City of Cordele

Phase II MS4

NPDES PERMIT NO. GAG610000

2017-2022
Storm Water Management Program
(SWMP)

CityOfCordele.com

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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 System (MS4)

1. General Information:

A. Name of small MS4: CITY OF CORDELE

B. Name of Responsible Official: Steve Fulford
Title: Public Works Director
Mailing Address: 808 E. 11TH Ave.
City/State/Zip Code: Cordele, Georgia 31015
Telephone Number: 229-273-6136

C. Designated stormwater management program contact:
Name: Brandon J. McGirt
Title: Superintendent of Engineering
Mailing Address: 808 E. 11TH Ave.
City/State/Zip Code: Cordele, Georgia 31015
Telephone Number: 229-276-2993
Email Address: bmcgirt@cityofcordele.com

2. Sharing Responsibility:

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

Control Measure or BMP:

1. Name of Entity: _____

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

_____
_____

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:

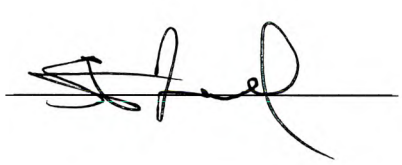
A. Public Education and Outreach
B. Public Involvement / Participation
C. Illicit Discharge Detection and Elimination *(Including the IDDE Manual)*
D. Construction Site Stormwater Runoff Control
E. Post-Construction Stormwater Management in New Development and Redevelopment
F. Pollution Prevention / Good Housekeeping
ERP. Enforcement Response Plan
IWP. Impaired Waters Plan

*A minimum of four BMPs per minimum control measure is required.

VI. 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 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: Steve Fulford Date: May 23, 2018

Signature:  Title: Public Works Director

A

MINIMUM CONTROL MEASURE (MCM)

A

PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

A1	Public Education and Outreach on Stormwater Impacts	
MCM A, BMP 1	**BROCHURE DISTRIBUTION**	
1. Target Audience	General Public	
2. Description of BMP	The City has prepared a brochure describing the Storm Water Management Program, including the reasons for the program, the benefits to be realized, and the impact on citizens and businesses in the community. Copies of the brochure are prominently displayed and copies are available to interested persons at City Hall, the Chamber of Commerce, library, or other public places. Brochures may also be distributed with land disturbing activity permits and building permits, at school and civic group presentations, at City Commission public hearing meetings for storm water, at local festivals and fairs, and placed on the City Storm water internet site. Businesses and apartment complexes will be encouraged to display brochures available for patron use.	
3. Measureable Goals	Number of brochures distributed at meetings, presentations, City Hall and similar public places on an annual basis.	
4. Documentation to be submitted with each annual report	The city will provide the number of brochures distributed	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As needed and revised from time to time
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	Many citizens may not be reached through public media, school programs or civic groups, and these brochures will provide an additional way to reach these groups.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	The brochure distribution should discourage the day to day practice that generates storm water pollution.	

A2	Public Education and Outreach on Stormwater Impacts	
MCM A, BMP 2	**MUNICIPAL WEBSITE**	
1. Target Audience	General Public	
2. Description of BMP	The City of Cordele has a municipal website located at www.CityofCordele.com. Information on the stormwater program will be made available via the website to the general public on an ongoing basis. Website will be maintained and updated as needed to reflect up-to-date information. Website will be referenced on any PSA documents made available to the public.	
3. Measureable Goals	A site counter will be used to monitor the number of visitors to the stormwater section specifically. The number of visitors to the page as of December 31st (or the last working day of the year) will be used for the total number.. Counter can then be reset to 0 for the next reporting period. If the counter can not be reset, then the previous years total count will be deducted from the count of the next reporting year's total for the adjusted total value.	
4. Documentation to be submitted with each annual report	A copy of the webpage (snapshot in PDF or other image format) will be provided with the annual report along with the total number of visitors to the website during the reporting period.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2018
	c) Frequency of actions	Annually
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	Websites are a low-cost, effective, and convenient way to distribute information to the public. Knowing the number of visitors shows the	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	As the number of visits to the website increases, it can be assumed that it is being effective. If the numbers decrease, then the BMP may need to be revised.	

A3	Public Education and Outreach on Stormwater Impacts	
MCM A, BMP 3	**PRESENTATION ON STORMWATER ISSUES**	
1. Target Audience	General Public / Government Officials	
2. Description of BMP	Present information on stormwater related material to city officials (possibly including, but not limited too City Commissioners, City Managers, Police Staff, Fire Department Staff, etc), Civic Organizations, or any members of the public that desire to attend such a presentation.	
3. Measureable Goals	At least one presentation will be presented annually.	
4. Documentation to be submitted with each annual report	A copy of the presentation material & sign-in sheet of attendees will be included in the annual report for the reporting year.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2018
	c) Frequency of actions	As needed and revised from time to time
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	Presenting to City Officials (separate from the Employee Training (see MCM F5) along side Civic Organizations, or the general public will help spread the word about stormwater related issues in the area.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.14 of the permit	As awareness for stormwater issues continues to spread, the effects on the environment should improve.	

A4	Public Education and Outreach on Stormwater Impacts	
MCM A, BMP 4	**UTILITY BILL INSERT**	
1. Target Audience	General Public	
2. Description of BMP	A brief message about protecting the water going into the MS4 storm system will be included with a monthly Utility Bill that is sent to all City of Cordele utility customers.	
3. Measureable Goals	A brief message will be included on a City of Cordele Utility Bill at least once annually, but at the most monthly.	
4. Documentation to be submitted with each annual report	An example copy of the bill or at least the verbiage that was the included along with the billing date (date that it was sent out) will be submitted with the annual report.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2018
	c) Frequency of actions	Monthly (max) / Annually (min)
	d) Month/Year of Action	Varies
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	Including a message with the utility will directly reach all customers within the jurisdiction of the City of Cordele.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	As awareness for stormwater issues continues to spread, the effects on the environment should improve.	

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B

MINIMUM CONTROL MEASURE (MCM)

B

PUBLIC INVOLEMENT / PARTICIPATION

B1	Public Involvement / Participation	
MCM B, BMP 1	**Stormwater Technical Advisory Committee (SWTAC)**	
1. Target Audience	Professional Citizens	
2. Description of BMP	The City Commission makes the appointments to the Stormwater Technical Advisory Committee (SWTAC), which may involve members from the Cordele Planning Commission, the Flood Plain Damage Preventions Committee, the Keep Crisp Beautiful Committee, and at least one registered professional (such as an Registered Land Surveyor or Civil Engineer) and the City Manager. This committee serves as an appeals board and also has an advisory capacity. Ex-officio members are other city staff, as appointed.	
3. Measureable Goals	The SWTAC will meet annually, as needed, for both advisory and appeals.	
4. Documentation to be submitted with each annual report	The City will provide a summary of the event, date, and the number of attendees.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	Once a year, or as needed
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	The City Commissioners, City Manager, and other officials, need to receive input from the SWTAC to continue development for a comprehensive, practical, and effective Stormwater Management Program.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	The BMP will be effective as the professional citizens on the SWTAC are involved and express their concerns regarding stormwater issues.	

B2	Public Involvement / Participation	
MCM B, BMP 2	**GREAT AMERICAN CLEANUP**	
1. Target Audience	General Public	
2. Description of BMP	As part of the Keep America Beautiful program, the Great American Cleanup is designed to prompt "individuals to take greater responsibility for their local environment by conducting grassroots community service projects that engage volunteers, local businesses and civic leaders." ("https://www.kab.org/great-american-cleanup/about-great-american-cleanup", 5/9/2018). In partnership with Keep Crisp Beautiful, the community will have opportunity to participate in this nationwide program on an annual basis.	
3. Measureable Goals	Activities that allow for volunteer involvement, and a record of the activities undertaken, and man-hours contributed.	
4. Documentation to be submitted with each annual report	Advertisements, posters, and / or photos of the event will be submitted as documentation of the event. If possible, an attendance roll will be obtained, but the number of volunteers that participated in the event will be made available.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2018
	c) Frequency of actions	Annually
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	The City is directly involving citizens to minimize costs, while getting participation in clean-up efforts.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Volunteers participating in clean-up projects will have hands on knowledge of trans and debris getting into our streams.	

B3	Public Involvement / Participation	
MCM B, BMP 3	**RIVERS ALIVE**	
1. Target Audience	General Public	
2. Description of BMP	River's Alive is "a year-round volunteer cleanup program that targets all waterways in the state of Georgia including streams, rivers, lakes, beaches and wetlands." (River's Alive Informational Brochure, 2018). River's Alive is an initiative of the Georgia Environmental Protection Division, and locally the City partners with Keep Crisp Beautiful to involve local citizens in the program which targets many locations in the Crisp County area.	
3. Measureable Goals	Activities that allow for volunteer involvement, and a record of the activities undertaken, and man-hours contributed.	
4. Documentation to be submitted with each annual report	Advertisements, posters, and / or photos of the event will be submitted as documentation of the event. If possible, an attendance roll will be obtained, but the number of volunteers that participated in the event will be made available.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2018
	c) Frequency of actions	Annually
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	The City is directly involving citizens to minimize costs, while getting participation in clean-up efforts.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Volunteers participating in clean-up projects will have hands on knowledge of trans and debris getting into our streams.	

B4	Public Involvement / Participation	
MCM B, BMP 4	**GUM CREEK BRIDGE AREA CLEANUP**	
1. Target Audience	General Public	
2. Description of BMP	In a effort to clean the primary stream running through the City of Cordele before it leaves the City, an cleanup will be performed at the location of the 15th Street Gum Creek bridge. This cleanup will involve the removal of any accumulated trash or debris that has washed from upstream and had become lodged in the stream banks. This will help beautify the area and minimize negative impact on the surrounding natural habitat.	
3. Measureable Goals	Activities that allow for volunteer involvement, and a record of the activities undertaken, and man-hours contributed.	
4. Documentation to be submitted with each annual report	Advertisements, posters, and / or photos of the event will be submitted as documentation of the event. If possible, an attendance roll will be obtained, but the number of volunteers that participated in the event will be made available.	
5. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2018
	c) Frequency of actions	Annually
	d) Month/Year of Action	Annually
6. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
7. Rationale for choosing BMP and setting measureable goal(s)	The City is directly involving citizens to minimize costs, while getting participation in clean-up efforts.	
8. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Volunteers participating in clean-up projects will have hands on knowledge of trans and debris getting into our streams.	

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C

MINIMUM CONTROL MEASURE (MCM)

C

ILLICIT DISCHARGE DETECTION & ELIMINATION (IDDE)

C1	Illicit Discharge and Elimination (IDDE)	
MCM C, BMP 1	**LEGAL AUTHORITY**	
1. Description of BMP	The City will review existing Ordinances and Regulations necessary to confirm that all required regulatory provisions related to storm water is in place and conform to the City adopted Illicit Discharge and Illegal Connections Ordinance on November 07, 2006 (Ordinance 0-06-19, Part Two). Revised Ordinances and Regulations may prohibit non-storm water discharges into the storm water system, and will require mandatory inspections of new buildings and provide necessary enforcement procedures and penalties.	
2. Measureable Goals	The City will adopt or revise its Ordinance and Regulation, and if necessary modify the ordinance during the reporting period. If the ordinance is revised during the reporting period, the City will submit a copy of the ordinance with the annual report.	
3. Documentation to be submitted with each annual report	The City will provide a copy of the revised adopted Ordinance with the annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2006 - Adopted
	c) Frequency of actions	As needed for revisions
	d) Month/Year of Action	NA
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Existing Ordinances and Regulations contain language controlling the design, construction, operation, and use of stormwater facilities. However, those ordinances and regulations may need additions, enhancements, and revisions, and new ordinances and regulations may be needed to comply fully with the requirements of 40 CFR Part 122.34(b)(3), et al.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Through regular inspections confirming that the City has authority to enforce Ordinance and Regulation for illicit discharges.	

PART TWO

ILLICIT DISCHARGE AND ILLEGAL CONNECTION

Sec. 18-420. General provisions.

(a) Purpose. The purpose of this article is to protect the public health, safety, environment and general welfare through the regulation of stormwater discharges to the city's municipal separate storm sewer system to the maximum extent practicable as required by state and federal law. This article establishes methods for controlling the introduction of pollutants into the city's municipal separate storm sewer system in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II stormwater general permit. The objectives of this article are to:

(1) Regulate the contribution of pollutants to the city's municipal separate storm sewer system by any person, property owner, site operator, etc;

(2) Prohibit illicit discharges and illegal connections to the city's municipal separate storm sewer system;

(3) Prevent nonstormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the city's municipal separate storm sewer system; and

(4) To establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this article.

(b) Applicability . The provisions of this article shall apply throughout the municipal boundaries of the city.

(c) Compatibility with other regulations . This article is not intended to modify or repeal any other article, rule, regulation, other provision of law. The requirements of this article are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law, and where any provision of this article imposes restrictions different from those imposed by any other article, rule, regulation, or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human health or the environment shall control.

(d) Responsibility for administration. The city manager shall administer, implement, and enforce the provisions of this article.

Sec. 18-421. Definitions.

Accidental discharge means a discharge prohibited by this article which occurs by chance and without planning or thought prior to occurrence.

City. See city manager hereafter.

City Manager. City Manager for the City of Cordele, Georgia, and/his/or her designee.

City municipal separate storm sewer system 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:

(a) Owned or maintained by the city;

(b) Not a combined sewer; and

(c) Not part of a publicly-owned treatment works.

Clean Water Act means the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.), and any subsequent amendments thereto.

Construction activity means activities subject to the Georgia Erosion and Sedimentation Control Act. or NPDES general construction permits. These include construction projects resulting in land disturbance. Such activities include, but are not limited to, clearing and grubbing, grading, excavating, and demolition.

Illicit discharge means any direct or indirect stormwater discharge to the city municipal separate storm sewer system, except as exempted herein.

Illegal connection means either of the following:

(a) 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 nonstormwater 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 the city; or

(b) Any pipe, open channel, drain or conveyance connected to the city's municipal separate storm sewer system which has not been documented in plans, maps, or equivalent records and approved by the city.

Industrial activity means activities subject to NPDES industrial permits as defined in 40 CFR, section 12226 (b)(14).

National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit means a permit issued by the Georgia EPD under authority delegated pursuant to 33 USC §§ 1342(b) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

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

Person means, except to the extent exempted from this article, 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.

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; nonhazardous liquid and solid wastes; refuse, rubbish, garbage, litter, 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; 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 mean any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

State waters means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface and 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 person.

Stormwater runoff or stormwater means any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Technical Advisory Committee (SWTAC). A seven member committee appointed by the city commission.

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.

Sec. 18-422. Prohibitions.

(a) Prohibition of illicit discharges . No person shall dispose, discard, drain, or otherwise discharge, cause, or allow others under its control to dispose, discard, drain, or otherwise discharge into the city's municipal separate storm sewer system any contaminated or polluted water, liquids, materials, waste products, etc., other than stormwater.

The following discharges to the city's municipal separate storm sewer system are exempt from the

prohibition provision above:

(1) Water-line flushing performed by a government agency, other potable water sources, landscape irrigation or lawn watering, noncommercial car wash water, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, natural riparian habitat or wetland flows, and any other water source not containing pollutants.

(2) Discharges or flows from firefighting, and other discharges specified in writing by the city as being necessary to protect public health and safety.

(3) The prohibition provision above shall not apply to any nonstormwater discharge permitted under an approved NPDES permit or order issued to the discharger and administered under the authority of the Georgia Environmental Protection Division (EPD) and the United States Environmental Protection Agency (USEPA), 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 city's municipal separate storm sewer system.

(b) Prohibition of illegal connections . The construction, connection, use, maintenance or continued existence of any illegal connection to the city's municipal separate storm sewer system is prohibited.

(1) This prohibition expressly includes, without limitation, connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection, but at the present time are illegal.

(2) A person violates this article if the person connects a line conveying sewage to the city's municipal separate storm sewer system, or allows such a connection to continue.

(3) Improper connections in violation of this article must be abated, disconnected and/or redirected, if necessary, to an approved onsite wastewater management system.

(4) Any drain or conveyance that has not been documented in plans, maps or equivalent, and which is connected to the city's municipal separate storm sewer system, shall be located by the owner or occupant of that property upon receipt of written notice of violation from the city requiring that such

locating be completed. Such notice will specify a time period within which the location of the drain or conveyance is to be completed, that the drain or conveyance be identified as storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the city.

Sec. 18-423. Industrial or construction activity discharges.

Any person subject to an NPDES industrial stormwater permit or NPDES construction activity permit administered by the Georgia EPD 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 municipal separate storm sewer system.

Sec. 18-424. Access and inspection of properties and facilities.

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

(a) 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 the city manager.

(b) The property 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.

(c) 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.

(d) 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 water quality shall be calibrated to ensure their accuracy.

(e) Any temporary or permanent obstruction to 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.

(f) Delays in allowing the city access to a facility are a violation of this article.

(g) If the city has been refused access to any part of the premises from which stormwater is discharged or would likely be discharged, and the city is able to demonstrate probable cause to believe that there may be a violation of this article, 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 article 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. 18-425. Notification of accidental discharges and spills.

(a) 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 nonstormwater discharges from that facility or operation which are resulting or may result in illicit discharges or pollutants discharging into stormwater, the city's municipal separate storm sewer system, state waters, or waters of the United States, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release so as to eliminate the effects of the discharge.

(b) Said person shall notify the city or 911 and other appropriate agencies (state, federal, etc.) in person or by phone, facsimile no later than 24 hours after the discharge, 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 manager within three business days of the initial notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the property 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 years. Said person shall also take immediate steps to ensure no recurrence of the discharge or

spill.

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

(d) Failure to provide notification of a release as provided above is a violation of this article.

Sec. 18-426. Violations, enforcement and penalties.

(a) Violations .

(1) It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this article. Any person who has violated or continues to violate the provisions of this article 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.

(2) 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 article.

(b) Notice of violation . Whenever the city finds that a violation of this article has occurred, the city may order compliance by a 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 article 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 to the Stormwater Technical Advisory Committee by filing a written notice of appeal with the city manager within 15 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 by the city manager within 15 days from the date of the notice of violation. The failure to timely file a notice of appeal shall be deemed a waiver of appeal. Hearing on the appeal before the SWTAC shall take place within thirty (30) days from the date of receipt of the notice of appeal. The SWTAC must render a decision on the appeal within thirty (30) days of the hearing and their failure to do so shall constitute a ruling in favor of the appellant. The decision of the SWTAC may be appealed within thirty (30) days after such decision to the Superior Court of Crisp County, Georgia.

(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 the later of five days of the decision of the SWTAC upholding the decision of the city or the time schedule set forth in the notice of violation, then the person receiving the notice of violation will be in noncompliance and 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 city

manager to enter upon the premises for the purposes set forth above.

(e) Costs of abatement of the violation .

(1) Within 30 days after abatement of the violation, the owner of the property will be notified by the city of the cost of abatement, including administrative costs. The property owner may file a written protest with the city manager objecting to the assessment or to the amount of the assessment within 15 days of such notice, and the appeal process set forth in subsection (c) shall be followed. The failure to file a timely written protest shall be deemed a waiver of the right to protest. If the amount due is not paid within 30 days after receipt of the notice, or if an appeal is taken, not paid within five days after a decision on said appeal that requires payment, the charges shall become a special assessment against the property upon which the violation occurred and shall constitute a lien on such property for the amount of the assessment.

(2) Any person violating any of the provisions of this article shall become liable to the city by reason of such violation.

(f) Civil penalties . In the event a person becomes noncompliant as provided in subsection (d) or otherwise violates this article, then such person shall be subject to citation to the municipal court of the city and subject to a penalty not to exceed $1,000.00. Each day the violation remains unremedied after the person becomes noncompliant shall be considered a separate violation.

(g) 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 article 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 applicable law.

(h) Remedies not exclusive.

(1) The remedies listed in this article are not exclusive of any other remedies available under any applicable federal, state or local law and the city may seek cumulative remedies.

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

Sec. 18-427. Severability.

In the event any provision of this ordinance shall be found to be illegal or unconstitutional by a court of competent jurisdiction, then the remaining provisions shall remain of full force and effect.

Sec. 18-428. Short Tile.

This Ordinance shall be known as, and may be cited as "STORMWATER MANAGEMENT ORDINANCE 2006.

Sec. 18-429. Repealer.

All ordinances, parts of ordinances, and provisions of the Code of the City of Cordele which are in conflict with the provisions of this ordinance are hereby repealed.

Sec. 18-430. Effective date.

This ordinance shall be effective and of full force and effect on June 30, 2007.

Introduction and first reading of this ordinance at the regular public meeting session of the City Commission on October 17, 2006.

Second reading, approval, and adoption of this ordinance at the regular public meeting session of the City Commission on November 7, 2006.

ZACK H. WADE, Chairman
Cordele City Commission

ATTEST:

STEVE FULFORD, City Clerk

[OFFICIAL SEAL}

C2	Illicit Discharge and Elimination (IDDE)	
MCM C, BMP 2	**OUTFALL MAP & INVENTORY**	
1. Description of BMP	The city inventoried its stormwater system in 2008. From this information, the city developed a storm water system map, showing the location of all outfalls, and the names and location of all waters of the State that receive discharges from those outfalls. In 2018, a major chang in the definition of a Stormwater Outfall created a need to modify the Outfall Map & Inventory. See: "Outfall Map	
2. Measureable Goals	The city will update the inventory and map showing any outfalls added during the reporting period.	
3. Documentation to be submitted with each annual report	The city will provide a summary of the total number of outfalls, including a list of the outfalls added during the reporting period, and an updated map in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	It is important to continuously maintain the stormwater system information, to identify problems, and ensure proper functions.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By having accurate information, the City IDDE program can respond quickly and take the necessary steps to ensure a successful program.	


