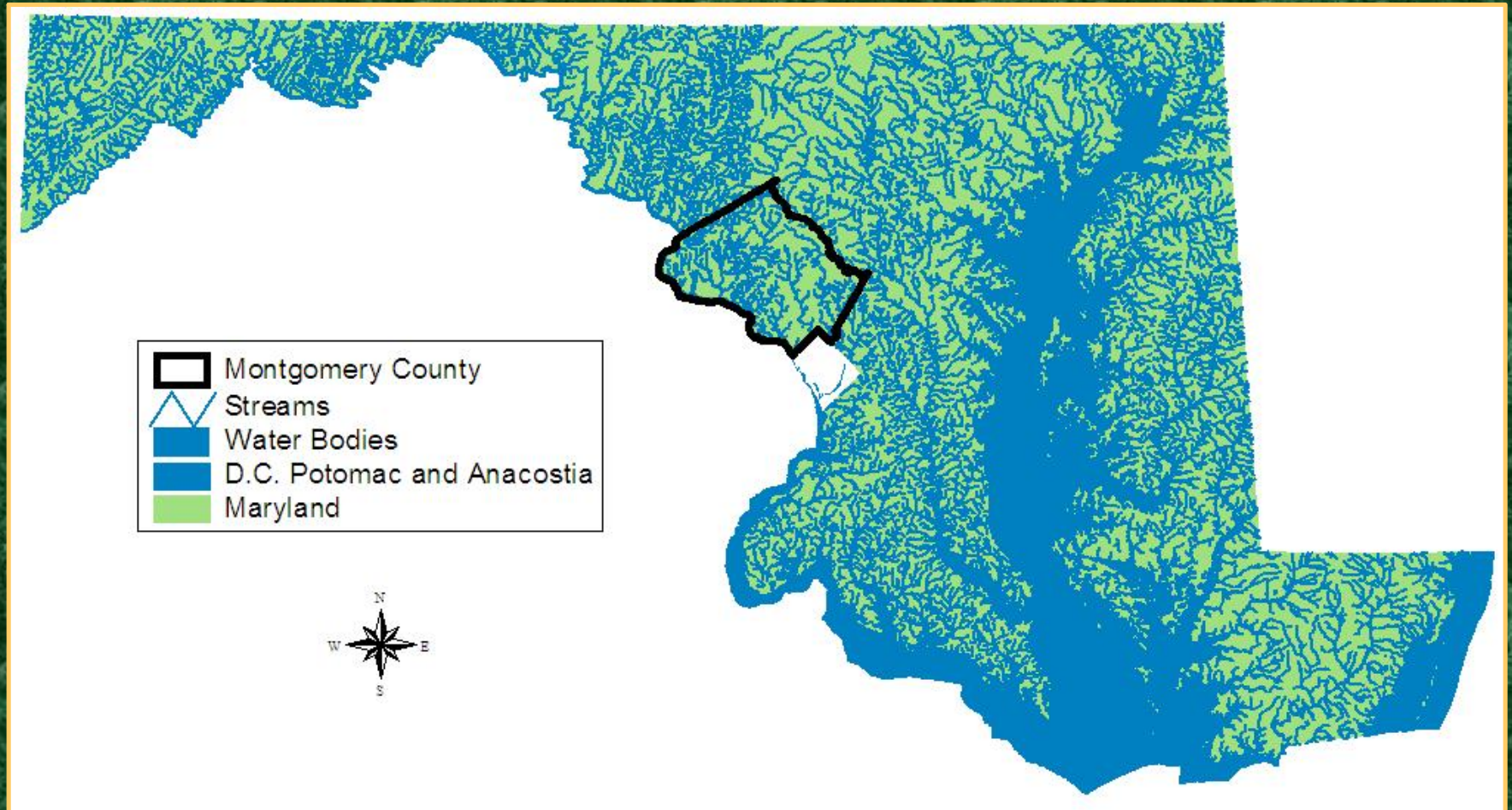
