



Town of Chapel Hill

Pro Forma Business Plan – Utility-Based Stormwater Management Program I-1 Program and Issues Assessment

Introduction

The Town of Chapel Hill is located primarily in Orange County and slightly in Durham County in the north central portion of North Carolina in the Piedmont Plateau, approximately equidistant between Washington, D.C. and Atlanta, Georgia. As of July 2001, the Town's population is 51,600. Chapel Hill is the largest town in Orange County, which has an estimated population of a little more than 118,000 and a projected population of 147,800 by the year 2020.

Land Use

- Chapel Hill is nestled in the rolling, wooded hills of North Carolina. The town is ideally situated in the state, three hours from the coast and three hours from the mountains, allowing residents to enjoy a variety of recreational activities.
- Chapel Hill, along with Raleigh and Durham continually receive accolades for being a top location to live and do business. Most recently the A & E television channel recognized Chapel Hill as the #2 city in their "Top Ten Cities to Have it All." Previous accolades have included *Money* magazine's selection of the Triangle as the "#1 Best Place to Live in America," *Fortune* magazine's rating of the Triangle as #1 for "The Best Cities For Knowledge Workers," and *Sports Illustrated's* nod as the "number one college town in the United States."
- The Town is the home of the University of North Carolina at Chapel Hill, the nation's oldest public university, established in 1789. Today, the University enjoys a reputation as one of the best public universities in the United States.
- The area of the Town is 20.16 square miles.

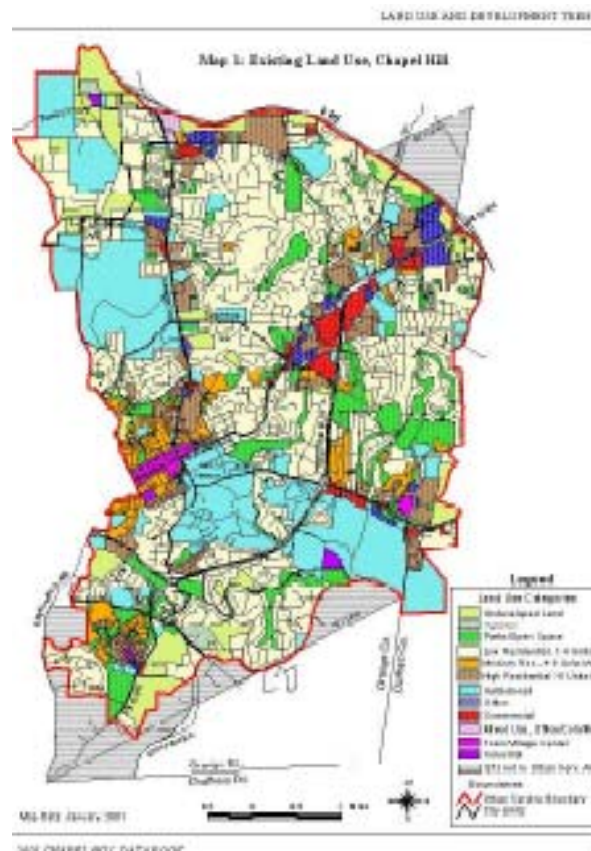


Figure 1 Map of Chapel Hill

- Chapel Hill's land use patterns are profoundly influenced by a policy enacted in 1986. This policy established an Urban Services Area, the area within which growth is expected to occur at urban intensities using Town standards. The Town has extended urban services within this area, and is annexing all land within the area as it develops and qualifies for annexation. The eventual ultimate boundary of Chapel Hill shall be identical with the established Urban Services Area boundary. The Town will not extend any urban services beyond this boundary; will not annex beyond this boundary; and plans to maintain very low densities of development in a Rural Buffer that surrounds the Urban Services Area. This is a fundamental Town policy to which the Town has strictly adhered since it was enacted.



Figure 2 Downtown Chapel Hill

The Existing Land Use Map, Figure 1, shows current land uses in the Town's Urban Service Area and Transition Area. There are approximately 12,900 acres within the Town limits. The Urban Services Area includes about 16,000 acres.

The Town maintains a small-town feel with the downtown the center of activity. The presence of the University of North Carolina lends a distinguishing quality to the Town in keeping with its history.

The predominant land use is low to medium density residential use, comprising nearly half the Town. The second largest category is institutional use, which includes the university and includes almost 20 percent of the Town's land. Privately owned commercial, office, mixed-use, and industrial areas combined, total approximately 5 percent of the Town's land. The amount of commercial space (office, retail and warehouse), measured in terms of square footage, has increased by about 18.5 percent in Chapel Hill since 1992.

