



## TOWN OF CARRBORO

NORTH CAROLINA

**TRANSMITTAL**

**PUBLIC WORKS DEPARTMENT**

**To:** David Andrews, Town Manager  
Board of Aldermen

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

**Through:** Joe Guckavan, Public Works Director

**Cc:** Heather Holley, Stormwater Specialist  
Daniel Snipes, Public Works Superintendent  
Patricia McGuire, Planning Director

**Date:** January 9, 2019

**Subject:** Stormwater Utility Update

### Summary

The purpose of this memo is to provide an update on Stormwater Utility activities in the second half of 2018, and plans for 2019.

### Information

The narrative below expands on the summary provided in Attachment 1.

Following on the adoption of a rate structure in June, 2018, the second half of 2018 saw the Stormwater Utility begin to transition from a formative stage to an operational stage. Some of the primary administrative activities during this period are shown below.

- Stormwater staff took on the new task of coordination with the Orange County Property Tax office for collection of stormwater fees, including providing databases related to impervious surfaces and billing, and responding to citizen's inquiries related to billing.
- Staff also prepared or provided support for 5 Stormwater Advisory Commission and 4 Board of Aldermen agendas.
- Other administrative activities included: providing regulatory compliance oversight, including supporting NPDES permits (6 management measures under the Townwide permit, and separate requirements for the Public Works facility) and reporting requirements under the Jordan Lake Rules; updating the 5 year stormwater capital improvement plan; hiring a new Stormwater Specialist; and supporting alterations at Public Works to provide additional office space.

Non-administrative July-December, 2018 highlights are elaborated on in more depth in the sections that follow.

### FEMA Hazard Mitigation Grant Program Update

In 2016, the Town was awarded a grant by the North Carolina Division of Emergency Management to elevate two homes at 400 Lorraine Street and 403 Lorraine Street. Following receipt of the grant, staff developed a Request for Qualifications to hire a qualified consulting firm to assist with pre-construction/design and bidding services, construction administration and grant compliance monitoring. The Town awarded the contract to Summit Design and Engineering Services in the late spring of 2018. Stormwater staff began providing administrative support for the grant and contract in October. Summit has wrapped up the preconstruction/design phase of the project and construction bid advertisement has been prepared, with bids due January 16<sup>th</sup>. Costs associated with the project will be reimbursed to the Town through the grant program with a combination of both Federal and state funds covering 100% of the costs associated with the project. The project is under a tight time frame due to the expected expiration of federal funding in March, 2019.