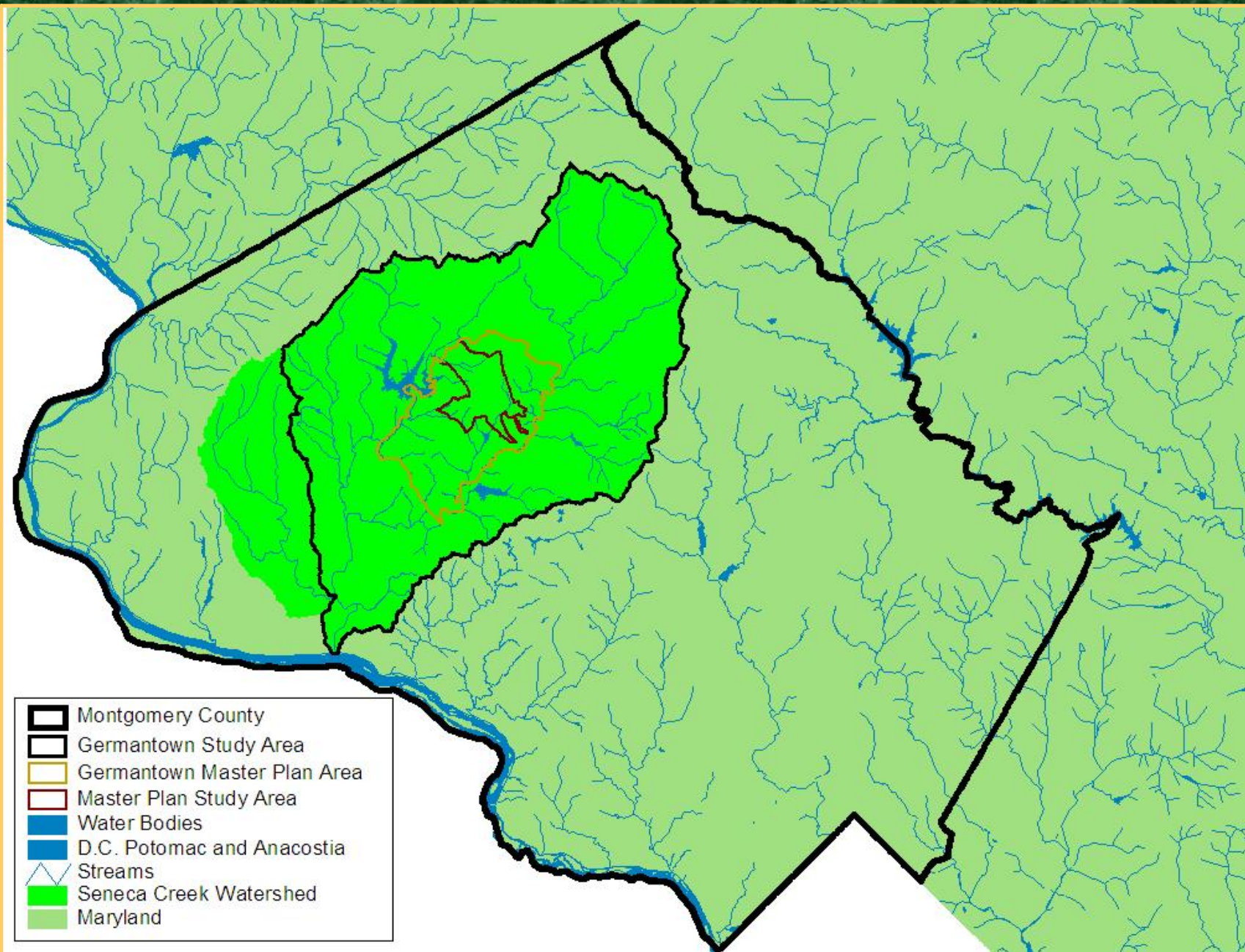


