

**CITY OF RALEIGH**  
**STORMWATER MANAGEMENT ADVISORY COMMITTEE**

The Stormwater Management Advisory Commission met in regular session on February 6, 2014, at 3:00 p.m., in room 305, Raleigh Municipal Building, Avery C. Upchurch Complex, 222 W. Hargett Street, Raleigh, North Carolina, with the following members present.

**Committee Members**

Vanessa Fleischmann, Kevin Yates, Francine Durso, Michael Birch, Chris Bostic, Will Service, Marc Horstman

**Stormwater Staff**

Mark Senior, Gary Morton, Lauren Witherspoon, Kevin Boyer, Scott Bryant, Carmela Teichman, Suzette Mitchell

**Absent**

Joanne Burkholder and David Webb

**Guests**

Bob Mulder , Rahsam Jones, Amit Achan, Neal Kochis, Warren Sugg, Wayne Maiorano, Louis Buonpane, Kenneth Waldrop, Mac Paul

Mr. Birch called the meeting to order. 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 Mr. Senior -

- Ms. Durso made a motion to excuse Dr. Burkholder and Mr. Webb for today’s meeting. Mr. Yates seconded; the motion was approved unanimously.
- Mr. Yates and Mr. Bostic excused themselves from Lifetime Fitness item.
- Water Quality Cost Share Modification – remains in Attorney’s Office.
- Mr. Yates made a motion to approve the January 21<sup>st</sup> minutes. Mr. Service seconded; the motion was approved unanimously.

Mr. Boyer –

- LID - (*TetraTech Consultant*) three working items:
  - Internal task force of staff – work items move forward; plan draft work plan on 3<sup>rd</sup> meeting.
  - LID aspect of design of Sandy Forks Road improvement in process
  - A work group evaluating possible LID-based performance standards for proposed developments in water supply watersheds that request variance from current UDO requirements.
- Environmental awards – new award category for stormwater for a 30-second public service announcement videos prepared by high school students. We’ve received two entries. Deadline for entries has been extended to February 21<sup>st</sup>.

Scott Bryant –

- Amos Clark (Crabtree Valley Mall) - Feel they will be able to come across BB&T & PNC properties, which would make the project much easier to construct.

1.2 Ms. Durso commended Kevin Boyer and staff on yesterday's Stormwater presentation at Urban Design Center. She noted the City has been putting on series of educational forums about development and it's good these issues come to the public in forums.

### **Item 2 – Lifetime Fitness**

2.1 **Mr. Senior** noted this has not been formally referred by Council. The Comprehensive Planning Committee added performance standards to our LID study that came out of this group as a result of concerns from the Lifetime Fitness project, a requested rezoning on Ray Road, and a pending case in the Swift Creek watershed. This would probably come back so it's best to get started on this topic so when it's brought to our attention, we won't have to spend a lot of time catching up on it.

2.2 **Mr. Dawson** (*Director*) indicated that Council has a long-standing policy that the City does not extend water and sewer into the water supply watersheds. The City generally does not allow commercial development in the watersheds to protect our water supplies. Lifetime Fitness is on the edge of a watershed. Originally approved with option/scenario where some of the site's stormwater will be pumped across Falls of Neuse Road, out of the water supply watershed. Under the master plan document, there was a provision that the developer may come back and request approval of an alternate plan, called the "LID option". There are questions in the Council's mind about whether or not staff would first need to evaluate performance standards. We have other developers looking at this as precedent to try to push forward in other scenarios. We have two potential development plans/rezoning requests right now citing Lifetime Fitness as an example of why they should do their projects. We have to deal with this, and it's a policy issue. Are we going to allow commercial development in the watershed, or not? It's an approved master plan now, and what they are proposing is a different technical solution to development under that master plan.

