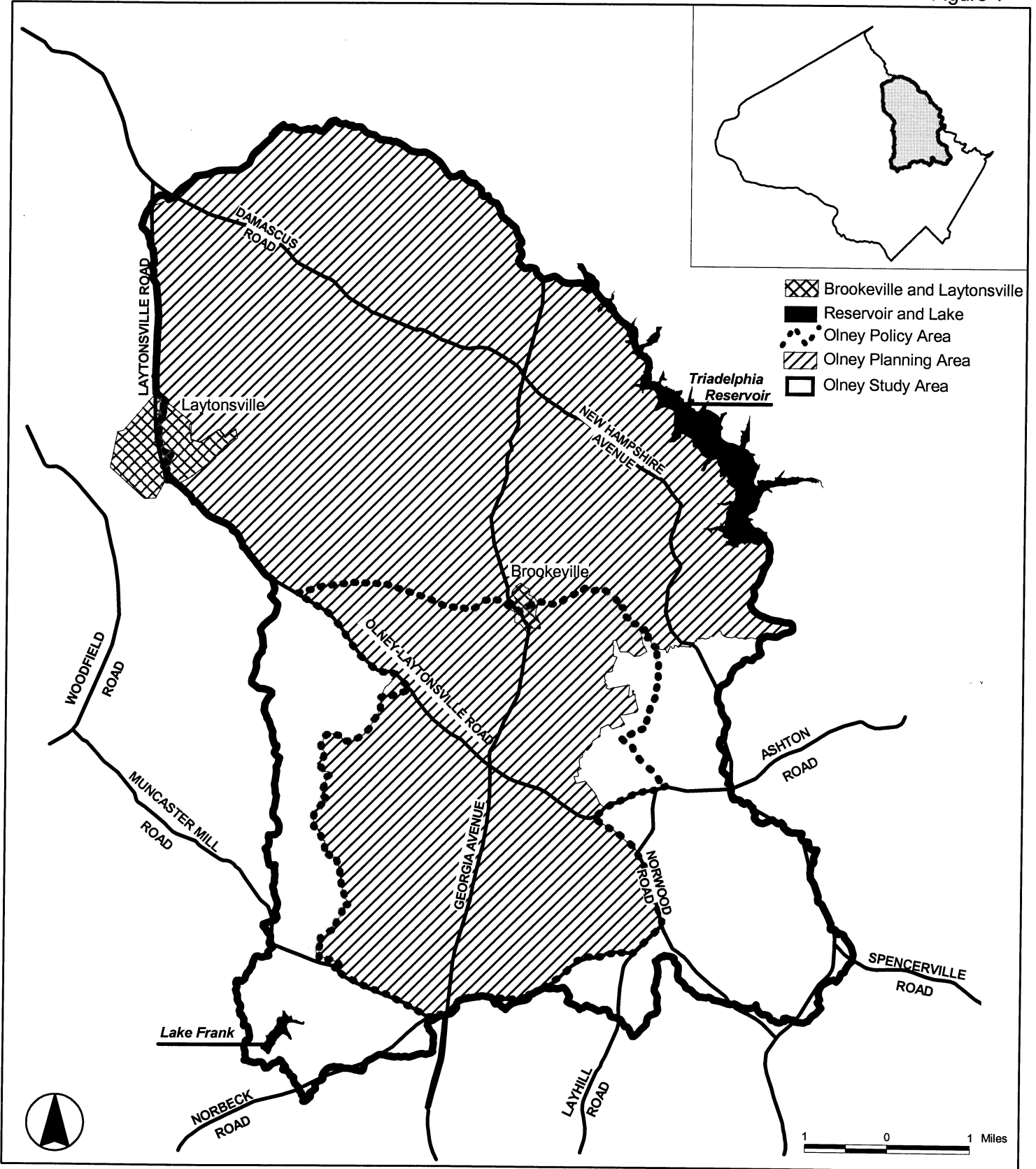


# Vicinity Map

Figure 1



## **Introduction and Executive Summary**

This environmental resources report provides an inventory of environmental conditions for Olney and vicinity and the policy context that applies to environmental resource protection. The report provides background information on the environment for the master planning process. That process, which follows the publication of this report, will develop environmental protection and management goals, objectives and recommendations specific to the Olney Planning Area.

### **Description of the Olney Study Area**

The Olney environmental study area is located in northern Montgomery County, Maryland. It is bounded approximately by the Patuxent River and Hipsley Mill Road to the north (near the intersection of Damascus Road and Laytonsville Road), Laytonsville Road and the North Branch of Rock Creek to the west, Norbeck Road to the south, and New Hampshire Avenue and the Patuxent River to the east. The study area encompasses 39,694 acres (62 square miles) which includes the entirety of the Olney Planning Area (29,772 acres) and the subwatershed area of tributary streams that are part of the planning area hydrology although they fall outside the planning area boundary (see Figures 1 and 2). The Olney Policy Area, which is the portion of the planning area with the highest development potential, encompasses approximately 11,000 acres and is also shown (see Figure 1).