Environmental Features of the Germantown Master Plan Area

Montgomery County Planning Department
Maryland-National Capital Park and Planning Commission
May 22, 2007

Location



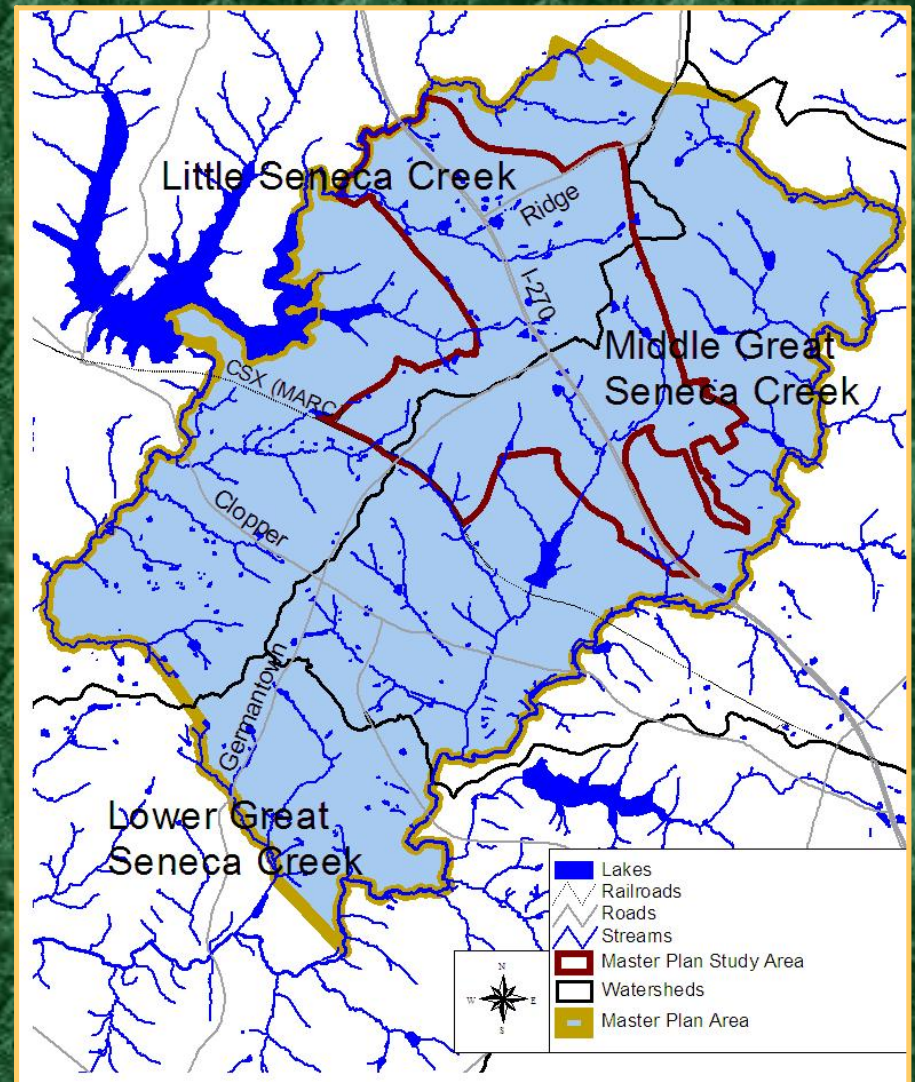


Planning Area Facts

- Located in north central Montgomery County
- 10,933 acres or approximately 17 miles²
- Population of 81,330 in 2003
- 2,336 acres of parks or 21% of the planning area
- Consists of Little Seneca Creek and Great Seneca Creek watersheds

