

STORMWATER ADVISORY COMMITTEE (SWAC)

Meeting #5 – Agenda

December 5, 2017 @ 3:00 P.M.

CITY HALL

ROOM 337

200 WEST FIFTH STREET

“Come with an open mind, a willingness to hear all opinions or ideas,
and be a champion for sustainable stormwater management in Greenville.”

1. Call to Order
2. Introductions
3. Announcements
4. Public Comment Period
5. Approval of November 7 meeting notes (minutes?)
6. Chairman’s Comments
7. Staff Presentation on Stormwater Program and Budget
 - a. What the City is doing now
 - b. What the City is committed to do
 - c. Anticipated cost to meet current obligations
 - d. Potential impact on SW Utility Fee
8. Identify Useful Evaluation Criteria Considering Financial Limitations **(need decision/feedback from SWAC on an objective way to evaluate Extent and Level of Service)**
 - a. Assignment of need 1 thru 5
 - i. 1 = Feel City obligated to provide this service now
 - ii. 5 = Would be nice if cost was no concern
9. Extent of Service Decisions **(need decision/feedback from SWAC on the following)**
 - a. Provide Service Outside City Limits? – Under What Conditions?
 - b. Provide Service on Private Property? – Under What Conditions?

- i. Must the system convey “public water”?
 - ii. Continue Policy for Assistance in Pipe Installation? – Conditions?
 - iii. Continue Informal Assistance for Failing Systems? – Conditions?
 - iv. Where Public Drainage Easement is Recorded? – Conditions?
 - c. Continue to Maintain “Flow” on Only those historically maintained?
 - d. Continue to Stabilize Jurisdictional and Non-jurisdictional Streams as Funding Allows?
 - e. Provide Service for Private BMP’s? – Under What Conditions?
 - f. Provide Service for Private Lakes and Dams? – Under What Conditions?
 - g. Provide Service for Leaf Collection?
- 10. Introduction to Level of Service (LOS)
 - a. Current LOS vs desired LOS
 - b. Ranking system (1 thru 5)
 - c. Level of Service Evaluation for Major Program Elements **(need feedback from SWAC on the following)**
 - i. Operation and Maintenance
 - ii. Capital Improvement Projects
 - iii. Program Management
- 11. Questions and comments
- 12. Closing remarks

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**City of Greenville (COG)
Stormwater Advisory Committee (SWAC) Meeting
November 7, 2017 3:00 pm – 5:00 pm
City Hall, Room 337**

Advisory Committee Members Present:

Tom Best	Donnie Brewer	Drake Brinkley
Matt Butler	Michelle Clement	Don Edwards
Joni Torres	Beth Ward	Landon Weaver
Cassius Williams		

Staff & Consultants Present:

Lisa Kirby/COG	Daryl Norris/COG	Ronnie Donley/COG*
Amanda Braddy/COG	Mark Senior/WK Dickson	Tom Murray/WK Dickson
Inga Kennedy/PEQ	Marla Hill/PEQ	Katie Cromwell/Raftelis

(*Mr. Donley was incorrectly identified as an advisory committee member in the 10/3/17 meeting minutes.)

1. Advisory Committee Chair Tom Best called the meeting to order and initiated introductions.
 - Tom Best, with the Soil and Water Conservation District
 - Drake Brinkley, partial real estate attorney with Warden Smith; former civil engineer
 - Landon Weaver, land development manager, Bill Clark Homes
 - Michelle Clements, civil engineer with East Group
 - Ronnie Donley, street superintendent with City Maintenance, COG
 - Daryl Norris, stormwater engineer, COG
 - Amanda Braddy, Public Works administrative assistant for Stormwater Engineering, COG
 - Lisa Kirby, Engineering, Public Works Department, COG
 - Mark Senior, WK Dickson
 - Tom Murray, WK Dickson
 - Katie Cromwell, Raftelis Financial Consultants
 - Marla Hill, PEQ
 - Matt Butler, Sound Rivers
 - Joni Torres, NC Cooperative Extension
 - Don Edwards, property owner and advocate
 - Cassius Williams
 - Inga Kennedy, PEQ

