

STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION

Storm Water Management Program (SWMP)

General NPDES Permit No. GAG610000 for Small Municipal Separate Storm Sewer Systems (MS4)

1. **General Information**

- A. Name of small MS4: City of Gainesville, Georgia
- B. Name of responsible official: Bryan Lackey
Title: City Manager, City of Gainesville
Mailing Address: P.O. Box 2496
City: Gainesville State: GA Zip Code: 30503
Telephone Number: 770-535-6865
- C. Designated stormwater management program contact:
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Title: Environmental Services Manager
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2. **Sharing Responsibility**

- A. Has another entity agreed to implement a control measure on your behalf?
Yes No (If no, skip to Part 3)

Control Measure or BMP:

1. Name of entity: Hall County
2. Control measure or component of control measure to be implemented by entity on your behalf:

- MCM #2, BMP #4, Establishment and operation of illicit discharge/illegal dumping hotline.

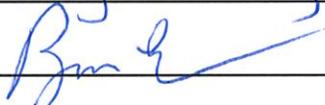
- B. Attach an additional page if necessary to list additional shared responsibilities. **It is mandatory that you submit a copy of a written agreement between your MS4 and the other entity demonstrating written acceptance of responsibility.**

3. **Minimum Control Measures and Appendices**

- A. Public Education and Outreach
- B. Public Involvement/Participation
- C. Illicit Discharge Detection and Elimination
- D. Construction Site Stormwater Runoff Control
- E. Post-Construction Stormwater Management in New Development and Redevelopment
- F. Pollution Prevention/Good Housekeeping
- G. Appendix – Enforcement Response Plan
- H. Appendix – Impaired Waters

4. **Certification Statement**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: Bryan Lackey Date: 6-20-19
Signature:  Title: City Manager

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Storm Water Management Program

MCM #1: Public Education and Outreach on Storm Water Impacts

The City of Gainesville has a long-standing program for public education and outreach. As part of the development of this SWMP, the City evaluated its program to ensure that it continues to meet the needs of this community. The City will implement the various components of this program as designed, and revise as needed throughout the permit period.

A. Best Management Practice (BMP) #1 – Utility Bill Insert

1. Target audience:

City of Gainesville water customers, including business owners and residents.

2. Description of BMP:

The City of Gainesville Department of Water Resources sends monthly water bills to our customers. Through these water bills, billing inserts are utilized to send various information. The City will educate area residents and commercial customers by sending one billing insert each year that includes topics such as water quality, pollution prevention or stormwater.

3. Measurable goal(s):

The City of Gainesville will educate area residents and commercial water customers by sending one utility bill insert each year that includes topics such as water quality, pollution prevention or stormwater. The number of accounts that were sent the insert and a copy of the insert will be documented in the annual report.

4. Documentation to be submitted with each annual report:

The number of accounts that were sent the insert and a copy of the insert will be documented in the annual report.

5. Schedule:

- a. Interim milestone dates (if applicable): N/A

- b. Implementation date (if applicable): 2019

- c. Frequency of actions (if applicable): Annually

- d. Month/Year of each action (if applicable): 2019 - 2022

6. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) and (Stormwater/MS4 Coordinator)

7. Rationale for choosing BMP and setting measurable goal(s):
This BMP will be a way to reach all of the City of Gainesville water customers with education materials. The frequency of one time a year, provides a cost effective way to utilize the City of Gainesville water bills for communicating environmental education, and local stormwater issues.
8. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
Including a billing insert which focus on stormwater pollution or other water awareness issues provides an ideal opportunity to reach almost every household in the City of Gainesville and surrounding area.

B. **BMP #2 – Public School Education Activities**

1. Target audience:
Area school system students.
2. Description of BMP:
The City has been actively involved with public schools in the City of Gainesville and the surrounding areas on public education regarding water resources and environmental awareness. City staff utilize their experience to teach multiple topics from stormwater pollution to water conservation topics. The education programs offered are versatile to meet the curriculum needs of the teachers and students.
3. Measurable goal(s):
The City of Gainesville will provide at least 20 hours of staff time to area schools each year. The number of hours provided will be documented in the annual report.
4. Documentation to be submitted with each annual report:
Photo documentation of presentations, completed teacher feedback forms and an electronic database tracking the presentations will be provided in each annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): 2018 - 2022
6. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)
7. Rationale for choosing BMP and setting measurable goal(s):
The City of Gainesville continues to encourage public education and outreach activities as an effective tool to maintain and improve water quality. This BMP has been effective in educating school children in the past and a direct educational approach will help increase awareness.
8. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
The City will base the success of this BMP upon feedback and effectiveness surveys from teachers at local schools.

C. **BMP #3 – Public Outreach Activities**

1. Target audience:
City of Gainesville / Hall County Residents
2. Description of BMP:
The City of Gainesville provides information to residents during community events, workshops and/or around key areas of town such as the City of Gainesville Square or the Department of Water Resources Administration Building. This allows for City staff to be out in the community to reach area residents with information about pollution prevention, watershed protection, water conservation, etc.
3. Measurable goal(s):
The city will provide information at community events, workshops and/or around town at least four times yearly. The number of public outreach activities completed will be documented in each annual report.
4. Documentation to be submitted with each annual report:
An electronic database including details of each activity and sample picture documentation will be provided with each annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable): Four times annually
 - d. Month/Year of each action (if applicable): 2018-2022
6. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator), and (Environmental Monitoring Coordinator)
7. Rationale for choosing BMP and setting measurable goal(s):
The City of Gainesville continues to encourage the residents of Gainesville/ Hall County to participate in public education and outreach activities. This BMP has been effective in educating the general public in the past and a direct educational approach will help increase awareness within the local community.
8. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
The City will base the success of this BMP upon the estimated number of people reached at each informational event.

D. **BMP #4 – Social Media**

1. Target audience:
Area Residents
2. Description of BMP:
The City engages area residents through an active social media campaign. Posts on the Gainesville Water Resources Facebook page provide residents access to information about area water resources, pollution prevention and water conservation.
3. Measurable goal(s):
The City of Gainesville will post about area water resources on the Gainesville Water Resources Facebook page at least once a month. The number of posts completed will be documented in the annual report.
4. Documentation to be submitted with each annual report:
A link to the Facebook page, photo documentation of posts and the number of people reached per post will be provided in each annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): 2018
 - c. Frequency of actions (if applicable): Monthly
 - d. Month/Year of each action (if applicable): 2018 - 2022
6. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator), and (Environmental Monitoring Coordinator)
7. Rationale for choosing BMP and setting measurable goal(s):
Social Media continues to be a rapid and effective way to communicate with area residents. The City of Gainesville established a Facebook page in 2013 and it has been effective in reaching area citizens. The City will continue to utilize and expand the use of this resource.
8. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
The City will determine whether this BMP is effective using the insight tools provided by Facebook. The overall number of page likes and the engagement in the posts will be used to determine if the content being shared is engaging.

MCM #2- Public Involvement/Participation

The City of Gainesville has a long-standing program for public involvement and participation. As part of the development of this SWMP, the City evaluated its program to ensure that it continues to meet the needs of this community. The City will implement the various components of this program as designed, and revise as needed throughout the permit period.

A. Best Management Practice (BMP) #1 – NPDES Stormwater Steering Committee

1. Target audience/stakeholder group:
NPDES Stormwater Steering Committee composed of the public, industry, businesses, and developers.
2. Description of BMP:
The NPDES Stormwater Steering Committee, established in 2002, meets at least biannually to bring together local community representatives to discuss current NPDES related issues throughout Hall County. Representatives from Hall County and the Cities of Gainesville, Flowery Branch, and Oakwood will meet at least biannually (twice per year) in order to address current stormwater issues within each municipality.
3. Measurable goal(s):
The NPDES Stormwater Steering Committee will meet at least biannually and have various representatives from throughout different municipalities of Hall County and must have at least three of the four municipalities represented at each meeting. Documentation of the meetings will be provided in the annual report.
4. Documentation to be submitted with each annual report:
Sign in sheets and the agenda from each meeting will be provided in the annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): n/a
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
Biannually (twice per year)
 - d. Month/Year of each action (if applicable): 2018-2022
6. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager) and (Stormwater/MS4 Coordinator)

7. Rationale for choosing BMP and setting measurable goal(s):
These meetings provide an opportunity to share knowledge regarding permit compliance, ensure consistency of approaches to managing stormwater, and provide the opportunity to discuss other stormwater related concerns throughout the service areas.
8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:
This BMP will be determined to be effective if the local jurisdictions are able to discuss topics and issues associated with stormwater during the Steering Committee meetings.

B. BMP #2 – Annual Stream Clean-up Event

1. Target audience/stakeholder group:
City of Gainesville adult and children volunteers
2. Description of BMP:
The City of Gainesville, hosts or partners on an annual clean-up event. The stream clean-up typically targets both adults and children to help clean up litter from local water bodies and the event also provides an opportunity to educate the general public on how litter is transported through stormwater to waters of the State.
3. Measurable goal(s):
The City of Gainesville shall hold or partner on one stream, lake and/or roadside clean-up each year to emphasize protection of our surface waters and to involve the general public. Documentation of the number of participants and trash removed will be included in the annual report.
4. Documentation to be submitted with each annual report:
The City will submit the sign in/sign out sheets from the clean-up, photos of the event as well as provide the estimate of the amount of litter/debris removed in the annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): n/a
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): 2018-2022
6. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)
7. Rationale for choosing BMP and setting measurable goal(s):
The annual stream clean-up event provides an opportunity for citizens of Gainesville to have a direct impact by removing trash from water bodies in the community. These events also provide an opportunity to educate volunteers on the importance of water quality and previous participation numbers have shown this program to be popular and successful within the local community.
8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:
The City will record the number of participants each year and the amount of litter/debris removed for the purpose of quantifying the success of the clean-up event.

C. BMP #3 – Storm Drain Marking

1. Target audience/stakeholder group:
City of Gainesville adult and youth volunteers
2. Description of BMP:
The City of Gainesville will provide the supplies and support for local volunteers to mark storm drains. The storm drain marking program will allow area residents to be involved with protecting their local drains and educate others that storm drains are not treated and drain to streams, creeks and Lake Lanier.
3. Measurable goal(s):
The City of Gainesville Department of Water Resources staff will partner with one group or organization each year to mark storm drains. The number of volunteers and storm drains marked will be provided in the annual report.
4. Documentation to be submitted with each annual report:
The City will submit photo documentation, any sign in sheets, and a map of the drains marked during the storm drain marking event.
5. Schedule:
 - a. Interim milestone dates (if applicable): n/a
 - b. Implementation date (if applicable): 2018
 - c. Frequency of actions (if applicable): Once annually
 - d. Month/Year of each action (if applicable): 2018-2022
6. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)
7. Rationale for choosing BMP and setting measurable goal(s):
Area storm drains drain directly to waterways, which flow into Lake Lanier. Lake Lanier is the source of the areas drinking water as well as an important economic driver for the community. A storm drain marking program will provide an opportunity for people to be actively involved with protecting our waterways and provide a secondary benefit of additional education for other residents who pass by and notice the markers.

8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will record the number of participants each year, the number of drains marked and will evaluate any potential feedback received from participants.

D. BMP #4 – Illicit Discharge/Illegal Dumping Hotline

1. Target audience/stakeholder group:
Gainesville/Hall County Residents
2. Description of BMP:
Hall County in partnership with the City of Gainesville provides a stormwater hotline number to be used by the public for reporting any potential illicit discharge activity to the MS4. This hotline number is provided on the City of Gainesville's website to provide awareness to the local community.
3. Measurable goal(s):
The hotline number (770) 533-7420, was established by Hall County and is maintained in part for the City of Gainesville. The telephone number is to be provided on the City's website. The number of calls received on the hotline will be documented in the annual report.
4. Documentation to be submitted with each annual report:
The number of problems/incidents remedied as a result of hotline calls shall be documented in each annual report. Additionally, a log of the calls will be generated each year summarizing the issues reported to the hotline.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
Follow up throughout the year as calls are received.
 - d. Month/Year of each action (if applicable): 2018-2022
6. Person (position) responsible for overall management and implementation of the BMP:
Hall County, Brian Wiley (Environmental Services Manager), and (Stormwater/MS4 Coordinator).
7. Rationale for choosing BMP and setting measurable goal(s):
The hotline number is a useful way for local citizens to contact the City if they have observed a potential illicit discharge, serious erosion concern, dumping site or other immediate stormwater problem. Offering the hotline allows the public to be involved with reporting problems to the City. An increased public awareness allows these issues to be noticed and corrected in a timely manner.

8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will determine this is effective by looking at the number of calls received and how many problems were corrected due to public participation in the IDDE/Erosion hotline.

MCM #3- Illicit Discharge Detection and Elimination (IDDE)

A. BMP #1 – IDDE Legal Authority

1. Description of BMP:

The Gainesville City Council originally adopted the Illicit Discharge Ordinance on April 19, 2005. The current ordinance Chapter 4-7 Stormwater and Illicit Discharges and Illegal Connections (Ordinance No. 2008-19) was enacted June 2008 “to assure the continued, efficient operation of the city stormwater system by specifically prohibiting illicit discharges and illegal connections.” (Attachment O.1) This continues to be the primary method by which the City manages and enforces illicit discharge and illegal connection issues.

2. Measurable goal(s):

The City will evaluate and, if necessary, modify the existing ordinance. If the ordinance is revised during the reporting period, the City will submit a copy of the adopted ordinance with the annual report.

3. Documentation to be submitted with each annual report:

Any modifications to the ordinance will be provided with the annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

The City will update the ordinance as needed.

d. Month/Year of each action (if applicable): 2018 - 2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The evaluation, and potential modification, of the ordinance is necessary to assure the continued, efficient operation of the city stormwater system by specifically prohibiting illicit discharges and illegal connections.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

The City will determine this BMP is effective if the ordinance provides the ability to prohibit illicit discharges and illegal connections.

B. BMP #2 – Outfall Map and Inventory

1. Description of BMP:

The City of Gainesville Department of Water Resources staff maintain an updated, searchable geographic information system (GIS) inventory and map of stormwater outfalls located in the City's service area. The GIS map contains the locations of all waters of the State that the outfalls discharge into. The inventory tracks attributes for structures that allow inspection and maintenance teams to locate individual structures.

2. Measurable goal(s):

a) The City will maintain an updated GIS map and inventory showing the locations of all outfalls from the MS4 and the names and locations of all waters of the State that receive discharges from those outfalls. The map and inventory will be updated accordingly as outfalls are added during the reporting period. The map and inventory will be provided with each annual report.

b) The total number of outfalls and the number of outfalls that have been added during the reporting period will be provided in each annual report.

3. Documentation to be submitted with each annual report:

The updated map and inventory, the total number of outfalls and the number added during the reporting period, will be submitted as part of each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

The map and inventory will be updated as needed.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Jill Graham (GIS Coordinator), Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The map and inventory allow the City to accurately track attributes for outfalls and waters of the State that receive discharges. By updating this inventory, the City will be able to efficiently provide information related to each outfall to help eliminate illicit discharges or illegal connections and to provide maintenance when necessary.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

The City will consider this BMP to be effective if the GIS map and inventory allows staff to find and track outfalls for IDDE dry weather screening.

C. BMP #3 – IDDE Plan

1. Description of BMP:

As part of the IDDE Plan, City of Gainesville Environmental Services personnel conduct outfall screenings to identify any potential illicit connections or discharges to the MS4. The City must inspect 100 percent of outfalls within a 5-year period to comply with the NPDES Phase II MS4 permit. The City will inspect a portion of outfalls each year and will inspect all outfalls within the service area during the permit term. Outfall screening procedures are outlined within the IDDE Plan, [attachment 3.1](#). Should city staff identify illicit discharges or illegal connections, enforcement measures will be conducted per the procedures outlined in the Enforcement Response Plan (ERP) in [Appendix A](#).

2. Measurable goal(s):

- a) During the 5-year permit term, 100 percent of the City's outfalls will be inspected through DWS procedures outlined in the IDDE Plan. A portion of these outfalls will be inspected each year with at least 5% completed annually. The portion and number of outfalls screened will be documented with each annual report. As new development is constructed within the City of Gainesville, the outfall inventory will be updated and the measurable goal shall adjust accordingly to include these additional outfalls.
- b) When inspections indicate the potential for an illicit discharge or illegal connection to the MS4, the City will implement investigative procedures including sampling and other inspection procedures outlined in the IDDE Plan ([attachment 3.1](#)). Information on any illicit discharge detection activities performed during the reporting period will be included in each annual report.
- c) The City will ensure any identified illicit discharges are eliminated. If necessary, enforcement procedures in accordance with the Enforcement Response Plan ([Appendix A](#)) will be implemented. Information on any enforcement actions taken to eliminate illicit discharges during the reporting period will be provided in each annual report.

3. Documentation to be submitted with each annual report:

Outfall screening forms and descriptions of any potential illicit discharges or illegal connections shall be documented in each annual report. Information on illicit discharge detection activities and any necessary enforcement actions will also be documented in each annual report.

4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
100 percent of outfalls screened over 5-year permit period with at least 5 percent of outfalls screened each year.
 - d. Month/Year of each action (if applicable): 2018-2022
5. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)
6. Rationale for choosing BMP and setting measurable goal(s):
Deteriorating infrastructure or violations of building codes may result in illicit discharge or illegal connections to the MS4. By screening 100 percent of stormwater outfalls over the 5-year permit period, the City actively determines the presence of any potential violations. The City will continue to track any illicit discharge investigative actions and necessary enforcement activities in order to ensure elimination of illicit discharges occur appropriately and in a timely manner.
7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
The City will investigate and document any illicit discharges or illegal connections to the MS4 and summarize details of elimination in each annual report.

D. BMP #4 - Education

1. Description of BMP:
Through the City's multiple outreach and public education programs, Department of Water Resources staff present educational information to citizens of Gainesville, businesses, and municipal employees regarding problems caused by illicit discharges/connections and illegal dumping.
2. Measurable goal(s):
One education activity will be conducted for each target audience (citizens, businesses and municipal employees) annually. Educational activities related to illicit discharges and illegal connections to the MS4 will be tracked by the City and documented within each annual report.
3. Documentation to be submitted with each annual report:
Documentation of educational activities may include sign-in sheets, notices of educational events, flyers and/or brochures, photos and/or the community education log database. These will be included in each annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
Educational activities will be conducted at least once a year for each target audience
 - d. Month/Year of each action (if applicable): 2018-2022
5. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)
6. Rationale for choosing BMP and setting measurable goal(s):
Educating local citizens, businesses, and municipal employees on the hazards associated with illicit discharges and illegal connections is an important aspect of improving water quality conditions in and around the City of Gainesville. By tracking the number of activities each year, the City will be able to determine how to improve education and outreach efforts and focus those programs on the protection and improvement of water quality.
7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
Where applicable, the City will ask for feedback from participants during educational activities to determine effectiveness.

E. BMP #5 – Complaint Response

1. Description of BMP:

As illicit discharges and illegal connections are discovered, the City will implement enforcement provisions outlined in the Enforcement Response Plan (ERP) in [Appendix A](#). The procedures outline appropriate actions and responses to complaints, investigations, and implementation of corrective actions which are necessary to eliminate any illicit discharges.

2. Measurable goal(s):

a) The City will implement the EPD approved procedures for receiving, investigating, and tracking the status of illicit discharge complaints.

b) The City will provide a report on each illicit discharge related complaint received and investigated during the reporting period in each annual report.

3. Documentation to be submitted with each annual report:

A summary of complaints and a completed Environmental Complaint Form ([attachment 3.4](#)) on each incident will be provided in each annual report. Details will include at least the complaint date, type of complaint, complaint status, and a description of any other notable observations or activities.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):
Complaints will be handled throughout the year as they occur.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator) and (Environmental Monitoring Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Developing procedures to manage complaints provided by either citizens or municipal employees provides an opportunity to address illicit discharges and illegal connections as they occur. The procedures outlined in the ERP will enable the City of Gainesville to eliminate illicit discharges as quickly as possible to ensure minimal adverse water quality effects.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
This BMP will be determined to be effective if the procedures allow for complaints to be received and resolved where applicable.

MCM #4- Construction Site Storm Water Runoff Control

A. BMP #1 – E&S Legal Authority

1. Description of BMP:
The City of Gainesville, which is a Local Issuing Authority (LIA), has established an ordinance, Article 9-14 Erosion, Sedimentation and Pollution Control, requiring erosion and sediment (E&S) controls on construction activities that disturb greater than or equal to one acre. In addition, construction activities disturbing less than one acre but that are part of a larger common plan of development that would disturb one acre or more are included. The ordinance requires construction site operators to control wastes such as discarded building materials, concrete truck washout, chemicals, litter and sanitary wastes at construction sites and provides the enforcement capabilities to ensure the provisions are adhered to. A copy of the ordinance can be found in [attachment O.2.](#)
2. Measurable goal(s):
The City will evaluate and, if necessary, modify the existing soil erosion, sedimentation and pollution control ordinance. If the ordinance is revised during the reporting period, the City will submit a copy of the adopted ordinance with the annual report.
3. Documentation to be submitted with each annual report:
Any modifications to the ordinance will be provided with the annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
The City will evaluate the ordinance and update as needed.
 - d. Month/Year of each action (if applicable): 2018-2022
5. Person (position) responsible for overall management and implementation of the BMP:
(Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer) and (Stormwater/MS4 Coordinator)
6. Rationale for choosing BMP and setting measurable goal(s):
The evaluation, and potential modification, of the E & S ordinance is necessary to assure pollutants related to land disturbing activities are appropriately contained. The ordinance contains provisions for the application of soil erosion and sedimentation and pollution control measures and practices to all land-disturbing activities that are not exempt.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
The BMP will be determined to be effective if it allows for the legal authority to require E&S controls on applicable construction sites.

B. BMP #2 – Site Plan Review Procedures

1. Description of BMP:

The City of Gainesville will review all proposed development plans, which meet the applicability requirements in Article 9-14, throughout each reporting year in accordance with the site plan review procedures provided. Site plan review is utilized to ensure construction activities are carried out in accordance with Georgia Soil and Water Conservation Commission (GSWCC) requirements. The Department of Water Resources reviews all proposed development plans, which meet the applicability requirements in Article 9-14, within 14 days of receipt and issue or deny the permit within 45 days of application to ensure compliance with the ordinance. Site plan review checklists can be found in [attachment 4.1](#).

2. Measurable goal(s):

- a) The City will implement the site plan review procedures in accordance with the Georgia Soil and Water Conservation Commission and as described in the SWMP.
- b) The City will provide a list of the site plans received and the number of site plans reviewed for erosion and sedimentation control plans, and the number approved or denied during the reporting period in each annual report.

3. Documentation to be submitted with each annual report:

The City will provide a list of all the site plans received and the number of site plans reviewed, approved or denied, which meet the applicability requirement in Article 9-14 for E&S land disturbance review during the reporting period.

4. Schedule:

- a. Interim milestone dates (if applicable): n/a
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
As needed, review all proposed applicable development plans within 14 days of receipt and issue/deny permits within 45 days of application.
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer), and City of Gainesville Community Development Department

6. Rationale for choosing BMP and setting measurable goal(s):
The City of Gainesville reviews all applicable construction site plans to ensure the plan is in compliance with the City's soil erosion, sedimentation, and pollution control policies and ordinance. These policies have been established to ensure that construction site operators prevent adverse impacts to water quality through the proper planning of BMP type and placement, to control erosion and sedimentation in accordance with GSWCC requirements.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:
The City will determine this BMP is effective if the site plan review procedures allow for the efficient review of construction site plans.

Site Plan Review Procedures

The Hall County Soil and Water Conservation District reviews new and re-developments and works with local developers to verify that the City's requirements for site design and stormwater management are met as development occurs. [Attachment O.3](#), City of Gainesville's Unified Land Development Code, provides a detailed description of the site plan review process within the City. The Director of Planning and Development must first approve a preliminary plat prior to the issuance of a Land Disturbance Permit (LDP) or the initiation of any land disturbing activities. No land development shall be issued unless the erosion and sediment control plan has been approved by both the Hall County Soil and Water Conservation District and the City of Gainesville Department of Water Resources, and that the Planning Department has confirmed that the plans required are in compliance with all requirements of the code. Blank copies of the Plan Review Checklists are provided in [attachment 4.1](#).

C. BMP #3 – Inspection Program

1. Description of BMP:

The City of Gainesville Department of Water Resources staff will continue field inspections of all active construction sites within the Gainesville jurisdiction to ensure compliance with the ordinance and the approved Erosion Sedimentation and Pollution Control (E&S) plan. The Department of Water Resources Inspectors shall inspect all active construction sites within the Gainesville jurisdiction at least 2 times per month to ensure the sites are in compliance with their E&S plans. The blank inspection sheets can be found in [attachment 4.2](#).

2. Measurable goal(s):

- a) The City will implement the construction site inspection procedures in accordance with the GSWCC and as described in the SWMP.
- b) The City will provide a list of active construction sites and any inspections conducted during the reporting period in each annual report.

3. Documentation to be submitted with each annual report:

The City will provide a list of active construction sites and a representative sample of inspection activities will be documented in each annual report with inspections tracked in an electronic database to ensure compliance at each construction site.

4. Schedule:

- a. Interim milestone dates (if applicable): n/a
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
Inspections occur at least twice per month
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), John Guth (Senior Erosion Sediment Control Inspector), and Corey Jones (Stormwater Civil Engineer)

6. Rationale for choosing BMP and setting measurable goal(s):

The Department of Water Resources personnel will perform inspections of construction sites. The purpose of the inspections is to ensure that structural and non-structural BMPs at construction sites are properly designed and maintained and that construction site waste is properly controlled. A database will track inspections to ensure site visits are conducted in a timely and thorough manner.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will determine this element has been effective by ensuring a timely and thorough inspection process is conducted.

Inspection Program Procedures

After the plans have been reviewed and the proper permit obtained, Department of Water Resources certified staff will hold a preconstruction meeting at new construction sites prior to any land disturbing activities. The meeting will consist of discussing the BMPs that have been planned and designed, obtaining any updated contact information and ensuring that the onsite contractor has a Blue Card issued by GSWCC. Once the BMPs are installed the site has seven days to provide a letter from the design engineer stating that the BMPs have been installed correctly and as designed.

After land disturbing activities begin, inspections to ensure that the structural and non-structural BMPs are properly designed and maintained and that construction site waste is properly controlled occur on a routine basis, 2 times a month. In particularly wet months, some sites that have demonstrated that they are routinely in compliance may only be visited once that month. This allows the Erosion and Sediment Control Inspector to focus on sites that have complaints or who have had deficiencies in the past. During each routine inspection the construction entrance, perimeter BMPs, and any additional BMPs based on the design are inspected for failures or other issues.

During each inspection, an Erosion and Sediment Control Inspection form is completed, ([attachment 4.2](#)) photos taken and the inspection database is updated. Any enforcement actions that are taken are completed in accordance with the Enforcement Response Plan ([Appendix A](#)).

D. BMP #4 – Enforcement Procedures

1. Description of BMP:

The Department of Water Resources will identify violations and notify the responsible permittee of the violation and any corrective actions needed. If a permittee does not bring the violation into compliance, a stop work order may be issued. The Department of Water Resources will investigate any and all violations of the Erosion, Sedimentation, and Pollution Control ordinance and continue field inspections of active construction sites to ensure compliance. Any violations and corrective actions will be documented and tracked in an electronic database.

2. Measurable goal(s):

The City will implement enforcement procedures for E&S violations documented at construction sites during the reporting period as described in the SWMP and in accordance with the ERP ([Appendix A](#)). The City will provide documentation of any enforcement actions taken during the reporting period in each annual report, including the number and type (e.g. notice of violation, stop work order) and status (e.g. pending, resolved).

3. Documentation to be submitted with each annual report:

Enforcement actions taken to correct ordinance violations will be documented in each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): n/a

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

Enforcement activities will be documented as they occur.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), John Guth (Senior Erosion Sediment Control Inspector), and Corey Jones (Stormwater Civil Engineer)

6. Rationale for choosing BMP and setting measurable goal(s):

The City of Gainesville shall conduct enforcement activities when violations of the Erosion Sedimentation and Pollution Control Ordinance are identified. These enforcement actions will allow identified violations to be resolved. Enforcement activities provide incentives to property owners and businesses to adhere to city codes and ordinances.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will determine this element has been effective by ensuring a timely and thorough enforcement process is conducted.

Enforcement Procedures

For a first and second violation, stop-work orders may be issued if the violation has not been corrected within 5 days of the issuance of a written warning to the violator. The City may also issue a stop-work order immediately if the violation presents an imminent threat to public health or waters of the state or if the land-disturbing activities are being conducted without the necessary permits. A third, and each subsequent violation, may result in an immediate stop-work order. Any person commencing land-disturbing activities without obtaining the appropriate permits shall be subject to revocation of their business license, work permit, or other authorization for business conducted within the City.

Any person found to be in violation of the article, or any permit condition or limitation established, or any failure to comply with any final emergency order of the City or the GAEPD director, shall be liable for a civil penalty not to exceed \$2,500 per day for each violation. The municipal court of the City shall be authorized to impose this penalty for each day of violation or refusal to comply. Further specifics regarding enforcement activities can be found in the Enforcement Response Plan ([Appendix A](#)).

E. BMP #5 – Complaint Response

1. Description of BMP:
Procedures have been developed which outline appropriate actions and responses to complaints, investigations, and implementation of corrective actions when necessary to eliminate any violations.
2. Measurable goal(s):
The City will implement the E&S complaint response procedures contained in the SWMP. The City will provide information on complaints received and investigated during the reporting period including complaint date, type of complaint and complaint status in each annual report.
3. Documentation to be submitted with each annual report:
A summary of complaints and a detailed description of each incident will be provided in each annual report. Details will include at least the complaint date, type of complaint, complaint status, and a description of any other notable observations or activities.
4. Schedule:
 - a. Interim milestone dates (if applicable): n/a
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
A response to complaints will be completed as each is received.
 - d. Month/Year of each action (if applicable): 2018-2022
5. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer) and John Guth (Senior Erosion and Sediment Control Inspector)
6. Rationale for choosing BMP and setting measurable goal(s):
Developing procedures to manage complaints provided by either citizens or municipal employees provides an opportunity to address violations as they occur. The procedures outlined below will enable the City of Gainesville to complete follow up on complaints as quickly as possible to ensure minimal adverse water quality effects.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:
This BMP will be determined to be effective if the procedures allow for complaints to be received and resolved efficiently where applicable.

Complaint Response Procedures

When a complaint is received it will be followed up with within three business days. The response time will be as soon as possible but based on the severity of the problem. If the complaint is deemed to be an emergency, follow up will be completed immediately. Any steps taken to investigate the complaint or follow up actions completed will be documented on an Erosion and Sedimentation Complaint Form. ([attachment 4.3](#)). If it is deemed that a person engaged in land-disturbing activities has failed to comply with the approved plan, with permit conditions, or with provisions of article 9-14, a verbal warning and/or a written notice to comply shall be served upon that person. When required any additional enforcement actions will be completed in accordance with the Enforcement Response Plan ([Appendix A](#)).

F. BMP #6 – Certification

1. Description of BMP:

The City of Gainesville ensures that municipal employees and other individuals involved in land development, design, review, permitting, construction inspection, or other land-disturbing activity are appropriately certified by the Georgia Soil and Water Conservation Commission. The training and certification requirements are dependent upon the individual's level of involvement, and pursuant to O.C.G.A. 12-7-20.

2. Measurable goal(s):

a) The City will ensure that any MS4 staff involved in construction activities subject to the Construction General Permits (CGPs) are trained and certified in accordance with the rules adopted by the Georgia Soil and Water Conservation Commission.

b) The City will provide the number and type of current certifications held by MS4 staff in each annual report.

3. Documentation to be submitted with each annual report:

The type of certification, certification number and expiration date or a copy of the certification card held by MS4 staff will be submitted in each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): n/a

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):
Certification will be updated as needed.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The City of Gainesville MS4 staff must be trained and certified in order to be involved in land development activities, design, review, permitting, construction inspection, or other activities in order to be in compliance with the rules adopted by the Georgia Soil and Water Conservation Commission.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will determine this element has been effective by ensuring all appropriate MS4 staff are certified.

MCM #5 - Post-Construction Storm Water Management in New Development and Redevelopment

A. BMP #1 – Post-Construction Legal Authority

1. Description of BMP:

Chapter 9-13-12 of the Unified Land Development code discusses minimum requirements and procedures required to reduce the effect of post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment. These requirements and procedures reflect the current Metropolitan North Georgia Water Planning District's (MNGWPD) Model Ordinance. The MNGWPD is in the process of updating the model ordinance. Due to these impending updates, the City will adopt a revised ordinance once this model has been finalized. Currently, the Georgia Stormwater Management Manual (GSMM) provides the primary guidance for the design and evaluation of stormwater management facilities within the City of Gainesville. Any future modifications to the ordinance shall be included as part of the annual report and can be found in [attachment O.4.](#)

2. Measurable goal(s):

The City will evaluate and, if necessary, modify the existing ordinance. If the ordinance is revised during the reporting period, the City will submit a copy of the adopted ordinance with the annual report.

3. Documentation to be submitted with each annual report:

Any modifications to the ordinance will be provided with the annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

The City will evaluate the ordinance, and if necessary, modify and report any modifications

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The evaluation, and potential modification, of the ordinance is necessary to assure post-construction stormwater management activities minimize the effect of post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will determine this BMP to be effective if the ordinance gives the legal authority to require development and redevelopment to apply the appropriate post construction standards.

B. BMP #2 - Inventory

1. Description of BMP:

The City has developed an inventory of all publicly and privately-owned post-construction storm water management structures (i.e. detention/retention ponds, water quality vaults). The inventory is updated annually and includes information on the number, type of structures, and whether the structure is publicly or privately owned. The City has chosen to include privately owned detention/retention structures that were designed prior to 2008.

