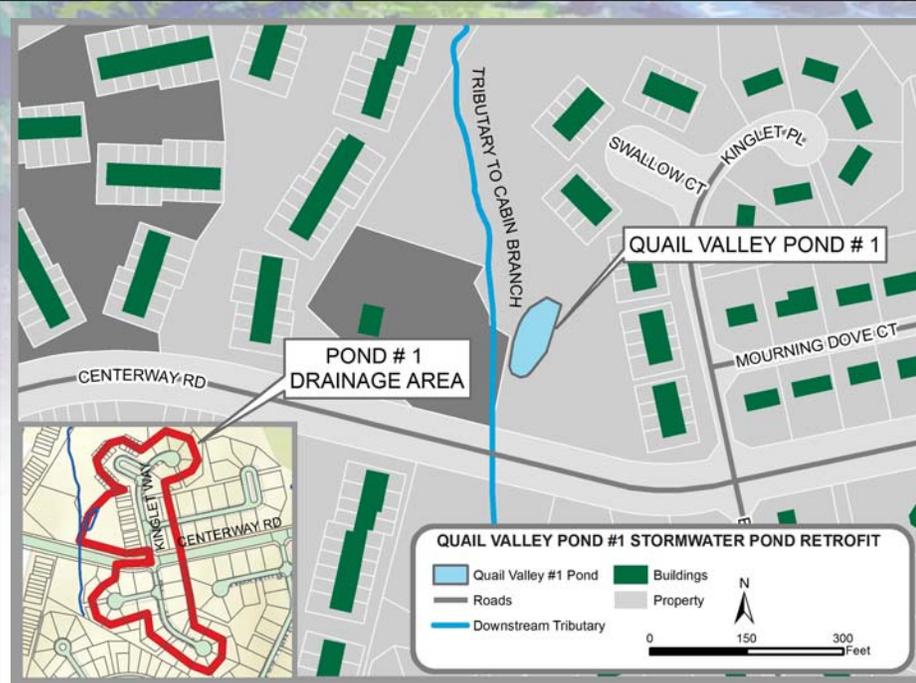




Watershed Restoration FACT SHEET

Quail Valley #1 Stormwater Management Retrofit Project



Watershed Facts

Subwatershed Drainage Area: 4.8 Sq. Mi.

Subwatershed Imperviousness: 25.8%

Property Ownership

Montgomery West HOA

Restoration Goals

The project goal is to improve water quality, stream health, and ecological benefits by improving an existing dry pond to replicate natural functions.

Restoration Project Facts

Project Length : 100 feet

Drainage Area Captured: 9.24 acres

Estimated Costs:

\$175,000

Project Status:

Estimated start of construction Summer 2015

Monitoring Facts

Pre- and post-restoration monitoring will be conducted, following MCDEP monitoring protocols.

Location of Quail Valley #1 Stormwater Management Retrofit Project

Project Selection

The Montgomery County Department of Environmental Protection has selected the Quail Valley #1 stormwater management pond for a stormwater retrofit project. Located in the Quail Valley neighborhood within the Cabin Branch watershed, the pond was constructed in the early 1980s prior to the establishment of current stormwater management techniques.

Similar to other restoration projects throughout the County, this project is designed to assist in compliance with the County's Municipal Separate Storm Sewer System (MS4) permit by treating stormwater runoff and stabilizing stream channels. This project will help to restore water quality, stream health, and ecological function in Cabin Branch and downstream waters, including Seneca Creek.



View of the existing pond.

Pre-Restoration Conditions

The drainage area to the pond is located within the Quail Valley community. The drainage area is fully developed and includes Kinglet Place and the adjacent lots. The land cover is 51% impervious and consists of roadways, sidewalks, manicured lawns and landscaping.

The existing pond is a dry detention facility and provides flow attenuation to help prevent excessive flooding at downstream properties. However, the pond does not provide critical water quality functions which are currently required to mitigate adverse effects of land development. Also, the pond was not designed to meet current safety standards which help protect the pond and downstream properties. As a result, sinkholes have formed in the embankment and temporary structural repairs have been made. Downstream channel degradation has also been observed.



View of existing pond showing high groundwater and substandard metal riser structure.



View of downstream channel showing degradation.



View of an existing wet pond similar to the proposed retrofit.

Restoration Actions

The proposed stormwater pond retrofit will allow the pond to treat the Water Quality Volume, which results from one inch of rain. The retrofit primarily involves regrading the pond to achieve additional storage volume and to create a wet pond. The depth of the pond will have a maximum depth of 3.5'. This pond will replace some of the natural processes which occurred prior to development and will help remove pollutants which result from land development such as nutrients, hydrocarbons, and metals. Also, a portion of the pond embankment and the outflow pipe and riser structure will be replaced. These embankment improvements will help safely convey flows from major storm events without causing damage or failure to the existing embankment and downstream properties.

The project area will be revegetated with attractive, non-invasive native plants. Trees will also be planted throughout the project area. This project will help improve stream health in the Cabin Branch watershed while also enhancing the aesthetics and sustainability of the existing pond within the Quail Valley community.



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