



TOWN OF CARRBORO
NORTH CAROLINA
STORMWATER UTILITY

To: David Andrews, Town Manager
Mayor and Board of Aldermen

From: Randy Dodd, Stormwater Utility Manager

Cc: Joe Guckavan, Public Works Director
Robert Hornik, Town Attorney
Arche McAdoo, Finance Director
Rachel Heggen, Communications Manager
Patricia McGuire, Planning Director
Stormwater Advisory Commission

Date: March 9, 2018

Subject: Update on Creation of Stormwater Utility for Work Session

Background and Summary

The purposes of this memorandum are: a) to provide an update of work related to establishing the new stormwater utility; and b) present topics for Board feedback at a work session. Most of the information provided in this memo is drawn from a draft stormwater utility rate study report; more details are available in the report.

Information

The Town is in the process of establishing a Stormwater Utility that recognizes that stormwater management is a community wide challenge, and the current stormwater program and existing level of funding are not adequately addressing the challenge.

As steps towards establishing the Utility, the Town has taken these steps in the past year:

- 1) the Board of Aldermen dedicated their 2017 retreat to this topic;
- 2) the Town Code was updated to formally establish the Utility and a Stormwater Enterprise Fund in the Town Code in June of 2017;
- 3) a new Stormwater Utility Manager was hired in December, 2017; and
- 4) the new Stormwater Advisory Commission began meeting in February of 2018.

The following topics are discussed in this memo:

- 1) an overview of the Town Code requirements as they relate to a) the basis for a fee structure; and b) who will be required to pay the new service charge;
- 2) a 5 year stormwater program cost projection;
- 3) an analysis of impervious surface which creates the basis for fees to assign;

- 4) a recommended rate structure;
 - 5) recommended steps to adopt the rate structure; and
 - 6) a status report from the first two meetings of the Stormwater Advisory Commission.
1. Town Code Stormwater Utility Provisions

Town Code Section 18-4: “Stormwater management utility shall mean an organizational structure established by the Town, that is responsible for funding, administering, and operating the Town's stormwater management program, and that is supported through a rate structure based on the impervious surface area and found on land parcels located within the town limits.”

The above excerpt from the Town Code creates the fundamental basis for the utility. An overview of Town Code sections most relevant to the development of a rate structure is presented in Table 1¹. An important contextual premise for work pursued by staff in early 2018 is that the Town will choose to pursue a fee basis rather than a property tax basis, as generally provided for in the Town Code.

Table 1: Town Code Stormwater Utility Definitions

Town Code Section	Important Direction
18-3: Definitions	Includes over a dozen important definitions. For example, determines how to distinguish between residential and nonresidential parcels, provides specificity for the concept of impervious surface, and defines Equivalent Residential Unit (ERU) as a unit of comparison
18-4: Utility and Enterprise Fund	Establishes utility and dedicated stormwater funding; requires that revenue collected only be used for stormwater, and a Public Hearing be held prior to collecting revenue
18-5: Jurisdiction	Establishes the municipal limits as the area for which the Town can collect revenue
18-6: Rate structure	To be added after establishment of the rate structure
18-7: Schedule of fees and charges	Establishes that rates, fees, charges, and penalties apply to properties in municipal limits
18-9: Exemption and credits	Establishes the properties that are exempt from service charges; allows for establishment of a credit manual.

¹ The complete stormwater utility section of the Town Code is available at <http://www.ci.carrboro.nc.us/DocumentCenter/View/4631>

Who Will Pay Stormwater Fees?

Town Code 18-9: Properties Exempted from Stormwater Fee

- (1) Publically dedicated roads, streets, greenways, sidewalks and other publically dedicated rights-of-way and easements.... This exemption shall not apply to internal site roadways.....
- (2) Railroad rights-of-way.....
- (3) Undeveloped land, open space or land parcels with fewer than 500 sf of impervious surface area.
- (4) Parcels maintained by homeowner associations as undeveloped open space or with engineered stormwater control measures.
- (5) Town-owned property.