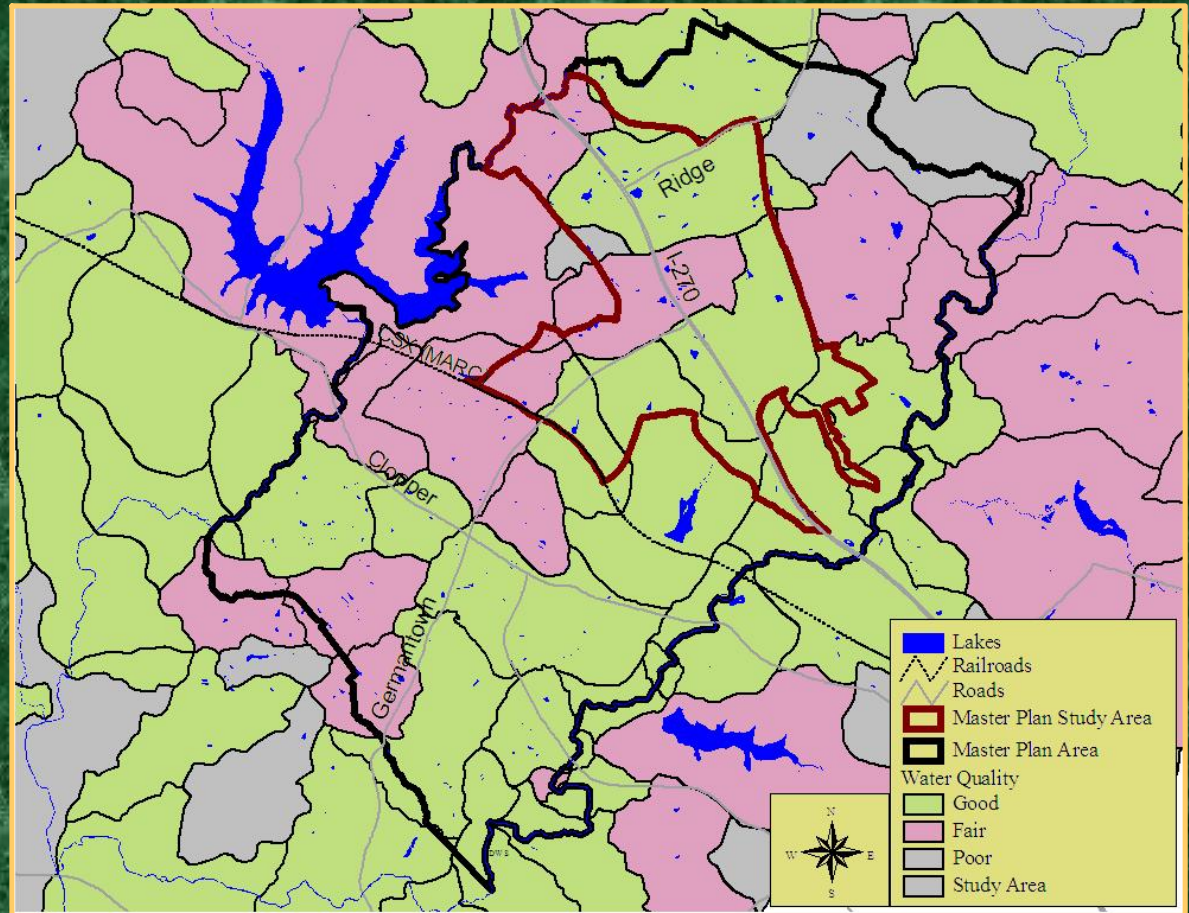
Master Plan Area Watersheds

- Occurs in heart of the Seneca Creek stream system
- Watershed acres:
 - Little Seneca Creek
~4,548 acres
 - Upper Great Seneca Creek
<1 acre
 - Middle Great Seneca Creek
~5,228 acres
 - Lower Great Seneca Creek
~1,157 acres



Water Quality

- **Determined via**
 - invertebrate and fish populations
 - stream chemistry
 - stream temperature
 - rapid habitat assessment
- **Water quality categories**
 - excellent
 - good
 - fair
 - poor



