



TOWN OF CARRBORO  
NORTH CAROLINA  
**STORMWATER UTILITY**

**To: David Andrews, Town Manager  
Mayor and Town Council**

**From: Randy Dodd, Stormwater Utility Manager**

**Cc: Joe Guckavan, Public Works Director  
Nick Herman, Town Attorney  
Arche McAdoo, Finance Director**

**Date: January 13, 2020**

**Subject: Stormwater Rate Structure Public Hearing**

**Background and Summary**

The purpose of this memorandum is to provide background information for the public hearing on the consideration of changes to the stormwater utility rate structure.

**Information**

A report on stormwater service delivery was presented on September 10, 2019 and a draft rate structure developed as part of the request to set up a public hearing on November 12, 2019. The draft rate structure has been reviewed by the Stormwater Advisory Commission and Economic Sustainability Commission. Notification of the proposed changes has been provided through media advertisement and Town communication channels. Drop in sessions were provided on December 12<sup>th</sup> and January 9<sup>th</sup><sup>1</sup>. A summary is provided in this memo to supplement other materials provided in consideration of amendments to the structure.

**Recommended Rate Structure**

The below excerpt from the Town Code creates the fundamental basis for the utility.

**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.”

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<sup>1</sup> There were no attendees at either session. Staff also have not received any written input, outside of advisory board review, to the draft amendments.

The Town's stormwater rate structure is based on the amount of impervious surface relative to the "Equivalent Residential Unit" (ERU) of impervious surface area as specified in the Town Code (18-3)), and consistent with the predominant practice for the other jurisdictions that have created a stormwater utility in North Carolina<sup>2</sup>. The premise is that impervious surface is an appropriate metric for determining the impact of stormwater runoff from a given property, and the ERU is a reasonable accounting basis.

In general terms, stormwater fees are calculated by determining the costs of providing the desired level of service and then distributing the costs based on impervious surface area. The draft rate structure includes a modification of the flat fee for single family residential properties to include a new tier for residential properties with greater than 6000 square feet of impervious surface, and a continuation of the current tiered structure for all other properties ("nonresidential") that is a direct extrapolation from the ERU. The tiered (22 tiers) nonresidential structure is driven by the much wider range of non-residential impervious area per parcel relative to residential properties. The overall rate structure 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 through the number of tiers as possible in the rate structure given the currently available data and staff capacity.

### Stormwater Services

On September 10<sup>th</sup>, staff presented a report on stormwater services, which have been incrementally increasing over the past 35-40 years. The Town has been transitioning into its largest increase in services with the new Stormwater Utility, Enterprise Fund, and Advisory Commission.

Until 2018, the stormwater program was staffed through a distributed network of responsibility across departments and positions. With the formation of the Stormwater Utility and the establishment of a rate structure with dedicated funding, the Enterprise Fund is currently funding 2 full time staff positions dedicated to stormwater service delivery who in turn are supported by other staff.

Beyond the transition from a formative to operational Stormwater Utility, the program is experiencing an inflection point:

- 1) EPA and the State are now requiring a higher level of regulatory compliance, record keeping, and reporting for NPDES stormwater permits. Two specific components of the Town's permit for which immediate attention is needed are preparing for a planned 2020 State/EPA audit, and expanding the inspections of Stormwater Control Measure (SCM) for private properties with SCMs permitted by the Town. Based on experience in over 20 other communities that have already been audited, it appears highly likely that Carrboro will be required to put more resources

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<sup>2</sup> According to the UNC Environmental Finance Center (EFC) dashboard: <https://efc.sog.unc.edu/resource/2018-north-carolina-stormwater-rates-dashboard>.

into NPDES permit compliance.

- 2) Recent experience with and concern for more intense storms is leading to a need for the stormwater program to play an expanding role in improved resilience to storm events, and floodplain management. Specific current examples include pursuit of FEMA Hazard Mitigation Grant Program (HMGP) and Public Assistance funds, Toms Creek flood mitigation, and request for support for other neighborhoods, and for potential Land Use Ordinance amendments to improve resiliency.
- 3) The Jordan Lake Rules will be reviewed in 2020; this is anticipated to place additional requirements on the program and Enterprise Fund.