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2. Chairman Best called for announcements. There were none. Ms. Kennedy asked for announcements from staff, and there were none. Ms. Kennedy informed the group that Lisa Sasser has resigned from the committee due to time constraints.
3. Mr. Best noted that since there was no member of the public present, no public comment would be heard at present although it is expected in the future. He noted that he has already received some public feedback.
4. Minutes of the October 3, 2017 meeting were approved.
5. Chairman Best announced that he had added an item to the agenda. He has received a lot of feedback and wanted to let the committee know that he is on the ballot for the District 5 Council seat (to be decided 11/1). He will continue with the SWAC regardless of the day's election outcome. He indicated that he would share what he has heard from District 5 constituents; he noted that there is a lot of need for information. He invited each attendee to share his/her particular expertise or experience with stormwater issues, along with anything the member would like to see the SWAC work toward, for discussion at a later meeting. A summary of responses follows:
 - Drake Brinkley: I have not received much feedback and quite frankly I don't think people even know this meeting is taking place. I would like to know how many developers are in the room. Although I have civil engineering background, what I bring to this is the commercial real estate, representing developers, builders and owners.
 - Landon Weaver: There needs to be more common-sense development of some of the ordinances, revisit some of the older ordinances, and having stakeholder meetings with local developers. A conversation with respect to how many developers needed to be involved was tabled for later discussion.
 - Michelle Clements: Civil engineer, development in Greenville, with design of water systems. Also helped the City in reviewing developers so sees both sides. Right now, important for developers to know the expectations up front for meeting requirements so that we have less to do on the back end.
 - Ronnie Donley/COG – 35 years of experience with open and closed stormwater systems.
 - Daryl Norris/COG - See a need for clarity on the rules COG already has. He wants the City to be able to move to a more proactive management style.
 - Lisa Kirby/COG: I started with the City as a stormwater engineer and helped to develop the current program. COG needs a financially sustainable program and your help to make some hard decisions with regard to what can realistically be accomplished.
 - Mark Senior/WKD noted that he had worked in Raleigh for 32 years, including initiating and managing their stormwater utility (SWU), and throughout the state with different cities of various sizes on their Stormwater Management (SWM) programs. Can bring that experience to this process.
 - Tom Murray/WKD has also worked with a number of cities' SWM programs, including larger cities like Charlotte and Raleigh, and is experienced with stormwater system retrofits, looking at the needs of the infrastructure over time, some dating back to the 1950s and 1960s, and the capital needs to bring them up to a desired Level of Service (LOS). Tom also worked on the Greenville master plans and can bring insight on that process and the COG's current capital programs list.

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- Katie Cromwell/Raftelis: Worked with SWUs across the country and state; role is to help the SWAC understand the financial implications of some of the decisions the SWAC is trying to make. Will be doing the financial modeling for this project.
- Cassius Williams: Perspective comes from an interest in the insurance side. Particular interest in development in floodplains which Greenville has done a lot of. He noted that he has seen the downside and it continues.
- Matt Butler –Environmental biology background, focused more on the water quality perspective of SWM than water quantity. Has done lots of projects retrofitting older SWM systems trying to get better water quality treatment. Reason for being here is in making sure there is an environmental perspective of looking at stormwater and making sure we are looking at the rules and achieving environmental compliance and exceeding when possible.
- Joni Torres – Has lived 23 years near a creek, family with best management practices and remediation. Still sees a good deal of erosion, despite the efforts. She would encourage looking at the problem holistically before it gets too costly. The COG should be preparing for an event like Houston – climate change is real – to the extent possible.
- Don Edwards, Vice Chair, stated that downtown revitalization is key. He is excited about the property tax increase, incentives for revitalization, walkability, historic preservation, density. Doesn't know how stormwater will be affected by all the dense building. Biggest challenge is often water – stormwater and leaks – wants to understand that relationship. He inquired whether the Town Creek culvert project is about stormwater or more. He feels there is not enough understanding but it will be disruptive. He noted that addressing drainage will be key.
- Inga Kennedy reiterated her role as facilitator, stating that she wants to make sure the SWAC accomplishes its goals and that the COG and consultants get the information they need from the SWAC and public.
- Chairman Best related some of the input he has heard from citizens on stormwater management:
 - Pocket parks have been suggested – where waterways crisscross neighborhoods, some natural slope, through laterals built by Soil & Water in 1977. Some houses are built so close together that normal, not even heavy rain may cause water damage in garages and beneath houses. They sometimes have to replace ductwork. May be good to extend and make some of the waterways parks.
 - Assign Soil & Water Conservation District (SWCD) position using stormwater utility funds – 1 or 2 technical staff positions funded by the City's stormwater funds and focused on the City, but would be trained by and report to the SWCD.
 - Would like to see Public Works retain control over stormwater fees rather than the general fund. Could be used exclusively for stormwater mitigation.
 - Empowerment to mitigate stormwater damages. Residents in District 5 say that they call the City, they call SWCD and sometimes things are resolved; sometimes not. Often the problem is whether the agency has permission to do something. We need to understand how permission works – sometimes with other groups; need empowerment to mitigate stormwater damage regionally.

Daryl Norris responded that the stormwater utility is, by state statute, an enterprise fund that is not transferred to the City's general fund and can only be used for stormwater management.

6. Before moving onto the presentation, Inga Kennedy thanked Amanda Braddy for coordinating parking passes for the SWAC. Anyone needing a pass should get with Amanda. Referring to #8 on

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the agenda, Kennedy noted that discussion items with question marks indicates that we want to leave with answers to those questions today. She encouraged members to keep the questions in mind as they listened to the presentation.

7. Mark Senior of WK Dickson picked up on last meeting's discussion of **Extent of Service (EOS)**, accompanied by a slideshow, and indicated they might be able to talk about **Level of Service (LOS)** afterward, potentially the closed system portion of it, and other topics as time permits. He defined EOS as the "where and what," including components geographical boundaries, City vs. ETJ, beyond ETJ, public vs. private property, residential vs. commercial, components like streams, pipes, lakes, dams, stormwater control measures, best management practices, etc. Will look at current EOS, desired EOS and then provide recommendations back on what those should be for the COG. Once we have those, the consultant team will take the recommendations back and start developing the financial implications, whether it's sustainable and people can afford it. This will be brought back to the group at a future meeting.

