



Town of Carrboro

Town Hall
301 W. Main St.
Carrboro, NC 27510

Agenda Item Abstract

File Number: 14-0274

Agenda Date: 9/16/2014

File Type: Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Update on Storm Water Flooding Issues

PURPOSE: The purpose of this item is to provide the Board of Aldermen an update on various storm water flooding issues since the last report on May 20, 2014.

DEPARTMENT: Public Works Department

CONTACT INFORMATION: George Seiz, Director of Public Works, 918-7427; Patricia McGuire, Planning Director, 918-7327; Travis Crabtree, Fire Chief, 918-7349

INFORMATION:

A. Overview

At the regular Board of Aldermen (BOA) meeting on February 11, 2014, town staff provided a report about storm water design standards and possible future considerations related to those standards. Included in the report was a summary and update of various storm water problem areas. As part of the discussion on February 11, the BOA requested staff to provide periodic updates on efforts to address these problem locations. The locations noted in the report were:

1. Tributary to Morgan Creek adjacent to Public Works
2. Areas along Tom's Creek
3. Old Pittsboro Road
4. 400 Block of Broad Street
5. 105 Morningside Drive
6. 1020 West Main Street

At the regular BOA meeting on May 20, 2014, town staff provided an update which included preliminary estimates prepared by Sungate Design to do further evaluation of these problem areas. The total estimated cost for this additional evaluation will be approximately \$26,000. It was noted that after evaluations were completed, staff would make recommendations for the Capital Improvement Plan. The proposed time line was to complete the evaluations from June thru September 2014, and prepare recommendations for the FY 15/16 CIP in the fall.

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B. Actions to date in chronological order:

- **Tom's Creek - Late Summer 2013** - Following the suggestion of one of the neighbors along Tom's Creek, Town staff set up a series of meetings to go door to door and ask homeowners what problems they have and here about concerns and suggestions. There were 5 neighborhood meetings held from mid-July to early August and 16 out of 39 property owners came to the meetings and helped to answer questions on survey sheets. neighborhood meetings with residents along Tom's creek.
- **July, 2013 re: 400 Block of Broad St.-** Emergency repair of washout in 400 block. Cost for repair approximately \$10,000
- **July 2013 and previous to this date re: 105 Morningside** - Street Supt. had several meetings with property owner regarding nuisance flooding in yard. Looked at things PW could possibly do with regards to curb and gutter work along roadway and driveway improvements. One option is to enlarge existing culvert but may have impacts downstream.
- **October, 2013 re: Flood Mitigation Assistance (FMA) grant, response to flooding along Tom's Creek.** In late July 2013, staff learned that the Federal Emergency Management Agency had released a notice of funds available for the Flood Mitigation program (FMA). An initial letter of interest was submitted, pertaining to four properties in the Plantation Acres neighborhood based on historical and recent flooding, as communicated to staff in meetings held in the neighborhood that summer. After further communication with property owners, four properties were discussed with the Board of Aldermen on October 15th. The Board of Aldermen authorized the submittal of two grant applications, one for acquisition of two properties and one for elevation of two properties. The total cost estimate for projects was \$746, 857. A 25 percent local match that could be met through in-kind contributions or cash match from the owners was required. The Town did not receive grant funding.
- **February 5, 2014 re: 1020 Main St.** - PW Director met with two neighbors to review site. Neighbors requested town do some storm water analysis. Made observations of existing storm sewer that crosses church property and PW cleaned out debris near inlet. PW Director also talked to pastor of adjacent church about the situation. Town staff and rep from Sungate Design had previously spoken with residents in 2010. Residents later installed small section of storm water piping (with permission from church) to help bypass storm water.
- **February 11, 2014** - staff provided an update to the BOA (see Overview above)
- **May 20, 2014** - staff provided an update to the BOA (see Overview above)
- **June 2014** - BOA approves FY 15/16 budget which includes \$20,000 for engineering evaluation of the locations noted above in addition to the \$6,000 to be spent in FY 13/14.

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- **June 23, 2014** - Initial Service Contract with Sungate signed to identify causes of flooding problems and possible alternatives for remediation of the problem and preliminary costs estimates for possible improvements at the following locations: Amount of contract - \$6,000
 - Tributary to Morgan Creek adjacent to Public Works
 - Areas along Tom's Creek
 - Properties adjacent or near 1020 Main Street.

- **August 26, 2014 re: tributary to Morgan Creek adjacent to Public Works** - Meeting between Town staff, Town Engineer and NCDOT regarding erosion along tributary. Discussed possible causes and remedies.