2. Measurable goal(s):

The inventory will be updated, at least annually, as new structures are completed or additional existing structures are identified. The updated inventory, ownership, and the number of structures added will be provided in each annual report.

3. Documentation to be submitted with each annual report:

An inventory listing of all of the post construction stormwater management facilities including any that have been added during the reporting period will be included in each annual report.

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
The inventory will be updated at least annually.
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer), (Stormwater/MS4 Coordinator), and Jill Graham (GIS Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The development of an inventory describing various aspects of post-construction stormwater structures is necessary to accurately and efficiently inspect and ensure maintenance is conducted on these structures over time.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will consider the inventory to be effective if it allows for the location and easy tracking of post construction stormwater structures.

C. BMP #3 – Inspection Program

1. Description of BMP:

The City will conduct inspections of all post-construction stormwater management structures within the 5-year permit term. A proportion of post- construction stormwater management structures will be inspected each year to determine any maintenance requirements or other needs associated with the functionality of each structure.

2. Measurable goal(s):

Inspections will be conducted on at least 5 percent of all post-construction stormwater structures each year. 100 percent of the structures on the inventory will be inspected at least once during the 5-year permit term. Inspections will be documented and provided in each annual report.

3. Documentation to be submitted with each annual report:

The completed inspection forms will be provided with each annual report. A blank copy of the inspection form can be found in [attachment 5.1](#).

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable): Inspections will occur annually.
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Inspections of post-construction stormwater structures are necessary to assess and maintain the functionality of these structures over time. Inspections will help the City determine if the structure is functioning appropriately.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

The City will determine this BMP to be effective if 100 percent of the post construction stormwater structures are inspected during the 5-year permit term and the inspections uncover any maintenance issues that need to be addressed.

Post Construction Stormwater Inspection Procedures

1. A minimum of 5% of city and private ponds will be inspected annually, with 100% inspected within the 5-year permit period.
2. Each inspection will be documented electronically on the Stormwater Pond Inspection Sheet ([attachment 5.1](#)).
3. The pond owner will be notified in writing by the Environmental Services Manager if any maintenance and/or repairs are necessary.
4. Follow up inspections will be completed to ensure the pond was brought into compliance and the required maintenance was completed.
5. If maintenance was not completed enforcement action will be taken in accordance with the Enforcement Response Plan ([Appendix A](#)).
6. Work orders will be issued for City-owned ponds that require maintenance and/or repairs. Maintenance will be completed on public ponds where feasible.

D. BMP #4 – Maintenance Program

1. Description of BMP:

The City of Gainesville implements an operations and maintenance program that requires post construction stormwater facilities to be regularly maintained. Completed Inspection and Maintenance agreements are required for all new post construction stormwater facilities. A blank copy of the Inspection and Maintenance agreement is included in Attachment 5.2. A blank copy of the maintenance form for the public ponds in included in Attachment 5.2.B.

2. Measurable goal(s):

As part of the implementation of the operations and maintenance program for post construction stormwater structural controls, the City requires the following for compliance with this BMP:

- a) The City will implement a maintenance program for all publicly-owned post construction stormwater structures, with maintenance completed to the maximum extent practicable. A list of structures maintained and the type of maintenance will be provided in the annual report.
- b) For privately-owned stormwater facilities and publically owned by other entities (not maintained by the City), an Inspection and Maintenance Agreement will be executed by the property owner. A summary list and total number of agreements will be provided in each annual report.
- c) The City will require maintenance on privately-owned and publically owned by other entities post construction stormwater facilities built prior to December 6, 2012. A list of structures that were inspected and maintained and the type of maintenance will be included in the annual report.

3. Documentation to be submitted with each annual report:

a) A list of publically owned structures maintained, the type of maintenance completed and sample photo documentation of the completed maintenance. b) A summary list of Inspection and Maintenance Agreements and the total number of agreements. c) A list of maintenance completed on privately-owned and publically owned, by other entities, post construction facilities and the type of maintenance preformed will be provided.

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
Maintenance activities will be completed routinely and if post construction structure inspections reveal problems.

- d. Month/Year of each action (if applicable): 2018-2022
5. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer) and (Stormwater/MS4 Coordinator).
6. Rationale for choosing BMP and setting measurable goal(s):
Defining the responsibility and performing necessary maintenance on post-construction stormwater infrastructure is necessary to ensure the functionality of structures throughout the service area and will allow the City to address maintenance concerns as they arise. Responsibility for the operation and maintenance of the stormwater management facility or practice shall remain with the property owner and shall pass to any successive owner. The Inspection and Maintenance Agreements will outline the necessary activities required by the responsible party to maintain functionality of the facility or structure.
7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
These structures must operate as designed in order to reduce pollution to stormwater and improve water quality in the community. The City will determine that this BMP is effective if private and public post-construction stormwater structures are being maintained to the maximum extent practicable.

Post Construction Stormwater Maintenance Procedures

The City requires post construction stormwater structures to be maintained. All publically owned structures are inspected once a year. Routine maintenance occurs on an as needed and where feasible basis. If larger repairs are needed a work order is created and addressed based on the severity of the problem and the level of available funding. For all new ponds, and ponds built after December 6, 2012 an inspection and maintenance agreement is required to be signed during the permitting phase [Attachment 5.2](#). All privately owned and publically owned by other entities post construction stormwater facilities are required to be maintained, regardless of when they were built. The City personnel inspect all known post construction stormwater structures to ensure they are being maintained. If a privately owned and publically owned by other entities post construction stormwater facility was found to be needing maintenance a letter will be sent to the land or business owner. The owner will be given 30-90 days to complete the required maintenance. The pond will be re-inspected to ensure the maintenance has been completed. If it was not completed, the enforcement response procedures ([Appendix A](#)) may be followed.

E. BMP #5 – GI/LID Structure Inventory

1. Description of BMP:

The City maintains an inventory of Green Infrastructure/Low Impact Development (GI/LID) structures constructed within the city limits after December 6, 2012. This inventory tracks information pertaining to GI/LID structure location, type, and installation year. The inventory will include all publically owned and privately-owned non-single family residential GI/LID structures. The City will track the addition of new structures through the plan review process to ensure they are added to the inventory.

2. Measurable goal(s):

The City will track the addition of new GI/LID structures through the plan review process. The inventory will be updated at least annually to include these structures. The updated inventory will be provided in each annual report.

3. Documentation to be submitted with each annual report:

The inventory, including the total number of each type of structure, and any annual updates will be provided with each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

The GI/LID inventory will be updated at least annually.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

An updated GI/LID structure inventory will allow the City to accurately implement the future GI/LID Program including the GI/LID Inspection and Maintenance Program. It will also provide information pertaining to where future installation of structures may provide the greatest benefit.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if the inventory allows for the tracking, identification and location of where GI/LID structures are installed.

F. BMP #6 – GI/LID Program

1. Description of BMP:

The City will develop a Green Infrastructure/Low Impact Development (GI/LID) program which will describe the practices (e.g. better site planning techniques, better site design techniques) that will be implemented by the City. The program will include procedures for evaluating the feasibility and site applicability of different GI/LID techniques and practices to be considered; GI/LID structures allowed to be constructed within City limits; and the procedures for the inspection and maintenance of the GI/LID structures. The GI/LID program will be submitted to EPD by February 15, 2020 and included in [attachment 5.3](#) of the SWMP upon its completion.

2. Measurable goal(s):

- a) Develop a GI/LID program that will include which GI/LID practices can be installed in the city, better site techniques to be utilized and the inspection and maintenance procedures for GI/LID structures that have been installed. The GI/LID Program will be submitted to EPD by February 15, 2020.
- b) Implement the EPD approved GI/LID Program. Any updates will be submitted with the annual report for EPD to review.

3. Documentation to be submitted with each annual report:

Any actions taken to implement the approved GI/LID Program or any updates to the program will be documented in the annual report.

4. Schedule:

- a. Interim milestone dates (if applicable): Submit GI/LID Program to EPD by February 15, 2020
- b. Implementation date (if applicable): 2020
- c. Frequency of actions (if applicable): Update as needed
- d. Month/Year of each action (if applicable): 2020-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer), and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The creation of a GI/LID Program will allow the City to ensure that the BMPs being installed in the jurisdiction will provide adequate water quality protection in the jurisdiction. It will also establish the inspection and maintenance requirements and procedures for GI/LID structures. This will ensure that these structures are properly maintained.

7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if the GI/LID Program provides adequate guidance to determine which GI/LID structures will be allowed and how inspections and maintenance will be conducted.

G. BMP #7 – GI/LID Inspection and Maintenance Program

1. Description of BMP:

Beginning in 2020, the City of Gainesville will conduct inspections and/or ensure inspections are completed on 100 percent of the GI/LID structures in the inventory, within a five year period. These inspections will be completed in accordance with the schedule which will be submitted in the GI/LID Program. The City will conduct maintenance on publically owned GI/LID structures as needed and require privately owned and publically owned by other entities GI/LID structures to be maintained in accordance with the GI/LID Program to be completed as required in BMP#6. Any forms created for the GI/LID inspections will be included in the [attachments](#) once they are created.

2. Measurable goal(s):

Beginning in 2020, as part of the implementation of the inspection and maintenance program for GI/LID stormwater structures, the City requires the following for compliance with this BMP:

- a) The City will inspect and/or ensure inspections are completed on 100% of the GI/LID structures included in the GI/LID inventory, within a 5 year period.
- b) The City will conduct maintenance on publically owned GI/LID structures as needed. The number of structures and percentage of the total structures maintained will be provided in each annual report.
- c) Upon EPD's approval, the City will implement the maintenance procedures in accordance with the GI/LID program. For privately-owned nonresidential and publically owned by other entities GI/LID structures the city will ensure the structures are maintained as needed.

3. Documentation to be submitted with each annual report:

Documentation of any completed GI/LID inspections, the number of publically owned structures and percentage of the total structures maintained, and a list of maintenance completed on privately-owned and publically owned, by other entities, GI/LID structures will be submitted with each annual report.

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): 2020
- c. Frequency of actions (if applicable):
A percentage of inspections will be completed annually, maintenance will occur as needed.
- d. Month/Year of each action (if applicable): 2020-2022

5. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager) and (Stormwater/MS4 Coordinator)
6. Rationale for choosing BMP and setting measurable goal(s):
Inspections of GI/LID structures and maintenance is necessary to assess and maintain the functionality of these structures over time. Inspections will help the City determine if the structures are functioning appropriately. Requiring maintenance on an as need basis will help to ensure these structures continue to work as designed.
7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
This BMP will be determined to be effective if the inspections and as needed maintenance help to ensure these structures continue to function as designed.

H. BMP #8 – GI/LID Ordinance Evaluation

1. Description of BMP:

As the City of Gainesville currently has a population exceeding 10,000, the City will conduct an evaluation of existing ordinances, building codes, and other regulations that may prohibit or impede the use of GI/LID practices.

2. Measurable goal(s):

The City will continue to review and revise, where necessary, building codes, ordinances and other regulations to ensure they do not prohibit or impeded the use of GI/LID practices.

3. Documentation to be submitted with each annual report:

Documentation of any completed GI/LID evaluation worksheet and a written summary will be included in the annual report.

4. Schedule:

e. Interim milestone dates (if applicable): N/A

f. Implementation date (if applicable): Ongoing

g. Frequency of actions (if applicable):
Ordinances reviewed as needed

h. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

The evaluation, and potential modification, of the ordinances is necessary to assure that existing ordinances, building codes, and other regulations do not impede the use of GI/LID Practices.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if the ordinances are reviewed and when applicable, ordinances are updated where feasible.

MCM #6- Pollution Prevention/Good Housekeeping for Municipal Operations

A. BMP #1 – MS4 Control Structure Inventory and Map

1. Description of BMP:
The City of Gainesville's Department of Water Resources staff maintain an updated, searchable geographic information system (GIS) inventory and map of MS4 stormwater control structures. This includes storm drain lines (pipes), catch basins, ditches, and detention/retention ponds located in the City's service area. The City will update the inventory and map as new structures are added or at least on an annual basis and submit the revised number of structures and map with each annual report.
2. Measurable goal(s):
 - a) The City will update annually an inventory and map of the MS4 control structures. The inventory includes catch basins, ditches, detention/retention ponds, and storm drain lines (pipes).
 - b) The number of structures added during the reporting period and the total number of structures shall be provided in each annual report.
3. Documentation to be submitted with each annual report:
The city will provide the updated map and inventory, the number of structures added during the reporting period, and the total number of structures in each annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): Ongoing
 - c. Frequency of actions (if applicable):
Update map and inventory at least annually
 - d. Month/Year of each action (if applicable): 2018-2022
5. Person (position) responsible for overall management and implementation of the BMP:
Brian Wiley (Environmental Services Manager), Corey Jones (Stormwater Civil Engineer), Jill Graham (GIS Coordinator), and (Stormwater/MS4 Coordinator)
6. Rationale for choosing BMP and setting measurable goal(s):
Stormwater infrastructure provides the basis for controlled stormwater conveyance, and a structure inventory and map ensure that all structures can be located in a timely manner.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

The BMP will be judged to be effective if the inventory and map are updated and allow for an as needed location of stormwater structures.

B. BMP #2 - MS4 Inspection Program

1. Description of BMP:

The City of Gainesville inspects 100 percent of the stormwater structures listed in the MS4 Control Structure Inventory per 5 year period based upon the stormwater infrastructure map. Each year at least one inspection will be completed. Starting in 2018, the City will utilize an electronic system to conduct and document inspections. The updated inspection form will be included in the 2018 annual report and updated in [attachment 6.1](#). The inspection procedures and schedule can be found in [attachment 6.2](#).

2. Measurable goal(s):

The City will inspect 100 percent of the MS4 control structures per 5 year period with at least 5 percent inspected each year. The city will document the number and percentage of the structures inspected in each annual report.

3. Documentation to be submitted with each annual report:

The city will document the number and percentage of stormwater structures inspected in each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

Inspect 100 percent of stormwater structures every five years

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Malcolm Wiley (Construction Superintendent) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Inspections are necessary to ensure that all MS4 structures are fully functioning and operational.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if the inspections are conducted and problems are found for needed routine maintenance to occur.

C. BMP #3- MS4 Maintenance Program

1. Description of BMP:

The City of Gainesville will conduct maintenance on MS4 Control structures on an as needed basis utilizing an electronic work order form for documentation. This can be found in [attachment 6.2.A](#). The procedures for when maintenance will be completed are outlined in the MS4 Inspection, Maintenance, and Waste Disposal Procedures which can be found in [attachment 6.2](#).

2. Measurable goal(s):

The City will conduct maintenance on the MS4 structures as needed. The number of each type of structure maintained will be provided in each annual report.

3. Documentation to be submitted with each annual report:

The number of each type of stormwater structure maintained will be documented in each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

Maintain stormwater structures on an as needed basis.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) and Malcolm Wiley (Construction Superintendent)

6. Rationale for choosing BMP and setting measurable goal(s):

Maintenance is necessary to ensure that all MS4 structures are fully functional and operational.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if the maintenance performed helps to ensure the MS4 structures are functional and operational.

D. BMP #4 - Street and Parking Lot Cleaning Program

1. Description of BMP:

The City of Gainesville has developed a Litter Control and Street Sweeping Program for City streets and parking lots. The city utilizes a street sweeper to clean area streets on a rotating basis, with parking lots swept on an as needed basis. The city will sweep at least 1 mile a year. The city implemented procedures for how these activities will be conducted is located below.

2. Measurable goal(s):

The City conducts street and parking lot cleaning using both street sweeping and other litter removal activities such as leaf pick-up and litter removal crews. At least one mile of roads will be swept a year. Documentation of litter removal and street sweeping activities will be included in each annual report.

3. Documentation to be submitted with each annual report:

The number of miles swept and tons of debris removed each year and sample waste tickets will be recorded and reported in each subsequent annual report.

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
Actions will occur throughout the year.
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

The Public Works Department (Sanitary and Street Division(s)), (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Street sweeping and litter removal activities reduce the amount of pollutants entering receiving waters from streets and other impervious surfaces.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if the street sweeping, litter and leaf activities remove pollutants from the streets before they can enter the waterways.

Street Sweeping and Litter Removal Procedures

The City of Gainesville has developed a Street Sweeping and Litter Removal program for city streets and right of ways. A summary of the procedures utilized for the program are as follows:

The City utilizes a street sweeper to clean city streets of trash and other debris. The Equipment Operator 3 cleans the streets on a rotating basis. The streets are broken down into five different zones. (Downtown streets, Zone 1, Zone 2, the Airport and state routes.) The streets in the downtown area are swept every other week. Streets in zone 1, zone 2, the airport and state routes are swept on a rotating basis each month. Maps of the streets which are swept can be found in [attachment 6.3](#). Parking Lots are swept on an as needed basis. Any debris removed from the street is properly disposed of in accordance with the waste disposal procedures in the MS4 Inspection, Maintenance and Waste Disposal Procedures, [attachment 6.2](#).

The City implements a leaf removal program. Leaf season runs from October 1st through January 31st. Leaves during this time period are picked up along city streets, once every two weeks. A leaf truck, vacuum method is utilized. During the remainder of the year, leaves can be bagged and placed at the curb for removal. Any leaves picked up are taken to the Alta Vista Facility and composted for residential and municipal use.

The Litter Removal Program consists of two inmate crews removing litter and maintaining vegetation on multiple stretches of road throughout the City. The trash is bagged and disposed of properly in trash dumpsters at the Alta Vista Public Works facility.

E. BMP #5 - Employee Training

1. Description of BMP:

The City provides training to employees regarding pollution prevention at municipal facilities on an annual basis. This annual training activity includes, but is not limited to, a discussion of topics such as: spill response, illicit discharge detection, green infrastructure, proper disposal of waste, proper vehicle washing, good housekeeping, construction site inspections and procedures and protocols necessary to prevent and minimize the exposure of pollutants to stormwater. The City trains municipal staff in good housekeeping techniques in order to minimize the potential for stormwater pollution at each facility. Employees are trained on an annual basis and all types of training are documented with sign-up sheets.

2. Measurable goal(s):

The City of Gainesville will implement at least one training meeting each year for all appropriate staff to educate employees on the importance of controlling nonpoint source pollution to minimize water quality impacts.

3. Documentation to be submitted with each annual report:

City employee trainings will be documented with an agenda, sign-in sheets and photos of the training in each annual report.

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
At least one training activity per year
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), (Environmental Monitoring Coordinator) and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Appropriate training of municipal staff is necessary for ensuring thorough inspections of facilities and good housekeeping practices. Training provides an educational opportunity for staff to minimize any potential for stormwater pollution from municipal facilities.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

The training will be determined to be effective if it helps employees know what to do in the event of a spill and how to prevent spills before they occur.

F. BMP #6 - Waste Disposal

1. Description of BMP:

The City of Gainesville has developed a formal plan for the collection, storage and disposal of storm drain debris. A copy of the waste disposal plan and procedures is provided in [attachment 6.2](#) and is titled MS4 Inspection, Maintenance and Waste Disposal Procedures. Debris from storm drains, gutters, and other storm water infrastructure is collected either by street sweeper or dump truck and is either taken to a storage facility at the Alta Vista complex or Bradford Street. When either temporary storage facility is full, the debris is hauled by dump truck to a properly licensed disposal facility. Some leaf and limb debris is utilized as compost available to city residents.

2. Measurable goal(s):

The City of Gainesville will follow the procedures in the SWMP for the collection, storage, and disposal of storm drain debris at all times when managing waste associated with MS4 cleaning and sweeping operations. The City will track the volume of waste collected and report this in each annual report.

3. Documentation to be submitted with each annual report:

The volume of debris disposed of each year and sample waste tickets will be recorded and reported in each annual report.

4. Schedule:

- a. Interim milestone dates (if applicable): N/A
- b. Implementation date (if applicable): Ongoing
- c. Frequency of actions (if applicable):
Ongoing throughout the year as pollution prevention activities are performed.
- d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), Malcolm Wiley (Construction Superintendent)

6. Rationale for choosing BMP and setting measurable goal(s):

A formal plan for the disposal of waste from street sweeping and storm sewer cleaning activities is necessary to prevent additional water quality impacts caused by the collected waste material.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

The BMP will be determined to be effective if wastes are disposed of properly.

G. BMP #7 - New Flood Management Projects

1. Description of BMP:

During the design phase, the City of Gainesville reviews 100 percent of plans submitted for development and redevelopment, which meet the applicability standards in 9-13-12, for water quality impacts. Article 9-13 Section 12 of the Gainesville Unified Land Development Code, [attachment O.4](#), requires all water quality standards be addressed in accordance with the Georgia Stormwater Management Manual (GSMM) if 5,000 square feet or more of impervious area is created, added or replaced. New Flood Management Projects are assessed utilizing the Georgia Stormwater Management Manual Stormwater Quality Site Development Review Tool. See [Attachment 6.4A](#).

2. Measurable goal(s):

The City of Gainesville will review the water quality impacts on 100 percent of all plans for projects with greater than 5,000 square feet created, added or replaced impervious area. Documentation of the number of plans reviewed for water quality impacts shall be submitted in the annual report.

3. Documentation to be submitted with each annual report:

The number of plans reviewed for water quality impacts shall be submitted in each annual report along with a copy of a representative number of Stormwater Quality Site Development Review Tool worksheets.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

The City will review 100 percent of all plans submitted for water quality impacts for projects greater than 5000 square feet created, added or replaced impervious area.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) and Corey Jones (Stormwater Civil Engineer)

6. Rationale for choosing BMP and setting measurable goal(s):

The City of Gainesville reviews 100 percent of plans submitted for development and redevelopment for water quality impacts. A review is necessary to ensure compliance with the city's ordinance's and codes designed to protect local water resources.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be determined to be effective if all the applicable plans are reviewed for water quality impacts during the design phase.

H. BMP #8 - Existing Flood Management Projects

1. Description of BMP:

City staff will conduct assessments of existing City owned flood management projects (detention/retention ponds) to identify possible retrofitting opportunities. These retrofitting opportunities would address improving water quality impacts downstream of the structure. One structure will be assessed annually. The Water Quality Improvement Worksheet: Existing MS4 Facility form will be utilized to assess these existing structures. Attachment 6.4

2. Measurable goal(s):

The City will assess one existing publicly-maintained flood management structure annually for the purpose of potentially improving water quality. Evaluations and any completed retrofitting will be documented in each annual report.

3. Documentation to be submitted with each annual report:

The number and details of existing flood management structures assessed and the completed Water Quality Improvement Worksheet: Existing MS4 facility form along with any additional pertinent information shall be submitted in each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

Assess at least one publicly-maintained existing flood control structure annually.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager) Corey Jones (Stormwater Civil Engineer), Jarrett Nash (Distribution and Collection Systems Manager), and (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Flood management facility assessments are necessary to determine if structural modifications to existing BMPs may lead to improvements in water quality conditions.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

The BMP will be determined to be effective if any feasible water quality changes are identified during the permit term for existing flood management structures.

Existing Publically Owned Flood Management Facilities Inspection Procedures

1. One existing publically owned flood management structure will be assessed each year.
2. The assessment will be documented on the Water Quality Improvement Worksheet: Existing MS4 facility form. [attachment 6.4](#).
3. During the assessment, City staff will verify that the flood management facility is functioning properly.
4. The facility will be assessed to determine if any retrofitting activities could be conducted to improve water quality.
5. Any retrofitting activities will be evaluated and ranked based on feasibility and budget availability.
6. If any retrofitting activities are determined to be feasible, a work order or plan, when applicable, will be created.
7. Any retrofitting activities will be documented through the work order process and photos.
8. Any completed assessment and when applicable, retrofitting activities will be documented in each annual report.

I. BMP #9 - Municipal Facilities

1. Description of BMP:

The City has developed an inventory of all municipal facilities with the potential to cause pollution, Attachment 6.5, and will update the inventory during each reporting period. The City will inspect 100 percent of the municipal facilities that have the potential to cause pollution over the 5-year permit term with a minimum of 5 percent inspected annually. A blank copy of the inspection form has been provided in attachment 6.6.

2. Measurable goal(s):

a) The City has developed an inventory of municipal facilities with the potential to cause pollution. The inventory will be updated annually and submitted with each annual report.

b) The City will conduct inspections on 100 percent of the municipal facilities within the 5-year permit term with a minimum of 5 percent inspected annually. Documentation of the inspections conducted during the reporting period will be provided in each annual report.

3. Documentation to be submitted with each annual report:

The inventory will be updated annually and submitted with each annual report. Documentation of the inspections and the number and percentage of inspections completed shall be provided in each annual report.

4. Schedule:

a. Interim milestone dates (if applicable): N/A

b. Implementation date (if applicable): Ongoing

c. Frequency of actions (if applicable):

At least 5 percent of facilities will be inspected annually.

d. Month/Year of each action (if applicable): 2018-2022

5. Person (position) responsible for overall management and implementation of the BMP:

Brian Wiley (Environmental Services Manager), (Stormwater/MS4 Coordinator)

6. Rationale for choosing BMP and setting measurable goal(s):

Regular inspections of municipal sites that have the potential to cause pollution can keep water pollution to a minimum in the event of a spill or seep.

7. How you will determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:

This BMP will be seen as effective if the inspections are completed and any identified pollution issues are resolved to the maximum extent practicable.

Appendix A

Enforcement Response Plan

1. The MS4 must develop and implement an Enforcement Response Plan (ERP) that describes the action to be taken for violations of the Storm Water Management Program. The ERP must be completed and submitted with the second annual report following permit issuance, February 15, 2014.

Final completion date: 08/09/2013

Date of submittal to EPD: 08/09/2013

EPD Approval: 04/22/2014

2. In accordance with Part 4.3 of the NPDES Permit, the ERP must include escalating enforcement responses for repeat and continuing violations. At a minimum, the ERP must address the following categories (refer to Part 4.3 of the NPDES Permit for more detail):
 - Names of ordinances and citations;
 - Types of enforcement mechanisms;
 - Description of the use of these enforcement mechanisms;
 - Time frames; and
 - Description of the tracking and reporting mechanism.

Link back to [BMP #3 – IDDE Plan](#)

Link back to [BMP #5 – Complaint Response](#)

Link back to [BMP #3 – Inspection Program](#)

Link back to [BMP #4 – Enforcement Procedures](#)

Link back to [BMP #5 – Complaint Response](#)

Link back to [BMP #3 – Inspection Program](#)

Link back to [BMP #4 – Maintenance Program](#)

Appendix A - Enforcement Response Plan

The City of Gainesville was required, as part of the SWMP development, to implement an Enforcement Response Plan (ERP) which outlines procedures the City staff will follow to identify, document, and take enforcement for a violation of a local ordinance. The purpose of this ERP is to outline the actions and procedures that will be used by the City staff during instances of non-compliance. The components of the plan are outlined below with regards to the various aspects of the SWMP including the Illicit Discharge Detection and Elimination Program (IDDEP) and the Construction Site Management Program.

A.1 Definitions and Abbreviations

Accidental discharge - a discharge prohibited by this chapter into the city's separate storm sewer system, which occurs by chance and without planning or consideration prior to occurrence.

Approved stormwater discharge - a discharge of rainwater into the city's separate stormwater system approved in advance of connection by the Department of Water Resources.

City - the City of Gainesville, Georgia.

Drainage - a general term applied to the removal of surface or subsurface water from a given area either by gravity or by pumping; commonly applied herein to surface water.

Drainage system - the surface and subsurface system for the removal of water from the land, including both the natural elements of streams, marshes, swales, and ponds, whether of an intermittent or continuous nature, and the man-made element which includes culverts, ditches, channels, detention facilities, and the storm sewer system.

Illicit discharge - any direct or indirect non-stormwater discharge to the municipal separate storm sewer system, except as exempted in section 4-7-3.

Illegal connection - either of the following:

- (1) Any pipe, open channel, drain or conveyance, whether on the surface or subsurface, which allows an illicit discharge to enter the storm drain system including but not limited to any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system, regardless of whether such pipe, open channel, drain or conveyance has been previously allowed, permitted, or approved by an authorized enforcement agency; or
- (2) Any pipe, open channel, drain or conveyance connected to the municipal separate storm sewer system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Industrial stormwater permit - a national pollutant discharge elimination system (NPDES) permit issued to an industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Municipal (city's) separate storm sewer system (MS4) - any facility designed or used for collecting and/or conveying stormwater, including but not limited to any roads with drainage systems, highways, city streets, curbs, gutters, inlets, catch basins, piped storm drains, pumping facilities, structural stormwater controls, ditches, swales, natural and man-made or altered drainage channels, reservoirs, and other drainage structures, and which is not part of a publicly-owned treatment works.

Non-stormwater discharge - any discharge to the storm drain system that is not composed entirely of stormwater.

Owner - the person in who is vested the ownership, dominion, or title of property. This term shall also include a tenant, any agent of the owner, or tenant including a developer.

Person - any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of this state, any interstate body, or any other legal entity.

Pollutant - anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; petroleum hydrocarbons; automotive fluids; cooking grease; detergents (biodegradable or otherwise); degreasers; cleaning chemicals; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, dirt, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; liquid and solid wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; concrete and cement; excessive heat; and noxious or offensive matter of any kind.

Pollution - the contamination or other alteration of any water's physical, chemical or biological properties by the addition of any constituent and includes but is not limited to, a change in temperature, taste, color, turbidity, or odor of such waters, or the discharge of any liquid, gaseous, solid, radioactive, or other substance into any such waters as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety, welfare, or environment, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Premises - any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Department of Water Resources - the department of the city responsible for public utilities, development permitting, industrial pretreatment, environmental services, water conservation, stormwater and water resources.

Public Works Department - the department of the city responsible for roads, drainage, traffic, airport, sanitation, the cemetery, and engineering.

Runoff - the portion of precipitation on the land which reaches the drainage system. Also known as stormwater runoff.

Sediment - solid material, both inorganic and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, ice or gravity; the product of erosion.

State waters - any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual, partnership or corporation, as determined by the Department of Water Resources.

Stormwater management - the collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, stream bank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.

Stormwater management ordinance administrator - the Department of Water Resources of the city.

Stormwater management system - the entire set of structural and nonstructural stormwater management facilities and practices that are used to capture, convey and control the quantity and quality of the stormwater runoff from a premise.

Stream - a natural body of running water flowing continuously or intermittently in a channel on or below the surface of the ground.

Structural stormwater control - a structural stormwater management facility or device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release or the velocity of flow of such runoff.

A.2 Illicit Discharge Detection and Elimination Program

Enforcement Response Plan

A.2.1 Ordinance and Authorization

Part 3, Title 4, Chapter 4-7, of the City of Gainesville Code of Ordinances provides the legal authority for stormwater management, definitions, and a description of the appeal/penalty processes. The Ordinance was designed to meet the following goals:

- Regulate the contribution of pollutants to the MS4 by any person.
- Prohibit illicit discharges and illegal connections to the MS4.
- Require owners of stormwater management systems to maintain the system such that said system functions as originally designed
- Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the MS4.
- Establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance.

A.2.2 Identify Potential Violations

A variety of accidental and illicit violations may occur resulting in noncompliance of the permit. Scenarios for noncompliance may include:

- Illicit connection to the MS4
- Accidental or illicit discharge of a pollutant into the MS4
- Not maintaining a stormwater management system in functional and working order as originally designed and constructed

Each of these scenarios constitutes a violation of the permit and must be corrected immediately. A discharge to the MS4 may be comprised of a variety of pollutants including but not limited to paints, solvents, pathogens, nutrients, detergents, fluoride, metals, sewage, automotive fluids, pesticides/herbicides, fertilizers, or other potential water quality pollutants.

A.2.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the city are consistent with the provisions of Section 4-7-9 of the city ordinance.

A.2.3.1 Enforcement Actions

The process described below should be considered a progressive guideline that should be followed to the extent practicable. Public safety and welfare along with environmental protection will be the first priority in all situations and any enforcement mechanisms shall be escalated as necessary in order to mitigate potential damages.

A.2.3.1.1 Step 1 – Discovery and Notice of Violation

Whenever the city finds that a violation of Chapter 4-7 has occurred, the city may order compliance by written notice of violation.

- (1) The notice of violation contains:
 - a) The name and address of the alleged violator;

- b) The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred;
 - c) A statement specifying the nature of the violation;
 - d) A description of the remedial measures necessary to restore compliance with this chapter and a time schedule for the completion of such remedial action;
 - e) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed; and
 - f) A statement that the determination of violation may be appealed by filing a written notice of appeal within 30 days of service of notice of violation.
- (2) The notice of violation may require:
- a) The performance of monitoring, analyses, and reporting;
 - b) The elimination of illicit discharges and illegal connections;
 - c) That violating discharges, practices, or operations shall cease and desist;
 - d) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
 - e) Payment of costs to cover administrative and abatement costs; and
 - f) The implementation of pollution prevention practices.

A.2.3.1.2 Step 2 – Appeal of Notice of Violation

Any notice of violation may be appealed. The notice of appeal must be received in writing by the city clerk's office within 30 days from the date of the notice of violation. Hearing on the appeal before the city's administrative hearing officer must take place within 30 days from the date of receipt of the notice of appeal. The decision of the administrative hearing officer is final.