Planning

The Town conducts an ongoing planning and programming process through which it implements orderly expansion and management of the growth and development of the community. At present, the Town exercises zoning and building controls over a 27.5 square mile area that includes the corporate limits and a 7.36 square mile planning jurisdiction.

The growth of the Town has been directly related to the expansion of the University of North Carolina at Chapel Hill. Enrollment at the University has risen from 8,791 in 1960 to 24,872 in 2000. It is anticipated that expansion will continue to occur in University-related health facilities such as the University of North Carolina Hospitals. The University and its hospital continue to be the town's largest employer.

Government

Incorporated in 1819, the Town has a Council-Manager form of government. The Town Council is comprised of a Mayor and eight-member Council. All Council Members serve four-year terms. The Mayor and four Council Members are elected every two years. All elections are on a non-partisan basis and at large. The Council appoints the Town Manager and Town Attorney. The Mayor presides over the Council meetings and has full voting privileges. The Town Manager is the chief administrative officer of the Town. Town departments are responsible to

the Town Manager for the provision of public services. The Town is governed by a Code of Ordinances that contains the Charter of the Town of Chapel Hill, and lists the duties and responsibilities of its elected officials, Town officials, Town departments, and advisory boards. Town Council meetings are normally broadcast live over the Time-Warner Cable channel 18.

Financial

The financial condition of the Town is solid. It has a Triple A rating from Moody’s, a Double A rating from Standard & Poors, and debt obligation under 1%.

- Currently, general fund revenue comes from the following sources:

Table 1. Sources of Current General Fund Revenue (2000-01)

<u>Source</u>	<u>Amount</u> <u>(\$ millions)</u>	<u>% Of</u> <u>Revenues</u>
Property Taxes	16.1	48.3
Other Taxes	0.9	2.6
Licenses, Permits, Fines	1.4	4.2
State-Shared Revenues	10.9	32.8
Grants	0.5	1.4
Service Charges	1.0	3.0
Interest on Investments	0.6	1.8
Other	0.2	0.7
Interfund Transfers	0.9	2.7
Appropriated Fund Balance	<u>0.8</u>	<u>2.4</u>
Total Revenues	<u>33.3</u>	<u>100.0</u>

Source: Town of Chapel Hill

- Nearly half the land in Chapel Hill is devoted to low to medium density residential use. This will have a positive impact on the revenue-generating potential for stormwater user fees although it is clear that there will be concern as well about a new fee, in light of a 6.6 cent proposed tax increase from the Town for the next year as well as a tax increase from Orange County.
- About 20% of the land use base is non-profit organizations, in particular UNC-Chapel Hill and the University Hospital. These facilities will need to be carefully handled if a user fee based on impervious area is to be established. It will be important to ensure it is clear that this is not a tax but a user fee. Since the University has been involved in several of the stormwater advisory committees over the past several years, past knowledge of the potential for a user fee will be beneficial.
- A substantial increase in multi-family units over the recent past presents a separate challenge, as these units are either condominiums in which the separate owners must share a fee, or rental units in which a commercial owner will carry the user fee.

Current Stormwater Program

The current stormwater program can be categorized as a “minimal” program, as compared to other communities of similar size. Due to resource constraints, the Town is often in a reactive

mode in terms of system maintenance. Current work programs include routine drainage system inspection and maintenance, street sweeping, removal of debris from three major waterways within Town, small drainage improvement projects, drainage assistance to private property owners, and inclement weather flooding response and recovery. The Drainage Assistance Program is the one program that exists to address issues on private property. However, there is no clear policy in place about how maintenance will be performed, or who will maintain or pay for continuing maintenance.

Currently (2000-01) the Town allocates about \$950,000 in operating funds (including some salary costs) to stormwater management divided into the following categories:

- Engineering \$250,000
- Drainage, maintenance and sweeping \$700,000

The current stormwater management program is handled between two Departments, which report to different Assistant Town Managers.

