

Regulatory and Policy Framework for Environmental Planning in the Potomac Subregion

Master planning attempts to balance appropriate land uses and zoning intensities with environmental protection goals adopted by federal, State and local government. Environmental assessments are conducted during the master planning process to assure that land use and density decisions are made with knowledge of sensitive environmental resources and potential impacts. While many environmental regulations and guidelines are applied at the time of subdivision or site plan, the master plan recommends appropriate zoning and development to allow the development process to proceed more smoothly. The process avoids conflicts between the natural environment and development where possible or addresses potential impacts when other goals are judged more important.

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The information in this chapter sets forth the environmental framework established by federal, State and local laws, regulations and policy by subject area (see Table 8 for a chronology of environmental policy and regulation). This framework is reflected in the *1993 General Plan Refinement* for Montgomery County in the chapter on Environment. (Figure 18 shows the legislative guidance within the *General Plan Refinement* goals.) The information on existing environmental conditions in Chapter 1, and in the data and mapping conducted as part of the environmental study support the master plan by providing the baseline information as it relates to the legislation and policies affecting the Potomac Subregion.

Water Quality Management

The need for protecting water resources is reflected in federal, State, and local laws as well as in regulations and guidelines. The County's numerous small streams and creeks flow into the main water supply resources (i.e., Potomac and Patuxent Rivers) and the Chesapeake Bay.

The State of Maryland and Montgomery County are national leaders in developing sound watershed management plans and policies.

The condition of water resources, including streams and wetlands, has been of primary environmental concern for the state of Maryland for at least the past twenty years (see Table 8). The quality of the Chesapeake Bay and its many tributaries have dramatically benefitted from environmental programs that reduce both point and some non-point sources of pollution. Clean-up of sewage plant discharges, removal of obstacles to fish passage, construction of stormwater management and stream enhancement projects have all contributed to improving water quality. At the same time, continuing increases in human population and development still create stresses on aquatic systems despite benefits that have been attained through the various water quality protection programs. Efforts in Montgomery County are coordinated with federal, State and regional programs to reduce the impact of new development and repair the impact of existing land uses and past development activity.

The Chesapeake Bay Agreement of 1983 is a commitment by the states of Maryland, Virginia, and Pennsylvania, and the District of Columbia, and the Environmental Protection Agency to restore and protect the Chesapeake Bay. In 1987 the same parties agreed to a 40 percent reduction of phosphorus and nitrogen loadings to the Bay. In 1992 the Bay partners agreed to develop "tributary strategies"—watershed based plans to reduce nitrogen and phosphorous entering the Bay. Maryland's tributary strategies are an addition to the historic Chesapeake Bay Agreement, to address the problems of excess nutrients and their impacts on the living resources. The Middle Potomac tributary strategy, includes urban watershed, agriculture, and wastewater/point source work groups. While no policies have been adopted that directly affect the Potomac Subregion, many approaches are being developed:

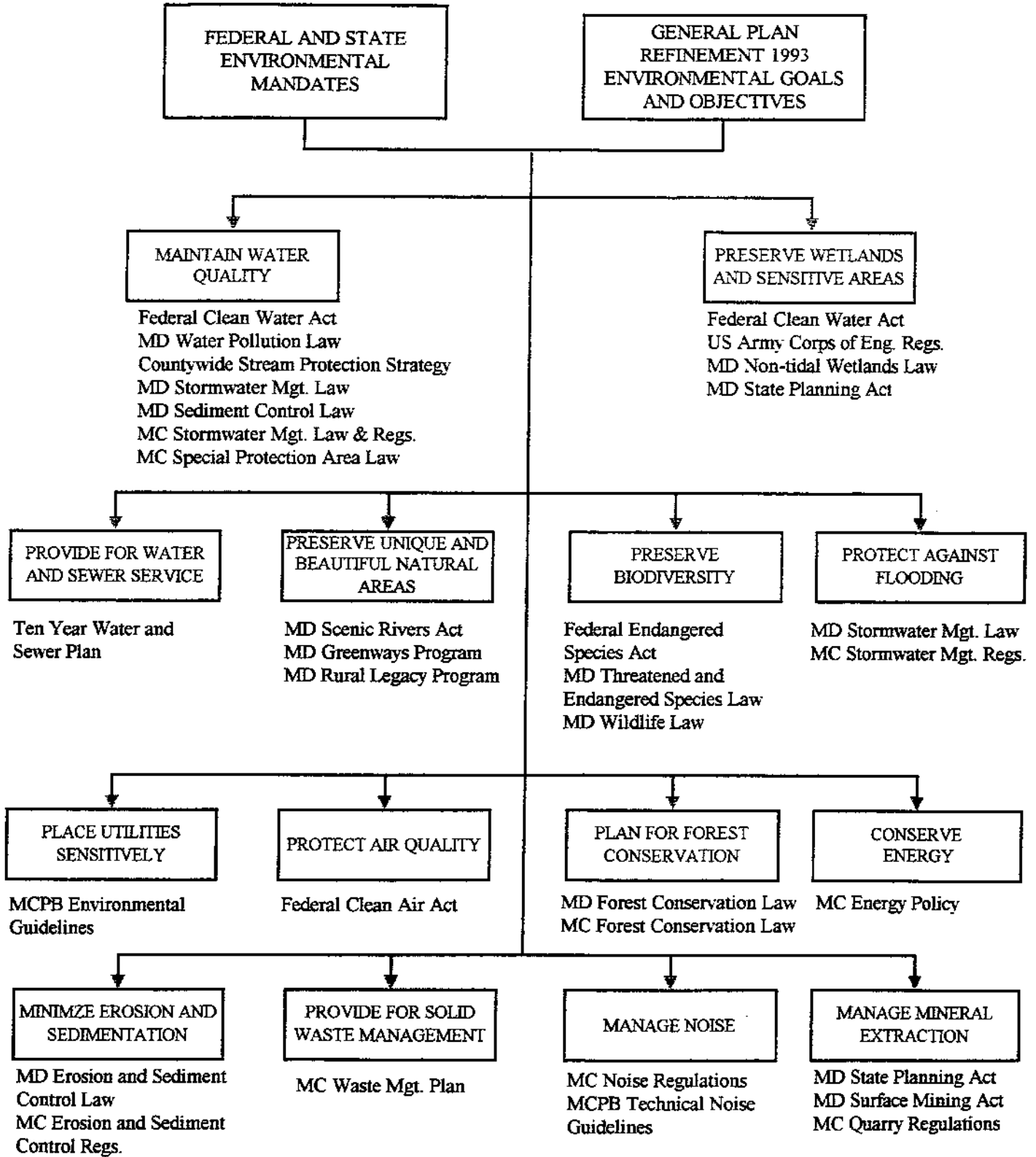
- Nutrient Trading
- Maryland's Smart Growth Initiative
- Total Maximum Daily Loadings (TMDLs)
- Pasture/Manure Management
- Riparian (stream) Buffers
- Education and outreach programs