A.2.3.1.3 Step 3 – Enforcement and Penalties

Any person violating the provisions of the chapter may be subject to the following penalties:

- If the violation has not been corrected according to the requirements listed in the notice of violation, or, in the event of an appeal, within 30 days of the decision of the administrative hearing officer upholding the decision of the city, then representatives of the city may enter upon the private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property.
- Within 30 days after abatement of the violation, the owner of the property will be notified of the cost to the city of the abatement, including administrative costs. If the amount due is not paid within 30 days after receipt of the notice or within 30 days after a decision on an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. The property owner may file a written protest objecting to the assessment or to the amount of the assessment within thirty days of the notice.
- Failure to take the remedial measures set forth in the notice of violation within 30 days, or such greater period as the city deems appropriate, may result in a penalty not to exceed \$1,000 (depending on the severity of the violation) for each day the violation remains un-remedied after receipt of the notice of violation.
- Intentional and flagrant violations may result in citations requiring the violator to appear in the municipal court of the city to answer charges for such violation. Upon conviction, such person shall

be punished by a fine not to exceed \$1,000 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

- The city may recover attorney's fees, court costs, and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses.

A.2.4 Appropriate Responses and Time Frames

If the violation creates an immediate danger to public health or public safety, the city is authorized to enter the private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. If the violation involves the release of hazardous materials, emergency response agencies and/or other appropriate agencies shall be immediately notified. Once the city has been notified of a violation, the city shall contact the violator/property owner immediately or within 24 hours. The violator/property owner shall be notified to take steps to immediately stop any ongoing violation and ensure that such a violation will not again occur. For a washing machine line not connected properly, the City will contact Hall County Environmental Health Department immediately and will conduct a follow-up inspection after 30 days of notification. For septic tank failures, the City will contact Hall County Environmental Health Department immediately and will conduct a follow-up inspection after 30 days of the notification. If a septic tank system is discharging into state waters, the City will contact the property owner immediately and allow 15 days for correction with the possibilities of citations if cleanup/repair is not performed. A follow-up inspection of the septic tank system will be conducted after the 15 day time frame. For sanitary sewer overflows, the owner is contacted immediately and cleanup/corrective activities will begin immediately. The City will follow GAEPD major and minor spill requirements and follow up daily for the next 7 days. For discharging of pollutants (e.g. soapy runoff, motor oil) the owner is contacted immediately to stop the discharge. A written warning is issued immediately and cleanup activities are required to be conducted immediately upon receiving a warning. The City will conduct a follow-up inspection the next day to check progress. Appeals shall follow the timeframes outlined in Section 4-7-9 of the ordinance.

A.2.5 Tracking

The City of Gainesville Department of Water Resources will maintain an electronic inventory of all stormwater structural controls and conveyance features within the service area. The City will continue to track information pertaining to any storm water violations or other instances of noncompliance. A record of all actions is necessary to determine a violator's compliance history. The following items will be included in the annual report submitted to GAEPD:

- Name of owner/operator of facility and/or the location or address
- Type of site (IDDE, Construction, etc.)
- Description of noncompliance
- Description of enforcement action(s) used
- Time frames for each step (investigation, corrective action, re-inspection, etc.)
- Documentation of inspection and enforcement actions taken
- Documentation of referral to other departments or agencies
- Date of violation resolution

Noncompliance information related to the Illicit Discharge Detection and Elimination Program will be tracked throughout the year using the Environmental Complaint Form and this information will be transferred into the annual report and submitted to GAEPD.

If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years. Said person shall also take immediate steps to ensure no recurrence of the discharge or spill.

A.3 Construction Site Activity Enforcement Response Plan

Any person subject to a NPDES stormwater discharge permit associated with construction site activity shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the city prior to allowing discharges to the city's separate storm sewer system.

A.3.1 Ordinances and Authorization

In addition to stipulations covered within the stormwater management ordinance (Part 3, Title 4, Chapter 4-7 of the Gainesville Municipal Code), construction site activity is subject to requirements and provisions within Article 9-14 of the Unified Land Development Code covering soil erosion, sedimentation and pollution control. This ordinance was designed to prevent or control erosion, sedimentation and pollution during all stages of land disturbing activity through the use of various minimum requirements and best management practices.

A.3.2 Enforcement Mechanisms

The City shall periodically inspect all sites of land-disturbing activities for which permits have been issued to determine if activities are being conducted in accordance with the plan and if the measures required in the plan are effective in controlling erosion and sedimentation. If it is deemed that a person engaged in land-disturbing activities has failed to comply with the approved plan, with permit conditions, or with provisions of article 9-14, a written notice to comply shall be served upon that person.

A.3.2.1 Penalties and Incentives

If it is determined that a person engaged in land-disturbing activities has failed to comply with the approved plan, a written notice to comply shall be served upon that person. The notice shall set forth necessary measures to achieve compliance with the plan and shall state the time within which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of article 9-14 and, in addition to other penalties, may be deemed to have forfeited his performance bond for erosion, sedimentation and pollution control, if required to post one. The city may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance.

If a person commences land-disturbing activities without first obtaining a permit, the person shall be subject to revocation of his business license, work permit or other authorization for the conduct of a business and associated work activities within the city.

A.3.2.2 Stop Work Order

For the first and second violations of the provisions of article 9-14, the GAEPD director or the City shall issue a written warning to the violator. The violator shall have five (5) days to correct the violation. If the violation is not corrected within five (5) days, the GAEPD director or the city may issue a stop-work order requiring that land-disturbing activities be stopped until necessary corrective action or mitigation has occurred; provided, however, that, if the violation presents an imminent threat to public health or waters of the state or if the land-disturbing activities are conducted without obtaining the necessary permit, the GAEPD director or the City may issue an immediate stop-work order in lieu of a warning.

For a third and each subsequent violation, the GAEPD director or the City may issue an immediate stop-work order. All stop-work orders are to be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred.

A.3.2.3 Penalties

Any person who violates any provision of article 9-14, or any permit condition or limitation established pursuant to the article, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the city or the EPD director issued as provided in the article shall be liable for a civil penalty not to exceed two thousand five hundred dollars (\$2,500.00) per day. For the purpose of enforcing the provisions of article 9-14, notwithstanding any provisions in any City Charter or ordinance to the contrary, the municipal court of the city shall be authorized to impose a penalty not to exceed two thousand five hundred dollars (\$2,500.00) for each

violation. Notwithstanding any limitation of law as to penalties which can be assessed for violations, each day during which violation or failure or refusal to comply continues shall be a separate violation.

A.3.3 Appropriate Responses and Time Frames

For the first and second violations of the provisions of article 9-14, the GAEPD director or the City shall issue a written warning to the violator. The violator shall have five (5) days to correct the violation. If the violation is not corrected within five (5) days, the GAEPD director or the city may issue a stop-work order requiring that land-disturbing activities be stopped until necessary corrective action or mitigation has occurred. If the violation creates an immediate danger to public health or public safety, the city is authorized to enter the construction site, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. If the violation involves the release of hazardous materials, emergency response agencies and/or other appropriate agencies shall be immediately notified.

A.3.4 Tracking

The City of Gainesville will maintain an electronic inventory of all inspections and enforcement actions of land-disturbing activities within the service area. The City will continue to track information pertaining to any storm water violations or other instances of noncompliance. Tracking information shall be submitted to GAEPD, including information regarding MS4 inspections and violations, on an annual basis. The following items will be included in the annual report submitted to GAEPD:

- Name of owner/operator of facility and/or the location or address
- Type of site (IDDE, Construction, etc.)
- Description of noncompliance
- Description of enforcement action(s) used
- Time frames for each step (investigation, corrective action, re-inspection, etc.)
- Documentation of inspection and enforcement actions taken
- Documentation of referral to other departments or agencies
- Date of violation resolution

Noncompliance information related to storm water runoff at construction sites will be tracked throughout the year using site field inspection summaries and this information will be transferred into the annual report and submitted to GAEPD.

A.4 Post-Construction Enforcement Response Plan

A.4.1 Ordinance and Authorization

The Unified Land Development Code Section 9-13-12-14 requires private parties to maintain their stormwater management facilities. It states, “Maintenance by private parties. *On all commercial sites and on residential property where stormwater management facilities exist, the maintenance is the responsibility of the owner or operator of the property. It shall be the responsibility of the owner or operator to repair deficiencies in a timely manner.*”

A.4.2 Identify Potential Violations

Potential violations can be documented during the annual post-construction stormwater BMP inspections. Scenarios for noncompliance may include:

- Overgrown vegetation
- Erosion or siltation
- Failing Structures
- Not maintaining a stormwater management system in functional and working order as originally designed and constructed

Each of these scenarios constitutes a violation of the code and must be corrected in a timely manner.

A.4.3 Enforcement Mechanisms

This section describes the enforcement mechanisms available to the city.

A.4.3.1 Enforcement Actions

The process described below should be considered a progressive guideline that should be followed to the extent practicable. Public safety and welfare along with environmental protection will be the first priority in all situations and any enforcement mechanisms shall be escalated as necessary in order to mitigate potential damages.

A.4.3.1.1 Step 1 – Discovery and Notice of Violation

Whenever the city finds that a violation of Chapter 9-13-12 has occurred, the city may order compliance by written notice. The initial notice will detail the deficiencies and give 30 to 90 days for the post construction structure to be brought into compliance.

A.4.3.1.2 Step 2 – Appeal of Notice of Violation

Any notice of violation may be appealed. The notice of appeal must be received in writing by the city clerk's office within 30 days from the date of the notice of violation. Hearing on the appeal before the city's administrative hearing officer must take place within 30 days from the date of receipt of the notice of appeal. The decision of the administrative hearing officer is final.

A.4.3.1.3 Enforcement and Penalties

Any person violating the provisions of the chapter may be subject to the following penalties:

- If the violation has not been corrected according to the requirements listed in the written notice, or, in the event of an appeal, within 30 days of the decision of the administrative hearing officer upholding the decision of the city, then representatives of the city may enter upon the private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property.

- Within 30 days after abatement of the violation, the owner of the property will be notified of the cost to the city of the abatement, including administrative costs. If the amount due is not paid within 30 days after receipt of the notice or within 30 days after a decision on an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. The property owner may file a written protest objecting to the assessment or to the amount of the assessment within thirty days of the notice.
- Failure to take the remedial measures set forth in the notice of violation within 30 days, or such greater period as the city deems appropriate, may result in a penalty not to exceed \$1,000 (depending on the severity of the violation) for each day the violation remains un-remedied after receipt of the notice of violation.
- Intentional and flagrant violations may result in citations requiring the violator to appear in the municipal court of the city to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed \$1,000 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.
- The city may recover attorney's fees, court costs, and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses.

A.4.4 Appropriate Responses and Time Frames

If the violation creates an immediate danger to public health or public safety, the city is authorized to enter the private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. If the violation is not corrected in the 30-90 day time frame a second letter will be sent giving a 14 day extension. If the violation is not remedied City of Gainesville Code Enforcement will implement the escalating actions found in A.4.3.1.3

A.4.5 Tracking

The City of Gainesville Department of Water Resources will maintain an electronic inventory of all stormwater structural controls and conveyance features within the service area and electronically track inspections and follow up.

Appendix B

Impaired Waters

1. Population based on the 2010 U.S. Census: 33,804

If the population is less than 10,000, then see items #2 and #3 below.

If the population exceeds 10,000, then see items #4 and #5 below.

2. If the population is less than 10,000, then the MS4 must develop an Impaired Waters Plan (see Part 4.4.1 of the NPDES Permit) including:
 - A list of impaired waters and the pollutant(s) of concern;
 - A map showing the location of the impaired waters and all identified MS4 outfalls located on the impaired waters or occurring within one linear mile upstream of the waters;
 - BMPs that will be implemented to address each pollutant of concern; and
 - A schedule for implementing the BMPs.
3. The Impaired Waters Plan must be submitted with the annual report due February 15, 2015.

Final completion date/date of submittal to EPD: N/A

4. If the population exceeds 10,000, then the MS4 must develop an Impaired Waters Plan/Monitoring and Implementation Plan (see Part 4.4.2 of the NPDES Permit) including:
 - A list of impaired waters and the pollutant(s) of concern.
 - A Monitoring and Implementation Plan, that includes:
 - a. Sample location;
 - b. Sample type, frequency, and seasonal considerations;
 - c. Monitoring implementation schedule;
 - d. A map showing the location of the impaired waters and all identified MS4 outfalls located on the impaired waters or occurring within one linear mile upstream of the waters or a schedule for confirming those outfalls; and
 - e. Description of proposed BMPs.
 - Description of the method used to annually assess data trends for each pollutant of concern.

5. The Impaired Waters Plan/Monitoring and Implementation Plan must be submitted with the annual report due February 15, 2015.

Final completion date/date of submittal to EPD:

08/09/2013

Updated:

January 2019

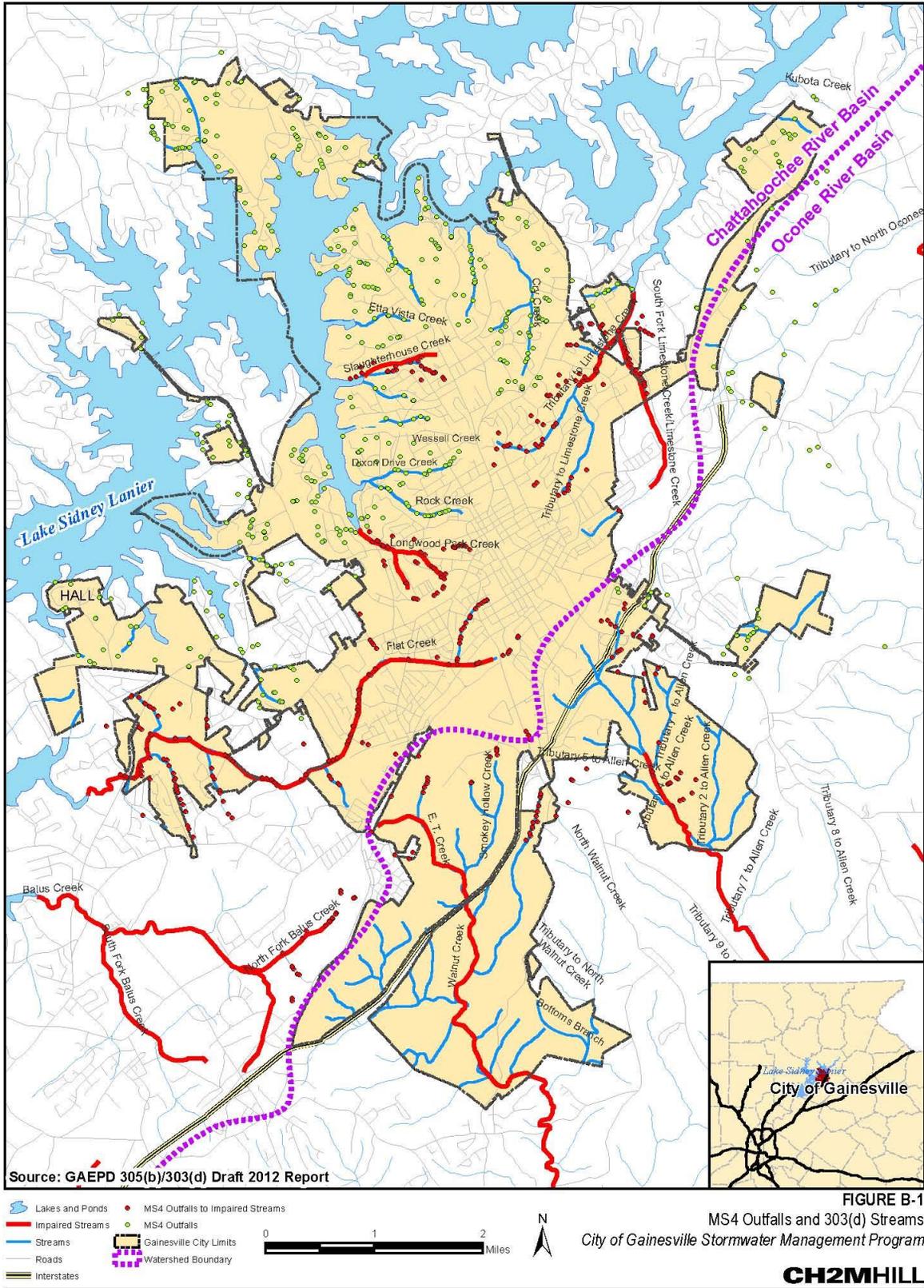
Appendix B - Impaired Waters Monitoring and Implementation Plan

B.1 Identifying Impaired Waters

GAEPD identifies stream segments in Georgia's Integrated 305(b)/303(d) report in accordance with Section 305(b) of the Clean Water Act. Section 305(b) requires states to monitor and report water quality conditions biannually. The 305(b)/303(d) Report provides an assessment of surface water quality by listing streams as either "supporting" or "not supporting" a designated use and, for waters not supporting a designated use, identifying the criterion exceeded and potential causes of impairment. The 305(b)/303(d) Report places waters into one of five categories, which indicate the development status of a TMDL by GAEPD. A TMDL is the amount of a pollutant which can be introduced to a stream without causing the stream to violate its designated use.

Table B-1 summarizes the City of Gainesville streams identified as not supporting the referenced designated use, based on Georgia's 2016 Integrated 305(b)/303(d) Report, and the stream segments are shown in Figure B-1 (GAEPD, 2012*). Of the twelve stream segments on the report, five are listed for violating State biological standards, including North Oconee River and Walnut Creek for impacted benthic macroinvertebrate communities and Flat Creek, South Fork Limestone Creek--Limestone Creek, and a Tributary to Limestone Creek for an impacted fish community. TMDLs have been developed for these segments, with sediment as the targeted pollutant for impaired fish and macroinvertebrates. In the City of Gainesville, the 2016 Integrated 305(b)/303(d) List did not add or remove any stream segments. In the City of Gainesville jurisdiction, nine stream segments are listed for violating fecal coliform standards due to nonpoint sources of pollution and/or urban runoff. TMDL limits have been developed for fecal coliform in each of these stream segments.

For the stream segments on the 303(d) list, the U.S. Clean Water Act requires a TMDL be developed for each pollutant. GAEPD is in charge of developing segment-specific TMDLs, or the maximum amount of a pollutant which can be introduced to a stream without causing it to not meet a designated use. TMDLs estimate the sum of the individual waste load allocations from point sources, waste load allocations from stormwater runoff associated with MS4s, and load allocations from nonpoint sources, as well as natural background (40 CFR 130.2) for a given water body. The TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving water body. TMDLs have been developed for all of the City of Gainesville stream segments on the 303(d) List. Table B-1 summarizes TMDLs developed for the City of Gainesville impaired streams.



*There were no changes between the stream segments identified in the GA EPD 2012 305(b)/303(d) list and the 2016 305(b)/303(d) list. Thus the maps in figures B-1 and B-2 referencing the 2012 data are still valid and no changes need to be made to the data.

TABLE B-1

Streams Listed as “Not Supporting” Designated Use*City of Gainesville Stormwater Management Program*

Stream Name	Location	Water Use Classification	Criterion Violated ^a	Evaluated Causes ^b	Stream Miles ^c	Category ^d	Notes
Chattahoochee River Basin							
Balus Creek	Headwaters to Lake Lanier (Gainesville)	Fishing	FC	UR	3	4a	TMDL completed FC 2003.
Flat Creek	Headwaters, Gainesville to Lake Lanier	Fishing	FC, Bio F	UR	6	4a	TMDL completed FC 2003. TMDL completed Bio (F) 2008.
Longwood Park Creek	Tributary to Lake Lanier (Gainesville)	Fishing	FC	UR	1	4a	TMDL completed FC 1998.
North Fork Balus Creek	Headwaters to Balus Creek (Gainesville)	Fishing	FC	UR	2	4a	TMDL completed FC 2003.
Slaughterhouse Creek	Tributary to Lake Lanier (Gainesville)	Fishing	FC	UR	1	4a	TMDL completed FC 1998.
South Fork Balus Creek	Headwaters to Balus Creek (Gainesville)	Fishing	FC	UR	2	4a	TMDL completed FC 2003.
South Fork Limestone Creek / Limestone Creek	Headwaters to Limestone Creek Arm of Lake Lanier	Fishing	FC, Bio F	UR, NP	2	4a	TMDL completed FC 1998. TMDL completed Bio (F) 2008.
Tributary to Limestone Creek	Brenau Lake to Limestone Creek	Fishing	Bio F	UR, NP	1	4a	TMDL completed Bio (F) 2008. TMDL completed FC 1998.
Oconee River Basin							
Allen Creek	Monroe Drive to 1 mi. downstream Ga. Hwy 11, Gainesville	Fishing	FC	UR	9	4a	TMDL completed FC (2002 & 2007).
E. T. Creek	Headwaters to North Walnut Creek, Gainesville	Fishing	FC	UR	1	4a	TMDL completed FC (1998 & 2007).
North Oconee River	Headwaters to Buffington Mill Creek	Fishing, Drinking Water	Bio M	NP	16	4a	TMDL completed Bio (M) 2002.
Walnut Creek	Headwaters to Caney Fork Creek	Fishing	Bio M	NP	10	4a	TMDL completed Bio (M) 2002.

Source: Georgia Environmental Protection Division (GAEPD). 2014 Georgia Integrated 305(b)/303(d) List of Streams.

^a FC = fecal coliform bacteria, Bio F = impacted biota (fish community); Bio M = impacted biota (macroinvertebrate community)^b UR = urban runoff/urban effects; NP = nonpoint sources/unknown sources^c Total length of stream miles impaired; not limited to City jurisdiction^d Category 4a indicates that a TMDL has been developed for parameter violated

B.2 Monitoring Plan

The City of Gainesville submits all water quality and biological data collected to GAEPD in its Phase II MS4 Annual Reports and WPP Annual Reports. Additionally, if improvements in water quality or biological communities are observed, the City will develop a revised Sampling Quality Assurance Plan as required to remove the stream from the 303(d) List. Where appropriate, the City will submit data biannually to GAEPD to be used for delisting stream segments for the 303(d) List.

The City's Environmental Monitoring Plan (EMP) was originally established as a result of the 2000 WAMP (CH2M HILL, 2000) to provide a plan for monitoring both water quality and biotic communities in City streams and to evaluate the effectiveness of the WAMP. The current EMP includes four primary components and is an update to the original plan, based on analysis and recommendations from the 2006 WPP, as well as Metropolitan North Georgia Water Planning District (MNGWPD) updates that have occurred since 2006. The City uses data collected in accordance with the EMP to document impairment and/or improvement in the streams, identify priority watersheds, and provide additional information for future calibration and validation of water quality models. Department of Water Resources staff complete internal quarterly reports for continuous review of data to address any potential water quality violations.

B.2.1 Short-term Water Quality Studies

The objectives of short-term water quality studies conducted by the City are to determine the effectiveness of BMPs, confirm the 303(d) listings, identify streams needing further action, and locate sources of water quality impairment in the watershed. Since the implementation of the EMP, a number of short-term water quality studies have been initiated and/or completed, including:

- Beginning in August 2009, the City has been monitoring the Cedar Creek reservoir and conducting monthly visual inspections to develop baseline conditions for water withdrawal.
- Continuous collection of quarterly erosion data from one location on Flat Creek, Balus Creek, and Limestone Creek has occurred since 2005. These data are utilized to quantify the rates of bank erosion at these locations.
- Biological sampling is being conducted biennially at two sampling stations on Flat Creek to monitor improvements that may result from stream restoration projects identified in the Flat Creek WIP (CH2M HILL, 2008a) and ERR (CH2M HILL, 2008b).

The short-term water quality studies have been essential in managing the City of Gainesville watersheds and in collecting important information for the adaptive watershed management approach being used by the City.

B.2.2 Long-term Ambient Water Quality Monitoring

The City of Gainesville understands that long-term monitoring of 303(d) listed streams is essential to tracking future changes in water quality, early detection of infrastructure maintenance issues, and the long-term goal of meeting the water's designated use. The City updates the EMP, as needed, to include monitoring of all 303(d)-listed stream segments for the parameters of concern, as well as to incorporate any changes to regulatory guidelines. The goals of the EMP are consistent with the GAEPD's position that all jurisdictions should implement effective nonpoint source programs to achieve and maintain beneficial uses of its State-regulated waters.

Long-term ambient water quality monitoring has been conducted at five stations on an approximately monthly basis since January 1, 2001, and a sixth site (NOH-8) was added in 2003 per an agreement to provide sewer services in this area of Hall County (Figure B-2). Samples are collected upstream of bridge-crossings at locations detailed in Table B-2. The City's long-term monitoring stations and additional stations monitored throughout the year are summarized in Table B-2. Sampling locations are located downstream of the City's outfalls in order to provide information on potential illicit discharges or illegal connections to the MS4. The following parameters are monitored at the six long-term sampling stations:

- Fecal coliform
- Total dissolved solids (TSS)
- Total phosphorus (TP)

- Total organic carbon (TOC)
- Nitrate-nitrite (NO3-NO2)
- Dissolved oxygen (DO), temperature, conductivity, pH, and turbidity

The City added stormwater sampling to its long-term monitoring program in 2007, as part of MNGWPD’s stormwater monitoring program. The City measures the following parameters as part of its stormwater sampling program:

- *Escherichia coli* (*E. coli*),
- Biological oxygen demand (BOD)
- Chemical oxygen demand (COD)
- Total Kjeldahl nitrogen (TKN)
- Ammonia (NH₃),
- Hardness
- Total dissolved solids (TDS)
- Phosphate (PO₄)
- Dissolved and total cadmium, copper, lead, and zinc

TABLE B-2
Sampling Station Locations, Selection Rationale, and Type
City of Gainesville Stormwater Management Plan

Station Location	Bacteria ^a	Long-term Water Quality ^b	Biota ^c
Balus Creek at Old Flowery Branch Rd	X	X	X
Cry Creek at Right-of-Way off Burns and Habersham	X		X
Flat Creek at Hilton Drive	X	X	X
Flat Creek at McEver Road	X	X	X
Flat Creek at Dorsey Street			X
Flat Creek at Kenwood Drive			X
Limestone Creek at Limestone Parkway	X	X	X
North Oconee off Bryant-Quarter Road (near County line)	X	X	
Longwood Park Creek at Pearl Nix Parkway	X	X	X
Allen Creek	X		
Slaughterhouse Creek	X		
E.T. Creek	X		
Valley Creek	X		
Smokey Hollow	X		
Kubota Creek	X		
North Walnut Creek	X		
Rock Creek	X		

^a Sampled for in situ and bacteriological parameters
^b Sampled for in situ and chemical parameters
^c Sampled for fish, benthic macroinvertebrates, and physical habitat

B.2.3 Biological Monitoring

The City of Gainesville conducts biological monitoring on a biennial basis in accordance with the MNGWPD’s 2017 Water Resources Management Plan, the City’s wastewater permits (through the Watershed Assessment and Management Plan), and the 303(d) listings for affected biota. The City uses biological data to analyze trends in aquatic communities over time and to identify streams in which the biota is qualified as affected. Biological

monitoring, including assessments of physical habitat and fish and benthic macroinvertebrate communities, is conducted in eight stream segments, including those listed as having impacted biota (Table B-2, Figure B-2). Two short-term sampling stations on Flat Creek, FLG-A and FLG-B, were added in 2007 as part of the focused study for the Flat Creek WIP. In 2009, FLG-B was relocated (and renamed FLG-C) to more accurately assess the changes that may result from the Flat Creek stream restoration. Biological monitoring is important in assessing the overall ecological health of a watershed and will become more important as GAEPD develops de-listing criteria for biological parameters. Benthic macroinvertebrate sampling is conducted biennially between mid-September and February in order to sample during the biologically optimal sampling season. Fish sampling is conducted biennially between the months of April and mid-October when water levels are at their lowest, fish populations are at their most stable, and pollution stresses are potentially at their greatest.

B.3 Implementation Plans

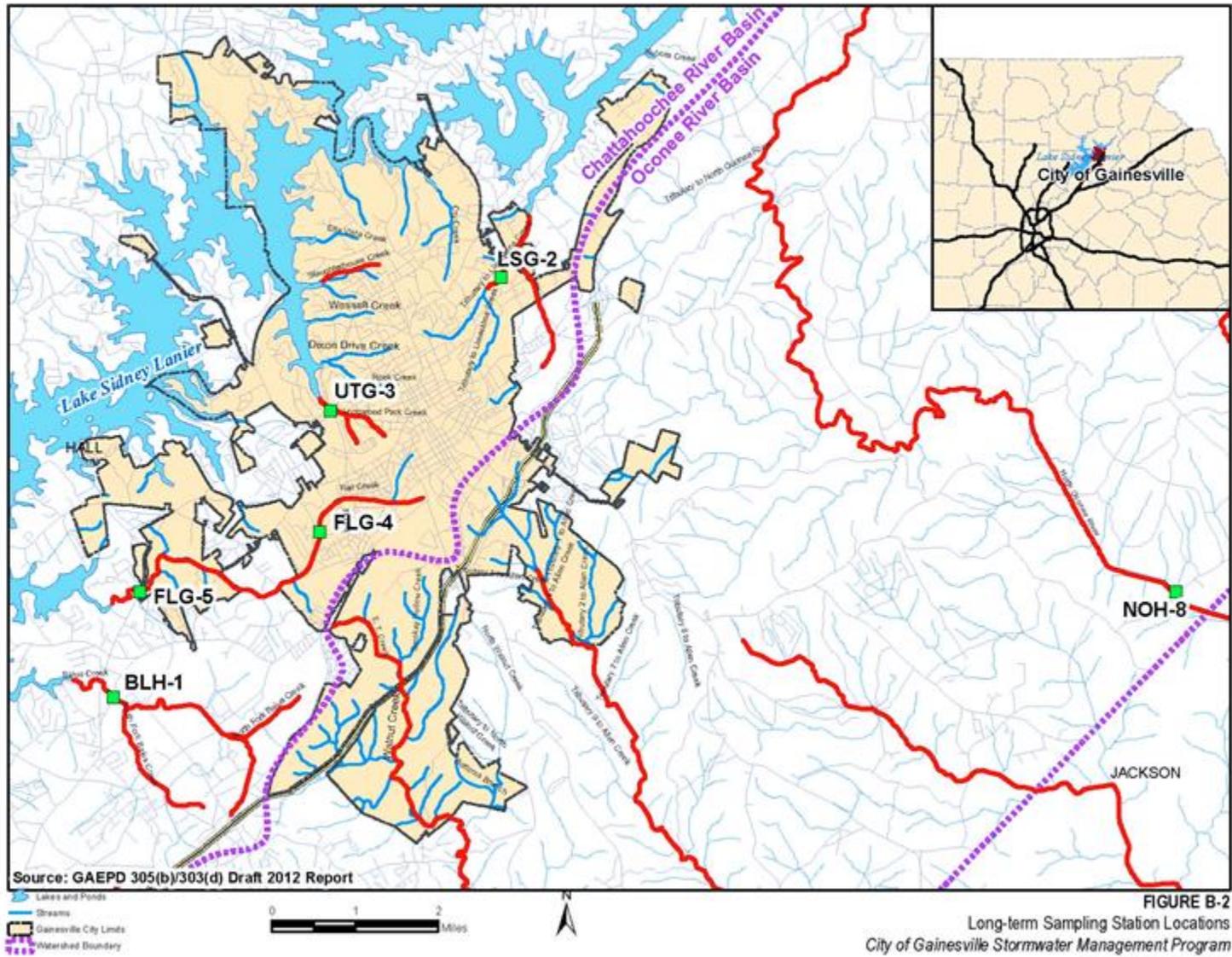
For each segment-specific TMDL developed, a corresponding TMDL Implementation Plan is required. The TMDL Implementation Plan outlines the steps to be taken to restore listed segments to their designated use. As of June 2011, fifteen TMDL Implementation Plans have been developed for the City's impaired stream segments. These implementation plans are intended to outline measures to reduce or eliminate the sources of high fecal coliform or sediment, to attain water quality standards within a decade of the plan being approved. To evaluate watershed improvements resulting from TMDL Implementation Plans, GAEPD has developed a 5-year planning and assessment cycle for water quality monitoring across the State.

The City of Gainesville uses the steps outlined in the TMDL implementation plans to steer water quality protection activities in the drainage areas associated with each segment. Activities generally include public outreach activities, preventing septic system failures, wastewater facility upgrades, protective ordinance adoption, and post-development stormwater control. The activities that the City has completed are outlined in the following section.

The City of Gainesville has taken steps to ensure compliance with its Phase II MS4 permit with regard to TMDL compliance. The City understands that authorization to discharge MS4 stormwater to State waters is met through multiple environmental responsibilities, including, but not limited to, the identification of impaired stream segments within its jurisdiction, the identification of outfalls from the MS4 to these impaired streams, the creation of a monitoring plan which addresses pollutants of concern, and reporting of appropriate activities and findings to the Georgia Environmental Protection Division (GAEPD).

B.3.1 BMPs to Control and Reduce Pollutants of Concern (POCs)

As mentioned, the City of Gainesville conducts annual water quality monitoring and biennial biological monitoring of their 303(d) listed streams. During each reporting period the most current data is compared to the data from previous years and analyzed to provide a summary of the improvements and/ or degradations observed since the last reporting period and to assess the effectiveness of the monitoring program. As part of the SWMP implementation, the City will continue analyzing the trends in the water quality data and will try to correlate this trend with specific BMPs to establish a measurement of their effectiveness. While the City monitors for many water chemistry parameters, special consideration is given to the 303(d) parameters of concern (POC): fecal coliform and sediment (which has been shown to have the greatest impact on biota). Table B-3 summarizes BMPs that the City implements that contribute to improvement of 303(d) listed streams. The effectiveness of these BMPs is assessed annually in the annual report submitted to EPD. Key activities/programs are discussed below.