**Kenneth Waldrop** (*Public Utilities*) said it's a collective effort with Public Utilities, Stormwater and Planning Department. The concept is looking at water supply watersheds and preserving them in a way where we are not spending money on water treatment facilities to treat water when we could spend instead on protecting watersheds and ensuring water quality is solid. It revolves around Council's policies as much as technical people informing Council of potential consequences so they can drive those policies. Raleigh was a State leader in developing watershed protection criteria. Raleigh helped develop the first water supply watershed protection ordinance and then State standards in the Swift Creek watershed. The State of NC looked at those standards and moved them forward on a statewide basis and it was litigated to the NC Supreme Court. In NC, there are five watershed classifications – City of Raleigh has access to two types of watershed and hopes to develop a third: Falls Lake – Class 4, (Swift Creek – Class 3, and the hope for Little River reservoir classified in anticipation of the project as Class 2. Raleigh and other municipalities chose to look at State

minimum standards and set a higher mark. Our watershed protection criteria are more stringent than minimum standards. Raleigh used two concepts in its plan: (1) not to extend water and sewer in watershed, and (2) increase State minimum standards. Those two together, at staff level we call them “use controls.” The other side of the equation is performance standards. Other communities use best management practices and established performance standards for those BMPs to allow higher development within the water supply watershed. State standard Class 4 allows up to 50% impervious surface and may go as high 70% if community will take on ownership and maintenance of stormwater devices. It’s quite a difference in distance between State standards and where we are as a community. There’s an area in the Falls water supply watershed where Council didn’t use both philosophies. Between Strickland & I-540, Council allowed water and sewer and retained some area of watershed as an urban area, but used existing density control. Where water/sewer is available, there is significant development pressure along corridor of I-540. Property owners and developers wish to talk about moving away from “use control” and looking at performance standards, which Lifetime Fitness is an example of that. Z-28-13 (Ray Road) is a case we are looking at now. Understanding planning and land use law, a decision for Lifetime Fitness or Z-28-13 doesn’t necessarily set a precedent that requires Council to make same decision for next door property. Staff has not received direction from full Council to seriously study these issues. We’ve been asked to look at LID and performance standards, but we’ve not been told how to apply. Our approach at staff level is to advise making no precedents until Attorney’s Office and highest level of administration can advise Council how to proceed.

**Mr. Senior** believes the role of SMAC is probably providing guidance to LID study as to what to look for performance standards to accomplish and specific impacts, as well as larger issues of setting a new standard from Council past policies and what might be secondary and cumulative impacts. We’ve been working with simple standards that other communities have used in protecting water supply in watersheds by limiting development in watersheds and have pretty much guaranteed clean water. We need to provide our LID consultant guidance on what we think are the biggest issues and have them report back to us.

**Mr. Dawson** said one of the reasons for bringing this to your attention is we know it’s coming and you will be involved in it and the earlier you get familiar with the various aspects we will be dealing with over the next year or two, the better off we will be. The Lifetime Fitness project is a good case study that has all these tensions contained in one project.

- 2.3 **Beth Trahose** (Lifetime Fitness) - The master plan was approved in June 2013, which contains site develop plan, conditions and performance standards specifically designed to deal with this site (*manual provided in agenda packet*). Located on Falls of Neuse Road, near intersection of I-540, the property is known as Falls Driving Range. A zoning application was submitted last fall showing specific details on what was being proposed for site, approved by Council and now under construction. It was originally proposed with on-site stormwater system using low impact device techniques. We heard that the Comprehensive Planning Committee did not understand our LID plan. They wanted to take all stormwater pumping out of watershed so none of the water would hit it. We

revised our plan to include a default option, called the “pumping option”, that takes some of the site’s stormwater and discharge to the south of the site. This includes an opportunity to request a public hearing and have City Council hold a public hearing about changing to the LID option if they felt it was a better option for developing the property, and we are considering asking City Council to do that. We’ve met with staff and they asked us to come and talk with you about whether you think that’s a better option than pumping. The general perception supported by experts in the field is that, if jurisdictions had adopted the standards we’re proposing in the Falls watershed, it would be in better shape than today.

**Amos Clark (McAdams)** said currently we collect all the runoff from all paved areas. All of the water from building/parking lots runs 35% of impervious into one of the four bioswales we have. The rest of the impervious is collected and routed into a stormwater wetland and it runs into a wet detention pond. Currently, once it goes into wet detention pond, we have a pump system that we pump all the stormwater back from pond and site into catch basin, and that’s how the plan was approved. We instead would like to do as we initially proposed as where we had same treatment train; we run through same bio-retention area, we run through the same wetland, we run through same water quality pond, but instead of pumping water out with no additional treatment, we propose to irrigate very slowly the runoff from water quality storm event. During the approval process, instead of capturing the first inch, we increased it where we capture all runoff from the site with no discharge. We would prefer to irrigate slowly in the stream patch area at a rate of no more than 3/10 of an hour so we can dispose of stormwater on-site so won’t generate with no runoff. We’ll end up with a system that generates with no discharge to the lake. It captures 15 inches of rainfall with no discharge and meets any standards that might be enacted later on (*attachments provided in agenda packet*). We have approval to construct, but the client wants to do this because it’s better. Consensus is this is a better way to treat stormwater than just pumping away and it’s unusual to have the opportunity to do this.