Topics today: city limits vs ETJ, drainage on private property, possible expansions to EOS – what other cities do that Greenville doesn't do. Also want to discuss what's attractive, what we should be doing or may not want to get involved in.

Will talk about categories, pros and cons, options to be considered by the group, then hopefully look at information and come back with what's appropriate. Will also talk about jurisdictional limits – inside/outside the City but for which the city is responsible by regulation.

8. Summary of Discussion on Presentation:

- Don Edwards: It might be helpful to understand the nature of the funding up front - where the money comes from and how it works. Could we get a 30-second budget overview? It will be easier to make decisions if we understand the financial structure.
- Lisa Kirby: All revenue is from the stormwater utility fee that is charged to every property within the city limits, not the ETJ. There are no exemptions currently; nonprofits still pay utility fee. That utility fees covers all, operating as well as capital expenses. There are no outside revenue sources, such as development plan review and inspection fees. The amount collected annually is about \$6 million. Of that, operating expenses total about \$3 million, debt service and indirect expenses paid to the general fund like attorney fees, financial services fees, etc., and the remaining money goes to maintenance and capital projects.
- Mark Senior pointed out on a map of the City area where the incorporated limits are (paying the SWU fees and taxes), the ETJ (not paying SWU fees and taxes) and how broken up the areas are. Since stormwater doesn't recognize those jurisdictional boundaries or ROWs, it is a system that has to function as a system; so when it crosses jurisdictions, it gets managed piecemeal. As to drainage outside the city – the city currently doesn't typically maintain that since they do receive stormwater fees from this area. It is currently maintained by NCDOT, if a public road, and by individual property owners on private property. Once an area is annexed from the ETJ to city's corporate limits, the City handles the maintenance. The City might want to consider maintenance where appropriate – DOT roadways where the City is impacted; NCDOT is not funded adequately to cover all their roads, may be in City's interest to handle it. Also, where waterway crosses from City to ETJ and back – the City might need to handle that. Where a stream crosses from City to ETJ and back and is experiencing erosion, the City would have to work on the whole stream. If the problem lies outside, the City would not be responsible for it.
- Most cities do restrict their maintenance to the city limits. Most will have an unwritten exception where the city itself is impacted, but the question is whether that should be formalized or if maintenance should be limited to city limits, handling other work on an exceptional basis. If the City does extend that service to cover the ETJ, the increase to costs will

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be significant. You would be essentially doubling the maintenance area. In limited cases where work in the ETJ is warranted – such as blockage affecting a roadway – City maintenance can handle those on a case by case basis as they arise.

- Drake Brinkley: Did the inventory only cover SWM infrastructure within the city limits? It will be harder to be proactive without knowing where the components of the system are.
- Daryl Norris: The inventory was not entirely limited to the city limits but also included certain pockets of the ETJ. However, the study was not carried out to the far limits of the ETJ.
- Tom Best: Would the County play a role with maintenance in the ETJ? I know they don't do anything with drainage.
- Daryl Norris: There is a County drainage district responsible for maintaining certain ditches and other parts of their drainage district.
- Tom Best: Would they respond to a citizen if someone had a problem?
- Daryl Norris: They would if it concerned ditches they were responsible for maintaining, but it's only specific ones.
- Tom Best: In meetings I sit in, I hear that nobody will do that.
- Landon Weaver: A perfect example of that is Old Corry Road where there was a DOT lateral coming from County where Windsor is –some in the city, some in the county – and it went through a portion of a ditch and culvert through to the Fork Swamp canal. They would only clean up the canal because originally when the drainage district came in and offered a chance for the landowner to sign up to get the ditches cleaned out, and the landowner declined, but it has since developed, and downstream neighborhood had to have the City put some kind of flange on the end of the pipe to keep water out of the neighborhood. But everyone in Windsor was affected. We actually had some properties flooded on Corey Road although they were not in the floodplain. DOT had undersized the pipe. They changed the pipe 2 months before the event, and we had to call hydraulics experts from Raleigh who said it was grossly undersized. Bill Clark Development put up the money to double the size of the pipe at about 10% cost. If the DOT is doing work that crosses boundaries, the City could chip in 5-10% but they're still doing the work. There's no coordination or communication.
- Michelle Clement: Developments in the ETJ must still meet stormwater requirements?
- Daryl Norris: Yes, they must submit a SWM plan for review and meet the development requirements, but they don't pay the stormwater utility fee. They have to comply with detention and nutrient requirements, but they don't pay the fee.
- Michelle Clement: But, do you inspect those areas?
- Daryl Norris: Yes, we are required to inspect those – annual BMP inspections, initial CO inspections and development inspections such as erosion control – so we absolutely do have City expenditures in areas where we are not collecting revenue.
- Landon Weaver: Developers have to pay an erosion control fee?
- Daryl Norris: It covers a portion of the cost of inspection, but it's not a full cost recovery.
- Mark Senior: Outside the county, NCDOT has a different set of standards and a different LOS so that once the City annexes that area, they may have a challenge bringing it up to standards. Also, NCDOT may have standards on materials that can conflict with City standards, for example, allowing corrugated metal pipe which has limited life.