Chronology of Environmental Policy and Regulatory Actions

Table 8

- The Federal Water Pollution Control Act of 1948 regulates dumping and disposal into navigable waters.
- The Water Quality Act of 1965 created ambient water quality standards for interstate waters.
- The Maryland Sediment Control Act of 1970 requires sediment control at construction sites and has been used to require stormwater management.
- The Maryland Environmental Policy Act of 1973 declares that State policy give the highest public priority to the protection, preservation, and enhancement of the State's diverse environment.
- The 1972 Federal Clean Water Act and 1977 and 1981 amendments, provide guidelines for preservation of fishable and swimmable waters of the U.S.
- The Chesapeake Bay Agreement of 1983 is a commitment by the states of Pennsylvania, Maryland, and Virginia, the District of Columbia, and the Environmental Protection Agency to restore and protect the Bay through correcting existing pollution problems and avoiding new ones.
- 1983 — Section 208 of the State Water Quality Management Plan by the State, in compliance with that section of the federal Clean Water Act.
- 1983 — Montgomery County issues stormwater management regulations for water quality and quantity control.
- 1983 — Montgomery County Planning Board approves stream buffer guidelines (updated in 1993) to protect stream valleys from physical development using environmental buffers and conservation easements.
- 1987 — The Chesapeake Bay Agreement of 1987 established a goal of reducing by 40 percent the nutrient input to the Chesapeake Bay.
- 1989 — The Maryland Non-Tidal Wetlands Act controls development in wetlands outside the tidal waters of the Chesapeake Bay.
- The State Planning Act of 1992, in which one of the seven visions given, states that stewardship of the Chesapeake Bay is to be considered a universal ethic. The planning act also requires implementation of the sensitive areas element, including 100-year floodplains, streams and their buffers, habitats of threatened and endangered species, and steep slopes.
- 1992 — The Chesapeake Bay Agreement requires a 40 percent reduction from the 1985 level in controllable nutrient loads of nitrogen and phosphorus to the Bay by the year 2000. The State initiates the tributary strategies program to customize nutrient reduction plans for different subwatersheds. Montgomery County has two tributary plans (Middle Potomac and Patuxent) that will focus on a combination of urban and agricultural non-point source best management practices (BMPs) to reduce pollution from runoff.
- 1992 — County Forest Conservation Law provides for tree preservation and planting in new developments; forest is protected with conservation easements.
- 1993 — General Plan Refinement contains fourteen environmental goals; three are protection and improvement of water quality; conservation of County waterways, wetlands, and sensitive parts of stream valleys; and comprehensive stormwater management to minimize sedimentation.
- 1994 — Special Protection Area (SPA) law requires certain developments to prepare a water quality plan and monitor the site before and after development to determine if the objectives of the water quality plan are met.
- 1995 — Montgomery County enacts regulations for special protection areas to implement the SPA law, including performance standards that are intended to maintain baseflow, wetland and aquatic habitat functions, and groundwater recharge.
- 1995 — Montgomery County Council designates the Piney Branch subwatershed of the Watts Branch a special protection area.
- 1996 — *Middle Potomac Tributary Strategies Annual Report* defines an intergovernmental approach to improving conditions in the Maryland portion of the middle Potomac watershed (includes parts of Montgomery, Prince George's and Frederick Counties). This report is updated annually.
- 1997 — Planning Board *Environmental Guidelines* revised to include a chapter on special protection areas.
- 1997 — *Countywide Stream Protection Strategy* assesses water quality conditions Countywide on a consistent biological basis, develops management categories, and prepares a list of priority subwatersheds that will be periodically updated.

Environmental Policy Sources To Guide Master Planning Figure 18



The Clean Water Act created the Total Maximum Daily Load (TMDL) approach to water quality management. The TMDL approach establishes a maximum limit for a pollutant or other quantifiable parameter which is causing water quality impairment in a specific subwatershed. Maryland is in the process of developing a TMDL program. Because the purpose and the process of the tributary strategies are identical to the purpose and the process of the TMDL approach, the tributary strategies will form the basis for the establishment of TMDLs for the Chesapeake Bay.

Although no loading limits have been set for the Potomac Subregion, Maryland Department of the Environment plans to require TMDLs for nutrients and suspended sediments in the Bay-wide TMDL. The master planning process will consider the State's initial findings when they are available. As of the date of this report, the schedule for application of TMDLs to the Potomac Subregion has not been finalized.

Montgomery County has aggressively pursued efforts to protect streams, rivers, wetlands and other directly related sensitive features. Montgomery County Code subsection 19-61 provides for the protection of a geographic area where existing water resources or other environmental features directly related to those water resources are of high quality and unusually sensitive and where the proposed land uses would threaten the quality of preservation. These areas, known as special protection areas (SPAs), are designated through area master plans, watershed plans, the *Comprehensive Water Supply and Sewerage System Plan*, or by resolution of the County Council. The County Executive and the Planning Board have implemented Executive Regulations and *Environmental Guidelines*, respectively, to implement the Special Protection Area law. In the Potomac Subregion, the Piney Branch watershed has been designated a special protection area by the County Council because of its high water quality and the potential for degradation by future development in the watershed.

Development projects on property in special protection areas undergo additional water quality review as part of the development process. A water quality plan is prepared to determine how specific water quality protection goals can be met through stormwater management and protection of environmental buffers around streams and wetlands. Water quality is monitored before and after the development to assess the extent to which the goals are met.

The *Countywide Stream Protection Strategy* (CSPS) was developed by the Montgomery County Department of Environmental Protection and M-NCPPC to provide an overall assessment of County stream conditions. The CSPS ranks Countywide stream conditions (excellent, good, fair, and poor) based on biological assessments. Prior to 1980, stream quality was analyzed based solely on chemical and physical parameters. Until the CSPS effort was undertaken, biological data was limited.

