



City of Raleigh Stormwater Management Division

Stormwater Management Advisory Committee (SMAC)

Dear Mayor McFarlane and Members of the City Council,

The Stormwater Management Advisory Commission, which was formed in April, 2004, has invested many hours becoming familiar with and discussing the City's stormwater issues. The Commission's work during the period from July 1, 2013 to June 30, 2014 has been mainly in these areas:

1. Stormwater Capital Improvement Program
2. Stormwater Drainage Cost-Share Project Petitions
3. Stormwater Quality Cost-Share Project Petitions
4. Requests for Variances to Stormwater Control Regulations
5. Low Impact Development

1 – Stormwater Capital Improvement Program (CIP)

The Commission reviewed and approved the proposed Stormwater Capital Improvement Program for fiscal years 2014 -2019. Following is a list of CIP projects completed during the past year as well as currently active projects:

Projects

<u>Projects Completed</u>	<u>Date Completed</u>	<u>Type of Project</u>	<u>Final Construction Cost</u>
Upper Longview Stream Restoration	2013-Dec	Stream Restoration & Lake Improvement	\$2M
Old Deer Trail Stream Restoration	2013-Nov	Stream Restoration	\$175K
8008 Misty Dawn Place	2014-April	Severe Stream Erosion	\$15K
8204 Clear Brook Drive	2014-April	Drainage System Improvements	\$15K
North Ridge Phases II & III	2014-April	Drainage System Improvements	\$1.9M
Simmons Branch Phase 1	2014-Feb	Drainage System Improvements	\$1.5M
Total			\$5.1M

<u>Projects Under Construction</u>			<u>Construction Cost</u>
Yorkgate Phase II	N/A	Stormwater System Improvements	\$100K
Cambridge Road	N/A	Culvert Improvement	\$1 M
Total			\$1.1M

<u>Projects Under Design</u>			<u>Design Cost</u>
Five Points Phase 2	N/A	Design phase	\$300K
Beechwood Area Drainage Study	N/A	Study phase	\$46K
Swann St. Area Drainage Study	N/A	Study phase	\$90K
Brockton Lake Dam & Stream Restoration	N/A	Design phase	\$318K
Lower Longview Lake Dam	N/A	Design phase	\$400K
Sierra Drive Area Study	N/A	Design phase	\$250K
Upper and Lower Durant Dams	N/A	Study phase	\$30K
Total			\$1.4M



Yorkgate Drive

Before: Flooding in residential area before construction improvements.

Yorkgate Drive

After: Improved culvert and stream channel to safely convey floodwaters.





8200 Block of Old Deer Trail

Before: Severely Eroded Stream Channel

8200 Block of Old Deer Trail

After: Restored and Re-vegetated Stream Banks





8204 Clear Brook Drive
Before: Eroded Stream Bank



8204 Clear Brook Drive
After: Stream Bank Repair
Stabilization, Installation of Rip Rap
Stone for Slope Protection

Before: 2304 Bertie Drive

Upper Longview Stream Bank Erosion.



**After: Upper Longview Stream
Restoration – Stream Stabilized With
Installation of Gabion Basket Wall**



Before:

North Ridge Phase II & III

**Haymarket Lane -
Undersized Drainage
Infrastructure System**

After:

North Ridge Phase II & III

**Haymarket Lane- New
Drainage Infrastructure
Box Culvert – Reduce
Flooding**



2 - Review of Stormwater Drainage Cost Share Projects

Staff received numerous requests from property owners for assistance under the Drainage Cost Share Program. The Commission reviewed 29 requests and approved nine, totaling \$696,000, 12 requests were held for future consideration. These projects will help alleviate severe erosion, repair drainage systems and reduce flood damage to structures.

Projects

<u>Project Name/Address</u>	<u>Date Approved</u>	<u>Type of Project</u>	<u>Total Cost</u>	<u>City Share</u>
1500 and 1600 Block of Oakland Hills	2013-Sept	Severe Erosion Within 10 Ft of Structure Structural	\$232,100	\$206,900
3900/3904 Western Blvd	2013-Sept	Flooding Structural	\$29,900	\$25,900
1904/1908/1912 Lodestar Drive	2013-Sept	Flooding Structural	\$154,800	\$143,900
5005/5009/5011 Rembert Drive	2013-Sept	Flooding Structural	\$79,000	\$68,800
2208 Basil Drive	2013-Sept	Flooding Severe Erosion Within 10 Ft of Structure	\$27,000	\$23,000
122 St. Mary's Street	2014-May	Structural Flooding	\$24,500	\$21,500
4829 North Hills Drive	2014-May	Severe Erosion Within 10 Ft of Structure	\$151,000	\$146,000
110 Glascock Street	2014-May	Structure	\$21,600	\$17,300
Total			\$719,900	\$653,300