Outfall Locations
2018.05
Cordele
N
4000 ft
Google Earth
© 2018 Google

City of Cordele IDDE Outfall Monitoring Points
(MCM C2: Outfall Inventory)

ID	GPS LOCATION (LAT, LONG)
H09O007	-83.78261075, 31.974531
H09O018	-83.77996971, 31.97416164
H09O017	-83.77976348, 31.9739362
H09O016	-83.77989104, 31.97392177
H09O015	-83.78006964, 31.97410753
H09O014	-83.78113594, 31.97460844
H09O013	-83.78118549, 31.97456972
H09O012	-83.78112942, 31.97454428
H09O011	-83.78134197, 31.97453985
H09O010	-83.78128459, 31.97457304
H08O021	-83.78128264, 31.98063953
H09O008	-83.78254685, 31.97458962
H10O001	-83.77985157, 31.972829
H09O006	-83.78296497, 31.9745256
H09O005	-83.78295454, 31.97458976
H09O004	-83.78421685, 31.97451784
H09O003	-83.7842025, 31.97447138
H09O002	-83.78442026, 31.97436408
H09O001	-83.78442939, 31.97442381
H08O024	-83.78128063, 31.9805069
H08O023	-83.781445, 31.9805409
F09O001	-83.79447573, 31.97468044
H09O009	-83.78134718, 31.97460622
H10O011	-83.7783836, 31.97125501
H11O002	-83.77722841, 31.96778963
H11O001	-83.77714459, 31.96798016
H10O020	-83.77717622, 31.96816517
H10O019	-83.77724744, 31.96815937
H10O018	-83.77714614, 31.96858533
H10O017	-83.77725848, 31.96859289
H10O016	-83.77731434, 31.96928535
H10O015	-83.77741197, 31.96927352
H10O014	-83.77780797, 31.97069297
H09O019	-83.77983935, 31.97303488
H10O012	-83.77849152, 31.9713562
H09O020	-83.77974221, 31.97303261
H10O010	-83.77845034, 31.97124778
H10O009	-83.77856111, 31.97135138
H10O008	-83.77924438, 31.97175007
H10O007	-83.77934814, 31.97171628
H10O006	-83.77973341, 31.97210325
H10O005	-83.77981845, 31.97204914
H10O004	-83.77975612, 31.97258927
H10O003	-83.77985032, 31.97272352
H10O002	-83.77974434, 31.97283061
H08O020	-83.77929428, 31.98039303
H10O013	-83.7778683, 31.97066016
G09O003	-83.79062407, 31.97397841
G10O003	-83.78663511, 31.97263971
G10O002	-83.78664561, 31.97270427
G10O001	-83.78651309, 31.97278552
G09O011	-83.78471104, 31.974082
G09O010	-83.78464323, 31.9740455
G09O009	-83.78477623, 31.97386187
G09O008	-83.78484404, 31.97389506
G09O007	-83.78524045, 31.97388951
G09O006	-83.7905579, 31.9737896

City of Cordele IDDE Outfall Monitoring Points
(MCM C2: Outfall Inventory)

H08O022	-83.781441, 31.98068373
G09O004	-83.79061711, 31.97383529
G10O006	-83.78823421, 31.97236168
G09O002	-83.79056222, 31.97402906
G09O001	-83.7906614, 31.97404047
G07O004	-83.79103432, 31.98359245
G07O003	-83.79119739, 31.9833729
G07O002	-83.79139411, 31.9837659
G07O001	-83.79123104, 31.98388885
F09O004	-83.79426829, 31.97433203
F09O003	-83.79445055, 31.97433201
F09O002	-83.79429167, 31.97467283
G09O005	-83.79064743, 31.97379048
H08O008	-83.77770685, 31.97839171
H08O019	-83.77954703, 31.98044094
H08O018	-83.77947086, 31.98054976
H08O017	-83.77921775, 31.98053345
H08O016	-83.77816235, 31.97945409
H08O015	-83.77835479, 31.97963737
H08O014	-83.77830509, 31.97964947
H08O013	-83.77810495, 31.97948273
H08O012	-83.77816909, 31.97895866
H08O011	-83.77816234, 31.97904887
G10O004	-83.78648422, 31.97271317
H08O009	-83.77810157, 31.97896009
G10O005	-83.78798742, 31.9723696
H08O007	-83.77784645, 31.97853866
H08O006	-83.77775364, 31.97855154
H08O005	-83.77760836, 31.97840822
H08O004	-83.7765435, 31.97794859
H08O003	-83.77674501, 31.97795252
H08O002	-83.77675345, 31.97803922
H08O001	-83.77656147, 31.97803249
G10O008	-83.7879873, 31.97228262
G10O007	-83.7882392, 31.97227747
H11O005	-83.777255, 31.96748859
H08O010	-83.77809482, 31.97905173
I08O001	-83.77360882, 31.97794134
I09O007	-83.77045188, 31.9748446
I09O006	-83.77043278, 31.97492141
I09O005	-83.77026353, 31.97486401
I09O004	-83.76991668, 31.97409868
I09O003	-83.76993791, 31.97422989
I09O002	-83.76978788, 31.97423271
I09O001	-83.76979688, 31.97409055
I08O005	-83.7748045, 31.9780958
I08O004	-83.77504675, 31.97809833
H11O003	-83.77728811, 31.9675419
I08O002	-83.77480764, 31.97818113
I09O010	-83.77092006, 31.97614123
H12O005	-83.78109002, 31.96258706
H12O004	-83.78105754, 31.96271425
H12O003	-83.7811225, 31.96271425
H12O002	-83.78094884, 31.9630121
H12O001	-83.78113125, 31.96301846
H11O055	-83.78109723, 31.96377437
H11O054	-83.78109752, 31.96312975
H11O053	-83.78109002, 31.96347636

City of Cordele IDDE Outfall Monitoring Points
(MCM C2: Outfall Inventory)

H11O052	-83.78113014, 31.96347304
I08O003	-83.77505738, 31.97818634
I09O020	-83.77210348, 31.97740804
J10O002	-83.76539226, 31.97011366
J10O001	-83.76516051, 31.96914349
I10O005	-83.76833794, 31.97203968
I10O004	-83.76828453, 31.97189184
I10O003	-83.76820736, 31.97180562
I10O002	-83.76840398, 31.97186418
I10O001	-83.76847369, 31.97201007
I09O024	-83.77277884, 31.97760227
I09O023	-83.77219835, 31.9773137
I09O008	-83.77027387, 31.97477206
I09O021	-83.7722555, 31.97753358
I09O009	-83.77044575, 31.97559312
I09O019	-83.77208466, 31.97736319
I09O018	-83.77132474, 31.97628842
I09O017	-83.7714474, 31.97646552
I09O016	-83.77136329, 31.97650637
I09O015	-83.77136227, 31.97647773
I09O014	-83.77124156, 31.97630523
I09O013	-83.77092471, 31.97607656
I09O012	-83.7709994, 31.9760936
I09O011	-83.7710109, 31.9761693
H11O049	-83.78110069, 31.96407468
I09O022	-83.77234697, 31.97744002
H11O015	-83.77767224, 31.96595855
H11O051	-83.78113185, 31.96377584
H11O025	-83.7780484, 31.96483091
H11O024	-83.77806078, 31.96484403
H11O023	-83.77801226, 31.96525131
H11O022	-83.77805427, 31.96525206
H11O021	-83.77801966, 31.96536975
H11O020	-83.77802119, 31.96535983
H11O019	-83.77802214, 31.9653436
H11O018	-83.77805136, 31.96534346
H11O027	-83.77798475, 31.96466752
H11O016	-83.77762348, 31.96594545
H11O028	-83.77801159, 31.96426134
H11O014	-83.77745236, 31.96642928
H11O013	-83.77747202, 31.96637438
H11O012	-83.77751625, 31.96637369
H11O011	-83.77751134, 31.96642581
H11O010	-83.77729751, 31.96705056
H11O009	-83.77733437, 31.96687267
H11O008	-83.77739826, 31.96687336
H11O007	-83.77735075, 31.967045
H11O006	-83.77722103, 31.96754766
J11O001	-83.7652809, 31.96715361
H11O017	-83.77805048, 31.96537095
H11O038	-83.77934182, 31.9641035
H11O004	-83.77731699, 31.96748355
H11O048	-83.78112925, 31.96409817
H11O047	-83.78093366, 31.96414663
H11O046	-83.78038125, 31.96410424
H11O045	-83.78051367, 31.96410204
H11O044	-83.78050761, 31.96414389
H11O043	-83.78040116, 31.96414977

City of Cordele IDDE Outfall Monitoring Points
(MCM C2: Outfall Inventory)

H11O042	-83.78020729, 31.96409543
H11O041	-83.78028086, 31.96410351
H11O026	-83.77804966, 31.9646712
H11O039	-83.78019431, 31.9641483
H11O050	-83.7808313, 31.96410057
H11O037	-83.77957031, 31.96409616
H11O036	-83.77957896, 31.96416224
H11O035	-83.77937298, 31.96416077
H11O034	-83.77912978, 31.96416004
H11O033	-83.77913238, 31.96412626
H11O032	-83.7786858, 31.96417912
H11O031	-83.77867974, 31.96413507
H11O030	-83.77857848, 31.96414167
H11O029	-83.77802717, 31.96413505
H11O056	-83.77800242, 31.96483803
H11O040	-83.78029903, 31.96414683

TOTAL NUMBER OF OUTFALLS: **189**

Date Printed
5/22/2018

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C3	Illicit Discharge and Elimination (IDDE)	
MCM C, BMP 3	**IDDE PLAN**	
1. Description of BMP	The City will conduct dry weather screening inspection so that 100% of the outfalls are inspected during the permit period. We will identify priority areas that are likely to contain illicit discharges and record each inspection on the "Dry Weather Outfall Screening Form" (see C3.38). The city has prepared a comprehensive IDDE Guidance Manual (see C3.01) including component procedures, guidelines, forms, test requirements, material supplies, and schedules and is in the attachments.	
2. Measureable Goals	The City will conduct dry weather screening inspection so that 100% of the outfalls are inspected during the permit period., with a minimum of at least one annually. The City will document any illicit discharge found and perform any detection activities and enforcement actions taken to eliminate illicit discharges.	
3. Documentation to be submitted with each annual report	The city will provide a list of illicit discharge and dates of inspection conducted on the inspection forms. If an illicit discharge is found, any activities performed will be provided, including eliminated discharges and/or enforcement actions in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As reported
	d) Month/Year of Action	Annually
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The City plan to detect and address non-storm water discharges, including illegal dumping, to the municipal storm water system. A City wide outfall survey with source tracing and identification and subsequent illicit discharge elimination should remove significant polluted water from flowing into State waters.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Identifying and addressing illicit discharges in priority areas.	

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C

C

CITY OF CORDELE, GEORGIA
ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) GUIDANCE MANUAL

Portion of Section

C3

of the City of Cordele

2017-2022 Storm Water Management Program (SWMP)

General NPDES Permit GAG610000

Small Municipal Separate Storm Sewer Systems (MS4)

IDDE

IDDE

Contains material obtained from the

CITY OF VALDOSTA, GEORGIA IDDE MANUAL, July 2013 revision

Contents (shown as page C3.##)

GLOSSARY

The words and terms used in this Manual, unless otherwise expressly stated, shall have the following meaning:

Clean Water Act (CWA) – The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act, is designed to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

Community – Designated boards, commissions, jurisdictions or representatives.

Environmental Protection Agency (EPA) – A government agency concerned with the American environment and its impact on human health.

C

Environmental Protection Division (EPD) – A state agency charged with protecting Georgia's air, land, and water resources through the authority of state and federal environmental statues.

Floatable Material – Any foreign matter that may float or remain suspended in the water column, and includes but is not limited to, plastic, aluminum cans, wood products, bottles, and paper products.

Geographic Information System (GIS) – Any system that captures, stores, analyzes, manages, and presents data that are linked to a location.

Hazardous Material – Any material including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Household Sewage Treatment System (HSTS) – A system designed to treat home sewage on-site.

Hydrologic Unit Code (HUC) – Are a way of identifying all of the drainage basins in the United States in a nested arrangement from largest (Regions) to smallest (Cataloging Units).

Illegal Connection – Any drain or conveyance, whether on the surface or subsurface, that allows an illicit discharge to enter the Municipal Separate Storm Sewer System (MS4).

Illicit Discharge – Any discharge to an MS4 that is not composed entirely of stormwater, except those discharges authorized under National Pollutant Discharge Elimination System (NPDES) permit – other than the NPDES permit for discharges from the MS4 – and discharges from fire fighting activities.

IDDE

Illicit Discharge Detection and Elimination (IDDE) – To find, fix and prevent illicit discharges.

Land Development Regulation (LDR) – Local laws that guide and regulate orderly growth, development, redevelopment, and preservation of the City in accordance with the adopted Comprehensive Plan and with long-term objectives, principles and standards deemed beneficial to the public interest.

Material Safety Data Sheets (MSDS) – A form containing data regarding the properties of a particular substance intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.

Municipal Separate Storm Sewer System (MS4) – As defined at 40 C.F.R. 122.26 (b)(8), municipal separate storm sewer system means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

Owned or operated by a State, city, town, borough, county, parish, district, municipality, township, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over sewage, industrial wastes, including special districts under State law such as a sewer district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
Designed or used for collecting or conveying stormwater;
Which is not a combined sewer; and
Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 C.F.R. 122.2.

National Pollutant Discharge Elimination System (NPDES) – A permit issued by the EPA (or by a State under authority delegated pursuant to 33 U that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide

Notice of Intent (NOI) – A notice that an environmental impact statement will be prepared and considered. The notice shall briefly:

Describe the proposed action and possible alternatives.

Describe the agency's proposed scoping process including whether, when, and where any scoping meeting will be held.
State the name and address of a person within the agency who can answer questions about the proposed action and the environmental i ment.

Publicly Owned Treatment Works (POTW) – A term used in the United States for a sewage treatment plant that is owned, and usually operated, by agency.

Pollutant – Anything that causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, solvents, oil and other aut non-hazardous liquid and solid wastes, yard wastes, refuse, rubbish, garbage, litter or other discarded or abandoned objects, floatable materials, pe cides, fertilizers, hazardous materials, wastes, sewage, dissolved and particulate metals, animal wastes, residues that result from constructing a struc ious or offensive matter of any kind.

Quality Assurance Management Plans (QAMP) – An organization's quality system or its systematic approach to quality assurance.

Quality Assurance Project Plans (QAPP) – The activities of an environmental data operations project involved with the acquisitio mental information whether generated from direct measurements activities, collected from other sources, or compiled from computeriz and information systems.

Quality Assurance Quality Control (QA/QC) – The planned and systematic activities implemented in a quality system so that quality for a product or service will be fulfilled.

Stormwater Runoff – The flow of water which results from, and which occurs during and following a rainfall event.

Total Dissolved Solids (TDS) – The total amount of mobile charged ions, including minerals, salts or metals dissolved in a given volume of water.

Wastewater – The spent water of a community. From the standpoint of a source, it may be a combination of the liquid and water-carried wastes fr commercial buildings, industrial plants, and institutions.

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IDDE

ACRONYMS

ABS – Alkyl Benzene Sulfonate
ATC – Automatic Temperature Compensation
CMP – Corrugated Metal Pipe
CWA – Clean Water Act
DIP – Ductile Iron Pipe
EPA – Environmental Protection Agency
EPD – Environmental Protection Division
FC – Fecal Coliform
GIS – Geographic Information System
GPS – Global Positioning System
HDPE – High Density Polyethylene
HSTS – Household Sewage Treatment Systems
HUC – Hydrologic Unit Code
IDDE – Illicit Discharge Detection and Elimination
LAS – Linear Alkylate Sulfonate
LDR – Land Development Regulation
MSDS – Material Safety Data Sheets
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NPDES – National Pollutant Discharge Elimination System
POTW – Publicly Owned Treatment Works
PPM – Parts Per Million
PVC – Polyvinyl Chloride
QAMP – Quality Assurance Management Plans
QAPP – Quality Assurance Project Plans
QA/QC – Quality Assurance Quality Control
RCP – Reinforced Concrete Pipe
SCA – Standard Calibration Adjust
TDS – Total Dissolved Solids
VCP – Vitrified Clay Pipe

INTRODUCTION

This manual is intended to serve as a guidance manual for the City of Cordele's Illicit Discharge Detection Elimination (IDDE) program, as required by the State of Georgia Environmental Protection Division (EPD) through a General National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II permit. This manual profiles the IDDE minimum control measure, which is one of six Phase II regulated small Municipal Separate Storm Sewer System (MS4) measures required to be included in a stormwater management program.

WHAT IS AN MS4

The State of Georgia defines a MS4 as "a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains owned or operated by a municipality or other public body, designed or used for collecting or conveying stormwater runoff and is not a combined sewer or part of a Publicly Owned Treatment Works (POTW)."

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BACKGROUND OF PHASE II

Although the quality of the nation's waters has improved greatly since the passage of the Clean Water Act (CWA) in 1972, many water bodies are still impaired by pollution. According to the United States Environmental Protection Agency (EPA), the top causes of impairment include siltation, nutrients, bacteria, metals, and oxygen-depleting substances. Polluted stormwater runoff, including runoff from urban/suburban areas and construction sites are leading sources of impairment. To address this problem, EPA has put into place a program that regulates certain stormwater discharges.

In 1990, the EPA promulgated Phase I of its stormwater program under the NPDES permit provisions of the CWA. Phase I addressed stormwater runoff from "medium" and "large" MS4s generally serving populations of 100,000 or greater, construction activity that would disturb five or more acres of land, and 10 categories of industrial activity. To further reduce the adverse effects of stormwater runoff, the EPA instituted its Stormwater Phase II Final Rule on December 8, 1999.

The Phase II program regulates discharges from small MS4s located in "urbanized areas" (as delineated by the Census Bureau in the most recent census) and from additional small MS4s designated by the permitting authority.

The EPA's Stormwater Phase II Final Rule states that this stormwater management program must include the following six minimum control measures:

- Public education and outreach on stormwater impacts
- Public involvement and participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management in new development and redevelopment
- Pollution prevention and good housekeeping for municipal operations

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WHY ARE ILLICIT DISCHARGE DETECTION AND ELIMINATION EFFORTS NECESSARY

Discharges from MS4s can often include wastes and wastewater from non-stormwater sources, including illicit discharges, which can enter the stormwater system through various means. The result of this is untreated discharges that contribute to high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving water bodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health. Now, more than ever, it is necessary to create an awareness of what illicit discharges are doing.

FINDING, FIXING, AND PREVENTING ILLICIT DISCHARGES

The purpose of an IDDE program is to find, fix and prevent illicit discharges, and develop a series of techniques to meet these objectives. This manual is designed to outline the City of Cordele's dry weather outfall screening procedures.

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CHAPTER 1: ILLICIT DISCHARGE DETECTION AND ELIMINATION

WHAT IS AN ILLICIT DISCHARGE

An illicit discharge is defined by the State of Georgia General NPDES Stormwater permit as "any discharge to an MS4 that is not composed entirely of stormwater, except those discharges authorized under NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from firefighting activities."

In most communities, the MS4 is directly connected to a waterbody and does not receive any type of treatment prior to its discharge to receiving water bodies of the United States. Because there is little or no treatment, it is vital that only stormwater be discharged from these MS4s.

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The general permit received by Phase II regulated communities requires that those communities develop an IDDE program. This program will assist communities in meeting their requirement set forth in their General NPDES Stormwater permit.

Figure 1: Designated MS4 outfall location

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TYPES OF ILLICIT DISCHARGES

Illicit discharges can be separated into three (3) categories based on frequency of discharge:

1. Transitory Illicit Discharge: These are typically a one-time event. They can result from spills, dumping, and line breaks and are often the most difficult to investigate and trace back to its source.
2. Intermittent Illicit Discharge: These are typically discharges that occur occasionally. They can occur several hours per day, week or over the course of a year and can happen as the result of line breaks or cross connections.
3. Continuous Illicit Discharge: These direct connections into the MS4 can be from sanitary sewers, cross connections, infrastructure problems with a sanitary sewer system, or malfunctioning household sewage treatment systems (HSTS).

Of these three types, the Continuous Illicit Discharge is the easiest to find, investigate, trace and eliminate from the MS4. This type of discharge also has the greatest impact because of the constant pollutant loading into a water body.

TABLE 1-1: TRANSITORY OR INTERMITTENT ILLICIT DISCHARGES

Land Use	Likely Source Locations	Condition/Activity that Produces Discharge
Residential	• Apartments • Multi-Family • Single Family Detached	• Car Washing • Driveway Cleaning • Dumping/Spills • Equipment Wash-Downs • Lawn/Landscape Watering • Septic System Maintenance • Swimming Pool Discharges • Laundry Wastewater • Improper Plumbing (e.g. garage floor drains)
Commercial	• Campgrounds/RV Parks • Car Dealers/Rental Car Company • Car Washes • Laundry or Dry Cleaners • Gas Stations/Auto Repair Shops • Nurseries and Garden Centers • Oil Change Shops • Restaurants • Swimming Pools • Service Garages	• Dumping/Spills • Landscaping/Grounds Care (e.g. irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (e.g. power washing) • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing • Wash-down of Greasy Equipment & Grease Traps
Industrial	• Auto Recyclers • Beverages and Brewing • Construction Vehicle Washouts • Distribution Centers • Food Processing • Garbage Truck Washouts • Metal Plating Operations • Paper and Wood Products • Petroleum Storage and Refining • Printing	• All Commercial Activities • Industrial Process Water or Rinse Water • Loading and Un-loading Area Wash-downs • Outdoor Material Storage (e.g. fluids)
Municipal	• Airports • Landfills • Maintenance Depots • Municipal Fleet Storage Areas • Public Works Yards • Streets and Highways	• Building Maintenance (e.g. power washing) • Dumping/Spills • Landscaping/Grounds Care (e.g. irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (e.g. power washing) • Road Maintenance • Emergency Response • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing

Source: Modified from *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, 2004, p. 12, Table 2.

TABLE 1-2: CONTINUOUS ILLICIT DISCHARGES

Land Use	Condition or Activity that Produces Discharge
Residential	• Failed sanitary sewer infiltrating into stormwater system • Sanitary sewer connection into stormwater system • Failed septic systems discharging to stormwater system
Commercial/Industrial	• Failed sanitary sewer infiltrating into stormwater system • Process water connections into stormwater system • Sanitary sewer connection into stormwater system
Municipal	• Failed sanitary sewer infiltrating into stormwater system • Sanitary sewer connection into stormwater system

Source: *Guidelines and Standard Operating Procedures for Stormwater Phase II Communities in Maine*, Casco Bay Estuary Partnership.

Tables 1-1 and 1-2 examine the likely source locations that contribute illicit discharges to a MS4. Land use can predict the potential for these discharges. By understanding the possible discharges originating from land use activities, it allows for the IDDE inspector to thoroughly utilize this knowledge in identifying illicit discharges and their potential sources. Industrial facilities are regulated by additional permits through the Georgia EPD. For industrial questions please contact Georgia EPD at (404) 675-6240 or visit their web-site at www.gaepd.org.

MODE OF ENTRY

Illicit discharges can also be classified based on how they enter the stormwater system. This entry can be direct or indirect.

1. Direct entry: The discharge is directly connected to the stormwater system via a pipe. This type of entry will produce discharges that are either continuous or intermittent. Direct entry usually occurs when there are sewage cross-connections, or where there are industrial and commercial cross-connections.
2. Indirect entry: Flows, which are generated outside the stormwater system, enter through stormwater inlets or by infiltrating through the joints of the pipe. Generally, indirect modes of entry produce intermittent or transitory discharges. This type of entry can include groundwater seepage into the stormwater pipe, spills, dumping, outdoor washing activities, and irrigation from landscaping or lawns that reaches the stormwater system.

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WHAT ARE THE ELEMENTS OF AN EFFECTIVE IDDE PROGRAM

At a minimum, the Georgia EPD requires the permittee to incorporate the following:

1. **Develop a storm sewer system map showing the location of all outfalls, and the names and location of all surface waters of the state that receive discharges from those outfalls. This also must include the location of all HSTS that discharge directly into the MS4.**
2. **To the extent allowable under law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions.**
3. **Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping to your system, as well as a program for dry weather inspections.**
4. **Inform public employees, businesses, and the general public of hazards associated with illegal discharges.**
5. **Develop a list of occasional and incidental non-stormwater discharges.**

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DOES THE IDDE PROGRAM ADDRESS ALL ILLICIT DISCHARGES

No. The IDDE program does not need to address all illicit discharges unless you identify them as significant contributors of pollutants to your small MS4. Under the Georgia EPD rules for Phase II Stormwater, examples of this include:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- 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
- Dechlorinated swimming pool discharges
- Street wash water

Discharges or flows from firefighting activities are excluded from the effective prohibition against non- stormwater and need only be addressed where they are identified as significant sources of pollutants to the waters of the State of Georgia.