The CSPS assigns a management category that recognizes the sensitivity of the stream condition and the projected imperviousness levels, and determines the potential for maintaining that level. The CSPS identifies broad management goals for the preservation, protection, and restoration of streams, along with management tools that can be applied to effectively meet those goals. The CSPS helps agencies identify, target, and budget specific watershed-based resource protection initiatives, and serves as a useful technical tool. The CSPS also identifies priority subwatersheds where instability in the stream condition indicates that action is needed to address immediate problems.

The CSPS is a dynamic effort by the County to provide updated water quality information, management information and priorities. The document is planned to be updated once every five years, incorporating new data on stream conditions.

This report includes CSPS information available at the time of publication on stream conditions, management categories, and priorities. For the most current information, check the CSPS update.

Stormwater Management

The Department of Permitting Services administers the County's stormwater management regulations, as well as the sediment and erosion control regulations, to protect stream quality and downstream areas from the impacts of upstream development. All new development is required to submit plans complying with these regulations during the development review (subdivision) process.

Floodplain Management

Floodplain management includes a full range of tools, programs, and policies. County agencies have been working together to deal with some of the major problems associated with changes in watershed hydrology and stream impacts as a result of urbanization. To address severe flooding problems, the Department of Park and Planning, in concert with the Department of Permitting Services (DPS), restricts development and construction activity in the 100-year floodplain on major streams throughout the County. Additionally, the Department of Park and Planning has a nationally recognized stream valley park system that provides flood and stream quality protection and recreational use. Increased water flows and velocities during heavy storm events result from continued development in the watersheds. These increases are at least partially controlled through the County's stormwater management law and regulations. Decreases in stream base flow due to the replacement of groundwater recharge areas with impervious surfaces is also recognized as a serious problem.

Since the early 1990s, the DPS has been the designated lead agency for administering the County floodplain regulations and coordinating the National Flood Insurance Program (see Table 9).

The DPS is the County agency designated to receive and act on proposals for encroachments in floodplains. DPS requires localized flooding studies where necessary to determine the impact of a particular development on flooding, as well as to establish floodplain boundaries where no data exists. DPS also updates and maintains floodplain data that originally is prepared by M-NCPPC.

The M-NCPPC and the Washington Suburban Sanitary Commission are the custodians of large multi-purpose dams in Montgomery County. The County's Department of Public Works and Transportation (DPWT) is responsible for managing State and County roads and responding to flooding issues at road crossings.

On-site sewerage systems are prohibited in the 100-year floodplain by County and State regulations administered by the Department of Permitting Services.

Mineral Resources

Recognizing that mineral resources are non-renewable, the State of Maryland has directed local governments to address the protection of potential extraction sites. Article 66B of the Annotated Code of Maryland is the source of authority for mineral resources planning for local jurisdictions. "The mineral resource plan element shall be incorporated in any new plan adopted after July 1, 1986, for all or any part of a jurisdiction . . . containing at a minimum; identification of undeveloped land with known mineral resources, a post-excavation land use plan, and a balance of mineral resource extraction with other land uses so as not to preempt mineral resources extraction. This element should be reviewed by the Department of the Environment for consistency with the goals of the State."

In response, Montgomery County has developed a floating Mineral Resource Zone, designed to be used in areas that are known to have deposits but are not yet developed and have the potential for future extraction. However, it is unlikely that any of the Potomac area quarries will expand their operations to neighboring properties. In the case of the three small quarries in the Cabin John Creek watershed, they were surrounded by residential properties, parkland, roads, and institutional uses long before the adoption of the State planning requirements.

In 1992, the Montgomery County Council adopted a comprehensive revision of the Quarry Ordinance (Chapter 38, MCC). More restrictive than the State Surface Mining law, it requires licensing for all quarry operations and regulates issues such as noise, air quality, water quality,

blasting, setbacks, hours of operation, and truck traffic. Part of the requirements of both State and local government for quarries is a reclamation plan. This typically includes stabilization of slopes, restoration of a hydrologic regime and plans for possible reuse.