#### Funding the Delivery of Stormwater Services

The Stormwater Enterprise Fund and [rate structure](#) established in 2018 have been set up to fund both operational and capital stormwater program needs<sup>3</sup>, including initiating projects with both water quantity/flood mitigation and water quality/environmental benefits. The initial establishment of the rate structure did not anticipate or attempt to completely reconcile the concerns mentioned above. This step was necessary to create the initial foundation for a program with dedicated funding, with a recognition that many details would need to be worked out over time to transition the Utility to a long term and sustainable enterprise. The long term nature is associated with the undertaking of developing a new and comprehensive program, maintaining and retrofitting infrastructure from a century worth of development, and building resiliency for uncertain and long term climate change related impacts. Since the Stormwater Utility is in the second year of receiving dedicated revenue, there are constraints on currently available funding for capital/larger projects as capital reserves are just beginning to accumulate. As a final and summary point for the motivation for considering a rate increase, staff are responding to the general need for the program to increase and accelerate service delivery.

#### Service Level Options Going Forward

Three short term (1-2 year) service level/delivery expansion options were presented on September 10 (Table 1). Highlighted/italicized items were mentioned as priorities at this meeting.

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<sup>3</sup> This approach is referred to as “pay as you go”. According the UNC Environmental Finance Center, it is how most stormwater programs fund their programs, including capital improvements. The EFC discusses various funding and financing options at [https://efc.sog.unc.edu/sites/default/files/2019/NC%20Stormwater%20Landscape\\_Final%20Draft\\_0.pdf](https://efc.sog.unc.edu/sites/default/files/2019/NC%20Stormwater%20Landscape_Final%20Draft_0.pdf)

**Table 1. Service Expansion Options Matrix (1-2 year time horizon)<sup>4</sup>**

| <b>Services</b>                                                                       | <b>Current/Planned</b>                                                                                                                                                                                                                                      | <b>Option 1</b>                                                                                                                      | <b>Option 2</b>                                                                                                                          |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Public Stormwater Infrastructure</b><br>(repair, rehab, replace, retrofit, extend) | Pursue Public Works stream restoration and Broad Street Culvert Replacement.<br>Develop prioritization matrix of already identified projects.                                                                                                               | Update MS4 inventory<br>Initiate system wide condition assessment                                                                    | Finish condition assessment and develop life cycle repair, rehab, replacement implementation plan.<br>Develop green infrastructure plan. |
| <b>Private Stormwater Control Measures Inspections</b>                                | Inspect 25% of SCMs in next 18-24 months.                                                                                                                                                                                                                   | <b><i>Inspect 50% of SCMs within 2 years.</i></b>                                                                                    | <b><i>Inspect 100% of SCMs within 2 years.</i></b>                                                                                       |
| <b>Regulatory/Water Quality</b>                                                       | Prepare for NPDES audit in early 2020 as able with current capacity and workload.<br>Continue to track Jordan Lake Rules.                                                                                                                                   | Prioritize/expand NPDES permit compliance activities                                                                                 | Commit to 319 grant application for next grant cycle (2020).                                                                             |
| <b>Flood Mitigation/Resilience</b>                                                    | Continue with FEMA HMGP grants and Public Assistance projects.<br>Complete engineering assessment for Toms Creek catchment.<br>Complete neighborhood pilot RainReady project. <sup>5</sup><br>Schedule LUO text amendment public hearing by December, 2020. | <b><i>Launch residential assistance program within 2 years</i></b><br>Schedule LUO text amendment public hearing by September, 2020. | Could include additional cost sharing.<br>Schedule LUO text amendment public hearing by June, 2020.                                      |
| <b>Stormwater Operations and Administration</b>                                       | Continue with Stormwater Enterprise Fund administration and other current operations.<br>Initiate workflow management system.                                                                                                                               | Consider new contractual services, e.g., on call Jet Vac and inspections of MS4                                                      | Invest in additional equipment.<br>Consider tiered rate structure and/or credit manual<br>Prepare first annual stormwater report.        |

The following feedback is provided in response to other comments provided on September 10<sup>th</sup>.

- The recommended rate structure provides capacity to initiate a residential assistance program, with the details to be determined through Management, Stormwater Advisory Commission, and Council review of policy and program recommendations to be provided later in 2020 after the “RainReady” pilot has been completed.

<sup>4</sup> Options 1 or 2 require a rate increase. All “Current/Planned” services are implicit in “Option 1”. “Option 1” services are implicit in “Option 2”. Only services not included in others are shown for “Option 2”.

<sup>5</sup> The Center for Neighborhood Technology “RainReady” pilot study is underway.