The above section of the Town Code provides the basis for identifying property owners who will be exempt and non-exempt. The analysis that has been pursued in early 2018 indicates that there are 4473 residential and 313 non-residential non-exempt properties, as defined below. Note that “non-residential” includes many multifamily residential properties:

“Residential parcel shall mean a parcel with a single-family residential structure used as a single-family dwelling and whose primary uses is as a single-family residence; residential condominiums/townhomes subdivided as individual parcels are considered residential parcels. Nonresidential parcel shall mean a parcel that is developed land not used as a single-family residence; this includes, but is not limited to, commercial, industrial, institutional properties, and apartment complexes.” **(From Town Code 18-3)**

With regard to opportunities for additional exemptions, credits, offsets, or other reductions:

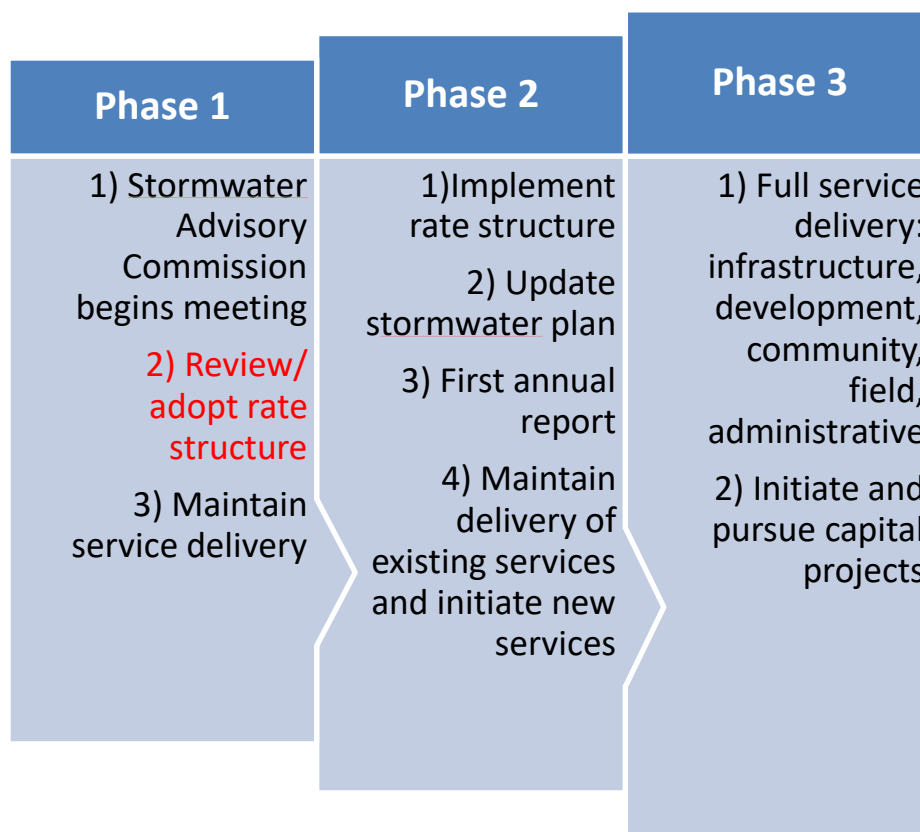
Town Code Section 18-9(a). Statement of policy. Except as provided in this section, no public or private property shall be exempt from stormwater management utility service charges or receive a credit or offset against such stormwater management utility service charges. No exemption or reduction in stormwater management utility service charges shall be granted based on the age, tax or economic status, race, or religion of the customer, or other condition unrelated to the cost of providing stormwater services and facilities.

This section constrains incorporation of social equity interests in the rate structure.

2. How Much Will it Cost to Fund the Town's Stormwater Program?

A timeline and approach for transitioning the Utility from a formative stage into an operational stage is needed to guide cost projections, which in turn will guide the development of a rate structure that matches new revenue with expected expenses. The analysis completed in early 2018 has resulted in a 5 year cost projection that corresponds to the following phases:

Figure 1: Recommended Phases for Moving from Utility Establishment to Operation



Phase 1 is currently underway, and is a largely administrative phase related to the establishment of the Utility. Until it is complete, Carrboro's stormwater program revenue will continue to originate from property taxes that pass through the General Fund.

Phase 2 will begin as soon as a rate structure and Interlocal Agreement for billing are in place, and marks a transition from Utility establishment to Utility operation. During this transition, both ongoing and new administrative activities will be required. Revenue from new fees will begin to flow into the Enterprise Fund, and service delivery for new services will begin. This

phase could begin as soon as late 2018, or could need to be delayed by a year, as further discussed below.

Phase 3 is the fully operational stage of the Utility. The administrative pieces will be fully established, and the Utility will be able to fully deliver a range of services. Achieving this stage in a timely fashion is desirable not only from a programmatic and community perspective, but also to be well prepared for implementation of Jordan Lake Rules, which are scheduled for review within this time frame, and for demonstrating compliance with the NPDES permit and progress with Bolin Creek watershed restoration. During Phase 3, projects programmed in the Capital Improvements Plan will begin to be implemented.

