

**CITY OF RALEIGH**  
**STORMWATER MANAGEMENT ADVISORY COMMISSION (SMAC)**

Minutes

Raleigh Municipal Building · 222 W. Hargett Street · Conference Room 305 3:00pm · Thursday, May 7, 2015
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**Commission Members Present:** Kevin Yates (vice-chair), Vanessa Fleischmann, Michael Birch (chair), Marc Horstman, Chris Bostic, Will Service, Matthew Starr, and Francine Durso

**Stormwater Staff Present:** Blair Hinkle, Suzette Mitchell, Kelly Daniel, Michael Atkinson, Neil Harrison, Wenju Zhang, Ben Brown, Brad Stuart, Scott Bryant, Mark Senior, McKenzie Gentry, Veronica High, Sheila Thomas-Ambat, Lauren Witherspoon, Gilles Bellot, Rob Normandy and Chris Stanley

**Members Absent:** David Webb, and JoAnn Burkholder

**Guests:** Shanice Lloyd, Emily Darr, Mathew Hornack, Ken Carper and Hunter Freeman

**Meeting called to order:** 3:04 p.m. by Mr. Birch

**Motions** (Absentees and Minutes)

- Absence: Mr. Birch said with no objection from the board, we will excuse Mr. Webb and Ms. Burkholder from the meeting.
- April Meeting Minutes: Mr. Bostic made a motion to approve, and Mr. Horstman seconded. The motion was passed unanimously.

The following items were discussed with action taken as shown.

**Item 1 – Commission/Stormwater Staff Update on Matters of Importance to the Stormwater Management Advisory Commission**

1.1 Stormwater Staff Report: (Blair Hinkle)

- Staffing Update –
  - Robert Normandy – *Project Engineer II (Capital Improvement Program)*
  - Michael Atkinson – *Stormwater Engineering Technician (Business Services)*
  - Neil Harrison – *Engineer Technician (Business Services)*
  - Scott Smith – *Storm Water Monitoring Tech moved to (Business Services)*
  - Carrie Mitchell – *promoted to Project Engineer II (Capital Improvement Program)*
  - Matt Cherry – *promoted to Engineering Tech Supervisor (Infrastructure)*
  - Kevin Boyer – *promoted to Senior Project Engineer (Water Quality)*
- Annual Work Plan Development (Request for Input) – *Blair would like it on the same schedule as the budget cycle and would like to present it to Council in July. An email will be sent with the current approved work plan asking the Commission for any input. This will be compiled and presented at the next meeting.*

**Item 2 – Stormwater Plan Review**

- 2.1 Blair Hinkle – Each year when we submit our annual NPDES Stormwater report to the State, we are required to review our Stormwater Plan. It lays out how we want to manage our program and the things we want to do to comply with the permit. Following the 2012 EPA audit, we received feedback from EPA on some of the items. Staff have revised our Stormwater plan, and broaden it to hold ourselves to standards that we can obtain. The process is that the Commission will provide feedback, and then recommend approval of the plan to Council. Council will then schedule a public hearing, officially approve the plan, we would submit the report and our revised plan to DENR.

2.2 Mark Senior – There are no significant compliance issues. One of the biggest issues for example, would be if the Sedimentation Erosion Control program includes seven inspectors operating in the four areas of the city, but when EPA audits us, we only have six inspectors that are working in three sections instead of the four. The response we would get back from EPA is that we are in violation of the permit. They take whatever we put in the Stormwater Plan as part of the permit. If there's anything in there that we are not in compliance with, they consider that as a violation of the permit. We soften the language to state, "we will try to do this" or "we intend to do", so they cannot hold us to specifics. We are going to develop a specific workplan for each area which will be our set of books instead of theirs, so we will not be held accountable for permit enforcement actions.

2.3 **Motion:**

2.3.1 Mr. Birch made motion to recommend approval to City Council of the updated May 2015 Stormwater Plan, and Matthew Starr seconded. The motion was passed unanimously.

**Item 3 – Impervious Area Exemption Limitations**

3.1 Blair Hinkle – At a previous meeting the Commission wanted more information on the consequences of rate control versus volume control and to look at some case studies related to both of them. Staff along with Hunter Freeman will provide a presentation on the difference.

3.2 Hunter Freeman (*Withers and Ravenel*) – There is no clear one, between the two, that is better for the environment or better for Raleigh than the other. We are presenting some engineering data to see what the differences are, the possible impact of either ordinance, discussing whether it's appropriate for single family lots in Raleigh that tip in this ordinance requirement, or should it stay as is, or should it move to a new requirement. At the State level, the tool we use for volume control is a smaller rainfall (*1.4 inch*) and not the two or the ten year storm. The intent is to capture and treat the more frequent storms, but when we do get a large storm event it would result in a lot of bypass.

