



**TOWN OF CARRBORO
STORMWATER ADVISORY COMMISSION**

AGENDA

April 29th, 2019; 6:30 pm
Carrboro Public Works

| <u>Time</u> | <u>Item</u> | <u>Presenter</u> |
|--------------------|---|-------------------------|
| 6:30 pm | Administrative matters <ul style="list-style-type: none">• Adjustments to agenda• Approval of 3/14 minutes | Chair |
| 6:40 pm | Scheduling Future Meetings | Chair, All |
| 6:50 pm | Staff Update on Recent Activities | Staff |
| 7:20 pm | Land Use Ordinance Review | Staff, All |
| 7:50 pm | Announcements and adjourn | Chair |



TOWN OF CARRBORO STORMWATER ADVISORY COMMISSION – SUMMARY

Meeting on March 14, 2019, 6:30 pm, Town Hall Room 100

| Board Members | | Guests | Staff |
|--|-------------------|--------|----------------|
| John Cox | Tom Hoban | | Randy Dodd |
| Robert Dickson | Jeanette O'Connor | | Heather Holley |
| Randee Haven O'Donnell (Board Liaison; absent) | Michael Paul | | |

Administrative Matters

The January 10th meeting minutes were approved.

Lloyd Property

The Commission reviewed the concept plan for the Lloyd Property, and passed on comments that: encourage green infrastructure and LID practices and minimize the use of centralized/large retention/detention; maximize use of native large canopy trees to encourage additional interception and infiltration and evapotranspiration and many other benefits and exceed minimum shading and tree canopy requirements; and incorporate future precipitation projections in estimating intensity, duration and frequency of design storms, including 50 and 100 year storms.

Residential Assistance

Staff provided a presentation and discussed the memos provided for the meeting regarding the consideration of creating a new residential assistance program. There are several motivations, including: an outdated (1984) drainage policy; the substantial interest; and need for clearer articulation and guidance going forward on what the Town/Stormwater Utility can and cannot offer on private residential lots. The presentation/discussion included both an introduction to the consideration, to be continued, as well as a report from a survey of what other NC municipalities are doing and have learned in these types of programs.

Staff Update

Staff provided an update on recent efforts, with a focus on the stormwater/urban forestry internship, FEMA Hazard Mitigation Grant Program project (2 home elevations) and new application (2 additional residences) as well as the FEMA Public Assistance application effort.

Adjourn

The meeting was adjourned at 8:30 pm. The next meeting date is to be determined.



TOWN OF CARRBORO

NORTH CAROLINA

TRANSMITTAL: STORMWATER UTILITY

DELIVERED VIA: HAND MAIL FAX EMAIL

To: Stormwater Advisory Commission (SWAC)
From: Randy Dodd, Stormwater Utility Manager
Cc: Joe Guckavan, Public Works Director
Heather Holley, Stormwater Specialist
Date: April 25th, 2019
Subject: Stormwater Utility Update and Planning for Future SWAC Meetings

Summary

The purpose of this memo is to provide the Stormwater Advisory Commission (SWAC) with a brief update related to some of the recent and planned stormwater program activities.

Information

Program activities included in this report are summarized below. Staff will be prepared to discuss these and other program activities at the April meeting.

FEMA Projects.

The status of the FEMA Hazard Mitigation Grant Program (HMGP) and Public Assistance projects has not changed significantly since the report provided at the March meeting. Appendix 1 provides a summary of the HMGP acquisition and elevation projects.

Board of Aldermen Stormwater Agenda Items

The Board of Aldermen discussed stormwater at both the 4/16 and 4/23 meetings. The topic for the 4/16 agenda item was potential Land Use Ordinance (LUO) amendments for stormwater. The agenda item for 4/23 was responding to a request from the Board at the 4/16 meeting for an update and report related to flooding concerns for several specific properties. The agenda item for the 4/16 meeting can be found at this link:

<https://carrboro.legistar.com/LegislationDetail.aspx?ID=3919560&GUID=59CDD594-2973-4C2B-813C-738A1CF5707B> The video from 4/16 can be found at

http://carrboro.granicus.com/MediaPlayer.php?view_id=2&clip_id=235 (starting at 1 hour and 7 minutes in), The video from 4/23 can be found at

http://carrboro.granicus.com/MediaPlayer.php?view_id=2&clip_id=236 (starting at 2 hours and 47 minutes in). Current stormwater provisions in the LUO can be found at this link:

<http://www.townofcarrboro.org/DocumentCenter/View/698/Article-XVI-Floodways-Floodplains-Drainage-and-Erosion-PDF> (pages 28-41).

