

ENVIRONMENTAL PLAN

ENVIRONMENTAL OBJECTIVES

Improve Wheaton's natural environment by reducing pollution and keeping Wheaton clean and green.

- Reduce air pollution in Wheaton.
- Improve water quality in Wheaton Branch and Sligo Creek.
- Reduce noise and create areas of quiet.

In an urban setting, which provides for the shelter, convenience, and commerce of people, the role of environmental planning is to mitigate the undesirable consequences of development to the maximum extent feasible. This applies, in particular, to the negative impacts on the environment in the form of air pollution, noise, and water pollution.

AIR QUALITY

In 1970, Congress set air quality standards that were to be met in five years. However, in 1977, the deadline for compliance with the standards was extended to the end of 1987. The requirements, known as the National Ambient Air Quality Standards (NAAQS), were established for six pollutants. Like many other communities throughout the nation, the Washington Metropolitan Area failed to achieve compliance by the most recent deadline for two of the pollutants, ozone and carbon monoxide.

Ozone, which provides a protective layer in the upper atmosphere from the harmful rays of the sun, is a pollutant at lower altitudes. Too much ozone at ground level can impair the human respiratory system and damage crops, forests, and other components of the ecosystem. Similarly, carbon monoxide can cause major respiratory and pulmonary impairments.

Ozone is formed by the photochemical reaction of sunlight and nitrogen oxides and hydrocarbons. The major source of these ozone precursors in the Washington area is motor vehicle emissions. Motor vehicles are also the major source of carbon monoxide on the national scale. In addition to auto emissions, other sources of pollutants that form ozone are gasoline vapors that escape from pumping gasoline into automobile fuel tanks, dry cleaning fluids, and household products such as aerosols, deodorants, adhesives, paints, and other solvents.

The Clean Air Act authorizes the U.S. Environmental Protection Agency to penalize offenders by imposing construction bans or withholding federal funds for clean air, highway, and sewage treatment projects. It is considered unlikely that the sanctions will be imposed on communities that are making "good faith" efforts to comply with the national standards. In 1988, Congress extended a short grace period to non-compliant communities in order to develop a new enforcement strategy.

Local governments in the Washington area are faced with a compounded compliance problem. Not only must the region achieve compliance to avoid sanctions, but future growth and development must also be accommodated. To the extent that growth means additional miles traveled per day, then the gap between regional air quality and the NAAQS will broaden.

In 1982, the Council of Governments, in coordination with the states of Maryland and Virginia and the District of Columbia, developed a plan to demonstrate "good faith" effort to achieve the air quality standards by 1987. The plan identified a number of controls that were required to attain clean air, including a process known as "Stage II vapor recovery." The process involves the use of special underground holding tanks at gasoline stations which, when combined with nozzles affixed to the pumps, recycles gasoline vapors into the tanks and not into the atmosphere.

Despite major expenditures to control both stationary and mobile sources of hydrocarbon emissions, ozone levels in most urban areas have not been reduced nearly as much as anticipated. A sensible air quality compliance program needs the integrated efforts of the federal government, states, and localities to address the problems identified by COG. The program must focus on two areas: more stringent pollution control and reduction in energy consumption. Pollution from transportation can be cut significantly through a program combining these two components.

Local programs that cut the total number of vehicle miles traveled and improve traffic flow would help to reduce emissions. Communities could plan to reduce vehicle miles and traffic by redirecting residential and commercial development with the goal of moving closer to a "jobs-housing" balance. Such a program is currently implemented in Montgomery County through the Annual Growth Policy and appropriate master and sector plans.

This Plan mitigates future air pollution generation in two ways. First, if growth is to occur anywhere in the County, it has less overall impact in a relatively dense urban setting than it does if diffused throughout the County. Density permits shorter trips between work and home. It offers the potential for fewer vehicle miles traveled than would occur in a scattered pattern of jobs and housing. Fewer vehicle miles traveled in turn would decrease air pollution in the region. Second, the transportation element of this Plan promotes the use of transit and car pooling in almost every way possible. If necessary, the County policy is to limit the number of parking spaces in the CBD to ensure transit and car pooling goals.