Floodplain and Stormwater Management Responsibilities Table 9

RESPONSIBILITY	AGENCY
Evaluation of impact of land use changes as part of master plan effort	M-NCPPC
Delineation of floodplain	DPS, M-NCPPC
Park development planning, stream valley acquisition (including floodplains)	M-NCPPC
Protection of floodplains in proposed subdivision site plans, zoning map amendments, urban redevelopment	M-NCPPC, DPS, DPWT
Maintenance of large multi-purpose dams	M-NCPPC, WSSC
Maintenance of small stormwater management structures	M-NCPPC, DEP, HOA
Review of encroachment applications and detailed floodplain analyses and floodplain regulations	DPS
Flood insurance program	FEMA, MDE, DPS
Health Regulations	DPS, MDE
Review of sediment control and stormwater management plans	DPS
Overall program for approval, operation, and maintenance of stormwater management facilities. (Treatment and control of stormwater runoff from developed areas into stream valleys, including floodplains.)	DPS, DEP

- M-NCPPC — Maryland-National Capital Park and Planning Commission
- DEP — Department of Environmental Protection
- DPS — Department of Permitting Services
- DPWT — Department of Public Works & Transportation
- WSSC — Washington Suburban Sanitary Commission
- MDE — Maryland Department of the Environment
- FEMA — Federal Emergency Management Agency
- HOA — Homeowners Association

State Smart Growth Initiatives

The Maryland Economic Development, Resource Protection, and Planning Act of 1992 ("Planning Act of 1992") requires comprehensive plans prepared by local governments to include the following seven "visions" designed to encourage economic growth, limit sprawl development, and protect natural resources:

1. Development is concentrated in suitable areas.
2. Sensitive areas are protected.
3. In rural areas, growth is directed to existing population centers and resource areas are protected.
4. Stewardship of the Chesapeake Bay and the land is a universal ethic.
5. Conservation of resources, including a reduction in resource consumption, is practiced.
6. To assure the achievement of 1 through 5 above, economic growth is encouraged and regulatory mechanisms are streamlined.
7. Funding mechanisms are addressed to achieve these visions.

In Montgomery County, the *General Plan Refinement* (1992) has been accepted by the State as meeting this requirement.

To strengthen these policies to support development targeted to areas of the State with existing infrastructure, the Maryland legislature recently enacted a series of laws to encourage smart growth and neighborhood conservation. This legislative package includes incentives for workers to relocate near their places of work, a job creation tax credit for small businesses in Smart Growth Areas, incentives to clean up and redevelop contaminated brownfields sites, and funding for acquisition of land to protect the State's rural legacy.

The most important new policy established under the Smart Growth umbrella is the requirement that State money for infrastructure be directed to existing towns and cities and other designated Smart Growth areas. The State is attempting to reverse the subsidy of sprawl by targeting highway, water, sewer, and other building and infrastructure funds to existing developed areas that already have the transportation, housing, and infrastructure capacity to support increased use. This program does not limit where counties can allow development, but it does prevent the use of State taxpayer dollars to support development in inappropriate areas.

Within Montgomery County, all areas within the Capital Beltway (I-495) are automatically designated as Smart Growth priority funding areas. In 1998 the County will designate additional priority funding areas that meet State requirements for sewer service, planned density, and access

to existing infrastructure. Parts of the Potomac area will likely be included in these final Smart Growth areas. The Potomac master planning process will be coordinated with the Smart Growth area designation process to ensure that appropriate areas are included as priority funding areas.

Sensitive Areas Protection and Biodiversity

The Planning Act of 1992 establishes criteria that must be included in local government comprehensive plans such as Montgomery County's General Plan. Among the criteria to be incorporated are the Seven Visions for the State and the preparation of a "Sensitive Areas" element.

Implementation of the Sensitive Areas element is intended to protect streams and their buffers, one-hundred year floodplains, steep slopes, and the habitats of threatened or endangered species, as well as any particular resource the locality deems appropriate.

Of the environmental goals, objectives, and strategies developed for the General Plan in response to the Seven Visions, Objectives 2, 4, and 6 particularly relate to the protection of environmentally sensitive areas:

Objective 2: Preserve natural areas and features that are ecologically unusual, environmentally sensitive, or possess outstanding natural beauty.

Objective 4: Conserve County waterways, wetlands, and sensitive parts of stream valleys to minimize flooding, pollution, sedimentation, and damage to the ecology and to preserve natural beauty and open space.

Objective 6: Preserve and enhance a diversity of plant and animal species in self-sustaining concentrations.

Local area master plans such as the Potomac Master Plan "are adopted as amendments to the General Plan" and "are expected to conform to the General Plan" (General Plan Refinement, Goals and Objectives, 1993). To reflect the priorities established in the Planning Act and the General Plan, master plans consider the presence and amount of sensitive areas in their land use proposals. One approach to protecting sensitive areas is direct acquisition and conservation as parkland.