**Beth Trahose-** said this case is different than others because it’s been approved and under construction; it’s just which of these two options is the better one. We believe it’s the LID option and we think City Council ought to hold a public hearing and authorize us to utilize that option rather than pumping.

- 2.4 **Mr. Senior** indicated this is a great example of what we are going to get into. It’s an existing commercial use in a residential zoning district. It’s on a major thoroughfare, and they are coming back with a proposal that improves the situation with structural control that provides better stormwater management than what we got, but it’s in conflict with some policies and potentially setting a precedent. It’s a single owner that can maintain the device, has redundancy built in, backups built in, monitoring built in, and it’s a Cadillac of the project. There’s another rezoning on Ray Road that wants exemption because of higher density and have water/sewer available. They want to go 1.5 units per acre; it’s wooded with no development. It’s going to be subdivided residential property; they would treat all stormwater on-site and not utilize a buy-down option. They are going to have stormwater controls that achieve that, but it’s going to be maintained by HOA of 13 lots. It will have to be inspected by City to ensure that’s its being maintained. Because precedence has been set, they come back in and say they’ve got an exemption to do something, so why can’t we. We will see more of these

and we will have to evaluate these on case by case basis unless we set up standards where all can accept. The struggle is what standards we can set that are acceptable for every project like this coming in, or can we find a finite area that we will allow exemptions to come in and not allowed in all watersheds and find some restrictions only here can we entertain performance standards as an option. Those are the type of guidance the SMAC need to provide to the consultants who are working on the performance standards as part of the LID study. We wanted to give you a feel of what's coming through door already, what's knocking and what standing in the wings so we can provide guidance on that study.

## 2.5 Summary Questions/Answers

- **Question:** What are you looking from SMAC on this issue?

**Answer -**

- *Be familiar with issues in water supply watershed*
- *Seeking some performance standards that will come out of LID Study*
- *Serve as education type session*
- *What LID study needs to consider*

- **Question:** Is there any more benefit to option one from technical Stormwater side?

- **Mr. Senior** said if function has proposed with all safeguards, the option of keeping the water on-site is better option including water supply in watershed.
- **Gary Morton** (*staff*) said clearly the non-pumping option is a better option, but at this point in the time, the pumping option was permitted and approved. It's so much redundancy; safety factors; it's a special situation that Lifetime Fitness is proposing with the non-pumping option. From a reviewer standpoint, whatever one developer sees, there are 10 others that see this whether correct or incorrect. They are going to ask questions and we will have to answer them. If indeed we are able to establish conditions and precedence in meeting a set of standards, that would be great.

- **Question:** Is there a cost difference for the two options?

- **Amos Clark** said it's a wash and probably close to the same thing.

2.6 **Beth Trahose** said we will use any feedback here, whether we request petition or not, to do if this board is supportive of on-site LID option will help us move to through process to convince City Council it's the right option. We would like for you to tell us so we can share that information.

2.7 **Bob Mulder** (*3116 Ward Road*) said 20 years ago, along with two others we formed the Watershed Protection Council. We fought rezoning requests we thought inappropriate in the watershed. We have been successful 95%. He met with both Beth and Amos a year ago and they presented the plan. We did not take a position. There was no front policy for LID and it will set precedence. If this was the only case, it's not a problem; but it's not. He's heard for new rules on LID you could do up 50 - 75% impervious which would be a huge mistake. The best treatment that doesn't cost anything is a lot of ground that's undisturbed. If you are putting in a structural element to control water, it will have to be

inspected and maintained; it will not work in the long run. If you would put LID in entire watershed, even in places we don't have jurisdiction, the water quality will get worse. If you would incorporate LID in retrofit non-watershed, it would make a huge difference. Human activity that damage water quality and we need to minimize that damage. It's a well known fact with impervious surface if you're getting over 10% impervious surface, your water quality heads for the basement. Prevailing notion is just leave to the marketplace and they will take care of environment, well it never worked and will not correct the problem. It takes groups like this and government action to make sure the public has clean water. If water quality is not protected, it always goes to taxpayer to pay for relief. One good measure how the City spends with the money they collect through the water bills is to repair problems that we created by continually not paying attention. The LID option needs looking at carefully. I believe the hands-on approach we have now to the watershed is the best. Once you increase density, there will be more pressure to increase it more and then we are done for as far as water quality.