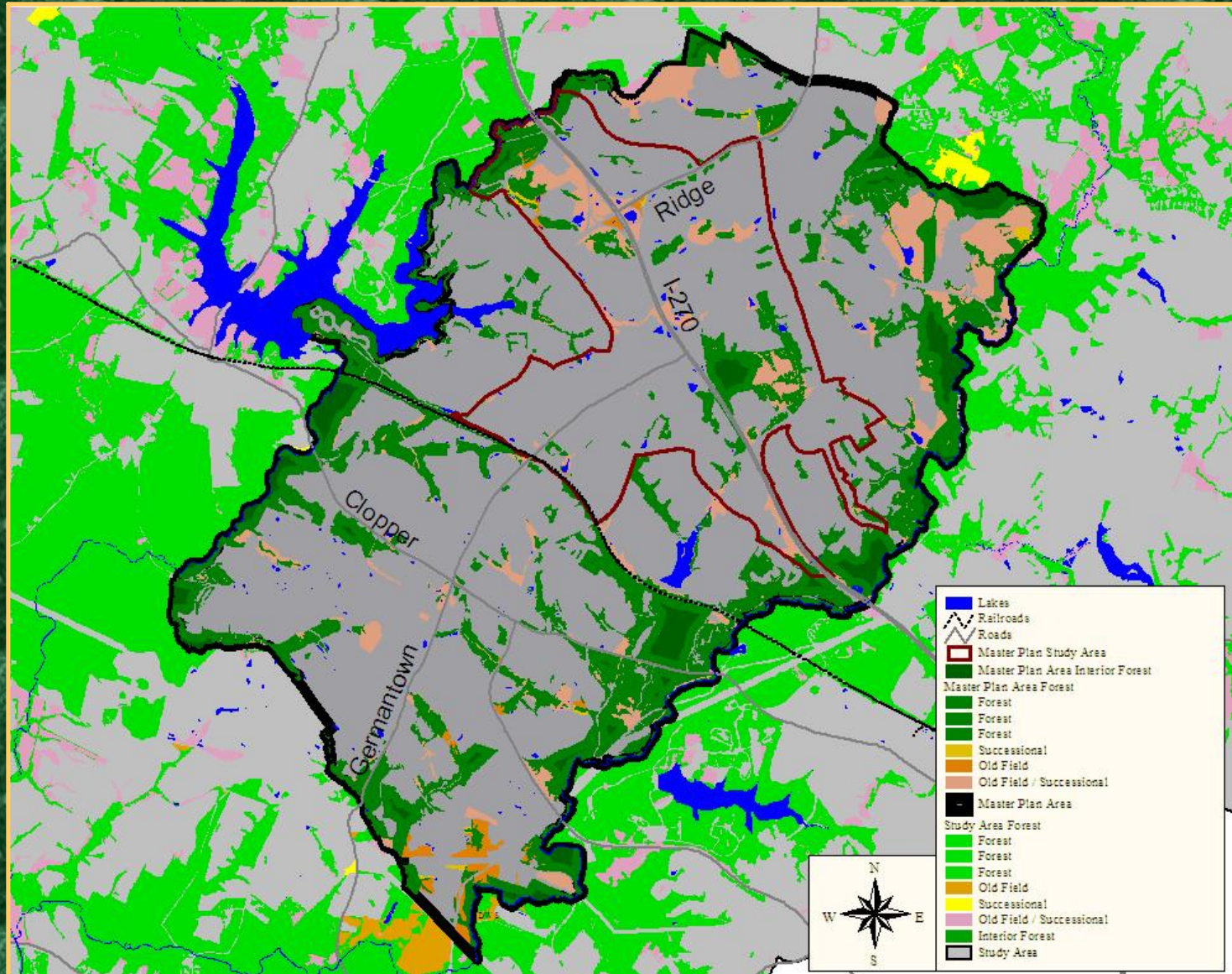
Air Quality

- D.C. Metropolitan area is non-compliant with EPA standards for ground-level ozone and very small particulate matter.
- Ozone
 - $\text{VOC} + \text{NO}_x + \text{sunlight} \rightarrow \text{O}_3$
- Particulates
 - Soot, dust, dirt, smoke, and liquid droplets that have the ability to suspend in the air for long periods of time
- Both harmful to health

Noise

- Vehicular
 - Large volumes of vehicles traveling at high speeds or encountering many stops and starts along all roads
 - Highest levels are along I-270 and all arterial and primary roads
- Railway
 - CSX railway bisects planning area
 - By the trains themselves (whistles, cars on rail, and locomotives)
 - By industries associated with the railroad

Forest Map



Forest Facts

- Approximately 2,574 acres of forest, roughly 24% of 1989 Master Plan area
- Approximately 260 acres of interior forest
- 55% of remaining forest occurs in current parkland
- Deciduous most common forest type; coniferous, mixed and successional also occur
- 746 acres of Old Field/Successional - important for forest regeneration

What is a wetland?

An area that is regularly saturated by surface water or groundwater and is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions.



