Environmental Features

of the Germantown Master Plan Area

Montgomery County Planning Department
Maryland-National Capital Park and Planning Commission
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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 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

- Emergent/Open Water
- Forested
- Scrub/Shrub
Assessing Wetland Functions

Assesses 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