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MAPPING

The Georgia EPD General NPDES permit requires small MS4s to "develop, if not already completed, a storm sewer system map showing the location of all outfalls and the names and location of all surface waters of the State receiving discharges from those outfalls". The City of Cordele completed mapping the MS4 in December 2006, using Geographic Information System (GIS). The inventory is maintained and updated by the Engineering Department as needed (e.g. infrastructure upgrades, new, etc); however, the inspection and cleaning of the system is provided by the Utilities Department.

INVENTORY

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The stormwater infrastructure for the MS4 is being collected by City staff using a Global Positioning System (GPS) unit. The data features collected included catch basins, junction boxes, manholes, storm pipes, outfalls, flumes, driveway pipes, culverts, ponds, etc. For each feature, specific information is being gathered including size, material, type, length, date GPS'ed, location, comments, reference number, condition, ownership, etc. All data is being stored at the public works department of the City of Cordele.

The GIS information is used to create the annual Stormwater System Map, which is used by the Stormwater Division on a daily basis for various tasks including inspections and cleaning of the MS4. As a result of the City maintaining a very extensive GIS database, including roads, parcels, addresses, etc, the Stormwater Division is able to digitally map inspections, cleanings, complaints, etc. By digitally mapping this type of information (e.g. outfall inspections), the City is able to ensure that all outfalls are inspected within a five year time.

To ensure that the City meets the Storm Water Management Program (SWMP) annual requirements of inspecting 20% of the MS4 outfalls, staff will be provided a monthly goal. Outfall inspections are dependent on the weather so if the monthly goal is not met, staff must ensure that the inspections are met in the upcoming months and plan accordingly.

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CHAPTER 3: INSPECTION AND DEVELOPING PRIORITY AREAS

Another mandatory requirement of a Phase II IDDE program is to "develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to your system". The EPA recommends that this plan include the following components:

1. Locate priority areas within your community
2. Trace the source of an illicit discharge
3. Remove the source of the illicit discharge
4. Program evaluation and assessment

Developing priority areas is vital to any community IDDE program. This process can be broken down into three fundamental steps:

1. Use all available information to identify the potential "hot spots" of the community
2. Conduct dry weather field screenings to locate non-stormwater discharges
3. Conduct water quality sampling and analysis to determine what non-stormwater discharges are present

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HOT SPOTS

The first step in locating priority areas is to identify possible hot spots within the City of Cordele. These hot spots are areas where there is a potential for illicit discharges to occur. These can be broken down into a list of commonly high probability locations where illicit discharges may be occurring.

1. Locations where there have been repeated problems in the past. This includes locations with known water quality data, as well as locations where numerous complaints have been received.
2. Older areas of a community may indicate possible locations where there will be illicit discharges detected. These locations in a community may have a higher percentage of illegal connections and/or have deteriorating utility infrastructure leading to infiltration problems.
3. The commercial and/or industrial areas of the community.

DETECTION AND INSPECTIONS

Dry weather screening inspections must be conducted on all known MS4 outfalls. Dry weather inspections are a visual inspection of the outfall location. Dry weather is defined as a minimum of 72 hours of no rainfall (0.1") within an area. When performing an effective dry weather screening process, be sure to do the following:

- **Utilize the information obtained in the mapping component. (e.g. AutoCAD, Arcview or Stormwater System Map)**
- Fill out the *Dry Weather Outfall Screening Form* (Appendix A). The following is a list of observations needed for this component, and are listed on the field format:
    - Date
    - Time
    - Inspector/Sample performed by
    - Outfall location/ID
    - Weather conditions
    - Outfall Type/Material
    - Receiving stream
    - Hydrologic Unit Code (HUC) 8 watershed name
    - Land use/industries in immediate drainage area
    - Comment section for: Flow, odor, color, turbidity, floatables

Be aware of the locations where field inspections will occur because specific locations may present safety concerns.
If additional field staff is needed, coordinate with your supervisor.
Notify the office of your field location.

See Appendix B: *Illicit Discharge Detection and Elimination Field Guide* for quick helpful tips on the IDDE program. If an illicit discharge is found, the Dry Weather Outfall Screening Form has a section for water quality sampling that is conducted.

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PHYSICAL INDICATORS

During dry weather visual inspections, it is important to indicate the conditions observed at an outfall location. This includes: flow, odor, color, turbidity, etc. if present at the location. The information obtained from the physical characteristics observed are indicators and cannot be fully relied upon by themselves. Floatables are the best physical indicator. The most common floatables are sewage, suds, and oil sheens. The observation of sewage at an outfall location indicates that there is a severe problem with that MS4 and should be looked at as to where the source for the sewage is originating from. Suds can indicate a variety of things. Some suds are naturally formed by the movement of the water. If the suds are located at a water drop off and break up quickly, this may only be water turbulence related. If the suds have a fragrant odor, this can indicate the presence of laundry water or wash water in the waterbody. Oil sheens need to be looked at to try and determine the source of the oil sheen. Some oil sheens are common and occur naturally by in-stream processes. This occurs when an iron bacteria forms a sheet-like film. This can be determined by looking at the sheen and seeing if it cracks when disturbed. Synthetic oil sheens, on the other hand, will swirl when disturbed. If this occurs, then the sheen is from an oil source.

When dry weather flows are observed at an outfall, the flow is considered non-stormwater related. This flow can be an illicit discharge, but it may also be a flow being generated from another action that is not considered illicit (See Chapter 1). Likewise, if no flow is observed at an outfall, it does not mean that there is no problem at that specific outfall. In Chapter 1, different types of illicit discharges including continuous, intermittent and transitory, were discussed. The continuous flows are the easiest to locate while the other two are not. That is why it is important to observe the area at each outfall's location for any type of observable pollution problem that may be the result of an intermittent or transitory illicit discharge.

It is extremely important for IDDE staff to recognize that during field inspections, the outfall is observed as a snapshot in time. To ensure that the City has an effective IDDE program, at a minimum, 20% of the outfalls will be inspected on an annual basis, so that in five years the entire outfall inventory will be inspected. Since the total number of outfalls change due to improvements and/ or new development, contact your supervisor for the most accurate number and your monthly goals.

WATER QUALITY SAMPLING AND TESTING

When dry weather flows are observed, it will be difficult to determine if there is a problem with that flow. Obvious problems, such as strong sewage odor, or the presence of raw sewage or toilet paper, will indicate that there is a bacterial problem at that location coming from sanitary sewers, cross connections or septic systems. However, in most circumstances, water that is observed during dry weather conditions will not have those visual indicators. That is why water quality testing and sampling is a vital component for an IDDE program.

Certain water quality parameters can serve as indicators of the likely presence or absence of a specific type of discharge. Some of these parameters can be measured in the field with specific instrumentation and field sample kits, while others will need to be analyzed at a laboratory. The City of Cordele uses the following parameters:

TABLE 3-1: WATER QUALITY TEST PARAMETERS AND USES

Water Quality Test	Use of Water Quality Test	Comments / Suggested Ranges
Conductivity	Used as an indicator of dissolved solids	Measured in the field with a probe. If less than 300 micromhos (µmhos/cm). If greater than 300 µmhos/cm, take grab sample and provide to POTW laboratory for fecal coliform testing.
Surfactants	Indicate the presence of detergent (e.g., laundry, car washing)	Measured with detergent test. Less than 0.2 mg/l. If found to be significantly high, send sample to contract laboratory
Ph	Extreme Ph values (low or high) may indicate commercial or industrial flows; not useful in determining the presence of sanitary wastewater (which, like uncontaminated base flows, tends to have a neutral Ph, i.e., close to 7)	Measured in the field and laboratory with a probe / Ph is (6-9) standard units (su)
Temperature	Sanitary wastewater and industrial cooling water can substantially influence outfall discharge temperatures. This measurement is most useful during cold weather	Measured in the field with a probe / Temperature should be near or below ambient conditions for groundwater or stormwater runoff
Fluoride	Used to indicate potable water sources in areas where water supplies are fluoridated	Measured in the field with a meter / Less than 0.2 mg/L

*In addition to these parameters, the following field observations are conducted: Flow, Odor, Color, Turbidity, and Floatables

QUALITY ASSURANCE MANAGEMENT PLANS AND PROJECT PLANS

The use of a Quality Assurance Management Plan (QAMP) or Quality Assurance Project Plan (QAPP) is extremely important in ensuring that when water samples are obtained, there is a consistent and approved protocol used. This is to ensure that the data you collect is accurate. This should include where to collect samples, when to collect, how to collect, calibration of equipment (e.g. meters), storage of samples, holding times, chain of custody and transportation of samples to the POTW laboratory (See Appendix C: *Chain of Custody Record* Form). Refer to 40 CFR part 136 Table II on the EPA website for the most up to date sampling parameters.

DRY WEATHER MONITORING FIELD CHECKLIST

When performing water quality sampling, it is important to have adequate equipment. This includes, but not limited to:

- Bottles (e.g. These will depend on the parameter being sampled for and are provided by the POTW laboratory to prevent cross contamination from occurring)
- Cooler
- Disposal waste containers
- Field forms
- Ice
- Labels for bottles
- Latex gloves
- Meters
- Permanent marker for bottles
- Test kits

Whenever a water sample is taken at MS4 outfall location, fill out the inspection form and make sure the time of sample is indicated. This is important when delivering samples to the POTW laboratory which has a Quality Assurance/Quality Control (QA/QC) policy in place and routinely performs this type of analysis for consistency purposes.

SAMPLING PROCEDURES AND SUBMISSION

Field Screening

The field screening part of dry weather monitoring consists of a series of qualitative field observations and field analyses of selected water quality parameters. General site observations (e.g. weather conditions, outfall type/material, etc.) are recorded on the Dry Weather Outfall Screening Form. Field measurements will be taken and recorded on the data sheet where there is flowing water, provided there has been no rain event during the last 72 hours. If no flow is observed during the outfall screening, the "Flow from outfall" field should be checked "No" and the screening is complete. This result will be counted towards the total number of outfalls screened. If flow is observed during the outfall screening, the "Flow from Outfall" field should be checked "yes" and both the Field Observations and Measurements and the Water Quality Sampling portions of the screening form should be completed.

Field Sample Collection

Water quality sampling of a dry weather flow is performed to look for chemical indicators which may detect, characterize or confirm the presence of an illicit discharge or illegal connection. Sampling may be undertaken either using field test kit equipment or by collecting grab samples for laboratory analysis. Follow the kit manufacturer's procedures for obtaining a test sample and completing the field analysis. Record the field analysis results on the screening form.

Performing a grab sample

- Label sample containers before sampling event
- Take a cooler with ice to the sampling point
- Take the grab from the horizontal and vertical center of the channel
- Avoid stirring up bottom sediments in the channel
- Hold the container so the opening faces upstream
- Avoid touching the inside of the container to prevent contamination
- Keep the sample free from uncharacteristic floating debris
- Transfer samples into proper containers (e.g., from bucket to sample container), however, FC should remain in original containers
- If taking numerous grabs, keep the samples separate and labeled clearly
- Use safety precautions

FIELD TESTING PROCEDURES

Conductivity

Conductivity is a measure of the ability of the water to pass an electrical current and is affected by the presence of dissolved solids. Dissolved substances in water dissociate into ions with the ability to conduct electrical current. As the level of total dissolved solids (TDS) rises, the conductivity will also increase. Conductivity is measured in micromhos per centimeter (µmhos/cm) or microsiemens per centimeter (µmS/cm). Micromhos (µmhos) and microsiemens (µmS) are equivalent units of measure and can be used interchangeably. If conductivity is greater than 300 umho/cm, proceed with the fecal coliform testing.

Calibrating the Conductivity Meter

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Prior to testing, calibrate your meter using the method recommended by the manufacturer of your particular meter. For the AP85 Portable Waterproof Accumet meter, follow the instructions below:

1. Make sure conductivity probe is connected to meter.
2. Press ON/OFF to start meter.
3. Press MODE to select conductivity measurement mode (µs).
4. Rinse the probe thoroughly with deionized water or rinse solution, and then rinse with a small amount of calibration standard.
5. Dip the probe in to the calibration standard. Immerse the probe tip beyond the upper steel band. Stir the probe gently to create a homogenous sample.
6. Wait for the measured conductivity value to stabilize.
7. Press CAL/MEAS to enter conductivity calibration mode. The CAL indicator will appear above the display.
8. Press the UP or DOWN keys to change the value on the primary display to match the value of the calibration standard. The secondary display shows the factory calibrated value.
9. Press ENTER to confirm the calibration value. The meter returns to the MEAS (measurement) mode. (To exit calibration mode without confirming calibration, do not press ENTER in this step. Press CAL/MEAS instead.)

1 0 . Repeat steps 1-9 for other ranges.

Measuring for Conductivity

1. Rinse the probe with deionized or distilled water before use to remove any impurities adhering to the probe body. Shake or air dry. To avoid contamination or dilution of your sample, rinse probe with a small volume of your sample liquid.
2. Press ON/OFF to start meter.
3. Press MODE to select conductivity measurement mode (µs). The MEAS annunciator appears on the top center on the meter screen, while the Automatic Temperature Compensation (ATC) indicator appears in the lower right hand corner.
4. Dip the probe into the sample. When dipping the probe into the sample, the tip of the probe must be immersed above the second steel band. Stir the probe gently in the sample to create a homogenous sample.
5. Allow time for the reading to stabilize.
6. Record reading in the space provided on your data form.
7. If the reading is greater than 300 µmho/cm, begin investigation.

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Temperature

Although temperature may be one of the easiest measurements to perform, it is probably one of the more important parameters to be considered. It dramatically affects the rates of chemical and biochemical reaction within the water. Many biological, physical, and chemical principles depend on the temperature. Some of the most common of these are the solubility of compounds in water, distribution and abundance of organisms living in the water, rates of chemical reactions, density inversions and mixing, and current movements.

Shallow bodies of water, such as small streams and stormwater ditches are much more susceptible to temperature changes because their capacity to store heat over time is also relatively small.

In a stormwater system, unusual temperature variations could indicate thermal pollution introduced by illegal discharges into the system.

Measuring for Temperature[1]

When you have collected the water sample in the appropriate container, remove the container from direct sunlight and wind. Do not hold the body of the bottle in your hands because your hands might begin to warm the water, instead hold it by its lid. Put the conductivity meter in the container to record the value to the nearest 0.5 degrees C. Record reading in the space provided on your data form. The temperature should be near or below ambient conditions for groundwater or stormwater runoff.

TABLE 3-2: CELSIUS / FAHRENHEIT CONVERSIONS

°C	°F	°C	°F	°C	°F
0	32.0	13	55.4	26	78.8
1	33.8	14	57.2	27	80.6
2	35.6	15	59.0	28	82.4
3	37.4	16	60.8	29	84.3
4	39.2	17	62.6	30	86.0
5	41.0	18	64.4	31	87.8
6	42.8	19	66.2	32	89.6
7	44.6	20	68.0	33	91.4
8	46.4	21	69.8	34	93.2
9	48.2	22	71.6	35	95.0
10	50.0	23	73.4	36	96.8
11	51.8	24	75.2	37	98.6
12	53.6	25	77.0	38	100.4

[1] If the conductivity meter is not available and a thermometer is used to determine temperature, do not remove the thermometer from the container to read the temperature to ensure accuracy.

Ph

Ph is a measure of how acidic or basic (alkaline) a solution is. The Ph scale ranges from 0 to 14 and is a means of showing which ion has the greater concentration. At a Ph 7.0, the concentration of both ions is equal and the water is said to be neutral, neither acidic nor alkaline. Pure water has a Ph of 7.0. When the Ph is less than 7.0, there are more hydrogen ions than hydroxyl ions and the water is said to be acidic. When the Ph is greater than 7.0, there are more hydroxyl ions than hydrogen ions and the water is said to be basic or alkaline.

Water's ability to resist changes in Ph, or its buffering capacity, is critical to aquatic life. Generally, an aquatic organism's ability to complete a life cycle greatly diminishes as Ph becomes greater than 9.0 or less than 5.0. There are several activities in water that can severely affect the Ph. Mineral substances are dissolved, aerosols and dust from the air are picked up, and manmade wastes are dumped into the water.

A Ph meter is an electronic instrument used to measure the Ph of a liquid. A typical Ph meter consists of a special measuring probe (a glass electrode) connected to an electronic meter that measures and displays the Ph reading. The pocket Ph meter is most appropriate for use out in the field. It is a small handheld device that can be easily transported from place to place. This type of meter provides quick and accurate Ph readings.

Calibrating the Ph Meter

These steps should be performed at least 24 hours before Ph testing is performed. Prior to testing, calibrate your meter using the method recommended by the manufacturer of your particular meter. For the pocket Waterproof pHTestr 10 meter, follow the instructions below:

1. Remove the protective cap off your Ph meter.
2. Rinse the beaker and meter twice with a small volume of 7.0 Ph buffer solution.
3. Put enough buffer solution in the beaker to reach the immersion level of the meter when it is submerged in the solution. Dip the tip of the meter in the buffer solution so that the glass electrode is submerged; however, do not exceed a depth of 2 inches.
4. Press ON/OFF to start meter. Hold the tip of the meter in the beaker and swirl gently. When the display stabilizes, check the meter reading. If the reading is 7.0, rinse the bulb with deionized water, shake off excess water, and proceed to step #8. If the reading is not 7.0, proceed to step #5.
5. Begin calibration by pressing CAL. The number displayed should begin flashing and will approach 7.0. It will rest on a number and stop changing. The number will continue flashing.
6. Calibrate the meter by pressing HOLD. The reading should immediately change to 7.0.
7. Turn the meter off.
8. Rinse the beaker and meter twice with a small volume of 10.0 Ph buffer solution.
9. Put enough buffer solution in the beaker to reach the immersion level of the meter when it is submerged in the solution. Dip the pen in the buffer up to the immersion level. Do not immerse the meter above the brown line.
10. Press ON/OFF to start meter. Hold the tip of the meter in the beaker and swirl gently. When the display stabilizes, check the meter reading. The reading should be near 10.0. Do not readjust the meter.
11. Repeat the same process with the 4.0 buffer solution.

Measuring for Ph

1. Remove protective cap.
2. Press ON/OFF to start meter.
3. Dip the glass electrode into the sample. Stir and let the reading stabilize.
4. Record reading in the space provided on your data form. If you need to freeze the reading, press HOLD/ENT. To release the reading, press HOLD/ENT again.
5. Press ON/OFF to turn the meter off. If you do not press a button for 8.5 minutes, the meter will automatically shut off to conserve batteries.
6. If the Ph is outside of the allowable parameters of 6-9 standard units, begin investigation.

Fluoride

Most water supplies contain some naturally occurring fluoride, such as sodium fluoride and fluorosilicates, which dissolves easily into ground water as it moves through gaps and pore spaces between rocks. Many communities add fluoride to their drinking water to promote dental health. Fluoride can also enter drinking water in discharge from fertilizer or aluminum factories. It can be used to detect the intrusion of drinking water or wastewater in groundwater samples.

Calibrating the Fluoride Meter

The Pocket Colorimeter II instrument is factory-calibrated and ready for use without user calibration. Use of the factory calibration is recommended unless the user is required to generate a calibration. To calibrate the meter with a known standard, see instruction manual for symbology and follow the instructions below:

1. Press POWER to start meter.
2. Place the blank (deionized water) in the meter, and then press ZERO/SCROLL.
3. Place the reacted standard in the meter, then press READ/ENTER.
4. Press MENU, then press ZERO/SCROLL until the display shows "SCA" (Standard Calibration Adjust).
5. Press READ/ENTER to display the SCA.
6. Press READ/ENTER to adjust the curve to the displayed value. The meter will return to the measurement mode and the Calibration Adjusted icon will appear in the display window.
7. If an alternate concentration is used, or if a standard concentration is not given, repeat steps 1-5.
8. Press ZERO/SCROLL to access the Edit function, then press READ/ENTER to begin editing. The digit to be edited will flash. Use the ZERO/SCROLL key to change the entry, then press READ/ENTER to accept and advance to the next digit. When the last digit is entered, press READ/ENTER and the meter will adjust the curve to the value entered. The meter will return to measurement mode and the Calibration Adjusted icon will appear in the display window.
9. To turn off SCA, press MENU.
10. Press ZERO/SCROLL until SCA appears in the display.
11. Press READ/ENTER, and then press ZERO/SCROLL until OFF appears in the display.
12. Press READ/ENTER to turn off SCA.

Measuring for Fluoride

1. Press POWER to start meter. The arrow should indicate channel 2.
2. Collect at least 40 Ml of sample in a 50 Ml beaker. Fill another 50 Ml beaker with at least 40 Ml of deionized water.
3. Fill a SPADNS Fluoride AccuVac Ampule with sample. Fill another SPADNS Fluoride AccuVac Ampule with the blank. Keep the tip of the Ampule immersed until it fills completely.
4. Quickly invert the Ampules several times to mix. Wipe off any liquid or fingerprints.
5. Wait 1 minute.
6. Place the blank in the cell holder.
7. Cover the blank with the instrument cap.
8. Press ZERO/SCROLL. The display will show "- - - -", then 0.0. Remove the blank from the cell holder.
9. Place the prepared sample in the cell holder.
10. Cover the sample cell with the instrument cap.
11. Press READ/ENTER. The display will show "- - - -", followed by results in mg/L fluoride. If the instrument shows a flashing 2.2 (over range), dilute the sample with an equal volume of deionized water and repeat the test. Multiply the result by 2.
12. Record reading in the space provided on your data form.
13. If the reading is greater than 0.2 mg/l, begin investigation.

Surfactants

Detergents contain synthetic or organic surface active agents called surfactants, which are derived from petroleum product precursors. They have the common property of lowering the surface tensions of water thus allowing dirt or grease adhered to various articles to be washed off. Industrial facilities use detergents to clean machinery. Soap manufacturers and households will also discharge anionic detergents into the surface water. The problem with these types of discharges is that surfactants can present significant environmental pollution problems. In aquatic environments, surfactants may form a surface film and reduce oxygen transfer at the water surface. Some surfactants may be acutely toxic to aquatic organisms. Detergents can damage fish gills by stripping them of their natural oils, thus interrupting oxygen transfer. Surfactants and detergents may also cause suds or foam to form on surface waters, which is aesthetically displeasing. Furthermore, this foam often contains nutrients such as nitrogen and phosphorous which can, in turn, provoke algae blooms. Surfactants can also alter the hydraulic characteristics of soils, affecting the movement of contaminants through soils and into groundwater. Surfactants are very slow to biodegrade and have carcinogenic and reproductively toxic byproducts such as nonylphenol, which is currently regarded as a potent endocrine disrupter.

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Measuring for Surfactants

The Hach Stormwater Detergents test[2] is used as an indicator for the presence of surfactants. Follow the instructions below to determine whether further testing needs to occur.

1. Fill one test tube to the upper mark (20 Ml) with the water to be tested.

2. Add 12 drops of Detergent Test Solution, insert stopper, and shake to mix.

3. Remove stopper and add chloroform to the lowest mark (5 Ml) on the test tube. (Chloroform is heavier than water and will sink.) Insert stopper, shake vigorously for 30 seconds and allow to stand for one minute to allow the chloroform to separate.
4. Using the draw-off pipet, remove the water from the tube and discard.

5. Refill the test tube to the upper mark with the Wash Water Buffer and, using the draw-off pipet, remove the Wash Water Buffer and discard. This step washes away the remaining water sample.
6. Refill the test tube to the upper mark with the Wash Water Buffer, insert stopper, and shake vigorously for 30 seconds. Allow to stand for one minute to slow the chloroform to separate.
7. Insert the test tube containing the prepared sample in the right opening of the color comparator.

