Micropools remove pollutants from stormwater runoff and are usually planted with pollution-absorbing, native wetland species. When fully established, a micropool provides community green space and habitat for fish, frogs and dragonflies.

Other advantages of micropools are:

- flood water absorption
- less bacteria from urban runoff
- relatively low maintenance costs
- improved downstream water quality
- fewer oxygen-demanding substances
- vegetation diversity and wildlife habitat in urban areas

To request this information in an alternate format call 703-324-5500, TTY 711.



Stormwater Planning Division
12000 Government Center Parkway, suite 449
Fairfax, VA 22035
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Detention Basins

A Fairfax County, VA
Publication, May 2011



**A post-construction
detention basin in
Fairfax County.**

Fairfax County Photo.

Detention basins can prevent stream erosion, improve water quality and protect residents and their property from flooding. Typically these man-made depressions in the ground are dry ponds; they are used to control stormwater and do not hold a permanent pool of water.

A low or basin area is created with an earthen embankment around it. The basin collects stormwater runoff which is slowly released into the ground through a pipe. This type of detention basin provides little improvement in water quality.

When basins are constructed with forebays (a berm near the drain inlets) stormwater is slowed down before it reaches the basin. This delay allows sediment to sink and helps trap litter and trash.

At the basin's outlet, a flow control structure can be adjusted to slow down stormwater even more and provide water-quality benefits. Longer detention times help stormwater to filter into the soil. A shallow, permanent pool of water called a *micropool* installed at the bottom of a basin can allow sediment to settle. Frequently, micropools are filled with hardy wetland plants that absorb pollutants.

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Native Plants in Virginia

Department of Public Works and
Environmental Services
[www.fairfaxcounty.gov/dpwes/
stormwater](http://www.fairfaxcounty.gov/dpwes/stormwater)

Plants that are native to Virginia match the finest cultivated plants in beauty and often surpass non-native plants in ruggedness and resistance to drought, insects and disease.

Native plants occur in the region in which they evolved over time. Virginia has characteristics of climate, soil, rainfall, drought and frost. Native plants possess traits that make them uniquely adapted to these local conditions and provide practical and ecological alternatives for landscaping, conservation and restoration projects. Their deep roots enable them to penetrate heavy soils and improve infiltration.

Non-native plants may displace native plants, disrupt ecological function and degrade entire plant communities. Invasive plants may spread quickly and overwhelm or replace endangered native species. Native plants require less water, fertilizer and pesticides that otherwise take time and money to provide. Non-native aquatic species often clog waterways, disrupt groundwater flows and degrade water quality.

A native plant list from the U.S. Fish & Wildlife Service identifies plant species that are recommended for use in horticulture, land management, conservation and restoration projects. There is a wide selection of plant choices that are adapted to growing conditions in the Piedmont Region of Virginia, which includes Fairfax County.

The list is available at

<http://www.nps.gov/plants/pubs/chesapeake/pdf/chesapeakenatives.pdf>
or call the Stormwater Planning Division at 703-324-5500, TTY 711.

Thank you.



A Fairfax County, VA
Publication, January 2013



**Butterfly Milkweed
(*Asclepias tuberosa*) is native
to the Commonwealth of
Virginia.**

**Photo courtesy
<http://en.wikipedia.org>**

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Mosquito Prevention

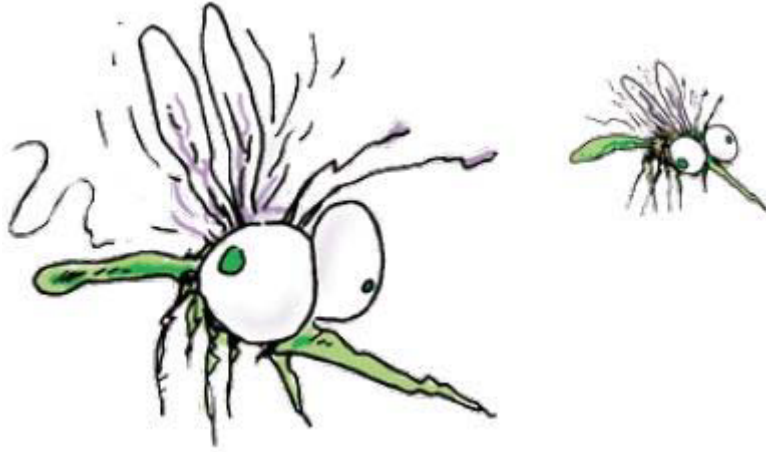


Image courtesy
Fairfax County
Health
Department

Mosquitos that carry the West Nile Virus can breed in almost any pond or body of water, however small.

Residents can prevent the growth of the mosquito population in small bodies of water by not allowing water to stand in roof gutters and flexible plastic pipes used for downspout drainage, among other places around their homes.

Mosquito breeding areas may be found in wheelbarrows, tires, bird baths, drainage ditches, culverts, tire ruts, tarps, garden equipment and leaking outdoor faucets. For more information about how to eliminate standing water on residential properties, see the web page at <http://www.fairfaxcounty.gov/hd/westnile/wnveliminate.htm>

Ornamental ponds should be stocked with fish that eat mosquito larvae, or should be filtered or aerated with a recirculation pump. Property owners may treat their privately-owned ponds with a larvicide.

The Fairfax County Health Department, upon request, will sample publicly-owned ponds for mosquito larvae during mosquito season and may treat those ponds with a larvicide when needed.

More information about the West Nile Virus may be seen at the Health Department web page <http://www.fairfaxcounty.gov/hd/westnile/>

For additional information about mosquitos call the Fairfax County Health Department at 703-246-8931, TTY 711.

Thank you.

Department of Public Works
and
Environmental Services
www.fairfaxcounty.gov/dpwes/stormwater



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