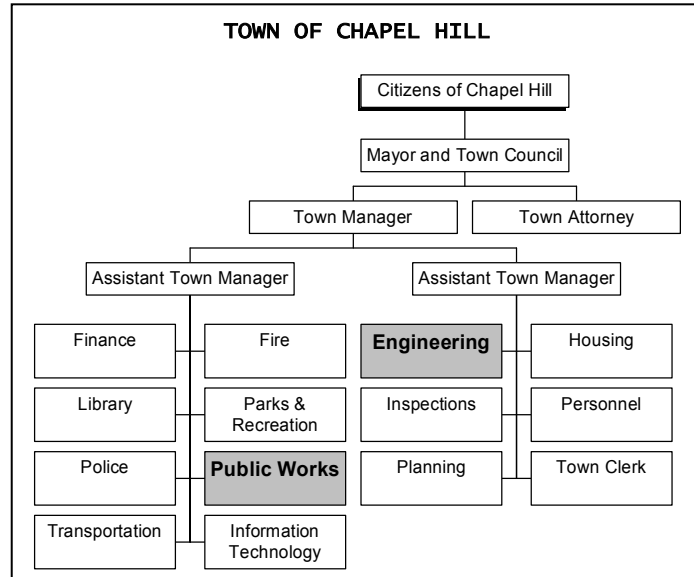
Engineering

The Town Engineering Department’s principle role in stormwater is responsible plan review, including stormwater infrastructure associated with development activities. For projects funded directly by the Town, they will conduct field reviews of small projects to assist with the decision to undertake in-house design activities. In some cases, they may be called upon to go with the Public Works personnel to diagnose a problem. They are staffed with a Stormwater Engineer, and a part-time, temporary position entitled Engineer Intern. The Intern has served many roles, including performing water quality monitoring, miscellaneous GIS database work, elementary school education, North Carolina Big Sweep (annual stream cleanup) coordinator, general assistant to the Stormwater Engineer with projects. In addition, the Department has had two technicians who have assisted during the summers with the completion of the storm sewer inventory program and gathering GIS data.

Public Works

The Right-of-Way/Drainage section of the Field Operations Division within Public Works primarily performs Stormwater maintenance. Some assistance is also provided by the Construction and Streets sections within the Field Operations Division.

The Public Works Department sets priorities and provides the maintenance and operations resources to the stormwater management program. Section managers have a list of guidelines and standards on maintenance of drainage and right-of-way areas, and keep records of daily activities.



Maintenance

There is one work crew that is designated to focus on stormwater and drainage. Due to the limited staff and other pressing needs, the crew currently does not spend 100% of its time doing stormwater type activities. The crew is made up of three individuals, who have several pieces of equipment available to them. Crew cost is estimated to be approximately \$140,000 per year; equipment cost is approximately \$40,000. Total crew cost is \$180,000 annually.

Capital Construction

In 1996 the Town issued Street Improvement Bonds allocated for drainage projects of \$500,000; \$453,491 of the bonds have been spent, leaving a balance of \$46,409. In addition, the Town has identified more than \$252,000 in unmet drainage improvement capital projects and a second list of drainage assistance capital projects where the dollar values have not been determined. For reference, just two of the major current needs (assistance to Eastgate Shopping Center and Burning Tree Drive) require funding of more than double the funds available from the bonds. There do not appear to be any other funds earmarked to handle another emergency if it arises.

Stormwater Problems and Issues

Overview

City staff has described the current approach being taken to address stormwater management as often reactive. The stormwater system has evolved over the course of many years – well beyond the anticipated useful life. The aging drainage infrastructure, some of it over 60 years old, may require significant maintenance, replacement and/or improvement in coming years to comply with water quality requirements, to mitigate flooding problems, and to safely convey increasing quantities of stormwater runoff.

The system has not received the resources it has needed, both in terms of capital construction and maintenance. Thus, collapsing pipes, nuisance flooding, erosion, gullies, broken headwalls, clogged systems, undersized systems, etc. are likely to occur within the drainage network. Without additional attention and investment, the system will become more antiquated every day.

Additional resources become even more necessary as Chapel Hill and other local governments are facing increasing stormwater quality requirements due to NPDES (National Pollutant Discharge Elimination System) regulations as well as other State and local regulations regarding soil erosion and sedimentation standards.

Complaints

Chapel Hill has a serious commitment to citizen satisfaction. At the same time, there is considerable anecdotal evidence that stormwater is a serious issue for the citizens of the Town. Until the Stormwater Management Engineer was hired in March 2000, there was no long-term tracking of complaints, thus trends and repeat calls are not recorded and cannot be analyzed to obtain a comprehensive picture of conditions within the Town. The Town estimates they currently receive approximately 50 stormwater related complaints a year, mostly about drainage water (quantity). In addition, the Town receives approximately four formal petitions from neighborhood groups or associations with requests for larger projects each year. These have included a request for assistance for stream bank erosion and flood mitigation assistance,

assistance with funding the replacement of obsolete major infrastructure draining public property runoff through private property, assessment of the watershed above a man-made impoundment to determine how to reduce severe deposition of sediment in a lake and ways to improve the lake, and assistance with on-going flooding problems at an apartment complex. Also, citizens raise drainage issues with Town Council at many of their meetings.