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- Daryl Norris: The seven Watershed Master Plans (WMPs) didn't distinguish between whose culvert, i.e., whether city or DOT culverts. Some DOT culverts are included in the list or improvements. How these projects get completed will come back to coordination with NCDOT.
- Mark Senior: So, some options are to:
 - Maintain only within city limits
 - Allow maintenance of public outside City limits on case by case basis
 - Maintain all public drainage within ETJ (city and state roads)
 - Maintain public and private drainage within ETJ with limitations

The key issue we're discussing is to solve how to address what is within and outside of the boundaries.

- Daryl Norris: Staff struggles with being consistent. The more clarity we have, the easier it is to remain consistent and not give different answers to different people. We seek clarity from committees like this and our Council, then we need the authority to act as given.
- Tom Best: I hope we can reach something today that the public can depend and rely on. If a farmer has a problem, Soil & Water is going to help. We don't do any regulation. We educate and focus on how to use BMPs to solve the problem. That's all we do. I would like to see that throughout the city and county.
- Daryl Norris: As a stormwater department and collector of utility fees, we are a blend of those. We're charged by the state to be a regulatory agency, and the authority to collect the utility fees is based on regulating stormwater for water quality. We're allowed to assist and help control water quantity because that helps water quality, but what gives us the authority to charge a fee in the first place is water quality. When we talk about assistance, that is technically sometimes secondary to our main objective, being a regulatory agency.
- Landon Weaver: So, you could not collect a fee if we're addressing quantity?
- Daryl Norris: No. The statute covers water quality aspects only.
- Mark Senior: Two things heard from this discussion: staff needs clarity; and there needs to be clarity between the public and city staff about what limitations are and what EOS the city will provide. What does the group recommend?
- Joni Torres: Why aren't we allowed charge a fee to the ETJ since they receive services?
- Daryl Norris: We are limited by law to charge the stormwater fee inside our corporate jurisdiction. We can charge inspection and plan review fees outside the jurisdiction, which we don't currently.
- Landon Weaver: It's hard to answer unless you know the cost, inventory, transition point between other jurisdictions, other agencies – it will be hard to pinpoint that cost. Unless you have an inventory and know what it will cost, it is a loaded question.
- Daryl Norris: There will be lots of loaded questions – it is an iterative process that includes identifying what you want, learning what that will cost, and then evaluating what you are willing pay for. It has to start with what you want.
- Landon Weaver: It would be nice to say case by case basis, but you have to see what that would cost. There may be times, such as when you have a catastrophic situation, we may have to take care of it if there's no one in the county drainage district or DOT responsible for fixing it; you could possibly partner with other agencies. Cost is still in question.

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- Tom Best: For example, a farm has a drainage or erosion problem. SWCD has a pocket of federal and state money primarily – we rank the problem, determine the cost, choose a contractor, and we’re authorized to pay a portion of the cost. It’s a finite amount of money, but we do pretty good every year. Doing it on a case by case basis allows you to address the current problem in the current location.
- Landon Weaver: Can we put some money into a dedicated fund for providing assistance in the ETJ on a case by case basis?
- Daryl Norris: We’ll probably arrive at a blend between the two extremes of doing no services outside the city and providing all services to the ETJ. Does anyone feel strongly about either extreme position?
- Tom Best: The county would benefit from the fee, but can they charge one?
- Daryl Norris: Rules are currently being rewritten. The county will be required to create a water quality regulation program and will be able to charge a fee if they choose. Should be finalized in January 2019.
- Donnie Brewer: Don’t you agree that if money is coming from the city, it should be spent in the city?
- Landon Weaver: I agree, except in the case of catastrophic issues. What statutes are governing the ETJ having to submit stormwater plans?
- Daryl Norris: The statute that gives us the regulatory authority and requires us to regulate water quality requires us to go out to the ETJ to do that, but it is a different statute than the authorization to collect the fee. We would have to regulate water quality with or without the fee. The state mandated the regulatory programs onto communities who saw them as “unfunded mandates,” so the State invented the stormwater utility fees to help us fund ourselves. The statutes don’t match in terms of jurisdiction. When the county comes in, they still won’t take over review of the ETJ. They won’t regulate what’s in the ETJ.
- Donnie Brewer: Isn’t that part of the Planning and Zoning Ordinance? That’s what brought the ETJ in.
- Daryl Norris: The regulatory authority is through the Planning and Zoning Ordinance, which is what extends us out to the ETJ.
- Joni Torres: Is it a federal or state statute? If it’s a policy thing, it can be changed at the state level?
- Daryl Norris: Yes, but it is law, not policy. Greenville has a federal NPDES permit that allows us to discharge directly into rivers and creeks. The fee is entirely state.
- Could the City implement the inspection and review fee for the ETJ only to offset that cost?
- Daryl Norris: Technically, yes.
- Katie Cromwell: Do you have data that could separate what portion of cost is from ETJ vs. in-city inspections?
- Daryl Norris: It could be done, but it doesn’t exist yet. It may be an issue from a legal perspective because it would be imposed on citizens who don’t vote and not on those who do, but as long as it is not greater than cost recovery, it could be fully justified.
- Landon Weaver: Would it cover some of the cost lost from not having the fee revenue?