3.3 Summary of Presentation (*Ben Brown and McKenzie Gentry*)

- Residential Impervious Area Limitation – *8 single family lots analyzed. Each analyzed to control peak runoff for 2 and 10 year storm and each analyzed for volume control using Storm EZ program*
- Design Assumption – *all underground tanks 4 ft. deep, 10 ft. wide, did not go in-depth, lawn pervious area, B soils and 12 inches of ponding in bio-retention cells*
- Possible Design Issues – *need private drainage easement, discharge must meet pre-development conditions, no water quality benefit for storing underground tank and site specific design issues*
- Rate Control Results – *storage volume for 8 single family lots as outlined in presentation*
- Estimated Homeowner Costs → *Flood Study \$10,000, → Underground Vault \$900 per linear foot with average cost for lots analyzed= \$26,000, → Bio-retention Cell \$30 per square foot – average cost for lots analyzed \$10,000*
- Flood Study-
  - *Pros – specific illustration of site you are working with, results can exempt you from the requirement for stormwater device,*
  - *Cons – can lead to more expense, sites can change making it difficult for designer/ reviewer and it will become a time consumer*
- Rate Control –
  - *Pros – treats every site the same throughout the city and will have to do 2 and 10 year analysis for all site*
  - *Cons – higher cost, creating point discharge, no nutrient reduction associated with it and property owner will have to maintain device*

- Volume Control –
  - Pros – *controls amount of water released downstream, infiltration of stormwater has water quality benefit, Storm EZ applicants/reviewers have more predictability, and potentially the most inexpensive options of the three*
  - Con – *does not control for the 2 and 10 year rate, costs more than current regulation and property owner will have to maintain*
- Staff Recommendations – *due to the predictability for applicant/staff and potential expense associated with the 2 and 10 year storm, staff recommends utilizing the Volume Control method*

### 3.4 **Motion:**

3.4.1 Mr. Birch made a motion to direct staff to revise the language for the new section (7) to reflect the option of volume control and preserve the option of a study to the extent if someone wants to spend money to see if they are exempt, and Mr. Bostic seconded. The motion was passed unanimously.

#### Action Items:

- *Bring back language in the current Stormwater manual on homeowner lot to lot drainage (flooding)*

### **Item 4 – Project Prioritization Model Preview**

- 4.1 Blair Hinkle (*summarizing*) – We don't have a way to vet all our stormwater projects in our CIP. We have legacy projects funded that are being worked on now, scheduled CIP projects, and a list of potential future projects. We don't have a comprehensive process and we can't articulate why we have done it that way. This is an effort to allow us to have an objective for SMAC, Council and staff input and mostly an objective way of prioritizing projects that we have.
- 4.2 Scott Bryant – As the Stormwater Management program continues to grow we are identifying more needs for stormwater quantity and quality, as well as other opportunities. We want to make the best use of the resources we have for the City of Raleigh and the public. An integrated approach is what we are proposing as a way to build upon any program we have to date.
- 4.3 Summary of the presentation:
- Vision and Commitment to Council – *This process started in December with staff and what work was done to date, and all the needs out there, and what we can do in terms of water quality, flood hazard reduction, public education, capital projects, etc., that we do for the City. The ideal for an integrated Project Prioritization Model came from that effort and we shared this with City Council at the City Council budget workshop.*
  - Four Themes –
    - *Should Stormwater Program become more active? To what extent should Stormwater systems be treated as public systems? How much public benefit is sufficient to merit City participation in a Stormwater improvement project? What extent should city invest in Stormwater services?*
  - Action Plan –
    - *Work with SMAC to develop specific program enhancement recommendation for Council consideration within 12-18 months*
    - *Develop integrated Project Prioritization Model ahead of FY17 budget as first phase*
    - *Provide budgetary and resource information in concert with above*
  - Key Outcomes – *Integrated Stormwater Project Prioritization Model, scoring guidance metrics for weigh criteria and process for implementing, applying and adaptively updating the model. The model will be a key tool for ongoing CIP prioritization, budgeting & resource allocation*
  - Model Development Approach– *Core team (SMAC and staff), benchmark with other municipalities, initial model in place ahead of FY17 CIP Budget and update model over time*

- Schedule/Milestones – *(Jan – Mar 2015 presented at Budget workshop), (May 7<sup>th</sup> SMAC kickoff, form subcommittees), (July 2<sup>nd</sup> SMAC workshop review), (September 3<sup>rd</sup>- final initial model approach present to SMAC), (October 6<sup>th</sup> to Council for information) and (October –December 2015- ready for initial use ahead of FY 2017 budget season)*
- SMAC Initial Feedback & Discussion – *Ms. Durso has volunteered to serve on the sub-committee*

Action Items

- *Provide the Commission with scheduled dates for sub-committee meetings*

**Item 5 – Election of Chair and Vice-Chair**

- 5.1 A motion was made to nominate Mr. Horstman as chair and Mr. Starr as vice-chair. The motion passed unanimously.

Meeting adjourned at: 5:21 p.m.  
Suzette Mitchell