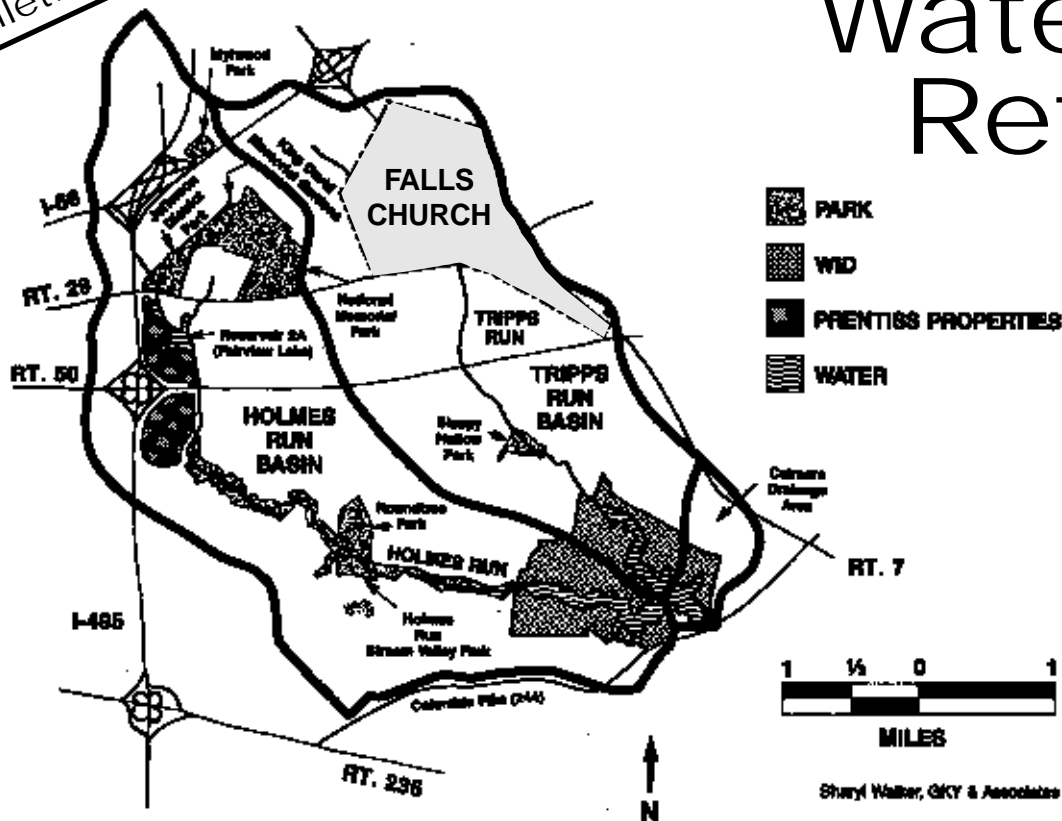


Watershed Retrofit



The concept of retrofitting existing watershed stormwater systems acknowledges the fact that earlier urban development lacked coherent design. A few decades ago, stormwater management consisted mostly of indiscriminately dumping excess runoff on whoever or whatever was downstream.

Lake Barcroft's little 14.5 square mile subwatershed cost literally **billions of dollars** to develop with homes, roads, commercial, industrial, institutional and recreational facilities. Spending only thousands to redesign this infrastructure can hardly be noticed. However, many retrofit BMP's provide leverage so a small improvement can produce a magnified benefit. Also, some recently identified BMP's are relatively inexpensive or may be paid for by the private sector.

Consider the recent emphasis on nutrient control which can improve water quality:

- The Holmes Run watershed yields approximately 10 tons of phosphorus a year to Lake Barcroft. However, a recent WID comprehensive phosphorus transport study reveals that the Lake removes over 54% of this phosphorus through several BMP's. The most recent Barcroft sediment dredging removed 14,000 cubic yards of phosphorus containing sediment at a cost of \$222,000.

- The recent ten-fold increase in the capacity of the Lake's aeration system eliminated algal scums.
- Barcroft's *No-Phos Fertilizer* is used almost exclusively by the community's thousand homes which surround the Lake. These homeowners have spent \$13,762 for this environmentally special fertilizer which was paid for by the private sector over a period of 7½ years. All of these are BMP's

Unlike some of America's major watershed retrofit projects such as Tampa Bay, the little Holmes Run Watershed Retrofit Program currently expends perhaps one or two million dollars a year. Most of these improvements consist of BMP installations coupled with improved government agency operations.

Today, flooding, erosion and pollution transport can be prevented by BMP's which increase temporary stormwater detention using check dams, flow regulators and stream stabilization and can remove pollution with street sweeping and other sound maintenance programs. Government agencies and private sector projects, programs and policies can improve watershed stormwater management. Not billions of dollars . . . but certainly significant incremental improvement.

***Individual BMP's have environmental value and provide substantial human benefit.
Long-term watershed retrofit projects reverse environmental degradation trends.***