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TABLE B-3

Summary of Watershed Implementation Activities from the WPP

City of Gainesville Stormwater Management Plan

Pollutant of Concern	Potential Pollutant Sources	BMPs
Fecal Coliform	MS4 discharges Leaks and overflows of sanitary sewers Illicit discharges of sanitary waste, and leaking septic systems Domestic animals	<p>Continuous water quality sampling and monitoring - continuous and consistent data collection has been used to establish a baseline and has provided the means to evaluate the health of the streams within the City. BMP is working appropriately</p> <p>NPDES permit compliance - monitoring NPDES permit compliance allows the City to keep track of any major upsets that may be correlated to spikes in the monitoring data. BMP is working appropriately;</p> <p>Illicit Discharge Detection and Elimination Program – no illicit discharges were identified during this reporting period. Dry-weather screenings are also useful to note the condition of the structure and field-verify outfalls listed in the GIS system. BMP is working appropriately;</p> <p>Sewer line inspections – inspections not only identify leaks but help to note the condition of the sewer system. BMP is working appropriately;</p> <p>Public education and cleanup activities – provide awareness and understanding on the actions that can cause the degradation of the City’s waterways as well as an understanding of the rules, inspections and enforcement actions. BMP is working appropriately;</p>
TSS and Nutrients	Residential and commercial runoff Infrastructure development	<p>Pre- and post-development stormwater management practices – the implementation of these practices has significantly prevented the further degradation of the City’s streams by slowing down erosion and the loss of habitat. BMP is working appropriately;</p> <p>Construction site inspections – informing the appropriate use of erosion and sedimentation controls in construction sites has prevented the intrusion of large amounts of TSS into the City’s streams. BMP is working appropriately;</p> <p>Green space preservation – the preservation of buffers and natural green space has reduced the impact of runoff. BMP is working appropriately;</p> <p>Public education and cleanup activities - provide awareness and understanding on the actions that can cause the degradation of the City’s waterways as well as an understanding of the rules, inspections and enforcement actions. BMP is working appropriately;</p> <p>Watershed improvement projects – The City plans to continue improving the areas identified in their Watershed Improvement Plan. The goals of these projects are to reduce stream erosion, improve water quality, and restore aquatic and terrestrial habitat. BMP is working appropriately;</p>

When unusually high fecal coliform concentrations are observed, the City takes steps to rule out or determine how to address BMP ineffectiveness by reviewing the following measures:

1. Rainfall duration and intensity to determine if a greater than normal pollutant build-up occurred prior to the event;
2. Upstream SSOs or sewer leaks within 2 weeks prior or following the event;
3. Targeted stream walks to identify illicit discharges, sewer leaks, failing septic systems, presence of pets/ livestock, or other influences;
4. Correlations between fecal coliform and other water quality indicators, such as conductivity, pH, DO, nutrients;

5. Review of discharge monitoring reports (DMRs) from any upstream permitted dischargers; and,
6. Review of other circumstances.

When unusually high turbidity or TSS concentrations are observed, the City takes steps to rule out or determine how to address BMP ineffectiveness by reviewing the following measures:

1. Rainfall duration and intensity to determine if a greater than normal pollutant build-up occurred prior to the event;
2. Review of construction site inspection violations;
3. Targeted construction site inspections in affected areas;
4. Targeted stream walks to identify failing stream banks, disrupted riparian buffers, or other influences to nonpoint source runoff;
5. Correlations between turbidity and TSS and fecal coliform.

B.3.2 Education and Outreach Activities

GAEPD encourages public involvement and the active participation of stakeholders in the process of improving water quality. Stakeholders can provide valuable information and data related to local watersheds and can also participate in implementing watershed management measures. The City of Gainesville has implemented an education and information program by engaging elected officials, community groups, business owners, residents and students and uses education and outreach to enhance public understanding of and participation in TMDL implementation plans. The education program includes activities such as presentations, facility tours, school activities, and utility bill inserts. MCM #1 and MCM#2 of this SWMP discuss the educational, public outreach, and public involvement activities conducted by the City and the associated BMPs and measurable goals for each category.

B.3.3 Watershed Improvement Plans

In compliance with its NPDES water and wastewater permit requirements, the City of Gainesville developed a WAMP in 2000 to establish a baseline watershed characterization, identify problem areas within the City, and outline strategies to improve and maintain water quality conditions (CH2M HILL, 2000). The WAMP and its update, the WPP (CH2M HILL, 2006), outline measures intended to improve water quality conditions and/or prevent further degradation of water quality and biotic integrity.

The Flat Creek Watershed was one of three areas identified in both the County-wide 2000 WAMP and the 2006 WPP as not currently meeting the desired level of health for reasons attributable to urban growth, such as 303(d) listings for violations due to high fecal coliform concentrations, unstable banks, and degraded stream quality. Additionally, the District classified Flat Creek as a substantially impacted watershed in 2003 due to high levels of estimated impervious cover. As a result of these reports, developing a Watershed Improvement Plan (WIP) for Flat Creek was assigned a higher priority than other watersheds in the City. Since development of the WPP, which outlined steps to be taken to protect water quality in the Flat Creek Watershed, the City developed a Flat Creek WIP (CH2M HILL, 2008a) and Ecosystem Restoration Report (ERR) (CH2M HILL, 2008b). In 2016, an updated WIP was developed (CH2M, 2016) and three additional projects in addition to two remaining projects from the 2008 Flat Creek WIP (CH2M HILL, 2008a) were identified for future restoration projects. These future projects are located along Flat Creek, Rock Creek and Longwood Park Creek. (CH2M 2016)

Following the completion of the Flat Creek WIP in 2008, the City immediately began implementing the first watershed improvement project within the Flat Creek watershed. To date, the City has completed five watershed improvement projects. The first project, called the Flat Creek Stream Restoration and Regional Stormwater Detention Facility Project Phase I, was completed in May 2010. Flat Creek Stream Restoration Phase II was completed in 2012. Phase III, located immediately upstream, was completed in 2014. The fourth watershed improvement project, Cargill to Gainesville Mill and Regional Detention

Pond, was completed on June 30, 2016 on the right fork of Flat Creek. The latest project included restoration of 2,360 linear feet of stream and retrofitting an existing fire protection pond to a regional stormwater BMP that provides retention and enhanced water quality treatment. (319 Grant Final Report) The fifth watershed improvement project was completed in 2018. The city worked with the Army Corps of Engineers to complete stream restoration and improve habitat along Flat Creek utilizing a 206 grant. The contractor over the project, Clean Water Consultants, restored 1,775 linear feet of stream. Work was done with a focus of restoring the stream channel, stabilizing banks and the planting native vegetation.

B.3.4 Sewer Line Inspections and Repairs

The City of Gainesville Department of Water Resources (including the Wastewater Collection Division of the Department of Water Resources) is responsible for inspecting and maintaining the sanitary sewer system. The following activities will continue to be implemented by the City:

- Department of Water Resources will perform right-of-way inspections on a regular basis and routine inspections for Infiltration and Inflow (I&I) in the sewer systems.
- The Department of Water Resources will conduct inspections for illicit sewer discharges during quarterly stream walks.
- The City maintains a hotline allowing citizens to report illicit discharges.

Attachment 3.1

Link back to [BMP #3 – IDDE Plan](#)

Illicit Discharge Detection and Elimination (IDDE) Plan

The City of Gainesville has created and implemented an IDDE Plan in accordance with the requirements stated in the Phase II permit section 4.2.3.3 and to meet the following objectives:

- Control illicit discharges by conducting field inspections of the Municipal Separate Storm Sewer Systems (MS4) outfalls, and identifying and eliminating the sources of non-stormwater discharges.
- Detect and eliminate illicit discharges and illegal connections to the MS4 through a program that combines education and enforcement.
- Effectively coordinate spill response and cleanup with other existing programs.

Dry Weather Screening (DWS) Procedures

The City of Gainesville Department of Water Resources staff currently inspect MS4 outfalls during dry weather to identify any potential illicit discharges or illegal connections to the MS4. Dry weather, is defined as at least 72 hours with less than .10 inch of rainfall. Environmental Specialists from the Department of Water Resources perform these screenings. The City's MS4 outfalls were fully mapped in 2006, and updates and maintenance of this inventory are ongoing. The inventory and map are maintained using a geographic information system (GIS).

MS4 outfalls are inspected throughout the municipality for signs of illicit discharges to State waters. Beginning in the second quarter of 2009, based on a recommendation from GAEPD, the City began utilizing the MNGWPD's illicit discharge detection form ([attachment 3.2](#)) instead of using stream walks to document illicit discharges. Using this method the City inspects at least 5 percent of its stormwater outfalls each year, with 100 percent inspected over the five year permit term, in compliance with the GAEPD Phase II MS4 requirements.

Any illicit connections or discharges that are detected are promptly evaluated and are addressed according to procedures outlined below and in the Enforcement Response Plan (Appendix A). If a DWS is conducted and the outfall is not found to be flowing, the appropriate form will be completed, a photo taken and the inspector will move onto inspect the next outfall.

Field Screening of Flowing Outfalls

If during DWS an outfall is observed to be discharging, the subsequent procedures will be followed.

- To document the flow and findings, the Environmental Specialist completing the inspection will complete the Field Observations and Measurements and the Water Quality Sampling sections of the Dry Weather Outfall Screening Form. When needed any tracking efforts will be noted on an Investigation Notes form. These forms will be provided in the annual report.
- The dry weather discharge is observed and any physical indicators of a potential illicit discharge are noted (visible sewage or sewage odor or any other color, odor, turbidity or floatables). Additional information regarding these indicators can be found in the Flow Observations Section below.
- Depending on the severity of the discharge, the first action is to notify the emergency services. Hazardous or toxic spills or discharges will be reported to the fire department or the emergency response system through the 911 system immediately after the discharge is discovered and no infield testing will be conducted until the appropriate authorities are present and it is deemed safe.

- If it is deemed to be non-hazardous, the discharge is tested using a calibrated field probe for pH, specific conductance, and temperature. A test kit is used to determine presence of surfactants (detergents) and fluoride. The criteria for measurements are as follows:
 - pH lower than 6.5 or higher than 7.5 standard units
 - Specific conductance greater than 300 $\mu\text{mhos/cm}$
 - Presence of fluoride
 - Presence of surfactants
- Samples will be collected for subsequent laboratory testing for fecal coliform. Samples will be run within 6 hours of sample collection according to standard EPA methods.
- Source Tracking:
 - The City has numerous outfalls that convey piped streams or have groundwater infiltration that have other infrastructure tied into the section allowing for the possibility of illicit discharges to be present. These known flowing outfalls will be tested, however if the field parameters are within the appropriate ranges, source tracking will not be conducted as the cause for the flow has previously been documented. If readings indicate a potential water quality issue in the field, source tracking will be initiated.
 - After field tests have been conducted the source of the potential illicit discharge will be tracked up the stormwater system using the procedures listed in the Source Tracking section below.
- Any illicit connections or discharges that are detected are addressed according to Source Elimination procedures outlined below and in the Enforcement Response Plan (Appendix A). If it is determined that the illicit connection or discharge is deriving from an adjacent MS4, staff will notify that MS4 and follow up and enforcement procedures will not be completed by City staff as it is within the jurisdiction of another entity.
- If it is determined to be an illicit discharge, originating from the City of Gainesville's MS4, follow up will occur to ensure the flow has been stopped.

Flow Observations

Flowing outfalls can indicate groundwater infiltration, a piped stream or pollutants from a number of illicit discharge sources such as sanitary sewer, septic tanks, sulfides and organics from industries, petroleum products from vehicle maintenance areas, food waste from residents or restaurants, sediment from construction, washwater, or others. The following is a list of observations that will be considered while conducting a field screening to indicate whether an illicit discharge is present:

Floatables: Floatables such as oil sheens, sewage, and sanitary trash found in the stormwater system will be considered evidence of a problem. If sewage and/or sanitary trash are observed, it is an indicator that a sanitary system is connected to the stormwater system; however, some floatables may occur naturally such as algae, bryozoans, pollen, and oil-like sheens may be caused by bacteria.

Odor: Strong chemical or sewage odors may indicate a potential illicit connection or discharge. If odors are detected, it is recommended to look for other indicators including floatables, water color, and/or stains inside the manhole or pipes.

Foam: The accumulations of foam in a stormwater system may indicate an illicit connection or discharge. Foam can be a natural occurrence in streams and lakes, but if the foam is concentrated around an outfall, or appears to be originating from a structure, it may be an indication of an illicit connection or discharge in that system.

Other Indicators: Other indicators, which may not be significant by themselves, include color, turbidity, the existence of stains or deposits, and the occurrence of excessive vegetation at the discharge point. If dry weather flow is not observed, other indicators will be explored to provide evidence of illicit connections or discharges. If the initial field screening indicates that no flow is present yet there is evidence of sewage waste, staining, grease deposits, or excessive plant growth, it is assumed that an illicit discharge has occurred. If needed, further investigation of the drainage system will be conducted to identify the source.

Source Tracing

Once field screening has been completed, the source of the dry weather discharge will be tracked up through the stormwater system.

- Starting with the outfall, the Environmental Specialists will attempt to track the flow up the stormwater system. The City's GIS will be utilized to determine what structures to inspect.
- Tracking a potential illicit discharge through a storm system is limited to the access points of the system. Lids to any catch basins and any exposed junction boxes will be removed, and the structures inspected to determine if flow is present.
- Investigations will continue until the source is identified or isolated between one or two stretches of pipe.
- If needed the Infiltration and Inflow (INI) group, part of the Distribution & Collection Systems Division of the Department of Water Resources, will be called to assist with the source tracking and confirmation. When needed smoke, dye or camera testing will be conducted.
- Once a source has been identified, the work will become source confirmation and elimination where applicable.
- If the source is determined to be one of the following categories of non-stormwater discharges or flows, source elimination will only be conducted if they are identified as significant contributors of pollutants to the MS4:
 - Water line flushing;
 - Landscape irrigation;
 - Diverted stream flows;
 - Rising groundwaters;
 - Uncontaminated groundwater infiltration (as defined in 40 CFR Part 35.2005(20));
 - Uncontaminated pumped groundwater;
 - Foundation drains;
 - Air conditioning condensation;
 - Springs;
 - Water from crawl space pumps;
 - Footing drains;
 - Flows from riparian habitats and wetlands;
 - and flows from firefighting activities.

Source Elimination

Once a source has been identified and determined to be an illicit discharge, not originating from an adjacent MS4, actions are taken to eliminate the discharge. The procedure necessary to address the illicit discharges varies, depending on severity, origination and nature of the event. The steps to be taken based on the identified source are listed below with the goal to stop all discharges as quickly as possible.

If the illicit discharge originates from a private source:

- If a person is located on site, the Environmental Specialists will immediately contact the person or business where the illicit discharge is originating. The person or business concerned shall take immediate steps to stop the discharge and contain, treat, or take other actions to minimize effects of the discharge on the MS4 and receiving stream. The person shall also be required to take immediate steps to prevent recurrence of the discharge.
- If a person is not on site or immediately available a phone number or contact information will be obtained and the person or business will be contacted within 24 hours.
- If a verbal warning is utilized, a follow-up inspection will take place within 3 business days of the original notification. The finding of this follow up inspection will be noted on the Investigation Notes form.
- If the discharge has not been stopped, a written warning will be issued.
- The procedures listed in the Enforcement Response Plan (Appendix A) will be followed. Including fines of up to \$1,000 per day may also be imposed if an illicit discharge is not corrected.
- Follow up procedures will be completed until the discharge is resolved.
- Note: Septic tank failures and washing machine lines will be reported and given to Hall County Environmental Health for follow up.

If the illicit discharge originates from a public source:

- City of Gainesville Water or Sewer: If the illicit discharge is from the City of Gainesville Water or Sewer system, the Distribution & Collection Systems Division of the Department of Water Resources will be notified immediately. The leak will be contained and repaired as quickly as possible. For sewer discharges, the City will follow all GAEPD major and minor spill requirements and documentation.
- Illegal Dumping: If illegal dumping has occurred in the City's MS4 and the culprit cannot be determined, the City will take all steps possible to stop the illicit discharge and clean up the material as best as possible to prevent further pollution.

Complaints

If any illicit discharges are found to be occurring through complaints, normal inspections or other means the same source tracking and elimination procedures are followed as above. The City utilizes a hotline as an additional avenue for citizens to report illicit discharges and/or illegal dumping. Information on how the hotline is publicized and utilized can be located in MCM#2 BMP#4 of the SWMP.

Tracking

The City of Gainesville Department of Water Resources staff will continue to track DWS and illicit discharge abatement with the appropriate documentation.

- DWS- Dry Weather Outfall Screening Form ([attachment 3.2](#))
- Source Tracking/Follow Up Actions: Investigative Notes Form ([attachment 3.3](#))
- Enforcement Actions: Investigative Notes Form and if needed written warnings and/or letters.
- Complaints: IDDE Hotline database and/or Environmental Complaint Form ([attachment 3.4](#))

Link back to [BMP #3 – IDDE Plan](#)

Attachment 3.2

Dry Weather Outfall Screening Form											
Name of City or County:						Data Sheet Number:					
Date of Screening: 11/20/17						Time of Screening:					
Weather conditions:											
Sampling performed by:											
Outfall Description											
Outfall Location: 3728 Maple Forge Lane						Outfall I.D. Number:					
Outfall Type/Material:						Outfall Diameter/Dimensions:					
<input type="checkbox"/> Closed Pipe (check): <input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE Other:											
<input type="checkbox"/> Open Channel (check): <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Grassy Other:											
Receiving stream and watershed name:											
Land use/industries in drainage area:											
GPS Coordinates:						Photo Numbers:					
Field Observations and Measurements											
Flow from outfall? <input type="checkbox"/> Yes <input type="checkbox"/> No				Flow Description: <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial							
<i>If no flow from outfall, the following indicators are not applicable.</i>											
Odor: <input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide (rotten eggs) <input type="checkbox"/> Petroleum/Gas <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Other:											
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Faint <input type="checkbox"/> 2-Easily Detected <input type="checkbox"/> 3-Noticable from a distance											
Color: <input type="checkbox"/> Clear <input type="checkbox"/> White <input type="checkbox"/> Gray <input type="checkbox"/> Orange/Rust <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Brown/Black <input type="checkbox"/> Other:											
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Faint <input type="checkbox"/> 2-Clearly visible in bottle <input type="checkbox"/> 3-Clearly visible in flow											
Turbidity: <input type="checkbox"/> None <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque <input type="checkbox"/> Silty <input type="checkbox"/> Muddy <input type="checkbox"/> Other:											
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Slight Cloudiness <input type="checkbox"/> 2-Cloudy <input type="checkbox"/> 3-Opaque											
Floatables: <input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:											
Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Few/slight <input type="checkbox"/> 2-Some <input type="checkbox"/> 3-Heavy											
Flow Temperature (°C):											
Flow pH:						pH meter calibrated? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Flow Conductivity (µmho/cm):						Conductivity meter calibrated? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Water Quality Sampling											
Field Test Kit Manufacturer:						Model:					
Fluoride (mg/L):						Fecal Coliform (MPN/100mL):					
Surfactants (mg/L):						Analysis Comments:					
Grab sample for lab? (fluoride/surfactants) <input type="checkbox"/> Yes <input type="checkbox"/> No						Bacteria Grab sample for lab? (fecal coliform) <input type="checkbox"/> Yes <input type="checkbox"/> No					
Grab Sample ID:						Bacteria Grab Sample ID:					
Outfall Potential for Illicit Discharge:											
<input type="checkbox"/> Unlikely - or - No Flow <input type="checkbox"/> Possible (presence of two or more indicators)											
<input type="checkbox"/> Suspect (one or more indicators with severity of 2 or 3) <input type="checkbox"/> Obvious - or - Confirmed											
NOTE: Water quality sampling (using a field test kit and/or grab samples) is required for a dry weather flow that meets any of the following criteria: Visible sewage or sewage odors; physical indicator of potential illicit discharge (color, odor, turbidity or floatables); pH lower than 6.5 or higher than 7.5; or specific conductivity greater than 300 µmho/cm.											



Attachment 3.3 Dry Weather Screening Investigative Notes Form*

Initial investigation date:	Investigator(s):
Outfall Number:	Location:
<input type="checkbox"/> No investigation made	Reason:
<input type="checkbox"/> Referred to different department/agency/jurisdiction	Department/Agency/jurisdiction:
<input type="checkbox"/> Investigated: No action or additional follow up needed	Reason:
<input type="checkbox"/> Investigated: Requires action	Descriptions of actions including dates of follow up:
Hours between discovery and investigation:	
Notification and Enforcement Action(s) (if any):	
Date case closed:	
Additional Notes:	

*Use form only when an outfall is found to be flowing during DWS. All sampling data can be found on the DWS form.

Link back to [BMP #3 – IDDE Plan](#)

Attachment 3.4

Link back to [BMP #5 – Complaint Response](#)

ENVIRONMENTAL COMPLAINT FORM											
DATE: _____											
MARK ONE: _____ COMPLAINT _____ REQUEST _____ INCIDENT OBSERVED _____											
CALLERS NAME _____						PROPERTY OWNER: _____					
PHONE NUMBER: _____						TELEPHONE NUMBER: _____					
						TENANT: _____					
ADDRESS: _____						TELEPHONE NUMBER: _____					
LOCATION/DIRECTIONS: _____											
COMPLAINT: _____											
EMPLOYEE RECEIVING CALL: _____ TIME: _____											
RESPONDING FIELD REPRESENTATIVE: _____ DATE: _____ TIME: _____											
LIST THE ACTION TAKEN AND/OR THE NAME OF THE DEPARTMENT THE COMPLAINT WAS REFERRED TO: _____											
FOLLOW-UP INVESTIGATION / DATES REVISITED / ADDITIONAL ACTION TAKEN(if needed): _____											
WAS ANY OTHER AGENCY NOTIFIED?				HEALTH DEPT. _____ DNR _____							
DATE: _____				EPD _____				HALL CO. _____			
TIME: _____											
PERSON SPOKEN TO: _____								OTHER _____			

Attachment 4.1

Link back to [BMP #2 – Site Plan Review Procedures](#)

**PLAN REVIEW CHECKLIST
FOR
STORMWATER – COMMON
DEVELOPMENTS**

Gainesville Department of Water Resources



AUGUST 2017

Project Name: _____

Plans Received: _____

Plans Reviewed: _____

Plans returned with
corrections to be made: _____

Reviewed By: _____

Comments: _____

****ORIGINAL RED-LINE COMMENTS MUST BE RETURNED WITH REVISED
PLANS FOR FINAL PLAN APPROVAL. CONTACT PLAN REVIEWEE AND
SCHEDULE APPOINTMENT FOR PLAN APPROVAL/SIGN –OFF. ****

GENERAL

- 1) _____ **Project Information:** Tax Parcel Number(s), Land Lot & District numbers, Adjoining Property Information.

- 2) _____ **Vicinity Map:** A small map, including north arrow, showing the site in relation to the surrounding area.

- 3) _____ **Owner Information:** Name, Legal Address, and Phone Number of Owner/Developer (Primary Permittee).

- 4) _____ **Contact Information:** Name and Phone Number of 24 Hour Local Contact responsible for ES&PC.

- 5) _____ **Certification Information:** Name, Address, Phone Number, Seal, and Signature

of PE, RLS, LA, or Architect. GSWCC Level II certification number of designer. Hydrology Studies are to be signed by a PE.

- 6)_____ **Survey Information:** Survey Date, North Arrow, Graphic Scale (1"=100' or larger), Metes and Bounds Description, Source of Boundary Information, and Adjoining Property Information (Property Owner, Zoning, and Tax Parcel Number). Total Acreage _____ & Disturbed Acreage _____.
- 7)_____ **Topographical Information:** Show existing and proposed contours (flat slopes 0-2% use 0.5 or 1 ft. intervals; rolling slope 2-8% use 1 or 2 ft. intervals; steep slope 8%+ use 2,5, or 10 ft. intervals). Indicate how contours were derived (i.e. Field Run Survey, Aerial Survey, USGS Quad Map, Etc.).
- 8)_____ **Plan Date:** List the original plan date, date of revisions and party requesting same on cover sheet and on all affected sheets.
- 9)_____ **Lot Layout:** Show lot layout, lot numbering, rough lot dimensions, setbacks, and phasing.

EXISTING CONDITIONS

- 10)_____ **Existing Information:** Locate any existing structures, cemeteries, etc.
- 11)_____ **Existing Vegetation:** Show existing tree lines, grassy areas, unique vegetation, wetlands vegetation, etc. on the plan.
- 12)_____ **Soils Information:** A brief description of the soils on site giving such information as soil names, mapping unit, erodibility, permeability, depth, texture, and soil structure. Indicate source of information.
- 13)_____ **Soils Boundaries:** The boundaries of the different soil types will be shown on the plan.
- 14)_____ **Waterways:** Delineate sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
- 15)_____ **Existing Drainage Patterns:** The dividing lines, the direction of flow, acreage, and exits from the site for the contributing drainage basins shall be shown on the plan. Include existing conveyance structures.
- 16)_____ **Utilities:** Show the location of the existing stormwater utilities.

PROPOSED CONDITIONS

- 17)_____ **Limits of Clearing and Grading:** Areas that are to be cleared and/or graded for each phase of construction.

18) _____ **Location of BMPs:** The location of the erosion and sediment control and storm water management practices used on the site shall be shown using the uniform coding symbols. Specify BMPs to minimize off-site vehicle tracking of sediment and the generation of dust. These shall include but not limited to:

- | | | |
|----------------------|--|--------------------|
| A. Construction Exit | B. Storm Drain Inlet/Outlet Protection | C. Retrofit |
| D. Sediment Barriers | E. Checkdams/Rockdams | F. Retaining Walls |
| G. Sediment Basins | H. Surface Roughening | |

19) _____ **Delineations:** If present, delineate the 50' undisturbed vegetative buffer, 75' impervious buffer, wetland areas, and flood hazard areas. Delineate all state waters located on or within 200 ft. of the site.

20) _____ **Grading & Drainage Plan:** Show proposed topography with all drainage structures and easements (Public and /or Private). Include 25' access easement and 100-yr pond limit for detention ponds.

21) _____ **Storm Water Discharge:** Identify/delineate all storm water discharge points.

22) _____ **Utilities:** Show the location of proposed stormwater utilities with easements on the plan.

NARRATIVE

23) _____ **Project Description:** Briefly describe the nature and purpose of the land disturbing activity, zoning classification, and the amount of grading involved in both area and volume.

24) _____ **Existing Conditions:** Briefly describe the existing topography, vegetation, drainage, and use of this site.

25) _____ **Adjacent Areas:** Identify the project receiving waters and describe all adjacent areas such as streams, lakes, residential areas, roads, wetlands, etc. which might be affected by the land disturbance.

26) _____ **Critical Areas:** Provide a description of areas on site which have potentially serious erosion problems, including but not limited to certain cut and fill slopes greater than 5' in height and the outlet of all storm drains. Detail any additional measures that will be utilized for these areas.

27) _____ **Construction Schedule:** A graphical description of how construction activities will be timed. Including but not limited to:

- | | |
|---|---|
| A. Installation of Erosion Control Measures | B. Clearing, Grubbing, and Grading Operations |
|---|---|

C. Grassing: Temporary and Permanent D. Maintenance of Erosion Control Measures
E. Final Landscaping, Clean-Up, Etc.

- 28)_____ **Sediment Management Calculations:** Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written rationale explaining the decision not to use a sediment basin must be included in the plan for each common drainage basin in which a basin is not provided.
- 29)_____ **Construction Phased Erosion/Sediment Control and Disturbed Area Stabilization:** A description of methods used to control erosion and sediment and to stabilize the disturbed area of the site during all phases of construction should be listed on the plans. Phase plan into initial sediment storage and perimeter control BMPs, intermediate grading and drainage BMPs and final BMPs.
- 30)_____ **Typical Lot:** Plan addresses BMPs for all phases of common developments including individual building lots and out-parcels, etc. regardless of who owns or operates the individual sites. Include typical lots as applicable.
- 31)_____ **Ownership:** State whether or not the storm drain systems (which portions) will be dedicated to the City of Gainesville.
- 32)_____ **Pollutants:** Plan describes practices used to reduce the pollutants in storm water discharges.
- 33)_____ **Certification:** Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated in Part IV of permit.
- 34)_____ **Secondary Permittee:** Indication that the applicable portion of the ES&PC Plan is to be provided to each secondary permittee prior to the secondary conducting any construction activity and that each secondary shall sign the Plan or portion of the plan applicable to their site. List the names and addresses of all secondary permittees.
- 35)_____ **Documentation:** Provide documentation that the ES&PC is in compliance with waste disposal, sanitary sewer, or septic tank regulations.
- 36)_____ **Spills:** Provide BMPs for the remediation of all petroleum spills and leaks.
- 37)_____ **Inspections:** Provide details on required inspections and record keeping by the primary permittee.
- 38)_____ **Sampling:** Provide a description of analytical methods to be used to collect and

analyze the samples from each location.

- 39)_____ **Appendix B:** Rationale for outfall sampling points where applicable
- 40)_____ **Frequency & Reporting:** Provide information on sampling frequency and reporting requirements.
- 41)_____ **Vegetative Plan:** Provide a vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.
- 42)_____ **Certification:** Provide certification and signature in accordance with section V.G.2. of the Permit.

NOTES

- 43)_____ **Maintenance Statement: IN BOLD TYPE:** “Erosion and sediment control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control additional erosion and sediment control measures shall be implemented to control or treat the sediment source.”
- 44)_____ **Revisions:** “Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.”
- 45)_____ **Owner Maintenance:** “Maintenance of all erosion control measures, whether temporary or permanent, shall at all times be the responsibility of the owner.”
- 46)_____ **Installation Statement: IN BOLD TYPE:** “The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities.”
- 47)_____ **Mulch: IN BOLD TYPE:** “Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.
- 48)_____ **Fill Slopes:** “All fill slopes will have silt fence at the toe of slope.”
- 49)_____ **Slopes:** “No cut or fill slopes steeper than 2:1 are allowed.”
- 50)_____ **Pre-Construction Meeting:** “The contractor will arrange a pre-construction meeting with the Department of Water Resources Stormwater Inspector at 470-248-8370 prior to beginning work.” Include this note in separate text field on the cover sheet.

- 51) _____ **State Waters Buffer:** “This site **is/is not** within 200’ of state waters.”
- 52) _____ **State Waters Buffer:** “A 50’ undisturbed vegetative buffer and a 75’ impervious buffer adjacent to all running streams and creeks will be left maintained. No non-exempt activities shall take place in the buffer areas without first acquiring the necessary variances and permits.”
- 53) _____ **Wetlands:** “This site **does/does not** contain wetlands.”
- 54) _____ **Flood Hazard Statement:** “This property **is/is not** located within a 100 Year flood plain per FIRM Panel No. _____.”
- 55) _____ **Surface Roughening:** “All cut and fill slopes shall be surfaced roughened and vegetated within three (3) days after grading is completed.”
- 56) _____ **Wastes:** “Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.”
- 57) _____ **Disposal:** “Stumps and construction debris shall be deposited in a properly permitted landfill.”
- 58) _____ **Type “S” Silt Fence:** “A double row of type “S” silt fence shall be required when placed within 200’ of state waters and at the toe of slopes greater than 10’ in height.”
- 59) _____ **Pipe:** “Storm drain pipes will be Class III reinforced concrete pipe (RCP), Type II aluminized corrugated metal pipe (CMP) or HDPE. All storm drain street crossings shall be Class III RCP.”
- 60) _____ **Storm Drain Design:** “The piped storm water systems were designed for a 25-Year storm. Cross drains were designed for a 100-Year storm.”
- 61) _____ **Detention:** “All detention facilities whether a pond or underground will be privately owned and maintained.”
- 62) _____ **Clearing Limits:** “The clearing limits will be clearly located in the field. No construction activity will take place outside of the clearing limits.”
- 63) _____ **Cemeteries:** “This site **does/does not** contain any known cemeteries.”

HYDRAULIC ANALYSIS

- 64) _____ **Hydrology Study:** Provide Hydrology study and maps of drainage basins for both the pre-and post-developed conditions, include analysis for runoff rates, volumes, and velocities showing methodologies used and supporting calculations.

- 65)_____ **Runoff:** Provide an estimate of the runoff coefficient or peak discharge flow of the site prior to and after constructions activities are completed.
- 66)_____ **BMPs:** Provide a description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after constructions operations have been completed.
- 67)_____ **Water Quality & Channel Protection:** Show TSS removal and Channel Protection & Water Quality Volume Storage using the **SITE REVIEW TOOL V2.2** available at www.atlantaregional.com/environmental/georgia-stormwater-manual
- 68)_____ **Summary:** Provide a narrative summary and tabulated calculations of pre-development flows vs. post-development flows of the hydrologic study.

PLAN AND PROFILE SHEET

- 69)_____ **Scale:** Minimum horizontal and vertical scale.
- 70)_____ **Storm Sewer:** Location, Size, Length, Type, Grade, Invert Elevations, Drainage Area, Cross-Drain Cross-Sections, etc.. Show storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion.

DETAIL SHEET

- 71)_____ **Storm Sewer:** Show details (GDOT standards) of all storm water structures (catch basins, drop inlets, headwalls, etc.).
- 72)_____ **Erosion and Sediment Control:** Show details of all E&S BMP proposed Standards set by the *Manual for Erosion and Sediment Control in Georgia*.
- 73)_____ **Site Review Tool:** Provide a copy of the completed Site Review Tool V2.2 (from www.atlantaregional.com/environmental/georgia-stormwater-manual).
- 74)_____ **Detention Pond:** Detention Pond Details.
- 75)_____ **Typical Lot:** Provide BMP design for typical lot construction.

GENERAL

- 76)_____ **Corps of Engineers Permit:** Provide a copy of the US Army Corps of Engineers Permit, if required.

