6. FLOOD PROTECTION

Protecting lives and private and public property is the basis for regulations that limit or prohibit development activities in floodplains. The 100-year ultimate floodplain is based on the area that would be flooded by a storm that has the statistical probability of occurring once every 100 years. Since it is only a statistical probability, it is possible that a 100-year storm could occur more than once in a 100-year period and even more than once in the same year. Periodically, a storm such as hurricane Agnes in 1972 reminds us of how much development has occurred in areas subject to flooding. During Agnes, parts of the metropolitan area experienced a 100-year or greater flood. Local conditions in a 100-year flood can be worse than expected if a floodway becomes blocked by debris. It should be noted that the floodplain calculation is based on run-off from estimates of fully developed land use recommended in the land use plan rather than existing conditions. The magnitude of a 100-year flood is such that it requires avoiding development in vulnerable areas and the provision of large-scale retention facilities such as Lake Frank and Lake Needwood. By comparison, stormwater management facilities typically are designed to handle a 2-year storm.

*** Various sections of the Montgomery County Code restrict the construction of homes, other structures, and the disturbance (grading, clearing) of 100-year ultimate floodplains.** Prior to 1974, the 50-year floodplain was the standard. Construction activities in 100-year floodplains also require a state waterway construction permit when disturbance of a floodplain is unavoidable. This is designed to limit the obstruction of floodways which could result in increased flooding. A County program to reduce the potential damage to private homes has purchased approximately two dozen homes located in floodplains.

*** Construction of residences and many other structures is not permitted within an area that may be flooded in the case of a dam break.** The area that is regulated is referred to as a "danger reach."

7. STORMWATER MANAGEMENT AND SEDIMENT CONTROL

Stormwater management (SWM) refers to a variety of active and passive techniques provided at the time of development or later in previously or developed areas to reduce the amount of water, sediment, and pollutants entering the stream system. These measures are designed to reduce the peak flow of streams to limit erosion and flooding and to complement normal flood protection.

*** Discharges into waters and wetlands require permits from the U.S. Army Corps of Engineers, the Maryland Department of the Environment (MDE), and the Maryland Department of Natural Resources (DNR).** Permits are issued based on compliance with the Federal Water Pollution Control Act (Clean Water Act) and state statutes.

*** The Montgomery County Department of Environmental Protection regulates stormwater management, erosion, and sediment control.** With the exception of low density agricultural and residential zones (RDT, Rural, RE-2, and, in some cases, RC), development is required to treat and store stormwater run-off. This provides flood protection, minimizes streambank erosion, removes pollutants, minimizes sedimentation of waterways, and, in some cases, recharges the groundwater supply.

*** State and County regulations identify infiltration as the preferred stormwater management (SWM) technique, where it is feasible.** Infiltration allows stormwater run-off to be detained in an area so that it can percolate into the soil to recharge while filtering pollutants entering the groundwater supply. Infiltration helps to minimize peak stream flows and related erosion while maintaining an adequate base flow by recharging the groundwater supply. SWM techniques, in order of preference, are: infiltration,