Another approach to identifying and managing sensitive areas is to incorporate their protection within proposed site plans for residential, commercial, and industrial development. During the development review process the *Environmental Guidelines* for Development are applied to each development proposal. These guidelines recommend specific protection measures for sensitive areas such as

establishing undisturbed stream buffers, protecting wetlands and establishing wetland buffers, maintaining areas of steep slopes and highly erodible soils, conserving trees within development sites and implementing County stormwater management and sediment/erosion control standards.

In addition to protection provided by the guidelines, wetlands in Montgomery County are regulated by federal and State statutes. Federal regulation of wetlands was established through Section 404 of the Clean Water Act and subsequent court cases defining wetlands as "waters of the U.S." In Maryland, federal and State environmental agencies share responsibility for issuing or denying permits to dredge, fill or otherwise disturb wetlands. The proposed disturbance also must meet the more stringent requirements of the Maryland Non-tidal Wetlands Act. This act established a minimum 25 foot buffer between the edge of the an area disturbed by construction and the wetland boundary. The Maryland Department of the Environment also administers State wetlands and water quality certification permits.

Federal and State environmental agencies also assist Montgomery County with wetland functional assessment studies, review of environmental and land use information contained within master plans, and regulatory review of proposed development. The Potomac Subregion Wetland Functional Assessment Study, recently completed by M-NCPPC and EA Engineering, Science & Technology, represents a cooperative effort by local and State government to develop a simple, field-based wetland assessment method and to use the method within the subwatersheds in Potomac. The method evaluates wetlands for five functions: groundwater discharge, flood attenuation, sediment/nutrient retention, aquatic habitat, and wildlife habitat (see Appendix for a detailed discussion of the methodology).

Preservation of habitats of endangered species is also required by State and federal law. For several years the M-NCPPC has contracted with the Maryland Department of Natural Resources, Wildlife and Heritage Division, to conduct surveys for rare, threatened, and endangered species and high-quality native habitats on selected parklands in Montgomery County. The result of these surveys has been the identification of six areas on parkland in the Potomac Subregion which contain rare, threatened, or endangered species. Surveys by M-NCPPC have identified additional areas containing rare, threatened or endangered species on park property.

Determinations regarding which species are rare, threatened, or endangered may be made either by the U.S. Fish and Wildlife Service (federal RTE species) or the Maryland Department of Natural Resources Heritage and Biodiversity Conservation Program (State RTE species). The State list includes "watchlist" species which, although not officially listed as endangered or threatened, have been

identified as species in need of conservation due to declining or restricted populations.

Concern over the decline and disappearance of rare, threatened, and endangered species of plants and animals is part of a broader concern for the preservation of biological diversity.

Biological diversity encompasses the variety of living species, variations within species, and the variable composition of biological communities. Biological diversity can be examined at different levels of organization, including genetic, species, ecosystem, and landscape scales (Scott *et al.*, 1993).

Good biological diversity is believed to contribute to ecosystem stability, provides the genetic raw material to adapt to changing environmental conditions, preserves natural resources for potentially valuable future uses, and enhances the quality of life for many County residents. In addition, planning for the preservation of biological diversity now may help preclude the need to undertake expensive and controversial endangered species restoration plans in the future.

In recent years, preservation of biological diversity has become a goal of governments and conservation organizations. Approaches to preservation of biodiversity include the identification and acquisition of unique or representative natural communities by public agencies or private foundations; identification and protection of unique or representative natural communities on existing public lands, and land-use planning which recognizes the value of biological diversity.

Forest Conservation

Forest conservation helps retain the natural beauty of the community and protects dependent ecosystems. Trees cleanse the air and water runoff, provide shade to ameliorate summer temperatures, and provide cover and food for a variety of wildlife. Since 1992, Montgomery County has been requiring forest conservation as part of applications for land disturbance and development. The County Forest Conservation law is required by and modeled after the Maryland Forest Conservation Act of 1991. Forest conservation recognizes the benefits of forest and trees in our increasingly urbanized environment and requires preservation and reforestation as part of the development process.