Reimbursement Projects

<u>Project Name/Address</u>	<u>Date Approved</u>	<u>Type of Project</u>	<u>Total Cost</u>	<u>City Share</u>
2701/2705 New Bern Avenue	2014-May	Severe Erosion Within 10 Ft of Structure	\$44,500	\$42,700
Total			\$44,500	\$42,700

3 - Review of Stormwater Quality Cost Share Projects

Staff received and qualified four requests from property owners for assistance under the Stormwater Quality Cost Share Program. The Commission reviewed these requests, totaling \$52,004. These projects reduce pollutant loads to local surface waters, provide valuable examples of on-site stormwater management, increase public awareness of water quality concerns, and in some cases (cisterns) conserve potable water. Following is a list of Stormwater Quality Cost Share projects completed during the past year, as well as projects in progress as of June 30, 2014.

Projects				
Project	Date	Type of Project	Total Cost	City Share
<u>Name/Address</u>	<u>Completed</u>			
Projects Completed				
4505 Laurel Hills Rd	12/01/2013	2,000-gallon Above-ground Cistern	\$6,375	\$3,188
950 Peterson St	2/20/2014	2,200-gallon Above-ground Cistern	\$40,712	\$25,125
213 E. Franklin St	5/30/2014	36,000-gallon Above-ground Cistern	\$69,160	\$51,870
2300 Lowden St	11/01/2014	900 SF Rain Garden	\$38,100	\$28,575
Total			\$154,347	\$108,758
Projects Under Construction				
827 E. Hargett St	N/A	550-gallon Above-ground Cistern	\$2,950	\$2,213
Total			\$2,950	\$2,213
Projects Under Design				
562 New Bern Ave	N/A	1,200-gallon Underground Cistern	\$12,077	\$9,057
2705 Talbot Court W	N/A	1,150-SF Permeable Driveway	\$21,900	\$16,425
562 New Bern Ave	N/A	1,525-SF Permeable Driveway	\$30,763	\$23,072
2124 Fallon Oaks Court	N/A	200-gallon Underground Cistern	\$4,600	\$3,450
Total			\$69,340	\$52,004



**950 Peterson Street
Walnut Creek Wetland
Center**

Above ground Cistern

**2300 Lowden Street
Joyner Elementary
School**

Rain Garden



4 – Requests for Variances to Stormwater Control Regulations

In March of 2008, the City Council began referring requests for variances from stormwater management rules to this Commission for review and recommendation back to the Council. During the past year, the Commission reviewed 2 variances with both recommended for approval. Following is a list of the approved variance requests.

- August 2013, Raleigh Critical Public Safety Facility using Filterra system for nitrogen removal.
- January 2014, Rite Aid on Capital Blvd using Filterra system for nitrogen removal.

5- Low Impact Development (LID) / Green Infrastructure (GI)

The Commission continues to strongly support advancing the use of LID/GI for stormwater management. The Commission is closely following progress on the work plan being developed by the City's consultant Tetra Tech and anticipates providing further recommendations to Council once the work plan is complete.

Thank you for your continued support of the Commission and the Stormwater Management Program.

Michael Birch – Chair
J. Kevin Yates – Vice-Chair
Vanessa Fleischmann
Francine Durso
Christopher O. Bostic
JoAnn Burkholder
Matthew Starr
William S. Service
Marc Horstman
David Webb



First Row: Will Service, Christopher Bostic, Kevin Yates

Middle Row: Matthew Starr, JoAnn Burkholder, Marc Horstman

Top Row: Vanessa Fleischmann, Francine Durso

Missing: Michael Birch, David Webb

Stormwater Management Advisory Commission Mission Statement

The Stormwater Management Advisory Commission will manage resources sufficiently to protect the public infrastructure, quality of life, environment, and property of the citizens of Raleigh through fair and equitable cost effective means. The SMAC recommendations will seek to improve, enhance, and protect the quality of the Neuse River and its tributaries.