Types of Wetlands



Assessing Wetland Functions

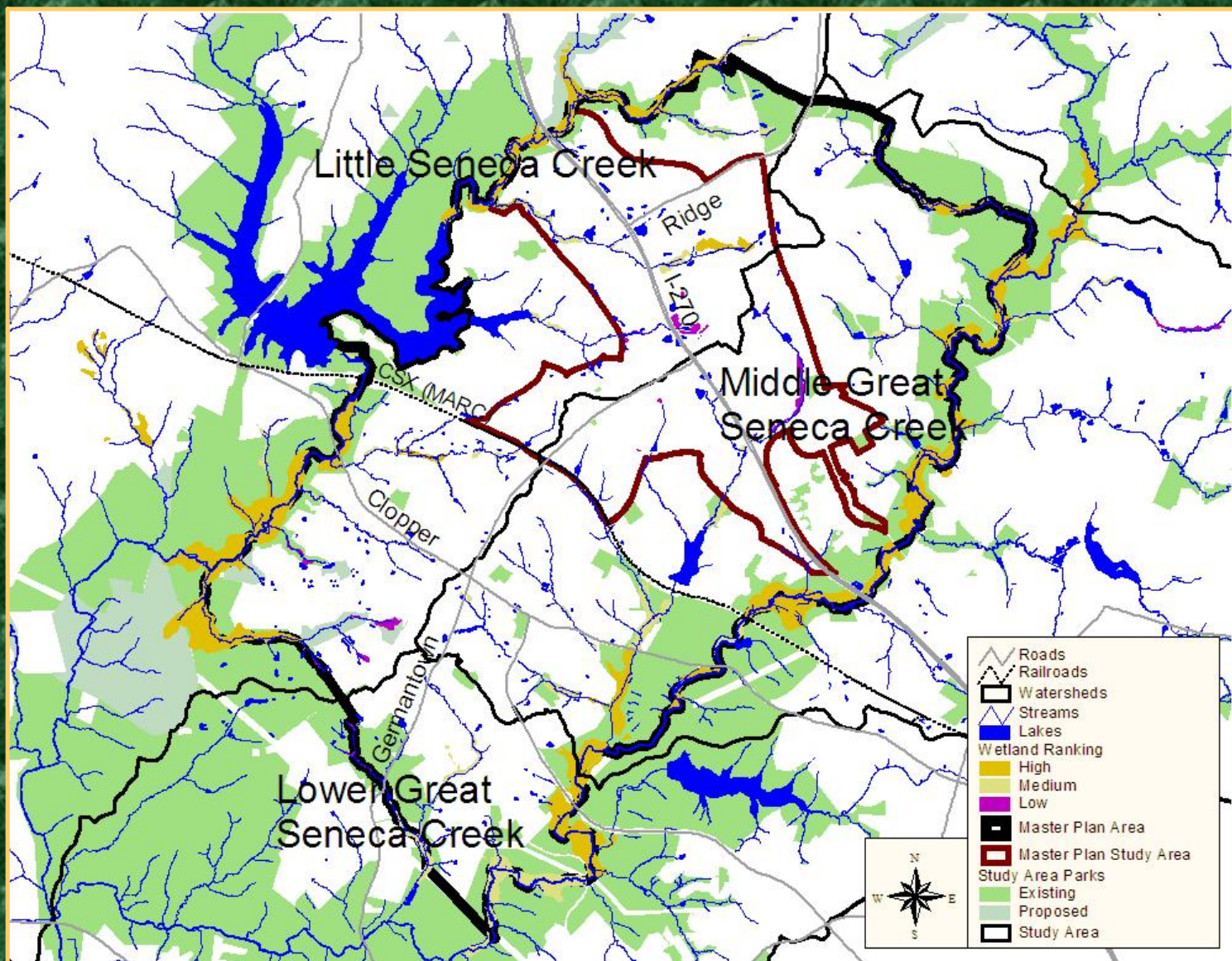
Compares and ranks the functional value of wetland types



Assessment Evaluates:

1. Groundwater recharge and discharge
2. Flood attenuation
3. Nutrient removal and sediment retention
4. Aquatic habitat
5. Wildlife habitat and diversity