Guidance for the planting of street trees, establishment of new forests, and protection of existing forests during the area master planning process comes from the *General Plan Refinement Goals and Objectives*, approved and adopted in 1993. Specifically, Strategy F under Objective 4 is to "plant and retain trees and other vegetation near streams" and

Strategy E under Objective 6 is to “minimize forest fragmentation to protect habitat continuity.” Objective 8, which is to “increase and conserve the County’s forests and trees” applies to forest and tree conservation. Strategies under Objective 8 are:

- Identify and designate forest preservation and tree planting areas.
- Ensure forest land conservation, tree planting, and related maintenance in all new development.
- Provide for increased tree cover and maintenance in urban and suburban areas and along transportation rights-of-way.
- Encourage private and public landowners to protect existing trees and to plant additional environmentally appropriate and native trees on their properties.

Preservation of urban forest and trees often is intended to meet the needs of people as much as the environment. Frequently woods in developed areas are isolated, invaded by exotic vegetation, and in poor health. Some individual trees are worthy of preservation, but they can be difficult to save given site and layout constraints. The forest conservation law encourages retention of existing trees wherever possible, as well as appropriate maintenance to keep them viable. Street trees, which enhance neighborhoods and buffer road noise, are an important part of the urban landscape.

Air Quality Policies and Regulations

Air quality improvement is a regional effort. The entire Washington Metropolitan Statistical Area, which includes all Montgomery County, falls into the serious classification for ozone. The Environmental Protection Agency (EPA) requires attainment of the federal standard by 1999. The Metropolitan Washington Air Quality Committee is responsible for approval of the air pollution control measures to be implemented by the region and for preparing the region’s air quality plans.

Although there are various forms of air pollution, the major health concern in this region is ozone. Ozone is formed in the lower atmosphere when nitrogen oxides (NOx) and volatile organic compounds (VOC) react in the presence of sunlight and heat. Factors affecting ozone formation include pollutant concentrations in the air, wind velocity, temperature, and sunlight. Ozone typically forms on hot, sunny, windless days. Adverse impacts of ozone

include vegetation damage and health effects such as coughing and chest pains, irritation of the eyes and throat, breathing difficulties, and greater susceptibility to infection.

Control measures target two sources of NOx and VOC: mobile and stationary sources. Mobile sources are generally internal combustion engines in on-road vehicles. Stationary sources cover a wide range of structures such as smoke stacks and gaseous industrial exhaust. Other contributors are lawn and garden equipment, varnishes and solvents.

In July 1997, EPA adopted more stringent standards for acceptable ozone levels. While these new standards could make it more difficult for the Washington region to meet ozone reduction goals, EPA will allow up to the year 2010 to achieve them. In the interim, EPA continues to require the region to attain current ozone standards by 1999.

In addition, EPA has adopted new standards to control very small (2.5 microns or less) atmospheric particulates. These are some of the most damaging to human health because they penetrate and remain in the deepest passages of the lungs. The main offenders in this area are industrial and residential combustion and diesel fuel exhaust. It will take several years to monitor these particulates to determine whether the Washington region will be in non-attainment for this pollutant. If designated non-attainment, the region will have until at least the year 2012 to achieve the standards for very small particulates.

To achieve air quality attainment goals, development needs to concentrate in areas served by public infrastructure and transit as stated in the General Plan. Other policies include promotion of transit, trip mitigation measures, cluster and mixed use development, carpool lanes, etc. The main approach used in master planning is to reinforce and implement the General Plan by emphasizing access to transit, bikeways, and sidewalks.

Noise Regulation

In Montgomery County, local government agencies have the authority to control the effects of two generalized sources of noise: stationary sources which affect nearby properties; and mobile (i.e., transportation-related) sources emanating from public linear rights-of-way. The Montgomery County Noise Ordinance regulates stationary noise sources from private property such as heating and air conditioning units, construction activity, and neighborhood noise disturbances. The Noise Ordinance is administered by the Montgomery County Department of Environmental Protection, Office of Environmental Policy and Compliance. The Noise Ordinance sets maximum permissible decibel limits based on land use and time of day. Violations of this ordinance are punishable by law.

recommendations to the Planning Board on reducing mobile source impacts on sensitive receptors. This document was developed to assure consistency in master plan and regulatory review recommendations on noise compatibility, and to promote greater understanding of noise compatible site design. Unlike the regulations in the county Noise Ordinance, the staff noise guidelines are intended to be considered proactively as an integral part of the land use planning and regulatory review process, and are tailored to be consistent yet flexible to allow a balanced achievement of all significant land use and site design objectives.