- 77)_____ **NPDES Permit:** Provide copy or proof of filing, for sites larger than one (1) acre.
- 78)_____ **Council Action:** A certified copy of the City Council’s actions regarding rezoning, annexation, etc. is required on the plans.
- 79)_____ **Operations & Maintenance Agreement:** A blank copy of the agreement can be obtained from the Department of Water Resources. If the development is covered by an existing O&M Agreement, note the name of the development the O&M Agreement is under.
- 80)_____ **Site Visit Certification:** A statement signed by the Certifying Designer that he or his direct representative has visited the site, and will inspect the installation of BMPs within seven days from the start of land disturbance activities.
- 81)_____ **Miscellaneous Items:**

Link back to [BMP #2 – Site Plan Review Procedures](#)

Link back to [BMP #2 – Site Plan Review Procedures](#)

**PLAN REVIEW CHECKLIST
FOR
STORMWATER – STAND ALONE
DEVELOPMENTS**

Gainesville Department of Water Resources



AUGUST 2017

Project Name: _____

Plans Received: _____

Plans Reviewed: _____

Plans returned with
corrections to be made: _____

Reviewed By: _____

Comments: _____

****ORIGINAL RED-LINE COMMENTS MUST BE RETURNED WITH REVISED
PLANS FOR FINAL PLAN APPROVAL. CONTACT PLAN REVIEWEE AND
SCHEDULE APPOINTMENT FOR PLAN APPROVAL/SIGN –OFF. ****

GENERAL

- 1) _____ **Project Information:** Tax Parcel Number(s), Land Lot & District numbers, Adjoining Property Information.

- 2) _____ **Vicinity Map:** A small map, including north arrow, showing the site in relation to the surrounding area.

- 3) _____ **Owner Information:** Name, Legal Address, and Phone Number of Owner/Developer (Primary Permittee).

- 4) _____ **Contact Information:** Name and Phone Number of 24 Hour Local Contact responsible for ES&PC.

- 5) _____ **Certification Information:** Name, Address, Phone Number, Seal, and Signature of PE, RLS, LA, or Architect. GSWCC Level II certification number of designer.

- Hydrology Studies are to be signed by a PE.
- 6) _____ **Survey Information:** Survey Date, North Arrow, Graphic Scale (1"=100' or larger), Metes and Bounds Description, Source of Boundary Information, and Adjoining Property Information (Property Owner, Zoning, and Tax Parcel Number). Total Acreage _____ & Disturbed Acreage _____.
- 7) _____ **Topographical Information:** Show existing and proposed contours (flat slopes 0-2% use 0.5 or 1 ft. intervals; rolling slope 2-8% use 1 or 2 ft. intervals; steep slope 8%+ use 2,5, or 10 ft. intervals). Indicate how contours were derived (i.e. Field Run Survey, Aerial Survey, USGS Quad Map, Etc.).
- 8) _____ **Plan Date:** List the original plan date, date of revisions and party requesting same on cover sheet and on all affected sheets.

EXISTING CONDITIONS

- 9) _____ **Existing Information:** Locate any existing structures, cemeteries, etc.
- 10) _____ **Existing Vegetation:** Show existing tree lines, grassy areas, unique vegetation, wetlands vegetation, etc. on the plan.
- 11) _____ **Soils Information:** A brief description of the soils on site giving such information as soil names, mapping unit, erodibility, permeability, depth, texture, and soil structure. Indicate source of information.
- 12) _____ **Soils Boundaries:** The boundaries of the different soil types will be shown on the plan.
- 13) _____ **Waterways:** Delineate sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
- 14) _____ **Existing Drainage Patterns:** The dividing lines, the direction of flow, acreage, and exits from the site for the contributing drainage basins shall be shown on the plan. Include existing conveyance structures.
- 15) _____ **Utilities:** Show the location of the existing stormwater utilities.

PROPOSED CONDITIONS

- 16) _____ **Limits of Clearing and Grading:** Areas that are to be cleared and/or graded for each phase of construction.
- 17) _____ **Location of BMPs:** The location of the erosion and sediment control and storm water management practices used on the site shall be shown using the uniform coding symbols. Specify BMPs to minimize off-site vehicle tracking of sediment and the generation of dust. These shall include but not limited to:

- | | | |
|----------------------|--|--------------------|
| A. Construction Exit | B. Storm Drain Inlet/Outlet Protection | C. Retrofit |
| D. Sediment Barriers | E. Checkdams/Rockdams | F. Retaining Walls |
| G. Sediment Basins | H. Surface Roughening | |

18)_____ **Delineations:** If present, delineate the 50’ undisturbed vegetative buffer, 75’ impervious buffer, wetland areas, and flood hazard areas. Delineate all state waters located on or within 200 ft. of the site.

19)_____ **Grading & Drainage Plan:** Show proposed topography with all drainage structures and _____ easements (Public and /or Private). Include 25’ access easement and 100-yr pond limit for _____ detention ponds.

20)_____ **Storm Water Discharge:** Identify/delineate all storm water discharge points.

21)_____ **Utilities:** Show the location of proposed stormwater utilities with easements on the plan.

NARRATIVE

22)_____ **Project Description:** Briefly describe the nature and purpose of the land disturbing activity, zoning classification, and the amount of grading involved in both area and volume.

23)_____ **Existing Conditions:** Briefly describe the existing topography, vegetation, drainage, and use of this site.

24)_____ **Adjacent Areas:** Identify the project receiving waters and describe all adjacent areas such as streams, lakes, residential areas, roads, wetlands, etc. which might be affected by the land disturbance.

25)_____ **Critical Areas:** Provide a description of areas on site which have potentially serious erosion problems, including but not limited to certain cut and fill slopes greater than 5’ in height and the outlet of all storm drains. Detail any additional measures that will be utilized for these areas.

26)_____ **Construction Schedule:** A graphical description of how construction activities will be timed. Including but not limited to:

- | | |
|---|---|
| A. Installation of Erosion Control Measures | B. Clearing, Grubbing, and Grading Operations |
| C. Grassing: Temporary and Permanent | D. Maintenance of Erosion Control Measures |
| E. Final Landscaping, Clean-Up, Etc. | |

27)_____ **Sediment Management Calculations:** Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage

location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written rationale explaining the decision not to use a sediment basin must be included in the plan for each common drainage basin in which a basin is not provided.

- 28)_____ **Construction Phased Erosion/Sediment Control and Disturbed Area Stabilization:** A description of methods used to control erosion and sediment and to stabilize the disturbed area of the site during all phases of construction should be listed on the plans. Phase plan into initial sediment storage and perimeter control BMPs, intermediate grading and drainage BMPs and final BMPs.
- 29)_____ **Ownership:** State whether or not the storm drain systems (which portions) will be dedicated to the City of Gainesville.
- 30)_____ **Pollutants:** Plan describes practices used to reduce the pollutants in storm water discharges.
- 31)_____ **Certification:** Design professional’s certification statement and signature that the permittee’s ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated in Part IV of permit.
- 32)_____ **Documentation:** Provide documentation that the ES&PC is in compliance with waste disposal, sanitary sewer, or septic tank regulations.
- 33)_____ **Spills:** Provide BMPs for the remediation of all petroleum spills and leaks.
- 34)_____ **Inspections:** Provide details on required inspections and record keeping by the primary permittee.
- 35)_____ **Sampling:** Provide a description of analytical methods to be used to collect and analyze the samples from each location.
- 36)_____ **Appendix B:** Rationale for outfall sampling points where applicable
- 37)_____ **Frequency & Reporting:** Provide information on sampling frequency and reporting requirements.
- 38)_____ **Vegetative Plan:** Provide a vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.
- 39)_____ **Certification:** Provide certification and signature in accordance with section V.G.2. of the Permit.

NOTES

- 40)_____ **Maintenance Statement:** **IN BOLD TYPE:** “Erosion and sediment control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control additional erosion and sediment control measures shall be implemented to control or treat the sediment source.”
- 41)_____ **Revisions:** “Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.”
- 42)_____ **Owner Maintenance:** “Maintenance of all erosion control measures, whether temporary or permanent, shall at all times be the responsibility of the owner.”
- 43)_____ **Installation Statement:** **IN BOLD TYPE:** “The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities.”
- 44)_____ **Mulch:** **IN BOLD TYPE:** “Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.
- 45)_____ **Fill Slopes:** “All fill slopes will have silt fence at the toe of slope.”
- 46)_____ **Slopes:** “No cut or fill slopes steeper than 2:1 are allowed.”
- 47)_____ **Pre-Construction Meeting:** “The contractor will arrange a pre-construction meeting with the Department of Water Resources Stormwater Inspector at 470-248-8370 prior to beginning work.” Include this note in separate text field on the cover sheet.
- 48)_____ **State Waters Buffer:** “This site **is/is not** within 200’ of state waters.”
- 49)_____ **State Waters Buffer:** “A 50’ undisturbed vegetative buffer and a 75’ impervious buffer adjacent to all running streams and creeks will be left maintained. No non-exempt activities shall take place in the buffer areas without first acquiring the necessary variances and permits.”
- 50)_____ **Wetlands:** “This site **does/does not** contain wetlands.”
- 51)_____ **Flood Hazard Statement:** “This property **is/is not** located within a 100 Year flood plain per FIRM Panel No._____.
- 52)_____ **Surface Roughening:** “All cut and fill slopes shall be surfaced roughened and

vegetated within three (3) days after grading is completed.”

- 53)_____ **Wastes:** “Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.”
- 54)_____ **Disposal:** “Stumps and construction debris shall be deposited in a properly permitted landfill.”
- 55)_____ **Type “S” Silt Fence:** “A double row of type “S” silt fence shall be required when placed within 200’ of state waters and at the toe of slopes greater than 10’ in height.”
- 56)_____ **Pipe:** “Storm drain pipes will be Class III reinforced concrete pipe (RCP), Type II aluminized corrugated metal pipe (CMP) or HDPE. All storm drain street crossings shall be Class III RCP.”
- 57)_____ **Storm Drain Design:** “The piped storm water systems were designed for a 25-Year storm. Cross drains were designed for a 100-Year storm.”
- 58)_____ **Detention:** “All detention facilities whether a pond or underground will be privately owned and maintained.”
- 59)_____ **Clearing Limits:** “The clearing limits will be clearly located in the field. No construction activity will take place outside of the clearing limits.”
- 60)_____ **Cemeteries:** “This site **does/does not** contain any known cemeteries.”

HYDRAULIC ANALYSIS

- 61)_____ **Hydrology Study:** Provide Hydrology study and maps of drainage basins for both the pre-and post-developed conditions, include analysis for runoff rates, volumes, and velocities showing methodologies used and supporting calculations.
- 62)_____ **Runoff:** Provide an estimate of the runoff coefficient or peak discharge flow of the site prior to and after constructions activities are completed.
- 63)_____ **BMPs:** Provide a description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after constructions operations have been completed.
- 64)_____ **Water Quality & Channel Protection:** Show TSS removal and Channel Protection & Water Quality Volume Storage using the **SITE REVIEW TOOL V2.2** available at www.atlantaregional.com/environmental/georgia-stormwater-manual

- 65)_____ **Summary:** Provide a narrative summary and tabulated calculations of pre-development flows vs. post-development flows of the hydrologic study.

PLAN AND PROFILE SHEET

- 66)_____ **Scale:** Minimum horizontal and vertical scale.
- 67)_____ **Storm Sewer:** Location, Size, Length, Type, Grade, Invert Elevations, Drainage Area, Cross-Drain Cross-Sections, etc.. Show storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion.

DETAIL SHEET

- 68)_____ **Storm Sewer:** Show details (GDOT standards) of all storm water structures (catch basins, drop inlets, headwalls, etc.).
- 69)_____ **Erosion and Sediment Control:** Show details of all E&S BMP proposed Standards set by the *Manual for Erosion and Sediment Control in Georgia*.
- 70)_____ **Site Review Tool:** Provide a copy of the completed Site Review Tool V2.2 (from www.atlantaregional.com/environmental/georgia-stormwater-manual).
- 71)_____ **Detention Pond:** Detention Pond Details.

GENERAL

- 72)_____ **Corps of Engineers Permit:** Provide a copy of the US Army Corps of Engineers Permit, if required.
- 73)_____ **NPDES Permit:** Provide copy or proof of filing, for sites larger than one (1) acre.
- 74)_____ **Council Action:** A certified copy of the City Council's actions regarding rezoning, annexation, etc. is required on the plans.
- 75)_____ **Operations & Maintenance Agreement:** A blank copy of the agreement can be obtained from the Department of Water Resources. If the development is covered by an existing O&M Agreement, note the name of the development the O&M Agreement is under.
- 76)_____ **Site Visit Certification:** A statement signed by the Certifying Designer that he or his direct representative has visited the site, and will inspect the installation of BMPs within seven days from the start of land disturbance activities.
- 77)_____ **Miscellaneous Items:**

Link back to [BMP #2 – Site Plan Review Procedures](#)



Attachment 4.2

Link back to BMP #3 – Inspection Program
 City of Gainesville
 Department Of Water Resources
 Erosion and Sediment Control Inspection

Site: _____ | **Inspector:** _____ | **Date:** _____

Address: _____

Weather: _____ | **Time:** _____

BMP Control	Description
CD- Check Dam:	
CH- Channel Stabilization:	
Co-Construction Exit:	
Di-Diversion:	
Dn1-Temp Down Drain:	
Dn2-Permanent Down Drain:	
Lv-Level Spreader:	
Rd-Rock Filter Dam:	
Re-Retaining Wall:	
Rt-Retro Fit:	
Sd1-Sediment Barrier:	
Sd2-Inlet Sediment Trap:	
Sd3-Temporary Sediment Trap:	
St-Storm Drain Outlet Protection:	
Su-Surface Roughening:	
Other:	

Vegetative Measures	Description
Bf-Buffer:	
Ds1-Mulching	
Ds2-Temporary Seeding:	
Ds3-Permanent Vegetation:	
Mb-Matting and Blankets:	
Other:	

Additional Comments: _____

Comply By: _____ | **Signature:** _____ | **Date:** _____

Deficiencies must be corrected within 5 working days from the date of this inspection
FAILURE TO CORRECT THE DEFICIENCIES WITHIN THE ALLOTTED TIME SPECIFIED COULD
RESULT IN FUTHER ACTION. Actions are as follows: Notice of Non Compliance, Stop Work Orders,
 And or Fines. Implementation of the approved **Soil Erosion and Sediment Control Plan** is required on
 all construction sites within the City of Gainesville.



Attachment 4.3
 Link back to BMP #5 – Complaint Response
City of Gainesville
Department of Water Resources
Action/Complaint Request & Response

Contact Information

Requesters Name	Date
Phone Number	Email*
Address*	

Location of Concern

Address
Other
Brief description of concern

Follow Up Inspection Results

Inspectors Name	Date	Time
Comments		

Status of concern

Resolved	Pending
Comments	

Response to concern

Description of resolution

Action Request forwarded*

Department Name	Date
Contact Number	

*Fill Out When Applicable

Attachment 5.1

Stormwater Pond Inspection Sheet

Link back to [BMP #3 – Inspection Program](#)

6/21/2019

HyperWeb Gainesville Operations(Gainesville, FLOWERS, JENNIFER)

Stormwater Pond Inspection

Go Back		
Asset ID:		
DP26	Refresh	Get Last Insp
Description:	Location:	Serial #:
DP26	TBD - Stormwater Inlets	N/A
SAFETY FIRST. Please follow Safe work procedures.		
+ JOBSITE DETAILS		
Inspected By:	Date Inspected (MM/DD/YYYY):	
Stormwater - Jennifer Flowers (FLOW)	6/21/2019	
+ JOB COST INFO		
1) Location Address:		
<input type="text"/>		
* 2) BMP Type		
<input type="radio"/> Dry Detention Pond <input type="radio"/> Wet Detention Pond <input type="radio"/> Underground <input type="radio"/> Retention Pond <input type="radio"/> Stormwater Wetland		
3) Weather the past 72 hrs?		
<input type="radio"/> Wet <input type="radio"/> Dry		
4) General Inspection		
<input type="checkbox"/> Yes- Adequately maintained for inspection and maintenance. <input type="checkbox"/> No site access- Access needs to be established. <input type="checkbox"/> Needs Maintenance: Vegetation needs to be maintained. <input type="checkbox"/> Needs Maintenance: Erosion needs to be repaired. <input type="checkbox"/> Other. See comments		
6) Comment:		
<input type="text"/>		
7) Is the Fence in good condition?		
<input type="radio"/> Yes- No action required. <input type="radio"/> No- Must be repaired. <input type="radio"/> N/A		
8) Is Trash present in the pond?		
<input type="checkbox"/> Yes- Trash must be removed. <input type="checkbox"/> No		
9) Is the Vegetation Maintained in the pond?		
<input type="checkbox"/> Yes -Continue vegetation maintenance schedule. <input type="checkbox"/> No -Vegetation needs to be maintained. <input type="checkbox"/> No -Trees need to be removed and vegetation maintained. <input type="checkbox"/> No -Remove debris (branches, leaves, cut vegetation, etc.) <input type="checkbox"/> No- See comments		
10) Comment:		
<input type="text"/>		
11) Is there adequate vegetation?		
<input type="checkbox"/> Yes -80-90% ground cover. No action needed.		

<input type="checkbox"/>	No -Vegetation needs to be established in bare spots.
<input type="checkbox"/>	No -Vegetation needs to be established throughout the pond.
<input type="checkbox"/>	No -Establish vegetation once trees are removed.
<input type="checkbox"/>	No- See comments
12) Comments	
<input type="text"/>	
13) Are trees growing on the pond dam/berm?	
<input type="checkbox"/>	No -Continue vegetation maintenance schedule.
<input type="checkbox"/>	Yes -Trees need to be removed from dam/berm.
<input type="checkbox"/>	Yes -Trees on dam/berm should be assessed.
<input type="checkbox"/>	Yes- See comments
14) Comments	
<input type="text"/>	
15) Inlets	
16) Are the inlets clear?	
<input type="checkbox"/>	Yes -Continue maintenance schedule.
<input type="checkbox"/>	No- Sediment buildup in rocks. Remove old rock and sediment, replace with washed rock.
<input type="checkbox"/>	No -Sediment accumulation in and/or in front of pipe needs to be removed.
<input type="checkbox"/>	No -Overgrown Vegetation needs to be maintained/removed.
<input type="checkbox"/>	No -Trash needs to be removed.
<input type="checkbox"/>	No- See comments
17) Comments	
<input type="text"/>	
18) Is erosion present at the inlets?	
<input type="checkbox"/>	No- No action required.
<input type="checkbox"/>	Yes- Area needs to be stabilized.
<input type="checkbox"/>	Yes- Washed rip rap or stone needs to be added.
<input type="checkbox"/>	Yes- Vegetation needs to be established.
<input type="checkbox"/>	Yes- See comments
19) Comments	
<input type="text"/>	
20) Do the inlet structures need maintenance?	
<input type="checkbox"/>	No- No action required.
<input type="checkbox"/>	Yes- Headwall needs to be repaired.
<input type="checkbox"/>	Yes- Erosion behind or under headwall needs to be addressed.
<input type="checkbox"/>	Yes- Pipe has a hole that must be repaired.
<input type="checkbox"/>	Yes- Pipe joint needs to be repaired.
<input type="checkbox"/>	Yes- See comments
21) Comments	
<input type="text"/>	

51) Does the outlet pipe need maintenance?

No- No action required.

Yes- Headwall needs to be repaired.

Yes- Erosion behind or under headwall needs to be addressed.

Yes- Pipe has a hole that must be repaired.

Yes- pipe joint needs to be repaired.

Yes- See Comments

52) Comments

53) Outside Slopes/Pond Dam/Berm

54) Is erosion present on the outside slopes/pond dam/berm of the pond?

No- No action required.

Yes- Major erosion, must be addressed immediately.

Yes- Outside slopes need to be stabilized, rock added.

Yes- Outside slopes need to be stabilized, vegetation established.

Yes- See comments

55) Comments

56) Overall Condition of Pond

57) Overall rating

Good

Moderate

Poor

58) Work must be completed in:

Pond in Compliance: No follow up needed.

No- See comments

30) Comment:

31) Location of rock rings that require maintenance?

N/A

At inlet pipe(s).

Rock berm in middle of pond.

Rock ring around outlet structure.

See comments.

32) Comments

33) Treatment area(s)

34) Is there excess sediment in the bottom of the pond?

No- No action needed.

Yes- Excess sediment in the bottom of the pond needs to be removed.

Yes- Excess sediment in forebay needs to be removed.

35) Outlet Control Structure

36) Is the outlet control structure clear?

Yes- Continue maintenance schedule.

No- Sediment accumulation needs to be removed.

No- Sediment accumulation in rock needs to be removed. Replace with washed rock.

No- Overgrown Vegetation needs to be maintained/removed.

No- Trash/debris need to be removed.

No- See comments

37) Comments

39) Does retrofit and/or trash rack need maintenance?

No- No action needed.

Yes- Debris must be removed.

Yes- Needs to be reattached.

Yes- Old stone is silted in. Remove old stone.

Yes- Needs new washed stone added.

Yes- See Comments

40) Comment

41) Is erosion present in front of outlet control structure?

No- No action required.

Yes- Area needs to be stabilized.

Yes- Washed Rip Rap or stone needs to be added.

Yes- Vegetation needs to be established.

Yes- See comments

42) Comment

43) Is Erosion present behind of outlet control structure?

No- No action required.

Yes- Area behind structure needs to be stabilized.

Yes- Erosion present around outlet pipe needs to be addressed.

Yes- Vegetation needs to be established.

Yes- See comments

44) Comments

45) Is the pond draining correctly?

Yes- No action required.

No- Outlet is clogged. Clear debris.

46) Outlet Pipe Leaving Pond

47) Is the outlet clear?

Yes- Continue maintenance schedule.

No- Sediment accumulation needs to be removed.

No- Overgrown vegetation needs to be maintained/removed.

No- Trash needs to be removed.

No- See comments

48) Comments

49) Is erosion present at the outlet pipe?

No- No action required.

Yes- Area needs to be stabilized.

Yes- Washed Rip Rap or stone needs to be added.

Yes- Vegetation needs to be established.

Yes- See comments

50) Comment

By next years annual inspection.

30 Days.

60 Days.

90 Days.

59) Overall Comments if Applicable:

Upload File: No file chosen
Please upload only one picture of the incident if available.



Attachment 5.2
Link back to BMP #4 – Maintenance Program
CITY OF GAINESVILLE
Inspection & Maintenance Agreement*

*This is a sample maintenance agreement and should not be utilized as an official document. Duplicate signatory pages for different types of partnerships have been omitted from this sample document.

WHEREAS, the Property Owner _____ recognizes that all permanent stormwater management facilities or ongoing practices related to stormwater management after completion of development and construction (hereinafter referred to as “Stormwater Facilities and Practices” or “SF/P”) must be maintained for the development called, _____, located in Land Lot(s) _____, District(s) _____, described as Tax Map /Parcel Identification Number _____ of Hall County, Georgia, Deed Book _____ Page _____, with a physical address of _____; and,

WHEREAS, the Property Owner is the owner of real property more particularly described on the attached Exhibit A (hereinafter referred to as “the Property”), and,

WHEREAS, The City of Gainesville (hereinafter referred to as “the City”) and the Property Owner, or its administrators, executors, successors, heirs, or assigns, agree that the health, safety and welfare of the citizens of the City require that the Stormwater Facilities and Practices be constructed, implemented and maintained on the property; and,

WHEREAS, the Unified Land Development Code require that all the Stormwater Facilities and Practices as shown on the approved development plans and specifications be constructed and maintained by the Property Owner, its administrators, executors, successors, heirs, or assigns.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

SECTION 1

The Stormwater Facilities and Practices shall be constructed or implemented by the Property Owner in accordance with the plans and specifications for the development.

SECTION 2

The Property Owner, it’s Administrators, Executors, Successors, Heirs or Assigns shall maintain the SF/P in good working condition acceptable to the City and in accordance with schedule of long term maintenance activities agreed hereto and attached as Exhibit B. Schedules for all BMP facilities can be referenced in the applicable Georgia Stormwater Management Manual – Appendix E – Operations and Maintenance Document in effect at the time of permitting (“BMP”).

SECTION 3

The Property Owner, it’s Administrators, Executors, Successors, Heirs or Assigns hereby grants permission to the City, its authorized agents and employees, to enter upon the property and to inspect the SF/P whenever the City deems necessary. Whenever possible, the City shall provide notice prior to entry. The Property

Owner shall execute an access easement in favor of The City to allow the City to inspect, observe, maintain, and repair the SF/P as deemed necessary. A copy of the fully executed original easement is attached to this Agreement as Exhibit C and by reference made a part hereof. The Easement shall be recorded in the Deed Records of Hall County, Georgia.

SECTION 4

In the event the Property Owner, its Administrators, Executors, Successors, Heirs or Assigns fails to maintain the SF/P as shown on the approved plans and specifications in good working order acceptable to the City and in accordance with the maintenance schedule incorporated in this Agreement, the City, with due notice, may enter the property and take whatever steps it deems necessary to return all SF/P to good working order. This provision shall not be construed to allow the City to erect any structure of a permanent nature on the property. It is expressly understood and agreed that the City is under no obligation to maintain, repair or restore any of the SF/P and in no event shall this Agreement be construed to impose any such obligation on the City.

SECTION 5

In the event the City, pursuant to the Agreement, performs work of any nature authorized under the terms of this Agreement, or expends any funds in the performance of said work for labor, use of equipment, supplies, materials, and the like, the Property Owner shall reimburse the City, or shall forfeit any required bond upon demand within thirty (30) days of receipt thereof for all the costs incurred by the City hereunder. If not paid within the prescribed time period, the City shall secure a lien against the real property in the amount of such costs. The actions described in this section are in addition to and not in lieu of any and all legal remedies available to the City as a result of the Property Owner's failure to maintain the SF/P.

SECTION 6

It is the intent of this agreement to insure the proper maintenance of the SF/P by the Property Owner; provided, however, that this Agreement shall not be deemed to create or affect any additional liability of any party for damage alleged to result from or caused by stormwater runoff.

SECTION 7

The Property Owner shall provide the City with a bond or a letter of credit providing for the maintenance of the SF/P pursuant to the City's Unified Land Development Code concerning Maintenance Agreements or Performance Bonds during development and any maintenance periods specified after completion of the Development.

SECTION 8

The Property Owner shall use the standard Operation and Maintenance Inspection Checklist for the site specific SF/P located on the Property. All BMP inspection checklists can be referenced from the then applicable Georgia Stormwater Management Manual – Appendix E – Operations & Maintenance Guidance Document in effect at the time of permitting, and added to this agreement as Exhibit D and by this reference made a part hereof for the purpose of a minimal annual inspection of the SF/P by a qualified inspector.

SECTION 9

The Property Owner, its Personal Representatives, Administrators, Executors, Successors, Heirs and Assigns hereby indemnifies and holds harmless the City and its authorized agents and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against

the City from the construction, presence, existence or maintenance of the SF/P by the Property Owner and shall defend at its own expense any suit based on such claim. If any judgment or claims against the City, its authorized agents or employees shall be allowed, the Property Owner shall pay for all costs and expenses in connection herewith.

SECTION 10

This Agreement may be enforced by proceedings at law or in equity by or against the parties hereto and their respective successors in interest.

SECTION 11

Invalidation of any one of the provisions of this Agreement shall in no way effect any other provisions and all other provisions shall remain in full force and effect.

MAINTENANCE AGREEMENT
(ONE SIGNATURE PAGE)

SO AGREED this _____ day of _____, 20_____.

**PROPERTY OWNER
CORPORATION**

Standard Signature Blocks for Agreements under seal with the City:

1. By a corporation with a sole officer (company should provide corporate bylaws proving it has a sole officer):

This Agreement is executed under seal as follows:

Exact Corporate Name

Signed, sealed and
delivered in the presence of:

By: _____(SEAL)
Name of President, President

[Affix corporate seal]

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Approved as to form:

Abbott S. Hayes, Jr., City Attorney

City of Gainesville

Signed, sealed and
delivered in the presence of:

By: _____
Name: _____
Director of
Water Resources formerly Public
Utilities

Witness

Notary Public
Commission Expires _____

[Affix City Seal]

Standard Signature Blocks for Agreements under seal with the City:

1. By a corporation with President and Vice President and Secretary (Corporate authority is presumed for any agreement signed by the President or Vice President, attested to by the Corporate Secretary and which has the corporate seal affixed. The corporate name should match the Secretary of State website for the state of the incorporation):

This Agreement is executed under seal as follows:

Signed, sealed and delivered in the presence of: _____
Exact Corporate Name
By: _____(SEAL)
Name of President, President

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Attest:

Name of Secretary, Secretary
[Affix Corporate Seal]

Approved as to form:

Abbott S. Hayes, Jr., City Attorney

City of Gainesville

Signed, sealed and delivered in the presence of: _____

By: _____
Name: _____
Director of
Water Resources formerly Public
Utilities

Witness

Notary Public
Commission Expires _____
[Affix Seal]

[Affix City Seal]

OR

Signed, sealed and
delivered in the presence of:

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Approved as to form:

Abbott S. Hayes, Jr., City Attorney

Signed, sealed and
delivered in the presence of:

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Exact Corporate Name

By: _____(SEAL)
Name of Vice-President, Vice-President

Attest:

Name of Secretary, Secretary

[Affix Corporate Seal]

City of Gainesville

By: _____
Name: _____
Director of
Water Resources formerly Public
Utilities

[Affix City Seal]

Standard Signature Blocks for Agreements under seal with the City:

1. By a corporation which has passed a resolution (which must be accompanied by Secretary's certificate certifying that the Resolution is still in full force and effect and the names of persons authorized under the Resolution to execute the Agreement on behalf of the corporation):

This Agreement is executed under seal as follows:

Exact Corporate Name

Signed, sealed and delivered in the presence of:

By: _____(SEAL)
Name, title of authorized signatory

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Approved as to form:

Abbott S. Hayes, Jr., City Attorney

City of Gainesville

Signed, sealed and delivered in the presence of:

By: _____
Name: _____
Director of
Water Resources formerly Public
Utilities

Witness

Notary Public
Commission Expires _____
[Affix Seal]

[Affix City Seal]

Attachments:

- Exhibit A (Plat and Legal Description)
- Exhibit B (Maintenance and Inspection Schedule)
- Exhibit C (Access Easement)
- Exhibit D (Standard BMP Operation and Maintenance Inspection Checklist)

EXHIBIT 'C'

STORMWATER FACILITIES AND PRACTICES ACCESS EASEMENT AGREEMENT

STATE OF GEORGIA

COUNTY OF HALL

THIS EASEMENT granted this ____ day of _____, 20____, between the property owner _____ as party of the first part, hereinafter referred to as a Grantor, and City of Gainesville, a political subdivision of the State of Georgia, as party of the second part, hereinafter referred to as Grantee.

WITNESSETH THAT: Grantor, for and in consideration of the sum of ONE DOLLAR (\$1.00) in hand paid at and before the sealing and delivery of this easement and in consideration of the agreements and covenants contained in this document and the Inspection & Maintenance Agreement between Grantor and Grantee, hereby grants unto the Grantee and easement in and to that portion of the property shown on Exhibit "A" to the Inspection & Maintenance Agreement, as shown and identified on the plat attached hereto as Exhibit "E".

The purpose of this easement is to allow Grantee, or its agents, access for maintenance activities to the Stormwater Facilities and Practices. Grantor covenants and expresses to prevent future development of the property within the easement or to allow obstructions or natural growth with interferes with the access over, through and across the basement following issuance of the Certificate of Occupancy or in the case of a residential subdivision, the approval of the Final Plat, without written permission from the City of Gainesville Department of Water Resources. This easement is required by the provisions of the Inspection & Maintenance Agreement executed by and between the Grantor and Grantee.

STORMWATER FACILITIES AND PRACTICES ACCESS EASEMENT AGREEMENT
(ONE SIGNATURE PAGE)

SO AGREED this _____ day of _____, 20_____.

**PROPERTY OWNER INDIVIDUAL OR
PROPERTY OWNED JOINTLY BY SEVERAL INDIVIDUALS**

Standard Signature Blocks for storm water maintenance agreements under seal with the City:

1. By an individual (The legal name of the individual should be used. Initials typically used by the individual for first or middle names are acceptable. Nicknames are not. John Doe should not sign as Buddy Doe):

This Agreement is executed under seal as follows:

Signed, sealed and _____(SEAL)
delivered in the presence of: [Name of individual]

Witness

Notary Public
Commission Expires _____
[Affix Seal]

OR

Standard Signature Blocks for Agreements under seal with the City:

1. By an individual doing business under a trade name but not otherwise incorporated or an entity (The legal name of the individual should be used. Initials typically used by the individual for first or middle names are acceptable. Nicknames are not. John Doe should not sign as Buddy Doe. The trade name should match the trade name registration filed by the individual):

This Agreement is executed under seal as follows:

Signed, sealed and _____(SEAL)
delivered in the presence of: Name of individual
d/b/a tradename

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Attachments: Exhibit E (Plat of Easement)

STORMWATER FACILITIES AND PRACTICES ACCESS EASEMENT AGREEMENT

SO AGREED this _____ day of _____, 20_____.