8. Fill the other test tube with deionized water and place it in the left opening of the comparator. Hold the comparator up to a light, such as the sky, and view through the two openings in the front. Rotate the Detergents Color Disc until a color match is obtained. Read the parts per million (ppm) Detergents, Linear Alkylate Sulfonate (LAS) and/or Alkyl Benzene Sulfonate (ABS), from the scale window.

9. If the color is darker than the highest reading on the color disc, the original sample may be diluted 20-to-1 by adding 1 Ml of sample to the test tube, using the plastic dropper filled to the top, or 1- Ml mark, and filling the test tube to the upper mark (20 Ml) with deionized water. Repeat Steps 2 through 9 and multiply the results by 20.
10. If the reading is less than 0.2 mg/l, record your results as “none detected”.

11. If the reading is greater than 0.2 mg/l, follow the steps under the Analytical Laboratory Sample Collection section and begin investigation.

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[2] If a different meter is used, follow the method recommended by the manufacturer of your particular meter.

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Analytical Laboratory Sample Collection

The remaining samples to be collected include FC and Surfactants (if the reading is greater than 0.2 mg/l). Use appropriate containers for the parameter being tested, as directed by the POTW laboratory.

Complete the following tasks:

- Fill out the chain-of custody form making sure that all sample bottles are correctly labeled
- Carefully pack the sample bottles in the cooler
- Transport the samples to the POTW laboratory
- Complete the chain-of-custody form

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Sampling for Bacteria – Fecal Coliform or E. Coli

Bacteria samples are collected from water flowing directly from the discharging outfall by leaving the lid on the sample bottle and lowering the bottle to the mid-depth position, then removing the lid and allowing the container to fill. Store samples in an ice chest at ≤ 6° C until custody is transferred to the POTW laboratory. Samples collected for laboratory analysis should be submitted to the POTW as soon as possible after collection. Bacteria samples must be delivered to the laboratory within 6 hours of collection. The grab sample bottle type, preservation requirements, and holding time requirements should be met for each sample collected. If the results from the sample are greater than 1,000 per 100Ml, begin investigation.

Sampling for Surfactants

Samples are collected from water flowing directly from the discharging outfall by leaving the lid on the sample bottle and lowering the bottle to the mid-depth position, then removing the lid and allowing the container to fill. Store samples in an ice chest at ≤ 4° C until custody is transferred to the contracted laboratory. Surfactant samples must be delivered to the laboratory within 48 hours of collection. See supervisor for steps to sending off contracted samples.

Recording Data

Record all qualitative observations and field testing results on the *Dry Weather Outfall Screening Form* (Appendix A) and the *Sample Data Tracking Form* (Appendix D). If a discharge is found, record investigation procedures on the Investigation Notes section of the *Dry Weather Outfall Screening Form* (Appendix A). Also note any changes to standard procedures, for whatever reason, and describe any unusual or noteworthy conditions or results in detail on the bottom of the form.

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Disposal

Dispose of all spent reagents, reacted samples, and rinse solutions in the appropriate waste containers. Upon returning to the office or laboratory, pour these wastes into the sanitary sewer system of the office or laboratory. Be sure to clean all equipment, recheck calibration if any results were questionable, and restock reagents if necessary.

SPECIAL MONITORING

If an outfall location shows physical signs of a problem, but no flow is observed, then that illicit discharge is either an intermittent or transitory discharge. These do not flow continuously and may be difficult to observe.

Once an outfall is determined to have a possible illicit discharge associated with it and no flow is observed, then an alternate inspection and sampling program must be used. This can include the following:

Odd hours of monitoring: Perform inspections either later in the evening, early morning, or on the weekends. Since many types of intermittent discharges probably occur when occupants are present, then the inspection needs to be performed during these times as well. Make sure that if samples will be collected during odd times, the POTW laboratory needs to be notified to ensure they can accept and analyze the sample since there are specific holding times for each type of parameter.

Sampling at the outfall plunge pool: A sample would be collected directly from the plunge pool below the outfall, if one is present. An upstream sample will also be taken to compare the results. This can be affected by dilution and time so it is not always that accurate and effective.

EQUIPMENT MAINTENANCE

In order to ensure the quality of field results, maintenance of equipment must be given a high priority.

All equipment must be cleaned and serviced at the end of a field shift.

All water quality meters must be calibrated in the laboratory or office before field use. Calibration solutions should remain uncontaminated and not be used after their expiration dates.
Field meters and cameras must be in proper working order. Make sure that batteries have sufficient voltage to power the equipment for the entire field trip. Recharge or replace them as necessary. Keep extra batteries in case they are needed.
Probes should be inspected, cleaned and reconditioned regularly.
Clean and rinse all other sampling equipment after returning from the field. Store clean equipment in storage cases.
Glassware used in the field (e.g. graduated cylinders for sample dilutions, test kit flasks and/or beakers) should be cleaned immediately after usage. Rinse three to four times with deionized water and wipe the outside of the glassware dry with a white paper towel. Dry in an inverted position.

HEALTH AND SAFETY

Dry weather water sampling may occur when the sampling environment and discharges create hazardous conditions. Use safety precautions at all times when conducting dry weather monitoring.

- Keep a first aid kit and fire extinguisher in the vehicle.
- Watch out for traffic along the access road when sampling or making observations.
- Park vehicle off-road, if possible, and turn hazard lights on.
- Do NOT remain in open areas or stand under trees if lightning is occurring in the vicinity.
- Watch your step. The ground may be wet, slippery, steep, or unstable. Do not attempt to climb down unsafe slopes.
- Always wear clean latex rubber gloves when sampling.
- Protect eyes and skin against contact with acids and preservatives.
- Wear appropriate attire (i.e., hat, safety boots, gloves, and long pants).
- Be aware of your environment. Watch for snakes, ticks, bees, poison oak, etc.
- Use common sense when deciding whether to sample during adverse weather conditions. This program is intended to assess dry weather conditions. Do not sample during dangerous conditions such as high winds, lightning storms, or flooding conditions that might be unsafe.
- Do not enter channels during periods of high flow. The general rule of thumb is: If the product of the water depth in feet and the velocity in feet per second is greater than 10, or the level is above your waist, don't go in.
- Do not enter confined spaces.
- Follow all analytical procedures as prescribed in the equipment manuals. Give careful attention to warnings and precautionary statements.
- Be familiar with Material Safety Data Sheets (MSDS) for all chemicals used in the field and when calibrating instruments. Know the health hazards and emergency medical treatments, and follow proper disposal instructions.

Safety Equipment

The following safety equipment is recommended for use during dry weather sampling:

- First aid kit
- Latex gloves
- Rubber boots or waders
- Safety vest

CHAPTER 4: TRACING FOR THE SOURCE OF AN ILLICIT DISCHARGE

Once an illicit discharge has been identified and detected, the next step is to locate the source of discharge. The development of a plan to locate and address illicit discharges is required under the Phase II Stormwater Rules. "EPA recommends that the plan include the following five components:"

1. Locate the priority areas
2. Sample or screen the outfall
3. Trace the source of an illicit discharge
4. Remove the source of the illicit discharge
5. Program evaluation and assessment

During the inspection process, illicit discharges may be located and detected. Once these outfall locations are determined to have an illicit discharge, staff must start the tracing protocol to determine where the source of illicit discharge is originating from. Once located, this discharge needs to be eliminated from the community's MS4 system.

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TRACING TECHNIQUES

There are a number of different techniques that can be utilized to trace for an illicit discharge. Each technique listed must be fully understood and its limitations.

Visual Inspections of Stormwater Network

Once a dry weather flow is observed and it has been determined to be an illicit discharge, inspections along the specific MS4 conveyance system must occur. Typically, if the conveyance system is an open ditch, this is an easier process then if it is within an enclosed stormwater system. The inspection process utilizing this method needs to start at the initial detection location – the MS4 outfall where the illicit discharge has been observed and noted. The next step is to work "upstream" from this location – that is moving up the stormwater system to the first manhole. Check this manhole to see if there is evidence of flow. If flow is present, you may wish to sample the manhole;
however, it is not required. If flow is observed at this manhole, move to the next upstream manhole. Keep moving upstream until no flow or low flow is observed. Keep in mind that as you move upstream, there may be junction lines entering the stormwater system at other locations. Utilize the stormwater maps to determine if this is the case. In these circumstances, you will need to check these manholes as well.

During this inspection process, key observations are necessary, including:

- Presence of flow
- Odors
- Colors/clarity
- Stains or deposits on the bottom of structure(s)
- Oil sheen, scum or foam on any standing water

Figure 2: Removing a catch basin manhole lid

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During this process, sampling can be utilized to assist in this tracing process. Once areas are determined to have possible illicit source flows, sampling these individual locations and manholes can assist in directing where the source of the illicit discharge is located. Specific parameters can be used when looking for the illicit discharge. Refer to Chapter 3, Table 3-1 for sample parameters that can be used for specific sources of illicit discharges. Typically, you will use the same parameter that was used when the initial sample was taken to determine if an illicit discharge was present at that flow.

Dye Testing

Once the area has been determined where the potential illicit discharge source is located, the utilization of dye testing will assist in determining the exact location of the illicit discharge. Permission is required on private property prior to starting a dye test procedure. If a dye test is needed on the inside of a building, written permission is required. Once permission is granted, the dye testing will begin. The dye needs to be put into the suspect location. This is done by pouring the dye into sinks, toilets, etc and then flushed through the sanitary sewer system. The stormwater and sanitary sewers need to be monitored to observe where the dye discharges to. This procedure is effective in determining direct connections of sanitary lines to storm lines.

Televising/Video Inspection

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Another method in determining where the illicit discharge source is located, is televising the storm line. Video cameras can be used by either pushing or using a mobile video unit. Both cameras will provide detailed information as to where the infiltration or connection is located within the MS4 system.

Indicator Monitoring / Sampling

When dry weather flow is observed at an outfall location, and the sample reveals that there is a problem with this flow, further monitoring can be done to assist in the location of the illicit discharge. As manholes are opened and dry weather flow is observed, samples can be taken and analyzed. During this process, we are looking for a pattern within the sample analysis, depending on the parameter sampled for. During this type of tracing, monitoring will allow staff to determine if the dry weather flow observed is the source of the flow at the outfall location. There can be circumstances where dry weather flow occurs and it is not "illicit" due to its source (See Chapter 1). This flow can combine with an illicit source in the stormwater system making it difficult to trace. By monitoring the water observed, it will assist in the tracing of the illicit source discharging into the stormwater system.

Automatic Samplers can also be used during the investigation of intermittent flows. These samplers can be placed at specific locations within the stormwater system of a community. These samplers can be triggered by dry weather flows. This type of sampling and monitoring is not the best method for most communities due to the cost of the sampling equipment. This type of monitoring can be effective however, in areas with a large intermittent discharge problem and/or very complex stormwater system.

These samplers will provide the date and time the sample was collected which will assist the community in locating the source of this discharge.

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Smoke Testing

This method should be used during special circumstances when a good storm sewer map is not available for a location and there are known problems of connection issues. Smoke is introduced into the storm drainage system and will emerge at locations that are connected to that system. It is recommended that qualified personnel be used for this method to ensure accurate test results.

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CHAPTER 5: ELIMINATION OF AN ILLICIT DISCHARGE

Once an illicit discharge has been identified, staff must then determine who is responsible for the removal of the discharge. On January 1, 2009 the Illicit Discharge and Illegal Connection regulations went into effect as part of the City of Cordele Land Development Regulations (LDR). Example situations may include:

- Internal Plumbing Connection
- Service Lateral
- Infrastructure Failure
- Transitory Discharge

Once the removal of the illicit discharge has occurred, it must be confirmed to ensure the correction has been made.

There are various methods that can be used to remove an illicit discharge and to fix the problem, see Table 5-1.

TABLE 5-1: METHODS TO ELIMINATE DISCHARGES

Technique	Application	Description
Service Lateral Disconnection/ Reconnection	Lateral is connected to the wrong line	Lateral is disconnected and reconnected to appropriate line
Cleaning	Line is blocked or capacity diminished	Flushing (sending a high pressure water jet through the line); pigging (dragging a large rubber plug through the lines); or rodding
Excavation and Replacement	Line is collapsed, severely blocked, significantly misaligned or undersized	Existing pipe is removed, new pipe placed in same alignment; Existing pipe abandoned in place, replaced by new pipe in parallel alignment
Manhole Repair	Decrease ponding; prevent flow of surface water into manhole; prevent groundwater infiltration	Raise frame and lid above grade; install lid inserts; grout, mortar or apply shortcrete inside the walls; install new precast manhole
Corrosion Control Coating	Improve resistance to corrosion	Spray- or brush-on coating applied to interior of pipe
Grouting	Seal leaking joints and small cracks	Seals leaking joints and small cracks
Pipe Bursting	Line is collapsed, severely blocked, or undersized	Existing pipe used as guide for inserting expansion head; expansion head increases area available for new pipe by pushing existing pipe out radially until it cracks; bursting device pulls new pipeline behind it

TABLE 5-1 (CONTINUED) METHODS TO ELIMINATE DISCHARGES

Slip Lining	Pipe has numerous cracks, leaking joints, but is continuous and not misaligned	Pulling of a new pipe through the old one
Fold and Formed Pipe	Pipe has numerous cracks, leaking joints	Similar to slip lining but is easier to install, uses existing manholes for insertion; a folded thermoplastic pipe is pulled into place and rounded to conform to internal diameter of existing pipe
Inversion Lining	Pipe has numerous cracks, leaking joints; can be used where there are misalignments	Similar to slip lining but is easier to install, uses existing manholes for insertion; a soft resin impregnated felt tube is inserted into the pipe, inverted by filling it with air or water at one end, and cured in place

Source: Modified from *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, 2004

If the illicit discharge is originating from outside the Cordele city limits, it is important that the community where the discharge is coming from be notified by the appropriate supervisor. This should be done in a letter format where you can document that it was sent. The letter should include where the illicit discharge **was detected and where it was traced to by staff. Keep records of all actions, and ask the neighboring community to inform you when the correction has been made. Include all of your documentation with the** annual **Phase II Stormwater Report to the Georgia EPD.**

Enforcement Procedures

The City will respond to the discovery of an illegal connection in a graduated manner, beginning with efforts to obtain voluntary compliance and escalating to increasingly severe enforcement actions, if compliance is not achieved.

1. VOLUNTARY COMPLIANCE: Many times home and business owners are not aware of the existence of illegal connections between their buildings and the storm sewer systems. In these cases, providing the responsible party with information about the connection, its environmental consequences, the applicable regulations, and how to remedy it may be enough to secure voluntary compliance. The cost of removing the connection and reconnecting it to the sanitary sewer system will be borne by the owner of the illegal connection or illicit discharge.

2. ENFORCEMENT ACTIONS: The following enforcement steps should be observed:

   The City should send the *Property Owner* a NOTICE OF VIOLATION (NOV), which should require that the property owner to take steps such as monitoring, elimination of an illicit connection or discharge, or payment of a fine.

   a. The person receiving the NOV would have the opportunity to appeal the NOV to the Public Works Director and ultimately to Municipal Courts.
   b. If the person fails to respond to the NOV and does not appeal the NOV, the City will issue a citation and will then need to take *EMERGENCY* measures necessary to abate the violation and/or restore the property. The City may then require reimbursement from the violator for the cost of the abatement, including administrative costs.
   c. The City may also seek an injunction against the violator restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.
   d. If a City official has been denied access to a property and the official is able to demonstrate probable cause that there may be a violation of a City ordinance 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 a City ordinance or any Order issued there under, or to protect overall public health, safety, environment and welfare of the community, then the City official may seek the issuance of a search warrant from any court of competent jurisdiction.

The City must ensure that each enforcement action is documented. Documentation is necessary in the event of escalation of enforcement to a judicial level.

CHAPTER 6: EDUCATION TO CITY EMPLOYEES, GENERAL PUBLIC AND BUSINESSES

The Georgia EPD requires that communities must inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste. This chapter provides some suggestions as to how to provide this information to the targeted audience.

CITY EMPLOYEES

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The Phase II Stormwater rules require that municipal employees be trained on pollution prevention techniques. This is located under Minimum Control Measure # 6: "Pollution Prevention/Good Housekeeping for Municipal Operations" of the City's stormwater NOI.

Service department employees can look for signs of illegal dumping in catch basins and other locations. Building inspectors can ensure that illegal connections to the storm sewer system do not take place during construction projects. Staff whose jobs keep them outside and mobile can help spot illegal dumpers. Fire and police department personnel who respond to hazardous material spills can help keep these spills out of the storm sewer system and adjacent water bodies.

GENERAL PUBLIC AND BUSINESSES

It is important to get the public involved and educated on environmental and water quality issues. Some examples of what can be done include:

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- Provide outreach materials
- Encourage the public to report illicit discharges/dumping when they are observed
- Partner with local volunteers to conduct storm drain stenciling projects
- Promote household hazardous waste disposal/recycling program
- Speak at public/private engagements

For more specific information on the City of Cordele stormwater education programs, please see the approved Storm Water Management Program (SWMP) *or* ***visit the City website at www.cityofcordele.com.***

REFERENCES

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CITY OF CORDELE
IDDE GUIDANCE MANUAL

APPENDIX

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APPENDIX IDDE-A:
DRY WEATHER OUTFALL SCREENING FORM

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DRY WEATHER OUTFALL SCREENING FORM

General Information	
Name of City:	Data Sheet Number:
Date of screening (MM/DD/YY):	Time of screening:
Weather conditions:	
Inspection performed by:	

Outfall Description	
Outfall Location:	Outfall I.D. Number:
Outfall Type/Material: Closed Pipe (circle): RCP CMP PVC HDPE Other:___ Open Channel (circle): Concrete Earthen Grassy Other:___	Outfall Diameter/Dimensions:
Receiving stream:	
HUC 8 Watershed Name (circle): 03110203 or 03110202	Photo number(s):
Land use/industries in immediate drainage area:	
Comments:	

Field Observations and Measurements
Flow from Outfall: □ Yes □ No Flow Description: □ Trickle □ Moderate □ Substantial
Odor: □ None □ Sewage □ Sulfide (rotten eggs) □ Petroleum/gas □ Rancid/sour □ Other: Relative severity: □ 0-None □ 1-Faint □ 2-Easily Detected □ 3-Noticable from a distance
Color: □ Clear □ White □ Gray □ Orange/Rust □ Red □ Yellow □ Green □ Brown/Black □ Other Relative severity: □ 0-None □ 1-Faint □ 2-Clearly visible in bottle □ 3-Clearly visible in flow
Turbidity: □ None □ Cloudy □ Opaque □ Silty □ Muddy □ Other Relative severity: □ 0-None □ 1-Slight cloudiness □ 2-Cloudy □ 3-Opaque
Floatables: □ None □ Sewage □ Petroleum(oil sheen) □ Suds □ Other Relative severity: □ 0-None □ 1-Few/Slight □ 2-Some □ 3-Heavy
Flow Temperature (˚C):
Flow pH: pH meter calibrated □ Yes □ No
Flow Conductivity (µmho/cm): Conductivity meter calibrated □ Yes □ No

Water Quality Sampling			
Sample performed by:			
Grab sample for lab (fluoride/surfactants) □ Yes □ No		Bacteria Grab sample for lab (fecal coliform) □ Yes □ No	
Fluoride (mg/L):		**Fecal Coliform** (MPN/100ml):	
Surfactants (mg/L):		**Analysis Comments:**	
Further investigation needed: □ Yes □ No (if yes, see attached documentation)			

Investigation Notes	
Initial investigation date:	Investigator(s):
Outfall Number:	Location:
No investigation made:	Reason:
Referred to different department/agency:	Department/Agency:
Investigated: No action necessary	
Investigated: Requires action	Description of actions:
Hours between discovery and investigation:	
Notification and Enforcement Action(s) (if any):	
Date case closed:	
Additional Notes:	

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APPENDIX IDDE-B:
ILLICIT DISCHARGE DETECTION ELIMINATION FIELD GUIDE

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City of Cordele Illicit Discharge Detection and Elimination Field Guide

An **illicit discharge** is defined by the US EPA's Phase II Storm Water Regulations as "any discharge to an MS4 that is not composed entirely of storm water..." with some exceptions. These exceptions include discharges from NPDES permitted industrial sources and discharges from fire-fighting activities. Illicit discharges are considered "illicit" because MS4s are not designed to accept, process, or discharge such non-storm water wastes.

MS4 means a conveyance or system including: roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains

i) Owned or operated by a State, city, township, county, district, association, or other public body including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, that discharges into waters of the state;
ii) Designed or used for collecting or conveying storm water;
iii) Which is not a combined sewer; and
iv) Which is not part of a POTW

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Stormwater testing supplies

Masking tape
Permanent marker
Flashlight
Tape measure
Camera (w/extra batteries)
Latex gloves
Rubber boots and/or waders)
Watch / phone
Cooler with ice
Distilled water
Laboratory bottles (FC / Surfactants)
Sanitized container for on-site testing
Extendable water sampling pole w/bottle
pH meter
Surfactants test (indicator)
Conductivity meter
Clipboard
Writing utensils
Outfall screening form
Chain of custody form
Stormwater Map Book
Hand cleaner
Bug repellant
First aid kit
Waste disposal container

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Calibrate

pH meter (daily)
Conductivity probe (weekly)

Illicit Discharge Testing Procedure

Go to site.

Put on flashers.

Locate the outfall.

Watch for snakes.
If outfall is at rear of property, notify resident of your presence.
Make visual observations about the pipe, its condition.

Take a picture of the outfall.
If no discharge is found, proceed to next location.
(Complete necessary paperwork)
If water sample will be collected, put on gloves.

Gather equipment.
Note water color, odor, turbidity, and floatables.
Collect a water sample in a laboratory supplied bottle for analysis or sanitized container for on sight testing.

Put sample for lab in cooler with ice.

For on-sight testing, rinse test tubes / meters with the water to be tested.

Run water quality tests on sample.

Rinse probes with distilled water.

Complete necessary paperwork.
Check to make sure all equipment is collected before leaving the site.

