

SLIGO CREEK – FIFTEEN YEARS LATER

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Sligo Creek is a highly impervious (30%) 8.6 square mile urbanized watershed located in southern Montgomery County, Maryland. It is a tributary of the Potomac River, via Northwest Branch and the Anacostia River. The Sligo Creek watershed was largely developed before stormwater controls were implemented. In the 1980's Sligo Creek was identified as the most seriously degraded stream in Montgomery County.

Sligo Creek suffers from many urban runoff related problems, including poor water quality, severe stream channel erosion, bank instability, and degraded fish and benthic communities. The watershed is characterized by high-density commercial and residential areas, and much of the natural stream system was piped during development of the last 70 years.

In 1989, the Montgomery County Department of Environmental Protection, the Maryland-National Capital Park and Planning Commission and other agencies started construction of restoration projects to improve stormwater management controls and restore aquatic habitat. Over the past 15 years, two older stormwater management ponds were retrofitted to state of the art technology and four new stormwater management ponds were constructed, which provide improved stormwater controls to over two square miles of the watershed. In addition, erosion repair and aquatic habitat restoration was performed on over four miles of stream channel.

In 1988, before restoration work began, there were only two native fish species (plus goldfish) found in Sligo Creek and its tributaries. The presence of blockages to upstream fish movement prevented fish from recolonising the creek after water quality and habitat conditions had improved. After the completion of the first stormwater management pond retrofit and the first phase of stream restoration, in 1991, fish were collected from Northwest Branch, the stream into which Sligo Creek flows, and stocked into Sligo Creek. As other projects were completed, additional areas of Sligo Creek were restocked with native fish species. As a result of these efforts, several have established breeding populations, and there are currently eleven species that appear to have stable populations. Since both water quality and habitat quality have continued to improve since the initial stockings, the stocking of additional species is planned for 2004.

It has taken 15 years and over \$2.5 million to improve conditions in Sligo Creek. This presentation discusses the planning of the restoration, watershed improvements implemented, and the biological responses to those improvements.

Sligo Creek served as the pilot watershed for a restoration program that is now countywide. Biological monitoring was conducted in all streams in Montgomery County. The results of this monitoring, when compared to reference conditions, were used to categorize the biological conditions of the streams. The biological data was a significant factor used in setting watershed priorities through the Countywide Stream Protection Strategy. Watershed studies identify and prioritise specific watershed restoration projects. Areas that are scheduled for restoration are subjected to biological monitoring before and after construction, and when necessary native species are reintroduced into restored areas.

Keywords: *Stormwater management, stream restoration, native fish species*

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