**PROPERTY OWNER
CORPORATION**

Standard Signature Blocks for Agreements under seal with the City:

1. By a corporation with a sole officer (company should provide corporate bylaws proving it has a sole officer):

This Agreement is executed under seal as follows:

Exact Corporate Name

Signed, sealed and
delivered in the presence of:

By: _____(SEAL)
Name of President, President

Witness

[Affix corporate seal]

Notary Public
Commission Expires _____
[Affix Seal]

OR

Standard Signature Blocks for Agreements under seal with the City:

1. By a corporation with President and Vice President and Secretary (Corporate authority is presumed for any agreement signed by the President or Vice President, attested to by the Corporate Secretary and which has the corporate seal affixed. The corporate name should match the Secretary of State website for the state of the incorporation):

This Agreement is executed under seal as follows:

	Exact Corporate Name
Signed, sealed and delivered in the presence of:	By: _____(SEAL) Name of President, President
_____ Witness	Attest:
_____ Notary Public Commission Expires _____ [Affix Seal]	_____ Name of Secretary, Secretary [Affix Corporate Seal]

OR

Signed, sealed and
delivered in the presence of:

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Exact Corporate Name

By: _____(SEAL)
Name of Vice-President, Vice-President

Attest:

Name of Secretary, Secretary

[Affix Corporate Seal]

OR

Standard Signature Blocks for Agreements under seal with the City:

1. By a corporation which has passed a resolution (which must be accompanied by Secretary’s certificate certifying that the Resolution is still in full force and effect and the names of persons authorized under the Resolution to execute the Agreement on behalf of the corporation):

This Agreement is executed under seal as follows:

Exact Corporate Name

Signed, sealed and
delivered in the presence of:

By: _____(SEAL)
Name, title of authorized signatory

Witness

Notary Public
Commission Expires _____
[Affix Seal]

Attachments: Exhibit E (Plat of Easement)

Link back to [BMP #4 – Maintenance Program](#)

Attachment 5.3 – GI/LID Program

Link back to [BMP #6 – GI/LID Program](#)

This attachment will be updated once the GI/LID Program is submitted and approved by EPD. The program must be submitted to EPD by February 5, 2020.

Intentionally left blank for GI/LID Program

Attachment 6.1

6/21/2019

HiperWeb Gainesville Operations(Gainesville, FLOWERS, JENNIFER)

Stormwater Structure Inspection

STORMWATER STRUCTURE INSPECTION FORM

Link back to [BMP #2 - MS4 Inspection Program](#)

Go Back		
Asset ID:		
A13520	Refresh	<input type="checkbox"/> Get Last Insp
Description:	Location:	Serial #:
A13520	TBD - Stormwater Inlets	N/A
SAFETY FIRST. Please follow Safe work procedures.		
+ JOBSITE DETAILS		
Inspected By:		Date Inspected (MM/DD/YYYY):
Stormwater - Jennifer Flowers (FLOW ▼)		6/21/2019
+ JOB COST INFO		
1) Weather Condition		
<input type="radio"/> Dry		
<input type="radio"/> Rain		
<input type="radio"/> Ice		
<input type="radio"/> Other		
2) Presence of Water		
<input type="radio"/> None		
<input type="radio"/> Flowing		
<input type="radio"/> Standing		
3) Inspection Type		
<input type="radio"/> Catch Basin		
<input type="radio"/> Ditch		
4) Debris in and around structure		
<input type="radio"/> Minor		
<input type="radio"/> Moderate		
<input type="radio"/> Significant		
5) Sediment build up in structure		
<input type="radio"/> None		
<input type="radio"/> 0-25 Percent		
<input type="radio"/> 25-50 Percent		
<input type="radio"/> 51-75 Percent		
<input type="radio"/> 76-100 Percent		
6) Structure Damage		
<input type="radio"/> None		
<input type="radio"/> Minor		
<input type="radio"/> Moderate		
<input type="radio"/> Safety Hazard		
<input type="radio"/> Severe		
<input type="radio"/> Outfall Damage		
7) Vegetation		
<input type="radio"/> Normal		
<input type="radio"/> Excessive Growth		
<input type="radio"/> Inhibited Growth		

8) Additional Work Required?
<input type="checkbox"/> Yes, failed pipe
<input type="checkbox"/> Yes, damage inlet
<input type="checkbox"/> Yes, excessive debris
<input type="checkbox"/> Yes, damaged lid/cover
<input type="checkbox"/> Yes, failed structure
<input type="checkbox"/> Yes, infiltration present
<input type="checkbox"/> No, maintenance is not required
9) Comments:
<input style="width: 100%;" type="text"/>
10) CONDITION
<input type="radio"/> Good
<input type="radio"/> Fair
<input type="radio"/> Poor

Upload File: [Choose File](#) No file chosen
Please upload only one picture of the incident if available.

[Save Inspection](#)



Attachment 6.2 City of Gainesville

MS4 Inspection, Maintenance and Waste Disposal Procedures

Link back to [BMP #2 - MS4 Inspection Program](#) [BMP #3- MS4 Maintenance Program](#)

Catch Basins and Storm Pipes

1. A minimum of 5% of city maintained catch basins will be inspected annually, with 100% inspected within the 5-year permit period. The percentage of structures inspected each year will vary as City staff will rotate throughout the City inspecting existing structures. New structures will be inspected when they are built or a new road is accepted by the City.
2. Each inspection will be documented electronically on a Stormwater Structure Inspection form.
3. Debris will be removed from the catch basin, when 25% filled with debris to prevent obstruction of the flow. Debris will be disposed of in accordance with disposal procedures below.
4. Storm pipes will be inspected and cleaned as part of the catch basin inspection and documented on an inspection form or electronically. Pipes are cleaned out when filled to 50%.
5. The infrastructure will be evaluated to determine if there are any structural problems.
6. The repair and replacement of boxes, lids and pipes are completed on an as necessary basis.
7. A work order will be issued for any needed maintenance and will be completed at the time of the inspection or on a later date, based on priority and funding availability.

Ditches

1. A minimum of 1 ditch will be inspected annually, with 100% inspected within the 5-year permit period.
2. The infrastructure will be evaluated to determine if there are any structural problems.
3. Each inspection will be documented electronically on a Stormwater Structure Inspection form.
4. Debris/obstructions will be removed from the ditch when the inspector determines flow would be substantially obstructed.
5. A work order will be issued, if any repairs and/or cleaning needs to occur.
6. Debris will be disposed of in accordance with disposal procedures below.

Ponds

7. A minimum of 5% of city and private ponds will be inspected annually, with 100% inspected within the 5-year permit period.
8. Each inspection will be documented electronically on the Stormwater Pond Inspection Form.
9. The pond owner will be notified in writing by the Environmental Services Manager if any maintenance and/or repairs are necessary.
10. Follow up inspections will be completed to ensure the pond was brought into compliance and the required maintenance was completed.
11. If maintenance was not completed enforcement action will be taken in accordance with the Enforcement Response Plan.
12. Work orders will be issued for City-owned ponds that require maintenance and/or repairs. Maintenance will be completed on public ponds where feasible.

Waste Disposal Procedures (Link back to [BMP #6 - Waste Disposal](#))

1. Debris from storm drain lines, gutters, ditches and other storm water infrastructure is collected either by street sweeper or other means and disposed of appropriately.
2. Any debris collected is taken to a temporary storage facility at the Alta Vista complex or Bradford Street.
3. When either temporary storage facility is full, the debris is hauled by dump truck to a properly licensed disposal facility.
4. Some leaf and limb debris is utilized as compost available to city residents.
5. The amount of debris removed from each location will be documented.

Attachment 6.2.A

MS4 Maintenance Program Work Order Form Link back to [BMP #3- MS4 Maintenance Program](#)

WORK ORDER | NEW

ASSET INFORMATION:

Facility: * Stormwater

Location: * TBD - Stormwater Inlets

Asset Class: * Stormwater Inlets

Asset: 25CB2036XXL

[Edit Asset](#)

JOB ACTIVITY INFORMATION:

Department: *

Supervisor: *

Assigned to: *

Job Type: *

Tasks: *

Date Wanted: * 08/21/2019

Priority: *

Comment/Instructions: *

25CB2036XXL

No images available [Add Photo](#)

[Maintenance History](#)

[Asset Detail](#)

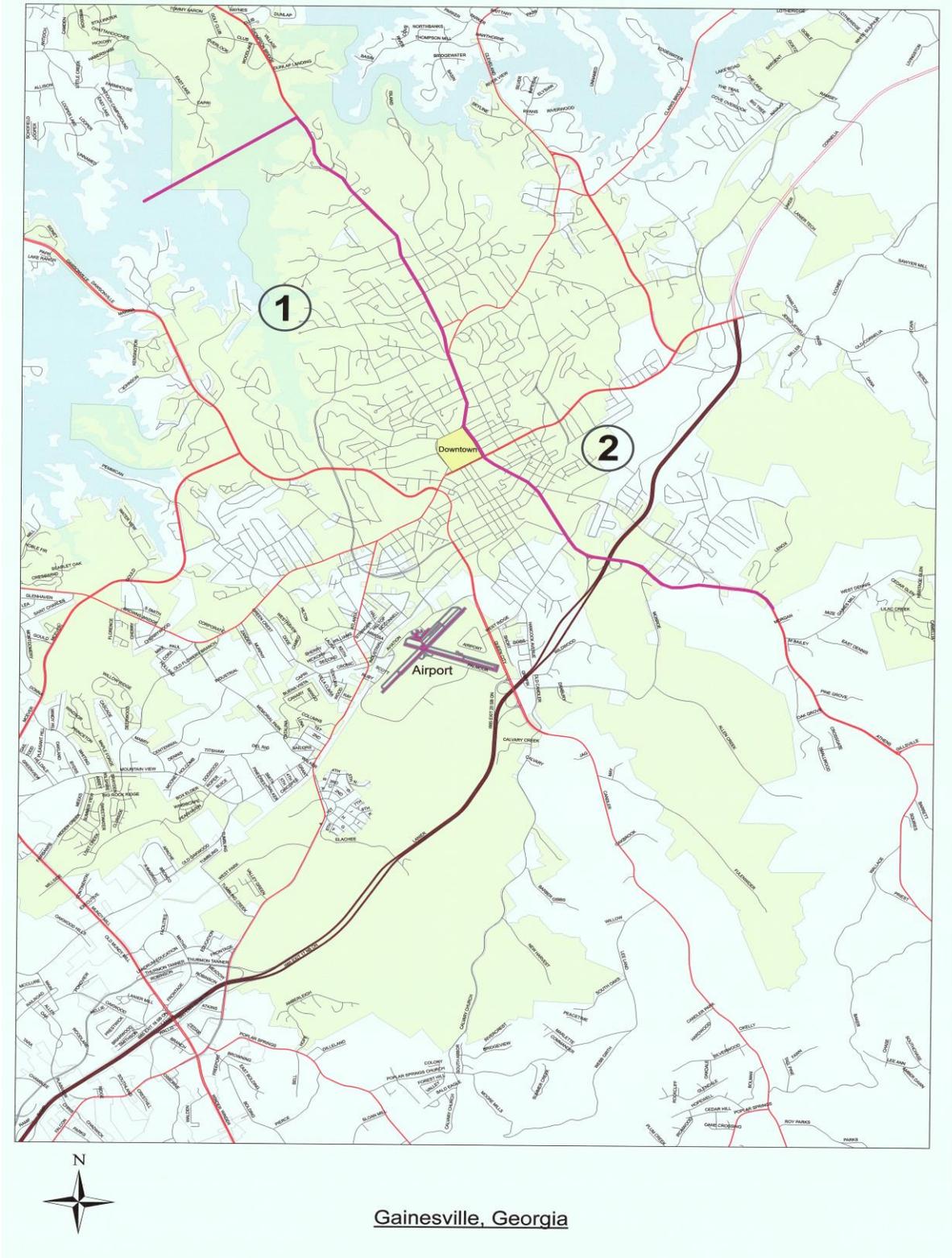
NAMPLATE DATA

Namplate Data Not Available

© 2013 PSD Software powered by HiperWeb™

Attachment 6.3

Link back to [BMP #4 - Street and Parking Lot Cleaning Program](#)



Attachment 6.4A

Link back to [BMP #7 - New Flood Management Projects](#)

Georgia Stormwater Management Manual Stormwater Quality Site Development Review Tool Version 2.2					
General Information					
Name of Developer:		Date Submitted:			
Development Name:		Permit Number:			
Site Location / Address:		Developer Contact:			
		Phone Number:			
		Name of Engineer(s):			
Development Type:		Maintenance Responsibility:			
Site Summary					
Total Pre-Development Area		0.00			
Total Post-Development Area		0.00			
Total Treated Area (ac):		0.00			
Total Untreated Area (ac):		0.00			
		I (ac)	P (ac)	(ac)	
Drainage Basin 1	DB 1	0.00	0.00	0.00	
Drainage Basin 2	DB 2	0.00	0.00	0.00	
Drainage Basin 3	DB 3	0.00	0.00	0.00	
Drainage Basin 4	DB 4	0.00	0.00	0.00	
Drainage Basin 5	DB 5	0.00	0.00	0.00	
Drainage Basin 6	DB 6	0.00	0.00	0.00	
Drainage Basin 7	DB 7	0.00	0.00	0.00	
Drainage Basin 8	DB 8	0.00	0.00	0.00	
Drainage Basin 9	DB 9	0.00	0.00	0.00	
Drainage Basin 10	DB 10	0.00	0.00	0.00	
TOTAL		0.00	0.00	0.00	
I = Impervious Area, P = Pervious Area, CR = Curved Line Area					
Target Runoff Reduction Volume Achieved?		N/A			
Target TSS Removal Achieved?		No			
Total Target Runoff Reduction Volume (cf)		0			
Runoff Reduction Volume Achieved (cf)		0			
Total Target Water Quality Volume (cf)		0			
% TSS Removal Achieved		0%			
Official Use Only					
Tracking #:			Conditions of Approval:		
Reviewed By:					
Date Approved:					
<	>	Instructions	Tool Flowchart	Summary	RR_TSS Removal %
		DB 1	DB 2	DB 3	DB 4
				DB 5	

Copy of full spreadsheet can be found at <https://atlantaregional.org/natural-resources/water/georgia-stormwater-management-manual/>

Attachment 6.5

Link back to [BMP #9 - Municipal Facilities](#)

City of Gainesville Municipal Facilities List			
No.	Facility Name	Facility Location	Type of Operation
Maintenance			
1	Alta Vista Maintenance Shop	263 Alta Vista Road	Street Maintenance
2	Water Resources Maintenance Shop	1198 Marler Street	Fleet Maintenance
Storage			
3	Hancock-Bradford-Gainesville Mill Storage Facilities	791 Georgia Avenue	Storage
Airports			
4	Lee Gilmer Memorial Airport	1137 Aviation Way	Municipal Airport
Water Treatment Plants			
5	Lakeside Drinking water Treatment Plant	5640 Jim Crow Road	Drinking Water Treatment Plant
6	Riverside Drinking Water Treatment Plant	2120 Riverside Drive	Drinking Water Treatment Plant



Attachment 6.6
 Link back to BMP #9 - Municipal Facilities
Municipal Facility Pollution Prevention/Good Housekeeping
Inspection
 Stormwater Management Program
 City of Gainesville

Issue Being Evaluated	Yes	No	N/A	Comments (Stains, Odors, Leaks, Trash & Debris)
<u>OUTFALL(S):</u>				
Any water flowing? (If YES, define the source):				
-Irrigation				
-Water line flushing				
-Broken water line				
-Unknown				
The connection to the source must be identifies and eliminated as soon as possible.				
<u>SITE HOUSEKEEPING:</u>				
Clean of debris (paper, leaves, etc.)?				
Storm drain inlets clean?				
<u>VEHICLE MAINTENANCE/STORAGE AREAS:</u>				
Dirt and Grease buildup?				
Clean of debris?				
Stains on the asphalt?				
Are oily parts exposed to storm water contact?				

Date/Time: _____ Location: _____



**Municipal Facility Pollution Prevention/Good
Housekeeping Inspection**
Stormwater Management Program
City of Gainesville

Issue Being Evaluated	Yes	No	N/A	Comments (Stains, Odors, Leaks, Trash & Debris)
<u>MATERIALS STORAGE AREAS:</u>				
Are the loading and unloading areas clean?				
Are chemicals on site properly stored?				
Are chemicals containers properly labeled?				
Is there secondary containment in chemical storage areas?				
Does the facility maintain a list of chemicals stored on site?				
Does the facility maintain current MSDS for each chemical on site?				
Does facility maintain a written clean-up procedure for chemical spills?				
Are potential pollutants properly stored beneath cover?				
Are areas around waste containers clean?				
<u>VEHICLE FUELING AREAS:</u>				
Are fuel pumps under cover?				
Are fuel stains evident?				
<u>SITE CONSTRUCTION ACTIVITIES:</u>				
Erosion controls in place?				
Construction debris/litter exposed to stormwater?				
Materials covered?				

Attachment O.1 – IDDE Legal Authority

Link back to BMP #1 – IDDE Legal Authority

CHAPTER 4-7. - STORMWATER AND ILLICIT DISCHARGES AND ILLEGAL CONNECTIONS

Sec. 4-7-1. - Purpose.

The purpose of this chapter is to:

- (1) Designate a stormwater management ordinance administrator which shall implement the provisions of these ordinances, and
- (2) To assure the continued, efficient operation of the city stormwater system by specifically prohibiting illicit discharges and illegal connections and specifically:
 - a. Regulate the contribution of pollutants to the municipal separate storm sewer system by any person;
 - b. Prohibit illicit discharges and illegal connections to the municipal separate storm sewer system;
 - c. Require owners of stormwater management systems to maintain the system such that said system functions as originally designed;
 - d. Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the municipal separate storm sewer system; and
 - e. To establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this chapter.

Sec. 4-7-2. - Definitions.

The following words, term and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Accidental discharge means a discharge prohibited by this chapter into the city's separate storm sewer system, which occurs by chance and without planning or consideration prior to occurrence.

Approved stormwater discharge means a discharge of rainwater into the city's separate stormwater system approved in advance of connection by the public works department.

City means the City of Gainesville, Georgia.

Drainage means a general term applied to the removal of surface or subsurface water from a given area either by gravity or by pumping; commonly applied herein to surface water.

Drainage system means the surface and subsurface system for the removal of water from the land, including both the natural elements of streams, marshes, swales, and ponds, whether of an intermittent or continuous nature, and the man-made element which includes culverts, ditches, channels, detention facilities, and the storm sewer system.

Illicit discharge means any direct or indirect non-stormwater discharge to the municipal separate storm sewer system, except as exempted in section 4-7-3.

Illegal connection means either of the following:

- (1) Any pipe, open channel, drain or conveyance, whether on the surface or subsurface, which allows an illicit discharge to enter the storm drain system including but not limited to any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system, regardless of whether such pipe, open channel, drain or conveyance has been previously allowed, permitted, or approved by an authorized enforcement agency; or

- (2) Any pipe, open channel, drain or conveyance connected to the municipal separate storm sewer system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Industrial stormwater permit means a national pollutant discharge elimination system (NPDES) permit issued to an industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Municipal (city's) separate storm sewer system (MS4) means any facility designed or used for collecting and/or conveying stormwater, including but not limited to any roads with drainage systems, highways, city streets, curbs, gutters, inlets, catch basins, piped storm drains, pumping facilities, structural stormwater controls, ditches, swales, natural and man-made or altered drainage channels, reservoirs, and other drainage structures, and which is not part of a publicly-owned treatment works.

Non-stormwater discharge means any discharge to the storm drain system that is not composed entirely of stormwater.

Owner means the person in whom is vested the ownership, dominion, or title of property. This term shall also include a tenant, any agent of the owner, or tenant including a developer.

Person means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of this state, any interstate body, or any other legal entity.

Pollutant means anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; petroleum hydrocarbons; automotive fluids; cooking grease; detergents (biodegradable or otherwise); degreasers; cleaning chemicals; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, dirt, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; liquid and solid wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; concrete and cement; excessive heat; and noxious or offensive matter of any kind.

Pollution means the contamination or other alteration of any water's physical, chemical or biological properties by the addition of any constituent and includes but is not limited to, a change in temperature, taste, color, turbidity, or odor of such waters, or the discharge of any liquid, gaseous, solid, radioactive, or other substance into any such waters as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety, welfare, or environment, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Premises means any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Public works department means the department of the city responsible for roads, drainage, traffic, airport, sanitation, the cemetery and engineering.

Runoff means the portion of precipitation on the land which reaches the drainage system. Also known as stormwater runoff.

Sediment means solid material, both inorganic and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, ice or gravity; the product of erosion.

State waters means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual, partnership or corporation, as determined by the public works department.

Stormwater management means the collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, streambank channel erosion,

habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.

Stormwater management ordinance administrator means the public works department of the city.

Stormwater management system means the entire set of structural and nonstructural stormwater management facilities and practices that are used to capture, convey and control the quantity and quality of the stormwater runoff from a premise.

Stream means a natural body of running water flowing continuously or intermittently in a channel on or below the surface of the ground.

Structural stormwater control means a structural stormwater management facility or device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release or the velocity of flow of such runoff.

Sec. 4-7-3. - Prohibition of illicit discharges

- (a) It is unlawful for any person to throw, drain, run or otherwise discharge to any component of the city's separate storm sewer system or to cause, permit or suffer to be thrown, drained, run, or allow to seep or otherwise discharge into such system all matter of any nature excepting only such stormwater or surface water as authorized in this chapter. It shall be the responsibility of the discharger to provide to the public works department with the appropriate certifications that discharges to the city separate storm sewer system meet the requirements of this chapter.
- (b) The public works department may exempt the following discharges from the prohibition provision of subsection (a) unless such discharges are identified as possible pollution sources:
 - (1) Water line flushing performed by a government agency, diverted stream flows, rising ground waters, and unpolluted ground water infiltration.
 - (2) Unpolluted pumped ground water.
 - (3) Discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, and street rinse water.
 - (4) Discharges or flows from fire fighting.
 - (5) Other unpolluted water.
- (6) The prohibition provision above shall not apply to any non-stormwater discharge permitted under an NPDES permit or order issued to the discharger and administered under the authority of the state and the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the municipal separate storm sewer system.

Sec. 4-7-4. - Prohibition of illegal connections.

- (a) It is unlawful for any person, company, corporation, and/or entity to connect any pipe, open channel, any other conveyance system that discharges anything except approved stormwater discharges, based on the exemptions listed in subsection 4-7-3(b), to the city separate storm sewer system.
- (b) Connections to the separate storm sewer system which are in violation of this article must be disconnected. The owner of the property where the connection originates shall be responsible for redirecting such connections to an approved location.

Sec. 4-7-5. - Owner to maintain stormwater management system.

The owner of a stormwater management system is to maintain such system in functional and working order as to control the quality and quantity of water as originally designed and constructed.

Sec. 4-7-6. - Industrial or construction activity discharges.

Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the city prior to allowing discharges to the city's separate storm sewer system.

Sec. 4-7-7. - Access and inspection of properties and facilities.

The city shall be permitted to enter and inspect properties and facilities at reasonable times as often as may be necessary to determine compliance with this chapter.

- (1) If a property or facility has security measures in force which require proper identification and clearance before entry into its premises, the owner or operator shall make the necessary arrangements to allow access to representatives of the city.
- (2) The owner or operator shall allow the city ready access to all parts of the premises for the purposes of inspection, sampling, photography, videotaping, examination and copying of any records that are required under the conditions of an NPDES permit to discharge stormwater.
- (3) The city shall have the right to set up on any property or facility such devices as are necessary in the opinion of the city to conduct monitoring and/or sampling of flow discharges.
- (4) The city may require the owner or operator to install monitoring equipment and perform monitoring as necessary, and make the monitoring data available to the city. This sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the owner or operator at his/her own expense. All devices used to measure flow and quality shall be calibrated to ensure their accuracy.
- (5) Any temporary or permanent obstruction to safe and easy access to the property or facility to be inspected and/or sampled shall be promptly removed by the owner or operator at the written or oral request of the city and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.
- (6) Unreasonable delays in allowing the city access to a facility is a violation of this chapter.
- (7) If the city has been refused access to any part of the premises from which stormwater is discharged, and the city is able to demonstrate probable cause to believe that there may be a violation of this chapter, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this chapter or any order issued hereunder, or to protect the overall public health, safety, environment and welfare of the community, then the city may seek issuance of a search warrant from any court of competent jurisdiction.

Sec. 4-7-8. - Notification of accidental discharges and spills.

Notwithstanding other requirements of law, as soon as any person responsible for a facility, activity or operation, or responsible for emergency response for a facility, activity or operation has information of any known or suspected release of pollutants or non-stormwater discharges from that facility or operation which are resulting or may result in illicit discharges or pollutants discharging into stormwater, the city's separate storm sewer system, state waters, or waters of the U.S., said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release so as to minimize the effects of the discharge.

Said person shall notify the authorized enforcement agency in person or by phone, facsimile, e-mail, or in person no later than twenty-four (24) hours of the nature, quantity and time of occurrence of the discharge. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the city within three (3) business days of the phone or in person notice. If the discharge of prohibited

materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three (3) years. Said person shall also take immediate steps to ensure no recurrence of the discharge or spill.

In the event of such a release of hazardous materials, emergency response agencies and/or other appropriate agencies shall be immediately notified.

Failure to provide notification of a release as provided above is a violation of this chapter.

Sec. 4-7-9. - Violations, enforcement and penalties.

- (a) *Violations.* It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this chapter. Any person who has violated or continues to violate the provisions of this chapter, may be subject to the enforcement actions outlined in this section or may be restrained by injunction or otherwise abated in a manner provided by law.

In the event the violation constitutes an immediate danger to public health or public safety, the city is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. The city is authorized to seek costs of the abatement as outlined in this section.

- (b) *Notice of violation.* Whenever the city finds that a violation of this chapter has occurred, the city may order compliance by written notice of violation.

- (1) The notice of violation shall contain:

- a. The name and address of the alleged violator;
- b. The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred;
- c. A statement specifying the nature of the violation;
- d. A description of the remedial measures necessary to restore compliance with this chapter and a time schedule for the completion of such remedial action;
- e. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed; and
- f. A statement that the determination of violation may be appealed as provided in subsection (c) by filing a written notice of appeal within thirty (30) days of service of notice of violation.

- (2) Such notice may require without limitation:

- a. The performance of monitoring, analyses, and reporting;
- b. The elimination of illicit discharges and illegal connections;
- c. That violating discharges, practices, or operations shall cease and desist;
- d. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
- e. Payment of costs to cover administrative and abatement costs; and
- f. The implementation of pollution prevention practices.

- (c) *Appeal of notice of violation.* Any person receiving a notice of violation may appeal the determination of the city. The notice of appeal must be received in writing by the city clerk's office within thirty (30) days from the date of the notice of violation. Hearing on the appeal before the city's administrative hearing officer, as provided in chapter 1-8, shall take place within thirty (30) days from the date of receipt of the notice of appeal. The decision of the administrative hearing officer shall be final.

- (d) *Enforcement measures after appeal.* If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or, in the event of an appeal, within thirty (30) days of the decision of the administrative hearing officer upholding the decision of the city, then representatives of the city may enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.
- (e) *Costs of abatement of the violation.* Within thirty (30) days after abatement of the violation, the owner of the property will be notified of the cost of the city of the abatement, including administrative costs. The property owner may file a written protest objecting to the assessment or to the amount of the assessment within thirty (30) days of such notice. If the amount due is not paid within thirty (30) days after receipt of the notice, or if an appeal is taken as provided in subsection (c), within thirty (30) days after a decision on said appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

Any person violating any of the provisions of this chapter shall become liable to the city by reason of such violation.

- (f) *Civil penalties.* In the event the alleged violator fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within thirty (30) days, or such greater period as the city shall deem appropriate, after the city has taken one or more of the actions described above, the city may impose a penalty not to exceed one thousand dollars (\$1,000.00) (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.
- (g) *Criminal penalties.* For intentional and flagrant violations of this chapter, the city may issue a citation to the alleged violator requiring such person to appear in the municipal court of the city to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) or imprisonment for sixty (60) days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.
- (h) *Violations deemed a public nuisance.* In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this chapter is a threat to public health, safety, welfare, and environment and is declared and deemed a nuisance, and may be abated by injunctive or other equitable relief as provided by law.
- (i) *Remedies not exclusive.* The remedies listed in this chapter are not exclusive of any other remedies available under any applicable federal, state or local law and the city may seek cumulative remedies.

The city may recover attorney's fees, court costs, and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses.

[Link back to BMP #1 – IDDE Legal Authority](#)

Attachment O.2 – Construction Legal Authority

Link back to [BMP #1 – E&S Legal Authority](#)

Chapter 9-14 Soil Erosion, Sedimentation and Pollution Control

Sec. 9-14-1 Definitions

Best management practices (BMPs): These include sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with and no less stringent than, those practices contained in the Manual for Erosion and Sediment Control in Georgia published by the Commission as of January 1 of the year in which the land-disturbing activity was permitted, a copy of which is on file in the clerk of the city.

Board: Board of Natural Resources.

Buffer: The area of land immediately adjacent to the banks of state waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.

Certified personnel: A person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water conservation Commission.

Commission: The Georgia Soil and Water Conservation Commission (GSWCC).

CPESC: Certified Professional in Erosion and Sediment Control with current certification by EnviroCert, Inc. , which is also referred to as CPESC or CPESC, Inc.

Cut: A portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to excavated surface. Also known as "excavation."

Department: The Georgia Department of Natural Resources (DNR).

Design professional: A professional licensed by the State of Georgia in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a Certified Professional in Erosion and Sediment Control (CPESC) with a current certification by EnviroCert, Inc. Design Professionals shall practice in a manner that complies with applicable Georgia law governing professional licensure.

Director: The director of the environmental protection division or an authorized representative.

District: The Hall County Soil and Water Conservation District.

Division: The environmental protection division (EPD) of the department of natural resources.

Drainage structure: A device composed of a virtually nonerodible material such as concrete, steel, plastic or other such material that conveys water from one place to another by intercepting the flow and carrying it to a release point for stormwater management, drainage control or flood control purposes.

EPD: The environmental protection division of the state department of natural resources.

EPD director: The director of the environmental protection division or an authorized representative.

Erosion: The process by which land surface is worn away by the action of wind, water, ice or gravity.

Erosion, sedimentation and pollution control plan: A plan required by the Erosion and Sedimentation Act, O.C.G.A. Chapter 12-7, as amended, that includes, as a minimum protections at least as stringent as the state general permit, best management practices, and requirements in Section 9-14-5 of this chapter.

Fill: A portion of land surface to which soil or other solid material has been added; the depth above the original ground or an excavation.

Final stabilization: All soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, one hundred (100) percent of the soil surface is uniformly covered in permanent vegetation with a density of seventy (70) percent or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscape areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and seeding of target crop perennials appropriate for the region). Final stabilization applies to each phase of construction.

Finished grade: The final elevation and contour of the ground after cutting or filling and conforming to the proposed design.

Grading: Altering the shape of ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling and shaping, or any combination thereof, and shall include the land in its cut or filled condition.

Grading permit: Authorization necessary but limited to the initiation and conduct of a land-disturbing activity on a property. For purposes of this Code, a land development permit issued pursuant to chapter 9-13-7 shall constitute approval of the grading permit required by this chapter.

Ground elevation: The original elevation of the ground surface prior to cutting or filling.

Land-disturbing activity: Any activity that may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands within the state, including, but not limited to, clearing, dredging, grading, excavating, transporting and filling of land but not including agricultural practices as described in this chapter.

Larger common plan of development or sale: A contiguous area where multiple separate and distinct construction activities are occurring under one plan of development or sale. For the purposes of this paragraph, "plan" means an announcement; piece of documentation such as a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, or computer design; or physical demarcation such as boundary signs, lot stakes, or surveyor markings, indicating that construction activities may occur on a specific plot.

Local Issuing Authority: The governing authority of any county or municipality which is certified pursuant to subsection (a) O.C.G.A. 12-7-8.

Metropolitan River Protection Act (MRPA): A state law referenced as O.C.G.A. § 12-5-440 et seq. which addresses environmental and developmental matters in certain metropolitan river corridors and their drainage basins.

Manual for Erosion and Sediment Control in Georgia: A publication of the same name published by the state soil and water conservation commission, and as amended or supplemented from time to time, a copy of which is on file in the office of the clerk of the city.

Natural ground surface: The ground surface in its original state before any grading, excavation or filling.

Nephelometric turbidity units (NTU): Numerical units of measure based upon photometric analytical techniques for measuring the light scattered by finely divided particles of a substance in suspension. This technique is used to estimate the extent of turbidity in water in which colloidally dispersed particles are present.

NOI: A notice of intent form provided by EPD for coverage under the state general permit.

NOT: A notice of termination form provided by EPD to terminate coverage under the state general permit.

Operator: The party or parties that have: (A) operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; or (B) day-to-day operational control of those activities that are necessary to ensure compliance with an erosion, sedimentation and pollution control plan for the site or other permit conditions, such as a person authorized to direct workers at a site to carry out activities required by the erosion, sedimentation and pollution control plan or to comply with other permit conditions.

Outfall: The location where storm water in a discernible, confined and discrete conveyance, leaves a facility or site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.

Permit: The authorization necessary to conduct a land-disturbing activity under the provisions of this chapter.

Person: Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of the state, any interstate body or any other legal entity.

Phase or phased: Sub-parts or segments of construction projects where the sub-part or segment is constructed and stabilized prior to completing construction activities on the entire construction site.

Project: The entire proposed development project regardless of the size of the area of land to be disturbed.

Properly designed: Designed in accordance with the design requirements and specifications contained in the Manual for Erosion and Sediment Control in Georgia (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the manual as approved by the commission up until the date of NOI submittal.

Roadway drainage structure: A device such as a bridge, culvert or ditch, composed of a virtually nonerodible material such as concrete, steel, plastic or other such material that conveys water under a roadway by intercepting the flow on one side of a traveled way consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.

Sediment: Solid material, both organic and inorganic, that is in suspension, is being transported or has been moved from its site of origin by air, water, ice or gravity as a product of erosion.

Sedimentation: The process by which eroded material is transported and deposited by the action of water, wind, ice or gravity.

Soil and water conservation district approved plan: An erosion, sedimentation and pollution control plan approved in writing by the Hall County Soil and Water Conservation District.

Stabilization: The process of establishing an enduring soil cover of vegetation by the installation of temporary or permanent structures for the purpose of reducing to a minimum the erosion process and the resultant transport of sediment by wind, water, ice or gravity.