This inventory uses a watershed and subwatershed approach to document the existing environmental conditions and health of the natural resources in Olney and its vicinity. The study area encompasses all or part of five watersheds: all of the Hawlings River watershed (18,069 acres) and parts of the Northwest Branch (6,502 acres), North Branch of Rock Creek (8,014 acres), Patuxent River (7,011 acres), and Great Seneca Creek (98 acres) watersheds (see Figure 2). Only a very small fraction of the Great Seneca Creek watershed lies within the study area. An assessment of the natural resources of the Seneca watershed is not included in this study.

The land uses in the study area range from medium density suburban residential and commercial uses in the

town center of Olney to low-density, rural, and agricultural uses in roughly the northern half of the study area. The town of Brookeville lies in the center of the study area. Public lands which provide protection of natural resources generally follow the various stream valleys, including the Patuxent River which forms the northeast border of Montgomery County.

### **Summary of Environmental Resources**

**Streams in the Olney study area are currently designated by the state of Maryland as high quality cold water habitats (either Use III or Use IV<sup>1</sup>).** Hawlings River and the portion of the Patuxent River watershed in the study area are also designated as Water Supply (P). According to the *County-wide Stream Protection Strategy* (DEP, 1998) report, subwatershed stream conditions where covered in the study area, range from excellent to poor. Subwatersheds in excellent condition exist in the relatively undeveloped, lower impervious portions of the study area. Those streams with poor conditions include Manor Run in the North Branch of Rock Creek, and upper James Creek, upper Olney Mill and upper Mt. Zion in the Hawlings River. They were mostly degraded by the effects of urbanization. The upper Mt. Zion tributary subwatershed has been affected by the Oaks Landfill.

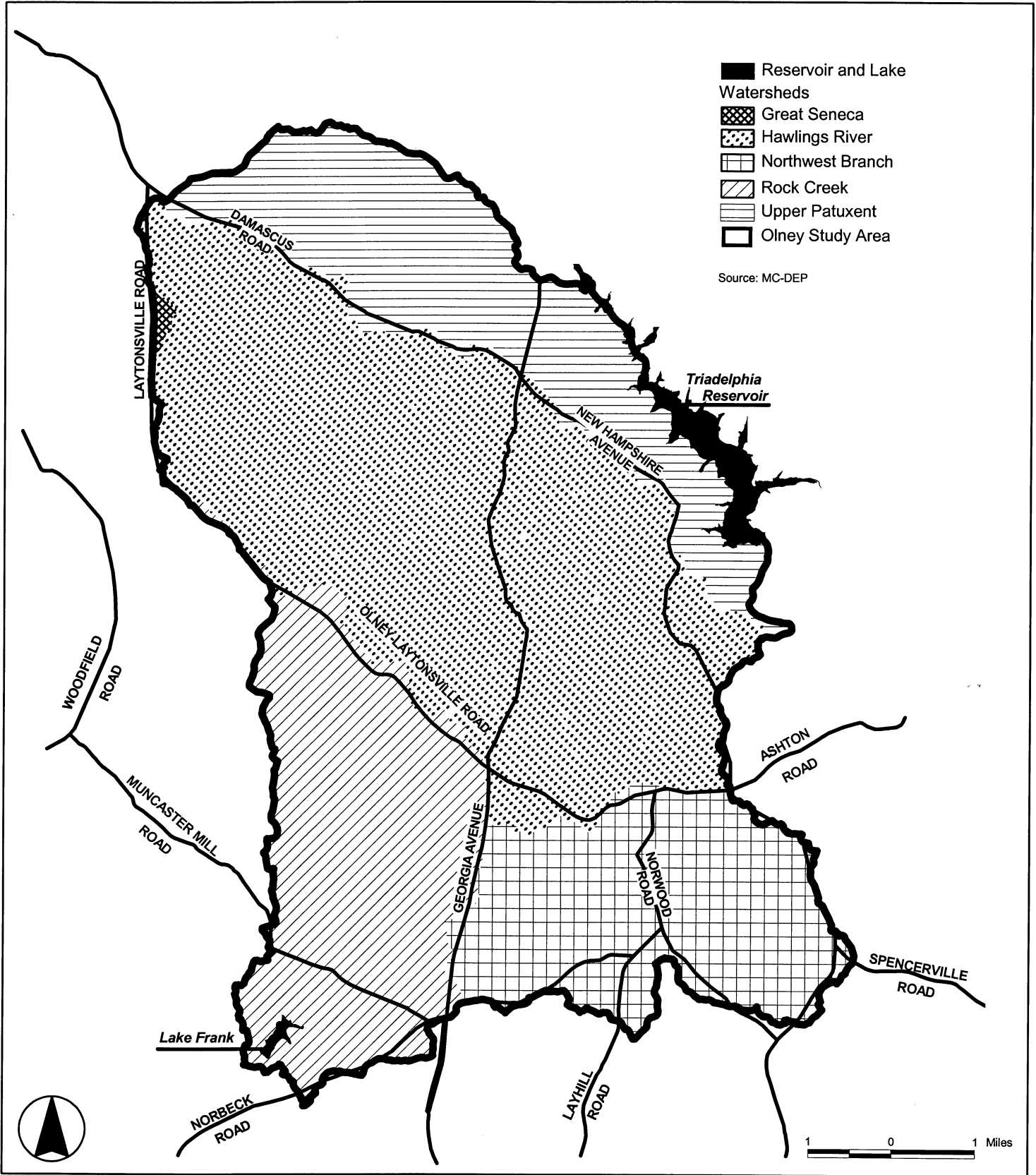
**Forests within the study area generally follow stream valleys, with significant upland habitat also occurring.** Many large blocks of contiguous forest that contain both stream valley and upland areas are present. These large blocks of contiguous forest are important habitat for forest interior dwelling animal and plant species, and are relatively rare in Montgomery County due to land development and agriculture. In some