- **September 1, 2014, re: FEMA Hazardous Mitigation grant** - On August 8, 2014, the Town of Carrboro was asked to join with the Town of Chapel Hill and Orange County in the pursuit of a \$4 million FEMA Hazardous Mitigation grant to be spread between Alamance and Orange counties. The initial application was turned in on September 1, 2014 which was a letter of interest and that we would like any available funding to help mitigate flooding issues in town. Addresses and estimates were provided with the letter of interest. The North Carolina Department of Emergency Management will review and approve what they feel is relevant based on past claims and then forward those that are approved to FEMA. Additional information deadline will be October 15, 2014, if the state needs additional beyond what was already provided. Property acquisition, flood and drainage mitigation along with power redundancy for important and critical structures were items allowed to be requested. Generator quick connects for key intersections to relieve police from traffic control duties, several culvert improvements and finally a fixed generator to power town hall were requested. All combined were a total of \$2.7 million just for the Town of Carrboro.

- **September 12, 2014** - Supplemental service agreement prepared for continued work for the three locations noted above and adding the following locations: amount of Contract \$20,000
 - 400 Block of Board Street
 - Old Pittsboro Rd.
 - 105 Morningside

Sungate and staff will continue to review various options to help mitigate flooding at these locations

C. Additional detail about locations - contained in previous updates:

- **Tom's Creek** - Neighborhood meetings. There were 5 neighborhood meetings held from mid-July to early August and 16 out of 39 property owners came to the meetings and helped to answer questions on survey sheets. More evaluation is needed.

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Most technical information is already available. Will need to prepare mapping to explain impacts to properties - \$4,000 to \$5,000

- **105 Morningside Drive** - yard flooding, water overtops the road, request to enlarge culvert. Staff has visited with the adjacent resident and discussed possible options. Preliminary analysis indicates that enlarging the culvert under Morningside will likely cause negative impacts downstream. Replacing sections of curb and/or installing some storm inlets may help mitigate the problem.

Possibly increase culvert size or add additional culvert, but must determine impacts downstream. More analysis to see if culvert can be enlarged and prepare construction cost estimate. - \$2,500 to \$4,000

- **400 Block of Broad St.** - water overtopped road on June 30th, public road damage and private property damage. Petition received, request to enlarge culvert. An emergency repair was made at this location costing about \$10,000. Preliminary review indicates the culvert would need to be enlarged from an 18” to 48” to meet current standards. Potential downstream impacts need to be reviewed as well as other possible options. Cost estimates for options need to be determined and programming in the CIP considered.

Some analysis already completed. Further review and prepare construction cost estimate - \$1,000 to \$1,500

- **Old Pittsboro Road** - concerns expressed about storm water run-off, sewage in the drainage ditch, sitting water. Staff is still in the early stages of evaluating the storm water run-off issues. Ideas suggested such as widening the drainage ditch or piping the storm water could possibly be considered. OWASA made a repair last summer to address sewage backing into a storm junction box. As a follow up to that repair OWASA also did some public education outreach to citizens and businesses about the detriments of putting fats, oils and grease in sanitary sewers as requested by the BOA.

Need to determine if under DENR or Corps of Engineers jurisdiction. Agencies may not let us do anything. Further evaluation - \$5,000 to \$7,000

- **1020 West Main Street** - Private storm sewer on adjacent church property backs up in heavy rains and threatens crawl space and HVAC units of private property. Dillard St., High St. and Goldston Dr. drain to this area. Possible drainage study to evaluate existing storm sewer system. - Study - \$2,000 - \$4,000.

- **Tributary to Morgan Creek adjacent to Public Works** - While clearing scrub trees this winter adjacent to the culvert pipes under Public Works Drive, Public Works staff discovered significant erosion of the stream bank adjacent to the Public Works property. Appeared to be a result from June 30, 2013 storm event. Location is still being evaluated to determine extent of repair work needed. Cost estimate for repair needs to be determined and programming in the CIP considered. A temporary more immediate repair may be necessary.

Sungate Design is working with another consultant to get a preliminary cost estimate for engineering

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and construction. Close proximity to NCDOT storm water culvert may require coordination with NCDOT. Further evaluation and prepare cost estimate - \$4,000 - \$5,000.

FISCAL & STAFF IMPACT: \$6,000 was allocated in FY 13/14 to begin the storm water flooding evaluation work and \$20,000 has been budgeted in FY 14/15 to continue the evaluations. PW staff will be working with the consultant during the evaluations and staff hours will also be needed for CIP recommendations. There may be significant fiscal impacts in the future depending on solutions determined to adequately address some of the problem areas. How the projects should be funded may become an important issue.

RECOMMENDATION: It is recommended the BOA accept the report.