A five year stormwater program cost projection has been drafted based on the following foundation.

1. Capture all known current operational stormwater related expenses. (In FY 17/18, Town staff began tracking stormwater specific expenses. Year to date information is being collected as input into annual estimates).
2. Capture new operational expenses associated with better service delivery for existing stormwater regulatory requirements and plan for potential new stormwater regulatory requirements;
3. Plan for future stormwater capital projects and enhanced infrastructure maintenance, repair, and replacement;
4. Minimize administrative burden/overhead and maximize delivery of services and environmental enhancement;
5. Collect sufficient revenue to minimize the need for an increase in fees during the 5 year time frame.
6. Plan for new town-maintained streets and conveyance and stormwater control measures (SCMs) on private property that will be added due to new development during the five year period
7. The Town currently owns 6 SCMs but is planning to construct more at MLK in the near future, with additional SCMs in the CIP for Anderson Park and on Town owned land adjacent to Morgan Creek. The 5 year projections reflect both the capital costs and the expected increase in maintenance.
8. The Town has a Drainage Policy (1984); interest has been expressed in revisiting this policy and potentially establishing a new Drainage Assistance Program that could include cost sharing.

9. The projections completed to date are intended to identify the level of revenue needed, but have not tried to discriminate between funds made available through a new rate structure and the current method of funding through the General Fund.

It is important to note that the cost projections presented are “best current estimates”, but are not intended for final budgetary use or as firm or fixed values. As this study was being drafted, input was also being provided into the development of the FY 18/19 operating budget. This timing, along with pending decisions regarding the details of implementation of a rate structure, create some uncertainty regarding stormwater revenue, expenses, and services to expect. The main purpose of these estimates is to provide guidance in the determination of the rates needed to deliver the desired services. More detailed analysis and decisions will be needed for future operating and capital budgeting as the Utility transitions from a formative to fully operational status.

The five year cost projection is summarized in Table 2.

Table 2: Five Year Stormwater Program Cost Projection

	<u>FY 18/19</u>	<u>FY 19/20</u>	<u>FY 20/21</u>	<u>FY 21/22</u>	<u>FY 22/23</u>
<u>Administrative Services</u>	\$169,569	\$141,805	\$127,307	\$133,743	\$138,501
<u>Infrastructure Services</u>	\$163,150	\$246,090	\$369,110	\$551,535	\$520,414
<u>Planning Services</u>	\$67,650	\$72,408	\$74,286	\$76,252	\$78,309
<u>Community Services</u>	\$38,650	\$66,375	\$92,860	\$100,575	\$108,436
<u>Field Services</u>	<u>\$30,650</u>	<u>\$60,762</u>	<u>\$57,439</u>	<u>\$59,706</u>	<u>\$61,569</u>
Total	\$469,670	\$587,440	\$721,003	\$921,811	\$907,229

*personnel expenses are allocated amongst the 5 service categories, with the allocation varying by year. More administrative time is expected at the start of the 5 years, and less at the end.

The following points are offered for the line items in Table 2:

- 1) The personnel estimates shown are only for Stormwater specific personnel, and not for time spent by non-Stormwater program personnel. That labor is captured under other line items.
- 2) The non-personnel administrative expenses cover a range of items including but not restricted to dues, training, conferences, routine office expenses/supplies, vehicle use, and legal and contractual services.
- 3) The Infrastructure estimates cover routine stormwater system maintenance, repairs, retrofits, street sweeping, capital stormwater and stream restoration projects, and Public Works facility stormwater related expenses.
- 4) The Planning estimates cover staff time and engineering services for Planning related stormwater program oversight.

- 5) The Community estimates cover establishment of a Drainage Assistance Program and cost sharing, outreach and education, and Stormwater Advisory Commission budget.
- 6) The Field estimates cover SCM maintenance and inspection, benthic monitoring, stream repair materials, and cost sharing for stream gage maintenance
- 7) There are currently about \$3.5M in capital expenses projected for beyond this 5 year window. The revenues from the draft rate structure creates a surplus to help fund capital expenses both within and beyond the 5 year window, with a surplus of approximately \$1M expected after 5 years to go towards capital expenses beyond the 5 year window.
- 8) The cost projection totals represent a steady increase from the current stormwater program level of funding. As part of the FY 17/18 budget development, a very preliminary annual stormwater program expense of just over \$300k was estimated.