Water Quality Test Parameters and Uses

Water Quality Test	Use of Water Quality Test
1. Conductivity	Indicator of dissolved solids
2. Bacteria (FC and *E. Coli*)	Indicates presence of sanitary sewer
3. Surfactants	Indicates presence of detergents (e.g. laundry and car washing)
4. pH	May indicate commercial or industrial discharge
5. Temperature	May indicate industrial cooling/sanitary sewer
6. Fluoride	Indicator of inflow from potable water source

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1) Outfall Materials

Polyvinyl Chloride (PVC)

High Density Polyethylene (HDPE)

Vitrified Clay Pipe (VCP)

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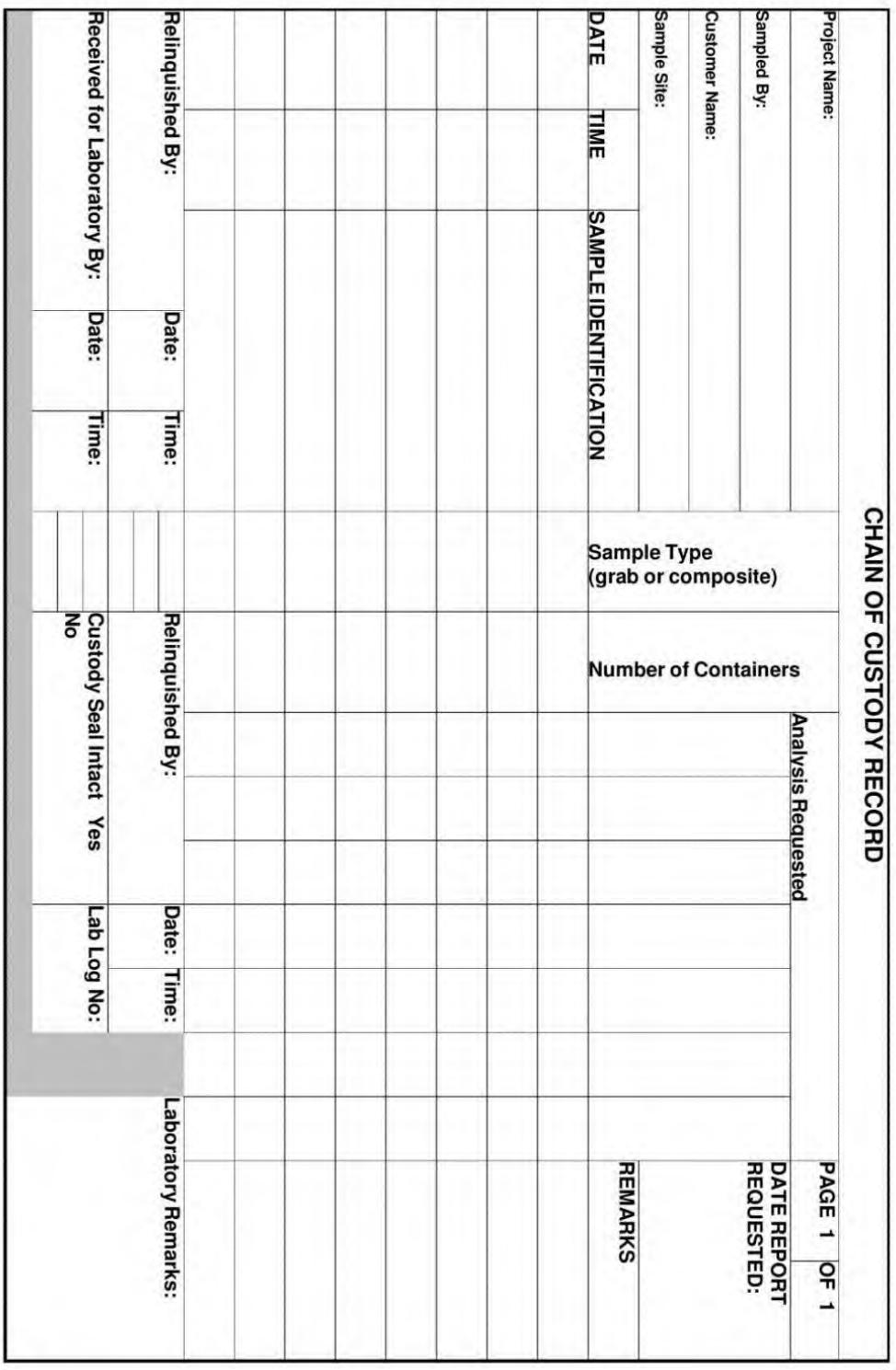
Reinforced Concrete Pipe (RCP)

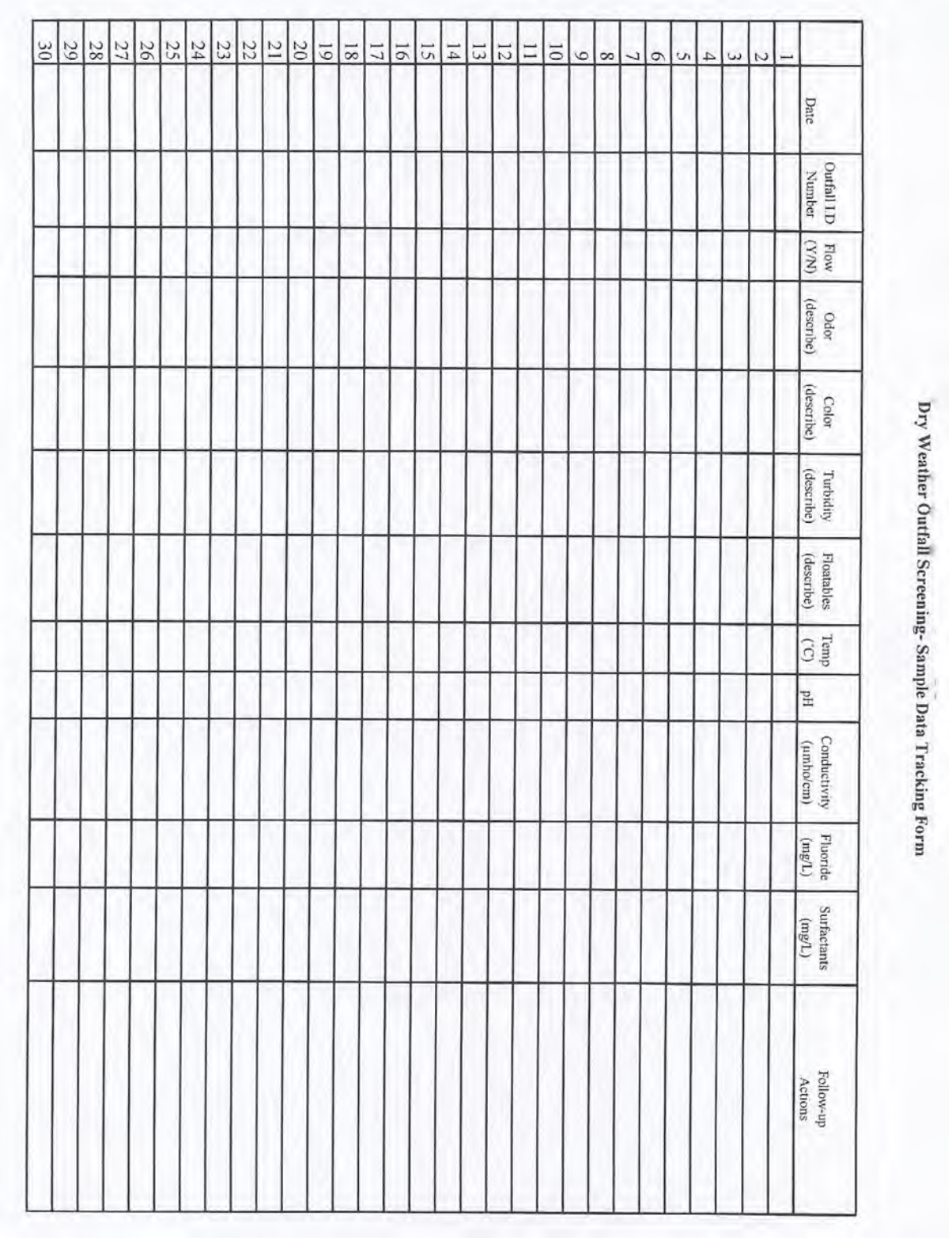
Ductile Iron Pipe (DIP)

Corrugated Metal Pipe (CMP)

APPENDIX IDDE-C:
CHAIN OF CUSTODY RECORD



APPENDIX IDDE-D:
DRY WEATHER SCREENING—SAMPLE DATA TRACKING FORM



Dry Weather Outfall Screening- Sample Data Tracking Form

	Date	Outfall I.D Number	Flow (Y/N)	Odor (describe)	Color (describe)	Turbidity (describe)	Floatables (describe)	Temp (°C)	pH	Conductivity (µmho/cm)	Fluoride (mg/L)	Surfactants (mg/L)	Follow-up Actions
1													
2													
3													
4													
5													
6													
7													
8													
9													
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C4	Illicit Discharge and Elimination (IDDE)	
MCM C, BMP 4	**EDUCATION**	
1. Description of BMP	The City will prepare and distribute brochure materials or produce videos that identify common illegal discharges and will request the assistance of citizens and employees in identifying potentially contaminated discharges.	
2. Measureable Goals	The City will continue to implement a program to educate the public, businesses, and government employees about the hazards of illicit discharges.	
3. Documentation to be submitted with each annual report	A copy of the brochures, the amount and locations of brochures distributed or a copy of the recorded video presentation, along with a transcript, will be submitted in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	Varies
	d) Month/Year of Action	Annually
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The brochure or video will inform the reader of the damages to the environment that result from such discharges. Storm water system users will be less likely to improperly dispose of wastes if fully informed of the hazards created. The public will be more likely to report evidence of illegal discharges if aware that regulatory controls are available.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Educating the community about the negative impact of illicit discharges can help identify problems that may be occurring and have a positive effort on the environment when eliminated.	

C5	Illicit Discharge and Elimination (IDDE)	
MCM C, BMP 5	**COMPLAINT RESPONSE**	
1. Description of BMP	The City will accept complaints and other information from the public through complaint forms (See: C5.01 "Illicit Discharge Complaint Response Procedures") submitted through the City website or through an existing telephone number set up to answer and record the information. All information submitted will be reviewed by the Storm water technician who will determine the appropriate response to resolving the complaint and monitor the issue to completion. Where possible, the person submitting the information will be contacted by the Storm water technician and provided a response to the information.	
2. Measureable Goals	The city will document each illicit discharge related complaint received during the reporting period.	
3. Documentation to be submitted with each annual report	The city will provide a summary that includes the complaint date, type of complaint, and status of complaint in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As Needed
	d) Month/Year of Action	Annually
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Tracking illicit connection complaints will assist with monitoring problem areas and record keeping.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	This procedure will be effective if citizens and local government work together and if the proper information is collected, provided to the appropriate authority, and investigated in a timely manner.	

ILLICIT DISCHARGE COMPLAINT RESPONSE PROCEDURES

Step 1: **Log citizen / employee complaint via the Illicit Discharge Citizen Complaint Reporting Form (see: "Attachment X")**

Step 2: **Inform the Stormwater Technician of the illicit discharge complaint.**

Step 3: **Perform site visit, investigate, and document with pictures and notes.**

Step 4: **Determine if there is an illicit discharge.**

Step 5: **If an illicit discharge does not exist, contact the citizen / employee and close out the complaint. If the citizen / employee is not satisfied with the findings, refer the complaint to the Public Works Director or his/her designee.**

Step 6: **If an illicit discharge is found, track the source of the discharge.**

-If the source of the discharge is traceable, contact the person responsible for the property / source and provide the corrective actions needed and timeframe.

-If the source of the discharge is not traceable, document that the source could not be found and close out the complaint.

Step 7: **If corrective measures are not completed, refer the case to the City Code office.**

Step 8: **If corrective actions are completed, notify the citizen / employee and close out the complaint.**

C

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D

MINIMUM CONTROL MEASURE (MCM)

D

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

D1	Construction Site Storm Water Runoff Control	
MCM D, BMP 1	**Legal Authority**	
1. Description of BMP	The City Erosion & Sediment ordinances has the necessary authority to implement and enforce the requirements and regulations for construction site operators to control waste at the construction site, such as concrete truck washout, building materials, litter, chemicals and sanitary waste, (See D1.01: "Soil Erosion, Sedimentation, and Pollution Control Ordinance"). The City Attorney will review any and all Ordinance changes or additions proposed and, upon adoption, will certify in writing that the ordinances are "legally sound, comply with the Phase II regulation requirements, and that the municipality has the authority to implement and enforce the requirements of the ordinances."	
2. Measureable Goals	The city will evaluate the existing Erosion & Sediment Ordinance and if necessary modify during the reporting period.	
3. Documentation to be submitted with each annual report	The city will provide any revised or adopted Ordinance in each annual period.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008 - Adopted August 2015—Revised
	c) Frequency of actions	As needed
	d) Month/Year of Action	As needed
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The City Ordinance and Regulatory language provides effective enforcement actions including penalties for violations.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Regulation for site operators to comply with during land disturbance activities.	

D

ORDINANCE

The Cordele Georgia 2011 Soil Erosion, Sedimentation and Pollution Control Ordinance as amended and as further amended on August 15, 2017

AN ORDINANCE TO AMEND THE CODE OF THE CITY OF CORDELE SO AS TO AMEND CHAPTER 13, THE CORDELE GEORGIA 2011 SOIL EROSION, SEDIMENTATION AND POLLUTION CONTROL ORDINANCE APPROVED AND ADOPTED MAY 3, 2011, SO AS TO ADD SUBSECTION (17) TO SECTION 13-4(c) TO PROVIDE FOR THE WASTE CONTROL OF CERTAIN WASTE AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SITE OPERATORS AND FURTHER TO READOPT SAID ORIGINAL ORDINANCE ADOPTED ON MAY 3, 2011 WITH THE AMENDMENT OF SECTION 13-2 THROUGH SECTION 13-5(B)(2) AS STATED THEREIN.

The City Commission of the City of Cordele ordains:

SECTION I
TITLE

This ordinance will be known as "City of Cordele 2011 Soil Erosion, Sedimentation and Pollution Control Ordinance as amended and as further amended on August 15, 2017."

SECTION II
DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of this ordinance, unless otherwise specifically stated:

1. **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.
2. **Board:** The Board of Natural Resources.
3. **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.
4. **Certified Personnel:** A person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.
5. **Commission:** The Georgia Soil and Water Conservation Commission (GSWCC).
6. **CPESC:** Certified Professional in Erosion and Sediment Control with current certification by EnviroCert, Inc., which is also referred to as CPESC or CPESC, Inc.
7. **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 the excavated surface. Also known as excavation.
8. **Department:** The Georgia Department of Natural Resources (DNR).
9. **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.

10. **Director:** The Director of the Environmental Protection Division or an authorized representative.
11. **District:** The Middle South Georgia Soil and Water Conservation District.
12. **Division:** The Environmental Protection Division (EPD) of the Department of Natural Resources.
13. **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 storm water management, drainage control, or flood control purposes.
14. **Erosion:** The process by which land surface is worn away by the action of wind, water, ice or gravity.
15. **Erosion, Sedimentation and Pollution Control Plan:** A plan required by the Erosion and Sedimentation Act, O.C.G.A. Chapter 12-7, that includes, as a minimum protections at least as stringent as the State General Permit, best management practices, and requirements in section IV.C. of this ordinance.
16. **Fill:** A portion of land surface to which soil or other solid material has been added; the depth above the original ground surface or an excavation.
17. **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, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% 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.
18. **Finished Grade:** The final elevation and contour of the ground after cutting or filling and conforming to the proposed design.
19. **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.
20. **Ground Elevation:** The original elevation of the ground surface prior to cutting or filling.
21. **Land-Disturbing Activity:** Any activity which 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 Section III, Paragraph 5.
22. **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.
23. **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.

24. **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.
25. **Natural Ground Surface:** The ground surface in its original state before any grading, excavation or filling.
26. **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 ofturbidity in water in which colloidally dispersed or suspended particles are present.
27. **NOI:** A Notice of Intent form provided by EPD for coverage under the State General Permit.
28. **NOT:** A Notice of Termination form provided by EPD to terminate coverage under the State General Permit.
29. **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.
30. **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.
31. **Permit:** The authorization necessary to conduct a land-disturbing activity under the provisions of this ordinance.
32. **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 of Georgia, any interstate body or any other legal entity.
33. **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.
34. **Project:** The entire proposed development project regardless of the size of the area of land to be disturbed.
35. **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.
36. **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 roadway consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.
37. **Sediment:** Solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by wind, water, ice, or gravity as a product of erosion.
38. **Sedimentation:** The process by which eroded material is transported and deposited by the action of water, wind, ice or gravity.
39. **Soil and Water Conservation District Approved Plan:** An erosion, sedimentation and pollution control plan approved in writing by the

Middle South Georgia Soil and Water Conservation District.

40. **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.
41. **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 Code Section 12-5-30.
42. **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 Georgia which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.
43. **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 sediment control practices are riprap, sediment basins, dikes, level spreaders, waterways or outlets, diversions, grade stabilization structures and sediment traps, etc. Such practices can be found in the publication Manual for Erosion and Sediment Control in Georgia.
44. **Trout Streams:** All streams or portions of streams within the watershed as designated by the Wildlife Resources Division of the Georgia Department of Natural Resources under the provisions of the Georgia Water Quality Control Act, O.C.G.A. 12-5-20, in the rules and regulations for Water Quality Control, Chapter 391-3-6 at www.epd.georgia.gov. 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.
45. **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, or
    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 publication Manual for Erosion and Sediment Control in Georgia.
46. **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.
47. **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.

SECTION III
EXEMPTIONS

This ordinance shall apply to any land-disturbing activity undertaken by any person on any land except for the following:

1. Surface mining, as the same is defined in O.C.G.A. 12-4-72, "The Georgia Surface Mining Act of 1968".
2. Granite quarrying and land clearing for such quarrying;
3. Such minor land-disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, fences, and other related activities which result in minor soil erosion;
4. The construction of single-family residences, when such construction disturbs less than one (1) 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 (1) 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 and this paragraph. For single-family residence construction covered by the provisions of this paragraph, there shall be a 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. In any such 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 buffer zone shall be at least 50 horizontal feet, and no variance to a smaller buffer shall be granted. For secondary trout waters, the buffer zone shall be at least 50 horizontal feet, but the Director may grant variances to no less than 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 buffer shall be at least 25 horizontal feet, and no variance to a smaller buffer shall be granted. The minimum requirements of subsection (b) of O.C.G.A. 12-7-6 and the buffer zones provided by this paragraph shall be enforced by the Local Issuing Authority;
5. Agricultural operations as defined in O.C.G.A. 1-3-3, "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 chickens, hens and turkeys; producing plants, trees, fowl, or animals; the production of aqua culture, horticultural, dairy, livestock, poultry, eggs and apiarian products; farm buildings and farm ponds;
6. 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 buffer, as established in paragraphs (15) and (16) of Section IV C. of this ordinance, 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;
7. Any project carried out under the technical supervision of the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture;
8. Any project involving less than one (1) 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 (1) acre or within 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 (1) acre, which involves land-disturbing activity, and which is within 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 Local Issuing Authority from regulating any such project which is not specifically exempted by paragraphs 1, 2, 3,4, 5, 6, 7, 9 or 10 of this section;

9. Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the Department of Transportation, the Georgia 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 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; except where the Department of Transportation, the Georgia 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 Local Issuing Authority, the Local Issuing Authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders;
10. 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, 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, 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 Local Issuing Authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders; and
11. Any public water system reservoir.

SECTION IV
MINIMUM REQUIREMENTS FOR EROSION, SEDIMENTATION AND POLLUTION CONTROL USING BEST MANAGEMENT PRACTICES

A. **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 this ordinance shall contain provisions for application of soil erosion, 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 Section IV B. & C. of this ordinance. 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 ordinance and the NPDES General Permit.

B. **MINIMUM REQUIREMENTS/ BMPs**

1. Best management practices as set forth in Section IV B. & C. of this ordinance shall be required for all land-disturbing activities. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with paragraph (2) of this subsection or any substantially similar terms contained in a permit for the discharge of storm water issued pursuant to subsection (f) of O.C.G.A. 12-5-30, the "Georgia Water Quality Control Act". As used in this subsection the terms "proper design" and "properly designed" mean designed 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).
2. A discharge of storm water 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 a local Issuing Authority or of any state general permit issued by the Division pursuant to subsection (f) of O.C.G.A. 12-5-30, 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 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.
3. Failure to properly design, install, or maintain best management practices shall constitute a violation of any land-disturbing ermit issued by a Local Issuing Authority or of any state general permit issued by the Division pursuant to subsection (f) of Code Section 12-5-30, the "Georgia Water Quality Control Act", for each day on which such failure occurs.
4. The Director may require, in accordance with regulations adopted by the Board, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land disturbing activities occur.
5. The LIA may set more stringent buffer requirements than stated in C.15. and 16., in light of O.C.G.A. § 12-7-6 (c).

C. The rules and regulations, ordinances, or resolutions adopted pursuant to O.C.G.A. 12- 7-1 et. seq. 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 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 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:

1. Stripping of vegetation, regrading and other development activities shall be conducted in a manner so as to minimize erosion;
2. Cut-fill operations must be kept to a minimum;
3. Development plans must conform to topography and soil type so as to create the lowest practicable erosion potential;
4. Whenever feasible, natural vegetation shall be retained, protected and supplemented;
5. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum;
6. Disturbed soil shall be stabilized as quickly as practicable;
7. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development;
8. Permanent vegetation and structural erosion control practices shall be installed as soon as practicable;
9. 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 of O.C.G.A. 12-7-1 et. seq.;
10. Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping of fills;
11. Cuts and fills may not endanger adjoining property;
12. Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners;
13. 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;
14. 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 Section IV B. 2. of this ordinance;
15. Except as provided in paragraph (16) of this subsection, there is established a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the Director pursuant to O.C.G.A. 12-2-8, 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 this 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 buffers of at least 25 feet established pursuant to part 6 of Article 5, Chapter 5 of Title 12, the "Georgia Water Quality Control Act", shall remain in force unless a variance is granted by the Director as provided in this paragraph. The following requirements shall apply to any such buffer

a. No land-disturbing activities shall be conducted within a buffer and a 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 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 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 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 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the 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; and

16. There is established a 50 foot 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, 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 25 gallons per minute or less shall have a 25 foot 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 buffer requirement for any adjacent trout streams. The Director may grant a variance from such 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 buffer:

a. No land-disturbing activities shall be conducted within a buffer and a 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 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 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 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 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the 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.

17. This ordinance requires construction site operators to control waste at the construction site, such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste.

D. Nothing contained in O.C.G.A. 12-7-1 et. seq. shall prevent any Local Issuing Authority from adopting rules and regulations, ordinances, or resolutions which contain stream buffer requirements that exceed the minimum requirements in Section IV B. & C. of this ordinance.

E. 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 ordinance or the terms of the permit.

SECTION V
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 Local Issuing Authority shall review the tract to be developed and the area surrounding it. They shall consult the zoning ordinance, storm water management ordinance, subdivision ordinance, flood damage prevention ordinance, this ordinance, and any other ordinances, rules, regulations or permits, which regulate the development of land within the jurisdictional boundaries of the Local Issuing Authority. 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 of Cordele without first obtaining a permit from the designated representative to perform such activity and providing a copy of Notice of Intent submitted to EPD if applicable.
2. The application for a permit shall be submitted to the City of Cordele 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 Section V C. of this ordinance. 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 Section IV B. & C. of this ordinance will be met. Applications for a permit will not be accepted unless accompanied by 3 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 thereof visited the site prior to creation of the plan in accordance with EPD Rule 391-3-7-10. Application for a permit fee is $75.00 (made payable to the "City of Cordele") and shall be charged to each applicant. In addition to the fee shown above, the applicant shall present a $50.00 fee payable to the Middle South Georgia Soil & Conservation Commission.