Wetland Assessment Ranking

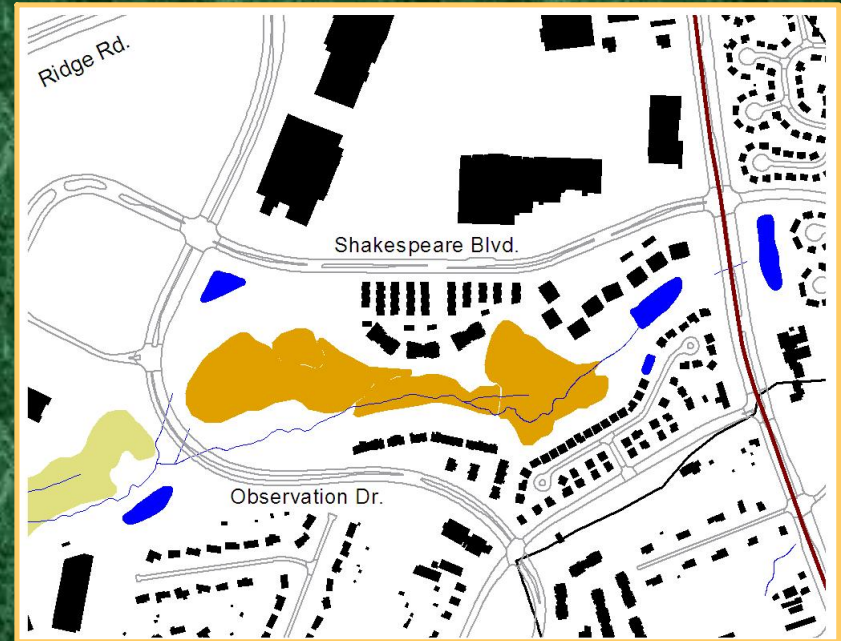
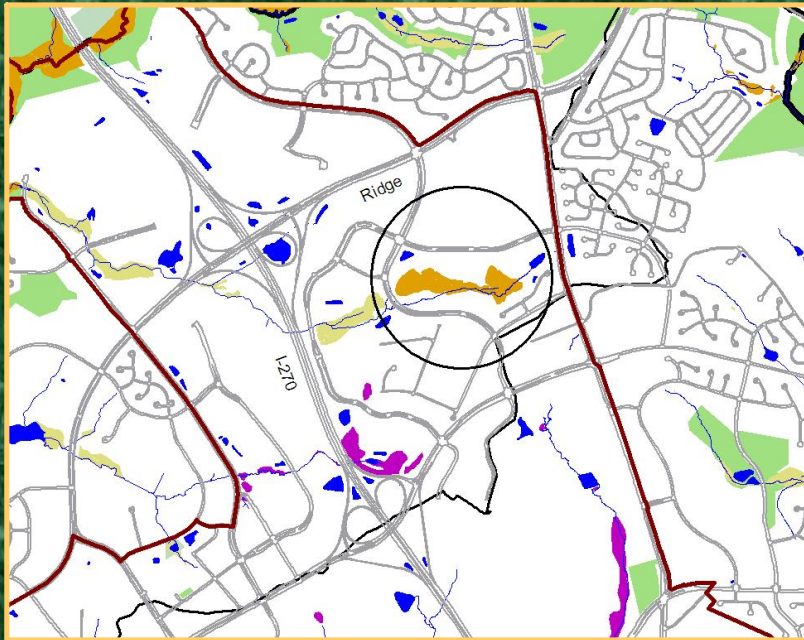


Germantown Bog:

A Wetland of Special State Concern

Threatened Species:

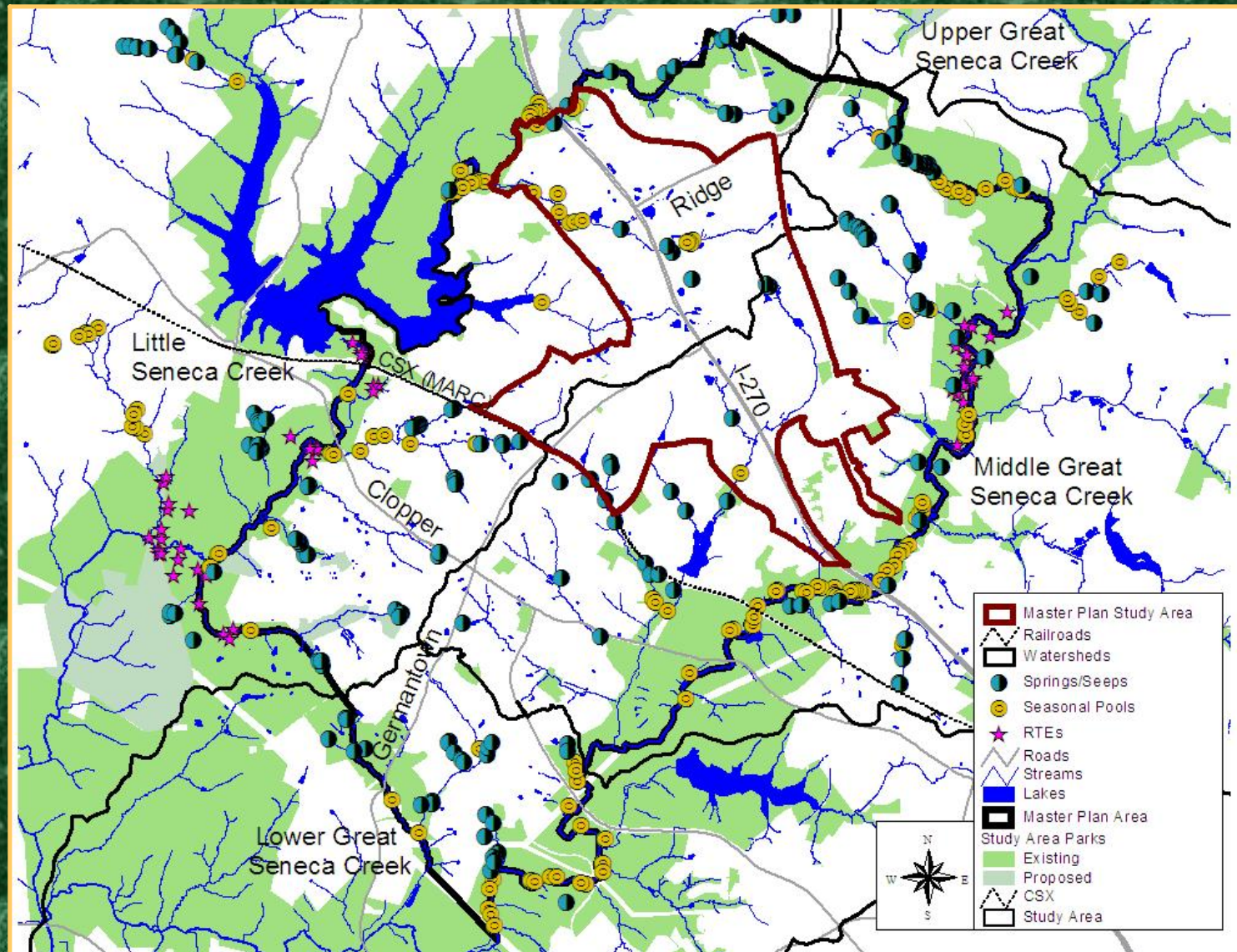
- Canada Burnet (*Sanquisorba canadensis*)
- Buxbaum's Sedge (*Carex buxbaumii*)
- Swamp Oats (*Tristeum pensylvanicum*)



Germantown Bog



Special Features



Environmental Planning

- Identify important resources that may be affected by new development or redevelopment
- Work with team to create a range of alternatives and their potential impact
- Determine how best to protect and restore natural resources

Environmental Sustainability

- Promote transit and increase transportation choices – shuttles, metro, walking, biking – to reduce auto use and improve air quality
- Concentrate parking and provide pedestrian friendly green center
- Increase green area and plant trees
- Improve water quality with better controls on stormwater in areas of redevelopment
- Plan location of uses based on noise sensitivity
- Provide incentives for renewable energy

Primary Environmental Concerns

- Emphasize the contribution of compact growth on environmental protection
- Avoid paved paths in wetlands and sensitive environmental areas
- Noise abatement is critical to the success of the Plan
- Supplement stormwater quality control through green building techniques