3. Impervious surface Analysis

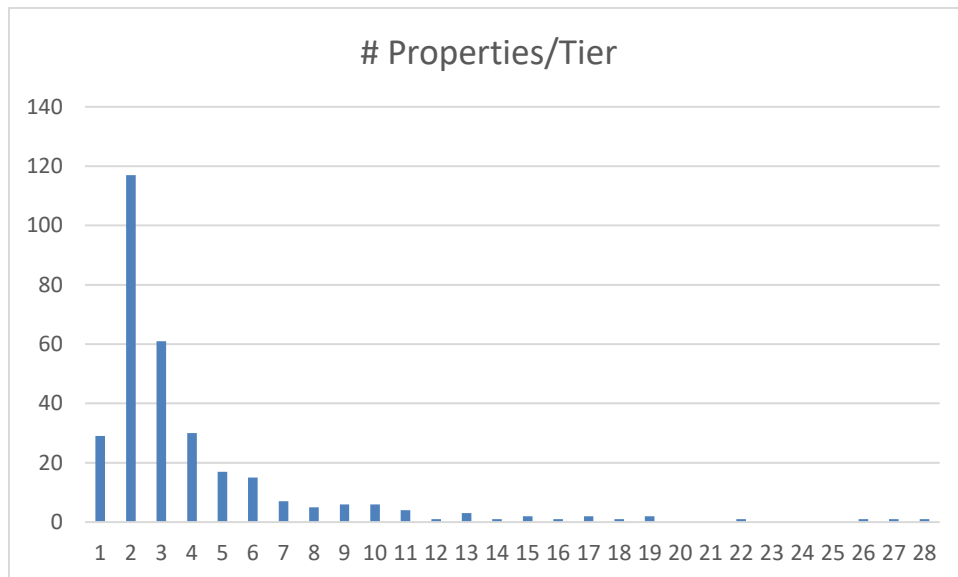
The recommended rate structure is based on the amount of impervious surface relative to the “Equivalent Residential Unit” (ERU) of impervious surface, as provided for in the Town Code, and consistent with the predominant practice for the 62² municipalities that have created a stormwater utility in North Carolina. The premise is that impervious surface is an appropriate metric for determining the impact of stormwater runoff from a given property. A GIS analysis of impervious surfaces was completed and guided by parcel data provided by Orange County, and Town maintained data for impervious surfaces.

The accuracy and precision of both the property/parcel boundary and impervious data is an important consideration in establishing the service charge/fee structure. Visual examination of GIS parcel boundary data during the analysis indicated that for many parcels, the parcel data appeared to represent the property boundary fairly accurately, but for some parcels, the depiction appears to be less accurate. Similarly, impervious surface areas depicted for many properties are relatively accurate, however, are less accurate for others. This has led to a recommendation that a flat residential fee be used to launch the utility. Figure 2 presents the number of residential properties in different impervious surface area ranges.

² As of July, 2017

Figure 2: Impervious Area for Residential Parcels

For non-residential properties, a wide range of impervious area per parcel was identified, with the distribution having a notably asymmetrical long “tail” (Figure 3). A tier structure was chosen that identified breakpoints that balance the need for sufficient and meaningful resolution in the structure and the accuracy and precision of the GIS data that is available.

Figure 3: Impervious Area Tiers for Nonresidential Parcels

(Y axis is number of properties per tier, X axis shows tiers)

A tiered rate structure is recommended given the wide range of non-residential imperviousness. Most non-residential parcels have less than 2 acres of impervious area, with three parcels having over 700,000 square feet of imperviousness. This approach balances considerations around: the accuracy of current data; administrative time with further impervious analysis and resolution of property level discrepancies, inquiries, and disputes; and providing as much equity as possible in the rate structure. Table 1 summarizes the distribution of impervious area across nonresidential properties, and also recommends a total of 28 tiers to use for the rate structure.