State general permit: The national pollution discharge elimination system (NPDES) general permit or permits for storm-water runoff from construction activities as is now in effect or as may be amended or reissued in the future pursuant to the state's authority to implement the same through federal delegation under the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251, et seq., and subsection (f) of O.C.G.A. Code Section 12-5-30, as amended.

State waters: Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual, partnership or corporation.

Structural erosion, sedimentation and pollution control practices: Practices for the stabilization of erodible or sediment-producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss. Examples of structural erosion and sedimentation control practices are riprap, sediment basins, dikes, level spreaders, waterways or outlets, diversions, grade stabilization structures and sediment traps. Such practices can be found in the publication Manual for Erosion and Sediment Control in Georgia.

Trout streams: All streams or portions of streams within the watershed as designated by the wildlife resources division of the state department of natural resources under the provisions of the Georgia Water Quality Control Act, O.C.G.A. § 12-5-20, as amended, in the Rules and Regulations for Water Quality Control Chapter 391-3-6 at www.epd.georgia.gov, as amended. Streams designated as primary trout waters are defined as water supporting a self-sustaining population of rainbow, brown or brook trout. Streams designated as secondary trout waters are those in which there is no evidence of natural trout reproduction, but are capable of supporting trout throughout the year. First order trout waters are streams into which no other streams flow except springs.

Vegetative erosion and sedimentation control measures: Measures for the stabilization of erodible or sediment-producing areas by covering the soil with:

- (a) Permanent seeding, sprigging or planting, producing long-term vegetative cover;
- (b) Temporary seeding, producing short-term vegetative cover; or
- (c) Sodding, covering areas with a turf of perennial sod-forming grass.

Such measures can be found in the Manual for Erosion and Sediment Control in Georgia.

Watercourse: Any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a definite channel, bed and banks, and including any area adjacent thereto subject to inundation by reason of overflow or floodwater.

Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Sec. 9-14-2 Exemptions

This chapter shall apply to any land-disturbing activity undertaken by any person on any land except for those uses specifically identified in this section.

Where this chapter requires compliance with section 9-14-3 through section 9-14-10, the city shall enforce compliance with the minimum requirements as if a land development permit had been issued and any violations of said minimum requirements shall be subject to the same penalties as violations by land development permit holders.

(a)- Mining and quarrying.

Surface mining, as same is defined in O.C.G.A. § 12-4-72, as amended, entitled "The Georgia Surface Mining Act of 1968," and granite quarrying and land clearing for such quarrying are exempt from compliance with this chapter.

(b)- Minor activities.

Minor land-disturbing activities, such as home gardens and individual home landscaping, repairs, maintenance work, fences, and other related activities, which result in minor soil erosion are exempt from compliance with this chapter.

(c)- Single-family detached dwellings.

The construction of single-family residences, when such construction disturbs less than one acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and not otherwise exempted under this paragraph; provided, however that construction of any such residence shall conform to the minimum requirements as set forth in O.C.G.A. § 12-7-6, as amended, and this paragraph. For single-family residence construction covered by the provisions of this paragraph, there shall be a stream protection buffer zone between the residence and any state waters classified as trout streams pursuant to Article 2 of Chapter 5 of the Georgia Water Quality Control Act, as amended. In any such stream protection buffer zone, no land disturbing activity shall be constructed between the residence and the point where vegetation has been wrested by normal stream flow or wave action from the banks of the trout waters. For primary trout waters, the stream protection buffer zone shall be at least fifty (50) horizontal feet, and no variance to a smaller stream protection buffer shall be granted. For secondary trout waters, the stream protection buffer zone shall be at least fifty (50) horizontal feet, but the EPD director may grant variances to no less than twenty-five (25) feet. Regardless of whether a trout stream is primary or secondary, for first order trout waters, which are streams into which no other streams flow except for springs, the stream protection buffer shall be at least twenty-five (25) horizontal feet, and no variance to a smaller stream protection buffer shall be granted. The minimum requirements of subsection (b) of O.C.G.A. § 12-7-6, as amended, and the stream protection buffer zones provided by this paragraph shall be enforced by the city.

(d) - Agriculture.

Exempt from the requirements of this chapter are those agricultural operations defined in O.C.G.A. § 1-3-3, as amended, "definitions", to include raising, harvesting, or storing of products of the field or orchard; feeding, breeding, or managing livestock or poultry; producing or storing feed for use in the production of livestock, including but not limited to cattle, calves, swine, hogs, goats, sheep and rabbits or for use in the production of poultry, including but not limited to chicken, hens, and turkeys; producing plants, trees, fowl, or animals; the production of aqua culture, horticultural, dairy, livestock, poultry, eggs, and apiarian products and farm buildings and farm ponds.

(e)- Forestry land management practices.

Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land-disturbing or other activities otherwise prohibited in a stream protection buffer, as established in section 9-14-6 , no other land-disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three (3) years after completion of such forestry practices.

(f) - NRCS projects.

Any project carried out under the technical supervision of the natural resources conservation service of the United States Department of Agriculture shall be exempt from compliance with this chapter.

(g)- Small projects.

Any project involving less than one acre of disturbed area; provided, however, that this exemption shall not apply to any land-disturbing activity within a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre or within two hundred (200) feet of the bank of any state waters, and for purposes of this paragraph, "state waters" excludes channels and drainage ways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year-round; provided, however, that any person responsible for a project which involves less than one acre, which involves land-disturbing activity, and

which is within two hundred (200) feet of any such excluded channel or drainage way, must prevent sediment from moving beyond the boundaries of the property on which such project is located and provided, further that nothing contained herein shall prevent the city from regulating any such project which is not specifically exempted by this chapter.

(h)- State projects and state/local road projects.

Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the state department of transportation, the state highway authority, or the state road and tollway authority; or any road construction or maintenance project, or both, undertaken by any county or municipality; provided, however, that construction or maintenance projects of the state department of transportation or the state road and tollway authority which disturb one or more contiguous acres of land shall be subject to provisions of O.C.G.A. § 12-7-7.1, as amended; except where the state department of transportation, the state highway authority, or the state road and tollway authority is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a notice of intent under the state general permit shall be submitted to the city, the city shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6, as amended, as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders.

(i) - Electric and public utilities.

Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the public service commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. 36-18-1, as amended, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power; except where an electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the public service commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, as amended, or any agency or instrumentality of the United States engaged in the generation transmission, or distribution of power is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case the city shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6, as amended, as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders.

(j) Any public water system reservoir.

Sec. 9-14-3 Minimum requirements for erosion and sedimentation general provisions

Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities if requirements of the ordinance and the NPDES general permit are not met. Therefore, plans for those land-disturbing activities which are not exempted by section 9-14-2 shall contain provisions for application of soil erosion and sedimentation and pollution control measures and practices. The provisions shall be incorporated into the erosion, sedimentation and pollution control plans. Soil erosion, sedimentation and pollution control measures and practices shall conform to the minimum requirements of this chapter.

The application of measures and practices shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion, sedimentation and pollution during all stages of any land-disturbing activity in accordance with requirements of this chapter and the NPDES general permit.

Sec. 9-14-4 Minimum requirements/best management practices.

- (a) *Required.* Best management practices as set forth in this section and sec. 9-14-5 shall be required for all land-disturbing activities unless specifically exempted by section 9-14-2.
- (b) *Defense to enforcement action.* Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the EPD director or to any other allegation of noncompliance with this section or any substantially similar terms contained in a permit for the discharge of stormwater issued pursuant to subsection (f) of O.C.G.A. § 12-5-30, as amended, the "Georgia Water Quality Control Act."
- (c) *Definitions.* As used in this section, the terms "proper design" and "properly designed" mean in accordance with the hydraulic design specifications contained in the Manual for Erosion and Sediment Control in Georgia specified in O.C.G.A. § 12-7-6 subsection (b), as amended.
- (d) *Violations.* A discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed and maintained shall constitute a separate violation of any land disturbing permit issued by the city or of any state general permit issued by the division pursuant to subsection (f) of O.C.G.A. § 12-5-30, as amended, the "Georgia Water Quality Control Act," for each day on which such discharge results in the turbidity of receiving waters being increased by more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries or by more than ten (10) nephelometric turbidity units for waters classified as trout waters. The turbidity of the receiving waters shall be measured in accordance with guidelines to be issued by the EPD director. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than five (5) acres.
- (e) *Inadequate best management practices.* Failure to properly design, install or maintain best management practices shall constitute a violation of any land disturbing permit issued by the city or of any state general permit issued by the Division pursuant to subsection (f) of O.C.G.A. § 12-5-30, as amended, the "Georgia Water Quality Control Act," for each day on which such failure occurs.
- (f) *Requirements by EPD director.* The EPD director may require, in accordance with regulations adopted by the board of natural resources, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land-disturbing activities occur.

Sec. 9-14-5 Additional Minimum requirements.

The rules and regulations, ordinances, or resolutions adopted pursuant to O.C.G.A. § 12-7-1 et seq., as amended, for the purpose of governing land-disturbing activities shall require, as a minimum, protections at least as stringent as the state general permit; and best management practices, including soil conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the Manual for Erosion and Sediment Control in Georgia published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

- (a) Stripping of vegetation, re-grading and other development activities shall be conducted in a manner so as to minimize erosion.
- (b) Cut-fill operations must be kept to a minimum.
- (c) Development plans must conform to topography and soil type so as to create the lowest practicable erosion potential.
- (d) Whenever feasible, natural vegetation shall be retained, protected and supplemented.
- (e) The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum.
- (f) Disturbed soil shall be stabilized as quickly as practicable.

- (g) Temporary vegetation or mulching shall be employed to protect exposed critical areas during development.
- (h) Permanent vegetation and structural erosion control measures shall be installed as soon as practicable.
- (i) To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements O.C.G.A. § 12-7-1 et seq., as amended.
- (j) Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping of fills.
- (k) Cuts and fills may not endanger adjoining property.
- (l) Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners.
- (m) Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, provided, in any case, that such crossings are kept to a minimum.
- (n) No public streets, drainage systems or private property shall be restricted from normal use or operation by the scattering of earth, rock, vegetation and other debris resulting from the land disturbing activity. The permittee shall be responsible for clearing, unclogging and cleaning any such facility or lands on a daily basis.
- (o) Land-disturbing activity plans for erosion, sedimentation and pollution control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on-site or preclude sedimentation of adjacent waters beyond the levels specified in this chapter.
- (p) Land-disturbing activities shall not be conducted within the 100-year flood plain except in compliance with article 9-15.
- (q) Construction site operators are required to control waste at the construction site, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste.

Sec. 9-14-6 Stream protection buffers.

Except as provided in section 9-14-7, there is established a 25-foot stream protection buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal streams flow or wave action, except where the EPD director determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the EPD director pursuant to O.C.G.A. § 12-2-8 as amended, where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications, and are implemented; or along any ephemeral stream. As used in the provision, the term "ephemeral stream" means a stream: that under normal circumstances has water flowing only during and for a short duration after precipitation events; that has the channel located above the ground-water table year round; for which ground water is not a source of water; and for which runoff from precipitation is the primary source of water flow, unless exempted as along an ephemeral stream, the stream protection buffers of at least twenty-five (25) feet established pursuant to part 6 of Article 5, Chapter 5 of Title 12, the "Georgia Water Quality Control Act," as amended, shall remain in force unless a variance is granted by the EPD director as provided in this paragraph. The following requirements shall apply to any such stream protection buffer:

- (a) No land-disturbing activities shall be conducted within a stream protection buffer and a stream protection buffer shall remain in its natural, undisturbed state of vegetation until all land-

disturbing activities on the construction site are completed. Once the final stabilization of the site is achieved, a stream protection buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a stream protection buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and

- (b) The stream protection buffer shall not apply to the following land-disturbing activities provided that they occur at an angle, as measured from the point of crossing, within twenty-five (25) degrees of perpendicular to the stream; cause a width of disturbance of not more than fifty (50) feet within the stream protection buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented: (i) Stream crossings for water lines; or (ii) Stream crossings for sewer lines.

Sec. 9-14-7 Stream protection buffers along trout streams.

There is established a 50-foot stream protection buffer as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any state waters classified as "trout streams" pursuant to Article 2 of Chapter 5 of Title 12, as amended, the "Georgia Water Quality Control Act," except where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as trout streams which discharge an average annual flow of twenty-five (25) gallons per minute or less shall have a 25-foot stream protection buffer or they may be piped, at the discretion of the landowner, pursuant to the terms of a rule providing for a general variance promulgated by the board, so long as any such pipe stops short of the downstream landowner's property and the landowner complies with the stream protection buffer requirements for any adjacent trout streams. The EPD director may grant a variance from such stream protection buffer to allow land-disturbing activity, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. The following requirements shall apply to such stream protection buffer:

- (a) No land-disturbing activities shall be conducted within a stream protection buffer and a stream protection buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. Once the final stabilization of the site is achieved, a stream protection buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a stream protection buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and
- (b) The stream protection buffer shall not apply to the following land-disturbing activities provided that they occur at an angle, as measured from the point of crossing, within twenty-five (25) degrees of perpendicular to the stream; cause a width of disturbance of not more than fifty (50) feet within the stream protection buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented: (i) Stream crossings for water lines; or (ii) Stream crossings for sewer lines.

Sec. 9-14-8 Provisions regarding land disturbance activity and the disturbance of stream protection buffers.

This chapter shall not be construed as preventing the application of other requirements of this Code which require larger buffers along property lines than specified in this chapter (see Table 9-5-2 and Table 9-6-2, which may apply). Furthermore nothing contained in O.C.G.A. § 12-7-1 et seq., as amended, shall prevent the city from adopting rules and regulations, ordinances, or resolutions which contain stream protection buffer requirements that exceed the minimum requirements in this chapter.

See chapter 9-16 for provisions regarding disturbance within stream protection buffers.

The fact that land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this chapter or the terms of the permit.

Sec. 9-14-9 Maintenance of control measures.

Owner's responsibility. Maintenance of all soil erosion and sediment control measures, whether temporary or permanent, shall be at all times the responsibility of the owner.

Sec. 9-14-10 Manual adopted by reference.

Conformance with the minimum requirements may be attained through the use of design criteria in the current issue of the Manual for Erosion and Sediment Control in Georgia or through the use of more stringent, alternate design criteria which conform to sound conservation and engineering practices. The Manual for Erosion and Sediment Control in Georgia is hereby incorporated by reference into this chapter.

Sec. 9-14-11 Application/permit process.

(a) *General.* The property owner, developer and designated planners and engineers shall design and review before submittal, the general development plans. The city shall review the tract to be developed and the area surrounding it. The staff of the city shall consult the zoning ordinance, storm water management ordinance, subdivision ordinance, floodplain management ordinance, this chapter, and any other ordinances, rules, regulations or permits, which regulate the development of land within the jurisdictional boundaries of the city. However, the owner and/or operator are the only parties who may obtain a permit.

(b) *Application requirements.*

- (1) No person shall conduct any land-disturbing activity within the jurisdictional boundaries of the city without first obtaining a permit from the city to perform such activity and providing a copy of NOI submitted to EPD if applicable.
- (2) The application for a permit shall be submitted to the city and must include the applicant's erosion, sedimentation and pollution control plan with supporting data, as necessary. Said plans shall include, as a minimum, the data specified in this chapter. Erosion, sedimentation and pollution control plans, together with supporting data, must demonstrate affirmatively that the land disturbing activity proposed will be carried out in such a manner that the provisions of this chapter will be met. Applications for a permit will not be accepted unless accompanied by seven (7) copies of the applicant's erosion, sedimentation and pollution control plans. All applications shall contain a certification stating that the plan preparer or the designee there of visited the site prior to creation of the plan in accordance with EPD Rule 391-3-7-.10, as amended.
- (3) In addition to the local permitting fees, fees will also be assessed pursuant to paragraph (5) subsection (a) of O.C.G.A. § 12-5-23, as amended, provided that such fees shall not exceed eighty dollars (\$80.00) per acre of land-disturbing activity, and these fees shall be calculated and paid by the primary permittee as defined in the state general permit for each acre of land-disturbing activity included in the planned development or each phase of development. All applicable fees shall be paid prior to issuance of the land disturbance permit. Half of such fees levied shall be submitted to the division; except that any and all fees due from an entity which is required to give

notice pursuant to paragraph (9) or (10) of O.C.G.A. § 12-7-17, as amended, shall be submitted in full to the division.

- (4) Immediately upon receipt of an application and plan for a permit, the city shall refer the application and plan to the district for its review and approval or disapproval concerning the adequacy of the erosion, sedimentation and pollution control plan. The district shall approve or disapprove a plan within thirty-five (35) days of receipt. Failure of the district to act within thirty-five (35) days shall be considered an approval of the pending plan. The results of the district review shall be forwarded to the city. No permit will be issued unless the plan has been approved by the district, and any variances required by this chapter have been obtained, all fees have been paid, and bonding, if required, has been obtained. Such review will not be required if the city and the district have entered into an agreement which allows the city to conduct such review and approval of the plan without referring the application and plan to the district. The city with plan review authority shall approve or disapprove a revised plan submittal within thirty-five (35) days of receipt. Failure of the city with plan review authority to act within thirty-five (35) days shall be considered an approval of the revised plan submittal.
- (5) If a permit applicant has had two (2) or more violations of previous permits, this chapter, or the Erosion and Sedimentation Act, as amended within three (3) years prior to the date of filing the application under consideration, the city may deny the permit application.
- (6) The city may require the permit applicant to post a bond in the form of government security, cash, irrevocable letter of credit, or any combination thereof up to, but not exceeding, three thousand dollars (\$3,000.00) per acre or fraction thereof of the proposed land-disturbing activity, prior to issuing the permit. If the applicant does not comply with this chapter or with the conditions of the permit after issuance, the city may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance. These provisions shall not apply unless there is in effect an ordinance or statute specifically providing for hearing and judicial review of any determination or order of the city with respect to alleged permit violations.

(c) *Plan requirements.*

- (1) Plans must be prepared to meet the minimum requirements as contained in this chapter, or through the use of more stringent alternate design criteria which conform to sound conservation and engineering practices. The plan for the land-disturbing activity shall consider the interrelationship of the soil types, geological and hydrological characteristics, topography, watershed, vegetation, proposed permanent structures including roadways, constructed waterways, sediment control and storm water management facilities, local ordinances and state laws. Maps, drawings and supportive computations shall bear the signature and seal of the certified design professional. Persons involved in land development design, review, permitting, construction, monitoring, or inspections or any land disturbing activity shall meet the education and training certification requirements, dependent on his or her level of involvement with the process, as developed by the commission and in consultation with the division and stakeholder advisory board created pursuant to O.C.G.A. 12-7-20, as amended.
- (2) Data required for site plan shall include all the information required from the appropriate erosion, sedimentation and pollution control plan review checklist established by the commission as of January 1 of the year in which the land-disturbing activity was permitted. Erosion, sedimentation and pollution control plans shall include:
 - (a) Narrative or notes, and other information. Notes or narrative to be located on the site plan in general notes or in erosion and sediment control notes.
 - (b) Description of existing land use at project site and description of proposed project.

- (c) Name, address, and phone number of the property owner.
- (d) Name and phone number of 24-hour local contact that is responsible for erosion and sedimentation controls.
- (e) Size of project, or phase under construction, in acres.
- (f) Activity schedule showing anticipated starting and completion dates for the project. Include the statement in bold letters, that "the installation of erosion and sediment control measures and practices shall occur prior to or concurrent with land-disturbing activities."
- (g) Stormwater and sedimentation management systems-storage capacity, hydrologic study, calculations including off-site drainage areas and other information as may be needed to satisfy the requirements of articles 9-13 and 9-14.
- (h) Location of erosion and sediment control measures and practices using coding symbols from the Manual for Erosion and Sediment Control in Georgia, chapter 6, and meeting the requirements of article 9-14. Practices may include, but are not limited to:
 - (1)Construction exit.
 - (2)Sediment barrier.
 - (3)Sediment basin.
 - (4)Grassed waterway (open swale).
 - (5)Storm drain outlet protection.
 - (6)A plan for temporary and permanent vegetative and structural erosion and sediment control measures.
- (i)Vegetative plan for all temporary and permanent vegetative practices, including species, planting dates, and seeding, fertilizer, lime and mulching rates. The vegetative plan should show options for year-round seeding.
- (j)Detail drawings for all structural practices. Specifications may follow guidelines set forth in the *Manual for Erosion and Sediment Control in Georgia*.
- (k)Maintenance statement. "Erosion and sediment control measures will be maintained at all times. Additional erosion and sediment control measures and practices will be installed if deemed necessary by on-site inspection."
- (l)A description of the sediment control program and sediment control practices.
- (m)An adequate description of general topographic and soil conditions of the tract as available from the Hall County Soil and Water Conservation District.
- (n)A description of the maintenance program for sediment control facilities including inspection programs, vegetative establishment of exposed soils, method and frequency of removal and disposal of solid waste material removed from control facilities and disposition of temporary structural measures.
- (o)Any additional requirement established by the commission.

(d) *Permits.*

- (1) Permits shall be issued or denied as soon as practicable but in any event not later than forty-five (45) days after receipt by the city of a completed application as well as all required approved plans and reports, providing variances and bonding are obtained, where necessary and all applicable fees have been paid prior to permit issuance. The permit shall include conditions under which the activity may be undertaken.

- (2) No permit shall be issued by the city unless the erosion, sedimentation and pollution control plan has been approved by the district and the city has affirmatively determined that the plan is in compliance with this chapter, any variances required by this chapter are obtained, bonding requirements, if necessary, are met and all ordinances and rules and regulations in effect within the jurisdictional boundaries of the city are met. If the permit is denied, the reason for denial shall be furnished to the applicant.
- (3) Any land-disturbing activities by the city shall be subject to the same requirements of this chapter, and any other ordinances relating to land development, as are applied to private persons and the division shall enforce such requirements upon the city.
- (4) If the tract is to be developed in phases, then a separate permit shall be required for each phase.
- (5) The permit may be suspended, revoked, or modified by the city, as to all or any portion of the land affected by the plan, upon finding that the holder or that person's successor in the title is not in compliance with the approved erosion, sedimentation and pollution control plan or that the holder or his successor in title is in violation of this chapter. A holder of a permit shall notify any successor in title to that person as to all or any portion of the land affected by the approved plan of the conditions contained in the permit.
- (6) The city may reject a permit application if the applicant has had two (2) or more violations of previous permits or the Erosion and Sedimentation Act permit requirements within three (3) years prior to the date of the application, in light of O.C.G.A. § 12-7-7(f)(1), as amended.

Sec. 9-14-12 Inspection and enforcement.

- (a) The city will periodically inspect the sites of land-disturbing activities for which permits have been issued to determine if the activities are being conducted in accordance with the plan and if the measures required in the plan are effective in controlling erosion and sedimentation. Also, the city shall regulate primary, secondary, and tertiary permittees as such terms are defined in the state general permit. Primary permittees shall be responsible for installation and maintenance of best management practices where the primary permittee is conducting land-disturbing activities. Secondary permittees shall be responsible for installation and maintenance of best management practices where the secondary permittee is conducting land-disturbing activities. Tertiary permittees shall be responsible for installation and maintenance where the tertiary permittee is conducting land-disturbing activities. If through inspection, it is deemed that a person engaged in land-disturbing activities as defined herein has failed to comply with the approved plan, with permit conditions, or with the provisions of this chapter, a written notice to comply shall be served upon that person. The notice shall set forth the necessary measures to achieve compliance and shall state the time within which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, that person shall be deemed in violation of this chapter.
- (b) The city shall have the power to conduct such investigations as it may reasonably deem necessary to carry out duties as prescribed in this chapter, and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigation and inspecting the sites of land-disturbing activities.
- (c) No person shall refuse entry or access to any authorized representative or agent of the city, the commission, the district, or division who requests entry for the purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out his official duties.

Sec. 9-14-13 Penalties and incentives.

- (a) *Failure to obtain a permit for land-disturbing activity.* If any person commences any land-disturbing activity requiring a land-disturbing permit as prescribed in this chapter without first obtaining said

permit, the person shall be subject to revocation of his business license, work permit or other authorization for the conduct of a business and associated work activities within the city.

- (b) Stop-work orders.
 - (1) For the first and second violations of the provisions of this chapter, the EPD director or the city shall issue a written warning to the violator. The violator shall have five (5) days to correct the violation. If the violation is not corrected within five (5) days, the EPD director or the city shall issue a stop-work order requiring that land-disturbing activities be stopped until necessary corrective action or mitigation has occurred; provided, however, that, if the violation presents an imminent threat to public health or waters of the state or if the land-disturbing activities are conducted without obtaining the necessary permit, the EPD director or the city shall issue an immediate stop-work order in lieu of a warning;
 - (2) For a third and each subsequent violation, the EPD director or the city shall issue and immediate stop-work order; and
 - (3) All stop-work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred.
 - (4) When a violation in the form of taking action without a permit, failure to maintain a stream protection buffer, or significant amounts of sediment, as determined by the city or by the EPD director, have been or are being discharged into state waters and where best management practices have not been properly designed, installed, and maintained, a stop work order shall be issued by the city or by the EPD director. All such stop work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred. Such stop work orders shall apply to all land-disturbing activity on the site with the exception of the installation and maintenance of temporary or permanent erosion and sediment controls.
- (c) Bond forfeiture. If, through inspection, it is determined that a person engaged in land-disturbing activities has failed to comply with the approved plan, a written notice to comply shall be served upon that person. The notice shall set forth necessary measures to achieve compliance with the plan and shall state the time within which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of this chapter and, in addition to other penalties, may be deemed to have forfeited his performance bond for erosion, sedimentation and pollution control, if required to post one. The city may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance.
- (d) Any person who violates any provision of this chapter, or any permit condition or limitation established pursuant to this chapter, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the city or the EPD director issued as provided in this chapter shall be liable for a civil penalty not to exceed two thousand five hundred dollars (\$2,500.00) per day. For the purpose of enforcing the provisions of this chapter, notwithstanding any provisions in any City Charter or ordinance to the contrary, the municipal court of the city shall be authorized to impose a penalty not to exceed two thousand five hundred dollars (\$2,500.00) for each violation. Notwithstanding any limitation of law as to penalties which can be assessed for violations, each day during which violation or failure or refusal to comply continues shall be a separate violation.

Sec. 9-14-14 Education and certification.

- (a) Persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, dependent on their level of involvement with the process, as developed by the commission in consultation with the division and the stakeholder advisory board created pursuant to O.C.G.A. § 12-7-20, as amended.

- (b) For each site on which land-disturbing activity occurs, each entity or person acting as either a primary, secondary, or tertiary permittee, as defined in the state general permit, shall have as a minimum one person who is in responsible charge of erosion and sedimentation control activities on behalf of said entity or person and meets the applicable education or training certification requirements developed by the commission present on site whenever land-disturbing activities are conducted on that site. A project site shall herein be defined as any land-disturbance site or multiple sites within a larger common plan of development or sale permitted by an owner or operator for compliance with the state general permit.
- (c) Persons or entities involved in projects not requiring a state general permit but otherwise requiring certified personnel on site may contract with certified persons to meet the requirements of this chapter.
- (d) If a state general permittee who has operational control of land-disturbing activities for a site has met the certification requirements of paragraph (1) of subsection (b) of O.C.G.A. 12-7-19, as amended, then any person or entity involved in land-disturbing activity at that site and operating in a subcontractor capacity for such permittee shall meet those educational requirements specified in paragraph (4) of subsection (b) of O.C.G.A. 12-7-19, as amended, and shall not be required to meet any educational requirements that exceed those specified in said paragraph.

Sec. 9-14-15 Administrative appeal judicial review.

- (a) *Administrative remedies.* The suspension, revocation, modification or grant with condition of a permit by the city upon finding that the holder is not in compliance with the approved erosion, sediment and pollution control plan; or that the holder is in violation of permit conditions; or that the holder is in violation of any ordinance; shall entitle the person submitting the plan or holding the permit to a hearing before the administrative hearing officer within thirty (30) days after receipt by the city of written notice of appeal.
- (b) *Judicial review.* Any person, aggrieved by a decision or order of the city, after exhausting his administrative remedies, shall have the right to appeal by writ of certiorari to the Superior Court of Hall County.

Sec. 9-14-16 Validity and liability.

- (a) *Liability.*
 - (1) Neither the approval of a plan under the provisions of this chapter, nor the compliance with provisions of this article shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor impose any liability upon the city or district for damage to any person or property.
 - (2) The fact that a land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of standards provided for in this chapter or the terms of the permit.
 - (3) No provision of this chapter shall permit any persons to violate the Georgia Erosion and Sedimentation Act of 1975, the Georgia Water Quality Control Act or the rules and regulations promulgated and approved thereunder, as amended, or pollute any waters of the state as defined thereby.

Link back to [BMP #1 – E&S Legal Authority](#)

Attachment O.3- Site Plan Review Procedures

Link back to [BMP #2 – Site Plan Review Procedures](#)

The City of Gainesville has set forth complete site plan review procedures, which are located in the Unified Land Development Code. These review procedures can be found on the municode website. The full procedures are dependent upon the type of plan that is to be reviewed. The links below distinguish the different sections of the Unified Land Development Code that refers to site plan review.

Chapter 9-9-2. – Site and Architectural Design Review

https://library.municode.com/ga/gainesville/codes/unified_land_development_code?nodeId=ART9-9SIARDERE_CH9-9-2SIARDERE

Chapter 9-13-4. – Preliminary Plats

https://library.municode.com/ga/gainesville/codes/unified_land_development_code?nodeId=ART9-13SULADE_CH9-13-4PRPL

Chapter 9-13-6. – Minor Land Development Permits

https://library.municode.com/ga/gainesville/codes/unified_land_development_code?nodeId=ART9-13SULADE_CH9-13-6MILADEPE

Chapter 9-13-7.- Land Development Permits

https://library.municode.com/ga/gainesville/codes/unified_land_development_code?nodeId=ART9-13SULADE_CH9-13-7LADEPE

Chapter 9-13-14.- Final Plats

https://library.municode.com/ga/gainesville/codes/unified_land_development_code?nodeId=ART9-13SULADE_CH9-13-14FIPL

Chapter 9-22. – Applications and Procedures

https://library.municode.com/ga/gainesville/codes/unified_land_development_code?nodeId=ART9-22APPR

Attachment O.4 – Post Construction Stormwater Legal Authority

Link back to [BMP #1 – Post-Construction Legal Authority](#)
[BMP #7 - New Flood Management Projects](#)

CHAPTER 9-13-12. - STORMWATER MANAGEMENT

Sec. 9-13-12-1. - Purposes.

This chapter defines requirements for stormwater management and outlines the water quantity and quality performance criteria for managing stormwater runoff. The majority of technical stormwater criteria and standards are adopted by reference through the use of the Georgia Stormwater Management Manual (GSMM).

The purposes of this chapter are also to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment.

Sec. 9-13-12-2. - Objectives.

This chapter seeks to meet its purposes through the following objectives:

- (a) Require that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable in order to reduce flooding, stream bank erosion, nonpoint source pollution and increases in stream temperature, and maintain the integrity of stream channels and aquatic habitats;
- (b) Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
- (c) Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet the minimum post-development stormwater management standards;
- (d) Encourage the use of nonstructural stormwater management and stormwater better site design practices, such as the preservation of greenspace and other conservation areas, to the maximum extent practicable;
- (e) Establish provisions for the long-term responsibility for and maintenance of structural stormwater control facilities and nonstructural stormwater management practices to ensure that they continue to function as designed, are maintained, and pose no threat to public safety; and
- (f) Establish administrative procedures for the submission, review, approval and disapproval of stormwater management plans, and for the inspection of approved active projects, and long-term follow up.

Sec. 9-13-12-3. - Definitions.

Administrative floodplain: Any land area susceptible to flooding, which would have at least a one percent probability of flooding occurrence in any calendar year based on the basin being fully developed as shown on the projected future land use map.

Applicant: A person submitting a post-development stormwater management application and plan for approval.

Channel: A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Conservation easement: An agreement between a land owner and the city or other government agency or land trust that permanently protects open space or greenspace on the owner's land by limiting

the amount and type of development that can take place, but continues to leave the remainder of the fee interest in private ownership.

Detention: The temporary storage of stormwater runoff in a stormwater management facility for the purpose of controlling the peak discharge.

Detention facility: A detention basin or structure designed for the detention of stormwater runoff and gradual release of stored water at controlled rates.

Drainage easement: An easement appurtenant or attached to a tract or parcel of land allowing the owner of adjacent tracts or other persons to discharge stormwater runoff onto the tract or parcel of land subject to the drainage easement. Both streams and storm drainage channels are required to have easements for maintenance purposes as specified in this chapter.

Extended detention: The detention of stormwater runoff for an extended period, typically twenty-four (24) hours or greater.

Extreme flood protection: Measures taken to prevent adverse impacts from large low-frequency storm events with a return frequency of one hundred (100) years or more.

Flooding: A volume of surface water that is too great to be confined within the banks or walls of a conveyance or stream channel and that overflows onto adjacent lands.

Greenspace or open space: Permanently protected areas of the site that are preserved in a natural state.

Hotspot: An area where the use of the land has the potential to generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Hydrologic soil group (HSG): A natural resource conservation service classification system in which soils are categorized into four runoff potential groups. The groups range from group A soils, with high permeability and little runoff produced, to group D soils, which have low permeability rates and produce much more runoff.

Impervious cover: A surface composed of any material that significantly impedes or prevents the natural infiltration of water into soil. Impervious surfaces include, but are not limited to, rooftops, buildings, streets and roads, and any concrete or asphalt surface.

Improvements: The physical addition and changes to land that may be necessary to produce usable, desirable and acceptable lots or building sites.

Industrial stormwater permit: A National Pollutant Discharge Elimination System (NPDES) permit issued to an industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Infiltration: The process of percolating stormwater runoff into the subsoil.