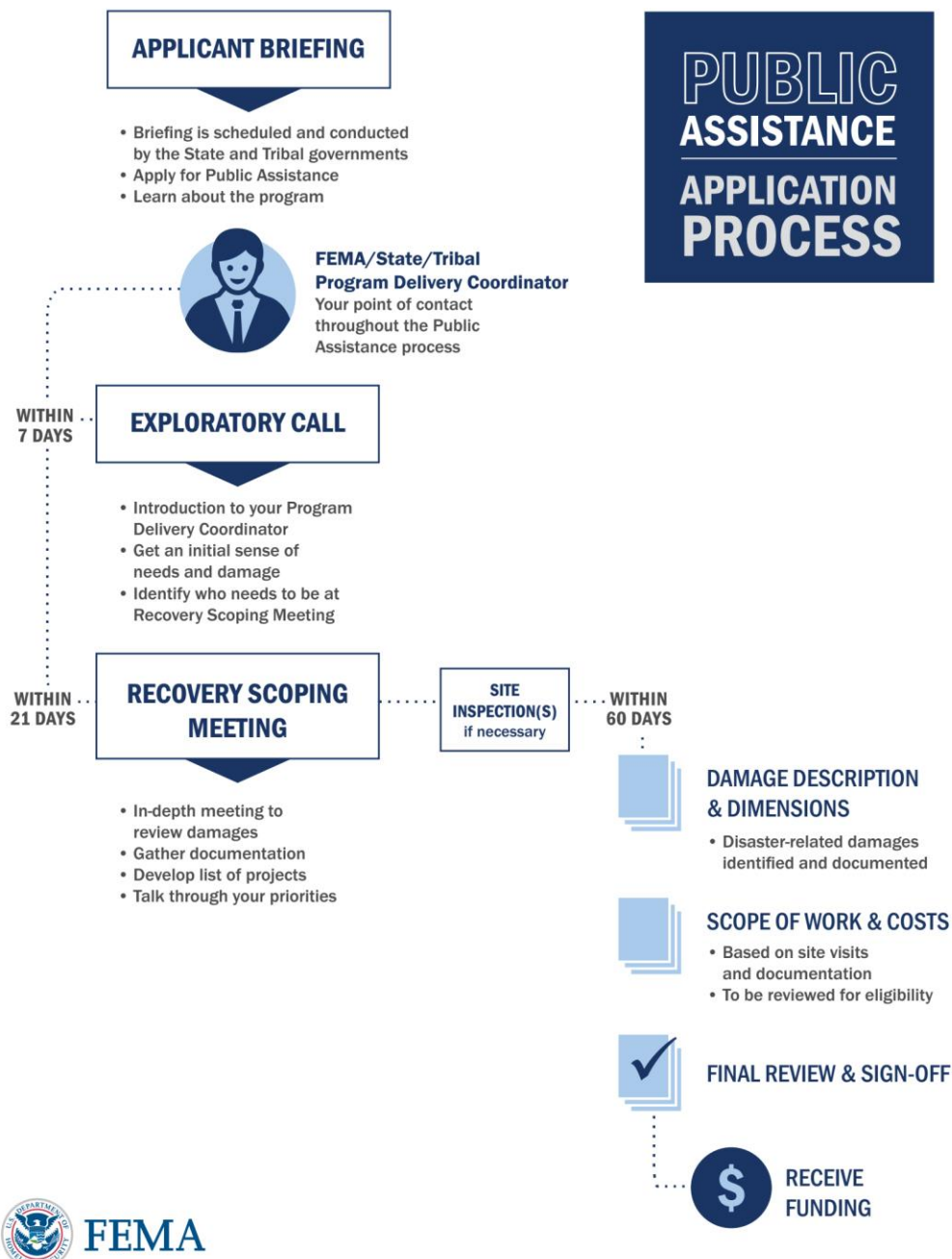
Following on Hurricane Florence, FEMA announced that a new round of Hazard Mitigation Grant Program funding would be pursued. Stormwater staff attended an orientation meeting on November 15<sup>th</sup> at the State Emergency Operations Center in Raleigh, and also reached out to community members to solicit interest in participating. The two homeowners at 116 Carol Street and 100 James Street (properties included in the previous HMGP applications for acquisitions that were not accepted by the State and FEMA) have responded, and provided information required to include in a Letter of Interest. (Staff have not received other inquiries of interest in participation.) Staff have been simultaneously

communicating with State Emergency Management staff and others to determine eligibility and the strategy for submittal with the highest likelihood of State/Federal acceptance. The Letter of Interest is due February 8<sup>th</sup>; Stormwater staff intend to continue to work with Planning staff, homeowners, and State staff on identifying the submittal strategy with the highest probability for funding and successful completion in the interim.

New FEMA Public Assistance Funding

Stormwater staff have been supporting the Town’s exploration of FEMA Public Assistance funding. This FEMA program is intended to “provide funds to assist communities responding to and recovering from major disasters or emergencies declared by the President”. At the Public Works facility, Florence resulted in a flood elevation that exceeded any previous flood observed by Public Works staff. One of the impacts was the inundation of the fleet’s fuel tanks which in and of itself presents a high risk situation. There are two unnamed intermittent streams that flow from the south side of downtown along South Greensboro Street and Old Pittsboro Road, join just above the 54 Bypass, and then flow under the bypass and along the Public Works property line before flowing into Morgan Creek. The stream channel is very incised adjacent to Public Works, with an actively eroding bank. During Hurricane Florence, a large section of the streambank immediately adjacent to the fuel tanks (as well as the Sign Shop and two shed buildings) collapsed, escalating and accelerating the importance of addressing the bank erosion. The flooding also blocked access to Public Works and compromised staff’s ability to provide emergency response, damaged outbuildings, equipment, and vehicles, placed employees at risk, and has required substantial staff effort for recovery from the event. Staff have submitted insurance claims for losses; uncovered expenses associated with impacts from Florence may also be eligible for Public Assistance, as well as reimbursement for staff time associated with emergency response and follow up, and other damages to Town property.

The Public Assistance application process is shown in the figure below.