It appears that both Engineering and Public Works are strongly aware of the issues existing around drainage issues. Public Works has segregated types of complaints into: public infrastructure, public maintained streams, high water problems, North Carolina Department of Transportation (NCDOT) public infrastructure, and private property.

The complaints are tracked by Engineering and most are re-directed to Public Works. The issue is reviewed and a decision is made if maintenance crews can address it. If so they schedule the work. If not, the *Citizen Request for Assistance* is forwarded to the Town Engineer with a recommendation.

Complaints that are easy or relatively inexpensive to fix or where timeliness is important to prevent a bigger problem have a better chance of being addressed than problems whose solutions are complex. It should be noted that, while issues revolving around NCDOT public infrastructure are referred to the Town by a citizen and relayed to NCDOT for them to handle, the public typically does not understand the differences between Town and NCDOT roadways and recognize only that their complaint has not been handled in a satisfactory way.

It is likely that many property owners may simply have given up calling due to the inability of the Town to address their problems under current policy and resource allocations. A new stormwater fee would likely stimulate them to try again to obtain relief from the Town.

Stormwater Management Tools

The Town lacks up-to-date maps of the drainage system, and thus does not know the current condition of the system or its adequacy for managing future growth and demands. Master plans have not been completed for each watershed, limiting the Town's ability to be proactive in addressing both water quality and water quantity issues. Regulation of the system is a key role for the Town and currently there are not appropriate policies in place to obtain access to all parts of the system and to provide routine and remedial maintenance at a level commensurate with the need. In many areas, drainage easements do not exist, or if they do, are not identified to allow for access to off street right-of-way portions of the drainage system that cause many problems. There is no clear policy regarding who is responsible for maintenance of easements.

Program Priorities and Planned Program Changes

Program Priorities

To date (from 1992 through 2001) there have been three separate Stormwater Advisory Committees looking at the Town's stormwater management program. Each established a set of goals for the stormwater program. The issues raised above and at the Committee level show that the primary program priorities fall into six key areas:

Table 2. Stormwater Program Priorities

Program Area	Program Priorities
Administration and Finance	<ul style="list-style-type: none"> • Develop stable, adequate and fair funding for the stormwater program • Establish additional policies regarding the maintenance of 'private' drainage systems • Improve public education / information about stormwater • Develop cost allocation system for the stormwater program
Planning and Engineering	<ul style="list-style-type: none"> • Develop an accurate physical inventory of the drainage system • Identify and prioritize key problem areas • Master plan systems, areas of new development, significant redevelopment, and "problem" areas • Develop a prioritized capital improvement program • Upgrade design standards and development guidelines • Integrate stormwater master planning with urban greenway planning • Seek to coordinate standards with the County. • Develop standard for proper catch basin covers and replace
Operations and Maintenance	<ul style="list-style-type: none"> • Develop a systematic drainage system rehabilitation program • Implement an effective preventive maintenance program • Be more responsive to drainage complaints • Extend maintenance to off right-of-way areas • Be more proactive in generating Work Orders by inventory information and field inspectors • Perform maintenance on a proactive watershed basis
Regulation and Enforcement	<ul style="list-style-type: none"> • Plan for and execute compliance with State and Federal regulations (sediment and erosion control / NPDES) • Improve maintenance of private systems (on site detention) through increased enforcement
Water Quality	<ul style="list-style-type: none"> • Track impacts of NPDES stormwater permit • Develop and implement water quality strategies as appropriate
Capital Construction	<ul style="list-style-type: none"> • Resolve backlog of capital construction needs

Comprehensive Program and Cost Estimates

It is clear that there will need to be a "ramping up" period in the development of the comprehensive stormwater program for Chapel Hill. One-time activities (which may require lesser ongoing activity) such as conducting a system inventory, performing master planning, and developing a capital construction prioritization methodology will be performed on the front end of the proposed management program, and then used and maintained as tools throughout the life of the program. Caution is advised that the program concentrate on a balance of fixing

and planning. If all the initial funds go toward planning and inventory activities without a demonstrated improvement in the service, the program and staff will fight an uphill public perception battle. At the inception of the expanded program, long standing drainage problems should be targeted for repair – even the very day the first bills go out, if a utility is implemented. Initial impressions are lasting.

