ATTACHMENT 5

"EXCERPT FROM TOWN'S COMPREHENSIVE PLAN'

9F. Water Quality and Stormwater Management

The quality of Chapel Hill's watercourses is of concern due to their relationships to local and regional drinking water supplies and because they are good barometers of general environmental health. In a largely developed community such as Chapel Hill, maintaining and enhancing water quality is dependent upon a variety of factors, such as stormwater management practices, open space protection, habitat preservation and restoration, and land development practices.

The Town of Chapel Hill has instituted a monthly monitoring of local streams since 1995. The monitoring includes factors such as temperature, dissolved oxygen, microinvertibrate populations (benthic inventories), and chemical constituents of the water. The Town's annual Data Book summarizes the date generated to date. In accordance with the federal Clean Water Act, the State of North Carolina has issued a draft list of impaired streams for the year 2000 across the state. In Chapel Hill, the list includes Booker Creek, Bolin Creek, Little Creek, Meeting of the Waters Creek, and Morgan Creek. In general, the list categorizes local creeks as nutrient sensitive water, and shows sediment as the cause of impairment. This finding suggests the need for continuing attention to land development practices that minimize pollutant discharges into local streams.

9F-1. Improve existing stormwater management practices.

Chapel Hill has in place overlay districts to protect water quality in the watersheds of public drinking water supplies (see Strategy 9A-1 above). However, the Town's stormwater management standards for new developments focus mainly on controlling the *quantity* of runoff during design storms rather than addressing the *quality* of stormwater runoff. This emphasis will need to change to improve water quality protection and to respond to

existing and proposed state and federal stormwater management regulations.

An alternative to conventional engineering approaches to stormwater management, ***low impact development*** minimizes disturbance of natural areas, reduces the amount of impervious surfaces (buildings and pavement), and, to the extent possible, infiltrates stormwater on-site. It is similar to conservation development (Strategy 9B-2) in its emphasis on maintaining areas in natural vegetation, but differs in its focus on hydrology rather than open space preservation. Low impact development emphasizes integrated solutions that address both the quality and the quantity of stormwater runoff. To more effectively address water quality issues, the Town should consider revising the existing stormwater management standards for both private and public development projects to incorporate low impact development principles. Low impact development principles should also be taken into consideration in revising the Development Ordinance.

Actions: Stormwater Management

- Evaluate the application of low impact development to Chapel Hill (Town staff, Stormwater Management Committee)
- Adopt and implement improved erosion and sedimentation requirements (Chapel Hill, Orange County)
- Develop a stormwater utility/dedicated source of funding for stormwater management (Town Council; potentially Carrboro and Orange County)

Measures of Progress: Stormwater Management

- Complete an evaluation of the application of low impact development to Chapel Hill no later than 12/31/2004
- Adopt a dedicated source of funding for stormwater management no later than 12/31/2004

Erosion caused by stormwater runoff during construction is another threat to the quality of Chapel Hill's watercourses. Orange County is currently developing enhanced erosion and sedimentation control standards and enforcement procedures. The Town should work with Orange County to implement these standards and procedures in Chapel Hill.

Improving stormwater management and erosion control practices will require a greater commitment of governmental resources. In 1999, a Stormwater Utility Technical Review Committee reported that it would be feasible to establish a stormwater utility in Chapel Hill to coordinate and fund local efforts to manage stormwater runoff, soil erosion, and sedimentation. This utility would collect fees to offset the cost of building and maintaining stormwater management infrastructure and of developing and monitoring regulatory compliance programs. To be most effective, a stormwater utility should be multi-jurisdictional, encompassing areas in Carrboro, southern Orange County, and possibly northern Chatham County that contribute runoff to Chapel Hill drainage basins.

9F-2. Develop and implement an effective water quality performance review process.

Improving water quality in Chapel Hill will require coordinated implementation of a variety of strategies. A number of these strategies are described above, including enhanced protection of

trees and natural habitat areas; preservation of open space, especially in the form of greenways along stream corridors; habitat restoration; and improved stormwater management and erosion control practices.

To monitor and increase the effectiveness of these separate initiatives in improving water quality, the Town should develop and implement a comprehensive water quality performance review process. This process should encompass water quality monitoring, design practices that address water quality, stream corridor restoration, and inspections. It should be based on an active, watershed-based monitoring program that tracks water quality trends, screens potential problem areas, and evaluates the effectiveness of alternative best management practices for development. (Key water quality parameters are currently monitored at nine locations on Chapel Hill streams.) Establishing adequate inspection and enforcement procedures is another key element. The process should be developed in cooperation with Orange County because of the regional character of water quality and stormwater management issues.

Action: Water Quality Performance Review

- Develop and implement a water quality performance review process (Chapel Hill, Orange County)

Measure of Progress: Water Quality Performance Review

- Reduce the percentage of water quality samples that exceed state standards to below the average of 1993-1999 levels