The applicant briefing meeting for all of Orange County occurred on November 1<sup>st</sup>. At this initial meeting, staff were made aware of the potential scope of available funds. This meeting was followed by an exploratory phone call with FEMA on December 3<sup>rd</sup>, and a “Recovery Scoping Meeting” on December 17<sup>th</sup>. The second meeting outlined required information and documentation for all projects/reimbursements under the program, and the scope of what the Town should consider applying for. FEMA provided input that the Town should move ahead with documenting and submitting damage estimates, and also consider applying for hazard mitigation assistance for: the Broad Street culvert replacement; stream restoration at Public Works; and Public Works facility relocation. Following up, the Town has 60 days (until February 15<sup>th</sup>) to provide the documentation for identified damages, expenses, and projects. FEMA will then provide notice of the amount of Public Assistance available, and will also advise the Town about the process to pursue additional FEMA support. Stormwater staff are part of an interdepartmental team that is carefully coordinating efforts with FEMA staff to maximize the Town’s ability to leverage FEMA resources.

#### Other Stormwater Activities

Carrboro has been identifying stormwater capital projects in the Capital Improvements Program (CIP) since 2012. These projects have been significantly but not solely motivated by regulatory requirements including: the implementation of State’s rules to restore Jordan Lake, the Town’s NPDES permit, and the listing of Bolin Creek as impaired. Stormwater staff provided recommendations to update the 5 year plan for stormwater capital improvements to the Management Team late in 2018. As part of the update, it is important to point out that revenue from the establishment of a rate structure is in the early stages of being collected, and it will take several years to build up a significant capital reserve. Therefore, it is not recommended that larger or multiple capital projects be pursued in the next 1-2 years. As mentioned above, impacts from Hurricane Florence have helped focus staff’s attention on the critical need for the stream restoration project at the Public Works facility. Staff are working with FEMA to determine the amount of FEMA Public Assistance funds that could be available following on Florence.

Notable other Stormwater staff activities for the second half of 2018 are provided in Attachment 1, and elaborated on below. Staff:

- 1) responded to a variety of stormwater related inquiries and issues by:
  - helping with coordination and outreach following a home heating oil spill on Phipps Street during Florence.
  - investigating and supporting Public Works response to reports of stormwater conveyance system maintenance needs
  - collaborating with Mr. Jim Porto, former Carrboro Mayor and founder of Community CAPS, Inc., to explore potential stormwater grant funding opportunities
  - providing technical support for the review of the Lloyd property rezoning and Sanderway conditional use permit application review
- 2) received State training and certification in Stormwater Control Measure (SCM) maintenance and inspection and stream determination methodology.
  - a. continued to provide SCM inspection and stream determination field services, and also continued to support a USGS stream gage on Bolin Creek and ongoing annual benthic macroinvertebrate monitoring.

Figure 1 in Attachment 1 provides a synopsis of the relative level of effort for different types of stormwater related activities for Stormwater Utility staff in the second half of 2018. A map showing many of the locations that staff were involved in in some capacity (e.g., stormwater issues on both public and private property, some of the specific activities discussed in this memo, billing inquiries) with during this time from is provided in Figure 2 in Attachment 1. Staff were contacted for many of these locations because of the storm events that occurred. Staff responded to: about inquiries on about 20 sites that were primarily about flooding or drainage issues, about a dozen billing inquiries, 8 sites in various stages of land use permitting, 4 sites with primarily erosion related concerns, three illicit discharge reports, several construction related issues, and miscellaneous other inquiries. Note that the sites shown in Figure 2 are a subset of all inquiries/sites, representing those with more extensive and readily documented phone/email communications and/or site visits.

### 2019 Initiatives

Stormwater Utility staff will be quite occupied during the first quarter of calendar year 2019 on top of the baselineworkload with supporting pursuit of Public Assistance funding, the current HMGP grant, and the new HMGP application, along with FY 19/20 operating budget preparation. In addition, staff were approached by David Salvesen from the UNC Institute for the Environment in the late summer to consider working with a UNC Capstone team for the spring semester. Staff shared this interest with Stormwater Advisory Commission, and the team plans to meet with the Commission at their January 10<sup>th</sup> meeting. The overall goals of the team's efforts will be to:

- improve outreach and awareness of Carrboro's stormwater management program
- provide information to Carrboro residents and businesses on how to reduce and mitigate stormwater runoff
- conduct a pilot study of stormwater mitigation for a particular area of Carrboro
- advise the Town on specific additional steps the Town could consider to better reduce or mitigate stormwater runoff.

Another planned winter/spring activity is working with a UNC intern (Luke Morin) on updating an inventory of street trees. The internship will also include educational outreach that will tie stormwater (quantity and quality) and urban forestry together. An area of focus will be identifying the many benefits and services of street trees, with some emphasis on downtown.