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, provided that such fees shall not exceed $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. In a jurisdiction that is certified pursuant to subsection (a) of O.C.G.A. 12-7-8 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 shall be submitted in full to the Division, regardless of the existence of a Local Issuing Authority in the jurisdiction.
4. Immediately upon receipt of an application and plan for a permit, the Local Issuing Authority 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 35 days of receipt. Failure of the District to act within 35 days shall be considered an approval of the pending plan. The results of the District review shall be forwarded to the Local Issuing Authority. No permit will be issued unless the plan has been approved by the District, and any variances required by Section IV C. 15. & 16. has been obtained, all fees have been paid, and bonding, if required as per Section V B.6., have been obtained. Such review will not be required if the Local Issuing Authority and the District have entered into an agreement which allows the Local Issuing Authority to conduct such review and approval of the plan without referring the application and plan to the District. The Local Issuing Authority with plan review authority shall approve or disapprove a revised Plan submittal within 35 days of receipt. Failure of the Local Issuing Authority with plan review authority to act within 35 days shall be considered an approval of the revised Plan submittal.
5. If a permit applicant has had two or more violations of previous permits, this ordinance section, or the Erosion and Sedimentation Act, as amended, within three years prior to the date of filing the application under consideration, the Local Issuing Authority may deny the permit application.
6. The Local Issuing Authority 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, $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 section or with the conditions of the permit after issuance, the Local Issuing Authority 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 Local Issuing Authority with respect to alleged permit violations.

C. **PLAN REQUIREMENTS**

1. Plans must be prepared to meet the minimum requirements as contained in Section IV B. & C. of this ordinance, 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 ordinance. 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 the Stakeholder Advisory Board created pursuant to O.C.G.A. 12-7-20.
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.

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 Local Issuing Authority of a completed application, 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 Local Issuing Authority unless the erosion, sedimentation and pollution control plan has been approved by the District and the Local Issuing Authority has affirmatively determined that the plan is in compliance with this ordinance, any variances required by Section IV C. 15, 16 and 17 are obtained, bonding requirements, if necessary, as per Section V B. 6. are met and all ordinances and rules and regulations in effect within the jurisdictional boundaries of the Local Issuing Authority are met. If the permit is denied, the reason for denial shall be furnished to the applicant.
3. Any land-disturbing activities by a local issuing authority shall be subject to the same requirements of this ordinance, and any other ordinances relating to land development, as are applied to private persons and the division shall enforce such requirements upon the local issuing authority.

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 Local Issuing Authority, as to all or any portion of the land affected by the plan, upon finding that the holder or his successor in the title is not in compliance with the approved erosion and sedimentation control plan or that the holder or his successor in title is in violation of this ordinance. A holder of a permit shall notify any successor in title to him as to all or any portion of the land affected by the approved plan of the conditions contained in the permit.
6. The LIA may reject a permit application if the applicant has had two or more violations of previous permits or the Erosion and Sedimentation Act permit requirements within three years prior to the date of the application, in light of O.C.G.A. 12-7-7 (f) (1).

SECTION VI
INSPECTION AND ENFORCEMENT

A. The City of Cordele 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 Local Issuing Authority 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 ordinance, a written notice to comply shall be served upon that person. The notice shall set forth the measures necessary 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, he shall be deemed in violation of this ordinance.

B. The Local Issuing Authority must amend its ordinances to the extent appropriate within twelve (12) months of any amendments to the Erosion and Sedimentation Act of 1975.

C. The City of Cordele shall have the power to conduct such investigations as it may reasonably deem necessary to carry out duties as prescribed in this ordinance, 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.

D. No person shall refuse entry or access to any authorized representative or agent of the Local Issuing Authority, 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.

E. The District or the Commission or both shall semi-annually review the

actions of counties and municipalities which have been certified as Local Issuing Authorities pursuant to O.C.G.A. 12-7-8

(a). The District or the Commission or both may provide technical assistance to any county or municipality for the purpose of improving the effectiveness of the county's or municipality's erosion, sedimentation and pollution control program. The District or the Commission shall notify the Division and request investigation by the Division if any deficient or ineffective local program is found.

F. The Division may periodically review the actions of counties and municipalities which have been certified as Local Issuing Authorities pursuant to Code Section 12-7-8

(a). Such review may include, but shall not be limited to, review of the administration and enforcement of a governing authority's ordinance and review of conformance with an agreement, if any, between the district and the governing authority. If such review indicates that the governing authority of any county or municipality certified pursuant to O.C.G.A. 12-7-8 (a) has not administered or enforced its ordinances or has not conducted the program in accordance with any agreement entered into pursuant to O.C.G.A. 12-7-7 (e), the Division shall notify the governing authority of the county or municipality in writing. The governing authority of any county or municipality so notified shall have 90 days within which to take the necessary corrective action to retain certification as a Local Issuing Authority. If the county or municipality does not take necessary corrective action within 90 days after notification by the division, the division shall revoke the certification of the county or municipality as a Local Issuing Authority.

SECTION VII
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 ordinance 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 jurisdictional boundaries of the Local Issuing Authority.

B. **STOP-WORK ORDERS**

1. For the first and second violations of the provisions of this ordinance, the Director or the Local Issuing Authority shall issue a written warning to the violator. The violator shall have five days to correct the violation. If the violation is not corrected within five days, the Director or the Local Issuing Authority 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 Director or the Local Issuing Authority shall issue an immediate stop-work order in lieu of a warning;
2. For a third and each subsequent violation, the Director or the Local Issuing Authority shall issue an 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 buffer, or significant amounts of sediment, as determined by the Local Issuing Authority or by the Director or his or her Designee, 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 Local Issuing Authority or by the Director or his or her Designee. 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 the measures necessary 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 ordinance and, in addition to other penalties, shall be deemed to have forfeited his performance bond, if required to post one under the provisions of Section V B. 6. The Local Issuing Authority 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. **MONETARY PENALTIES**

1. Any person who violates any provisions of this ordinance, or any permit condition or limitation established pursuant to this ordinance, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the Director issued as provided in this ordinance shall be liable for a civil penalty not to exceed $2,500.00 per day. For the purpose of enforcing the provisions of this ordinance, notwithstanding any provisions in any City charter to the contrary, municipal courts shall be authorized to impose penalty not to exceed $2,500.00 for each violation. Notwithstanding any limitation of law as to penalties which can be assessed for violations of county ordinances, any magistrate court or any other court of competent jurisdiction trying cases brought as violations of this ordinance under county ordinances approved under this ordinance shall be authorized to impose penalties for such violations not to exceed $2,500.00 for each violation. Each day during which violation or failure or refusal to comply continues shall be a separate violation.

SECTION VIII
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.

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 1 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 ordinance.

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, 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 and shall not be required to meet any educational requirements that exceed those specified in said paragraph.

SECTION IX
ADMINISTRATIVE APPEAL JUDICIAL REVIEW

A. **ADMINISTRATIVE REMEDIES**
The suspension, revocation, modification or grant with condition of a permit by the Local Issuing Authority 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 City Manager within 15 days after receipt by the Local Issuing Authority of written notice of appeal.

B. **JUDICIAL REVIEW**
Any person, aggrieved by a decision or order of the Local issuing Authority, after exhausting his administrative remedies, shall have the right to appeal denovo to the Superior Court of Crisp County, Georgia.

SECTION X
EFFECTIVITY, VALIDITY AND LIABILITY

A. **EFFECTIVITY**
This ordinance shall become effective on the 6th day of January, 2016.

B. **VALIDITY**
If any section, paragraph, clause, phrase, or provision of this ordinance shall be adjudged invalid or held unconstitutional, such decisions shall not affect the remaining portions of this ordinance.

C. **LIABILITY**
Neither the approval of a plan under the provisions of this ordinance, nor the compliance with provisions of this ordinance shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor impose any liability upon the Local Issuing Authority or District for damage to any person or property. 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 the standards provided for in this ordinance or the terms of the permit. No provision of this ordinance 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 or pollute any Waters of the State as defined thereby.

D. **REPEAL OF CONFLICTING PROVISIONS**
All ordinances, parts of ordinances, sentences, provisions, words, phrases and all other writings in conflict with the provisions of this ordinance are hereby expressly repealed.

First reading by the Cordele City Commission on the 1st day of August, 2017.

Second reading and final adoption by the Cordele City Commission on the 15th day of August, 2017.

CITY OF CORDELE

BY: _____
Zack H. Wade, Chairman

ATTEST: _____
Edward Beach, Clerk

(City Seal)

D2	Construction Site Storm Water Runoff Control	
MCM D, BMP 2	**Site Plan Review Procedures**	
1. Description of BMP	The City will review site plan drawings of each applicant for a Land Disturbing Activity Permit to confirm that site work provisions incorporate measures to control polluted storm water runoff and to consider potential water quality impacts. The review will verify compliance with the Erosion and Sediment Control Ordinance. Where provisions are lacking, revisions will be required to the drawings before the LDA permit is issued. An acceptable site plan review will be required before issuance of the LDA permit.	
2. Measureable Goals	The city will review all site plans submitted for a Land Disturbing Activity permit for sites with disturbed area of 1.0 acre or greater.	
3. Documentation to be submitted with each annual report	The city will provide a list of site plans received, reviewed, approved or denied, with each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As needed
	d) Month/Year of Action	Annual
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The City review of drawing and drainage calculations will improve storm water runoff from construction sites other than visual on-site inspections. The City implementation of site plans review by LDA permit applicants to provide better compliance with regulations.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By reviewing the plans ensure proper design and keep record of LDA permits.	

D

SITE PLAN REVIEW PROCEDURES

Step 1: Plans are submitted to the Community Development Department and the Administrative Assistant verifies that all required documents and fees have been delivered with the plans. Once confirmed, the plans are logged in as received.

Step 2: Plans are then routed to the reviewer.

Step 3: Plans are reviewed in the order in which they were received using the *Erosion, Sedimentation and Pollution Control Plan Checklist* (Most recent edition from the Georgia Soil & Water Conservation Commission). See D2.02 for the Standalone Development Checklist. (Note: Although only the Standalone Development checklist is attached to this SWMP, use the proper current checklist as pertains to the project you are reviewing. There are three total versions available: Standalone, Infrastructure, and Common Development. All are available via the GSWCC Website at https://gaswcc.georgia.gov/documents-list)

Step 4: Within 14 days, comments are provided to the design professional and primary permittee.

Step 5: Once comments are addressed and the plans have been corrected, the design professional and/or primary permittee is notified of plan status.

Step 6: Permits are only issued at the time the plans are picked up. Plans not permitted within 90- days will require an addendum to provide adjustments to the project calendar and seasonal adjustments to vegetative measures.

Step 7: Plans not permitted with one year must be resubmitted.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD:_____

Project Name:_____ **Address:**_____

City/County:_____ **Date on Plans:**_____

Name&email of person filling out checklist:_____

Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
		1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
		2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
		3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist.* (A copy of the written approval by EPD must be attached to the plan for the plan to be reviewed.)
		4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
		5 Provide the name, address and phone number of primary permittee.
		6 Note total and disturbed acreage of the project or phase under construction.
		7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
		8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
		9 Description of the nature of construction activity.
		10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
		11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
		12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
		13 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 on page 15 of the permit.*
		14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."*
		15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
		16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
		17 Clearly note the statement that "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."*
		18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."*

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19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."

20 Clearly note statement that "Erosion 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."

21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*

23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.*

24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.*

25 Provide BMPs for the remediation of all petroleum spills and leaks.

26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.*

27 Description of the practices that will be used to reduce the pollutants in storm water discharges.*

28 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

29 Provide complete requirements of inspections and record keeping by the primary permittee.*

30 Provide complete requirements of sampling frequency and reporting of sampling results.*

31 Provide complete details for retention of records as per Part IV.F. of the permit.*

32 Description of analytical methods to be used to collect and analyze the samples from each location.*

33 Appendix B rationale for NTU values at all outfall sampling points where applicable.*

34 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.*

35 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase.*

36 Graphic scale and North arrow.

37 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

☐☐ 38 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.

☐☐ 39 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.*

☐☐ 40 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.

☐☐ 41 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.

☐☐ 42 Delineation and acreage of contributing drainage basins on the project site.

☐☐ 43 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.*

☐☐ 44 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.

☐☐ 45 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.

☐☐ 46 Soil series for the project site and their delineation.

☐☐ 47 The limits of disturbance for each phase of construction.

☐☐ 48 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 justfication explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permitees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan.

☐☐ 49 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

☐☐ 50 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.

☐☐ 51 Provide 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 the year that seeding will take place and for the appropriate geographic region of Georgia.

*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2018

D3	Construction Site Storm Water Runoff Control	
MCM D, BMP 3	**Inspection Program**	
1. Description of BMP	The City will inspect the site work of each holder of a Land Disturbing Activity Permit to confirm that site work does incorporate erosion and sediment controls and that site work controls runoff of polluted storm water from the construction site.	
2. Measureable Goals	The city will inspect each construction site a minimum of three times: following installation of initial BMPs, during active construction, and after final stabilization.	
3. Documentation to be submitted with each annual report	The city will provide inspection sheets, and a list of construction sites, with each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	Three (3) Times
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	Regular construction site inspections will encourage site operators to use more effectively controlled runoff of polluted storm water. We hope that the preliminary meeting will help form a working bond between the city and the site developers to make this task run smoothly.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By inspecting construction site work will ensure proper installation, maintenance and reduce pollutants from entering waters of the State.	

D

CONSTRUCTION SITE PLAN INSPECTION PROCEDURES

Step 1: Upon arrival at a job site, the superintendent is notified of the inspector's presence on the site.

Step 2: The inspector walks the entire job site, including active work areas and stabilized areas. If any deficiencies are found, the inspector will include his/her findings on the *Land Disturbance Permit Site Check List* form and document with photographs.

Step 3: Turbidity samples are only collected if a discharge is present during inspection. If a discharge is found that exceeds the approved limits for the job site, a copy of the inspection form is given to the job superintendent or their designee.

Step 4: If the sample is within the approved limits, however, other deficiencies are found, a copy of the inspection form is given to the job superintendent or their designee.

D

Step 5: Corrective actions are to be made within 48 hours of notification. In serious situations immediate attention is required.

Step 6: Follow up inspections are made to ensure that corrections have been made and working properly.

Step 7: Copies of the inspection report and detailed photographs of deficiencies are placed in the file for that project.

LAND DISTURBANCE PERMIT SITE CHECK LIST

Permit #		Date of Inspection	
Project Name			

Name and phone number of Jobsite Inspector, Sampling and Reporting Personnel

WEATHER CONDITIONS					
1	Are the NPDES records being kept properly?	YES		NO	
2	Are Co(s) working properly?	YES		NO	
	If NO: Action required:				
3	Are all structural control measures working properly?	YES		NO	
	If NO: BMP(s) not installed or working properly?				
	Action Required:				
4	Any disturbed areas without proper stabilization?	YES		NO	
	If YES: Area:				
5	Areas where petroleum is stored or used?	YES		NO	
	If YES: Area:				
	Are there any spills or leaks?	YES		NO	
	If YES: Action required:				
6	Is trash stored and / or disposed of properly?	YES		NO	
7	Do receiving waters show evidence of sediment?	YES		NO	
	If YES: Water Body:				
8	Is there sediment entering storm drainage system?	YES		NO	
	If YES: Action required:				

COMMENTS	
Name of Inspector	Date

D4	Construction Site Storm Water Runoff Control	
MCM D, BMP 4	**Enforcement Procedures**	
1. Description of BMP	The City maintains ordinances that provide legal enforcement authority to address E & S violations. If a violation of the City Ordinance is found, then the appropriate enforcement actions are taken, which may include verbal warning, written warning, stop work order, etc. All violations will be investigated and the resolution will be recorded. See Appendix C for " Construction site Enforcement Procedures".	
2. Measureable Goals	The city will respond and document the numbers of violations during the reporting period.	
3. Documentation to be submitted with each annual report	The city will provide a summary of the E&S violations, any enforcement actions taken, including the number and type of violations and the status of the violations in the annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As needed
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The City is performing this effort as part of its responsibility as a Local Issuing Authority under the State of Georgia Erosion and Sedimentation Control Act.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	If failures are being corrected, then the enforcement procedures is effective.	

D

CONSTRUCTION SITE ENFORCEMENT PROCEDURES

Step 1: All construction sites inspections are documented using the *Land Disturbance Permit Site Check List* inspection form and must meet minimum requirements for Soil Erosion, Sedimentation, and Pollution Control using best management practices (BMP).

Step 2: If a construction site is found to have a violation / non-compliant, then the inspector will document the findings and notify the site superintendent.

Step 3: Depending on the violation (e.g. working without an approved permit, BMP failure, etc.) the following actions can be taken:

- After the superintendents' initial notification of deficiencies a follow up inspection is made within 48 hours.
- If not corrected an official Notice of Violation (NOV) with seven days to comply is issued. Depending upon the nature of the violation, a Stop Work order may be issued in addition.
- If the site remains non – compliant after the time specified in the NOV an Order to Stop Work is automatically issued, all building inspections are suspended and a second NOV is issued with seven days to comply.
- If the site remains non – compliant after the time specified in the second NOV, a summons is sent to appear in Magistrate Court.

Step 4: Once the violation has been addressed, then the construction site activities can resume and/or final inspection can be issued.

D5	Construction Site Storm Water Runoff Control	
MCM D, BMP 5	**Complaint Response**	
1. Description of BMP	Anyone can submit E&S complaints verbally or in writing to the Public Works Department. Each complaint is logged, investigated, and documented. See Appendix C for "Erosion and Sedimentation Response Procedures".	
2. Measureable Goals	The City will respond and document all of the E&S complaints received during the reporting period.	
3. Documentation to be submitted with each annual report	The city will provide a summary that includes the complaint date, type of complaint, and status of complaint in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As needed
	d) Month/Year of Action	Annually
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The City is performing this effort as part of its responsibility as an Issuing Authority under the State of Georgia's Erosion and Sedimentation Control Act.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Citizens are provided a way to make a complaint and legitimate issues are resolved.	

E&S COMPLAINT RESPONSE PROCEDURES

Step 1: Log citizen / employee complaint (e.g. date, name, contact information, location, concern, etc.).

Step 2: Perform site visit, investigate and document with pictures and notes.

Step 3: Determine if there is a violation(s).

Step 4: If no E&S violation is found, notify the citizen / employee and close case file. If the citizen / employee do not agree with findings, refer the case to the Georgia – Environmental Protection Division Albany office.

Step 5: If an E&S violation is found, contact the person responsible for the property / job site of the violation(s) and provide the corrective actions needed and time frame.

Step 6: If corrective actions are not completed, refer the case to the Georgia – Environmental Protection Division Albany office for guidance.

D

Step 7: If correction actions are completed, notify the citizen / employee and close case file.

E&S COMPLAINT FORM

Name of Individual Filing Complaint

Company (If applicable)

Contact Telephone

Contact E-mail

Project Location (identify by street address, nearest intersection, adjacent businesses or residence, etc.)

Reported Concern

Weather conditions at the time the CONTACT observed the issue of concern

1. Is this an active construction site? ☐ YES (Proceed to question 2) ☐ NO (Proceed to question 5)

2. Name of Contractor on Site
3. Site Superintendent's Name
4. Level 1A (Blue Card) Rep on site

5. Date of On-Site Inspection
6. Time of On-Site Inspection

7. Observerd conditions while On-Site:

8. Is there a violation present on site? ☐ YES ☐ NO

9. Corrective action to be taken:

10. Has the CONTACT been notified of findings? ☐ YES ☐ NO

Name of City of Cordele Inspector

Signature

Title

Date

D6	Construction Site Storm Water Runoff Control	
MCM D, BMP 6	**Certification**	
1. Description of BMP	The City MS4 staff involved in construction activities subject to the Construction General Permits are trained and certified in accordance with the rules adopted by the Georgia Soil and Water Conservation Commission, including site inspection and enforcement of control measures.	
2. Measureable Goals	The city will ensure that the MS4 staff involved in construction activities are trained and certified in accordance with the rules adopted by the Georgia Soil and Water Conservation Commission.	
3. Documentation to be submitted with each annual report	The city will provide the number and type of current certifications held by MS4 staff in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	Every three (3) years
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee.	
6. Rationale for choosing BMP and setting measureable goal(s)	The City is performing this effort as part of its responsibility as a Local Issuing Authority under the State of Georgia Erosion and Sedimentation Control Act.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Properly trained inspectors are able to identify problem areas under construction.	

LIST OF GEORGIA SOIL & WATER CONSERVATION COMMISSION EROSION CONTROL CERIFICATIONS

As of
December, 2017

LEVEL 1B – INSPECTORS (red card)

Jack Wood
Brandon J. McGirt

D

LEVEL 2 – DESIGN PROFESSIONALS (tan card)

Ritchey M. Marbury, III, PE, RLS

LEVEL 2 – PLAN REVIEWERS (grey card)

Brandon J. McGirt

E

MINIMUM CONTROL MEASURE (MCM)

E

POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

E1	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 1	**LEGAL AUTHORITY**	
1. Description of BMP	The City will use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State and local law. See E.01 for the Stormwater Ordinance—Part 1, "Post-Construction Storm Water Management"	
2. Measureable Goals	The City will evaluate the existing stormwater ordinance, and if necessary, modify the ordinance during the reporting period.	
3. Documentation to be submitted with each annual report	If the ordinance is revised during the reporting period, the City will provide a copy of the adopted ordinance with the annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As needed
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	The stormwater ordinance ensures that controls are in place that will prevent or minimize water quality impacts.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	The City will determine this through enforcement of the stormwater ordinance. This will ensure that post-construction stormwater is being handled properly.	

E

O-06-19

ORDINANCE

AN ORDINANCE TO ENACT A NEW ARTICLE IN THE CODE OF THE CITY OF CORDELE TO BE KNOWN AS CHAPTER 18, UTILITIES, ARTICLE IX, STORM WATER MANAGEMENT, PART ONE AND PART TWO, §§ 18-400 –426.

The City Commission of the City of Cordele hereby ordains

That the Code of the City of Cordele is hereby amended by adding an Article to Chapter 18 to be numbered Chapter 18, UTILITIES, Article IX, §§ 18-400 – 426, which shall read as follows:

Chapter 18

UTILITIES

ART. IX Storm Water Management

PART ONE

POSTCONSTRUCTION STORMWATER MANAGEMENT

Sec. 18-400. General provisions.

Purpose. The purpose of this article is 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 postdevelopment stormwater runoff and nonpoint source pollution associated with new development and redevelopment. It has been determined that proper management of postdevelopment stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, and protect water and aquatic resources. This article seeks to meet that purpose through the following objectives:

Establish decision-making processes surrounding land-development activities that protect the integrity of the watershed and preserve the health of water resources;

Require that new development and redevelopment maintain the predevelopment hydrologic response in their postdevelopment state as nearly as practicable in order to reduce flooding, stream bank erosion, nonpoint source pollution, and maintain the integrity of stream channels and aquatic habitats;

Exhibit "D"

Establish minimum postdevelopment stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;

Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet the minimum postdevelopment stormwater management standards;

Encourage the use of nonstructural stormwater management and stormwater better site design practices, such as the preservation of green space and other conservation areas, to the maximum extent practicable;

Establish provisions for the longterm responsibility for and maintenance of structural storm water 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,

Establish administrative procedures for the submission, review, approval and disapproval of stormwater management plans, and for the inspection of approved active projects, and longterm follow up.

Applicability. All persons proposing development and/or construction within the city shall submit a stormwater management plan and hydrology study to the city manager for review of conformity with this article, except as provided herein. These standards apply to any new development or redevelopment site that meets one or more of the following criteria:

New development that involves the creation of 5,000 square feet or more of new impervious cover, or that involves other land development activities of one acre or more;

Redevelopment that includes the creation, addition or replacement of 5,000 square feet or more of new impervious cover, or that involves other land development activity of one acre or more;

Any new development or redevelopment, regardless of size that is defined as a hotspot land use;

Land development activities that are smaller than the minimum applicability criteria set forth herein 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. 18-401 . Definitions.