- Stormwater and Affordable Housing staff have conferred about supporting residents in low income housing with stormwater related concerns and needs. When qualifying households have stormwater problems, staff plan to work on a case by case basis to see what solutions are possible.
- Regarding creating synergies in community outreach between the Community Climate Action Plan and the Center for Neighborhood Technology (CNT) Pilot “RainReady” Project: Stormwater staff and the Environmental Planner have conferred and have also participated in a call with Center for Neighborhood Technology staff.
- With regard to expediting inspections of privately owned and permitted Stormwater Control Measures, the main immediate need is for additional staff: the recommended rate structure will support a new staff position to focus on administrative and technical/office activities that will free up the Stormwater Utility Manager and Stormwater Specialist for these inspections, with the potential for support from other staff if needed.

An important consideration for planning for service delivery over the next 1-2 years is that Stormwater staff are and, presuming new funding is awarded, will continue to be supporting FEMA HMGP projects (2 grant cycles, four residential properties) and Public Assistance efforts. FEMA grant administration requires a very significant amount of staff time, and success is contingent on navigation of many requirements. The motivation is that, if successful, flood mitigation will be provided for 4 of the most vulnerable residences along Toms Creek and a very vulnerable situation due to streambank instability at Public Works will be addressed. The Town could, if successful, also access close to \$1M of federal and state funds for these projects. (They are being pursued on a reimbursal basis that requires substantial documentation and adherence to federal requirements; funding is not guaranteed.) Stormwater staff’s pursuit of these projects is one reason why the two core/full time Stormwater staff are not currently able to devote more time to other important activities. The draft rate structure has been developed to support the necessary additional staff capacity that the program needs. A 10 year projection of anticipated program expenses has been developed and reviewed, and premised on adequate service delivery from stormwater fees alone. Any additional revenue through grant support or other revenue streams will allow for further acceleration and expansion. The additional fee-based revenue will also greatly enhance staff’s capacity to pursue other grant opportunities.

### **Recommendation**

Staff recommend that the Town Council hold a Public Hearing and consider the draft resolution to modify the rate structure as presented in Table 2 and the resolution. This rate structure will allow the Town to in general accelerate and expand stormwater service delivery, more quickly create reserves to pursue larger projects, and to specifically respond to the feedback provided in September, as described in this memo.

**Table 2: Recommended Rate Structure  
(Annual Service Charge/Fee)**

**Residential**

| <b><u>Tier</u></b> | <b><u>Minimum Impervious Surface (square feet)</u></b> | <b><u>Maximum Impervious Surface (square feet)</u></b> | <b><u>Fee</u></b> |
|--------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------|
| <b>1</b>           | 500                                                    | 5,999                                                  | \$90              |
| <b>2</b>           | 6,000                                                  | ---                                                    | \$180             |

**Non-Residential**

| <b><u>Tier</u></b> | <b><u>Minimum Impervious Surface (square feet)</u></b> | <b><u>Maximum Impervious Surface (square feet)</u></b> | <b><u>Fee</u></b> |
|--------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------|
| <b>1</b>           | 500                                                    | 5,999                                                  | \$90              |
| <b>2</b>           | 6,000                                                  | 23,999                                                 | \$450             |
| <b>3</b>           | 24,000                                                 | 41,999                                                 | \$990             |
| <b>4</b>           | 42,000                                                 | 59,999                                                 | \$1,530           |
| <b>5</b>           | 60,000                                                 | 89,999                                                 | \$2,250           |
| <b>6</b>           | 90,000                                                 | 119,999                                                | \$3,150           |
| <b>7</b>           | 120,000                                                | 149,999                                                | \$4,050           |
| <b>8</b>           | 150,000                                                | 179,999                                                | \$4,950           |
| <b>9</b>           | 180,000                                                | 209,999                                                | \$5,850           |
| <b>10</b>          | 210,000                                                | 239,999                                                | \$6,750           |
| <b>11</b>          | 240,000                                                | 269,999                                                | \$7,650           |
| <b>12</b>          | 270,000                                                | 299,999                                                | \$8,550           |
| <b>13</b>          | 300,000                                                | 329,999                                                | \$9,450           |
| <b>14</b>          | 330,000                                                | 359,999                                                | \$10,350          |
| <b>15</b>          | 360,000                                                | 389,999                                                | \$11,250          |
| <b>16</b>          | 390,000                                                | 419,999                                                | \$12,150          |
| <b>17</b>          | 420,000                                                | 449,999                                                | \$13,050          |
| <b>18</b>          | 450,000                                                | 479,999                                                | \$13,950          |
| <b>19</b>          | 480,000                                                | 509,999                                                | \$14,850          |
| <b>20</b>          | 510,000                                                | 539,999                                                | \$15,750          |
| <b>21</b>          | 540,000                                                | 569,999                                                | \$16,650          |
| <b>22</b>          | 570,000                                                | 599,999                                                | \$17,550          |