Table 3: # of Non-Residential Properties by Tier

<u>Tier</u>	Impervious Area (sf)			<u>ERUs</u>	<u>#</u>
	<u>Minimum</u>	<u>Maximum</u>	<u>Median</u>		
1	500	5999	3250	1	29
2	6000	23999	15000	5	117
3	24000	41999	33000	11	61
4	42000	59999	51000	17	30
5	60000	89999	75000	25	17
6	90000	119999	105000	35	15
7	120000	149999	135000	45	7
8	150000	179999	165000	55	5
9	180000	209999	195000	65	6
10	210000	239999	225000	75	6
11	240000	269999	255000	85	4
12	270000	299999	285000	95	1
13	300000	329999	315000	105	3
14	330000	359999	345000	115	1
15	360000	389999	375000	125	2
16	390000	419999	405000	135	1
17	420000	449999	435000	145	2
18	450000	479999	465000	155	1
19	480000	509999	495000	165	2
20	510000	539999	525000	175	0
21	540000	569999	555000	185	0
22	570000	599999	585000	195	1
23	600000	629999	615000	205	0
24	630000	659999	645000	215	0
25	660000	689999	675000	225	0
26	690000	719999	705000	235	1
27	720000	749999	735000	245	1
28	750000	779999	765000	255	1

There is a total of 313 acres of residential impervious area and 486 acres of non-residential impervious area in Carrboro.

4. Recommended rate structure

Stormwater fees (aka, “service charges” in the Town Code) are calculated by determining the costs of providing the desired level of service and then distributing the costs based on the demand that each property places on the local government for service. The report that has been drafted captures and expands on the above discussion, but is primarily focused on recommending a rate structure as the necessary next step for funding the stormwater program and formally establishing the Utility. The recommended rate structure is a "hybrid" with a flat fee for single family/small residential properties and a tiered structure for nonresidential properties. The nonresidential rate structure, while tiered, is a direct extrapolation from the residential rate based on amount of impervious surface for a given property. An important factor in recommending this rate structure is balancing the level of administrative overhead with the more discrete fees that can be assigned with more accurate and precise but more administratively intensive data. The recommended rate structure will support an annual stormwater budget of a little under \$900k, which will meet operating requirements with a surplus for future capital expenses.

Table 4: Recommended Rate Structure

(Annual Service Charge/Fee)

Residential (1 ERU).....	\$75
Non-residential:	
Tier 1 (1 ERU).....	\$75
Tier 2 (5 ERUs).....	\$375
Tier 3 (11 ERUs)	\$825
Tier 4 (17 ERUs)	\$1275
Tier 5 (25 ERUs)	\$1875
Additional Tiers (+10 ERUs)*....add \$750 from the immediately adjacent lower tier	

*in 10 ERU increments, price per tier, total of 28 tiers. The largest tier has 255 ERUs. The annual fee for this tier would be \$15,300/\$19,125/\$22,950. A table showing all 28 non-residential tiers is provided in Table 12.

The rate structure can be revisited in the future as better data becomes available.

5. Steps to adopt the rate structure

Potential next steps and an implementation timeline for adopting the rate structure is provided below.

Community Outreach and Engagement

Community outreach and engagement will be essential to convey the reasons for the increasing cost of stormwater management, the benefits of moving forward, and to get community input and buy-in. A diversity of outreach techniques should be employed to reach as many people as possible, with review and direction from the Stormwater Advisory Commission and Board of Aldermen. A public hearing is a statutory requirement for rate structure adoption; it is recommended that a public hearing be scheduled for the spring of 2018.

Billing: Interlocal Agreement.

The preferred method for billing for service charges/fees to be collected is to piggyback on a system which is already in place to reduce upfront and ongoing operational administrative overhead. An Interlocal Agreement with Orange County is recommended to allow the Orange County Property Tax Office to provide billing support³. If the rate structure is adopted in the spring of 2018, the associated fees can be included in property tax bills sent out in the summer of 2018. In the event that it is not possible to adopt a rate structure in the spring of 2018, the new revenue stream from fees will be delayed a year because property taxes are billed on an annual cycle. For this scenario, Carrboro's stormwater program would be funded in FY 18/19, as has been done historically, through the Town's General Fund.

6. Stormwater Advisory Commission Update

The Commission met on February 22nd and received an orientation presentation. The Commission met on March 7th, received a presentation and discussed the same topics as presented in this memo, and provided a recommendation which is included in the work session agenda packet. The Commission will next meet on March 21st.

³ Orange County is currently providing this service for Chapel Hill and Hillsborough.

Recommendation

Staff recommend that the Board of Aldermen receive this memo, and consider the draft resolution to:

- a. pursue a community outreach and engagement process for the Town's plans to adopt a Stormwater Utility rate structure; and
- b. schedule a Public Hearing on the adoption of a rate structure in the spring of 2018; and
- c. work with Orange County staff to develop an Interlocal Agreement for billing as a matter to include in the review and adoption of a rate structure;
- d. refer the complete draft rate study report to the Stormwater Advisory Commission; and
- e. provide any other desired feedback.