When used in this article, the following words and phrases shall have the meaning given in this section. Words not defined herein shall be construed to have a meaning given by common and ordinary use. The term "shall" is mandatory. When not inconsistent with the context, words used in the singular number include the plural and those used in the plural number include the singular. Words used in the present tense include the future. The following definitions shall apply in the interpretation and enforcement of this article, unless otherwise specifically stated:

Addition (to an existing structure). Any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load bearing wall other than a firewall. Any walled and roofed addition, which is connected by a firewall or is separated by independent perimeter load-bearing walls, is new construction.

As-built survey. A drawing prepared and signed by a registered land surveyor or professional engineer registered in the state illustrating the locations, dimensions and elevations of a development as it has been constructed following completion of construction based on direct field measurements and shown to scale.

As-built design certification. A report prepared and signed by the registered land surveyor or professional engineer that prepared the construction plans and/or storm management plan, certifying that the stormwater facilities constructed as part of the development and depicted on the as-built survey will function as designed in the stormwater management plan and meeting the requirements outlined in the Development Regulations of the City of Cordele, Georgia.

Agricultural activities. The raising, harvesting, or storing of crops; 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, ratites, and rabbits, or for use in the production of poultry, including, but not limited to, chickens, hens, and turkeys; producing plants, trees, fowl, or animals; or the production of agricultural, horticultural, dairy, livestock, poultry, eggs, and apiarian products.

Best management practices (BMPs). A collection of structural practices and vegetative measures which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control, prevent or reduce the pollution of the water of the state, or prevent flooding.

The term "properly designed" means designed in accordance with the hydraulic design specifications contained in the "Local Design Manual" (LDM).

City. See city manager.

City Manager. City manager of the City of Cordele, Georgia, and/or his/her designee.

Construction. Any alteration of land for the purpose of achieving its development of changing use, including particularly any preparation for, building of, or erection of a structure and/or infrastructure.

Construction activity. Activities subject to NPDES construction permits or those activities addressed in the LDM. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Day. A calendar day.

Design storm. The rainfall event of such size and frequency as described in the LDM that is used for the design of stormwater facilities.

Detention/Retention Facilities. Synonymous as to terminology, but different as to use.

Developer. Any person who acts in his/her own behalf or as the agent of any owner of property for construction activity.

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, and ponds, whether of an intermittent or continuous nature, and the manmade element which includes culverts, ditches, channels, retention facilities and the storm sewer system.

Hardship, (as related to variances of this article) means the exceptional hardship that would result from a failure to grant the requested variance. The city requires that the variance is exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All

of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

Hazardous materials. Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Hotspot. An area where the land use or activities generate or have the potential to generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Impervious cover. Sky/ground cover which does not absorb water.

Industrial activity. Activities subject to NPDES industrial permits as defined in 40 CFR, section 122.26 (b)(14).

Jurisdictional wetland. An area that meets the definitional requirements for wetlands as determined by the U.S. Army Corps of Engineers, and/or The Federal Insurance Rate Map (FIRM).

Local Design Manual (LDM). A manual containing specific guidelines and standards for stormwater management that are citywide specific, for the proper implementation of the requirements of this article, also known as "The Development Regulations of the City or Cordele, Georgia."

Maintenance of stormwater facility. The performance of routine methods and procedures that preserve drainage structures and other stormwater facilities in good condition; ensuring structural soundness, functional adequacy and mostly free from sediment, debris and other obstructions; and rectifying any unforeseen erosion and water quality problems.

National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit. A permit issued by the U.S. Environmental Protection Agency (or by the state under authority delegated pursuant to 33 USC §§ 1342(b)) that authorizes the discharge of pollutants to waters of the United

States, whether the permit is applicable on an individual, group, or general area-wide basis.

Nonstructural best management 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 green space areas, overland flow filtration areas, natural depressions, and vegetated channels.

Obstruction includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

Owner. The person in whom is vested the fee ownership, dominion or title of property, by proprietor; this term may also include a tenant, if chargeable under his/her lease for the maintenance of the property, and 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.

Pollution. The contamination or other significant alteration of any water's physical, chemical or biological properties, including, but 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 render such waters harmful, detrimental or injurious to the public health, safety or welfare or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Pollutant. Any impurity or waste material that degrades the physical, chemical, biological or radiological integrity of surface or subsurface waters.

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.

Site development permit. The authorization necessary to conduct a land-disturbing activity under the provisions of this article.

Stormwater. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Design Manual . Is also the LDM, however, refer to the Georgia Stormwater Management Manual (GSMM), current edition, as published by the Atlanta Regional Commission. The Georgia Stormwater Management Manual is available online at www.georgiastormwater.org.

Stormwater facility . 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, the quality, the period of release or the velocity of flow.

Undisturbed natural buffer. A tract of land in its natural undisturbed state that is permitted by State or Federal Statutes.

Violation. The failure of a structure or other development to be fully compliant with this article. A structure or other development without evidence of compliance required in this article is presumed to be in violation.

Sec. 18-402. Stormwater local design manual.

The city will utilize the policy, criteria and information including technical specifications and standards in the latest edition of the LDM, for the proper implementation of the requirements of this article. The LDM may be updated and expanded periodically, based on improvements in science, engineering, monitoring and local maintenance experience.

Sec. 18-403. Exemption from requirements.

The following development activities are exempt from the provisions of this article and the requirements of providing stormwater management but are not exempted from state erosion

control/forestry BMPs:

Agricultural and forestry land management activities.

Additions or modifications to existing detached single-family or duplex dwellings.

Repairs to any stormwater management facility or practice deemed necessary by the city.

Two-lane road construction by a governmental body (any road wider than a two-lane road is not exempted).

Sec. 18-404. Requirements for stormwater management plan.

All stormwater management plans submitted to the city shall be submitted in accordance with the provisions as outlined in this article and the LDM. A statement prepared by the design professional to this effect shall accompany and be made a part of any plan or any revision thereto.

The stormwater management plan shall be prepared under the supervision of, and certified by, a professional engineer, professional land surveyor, or registered landscape architect with competency in hydrology and hydraulics, currently registered in the state. The plan shall conform to the requirements of this article.

Upon receipt of the stormwater management plan, the city shall perform appropriate reviews, and shall either approve the stormwater management plan or return comments and reasons for rejection.

Sec. 18-405. Permit procedures and requirements.

Permit application requirements. No owner or developer shall perform any land development activities without first meeting the requirements of this article prior to commencing the proposed activity. Unless otherwise exempted by this article, or granted a waiver to meeting the minimum requirements outlined in the LDM, a site development permit application shall be accompanied by the following items in order to be considered:

Stormwater concept plan and consultation meeting certification if required by the city;

Stormwater management plan;

Inspection and longterm maintenance agreement;

Performance bond, if applicable; and,

Site development permit application and applicable review fees.

Stormwater concept plan and consultation meeting. Projects shall require a stormwater concept plan and consultation prior to submittal of design plans for review by the city manager. The stormwater concept plan shall meet the requirements outlined in the LDM. For the purposes of this section, any proposed development activity that meets any of the following criteria shall be required to perform a stormwater concept plan and consultation meeting prior to submittal of engineering plans for review.

Any residential subdivision with greater than 100 lots, unless such development contains two-acre or greater lots.

Any nonresidential development with a new disturbed area of 5000 square feet or greater.

Any nonresidential development regardless of size which has an impervious surface coverage that covers 50 percent or more of the property excluding those lands contained within undisturbed buffers including, but not limited to, floodplains, stream buffers and undisturbed buffers between dissimilar zonings.

Any nonresidential development regardless of size which is defined as a hot spot land use or activity.

Stormwater management plan requirements. A stormwater management plan must be submitted in accordance with the LDM.

Modifications for off-site facilities. The stormwater management plan for each land development project shall provide for stormwater management measures located on the site of the project, unless provisions are made with the city to manage stormwater by an off-site, or regional facility. The off-site or regional facility: (1) must be located on property legally dedicated for the purpose, (2) must be designed and adequately sized to provide a level of stormwater quantity and quality control that is equal to or greater than that which would be afforded by on-site practices, and (3) there must be a city-approved, legally-obligated entity responsible for long-term operation and maintenance of the off-site or regional stormwater facility. In addition, on-site measures shall be implemented, where

necessary, to address stormwater management issues upstream and downstream from the development site to the off-site or regional facility.

A stormwater management plan must be submitted to the city which shows the adequacy of the off-site or regional facility.

To be eligible for a modification, the applicant must demonstrate to the satisfaction of the city that the use of an off-site or regional facility will not result in the following impacts to upstream or downstream areas:

Increased threat of flood damage to public health, life, and property;

Deterioration of existing culverts, bridges, dams, and other structures;

Accelerated stream bank or streambed erosion or siltation;

Degradation of in-stream biological functions or habitat; or

Water quality impairment in violation of state water-quality standards, and/or violation of any state or federal regulations.

Sec. 18-406. Post-development stormwater management performance criteria.

The following performance criteria shall be applicable to all stormwater management plans, unless otherwise provided for in this article per the submission of a statement of compliance with State and Federal Regulations prepared by a design professional.

Water quality. 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:

The system is sized for the volume from the site, as defined in the LDM;

Appropriate structural stormwater controls or nonstructural practices are selected, designed, constructed and preserved in accordance with the specific criteria in the LDM; and, runoff

from hotspot land uses and activities identified in the LDM are adequately treated and addressed through the use of appropriate structural stormwater controls, nonstructural practices and pollution prevention practices identified in the LDM..

Stream channel protection. Protection of stream channels from bank and bed erosion and degradation shall be provided by using the following approaches:

Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer; and, erosion prevention measures such as energy dissipation and velocity control.

All design and construction work that is undertaken proximate to stream channels (including the buffer areas) shall be in strict conformance with current local, state and federal regulations.

Flood protection. Flood and public safety protection shall be provided by controlling and safely conveying storm events such that flooding is not exacerbated for the storm events specified in the LDM and in accordance with applicable requirements of this article.

Drainage system guidelines. A system emphasizing a natural, as opposed to an engineered, drainage strategy shall be encouraged. The applicability of a natural approach depends upon such factors as site storage capacity, open channel hydraulic capacity, maintenance needs/resources and regulatory permitting factors. Stormwater conveyance facilities may include but are not limited to culverts, stormwater drainage pipes, catch basins, drop inlets, junction boxes, headwalls, gutters, swales, channels, ditches, and energy dissipaters shallbe provided when necessary for the protection of public and private properties adjoining project sites. Stormwater conveyance facilities that are designed to carry stormwater runoff from more than one parcel, existing or proposed, shall meet the following requirements:

Methods to calculate stormwater flows shall be in accordance with the LDM;

All culverts, pipe systems and open channel flow systems shall be sized in accordance with the stormwater management plan using the methods included in the LDM; and,

Design and construction of stormwater conveyance facilities shall be in accordance with the criteria and specifications found in the LDM.

Sec. 18-407. Maintenance of facilities.

Stormwater detention facilities which are owned by the city are deemed to be an essential and

integral part of the city stormwater management program and shall be maintained by the city. Stormwater management facilities owned by others which are built to satisfy this article will not be maintained by the city, and the owners thereof shall meet the requirements of all of the provisions of this article. No stormwater detention/retention facility shall be accepted for maintenance by the city.

An inspection and maintenance agreement shall be executed for all private on-site stormwater management facilities prior to approval of the final plat.. Such agreement shall be in form and content acceptable to the city, and shall provide that all inspection, maintenance and repair procedures of such facilities shall be the responsibility of the property owner. Such agreement shall provide for access to the facility by virtue of a nonexclusive perpetual easement in favor of the city at reasonable times for regular inspection by the city manager.

The agreement shall provide that preventive maintenance inspections of infiltration systems, retention, or detention structures may be made by the city, at its option.

The agreement shall provide that if, after an inspection, the condition of a facility presents an immediate danger to the public health, safety or general welfare because of unsafe conditions or improper maintenance, the city shall have the right, but not the duty, to take such action as may be necessary to protect the public health, safety, general welfare and adjacent properties from damage. If it is determined that such deficient conditions are the result of neglected maintenance, or other action caused by the property owner, then any cost incurred by the city shall be paid by the property owner.

The maintenance agreement shall be recorded by the property owner in the land records of Crisp County, Georgia prior to approval of the final plat.

The agreement shall provide that the city shall notify the property owner(s) of the facility of any violation, deficiency or failure to comply with this article. The agreement shall also provide that upon a failure to correct violations requiring maintenance work, within 30 days after notice thereof, in writing, the city may provide for all necessary work to place the facility in proper working condition. The owner(s) of the facility shall be assessed the costs of the work performed by the City pursuant to this subsection, and there shall be a lien on all property of the owner, which lien, when

filed in the county real estate records, shall have the same status and priority as liens for nonpayment of ad valorem taxes. Should such a lien be filed, portions of the affected property may be released by the city following the payments by the owner of such portion of the property of such owner's pro-rata share of the lien amount based upon the acreage to be released with such release amount to be determined by the city commission.

Sec. 18-408. Inspection.

The city manager shall be responsible for determining whether a development is proceeding in accordance with the approved stormwater management plan. Periodic inspection of the development site shall be made by the city manager to ensure that the stormwater management plan is properly implemented.

Upon completion of the construction phase on the project, and prior to approval of the final plat the developer shall provide an as-built survey and an as-built design certification for each stormwater management facility. A certified record drawing of the facility shall be prepared based upon this as-built survey and certified by the design professional who prepared the stormwater management plan. Based on the actual parameters established on the record drawing, an addendum to the stormwater management plan shall be prepared which demonstrates that the facility, as constructed, complies with the requirements of the approved stormwater management plan.

Following final plat approval, the city manager may conduct periodic inspections of the stormwater facility. Inspection reports including documented deficiencies and needed maintenance requirements will be included on the inspection reports and provided to the property owner to undertake appropriate action.

Secs. 18-409 – 18-419 RESERVED.

E2	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 2	**INVENTORY**	
1. Description of BMP	The City updates, as needed, the inventory of all publicly owned post-construction stormwater management structures (e.g. detention/retention ponds, water quality vaults, infiltration structures) and only those privately-owned structures designed after the December 9, 2008, deadline for adoption of the GSMM (e.g. new structures). The inventory shall include information on the number and type of structures and ownership (e.g. publicly-owned, privately owned). See : "MCM E2.01—Pond Inventory" and "MCM E2.02—Pond Location Map".	
2. Measureable Goals	The City will update the inventory to include structures added during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the revised inventory in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	As needed
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	It is important to continuously maintain the post-construction information to identify problems and ensure proper functions.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By having accurate information, the City can respond quickly and take the necessary steps to ensure proper function of the post-construction structures	

E

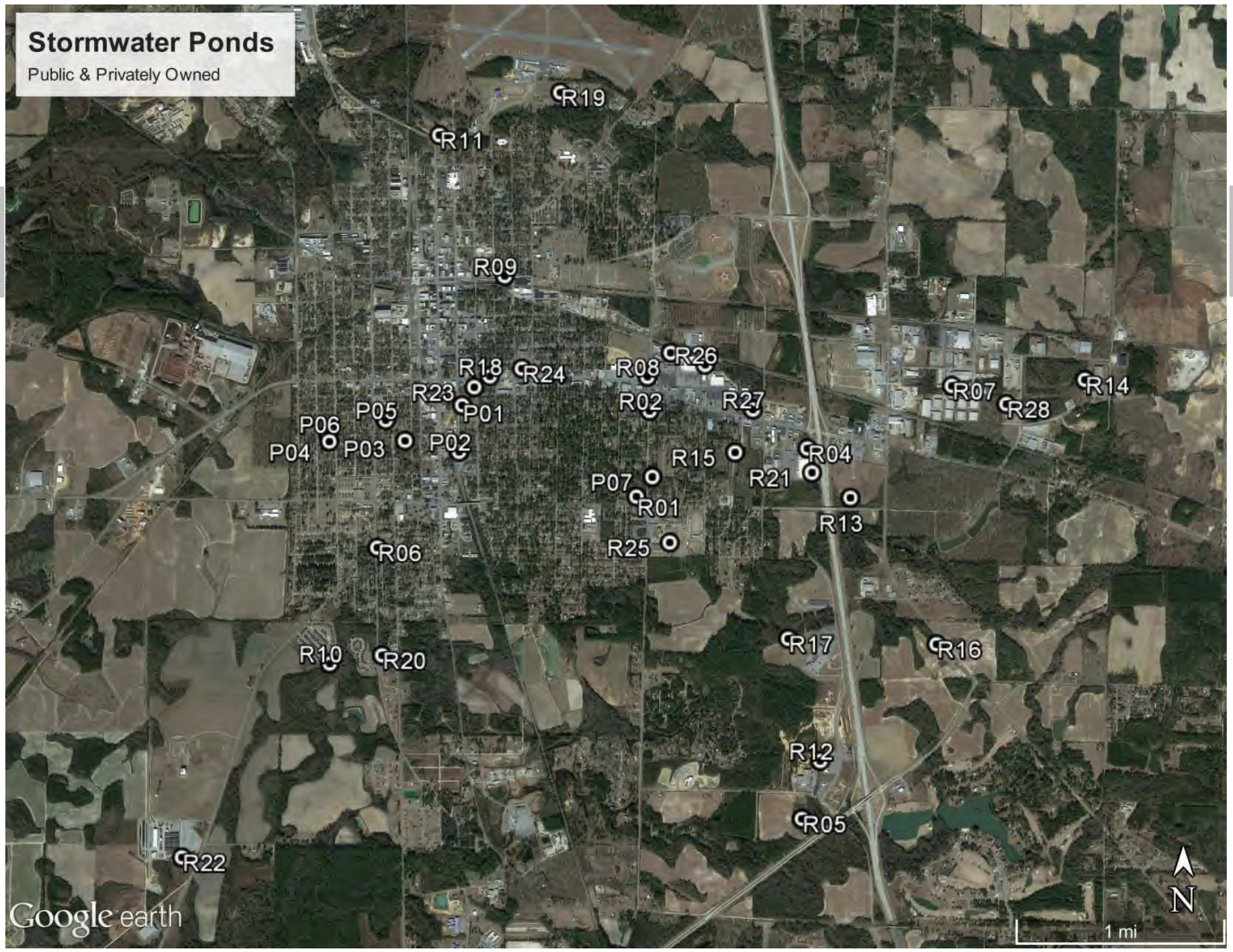
City of Cordele Pond Inventory
(MCM E2: Post-Construction Inventory)

Private Ponds ID	Pond No.	Detention / Retention
J12D077	R02	Detention Pond
I07D001	R19	Detention Pond
E18D013	R22	Detention Pond
H11D117	R23	Detention Pond
G12D077	P04	Detention Pond
G12D078	P05	Detention Pond
G12D079	P06	Detention Pond
G14D014	R06	Detention Pond
H11D116	R18	Detention Pond
G15D001	R10	Detention Pond
H10D114	R09	Detention Pond
M12D017	R28	Detention Pond
H11D118	R24	Detention Pond
J11D027	R26	Detention Pond
I13D049	R01	Detention Pond
J14D063	R25	Detention Pond
J12D079	R27	Detention Pond
H08D030	R11	Detention Pond
K12D061	R04	Detention Pond
G15D002	R20	Detention Pond
K13D043	R21	Detention Pond
K15D001	R17	Detention Pond
K17D005	R05	Detention Pond
K17D006	R12	Detention Pond
L11D029	R07	Detention Pond
L15D001	R16	Detention Pond
M11D019	R14	Detention Pond
J11D026	R08	Detention Pond
28 Private		

Public Ponds ID	Pond No.	Detention / Retention
G12D076	P03	Retention Pond
H12D172	P01	Retention Pond
J11D025	R03	Retention Pond
J12D078	R15	Retention Pond
J13D109	P07	Retention Pond
K13D042	R13	Retention Pond
H12D173	P02	Retention Pond
7 Public		

TOTAL NUMBER OF Ponds (Public and Private): 35

Date Printed
1/31/2018


Stormwater Ponds
Public & Privately Owned
R19
R11
R09
R18
R24
R08
R26
R23
P01
R02
R27
R07
R28
R14
P05
P06
P04
P03
P02
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E3	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 3	**INSPECTION PROGRAM**	
1. Description of BMP	The City inspects all City and private maintained post-construction stormwater management structures, so that 100% are inspected within the 5-year permit term. Each inspection is documented and if maintenance and/or repairs are needed, the owner is notified.	
2. Measureable Goals	The City will inspect 100% of all post-construction stormwater management structures during the 5-year permit period, but no less than one annually.	
3. Documentation to be submitted with each annual report	The City will provide a summary of all inspections and digital copies of the inspections in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2013
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Routine inspections help prevent potential nuisances, reduce the need for repair maintenance, and reduce the chance of polluting stormwater runoff by finding and fixing problems.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Inspecting each pond on a routine basis will help to ensure that they are being properly maintained, functioning, and if any deficiencies are found to be addressed in a timely manner.	

E

Operation and Maintenance Inspection Report for Stormwater Management Ponds

(Adapted from the Georgia Stormwater Management Manual, Volume 2)

Inspector Name:		Project Location:	
Inspection Date:			
Stormwater Pool:			
	Normal Pool:		
	Normally Dry:	Watershed:	

Inspection Items			Checked? (YES / NO)	Maintenance Needed? (YES / NO)	Inspection Frequency
Pond Components					
1	Embankment and Emergency Spillway				
	a.	Adequate Vegetation and ground cover			A
	b.	Embankment Erosion			A
	c.	Animal burrows			A
	d.	Unauthorized plantings			A
	e.	Cracking, bulging, or sliding of dam			
		i. Upstream Face			A
		ii. Downstream Face			A
		iii. At or beyond toe upstream			A
		iv. At or beyond toe downstream			A
		v. Emergency Spillway			A
	f.	Pond, toe & chimney drains clean and functioning			A
	g.	Leaks on downstream face			A
	h.	Abutment protection or riprap failure			A
	i.	Visual settlement or horizontal misalignment of top of dam			A
	j.	Emergency spillway clear of debris			A
	k.	Other (specify)			A
2	Riser and Principal Spillway				
	Type:				
		_____ Reinforced concrete			
		_____ Corrugated pipe			
		_____ Masonry			
	a.	Low flow orfice obstructed			A
	b.	Low flow trash rack			

Inspection Items			Checked? (YES / NO)	Maintenance Needed? (YES / NO)	Inspection Frequency
	e.	Concrete / Masonry condition Riser and barrels			
		i. Cracks or displacement			A
		ii. Minor spalling (<1")			A
		iii. Major spalling (rebars			A
		iv. Joint failures			A
		v. Water tightness			A
	f.	Metal Pipe Condition			A
	g.	Control Valve			
		i. Operational / exercised			A
		ii. Chained and locked			A
	h.	Pond drain valve			
		i. Operational / exercised			A
		ii. Chained and locked			A
	i.	Outfall channels flowing			A
	j.	Other (specify)			A
3	Permanent pool (wet ponds)				
	a.	Undesirable vegetative growth			M
	b.	Floating or floatable debris removal required			M
	c.	Visible pollution			M
	d.	High Water Marks			M
	e.	Shoreline problems			M
	f.	Other (specify)			M
4	Sediment forebays				
	a.	Sedimentation noted			M
	b.	Sediment removal when depth < 50% design depth			M
5	Dry pond areas				
	a.	Vegetation adequate			M
	b.	Undesirable vegetative growth			M
	c.	Undesirable woody vegetation			M
	d.	Low flow channels clear of obstructions			M

E

E4	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 4	**MAINTENANCE PROGRAM**	
1. Description of BMP	The City will implement a long-term operation and maintenance program for post-construction stormwater management structures. At a minimum, the maintenance program must address all publicly-owned structures and those privately-owned structures with construction completed after the effective date of the permit (December 6, 2012). *For information see Attachments.*	
2. Measureable Goals	The City will document maintenance, as needed, on both public and private ponds to ensure proper function during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the pond inventory, ownership, and maintenance activities and / or maintenance agreement during the reporting period in each annual report, to include: 1) Publicly-Owned Ponds: The City will provide a list of ponds maintained and the type of maintenance performed, including documentation of maintenance activities performed. 2) Privately-Owned Ponds: The City will provide a list of ponds and note whether the city and/or the owner/operator performs maintenance. If the city conducts the maintenance, a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed will be provided. If maintenance is to be performed by an owner/operator in accordance with a maintenance agreement, the city will retain copies of the maintenance agreements.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	December 2013
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Routine maintenance helps prevent potential nuisances, reduces the need for repair maintenance, and reduces the chance of polluting stormwater runoff by finding and fixing problems.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By performing regular maintenance this will help to ensure the structure is functioning properly and minimize health and safety issues, property damage, etc.	