NOISE

The other term for noise is sound pollution. Long exposure to excessive noise can lead to health problems as surely as air pollution. The principal cause of noise problems is moving vehicles, including cars, trucks, and trains. Whether the cause of the sound is from air rushing around the moving object or from engine noise, the resulting irritation is proportional to the volume of the noise. In more suburban locations, noise attenuation measures would include physical barriers between the source of the noise and the development. However, solutions such as this may be inappropriate to the urban environment.

STORMWATER AND SEWER

Uncontrolled flood water is one of the most powerful forces in nature. Development which does not adequately control stormwater runoff can destroy the stream valley system and degrade the water quality of County streams. The County has implemented a Comprehensive Program of Storm Water Management controls. This program includes acquisition of stream valley parks, restricting development in floodplains, construction of storm drainage facilities, and a system of stormwater management facilities.

Development contributes to the problem of the degraded quality of surface runoff and the additional runoff generated from impervious areas. To control the problem, the County requires that developers install infiltration devices, construct wet or dry ponds or pay waiver fees so that these facilities can be built elsewhere.

Another water quality control device that is used most frequently in the Wheaton CBD is the oil-grit separators. These special structures can be used instead of the standard storm drain inlets. Oil-grit separators are being installed to collect surface runoff from paved areas. In addition, underground parking facilities are being required to connect floor drains to the sanitary sewer system. Both of these techniques are part of the County's commitment to improve water quality in the local stream system and, ultimately, the Chesapeake Bay. Oil-grit separators need to be maintained (cleaned) on a regular basis if they are to be effective. Strong enforcement of maintenance is necessary if the devices are to function properly. This should help the CBD to improve water quality, to meet State water quality standards in receiving streams, and to enhance the environmental quality of stream valleys.

The Wheaton CBD is mostly impervious and currently produces a substantial level of stormwater runoff. Virtually all of the existing development in Wheaton occurred under standards of runoff management which were lower than those prevailing today. Under today's higher standards new development, when it occurs, can be expected to be managed so as not to degrade existing conditions.

The majority of Wheaton Plaza drains to the Wheaton Branch of Sligo Creek. The drainage basin for the total Wheaton Sector Plan area also includes the Kensington Branch of Rock Creek and the McKenney Branch of Rock Creek.

In order to protect the Wheaton Branch and Sligo Creek from erosion, sedimentation, and flooding problems, the Montgomery County Department of Environmental Protection, in 1978, constructed the Wheaton Branch Regional stormwater management facility near Woodman Avenue. This project included the construction of a stormwater detention structure on the "Heitmuller Tract," along Dennis Avenue, east of Georgia Avenue. This facility covers approximately 14 acres and controls runoff from the 775-acre sub-watershed above Woodman Avenue. This impoundment is designed to protect the area against a range of peak flows from storms of from 2- to 100-year recurrence potential. In 1989, the County began a major retrofit project to install three wet ponds on the floor of the Wheaton Branch facility. This project was completed in 1990 and provides for the treatment of stream water as it flows through the pond network. In 1990, work will begin on a stream bank stabilization project

below the Wheaton Branch facility. The County also improved the storm drain outfall from the Plaza.

The Kensington Branch tributary of Rock Creek drains across University Boulevard to an unimproved drainage system along East Avenue, Upton Drive, and Hillsdale Road. There have been several drainage complaints over the years about the uncontrolled runoff. The drainage flows into an enclosed drainage system which crosses University Boulevard. It then becomes an open system again and drains through several areas of severe erosion east of Dupont Avenue. The drainage then passes under Plyers Mill Road and into a short section of concrete channel, into an undersized culvert along Wheatley Street, to an old railroad culvert. The stream then flows along Kensington Parkway, where the County expended funds to stabilize the streambanks before it flows into Rock Creek.

The McKenney Branch tributary of Rock Creek drains through an enclosed drainage system across McComas Avenue and along Drumm Drive, until it reaches the confluence with Kensington Branch.

SANITARY SEWERAGE SYSTEM CAPACITY

As a regionally-imposed constraint, sanitary sewer system capacity cannot be resolved purely in the local context of a small Sector Plan. Plans to provide increased sewage treatment capacity and transmission capacity are best addressed on a larger scale. The Sector Plan recommends that sufficient capability be made available to support the level of development ultimately recommended by the Plan.