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- Daryl Norris: Yes, it could be for new development review; would not provide anything for upgrading existing systems, drainage improvement projects, etc. but could offset the new development review.
- Landon Weaver: I don't think you would see much of that; most of the ETJ will have water and sewer fees.
- Tom Best: You'll have a situation like we have in the industrial parks. It's not taxed but you do have stormwater.
- Inga Kennedy: The first two issues on the table so far are –
 - Maintain only within the city limits
 - Allow maintenance on a case by case basis outside the limits where case is catastrophic and there's a very high need
- Michelle Clement: It has to be looked at. There are areas such as the area on top of Langston Road – that area has been up in arms because development outside the City comes through their drainage system and causing flooding. No one is regulating or maintaining their side, only the city side. The City and DOT have stepped in to help some of the folks, but there's no way to separate whose stormwater is going to whose ditch. You'll have to do it on a case by case because there are cross-impacts; you can't set a line.
- Donnie Brewer: What were the rules with respect to whether the issue is outside city jurisdiction, water could flow through (bypassed) through municipal limits without storing?
- Michelle Clement: Currently the County doesn't have any stormwater containment rules, so right now the County does that.
- Donnie Brewer: But water coming into the city doesn't have to be stored.
- Daryl Norris: It's not required even if inside the City limits – you don't have to treat offsite stormwater, you only have to treat for your development. In maintaining flow, if we're crossing into the ETJ, if there's a blockage in the ETJ that's backing water up into the city, there's nothing we can do about it. Mark will discuss public vs. private water.
- Mark Senior: We'll have to talk about when the City will go outside its Right-of-Way (ROW) when public water flows outside of the City limits or when water flows from a public facility onto private property. The City would participate in fixing a situation where public water flows from the city into the ETJ.
- Inga Kennedy: We will come back and discuss the second option more later.
- Katie Cromwell: We can model the cost of having a pocket of money to address SWM on a case by case basis and the effect on fees, to help steer your decision.
- Drake Brinkley: Have you already modelled that to show the fee inside the City?
- Katie Cromwell: We can take that pocket of money out so we can see what it would be inside the City to compare how much of a fee increase would be needed to have that pocket of money.
- Drake Brinkley: So, you may have to impose extra fee inside the City and ask people to pay a higher rate.
- Ronnie Donley: Should be able to get from the watershed master plans of the capital improvements needed.
- Daryl Norris: From the WMPs, we established a general need of about \$15.5 million for operating and capital, for infrastructure replacement as it ages and fails; it was based on the

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- extent of the study, both in and out of the ETJ – but did not distinguish between the City and the ETJ.
- Inga Kennedy: It seems we have consensus on exploring the case by case basis approach, and Raftelis can do the financial modelling both within the City limits and outside the City limits.
- Tom Best: Was there a majority on either approach?
- Inga Kennedy: We haven't asked yet.
- Daryl Norris: It is such a broad question. As we go through these other questions, we add more clarity and have more information.
- How hard would it be to cost out: completely ETJ; within City limits; case-by-case basis?
- Katie Cromwell: It would be pretty expensive. Not knowing what is going on within the ETJ creates a kind of black hole in terms of guessing what that would cost.
- Daryl Norris: There are two ways to define case by case basis. One would be to define a pot of money that can be spent outside of city limits on a case by case basis. That's the easiest way to compare financially what the impact is. The second would be to look at those places where water flows from the city, into the ETJ and back into the city and just include those, but not the stuff on the outside.
- Mark Senior: We can develop those options and bring those back; we might also want to look at a stream split by city vs. ETJ to determine whether to work on whole stream or part of the stream.
- Don Edwards: Does that pot of money come from the stormwater revenues vs. expenses in reserve? How are we looking now as far as annual need?
- Daryl Norris: Currently we're bringing in about \$6 million, of which half is operating expenses, including maintenance and regulatory. That leaves \$3 million annually to spend or save on capital improvements, with about \$200 million worth of capital projects to do. That's where the \$15.5 million comes in. That would be our annual need for operating and capital improvements.
- Don Edwards: Is the astronomical cost of the Town Lake Culvert funded by the stormwater fee?
- Daryl Norris: Yes, it is being funded from the stormwater fees. We're getting a zero-interest loan from the state revolving fund but ultimately that is paid back from the stormwater utility fee, so that is part of the debt service that we have to pay off the top
- Mark Senior: Now to discuss drainage on private property. 20-30 years ago, most cities in NC only maintained in the ROW, not on private property. Over time, and with creation of SWUs, the lines have been blurred somewhat and some cities find themselves working on private property in certain circumstances, while some cities (examples: Cary, Asheville, Wilmington) are trying to hold the hard line and work only on public property. Most cities with stormwater permits and charging a stormwater fee have extended services to private property. We'll talk about those, what Greenville does, and what is appropriate going forward. First question: is it appropriate to maintain beyond the ROW and if so, under what circumstances?
- Tom Best: Will you present cases for us to discuss?
- Mark Senior: Yes, we will discuss some cases now where the City does go onto private property and where we might need to expand now.
- Landon Weaver: Up until a few years ago, the City did maintain and work on private issues. I believe that if a development is designed and installed to City standards and accepts some private water, it would be good for the city to maintain because in the long run, you won't have