Stormwater Utility Implementation

Among the first activities that should be undertaken would be reconstitution of the Stormwater Advisory Committee. This Committee would now be charged with going past the theoretical discussions that previously took place and provide input on the Town’s specific policies on the mission of the program, short term and long-term program priorities, level and extent of service, rate methodology, and cost of service. They would be asked to voice their opinions and come to consensus on the balance of cost versus services on behalf of the citizens of Chapel Hill.

Full consideration needs to be given to the structure of the stormwater utility, including a consideration of the additional services and structure associated with running a stormwater utility. Although the impact to the existing structure of starting a utility will be significant, it is common to find that even without that change, the organizational responsibility for stormwater management is too diffuse in its current form. With or without a utility, it is important that one person has responsibility and accountability to manage the stormwater program, to marshal resources, and to set its priorities.

Based on the stormwater program priorities developed above, a stormwater program budget was estimated to address key issues. The estimate is in very broad terms for the purpose of establishing the potential feasibility of stormwater user fee funding for a viable program. It is for a period out several years after one-time activities have taken place. It is in addition to the current \$950,000 spent on the program and includes building an appropriate NPDES compliance program. The following table lists the major cost items:

Table 3. Proposed Program Costs (New Funds)

Program Area	Program Cost (Low)	Program Cost (High)
Administration and Finance	\$200,000	\$200,000
- Indirect allocations and billing costs		
Engineering		
- Master planning and system inventory	\$250,000	\$500,000
- Inspection/Regulation and enforcement	\$50,000	\$50,000
- Water Quality	\$187,500	\$187,500
Operations and Maintenance	\$250,000	\$250,000
Capital Construction	\$200,000	\$400,000
Totals	<u>\$937,500</u>	<u>\$1,387,500</u>
Current Budget	<u>\$950,000</u>	<u>\$950,000</u>
Projected Total Annual Spending	<u>\$1,887,500</u>	<u>\$2,337,500</u>

This amounts to at least doubling of the stormwater resources in Chapel Hill. Highlights include:

- Adding \$187,500 annually to meet NPDES Phase II water quality and other regulatory program needs. This number is based on previous experience with municipalities of approximately the size of Chapel Hill, and does not differ substantially from the numbers presented February 11, 2002 to Town Council in the *Manager's Follow-up Report on Recommendations of the Stormwater Utility Development and Implementation Study Committee*.
- Adding to the annual capital improvement budget with a goal of working off the major capital and remedial needs until the backlog is worked down to a more manageable project list. This amount would change as Master Planning is completed and better information becomes available on the actual needs and the effectiveness of the program.
- Adding at least one totally dedicated maintenance crew along with equipment. It will take a year or so to create this resource, based on acquisition of equipment and hiring activities. There is a concern that the current assets dedicated to stormwater management will be pulled off for other duties when another fully dedicated stormwater crew is formed. Resources provided through a dedicated funding process will ensure that the drainage issues are addressed and that the other maintenance priorities will be covered through currently budgeted General Fund revenues. This must be accomplished or else the level of service will remain the same as prior to an identified stormwater charge, but the level of public demand for stormwater services will be significantly higher. This will result in a public dissatisfaction with the program.

Program Related Issues

Development of a stormwater management program funded through a dedicated user fee presents several issues:

- The need to educate the public about the needs and to gain their support
- The need to identify and gain the support of key stakeholder groups
- Handling and gaining the support of tax exempt property owners
- Convincing non-residential property owners that a stormwater user fee is fair and logical
- Determining internal organization and accounting changes to handle the new approach to stormwater management
- Addressing issues such as ability to pay

Each of these issues is commonplace in the development of stormwater management user-fee programs. The way these have been successfully dealt with in other communities is through a combination of:

- Effective public education and awareness
- Special efforts toward specific stakeholder groups

- Consensus building with a representative citizens group
- A well-thought-out logic as to why the user fee is the best way to go
- A fair and generous credit program
- A technically sound rate structure and approach
- A legally sound approach
- An approach that political leadership can buy into with minimized risk

Each of these points will be dealt with if, and when, the user fee-based program proceeds beyond the feasibility stage. The logic for setting up a stormwater management user fee can follow along the following line:

1. The stormwater related problems are real, under-funded, and generally unresolved.
2. We can develop and implement a plan to resolve them.
3. Government must take the lead.
4. Benefits will result.
5. It will cost more to do this for the community.
6. A stable, adequate and fair funding method is necessary.