Stormwater Control Measure Maintenance and Inspection Program

Staff are preparing for a more proactive Stormwater Control Measure (SCM) maintenance and inspection program. There are over 200 SCMs on private property for which the Town is

responsible under its NPDES permit for insuring that the SCMs are being properly maintained. Improved maintenance of SCMs is also a very important step for community resilience from flooding and drainage impacts, and for meeting other regulatory and nonregulatory goals. More information on this program is available at this link:

<http://www.townofcarrboro.org/751/Maintenance-and-Inspection>

Urban Forestry Internship

The urban forestry spring semester internship has come to end. 30 tree tags were posted around the community to help disseminate information about the benefits of trees for stormwater management and other purposes. Outreach was provided at multiple events in March and April. Another outcome was updating of the Town's website:

<http://www.townofcarrboro.org/1177/Carrboro-Tree-Value-Tags>

Website Update

Staff are in the early stages of working on other updates to the website. We expect to have an updated FAQ page ready soon, and will be asking the SWAC to review that information as soon as it is ready.

Residential Assistance Policy and Program

As a follow up to information provided at the March meeting, staff have continued work on a draft of a residential assistance policy and program. The purpose of this document is to provide a general framework for considering potential Town technical and/or financial assistance to residential property owners in Carrboro experiencing stormwater/drainage problems. This draft document will be shared with the SWAC in the near future for review.

Recommendation

It is recommended that SWAC members review this memo, contact staff with any questions, and plan to receive additional information and further discuss at the April meeting.

Brief Chronology for Pursuing FEMA Hazard Mitigation Grant Program Funds for Acquisition of 116 Carol Street

| <u>Date</u> | <u>Action</u> | <u>Notes</u> |
|----------------|--|--|
| 2013 | Applications submitted to FEMA (through State) for acquisition of 116 Carol Street and 100 James Street | The applications were deemed fundable, but due to a shortage of mitigation funds, grants were not awarded. |
| 2015 | Town was invited to resubmit the applications , and subsequently received notice of award | |
| 2016 | A grant agreement between the Town and NC Dept. of Public Safety was negotiated and approved by Board | The grant agreement was fully executed in September and work initiated. |
| 2017 | Appraisal completed in mid-2017, with appraised value exceeding amount allowable per FEMA policy (for both properties). Project determined to not be fundable. | Staff work with NCDPS staff to determine options. |
| Early 2018 | Decision made to decline grant funding. | |
| Late 2018 | FEMA announces new HMGP funding for Florence. Community solicited for interest. | Staff continue to check with NCDPS staff to determine options, emphasizing repetitive loss and magnitude of impacts. |
| Jan-March 2019 | 116 Carol Street owner requests that Town submit acquisition Letter of Interest. Necessary application material provided, and Letter of Interest submitted to NCDPS prior to March 15 th deadline | Staff continue to check with NCDPS staff to determine options; staff and elected officials pursue separate exploration with State and federal policy makers to request policy/procedural change. |
| April 2019 | Awaiting response/decision regarding Letter of Interest submittal. | If LOI is accepted, next step is to negotiate a grant agreement. Recommended that clarity be provided on issues around the appraisal policy/review process prior to entering into an agreement. |

**Brief Chronology for Pursuing FEMA Hazard Mitigation Grant Program Funds
for Elevation of 400 and 403 Lorraine Street (and 100 James Street)**