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potential contamination from private sources and you won't have erosion, which would keep the environmental quality up and serve the greater good. Can be less expensive to maintain in back yards than having to correct in the street with curb and gutter work. This refers to piping and structures – ditches and ponds would be for the homeowner's association to maintain. We are very challenged in this area with grading because we're flat – there is natural grading in some areas where you have to change the whole landscape just to get to a ROW. In a piping system this is expensive, and it goes directly to the consumer. There's a tax benefit to the City by doing that, and it adds value regardless.

- Daryl Norris: Primary example – a neighborhood road with multiple houses – if those houses drain towards the road and the water ends up in the road, that's the City ROW. If it slopes in back and drains to a swale, and the developer puts in a drain and pipes that direct it to the City ROW, all of it is private until it reaches the City ROW, the responsibility of maintaining that pipe is the question. Often private owners and homeowner's associations don't have the resources to maintain pipes and catch basins in their back yard.
 - Donnie Brewer: You started in the back and most of the time it's about midway, where some of it goes to the back, some goes to the ROW, crosses the street, and flows back to private property. Does the City maintain that? I would say you really don't need to. You may need to do some maintenance – clean out the catch basins, for example – but this pipe should drain fairly well.
 - Landon Weaver: Water flow may go back and forth to ROW and private, and water may be backing up onto the private property.
9. Mark Senior reviewed the different examples where water flows across private and ROW. The diagram showed under which scenarios the City might be responsible for maintenance. Daryl Norris described the different scenarios and what drives the City's response.
- Daryl Norris: If property owner clearly creates a problem, the City will not fix. If it is carrying public water and gets blocked, becomes a ROW issue and affects travel, we would fix. From a water quality perspective, we can justify fixing some owner-created problems. Often the developer installs the system and builds the street, then gives the City the street
 - Michelle Clement: Every map we draw has the drainage easement on it, but homeowners will still build a fence too close to the property line. If you're the City and you're having to go out and maintain that pipe and there's a fence on either side of the property line, and the pipe runs down the middle and they've created a sprinkler system or other change, and the City has to access it to do maintenance, not only are you paying for maintenance of the pipe, now you're paying for replacement of the fence and other costs. Sometimes the property is sold, and something new is built on the property, but the setback is unclear. How do you determine who did something wrong? Scenarios for existing developments are going to be more difficult, especially when permission and access are not given.
 - Mark Senior: We'll discuss that very case – easement issues are a big part of this discussion. Also, in some cases, the system has public runoff that makes it eligible for assistance but in other cases, the system is not receiving any public water and is not eligible for assistance.
 - Donnie Brewer: That also works for drainage ditches because a lot of sediment comes off the street, goes into the ditch and blocks the water so it backs up the street.
 - Daryl Norris: If it's not carrying public water, i.e., the water comes from the City ROW or property, the first answer is "it's private." That might not be the final answer, but that is our first position.
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- Mark Senior: Now we'll talk about some options for maintaining drainage on private property, whether City should go beyond the current ordinance allowing the City to do some maintenance, or go beyond that to say you maintain all the drainage, whether public or private. For example, Charlotte does that and has perpetual backlogs and a huge budget for addressing that; it will drastically increase the budget need. What Greenville does now, and many cities do, the city maintains a portion of the private system with the limitation being it has to have public water going through it, along with other caveats that determine whether the City will help.
- Tom Best: I believe you should take over the entire system. Citizens don't know what to do, but Soil and Water staff would. We've walked entire waterways and could see where problem areas are. Parks could be a solution, but I think we have to help.
- Daryl Norris: The numbers quoted earlier don't include private drainage at all.
- Tom Best: Natural waterways may be technically owned by the property owner, but they help drainage. The ideal situation would be to put linear parks there, not homes.
- Landon Weaver: With respect to system maintenance, it needs to meet a standard. They need to meet a standard, bringing it to a state that allows the City to maintain.
- Drake Brinkley: DOT standards are completely different. Are they willing to enlarge the pipes they install?
- Daryl Norris: Not presently, but that would meet the citizens' expectations. The budget can drive the EOS.
- Tom Best: Have it evaluated by an expert who can supply a plan and contractors. Apportion the cost between the citizen and other agencies.
- Daryl Norris: Like a dedicated line of money for private drainage assistance.
- Don Edwards: Hard to decide without knowing the dollar amount
- Michelle Clement: When DOT goes into subdivision and evaluates the system, problems must be corrected before DOT will take over the system. There must be standards before we can adopt things into our system
- Daryl Norris: The original stormwater committee made a recommendation that all pipes 15" or greater would be maintained by the City, but Council didn't adopt that as part of the ordinance.
- Beth Ward: As far as the stormwater fee, we all pay partial assistance vs. what's currently done. Going forward with new regulations and standards – removing fences, for example. You can develop standards for people to follow so they don't have future costs and money can go to correction.
- Mark Senior: The consensus is that we don't want to limit to just public property – shared cost arrangement – Raleigh originally tried a 50-50 cost share program but had to give up and now pays 100% of the cost of qualifying projects on private property – as a result, there is a backlog of projects that have to be prioritized, and there are not enough funds to address all private projects.
- Donnie Brewer: It's hard to say cover everything without an inventory – what are we looking at? Maybe we should develop an emergency fund.
- Daryl Norris: We can fiscally analyze the cost of private drainage assistance.
- Katie Cromwell: It's also an administrative burden and COG doesn't have the staff. That will cost in addition to the pot money.

