

## WMA 7 Priority Stream Segment

**WMA 7 Segment:** West Branch of the Elizabeth River (non-tidal) -Tributary to the Elizabeth River, Union Township, Union County

**Plans for Initial Work:** The Bureau proposes to use the funds to follow up on recommendations from the Union, Essex, Middlesex and Hudson Counties Watershed funded Characterization Report (“Surface Water Quality, Pollutant Loadings and Critical Resources Assessment: A Technical Report for the Characterization and Assessment of Watershed Management Area 7”, May 2003). The Bureau proposes to perform necessary follow up sampling in the West Branch of the Elizabeth River to a): verify whether the golf courses are a major contributing factor to fecal coliform, phosphorus and total dissolved solids impairments; b): to conduct additional sampling to further identify the actual source (golf courses/catchments) of the fecal coliform problem from other identified catchment areas in the upper reaches of this priority segment and c): determine what the effects of riparian buffer enhancement along the impaired segment would have on the impairing factors.

**Potential Partners:** Union Township, Union County Parks Department, Union County Golf Department, Elizabeth River Watershed Association, Bureau of Freshwater and Biological Monitoring, Kean University and Geese Peace

**Listed Impairments:** fecal coliform, phosphorus, nitrogen, total suspended solids, temperature, dissolved oxygen, pH, specific conductance and turbidity.

**Background:** Water quality degradation in the West Branch of the Elizabeth River is primarily caused by non-point source pollution (NPS). The impaired segment runs for 4.2 miles. There are approximately 7000 acres within the impaired segments watershed and it consists of 94% urban, 4% forested and 2% wetlands. The AMNET sampling site is located less than a half of a mile down stream of Suburban Golf Course and less than a mile down stream from Galloping Hill Golf Course. Geese were observed at both Golf Courses. Three stormwater outfalls are located at the headwaters of this impaired segment, which also could be another source of fecal coliform. The stream shed also drains a large urbanized section to the north. The majority of immediate area contains urbanized landuse that has many detention basins, pets, and geese.

Additional sampling of the West Branch of the Elizabeth River is needed to identify the actual source (golf course/catchments) of the fecal coliform problem from other identified catchments areas in the upper reaches of this priority segment and determine adequate implementation measures to improve water quality.