The staff noise guidelines include reasonable noise level goals for the entire County, ranging from a maximum acceptable noise ceiling of 65 dBA, to a goal of 55 dBA to protect the peaceful rural environment in estate and agricultural areas. Along freeways and within the urban core (principally high density areas within and just outside the Capital Beltway (I-495)), a noise guideline of 65 dBA was determined to be achievable and appropriate given the high ambient noise levels, and traffic volumes. In the suburban "ring" around the urban core, a 60 dBA level was determined to be an achievable goal given lower ambient levels and greater opportunity for cost-effective noise mitigation. In the rural areas of the County where ambient noise levels are much lower and lot sizes are larger, the 55 dBA level guideline is applied.

To achieve these goals, the guidelines identify several measures to reduce traffic noise problems for affected properties, which include:

- Noise compatible land use (typically done at master plan or rezoning)
- Noise compatible site design, distancing sensitive uses/receptors from the source
- Blocking the path from source to receiver
- Acoustical treatment of buildings

These measures are typically applied at one of two opportunities. The first is the master plan process. The master plan identifies where noise impacts may occur and examines potential options for noise compatible land uses, or alternatively, suggests zoning categories that allow sensitive land uses (residential) to be clustered, set back or otherwise buffered from high noise levels. The second opportunity is during the regulatory review process when noise mitigation techniques can be applied to individual properties undergoing staff review.

Water Supply and Sewerage

The *Montgomery County Comprehensive Water Supply and Sewerage Systems Plan* governs the provision of water and sewer service throughout the County. The goal of the plan is to systematically extend water and sewerage systems in concert with other public facilities along the corridors as defined in the General Plan, to accommodate growth only in areas indicated by adopted master or sector plans. In addition, the Water and Sewerage Systems Plan considers other adopted or proposed policies of various agencies affecting land use, including guidelines for the administration of the Adequate Public Facilities Ordinance.

For all properties in the County, the plan designates one of six water and/or sewer staging categories that are primarily based on master plan development staging strategies and/or capital program infrastructure staging. The authority to adopt and amend the Water and Sewerage Systems Plan resides with the County Council. The County Executive administers the plan through MCDEP in cooperation with M-NCPPC and WSSC.

The approved and adopted *Master Plan for the Potomac Subregion, May 1980* envisions sewer service within the master planning area to be expanded based on a staging sequence. Presently, most of the master planning area designated as sewer stages I, II, and III have or are approved to receive community sewer service (see Figure 7). This generally includes areas with zoning densities R-200 and greater, as well as RE-1, RE-2C and RE-2. The intent of the Master Plan was to allow stages I, II, and III to develop first and use available capacity within the conveyance system and at the Blue Plains treatment plant. The remainder of Potomac was designated as sewer stage IV, the last stage to be opened to development using community sewer service. The Master Plan anticipated that stage IV would use any remaining capacity within the system if it could be served by logical, economical, and environmentally acceptable extensions from the sewerage system serving stages I, II, and III properties. The Potomac Master Plan is one of two master plans⁶ in the County that recommends community sewer service to the RE-2 Zone. This recommendation represents a substantial departure from the Water and Sewer Plan's general policies for the provision of community service throughout the County.

The 1980 Potomac Master Plan recommends comprehensive water and sewer service area map amendments for the Water and Sewer Plan that will place properties in the appropriate service area categories

⁶The approved and adopted *Fairland Master Plan* designates a portion of Fairland Recreation Park that is zoned RE-2 for sewer service in order to serve park facilities.

consistent with the policies of the Water and Sewer Plan and the recommendations of the Master Plan. The 1980 Master Plan makes no such recommendations and instead relies on sewer staging. Properties that require immediate community water and sewer service must be in categories S(Sewer) 1 or 3, and W(Water) 1 or 3, indicating the highest priorities for community service, to proceed with the development process. (Category 2 is not used in Montgomery County.) Categories 4 and 5 represent areas that will receive community service in the next four through ten year period, indicating a need for major service

extensions or capital improvements. Categories W6 and S6 represent areas where there is no planned service.

To minimize the effects of development on the Piney Branch stream system, the County Council has adopted the Piney Branch Sewer Restricted Access Policy as an amendment to the Water and Sewer Plan. This policy restricts the ability of properties in the Piney Branch Watershed to connect to the sewer. For details of this policy, refer to the Appendix.