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- Daryl Norris: There is a pot of money to address eroded streambanks – \$200,000 a year, and private property owners can apply.
- Matt Butler: Is that being used?
- Daryl Norris: Yes.
- Mark Senior: It's agreed that no one wants to take over 100% but don't want to prohibit private property work? We can talk more about the conditions.
- Donnie Brewer: As long as the standards are being met.
- Michelle Clement: The conditions will have to include pipe size and function. Also, 15-inch pipe size is not large enough; it won't carry much water. You would have to exclude smaller pipes. Public water may not be a sufficient standard. It will include some private water.
- Daryl Norris: Are there conditions where the City should maintain pipes with no public water? E.g., a 24" drain in backyard carrying no public water, but it develops a sinkhole. Should the city assist?
- Donnie Brewer: The city has put pipes on private property on a cost-sharing basis. Does that make it public?
- Mark Senior: No. As part of the project, the property owner must sign a legal document establishing that the City is not responsible for future maintenance.
- Daryl Norris: That is actually in the ordinance that allows us to install those pipes – the City is not responsible for maintenance.
- Donnie Brewer: Not sure if that covered older pipes.
- Landon Weaver: If 15 inches is adequate capacity and approved material is used, if it follows the standard, they should get help.
- Donnie Brewer: think it should be concrete pipe.
- Daryl Norris: If it meets other conditions, should it be included whether it carries public water or not?
- Matt Butler: So, eligibility for assistance should not be delineated by public/private water, but City water. So, if it's in the city limit where the fee is being paid, we should provide assistance to them?
- Landon Weaver: Maintenance, as long as it meets the standards. They shouldn't necessarily have to pay for it.
- Donnie Brewer: What about invested rights (i.e., was to standard when built)?
- Daryl Norris: It seems the consensus is to allow assistance on private property under certain conditions, not just based on public water. We can get into the conditions in more detail.
- Mark Senior: Along with pipe system, the City maintains stream systems. In Greenville, the City has historically maintained a limited number of jurisdictional streams where the City has participated in the project, but that's the extent of the City's maintenance of these streams on private property. Should that continue or should that program be expanded under the EOS? Who knows the history of how the City became responsible for the three jurisdictional streams?
- Daryl Norris: It is important to understand the difference between the maintenance of these three streams. It gets into the LOS of what we actually do.

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- Ronnie Donley: Everyone has a different opinion of what maintenance means today. According to ordinance, we are there just to remove blockages. Generally on streams like that, you have Division water quality standards to go by but again, as with pipe systems, access is the number one problem to provide maintenance. We do walk these streams, get involved with beaver dams, etc. The LOS that we provide now takes up the majority of our time trying to keep them moving. I have 4 people to maintain 75 miles of drainage. Mainly, we walk them to keep them open. What we've done in the past 4-5 years is to try and keep those systems open and limit the impact on roadways.
- Mark Senior: Jurisdictional stream means that it looks/acts like a stream, conveys water most of the time, state or federal regulators take over, and there are restrictions on what you can do with respect to those streams. Any thoughts on limits to what the City should be doing to maintain those streams?
- Landon Weaver: Is there an overlay of what is/is not maintained by you or the drainage district?
- Daryl Norris: We do have a map that we've posted on the website of the streams and ditches that are maintained by us and to what level.
- Tom Best: There are so many streams that run through the City and some are maintained, but some are ignored – not by you, they're 100% private property – and they don't know what to do. They may be doing nothing but cutting the grass. When it fills up, it gets blocked.
- Mark Senior: In Charlotte-Mecklenburg, the City handles the smaller portions of the drainage system, the pipe system and smaller drainage ways, but larger streams that drain a square mile or more, the county handles, probably providing the same level of service to keep it free and flowing, so that people don't get flooded upstream because of blockage.
- Inga Kennedy: So you do have a map, Daryl, that shows the jurisdictional maintenance lines?
- Daryl Norris: Yes, it is on our website, but we will email it so that everyone can look at it.
- Mark Senior: Beyond streams, we talk about ditches and things that are non-jurisdictional. The City ordinance that is in place now does provide stabilizing on jurisdictional and non-jurisdictional ditches and streams on private property. The City covers 100% of the cost but only as funding allows. Probably similar to other programs we discussed, but without the cost-share. Charlotte had to drop that stabilization program due to an extensive list of high priorities that they can never get to. Do we want to maintain under that EOS?
- Daryl Norris: The ordinance allows it. We have a current dedicated line item of \$200,000 per year for streambank stabilization. Last year was the first year we had the funding. The ordinance allowed it for a while, but it was not dedicated funding. We did not spend it all last year, but did 2 projects we had applications for that were qualified. This year, we are making a concerted effort to spend it all because the WMP has identified banks that need stabilizing and projects to do that, so we are prioritizing applications first and then with any money that remains that hasn't been asked for, we will go down the list of projects and try to get some accomplished. But, streambank stabilization is what the money is dedicated to. We prioritize them as they come in. Still comes from the same \$6 million.
- Mark Senior: You all still have to determine how much to allocate under the LOS
- Donnie Brewer: How much does the ECU system put in?
- Daryl Norris: Quite a lot. They are one of our top payers. We charge by impervious surface. The hospital is another of our top ratepayers.
- Donnie Brewer: How does it work with Greens Mill Run running through university property? Do they maintain themselves?