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<sup>1</sup> State water use III designation includes waters which have the potential for, or are suitable for the growth and propagation of trout and are capable of supporting self-sustaining trout populations and their associated food organisms. State water use IV designation includes cold or warm waters which have the potential for or are capable of holding or supporting adult trout for put and take fishing; and are managed as a special fishery by periodic stocking and seasonal catching (COMAR § 26.08.01).

# Watersheds

Figure 2



instances, the quality of the forest contained in these areas is exceptionally high. They contain uncommon or rare species and exceptionally large individual trees in good condition. Significant upland forest habitat occurs along North Branch, Hawlings River, the Patuxent and along the Bachelors Forest tributaries to Northwest Branch. Where development has occurred, forests in many cases have been highly fragmented.

**Wetlands occur throughout the study area, generally along streams.** By far, the greatest amount of wetland occurs within the Patuxent and Hawlings River portions of the study area, however, several high quality wetlands are also present within parkland along North Branch. A variety of functions are performed by these wetlands, including provision of terrestrial and aquatic wildlife habitat, amelioration of flooding, filtering of stormwater, and provision of groundwater flow to surface streams.

**Agricultural land uses are concentrated in the northern half of the study area.** This is due in part to the inclusion of Olney in the early Rural Density Transfer (RDT) program which has resulted in a more compact development pattern around the town center and protection of agricultural land. Approximately 8,482 acres of pasture and crop land occupy 21 percent of the study area. Approximately 12 percent of these agricultural areas are in parkland.

**Lake Frank within the Rock Creek Regional Park and the Triadelphia Reservoir in the Patuxent River provide various benefits.** Both provide flood mitigation and sediment removal for upstream development and agriculture which do not have stormwater management controls. They also provide recreational opportunities, and the reservoirs provide regional water supply. Increased sediment deposition in Lake Frank is gradually decreasing its functionality for recreation. Periodic dredging or the creation and maintenance of a forebay will eventually be required to retain the recreational functions of the lake. Elevated nutrient levels, depressed dissolved oxygen concentrations and sediment deposition are affecting water quality in the reservoir.

**Natural resources in the study area receive varying levels of protection on public lands.** These public lands cover 7,070 acres of the study area; they include M-NCPPC and state of Maryland parklands, and WSSC properties that abut and protect the Patuxent River and the Triadelphia Reservoir. Wide bands of parkland exist along the stream valleys of the North Branch of Rock

Creek and the Hawlings River, and along the Patuxent River. The Reddy Branch of Hawlings and the mainstem of Northwest Branch are also protected in parkland. Protection of small headwater tributaries relies primarily on conservation areas set aside during the land development process.

**Air quality in the study area is similar to that found throughout the County.** Ground-level ozone is formed from a regional mixture of vehicle and industrial emissions, creating unhealthy ozone levels throughout the metropolitan area several days each summer.

**Noise is generated by roadway traffic.** Noise is created along main roads by high levels of traffic and distribution of roads throughout the area, especially within the policy area boundary.

**Water and sewer systems serve approximately two thirds of the area south of Brookeville and very limited portions of the study area north of Brookeville.** Water service is not currently planned for the northern half and significant portions of the southeastern quarter of the study area. Sewer service is available primarily to properties zoned higher density residential, commercial or industrial within the policy area boundary; it is not currently planned for the majority of the study area. Potable water is provided by WSSC from either the Patuxent water filtration plant (WFP) or the Potomac WFP. Sewer service is provided by the WSSC trunk lines along the mainstem of the North Branch of Rock Creek, and in limited areas of the Northwest Branch.

### Environmental Policy Framework

Many existing environmental laws, policies, and regulations affect planning for Olney and vicinity. This policy framework is reflected in the environmental goals and objectives of the General Plan Refinement. The federal, state and local framework helps identify resources to be protected and guides local decisions regarding land use planning and zoning as it affects the natural environment.

The identification and protection of sensitive areas are required by the state of Maryland Economic Growth, Resource Protection, and Planning Act of 1992. This environmental inventory report is designed to satisfy the requirements of the Planning Act's Sensitive Areas Element for Olney and vicinity.

Parkland and Agriculture

Figure 3