| <u>Date</u> | <u>Action</u> | <u>Notes</u> |
|--------------------|--|--|
| 2013 | Applications submitted to FEMA (through State) for elevation of 400 and 403 Lorraine Streets | The applications were deemed fundable, but due to a shortage of mitigation funds, grants were not awarded. |
| 2015 | Town was invited to resubmit the applications, and subsequently received notice of award. | |
| 2016 | A grant agreement between the Town and State was negotiated and approved by Board. | The grant agreement was fully executed in September |
| 2017 | Decision made to seek contractual support to assist with structural engineering/design, bid and construction management, and grant compliance. | An RFP was published in November 2017. Contributing factors to the delay included the death of one staff member and resignation of others and need for a firm with technical expertise and HMGP related experience. |
| 2018 | The Board approved a contract with Summit Engineering to provide technical support. | A grant extension request was submitted to NCDPS and approved to extend the project to March, 2019. |
| Late 2018 | Design work for elevations completed. Construction bid advertised. FEMA announces new HMGP funding for Florence. | A grant extension request was submitted to NCDPS and approved to extend the project to March, 2019. Community solicited for interest in new applications. |
| Jan-March 2019 | Construction bid readvertised since qualifying bid not received. Letter of Interest to reapply for elevation funding developed and submitted to NCDPS to meet March 15 th deadline | Qualifying construction bid received, but exceeded funding in grant agreement. Request for additional funding and second extension submitted. LOI included resubmittal for 400 and 403 Lorraine (in case funding/extension request not approved) and new submittal for 100 James Street (at which there is a new property owner). |
| April 2019 | Awaiting response to request for extension/ additional funding and Letter of Interest under new funding cycle. | |

JOINT ADVISORY BOARDS

ITEM NO. _____

AGENDA ITEM ABSTRACT

MEETING DATE: May 2, 2019

TITLE: Land Use Ordinance Amendment Relating to Stormwater Management

| | |
|--|--|
| DEPARTMENT: Planning | PUBLIC HEARING: YES ___ NO_X_ |
| ATTACHMENTS: A Recommendation Template B Draft LUO Ordinance C Proposed Amendment Language shown in Tracking | FOR INFORMATION CONTACT: Christina Moon – 918-7325 Patricia McGuire -- 918-7327 |

PURPOSE

The purpose of this item is to consider an amendment to the text of the Land Use Ordinance relating to stormwater management. The Board of Aldermen has set a public hearing for May 28, 2019 and has requested Planning Board, Economic Sustainability Commission and Stormwater Advisory Commission review prior to the hearing.

INFORMATION

At the April 16th Board of Aldermen meeting, the Board considered two aspects of the Town's stormwater management regulations relating to rate and volume of post-development controls. (<https://carrboro.legistar.com/MeetingDetail.aspx?ID=678575&GUID=D1903920-6614-456A-8277-65BD80F24C9E&Options=&Search=>) The first, involved a discussion on possible options for establishing new standards for stormwater management. The second focused on the preparation of a draft ordinance to update the Land Use Ordinance to reflect changes in state agency organization: the establishment of two agencies, DEQ and DEMLR, replacing the role of NCDENR, and the renaming of the BMP manual to the SCM manual. In addition, the draft ordinance, if adopted, would remove the reference to the Jordan Lake Accounting Tool (JLAT) which is no longer used. Rather than replace the JLAT, with Stormwater Nitrogen and Phosphorus v4.1 (SNAP), with the new project-scale modeling tool, the draft ordinance includes more generic references to the state's agencies and actions/tools to avoid having to do future amendments because of state administrative reorganizations or changes to the name of software (*Attachment B*).

A public hearing has been set for May 28, 2019. The Board of Aldermen must receive public comments before adopting amendments to the Land Use Ordinance. Orange County and Planning Board are also needed, and staff has identified the Economic Sustainability Commission and the Stormwater Advisory Commission as other advisory boards for referral based on their purview.

RECOMMENDATION

Staff recommends that advisory boards review the draft ordinance (*Attachment B*) and adopt a recommendation for inclusion in the public hearing materials for May 28, 2019. A recommendation template has been provided for the boards to use (*Attachment A*).

TOWN OF CARRBORO



301 West Main Street, Carrboro, North Carolina 27510

R E C O M M E N D A T I O N

THURSDAY, MAY 2, 2019

Land Use Ordinance Text Amendment Relating to Stormwater Volume Control Provisions

Motion was made by _____ and seconded by _____ that the _____ of the Town of Carrboro recommends that the Board of Aldermen _____ the draft ordinance.

VOTE:

- AYES: ()
ABSENT/EXCUSED: ()
NOES: ()
ABSTENTIONS: ()

Associated Findings

By a unanimous show of hands, the _____ membership indicated that no members have any financial interests that would pose a conflict of interest to the adoption of this amendment.

Motion was made by _____ and seconded by _____ that the _____ of the Town of Carrboro finds the proposed text amendment, _____ consistent with the provisions in Carrboro Vision2020 to be proactive in managing stormwater.