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- Daryl Norris: Their drainage system and pipes on school property, we don't maintain. They pay for what's on school property.
- Beth Ward: I've been here 35 years – my property backs up to Greens Mill Run. Any statistics from within COG limits where we've seen flooding increase because of increased development? Can we tie development to flooding? I never saw Greens Mill Run flood before the new development.
- Donnie Brewer: The channel section is the same; impervious surface was added.
- Beth Ward: Flooding never happened until they started developing in the area. There wasn't a huge problem before, when Union Carbide was there but there was an abundance of grass and trees, but when the asphalt started surrounding that area is when flooding started taking place at Evans and Arlington, in houses in Lakewood Pines and other neighborhoods. Wasn't as big a problem but it got to be one and we couldn't get anything done. It seems that something needed to be done but wasn't. People don't see improvement even with the fee being paid. This town is becoming overrun by water. It hasn't been that way forever. I appreciate cases from other cities, but it's time to look at problems here. We are hearing the same things and at some point, we just have to bite the bullet. Everyone has to put in something to fix it or the problem will continue. The building and increased asphalt continues.

10. Chairman Best called for the meeting to adjourn. Ms. Kennedy reiterated the items that would be sent for the next meeting, including the jurisdiction overlay map and any cost information that could be developed by Raftelis to support the discussion.

Handouts:

- Agenda
- Summary of November 7, 2017 Stormwater Advisory Committee Meeting (Attachment A)
- Summary of SWAC Goals Exercise from November 7, 2017 Stormwater Advisory Committee Meeting (Attachment B)
- Open Channel Maintenance – Levels of Service (Attachment C)
- Open Channel Maintenance Map (Attachment D)

**City of Greenville (COG)
Stormwater Advisory Committee Meeting
November 1, 2017 3:00 pm – 5:00 pm
City Hall, Room 337**

Process Outcome Goals

Chairman's Comments

Process outcomes? Everyone

- Commercial
- Rethink ordinances – developers
- Ensure developers know on the front end what the requirements are
- Get clarity on current ordinances
- Financially sustainable program
- Knowledge of the industry
- Knowledge of areas in NC on how/what others are doing
- Help understand financial implications
- Insurance understanding of how stormwater impacts communities
- Ensure environmental compliance
- Lives near a creek with impacts. Look at approach comprehensively.
- Concerned about downtown revitalization and how stormwater impacts the new development including Town Creek Culvert
- Waterways turned into parks
- Retain control of stormwater fees by Public Works

Recommendations

- Staff needs clarity
- Answers should be clear to everyone

Open Channel Maintenance Levels of Service

Colors correlate to the open channels identified on the Open Channel Maintenance Map

Grandfathered Blueline Streams (Green Mill Run, Fornes Branch and Reedy Branch)

- 1) Nuisance vegetation will only be removed when it reduces free movement of water through the stream.
- 2) Remove obstructions in the stream that will impede water flow (i.e. fallen trees or debris).
- 3) Vegetation and debris retrieved from the stream will be removed from the riparian buffer (50' each side of stream) and disposed of properly.
- 4) Herbicide applications will be permitted to control nuisance vegetation.
- 5) Remove sediment as needed by hand. No heavy equipment is permitted in the stream channel.
- 6) Erosion creating a hardship on private property owners can apply for assistance through the City of Greenville's Stream Enhancement Program.

All Other Blue Line Streams

- 1) Nuisance vegetation will only be removed when it reduces free movement of water through the stream.
- 2) Remove obstructions in the stream that will impede water flow (i.e. fallen trees or debris).
- 3) Vegetation and debris retrieved from the stream will be removed from the riparian buffer (50' each side of stream) and disposed of properly.
- 4) Erosion creating a hardship on private property owners can apply for assistance through the City of Greenville's Stream Enhancement Program.

Ditches

- 1) Nuisance vegetation will be removed from the edge of water to five feet up the ditch bank.
- 2) Remove obstructions in the ditch that will impede water flow (i.e. fallen trees or debris).
- 3) Vegetation and debris retrieved from the ditch will be removed from the easement and disposed of properly.
- 4) Remove sediment as needed.
- 5) Repair erosion as needed.