A baseline workload activity that staff intend to ramp up in 2019 is Stormwater Control Measure (formerly known as "Best Management Practices", or BMPs) inspections.

In consideration of the requests and inquiries that staff regularly receive, Stormwater Utility staff are also seeking Management and Board direction to spend time in the first half of 2019: reviewing the Town's (1984) Drainage Policy; researching approaches taken in other municipalities; working with the Stormwater Advisory Commission to identify options to provide enhanced residential drainage assistance/runoff reduction services; and bringing back a joint staff/Commission recommendation to the Board before the summer break for a potential update to the Drainage Policy and establishment of a more formal residential assistance program. At that time, staff could also provide the Board with a broader mid-year update and plans for the second half of 2019 for Board feedback.

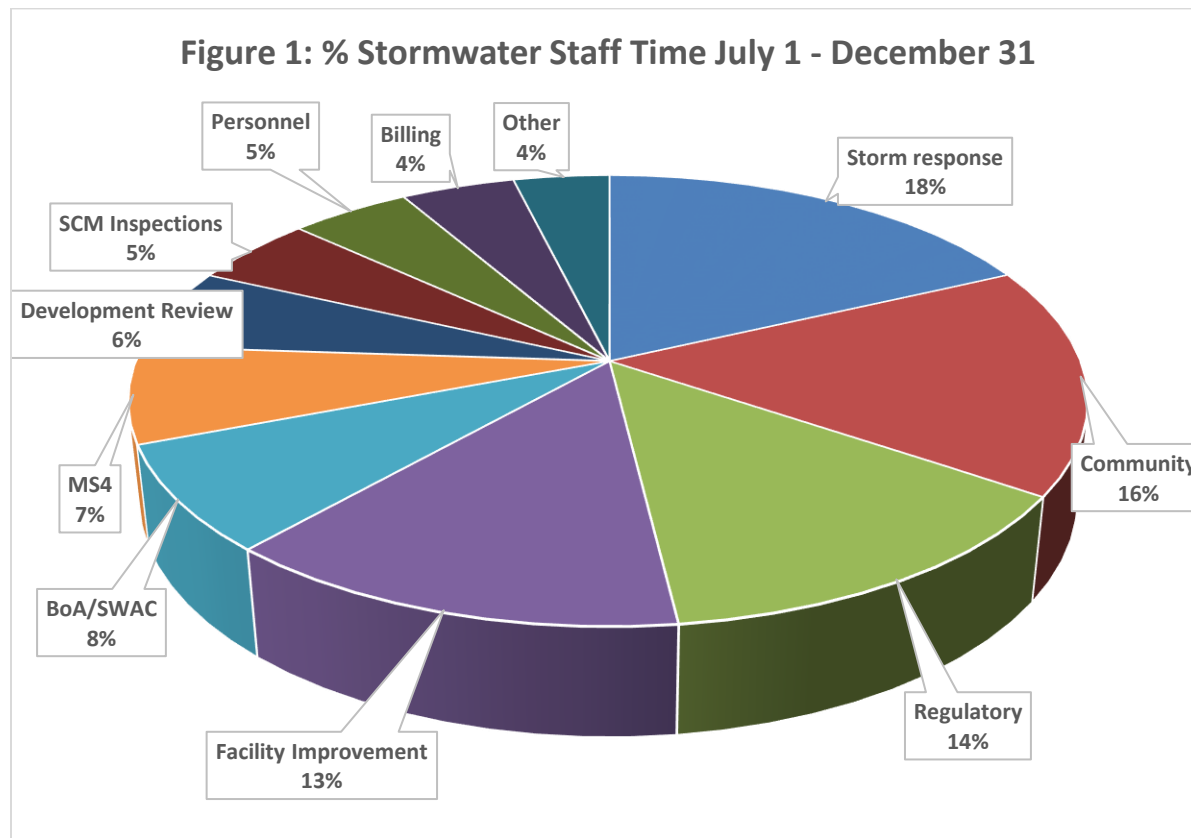
### **Recommendation**

Staff recommend that the Board of Aldermen receive this memo, and direct staff to work with the Stormwater Advisory Commission to review the Town's Drainage Policy and provide recommendations for updates to the Policy and direction for a residential assistance program, and provide a report for the Board in the late spring.