- 2.8 **Mr. Service** said as he understands the on-site disposal option is clearly a better option in terms of nutrient loading for both watersheds. You're eliminating nutrient sediment and all that stormwater going in the Neuse River. The question is what set of precedence are we setting.

**Michael Birch** said he's of having an opinion of option 2 being preferable from his perspective from a policy standpoint in Comprehensive Plan that's guided decisions in the watershed. See those decisions have already been made. Allowed a more commercial use in watershed, allowing extension of utilities to property regardless of option 1 or option 2 that decision has already made. In either scenario, the property is complying with Falls Watershed protection overlay standards that apply to other properties in secondary watershed in Falls Lake. See option 2; seem as or better than option 1 as far as impact on Falls Lake, but option 2 is better option for water quality for the Neuse River, whether it's our water supply in the future and someone else's now. We need to take in considerations as other cities are doing in Falls Lake watershed from a development standpoint. We need to consider in what we are doing in the context of the Neuse River and option 2 is keeping everything on-site, while option 1 is proposing to send water at a rate low to area in the city already experiencing problems from a flooding standpoint. I would like to see it move forward to a public hearing. There's those policy issues dealing with the City negotiating position and dealing with other jurisdictions can be discussed.

**Marc Horstman** said this is a situation when developing is improving water quality from previous development. He's in agreement with option 2 and set going to a public hearing.

**Ms. Durso** said she's in favor of us not taking any action today. Watershed protection is a real policy issue for City. Upper Falls Lake watershed which is not in Raleigh's jurisdiction those communities are looking at what they can do to improve water quality. Raleigh's putting pressure to help improve water quality in Falls Lake from the areas that have jurisdiction. Raleigh is telling other communities not to develop in the watershed, but yet we going to go ahead and

violate our own policy and that's why it's a policy issue for the City. If you noticed on water bill a new fee "watershed protection fee," taxpayers are paying an extra fee for watershed protection and yet City debating should we allow these things to happen in the watershed. It needs to be a Council policy level decision, and I don't think we ought to be weighing in on it other than there are so many other issues than just Stormwater. We don't understand enough at this point to really take action today, just discussion.

### **Item 3 – Code Exemption for Stormwater Requirement**

- 3.1 Mr. Senior noted that Ben Brown had to attend another meeting. There were concerns about what the cost of study would be and believed it was in agreement of what the estimate could be. One of the questions left for staff was what would the study document. The intent was for the study to look at post construction flows, velocity, and downstream flood elevation to evaluate potential impact. At this point, SMAC is left with the task of trying to set a threshold or numbers on what to send to Council.
- 3.2 Mr. Birch said Suzanne Harris forward some comments she received from constituents. From a range of impervious surfaces, their builders are doing on infield projects are in the 45% range, 50-60% range, 48-50% were three responses and then general comments on potential negative impacts urbanization of this area, the impact on pricing of these homes (ranges \$2,500- \$5,000) high level cost for implementing those things, if necessary, accumulative cost of \$10,000 so those were the comments she received. The thresholds proposed by staff in the text change for impervious surface were: (R1 – 20%), (R2 – 25%), (R4 – 38%) and (R6 – 51%)
- 3.3 Mr. Senior indicated the idea was to adopt those numbers and send to Council.
  - 3.3.1 Mr. Birch said from his understanding, we are making a recommendation to Council that authorized staff to prepare text change. The text change would have to go through the normal text review process.
- 3.4 Mr. Yates made a motion to defer this item until the next meeting.
  - 3.4.1 Mr. Service and Mr. Horstman seconded. The motion was unanimously approved.

Meeting adjourned at 5:10pm.

Suzette Mitchell  
Stormwater Management