Inspection and maintenance agreement: A written agreement providing for the long-term inspection and maintenance of stormwater management facilities and practices on a site or with respect to a land development project, which when properly recorded in the deed records constitutes a restriction on the title to a site or other land involved in a land development project.

Jurisdictional wetland: An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Land development: Any land change, including, but not limited to, clearing, digging, grubbing, stripping, removal of vegetation, dredging, grading, excavating, transporting and filling of land, construction, paving, and any other installation of impervious cover.

Land development activities: Those actions or activities which comprise, facilitate or result in land development.

Land development project: A discrete land development undertaking.

New development: A land development activity on a previously undeveloped site.

Nonpoint source pollution: A form of water pollution that does not originate from a discrete point such as a sewage treatment plant or industrial discharge, but involves the transport of pollutants such as sediment, fertilizers, pesticides, heavy metals, oil, grease, bacteria, organic materials and other contaminants from land to surface water and groundwater via mechanisms such as precipitation, stormwater runoff, and leaching. Nonpoint source pollution is a by-product of land use practices such as agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

Nonstructural stormwater management practice or nonstructural practice: Any natural or planted vegetation or other nonstructural component of the stormwater management plan that provides for or enhances stormwater quantity and/or quality control or other stormwater management benefits, and includes, but is not limited to, riparian buffers, open and greenspace areas, overland flow filtration areas, natural depressions, and vegetated channels.

Off-site facility: A stormwater management facility located outside the boundaries of the site.

On-site facility: A stormwater management facility located within the boundaries of the site.

Overbank flood protection: The measures taken to prevent an increase in the frequency and magnitude of out-of-bank flooding (i.e. flow events that exceed the capacity of the channel and enter the floodplain), and that are intended to protect downstream properties from flooding for the two-year through 25-year frequency storm events.

Owner: The legal or beneficial owner of a site, including but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, lessee or other person, firm or corporation in control of the site.

Permit: The permit issued by the city to the applicant which is required for undertaking any land development activity.

Person: Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, city, county or other political subdivision of the state, any interstate body or any other legal entity.

Post-development: The time period, or the conditions that may reasonably be expected or anticipated to exist, after completion of the land development activity on a site as the context may require.

Pre-development: The time period, or the conditions that exist, on a site prior to the commencement of a land development project and at the time that plans for the land development of a site are approved by the plan approving authority. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first item being approved or permitted shall establish pre-development conditions.

Professional engineer: An engineer licensed and registered to perform the duties of a professional engineer (P.E.) by the state.

Project: A land development project.

Public utility: A utility owned and operated by a public agency or authority.

- (1) *Public sewerage system:* A sanitary sewerage system for the collection of water-borne wastes complete with a sewage treatment plant that is owned and operated by a public agency or authority.
- (2) *Public water system:* A system for the intake, treatment and distribution of potable water that is owned and operated by a public agency or authority.

Public utilities director: The director of the department of public utilities of the city, or his designee, whose duties include the review and approval of construction plans for public utilities for the city.

Public works department: References to action by the public works department shall mean action by that administrative official of the city public works department to whom responsibility for that action has been assigned by the director of public works.

Public works director: The director of the department of public works of the city, or his designee, whose duties include the review and approval of construction plans for public streets for the city.

Redevelopment: A land development project on a previously developed site, but excludes ordinary maintenance activities, remodeling of existing buildings, resurfacing of paved areas, and exterior changes or improvements which do not materially increase or concentrate stormwater runoff, or cause additional nonpoint source pollution.

Regional stormwater management facility or regional facility: Stormwater management facilities designed to control stormwater runoff from multiple properties, where the owners or developers of the individual properties may assist in the financing of the facility, and the requirement for on-site controls is either eliminated or reduced.

Runoff: Stormwater runoff.

Stormwater better site design: Nonstructural site design approaches and techniques that can reduce a site's impact on the watershed and can provide for nonstructural stormwater management. Stormwater better site design includes conserving and protecting natural areas and greenspace, reducing impervious cover and using natural features for stormwater management.

Stormwater management: The collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, streambank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.

Stormwater management facility: Any infrastructure that controls or conveys stormwater runoff.

Stormwater management measure: Any stormwater management facility or nonstructural stormwater practice.

Stormwater management plan: Means a document describing how existing runoff characteristics will be affected by a land development project and containing measures for complying with the provisions of this Code.

Stormwater management system: The entire set of structural and nonstructural stormwater management facilities and practices that are used to capture, convey and control the quantity and quality of the stormwater runoff from a site.

Stormwater retrofit: A stormwater management practice designed for a currently developed site that previously had either no stormwater management practice in place or a practice inadequate to meet the stormwater management requirements of the site.

Stormwater runoff: The flow of surface water resulting from precipitation.

Sec. 9-13-12-4. - Stormwater management report required.

All persons proposing development or construction in the city that meets the applicability requirements of this chapter shall prepare a stormwater management report, unless specifically exempted from the requirements of this chapter. No final subdivision plat shall be approved and no development or building permit shall be issued until and unless the stormwater management report has been reviewed and approved by the director of public works, except as exempt below.

This report must be submitted with the stamp and signature of a professional engineer (PE) licensed in the state, who must verify that the design of all stormwater management facilities and practices meet submittal and permitting requirements. The engineer sealing the stormwater management report is responsible for ensuring that all permit requirements related to Section 404 of the Clean Water Act are met.

Stormwater management reports shall not be required for activities that are exempt from the provisions of this chapter.

Sec. 9-13-12-5. - Applicability.

The provisions of this chapter apply to any new development or redevelopment site that meets one or more of the following criteria:

- (a) New development that involves the creation of five thousand (5,000) square feet or more of impervious cover, or that involves other land development activities of one acre or more;
- (b) Redevelopment that includes the creation, addition or replacement of five thousand (5,000) square feet or more of impervious cover, or that involves other land development activity of one acre or more;
- (c) Any new development or redevelopment, regardless of size, that is defined by the director of public works to be a hotspot land use; or
- (d) Land development activities that are smaller than the minimum applicability criteria set forth in subsections (a) and (b) if such activities are part of a larger common plan of development, even though multiple, separate and distinct land development activities may take place at different times on different schedules.

Sec. 9-13-12-6. - Exemptions.

The following activities are exempt from the requirements this chapter:

- (a) Additions or modifications to existing single-family detached or duplex residential structures;
- (b) Individual single-family residential lots that are not part of a subdivision or phased development project;
- (c) Agricultural or silvicultural land management activities within areas zoned for these activities; and
- (d) Repairs to any stormwater management facility or practice deemed necessary by the department of public works or department of planning and development.

Sec. 9-13-12-7. - Variances.

The director of public works may grant a variance from the requirements of this chapter if the proposed development activity will not:

- (a) Change the rate or volume of runoff significantly, as specified in the stormwater design manual;
- (b) Have a significant, negative impact on any wetland, watercourse, or water body as specified in the stormwater design manual; or
- (c) Contribute to degradation of water quality.

Sec. 9-13-12-8. - Reference to stormwater manual.

The current version of the Georgia Stormwater Management Manual (GSMM) will provide the primary guidance for the design and evaluation of stormwater management facilities in the city. A copy of the GSMM can be viewed in the department of public works or can be accessed at www.georgiastormwater.com.

Sec. 9-13-12-9. - Stormwater management report contents.

The stormwater management report shall detail how post-development stormwater runoff will be controlled or managed and how the proposed project will meet the requirements of this section, Georgia Stormwater Management Manual, and Section 404 of the Clean Water Act. The stormwater management report shall address the following issues and analyze compliance with the water quantity and water quality performance indicators specified in this chapter.

The stormwater management report shall have the following minimum contents:

- (a) A brief narrative description of the project;
- (b) Geotechnical investigations including soil maps, borings, site specific recommendations, and any additional information necessary for the proposed stormwater management design;
- (c) Site plan that depicts all streams, lakes, wetlands and other bodies of water. Should verification of jurisdictional waters of the U.S. be needed, the developer must provide the department of public works with a formal delineation of the waters of the US performed by a qualified and experienced professional and have the delineation verified in writing by the United States Army Corp of Engineers (USACE). Additionally, the plan shall depict relevant boundaries of the 100-year floodplain for ultimate build-out conditions (the administrative floodplain). The administrative

floodplain boundary must be calculated using Federal Emergency Management Agency (FEMA) methodologies for delineating floodplains using future hydrology conditions.

- (d) Hydrologic computations, including drainage area maps depicting pre-development and post-development runoff flow paths and land use, including the locations and quantities of stormwater runoff entering and exiting the site for both pre-developed and post-developed conditions. Analysis of the off-site properties shall anticipate future development in addition to addressing existing conditions.
- (e) Drainage area delineation maps and other exhibits at a satisfactory scale and sufficient in quantity and scope to define the boundaries of the site relative to any applicable water courses, drainage divides, drainage structures and other pertinent features.
- (f) Estimates of the stormwater quality in terms of total suspended solids for both pre-developed and post-developed conditions using the stormwater quality site development review tool.
- (g) Hydraulic computations;
- (h) Structural computations;
- (i) Unified sizing criteria volume computations according to the Georgia Stormwater Management Manual and this section.
- (j) Analysis of downstream conditions at each and every point or area along the project sites boundaries at which runoff will exit the property.
- (k) Analysis of the portion of the drainage way "immediately" downstream from the project. In determining downstream effects from stormwater discharge control structures and the development, hydrologic-hydraulic engineering studies, using the administrative floodplain, shall extend to a point where the proposed development represents less than ten (10) percent of the total watershed (the ten (10) percent rule). If the discharge calculations indicate that adjacent properties, between the exit of the proposed development and the "ten (10) percent downstream point" might be adversely impacted by the proposed development, then the engineer will provide a summary of recommendations.
- (l) Stormwater management plan. Whenever adverse stormwater runoff related impacts are expected to result from the development of a property, the stormwater management report shall describe in detail the proposed stormwater management plan. Plans, specifications and computations must be complete in detail sufficient to enable another engineer to fully check and verify the results and computations. The plans used for construction must contain design data, a project narrative, schedule of construction, name and address or person responsible for construction and the engineer's seal, signature and address on the engineering drawings required for the project construction.

Sec. 9-13-12-10. - Specifications for stormwater management plans.

The stormwater management plan shall include the following items:

- (a) Description of the overall stormwater management strategy.
- (b) Topographic maps showing all on-site and off-site contributing drainage areas.
- (c) Basis for determining runoff coefficients and times of concentration.
- (d) Inflow and outflow hydrographs with peak flows for the one-, 25- and 100-year storm frequencies.
- (e) Hydraulic performance properties for all stormwater management facilities (e.g., stage/storage/discharge curves, infiltration capacities, overflow relationships).
- (f) Details and calculations for all outlet control structures, including buoyancy calculations and emergency spillways.
- (g) Configuration of the stormwater management system, including outflow and overflow control devices, shall be clearly described in report with cross-sections depicted on all construction drawings.

- (h) Graded access easements, (maximum 3:1 slope) around all stormwater management ponds in areas inaccessible to vehicular traffic.
- (i) Temporary sediment basins are required for all detention sites and major drainage exits. The detention facility shall be designed to provide temporary sediment control unless a live stream exists.
- (j) Underground detention facilities with details that provide:
 - (1) The location and type of access protection for the detention facility.
 - (2) Safety requirements as specified by the city for the site.
 - (3) Outline of the inspection and maintenance covenant to be filed with director of public works for all components of the stormwater management report, and
 - (4) Summary of the proposed stormwater management approach and the expected performance.
- (k) Construction drawings submitted for stormwater management plan approval shall include the following:
 - (1) A vicinity map;
 - (2) Topography survey showing existing and proposed terrain, including the area to be included in the downstream analyses;
 - (3) Any proposed improvements including location of buildings or other structures, impervious surfaces, storm drainage facilities, and all grading;
 - (4) The location of existing and proposed structures and utilities;
 - (5) Any easements and rights-of-way;
 - (6) The delineation, if applicable, of the administrative floodplain and any on site wetlands;
 - (7) Structural and construction details for all components of the proposed drainage system or systems, and stormwater management facilities;
 - (8) All necessary construction specifications;
 - (9) A sequence of construction;
 - (10) Data for total site area, disturbed area, new impervious area, and total impervious area;
 - (11) A table showing the unified sizing criteria volumes required by the GSMM;
 - (12) A table of materials to be used for stormwater management facility planting;
 - (13) All soil boring logs and locations;
 - (14) A maintenance schedule;
 - (15) Certification by the owner/developer that all stormwater management construction will be done according to this plan; and
 - (16) An as-built certification signature block to be executed after project completion.

Sec. 9-13-12-11. - Use of stormwater quality site design tool required.

An automated spreadsheet tool was developed to facilitate the consistent review of development projects across the 16-county Metropolitan North Georgia Water Planning District (the district) of which the city is a part. The tool was specifically designed to meet the unified sizing and water quality performance criteria outlined in the *Georgia Stormwater Management Manual*. The overall goal is to provide an effective tool for city review staff and the development community to quickly evaluate the water quality performance of stormwater management plans for development sites. It allows the developer to use a variety of BMPs and provides incentives for leaving key areas, particularly riparian buffers, undisturbed.

The city requires every project, unless otherwise exempt, to use the stormwater quality site design tool. A copy of the tool is available upon request from the department of public works.

Sec. 9-13-12-12. - As-built certification of stormwater management facilities.

After construction and before acceptance for occupation or otherwise, the designer shall submit a certified field run topographic map of all areas including the stormwater management facilities, a revised stormwater management report (if needed), and a long-term inspection and maintenance covenant signed by the property owner or organization. The designer shall certify that the as-built conditions regarding storage and outflow meet the requirements of this chapter.

Sec. 9-13-12-13. - Inspection and maintenance agreement.

Prior to the issuance of any permit of occupancy, the developer must execute an inspection and maintenance agreement, and/or a conservation easement, if applicable, that shall be binding on all subsequent owners of the site. Responsibility for the operation and maintenance of the stormwater management facility or practice shall remain with the property owner and shall pass to any successor owner. If portions of the land are sold or otherwise transferred, legally binding arrangements shall be made to pass the inspection and maintenance responsibility to the appropriate successors in title. A copy of this agreement is available from the department of public works. The inspection and maintenance agreement shall consist of the following:

- (a) *Responsible person(s)*. The inspection and maintenance agreement shall identify by name or official title the person(s) responsible for carrying out the inspection and maintenance. These arrangements shall designate for each portion of the site, the person to be permanently responsible for its inspection and maintenance.
- (b) *Schedule*. As part of the inspection and maintenance agreement, a schedule shall be developed for routine inspection and maintenance to ensure proper function of the stormwater management facility or practice.
- (c) *Plans for annual inspections*. The agreement shall also include plans for annual inspections to ensure proper performance of the facility between scheduled maintenance events and shall also include remedies for the default thereof.

Sec. 9-13-12-14. - Maintenance by private parties.

On all commercial sites and on residential property where stormwater management facilities exist, the maintenance is the responsibility of the owner or operator of the property. It shall be the responsibility of the owner or operator to repair deficiencies in a timely manner.

Sec. 9-13-12-15. - Maintenance by property or homeowners associations.

When a subdivision or industrial/commercial park has a legally created property or homeowners association, the association will be responsible for maintenance of all drainage easements and all stormwater facilities within the entire development. The association may be required to apply larvicides, stock mosquito fish or take other measures, as required by the department of public works, to protect the health, safety and welfare of the public. The association will have to be formed prior to final plat approval.

Sec. 9-13-12-16. - Inspection and repair.

The city department of public works personnel will perform periodic inspections of existing and new private stormwater management facilities to determine whether they are maintained properly. Should an owner fail to maintain the stormwater management facilities in a state of service intended by the stormwater management plan, then the director of public works shall notify the owner or operator in writing of the deficiencies and specific minimum maintenance requirements to remedy such deficiencies. It shall be the responsibility of the private party or association that owns or operates the facility to repair deficiencies in a timely manner.

Sec. 9-13-12-17. - Failure to maintain.

If the owner or operator fails to perform the required maintenance work within a maximum of thirty (30) days, then the owner or operator shall be in violation of the provisions of this chapter. At that point, the department of public works may undertake the work itself or otherwise provide for the maintenance of the system, and may call such bonds or other surety as may be outstanding on the development, or may place liens or assessments on the responsible owner's properties, in satisfaction of the cost to the city.

Sec. 9-13-12-18. - Reference to unified stormwater sizing criteria.

The GSMM has developed a set of unified stormwater sizing criteria that serves as the basis of designing stormwater facilities in the city. These criteria provide an integrated approach for meeting the stormwater runoff quality and quantity management requirements for those applicable developments identified in this section.

The purpose of the unified stormwater sizing criteria is to design a stormwater management system to:

- (a) Remove stormwater runoff pollutants and improve water quality;
- (b) Prevent downstream stream bank and channel erosion;
- (c) Reduce downstream overbank flooding; and
- (d) Reduce the runoff from and safely pass extreme storm events.

Sec. 9-13-12-19. - Stormwater design sizing criteria.

Stormwater management typically relies on a system of natural and constructed facilities (practices) for the storage, treatment, and conveyance of runoff. This section provides an overview of the design criteria required for stormwater detention and conveyance facilities in the city.

- (a) *Stormwater facilities generally.* Stormwater facilities in the city must be designed to meet the criteria in the following table using the appropriate runoff calculation methods described in this section. Additional discussion of these criteria can be found in the following subsections and in Volume II, Section 3.1 of the Georgia Stormwater Management Manual.

Summary of the Statewide Stormwater Sizing Criteria for Stormwater Control and Mitigation

Sizing Criteria	Description
Water Quality	Treat 85% of the runoff from the storms that occur in an average year and reduce average annual post-development total suspended solids loadings by 80%. For Georgia, these conditions equate to providing water quality treatment for the runoff resulting from the initial 1.2 inches of rainfall for every storm.
Stream Channel Protection	Provide extended detention so that the 1-year, 24-hour storm event is released over a period of 24 hours to reduce bankfull flows and protect downstream channels from erosive velocities and unstable conditions.
Overbank Flood Protection	Provide peak discharge control of the 25-year storm event such that the post-development peak rate does not exceed the predevelopment rate to reduce overbank flooding.
Extreme Flood Protection	Control and safely convey the flood produced by the 100-year, 24-hour storm event. Conduct a downstream hydrologic analysis to determine whether there are any additional impacts in terms of peak flow increase or downstream flooding. This analysis shall be conducted at the outlets of the site, and at each downstream tributary junction until the area of the portion of the site draining into the system is less than or equal to 10% of the total drainage area above that point. The comparison shall be conducted for the 100-year flood resulting from full build-out conditions in the watershed.

Notes: Source: Georgia Stormwater Management Manual, Volume II, p. 1.3-1.

- (b) *Water quality.* All stormwater runoff generated from a site shall be adequately treated before discharge. It will be presumed that a stormwater management system complies with this requirement if:

- (1) It is sized to treat the prescribed water quality treatment volume from the site, as defined in the Georgia Stormwater Management Manual;
 - (2) Appropriate structural stormwater controls or nonstructural practices are selected, designed, constructed or preserved, and maintained according to the specific criteria in the Georgia Stormwater Management Manual; and
 - (3) Runoff from hotspot land uses and activities identified by the department of public works are adequately treated and addressed through the use of appropriate structural stormwater controls, nonstructural practices and pollution prevention practices.
- (c) *Stream channel protection.*
- (1) Protection of stream channels from bank and bed erosion and degradation shall be provided by using all of the following three (3) approaches:
 - (2) Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer;
 - (3) 24-hour extended detention storage of the one-year, 24-hour return frequency storm event;
 - (4) Erosion prevention measures such as energy dissipation and velocity control.
- (d) *Overbank flooding protection.* Downstream overbank flood and property protection shall be provided by controlling (attenuating) the post-development peak discharge rate to the pre-development rate for the 25-year, 24-hour return frequency storm event. If control of the one-year, 24-hour storm is exempted, then peak discharge rate attenuation of the two-year through the 25-year return frequency storm event must be provided.
- (e) *Extreme flooding protection.* Extreme flood and public safety protection shall be provided by controlling and safely conveying the 100-year, 24-hour return frequency storm event such that flooding is not exacerbated.
- (f) *Structural stormwater controls.* All structural stormwater management facilities shall be selected and designed using the appropriate criteria from the Georgia Stormwater Management Manual. All structural stormwater controls must be designed appropriately to meet their intended function. For other structural stormwater controls not included in the Georgia Stormwater Management Manual, or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through prior studies, literature reviews, or other means and receive approval from the Department of Public Works before being included in the design of a stormwater management system. In addition, if hydrologic or topographic conditions, or land use activities warrant greater control than that provided by the minimum control requirements, Public Works may impose additional requirements deemed necessary to protect upstream and downstream properties and aquatic resources from damage due to increased volume, frequency, and rate of stormwater runoff or increased nonpoint source pollution loads created on the site in question. Applicants shall consult the Georgia Stormwater Management Manual for guidance on the factors that determine site design feasibility when selecting and locating a structural stormwater control.
- (g) *Stormwater credits for nonstructural measures.* The use of one or more site design measures by the applicant may allow for a reduction in the water quality treatment volume required. The applicant may, if approved by the director of public works, take credit for the use of stormwater better site design practices and reduce the water quality volume requirement. For each potential credit, there is a minimum set of criteria and requirements which identify the conditions or circumstances under which the credit may be applied. The site design practices that qualify for this credit and the criteria and procedures for applying and calculating the credits are included in the Georgia Stormwater Management Manual.

Sec. 9-13-12-20. - Stormwater runoff computation.

Computations for rate of runoff shall be based on the average rainfall intensity and duration for Roswell, Georgia for the available period of record as tabulated in the Georgia Stormwater Management Manual (GSMM), Volume II, Appendix A. Computing runoff and generating hydrographs must be done by one of the methods outlined in the GSMM. The table below summarizes the hydrologic calculation methods that will be accepted by the director of public works and the section reference from the GSMM that explains each. The table also provides guidelines for using the appropriate method based on the size of the drainage area. Additional information relating to the design of conveyance structures can be found in Section 4.1 of the GSMM. As noted, the rational formula can only be used to design conveyance systems, one of the other methods listed must be used for designing the stormwater detention facilities.

Methods for Stormwater Runoff Computation

Computation Task	GSMM Chapter	Rational Formula	SCS	USGS Equations	Water Quality Volume
Size Limitations for Each Method		25 acres	25 to 2,000 acres	2,000 acres to 25 square miles	Based on Structural Control
Water Quality Volume (WQ _v)	1.3				X
Channel Protection Volume (CP _v)	1.3		X		
Overbank Flood Protection (QP ₂₅)	1.3		X	X	
Extreme Flood Protection (Q _f)	1.3		X	X	
Storage Facilities	2.2		X	X	
Outlet Structures	2.3		X	X	
Gutter Flow and Inlets	4.2	X			
Storm Drain Pipes	4.2	X	X	X	
Culverts	4.3	X	X	X	
Small Ditches	4.4	X	X	X	
Open Channels	4.4		X	X	
Energy Dissipation	4.5		X	X	

Source: Georgia Stormwater Management Manual, Volume II, p. 3.1-2.

Sec. 9-13-12-21. - Water quality performance criteria.

Total suspended solids (TSS) are a key pollutant associated with sediment runoff. It also serves as a "carrier" of other pollutants such as organics, nutrients, and metals. Thus, TSS, a measure of suspended matter-including soils and sediments, will serve as the watershed improvement guideline for managing pollutants.

- (a) Stormwater management systems (which can include both structural stormwater controls and better site design practices) must be designed to remove eighty (80) percent of the average annual post-development TSS load and be able to meet any other additional watershed- or site-

specific water quality requirements. All stormwater detention facilities shall be designed to control the peak flow rates associated with storms having one-, 25- and 100-year storm frequencies as specified in the table above.

- (b) Use of the stormwater quality site development review tool, described in this chapter, provides the developer and reviewer with a summary of the TSS reduction from each of the drainage areas and also presents the overall TSS reduction efficiency of the planned site. Please note that if this overall efficiency is less than eighty (80) percent, then the site will fail to meet the recommendations of the Georgia Stormwater Management Manual and will not be approved.

Sec. 9-13-12-22. - Storm drain pipe design.

Piped drainage structures shall be designed to meet the following criteria:

- (a) Street catch basins, inlets, cross drains serving basins of twenty (20) acres or less and longitudinal piping shall be designed for the 25-year storm, shall have a minimum slope of one percent, and shall have a minimum size of eighteen (18) inches in diameter.
- (b) Inlet and outlet headwalls are required for all pipes.
- (c) The 100-year storm frequency shall be used on live streams, cross drains serving basins of twenty (20) acres or larger and any other drainage system receiving and/or transferring offsite drainage flow.
- (d) Velocities for all pipes should be kept to a minimum of two (2) feet per second and outlet velocities, if practical, shall not exceed four (4) feet per second when flowing full. However, if outlet velocities exceed (5) feet per second then energy dissipation devices and/or channel protection must be provided.
- (e) The downstream end of all storm drain pipe shall be located at a minimum of fifty (50) feet past the building line for pipe sizes up to and including thirty-six (36) inches in diameter, unless the storm drainage is on a live stream.
- (f) For all pipe design, the designer shall check the 100-year hydraulic grade line to determine that no inlet structures are flooded and that the collection capacity of any structure has not been compromised by the 100-year ultimate hydraulic grade line.
- (g) Storm drain pipes shall be constructed of class III reinforced concrete, thermoplastic corrugated-smooth lined (HDPE), or aluminized type II corrugated culvert, as determined by the public works director. Pipe materials, related connections, and fittings shall meet the following requirements and specifications noted below.

Sec. 9-13-12-23. - Pipe references and requirements.

Pipe references and requirements are as follows:

- (a) *Reinforced concrete*: AASHTO M170, ASTM C-969, minimum eight-foot joint lengths, bell and spigot with rubber O-ring gasket conforming to ASTM C-361, class of pipe and wall thickness shall be in accordance with 1030D, Georgia GDOT specifications, Table 1.
- (b) *Aluminized type II corrugated culvert*: AASHTO M36, AASHTO M274, AASHTO M196, ASTM C-969, ASTM B74512 gauge minimum.
- (c) *High density polyethylene*: AASHTO M294 Type "S", AASHTO MP7 and type "S", ASTM D-3212, ASTM F-1417, ASTM F-477, ASTM C-969, and shall be certified through the Plastic Pipe Institute Third Party Certification.
- (d) *Polyvinyl chloride (PVC)*: AASHTO M304, ASTM D-3212, ASTM F-1417, ASTM F-477, ASTM C-969, ASTM F949, ASTM F794 and F949, and shall be certified through the Plastic Pipe Institute Third Party Certification.
- (e) *Thermoplastic pipes*: All thermoplastic pipes shall have a full circular cross section with an outer corrugated pipe wall and smooth inner wall. Deflection under loads that contributes to local buckling shall not be decreased by more than five (5) percent (AASHTO M294 and MP7 Sec. 7.4)

when tested in accordance with ASTM D-2412. The structural design of thermoplastic pipes shall be in accordance with AASHTO Section 12 titled "Buried Structures and Tunnel Liners."

Sec. 9-13-12-24. - Pipe installation specifications.

Pipe installation specifications are as follows:

- (a) *Foundation and bedding.* Unsuitable or unstable foundations shall be undercut and replaced with suitable material. A four-inch to six-inch bedding of class I or II shall be placed and compacted to a minimum of ninety (90) percent standard proctor density and as per AASHTO T99, AASHTO M145. Haunching materials shall be class I, II, or III and shall be worked under the haunches by hand compaction in eight-inch maximum lifts to ninety (90) percent standard proctor density. All materials and installation (compaction and bedding) shall meet AASHTO Section 30, AASHTO Section 12, ASTM 2321 and manufacturer's latest specifications. Pipes shall be installed in a dry trench.
- (b) *Initial backfill.* Shall meet the requirements of AASHTO M145, AASHTO Section 12 and shall be one and twenty-four one-hundredths (1.24) inches maximum granular size and minimum compaction of ninety (90) percent standard proctor density as per AASHTO T99.
- (c) *Water tight.* All joints and connections to drainage structures shall be watertight per ASTM F-1417, inspected and approved by director of public works before backfilling.
- (d) *Street crossings.* Thermoplastic corrugated-smooth lined pipe may only be installed in street cross drains where the street is classified as a local road, serves twenty-five (25) or fewer lots, and shall be approved by the director of public works.
- (e) *Live streams.* Stormwater pipes carrying live streams shall be reinforced concrete or thermoplastic pipe and shall be approved by the director of public works.
- (f) *Construction.* Any storm drainage pipe dedicated to the city shall be constructed using reinforced concrete pipe or thermoplastic pipe.
- (g) *Easement.* Any storm drainage pipe dedicated to the city that extends outside of the street right-of-way shall be located within a 30-foot wide easement.
- (h) *Depth.* All storm drainage pipes shall be at least eighteen (18) inches below the surface and shall have a slope of at least one percent.
- (i) *Connection to public system.* Development storm drain outlet systems shall connect to a public stormwater conveyance system or to a free-flowing stream, assuming that the post-development stormwater requirements in this section are met. The developer shall be required to provide evidence of acceptable capacity to receive additional flow.
- (j) *Structures.* Under no circumstances shall structures be constructed over an existing or proposed storm drain, whether public or private.
- (k) *Location.* All pipes shall be laid in a straight line between structures and longitudinal outside street pavement within the right-of-way or outside right-of-way in dedicated easements. Pipes and fittings will be installed in strict accordance with AASHTO Section 30 and AASHTO Section 12.
- (l) *Junction boxes.* Junction boxes shall be installed where the storm drain changes direction and where one pipe or more intersect. Minimum cover will be eighteen (18) inches from finished street elevation to top of pipe.

Sec. 9-13-12-25. - Headwalls.

- (a) Headwalls or flared end sections with concrete collars are required at the inlet and outlet on all street cross drains and storm drain pipes.
- (b) Headwalls are to be precast concrete, stone masonry with reinforced concrete footings, or poured-in-place, reinforced concrete with reinforced concrete footings.

- (c) Flared end sections shall be constructed of the same material as the drainage pipe to which they are being connected.
- (d) High water elevation contour is to be based on a 25-year storm at the entrance of each head wall.
- (e) Energy dissipation devices, such as splash pads, riprap, stilling basins, etc., shall be provided at the outlet of every street cross drain and storm drain pipe.

Sec. 9-13-12-26. - Open channels.

- (a) All storm water channels shall be designed to carry at least the 25-year frequency storm with one foot of freeboard.
- (b) Velocity at design flow shall be not less than six (6) inches per second but not greater than four (4) feet per second. A higher velocity may be allowed if actions are taken that would avoid erosion or scouring of the channel.
- (c) All storm water channels must be designed to convey flows that prevent dwelling flooding, property damage, or public access and/or utility interruption.
- (d) The director of public works may determine that the expected long-term maintenance of a surface drainage system could prove impractical, and a storm water pipe collection system may be required.
- (e) Any storm drainage channel that extends outside of the street right-of-way shall be located within a 30-foot wide easement.
- (f) In cases in which a subdivision or development is traversed by a stream, there shall be provided an easement extending fifteen (15) feet from the top of each side of the stream bank.
- (g) All drainage easements, natural ditches, and drainage areas shall be grassed and/or rip-rapped as necessary to control erosion.
- (h) Cross drains under driveways shall meet the standards for street cross drains.

Sec. 9-13-12-27. - General stormwater design criteria.

- (a) The director of public works may permit several developers to construct joint facilities. The public works department shall approve or disapprove the waiver of on-site drainage or detention facilities on the basis of the engineering feasibility of a combined facility.
- (b) The director of public works shall be authorized to approve of alternative methods of stormwater detention based on appropriate engineering studies that do demonstrate equal or better performance in accordance with city storm water management practices. Approved alternatives may include well maintained and landscaped lakes that may be provided to act jointly as detention reservoirs and recreation facilities or aesthetic focal points within forest preserve areas, city or private parks, housing developments, shopping centers, and industrial parks. Other control methods to regulate the rate of stormwater discharge which may be acceptable include, but not [to] be limited to, detention on flat roofs, parking lots, streets, lawns, underground storage, and oversized storm drains with restricted outlets.
- (c) Detention facilities and drainage structures shall, where possible, use natural topography and natural vegetation. In lieu thereof these shall have planted trees and vegetation such as shrubs and permanent ground cover on their borders. All on-site facilities shall be properly maintained by the owner in such a way that they do not become nuisances. Nuisance conditions shall include: improper storage resulting in uncontrolled runoff and overflow; stagnant water with algae growth, insect breeding, and odors; discarded debris; and safety hazards created by the facility's operation. Private facilities are the perpetual responsibility of the landowner.
- (d) No portion of any detention facility shall be located in any required buffer, street right-of-way or within a flood hazard area.
- (e) The 100-year ponding limits of a detention facility shall not encroach upon a public street.
- (f) An easement at least twenty-five (25) feet in width shall be required to provide access to the detention facility from a street.
- (g) Every detention facility shall be completely enclosed within a drainage easement. The drainage easement shall extend at least ten (10) feet beyond the ponding limits of the 100-year storm.
- (h) Detention facilities shall be enclosed with a minimum four-foot high chain link fence and shall be equipped with a minimum four-foot wide access as necessary for maintenance.

Sec. 9-13-12-28. - Timing of installation.

Construction of the storm water system shall be initiated as part of the grading of the site. Storm water detention facilities shall be constructed prior to the installation of any other site improvements, and may be utilized under proper design as sedimentation basins during development. Installation of all other storm drainage pipes, culverts, headwalls, and ditches, shall be coordinated with the construction of streets and other site improvements, as appropriate.

Link back to [BMP #1 – Post-Construction Legal Authority](#)