# Highlights of Stormwater Utility Activities

July-December, 2018

Service	Activity
Administration	<ol style="list-style-type: none"> <li>1. Stormwater Utility rate structure implementation began in July 2018.</li> <li>2. Prepared Stormwater Advisory Commission and Board of Aldermen agenda materials</li> <li>3. Regulatory compliance:               <ul style="list-style-type: none"> <li>• Administered NPDES Phase II permits                   <ul style="list-style-type: none"> <li>• 6 management measures for Townwide permit</li> <li>• Coordination with Public Works staff and contractor for Public Works facility permit</li> </ul> </li> <li>• Provided annual reporting for compliance with Jordan Lake Rules</li> <li>• No new activity for Bolin Creek watershed restoration/TMDL</li> </ul> </li> <li>4. Hired new Stormwater Specialist</li> <li>5. Supported alterations at Public Works facility</li> </ol>
Infrastructure	<ol style="list-style-type: none"> <li>1. Pursued and coordinated public conveyance system maintenance and inspection activities with Streets Division and community members               <ul style="list-style-type: none"> <li>• Uptick due to storm events</li> </ul> </li> <li>2. Participated in internal staff update of planned stormwater capital improvements               <ul style="list-style-type: none"> <li>• Solicited feedback from Stormwater Advisory Commission</li> </ul> </li> <li>3. Initiated pursuit of FEMA Public Assistance funding to address emergency situation at Public Works associated with repetitive and significant flooding and a rapidly eroding streambank adjacent to the fleet's underground fuel tanks.</li> </ol>
Community	<ol style="list-style-type: none"> <li>1. Responded to inquiries associated with two large storm events.               <ul style="list-style-type: none"> <li>• Followed up on home heating oil spill on Phipps Street</li> </ul> </li> <li>2. Providing staff support for Hazard Mitigation Grant Program (HMGP) projects to elevate homes at 400 and 403 Lorraine Street</li> <li>3. Preparing Letter of Interest for new HMGP funding cycle associated with Florence.</li> <li>4. Providing phone, email, and on site consultative services to community members.</li> <li>5. Continue to participate in Clean Water Education Partnership.</li> </ol>
Planning	<ol style="list-style-type: none"> <li>1. Provided technical review for 8 projects seeking land use permits and rezoning</li> <li>2. Referred development applications to Stormwater Advisory Commission for review</li> </ol>
Field	<ol style="list-style-type: none"> <li>1. Completed stream determinations to clarify inquiries regarding regulated surface waters and associated buffers.</li> <li>2. Inspected Stormwater Control Measures permitted by the Town.</li> <li>3. Continued to participate in a cooperative agreement with Chapel Hill and USGS to support a stream gage on Bolin Creek.</li> <li>4. Continued to complete annual benthic monitoring to document stream biological integrity.</li> </ol>



#### Explanation of Figure 1 Categories

1. Storm Response: Time spent primarily related to Florence, Matthew, and the storm event in early November. This includes much of the time associated with FEMA Public Assistance and HMGP.
2. Community: Time spent primarily responding to stormwater related inquiries from community members, aside from time indicated in other categories.
3. Regulatory: Time spent primarily related to the Town's two NPDES permits, Jordan Lake Rules, and listing of Bolin Creek as an impaired water.
4. Facility Improvement: Time spent providing construction contracting support for the office alteration at Public Works.
5. BoA/SWAC: Time spent preparing agenda Board of Aldermen and Stormwater Advisory Commission agenda materials, attending meetings, and following up on meetings.
6. MS4: Time spent primarily related to inspections and maintenance of the Municipal Separate Stormwater Sewer System (MS4). This was generally coordinated with Public Works Streets Division staff.
7. Development Review: Time spent generally related to development projects (rezoning, land use permits, construction projects, predevelopment application inquiries)
8. SCM Inspections: Time spent planning, completing, and following up on Stormwater Control Measure inspections
9. Personnel: Time spent creating, advertising, interviewing, and hiring new Stormwater Specialist position.
10. Billing: Time spent responding to inquiries related to the new stormwater fees being collected by the Orange County Property Tax Office.
11. Other: Activities not readily captured in above.

Note that these are best estimates and subjectively determined. Some activities cross multiple categories. Note also that the second half of 2019 was atypical given the storm activity and transition period for the Utility. A different breakdown is expected and desired for 2019 and future years, with less time/effort anticipated for #s 1, 4, 9, and 10 in particular which will allow for more capacity for other items.

**Figure 2: Level of Staff Effort for Carrboro Locations (July-December 2018)**