Furthermore, the _____ of the Town of Carrboro finds the proposed text amendment, is reasonable in the public interest because it updates Town standards to align with current state agency titles and terminology.

VOTE:

- AYES: ()
ABSENT/EXCUSED: ()
NOES: ()
ABSTENTIONS: ()

(Chair)

(Date)

**AN ORDINANCE TO AMEND THE TOWN OF CARRBORO'S LAND USE
ORDINANCE RELATING TO THE STORMWATER VOLUME CONTROL
PROVISIONS**

****DRAFT 4-11-2019****

BE IT HEREBY ORDAINED BY THE CARRBORO BOARD OF ALDERMEN THE
FOLLOWING:

Section 1. Subsection 15-263, of the Carrboro Land Use Ordinance, Management of
Stormwater, (g)(3) is rewritten to read as follows:

(3) The Board finds that increases in the total annual volume of runoff associated with new development results in decreased groundwater recharge, increased stream channel instability/erosion and significant water quality degradation. Therefore to the maximum extent practicable developments shall install and maintain stormwater management systems such that the post-development total annual stormwater runoff volume shall not exceed the predevelopment volume by more than the limits set forth in the table below. The predevelopment and post-development annual stormwater runoff volume shall be calculated using the most up to date guidance and accounting methodology from North Carolina environmental regulatory agencies with stormwater management oversight.

Section 2. All provisions of any Town ordinance or resolution in conflict with this ordinance are repealed.

Section 3. This ordinance is effective upon adoption.

ARTICLE XVI**FLOOD DAMAGE PREVENTION, STORMWATER MANAGEMENT,
AND WATERSHED PROTECTION****PART II. STORM WATER MANAGEMENT****Section 15-263 Management of Stormwater (REWRITTEN 6/26/07; AMENDED 6/24/08; AMENDED 10/28/08; 6/22/10; 11/23/10; REWRITTEN 6/26/12)**

(g) Developments shall be constructed and maintained so that their stormwater management systems meet the following minimum standards:

(1) The post-development discharge rates shall be less than or equal to the pre-development discharge rates for the 1-, 2-, 5-, 10-, and 25-year 24-hour design storms.

(1) For upstream properties, the 1% chance flood elevation may not be increased.

(2) The Board finds that increases in the total annual volume of runoff associated with new development results in decreased groundwater recharge, increased stream channel instability/erosion and significant water quality degradation. Therefore **to the maximum extent practicable** developments shall install and maintain stormwater management systems such that the post-development total annual stormwater runoff volume shall not exceed the predevelopment volume by more than the limits set forth in the table below. The predevelopment and post-development annual stormwater runoff volume shall be calculated using the [most up to date guidance and accounting methodology from North Carolina environmental regulatory agencies with stormwater management oversight](#). ~~Jordan Lake Accounting Tool (“JLAT”), except that the following inputs for the use of permeable pavement shall apply. If the NCDENR Division of Water Quality (DWQ) revises the following table of inputs for the use of permeable pavement, this subsection shall be deemed amended to incorporate the most recent inputs established by DWQ.~~ (AMENDED 6/26/12) (AMENDED 2/26/13)

| Infiltrating Permeable Pavement | | | |
|--|------------------------|----------------------------|---------------------------|
| Soil Type | Infiltrating PP | Detention w/o Liner | Detention w/ Liner |
| A | 90% | - | 0 |
| B | 85% | - | 0 |
| C | 80% | 20% | 0 |
| D | 75% | 5% | 0 |

Art. XVI. FLOOD DAMAGE PREVENTION, STORMWATER MANAGEMENT, AND WATERSHED PROTECTION

A composite curve number shall be assigned to the development site in the pre-development stage using the runoff curve number method described in USDA NRCS Technical Release 55, Urban Hydrology for Small Watersheds (June, 1986). See also Chapters 4 through 10 of NEH-4, SCS (1985).

| Preexisting Composite Curve Number* | Maximum allowable increase in annual stormwater runoff volume |
|--|--|
| > 78 | 50% |
| >70-78 | 100% |
| > 64-70 | 200% |
| <=64 | 400% |

(AMENDED 2/26/13)

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- NOES: ()
- ABSTENTIONS: ()

(Chair)

(Date)