E

E5	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 5	**GI/LID STRUCTURES**	
1. Description of BMP	The City will maintain an inventory of water quality – related GI/LID structures located within the permitted area and at a minimum, constructed after the effective date of the permit (December, 2017). As of December 31, 2017, no GI/LID structures had been constructed.	
2. Measureable Goals	The City will document each GI/LID structure constructed during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the GI/LID inventory, which will include the total number of each type of structure (e.g. bioswales, pervious pavement, rain gardens, cisterns, and green roofs) in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	December 2013
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Green infrastructure/ LID are approaches that communities can choose to maintain healthy waters and provide multiple environmental benefits.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By incorporating natural processes into the built environment, stormwater management can be improved.	

E

E6	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 6	**GI/LID ORDINANCE EVALUATION**	
1. Description of BMP	The City will establish an ordinance to ensure they do not prohibit or impede the use of GI/LID practices. At a minimum the city shall encourage reuse, evapotranspiration, and infiltration. At a minimum the City shall assess the regulations governing road design and parking requirement. See E6.01 for ordinance.	
2. Measureable Goals	The City will evaluate the ordinances to ensure they allow the use of GI/LID practices.	
3. Documentation to be submitted with each annual report	The City will provide a written report to EPD with the 2014 annual report, which is due February 15, 2015. If ordinance revisions are needed, they must be adopted and submitted to EPD within four years of the effective date of the Permit (December 6, 2016).	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2015
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	GI/LID are areas that communities can choose to maintain healthy waters and provide multiple environmental benefits.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By incorporating natural process into the environment, storm water management can be improved.	

E

ORDINANCE

AN ORDINANCE TO AMEND THE CODE OF THE CITY OF CORDELE SO AS TO AMEND SECTION 18-435(a) OF THE STORMWATER MANAGEMENT ORDINANCE 2006 APPROVED AND ADOPTED NOVEMBER 7, 2006, SO AS TO ENCOURAGE THE USE OF GREEN INFRASTRUCTURE/LOW IMPACT DEVELOPMENT (GI/LID) PRACTICES AND TO ENSURE THAT BUILDING CODES, ORDINANCES AND OTHER REGULATIONS DO NOT PROHIBIT OR IMPEDE THE USE OF GI/LID PRACTICES, AND FOR OTHER PURPOSES NOT INCONSISTENT WITH THE PROVISIONS OF SAID AMENDMENT.

The City Commission of the City of Cordele, hereby ordains

1.

That Section 18-435(a) of the Code of the City of Cordele is hereby amended to read as follows:

Section 18-435. General Provisions.

(a) Purpose. The purpose of this article is 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 postdevelopment stormwater runoff and nonpoint source pollution associated with new development and redevelopment. It has been determined that proper management of postdevelopment stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, and protect water and aquatic resources. This article seeks to meet that purpose through the following objectives:

(1) Establish decision-making processes surrounding land-development activities that protect the integrity of the watershed and preserve the health of water resources;

(2) Require that new development and redevelopment maintain the predevelopment hydrologic response in their postdevelopment state as nearly as practicable in order to reduce flooding, stream bank erosion, nonpoint source pollution, and maintain the integrity of stream channels and aquatic habitats;

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Attorneys at Law
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(3) Establish minimum postdevelopment stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;

(4) Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet the minimum postdevelopment stormwater management standards;

(5) Encourage the use of nonstructural stormwater management and stormwater better site design practices, such as the preservation of green space and other conservation areas, to the maximum extent practicable;

(6) In order to encourage the use of Green Infrastructure/Low Impact Development practices and to ensure that building codes, ordinances and other regulations do not prohibit or impede the use of Green Infrastructure/Low Impact Development practices, the following amendments are added to the existing municipal codes of the City of Cordele, Georgia:

i. Street pavement widths with less than 500 average daily trips (ADT) may be reduced to a minimum of 22 feet.

ii. Street layout standards may allow the use of innovative layouts such as cluster developments, etc. provided such layouts are submitted to and approved by the City Commission of the City of Cordele, Georgia.

iii. Landscaped islands are permitted within cul-de-sacs provided the developer creates a home owner's association or some other entity approved by the City Commission of the City of Cordele with the responsibility of maintaining said landscaped islands. Alternative turn-arounds such as "hammerheads" are also permitted in low density residential developments as long as the design is approved by the appropriate division of the Public Works Department of the City of Cordele.

iv. Drainage swales that can provide stormwater quality treatment such as dry swales, biofilters, or grass swales are encouraged and

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Attorneys at Law
P.O. BOX 897
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the design of such swales must meet the requirements of the Manual for Erosion and Sediment Control in Georgia, latest edition.

v. It is noted that the existing Zoning Ordinance of the City of Cordele requires at least six (6) percent of the parking area to be permanently landscaped. This amendment clarifies that requirement to state that also allowed are the use of bioretention islands and other stormwater practices within landscaped areas.

vi. Land Conservation and impervious cover reduction is a major goal and objective in project design. As such the use of innovative open space and cluster development design is allowed with the approval of the City Commission of the City of Cordele, Georgia.

vii. Alternative pedestrian networks such as unpaved grassed trails through common areas may be substituted for sidewalks where practical.

viii. Pervious materials such as grass, gravel, porous pavers, etc. may be used for single family home driveways.

ix. Open space may be managed by third parties using land trusts or conservation easements. Allowable and unallowable uses of open spaces in residential development shall be as defined by the zoning ordinance or the subdivision regulations of the City of Cordele.

x. Rainfall runoff from rooftops may be discharged to yard areas and temporary ponding of stormwater is allowed on front and rear yards.

xi. Developers and landowners are encouraged to conserve nonregulated land. As such, incentives such as greater design flexibility in meeting regulatory requirements will be considered where it is shown that the use of such incentives results in greater conservation and reduction of impervious services.

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xii. Stormwater outfalls must meet best management practices (BMPs) as defined by the Manual for Erosion and Sediment Control in Georgia, latest edition.

(7) Establish administrative procedures for the submission, review, approval and disapproval of stormwater management plans, and for the inspection of approved active projects, and longterm follow up.

FIRST READING by the Cordele City Commission in regular public meeting session assembled, this the 6th day of January, 2015.

SECOND READING, APPROVAL AND FINAL ADOPTION, by the Cordele City Commission in regular public meeting session assembled, this the 20th day of January, 2015.

CORDELE CITY COMMISSION

By: _____
ZACK H. WADE, Chairman

ATTEST:

By: _____
EDWARD BEACH, City Clerk

[OFFICIAL SEAL]

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Attorneys at Law
P.O. BOX 897
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E7	Post-Construction Storm Water Management in New Development and Redevelopment	
MCM E, BMP 7	**GI/LID INSPECTION & MAINTENANCE PROGRAM**	
1. Description of BMP	The City inspects all GI/LID Structures part of the City's MS4 system so that 100% are inspected within the 5-year permit period. Each inspection is documented and if maintenance and/or repairs are needed, these repairs will be documented. Any structures that are publicly-owned that are owned by other entities, or any privately-owned non-residential GI/LID structures will be inspected by the City, but maintained by the respective owners.	
2. Measureable Goals	The City will inspect all City maintained GI/LID Structures that have been constructed so that 100% are inspected within the 5-year permit period, but no less than one annually, if any structures exist. As of December 31, 2017, there were no GI/LID structures within the City.	
3. Documentation to be submitted with each annual report	The City will provide a summary of all inspections and digital copies of the inspections in each annual report. Documentation of any maintenance on any GI/LID structure performed within the reporting period will be digitally submitted, including at a minimum the number of structures maintained and the percentage of the total number of structures that the City oversees.	
4. Schedule	a) Interim Milestone Date	
	b) Implementation dates	2018
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Routine inspections help prevent potential nuisances, reduce the need for repair maintenance, and reduce the chance of a faulty GI/LID structures. Faulty structures provide the potential of pollution entering into the stormwater system.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Inspecting each GI/LID structure on a routine basis will help to ensure that they are being properly maintained, functioning, and if any deficiencies are found to be addressed in a timely manner.	

MINIMUM CONTROL MEASURE (MCM)

F

F

POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATION — BEST MANAGEMENT PRACTICES

F

F

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F1	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 1	**MS4 Control Structure Inventory and Map**	
1. Description of BMP	The City maintains an inventory and map of the MS4 control structures. At a minimum, the inventory and map must include catch basins, ditches, (miles or linear feet), detention/retention ponds, and storm drain lines (miles or linear feet). See "F1.02—MS4 Structure Inventory" (Map) and "F1.03" for the Storm System Inventory.	
2. Measureable Goals	The City will update the inventory as new structures are added during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the number of structures added during the reporting period and the total number of structures in each annual report.	
4. Schedule	a) Interim Milestone Date	2008
	b) Implementation dates	2015
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Due to the complexity and age of the stormwater system it is important to have it mapped for the overall function, which is dependent on inspection, maintenance and familiarity of the system.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By keeping the stormwater infrastructure up-to-date and digitally available, this will allow for improved maintenance records and management of the system as it continues to grow and change.	

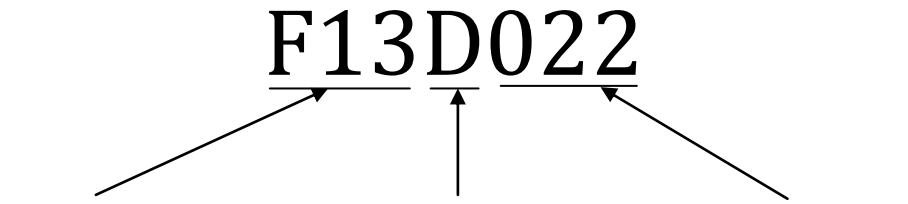
F

MS4 STORM SEWER SYSTEM MAP & INVENTORY

MAPPING NOMENCLATURE:

Beginning in 2015, an ongoing effort has been in place to provide are more accurate, GIS level mapping of all utilities within the jurisdiction of the City of Cordele. In an effort to streamline the numbering of all structures in a uniform manner, a grid system was established. All structures are identified based on this grid system (which can be seen on the overview map). The grid consists of a ALPHA-NUMERIC system where the first three spaces identify the grid area the structure is found, followed by the alpha character of the main system type (ie, Stormwater (D), Stormwater Outfall (O), Natural Gas (G), Potable Water (W), Fire Hydrant (F), Sanitary (N) or (SN)), and a three digit identifier.

EXAMPLE:



or

Structure 22 of the Stormwater Network within Grid F13

F

DEFINITIONS OF STRUCTURES:

CATCH BASIN—Abandoned definition. NOTE: Beginning with the 2017-2022 Permit, the defined structures that are labeled as "Catch Basins" will begin being re-designated as "Inlets" or "Junction Boxes" as a better description for the given structure. This process is intended to be completed by the end of the five year permit term.

CULVERT—A large opening, typically along a ditch or canal, that allows for the free-flowing of stormwater through the structure. Culverts are typically found where roads cross these ditches or canals.

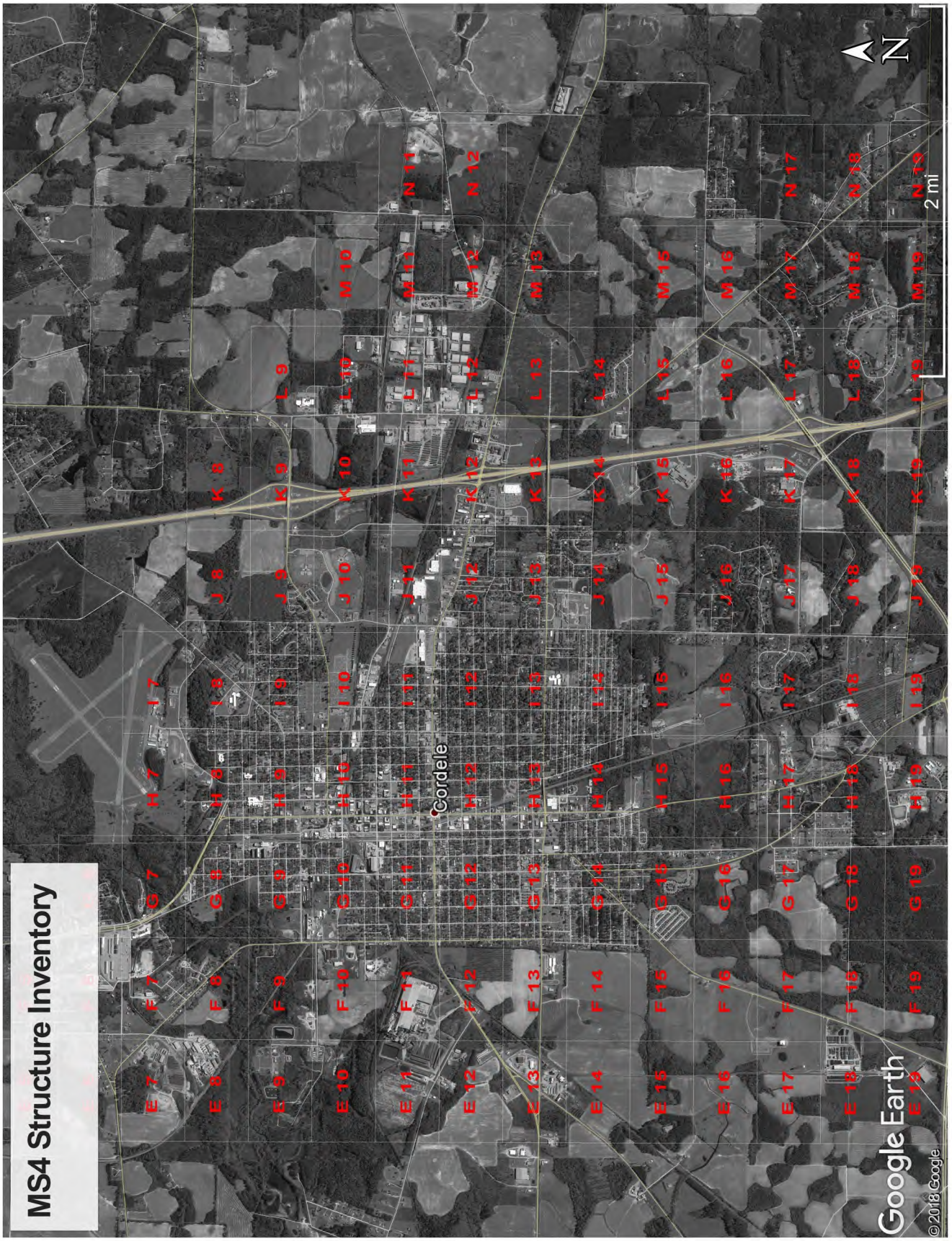
DETENTION POND—A pond that is designed to detain stormwater for a specified amount of time to adjust the Time of Concentration (TC) for the collected stormwater to prevent an overload of the MS4 farther down-network.

DITCH—A above-ground stormwater conveyance mechanism, normally grassed.

INLET—Any non-pipe direct structure that has an opening to allow the entrance of stormwater from a surface level conveyance system to an underground piped, ditch, or other manageable stormwater conveyance system. Inlets may also be referred to as a "curb inlet", "yard inlet", "grate inlet", "catch basin", or similar structure. For the purpose of the City of Cordele's definition within the MS4 network, an "INLET" shall consist of the point of entry (metal grate, opening, or other orifice), and the subterranean mechanism immediately before the orifice for the gathering the stormwater that may fall in at the given location. The water is then conveyed away by other means. Inlets should have a removable grate, manhole access, or other approved method of access for cleaning and inspection.

JUNCTION BOX—A simple point of access or point of combination of multiple in-flow storm pipe networks into a single out-flow pipe. Junction Boxes should have a manhole access, or other approved method of access, for cleaning and inspection

RETENTION POND—A pond that is designed to retain stormwater for a specific portion of the MS4 stormwater network. The water is gathered and is retained in the pond until the water level reduces via infiltration into the ground, or rises to a specified elevation. If the water level reaches the designed elevation. it then leaves the pond at a controlled rate into the remaining MS4 structures farther down-network.



This image is a simple overview map of all MS4 structures with the City of Cordele. The detail of this overview map is very limited. A more detailed map is maintained by the City of Cordele Engineering Department.

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
E18D001	Inlet	F12D010	Inlet	G08D014	Inlet
E18D002	Inlet	F12D011	Inlet	G08D015	Inlet
E18D003	Inlet	F12D012	Inlet	G08D016	Inlet
E18D004	Inlet	F12D013	Inlet	G08D018	Inlet
E18D005	Inlet	F13D001	Inlet	G08D019	Inlet
E18D007	Inlet	F13D002	Inlet	G08D020	Inlet
E18D009	Inlet	F13D003	Inlet	G08D022	Inlet
E18D010	Inlet	F13D004	Inlet	G08D023	Inlet
E18D011	Inlet	F13D005	Inlet	G08D024	Inlet
E18D013	Detention Pond	F13D006	Inlet	G08D026	Inlet
F09O001	Outfall	F13D007	Inlet	G08D029	Inlet
F09O002	Outfall	F13D008	Inlet	G08D030	Inlet
F09O003	Outfall	F13D009	Inlet	G08D031	Inlet
F09O004	Outfall	F13D010	Inlet	G08D032	Inlet
F10D001	Inlet	F13D011	Inlet	G08D033	Inlet
F10D002	Inlet	F13D012	Inlet	G08D034	Inlet
F10D003	Inlet	F13D013	Inlet	G08D035	Inlet
F10D004	Inlet	F13D014	Inlet	G08D036	Culvert
F10D005	Inlet	F13D015	Inlet	G08D041	Inlet
F10D006	Inlet	F13D016	Inlet	G08D042	Inlet
F10D007	Inlet	F13D017	Inlet	G08D043	Culvert
F10D008	Inlet	F13D018	Inlet	G09D001	Inlet
F10D009	Inlet	F13D019	Inlet	G09D002	Inlet
F10D010	Inlet	F13D020	Inlet	G09D003	Inlet
F10D011	Inlet	F13D021	Culvert	G09D004	Inlet
F10D012	Inlet	F18D001	Inlet	G09D005	Inlet
F10D013	Inlet	F18D002	Inlet	G09D006	Inlet
F10D014	Inlet	F18D003	Inlet	G09D007	Inlet
F10D015	Inlet	F18D004	Inlet	G09D008	Inlet
F11D001	Inlet	F18D005	Inlet	G09D009	Culvert
F11D002	Cross Drain	F18D006	Inlet	G09D010	Inlet
F11D003	Catch Basin	G07O001	Outfall	G09D011	Inlet
F11D004	Catch Basin	G07O002	Outfall	G09D012	Culvert
F12D001	Inlet	G07O003	Outfall	G09D013	Inlet
F12D002	Inlet	G07O004	Outfall	G09D014	Inlet
F12D003	Inlet	G08D001	Inlet	G09D015	Inlet
F12D004	Inlet	G08D002	Cross Drain	G09D016	Inlet
F12D005	Inlet	G08D008	Inlet	G09D017	Inlet
F12D006	Inlet	G08D009	Inlet	G09D018	Inlet
F12D007	Inlet	G08D010	Inlet	G09D019	Inlet
F12D008	Inlet	G08D011	Inlet	G09D020	Inlet
F12D009	Inlet	G08D012	Inlet	G09D021	Inlet

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City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
G09D022	Inlet	G10D005	Inlet	G11D015	Cross Drain
G09D023	Inlet	G10D006	Inlet	G11D016	Culvert
G09D024	Inlet	G10D007	Inlet	G11D017	Inlet
G09D025	Inlet	G10D008	Inlet	G11D018	Inlet
G09D026	Cross Drain	G10D009	Inlet	G11D019	Cross Drain
G09D027	Inlet	G10D010	Inlet	G11D020	Cross Drain
G09D028	Inlet	G10D011	Inlet	G11D021	Inlet
G09D029	Inlet	G10D012	Inlet	G11D022	Culvert
G09D030	Inlet	G10D013	Inlet	G11D023	Culvert
G09D031	Inlet	G10D014	Inlet	G11D024	Cross Drain
G09D032	Cross Drain	G10D015	Inlet	G11D025	Cross Drain
G09D033	Inlet	G10D016	Inlet	G11D026	Cross Drain
G09D034	Cross Drain	G10D017	Culvert	G11D027	Cross Drain
G09D035	Inlet	G10D018	Culvert	G11D028	Cross Drain
G09D036	Inlet	G10D019	Culvert	G11D029	Cross Drain
G09D037	Inlet	G10D020	Inlet	G11D030	Cross Drain
G09D038	Inlet	G10D021	Culvert	G11D031	Cross Drain
G09D039	Inlet	G10D022	Inlet	G11D032	Cross Drain
G09D040	Inlet	G10D023	Inlet	G11D033	Cross Drain
G09D041	Inlet	G10D024	Culvert	G11D034	Cross Drain
G09D042	Culvert	G10O001	Outfall	G11D035	Cross Drain
G09D043	Culvert	G10O002	Outfall	G11D036	Cross Drain
G09D044	Inlet	G10O003	Outfall	G11D037	Inlet
G09D045	Cross Drain	G10O004	Outfall	G11D038	Cross Drain
G09D046	Inlet	G10O005	Outfall	G11D039	Cross Drain
G09D047	Inlet	G10O006	Outfall	G11D040	Cross Drain
G09D048	Inlet	G10O007	Outfall	G11D041	Cross Drain
G09O001	Outfall	G10O008	Outfall	G11D042	Cross Drain
G09O002	Outfall	G11D001	Culvert	G11D043	Cross Drain
G09O003	Outfall	G11D002	Cross Drain	G11D044	Cross Drain
G09O004	Outfall	G11D003	Cross Drain	G11D045	Cross Drain
G09O005	Outfall	G11D004	Cross Drain	G11D046	Inlet
G09O006	Outfall	G11D005	Cross Drain	G11D047	Inlet
G09O007	Outfall	G11D006	Cross Drain	G11D048	Cross Drain
G09O008	Outfall	G11D007	Cross Drain	G11D049	Cross Drain
G09O009	Outfall	G11D008	Cross Drain	G11D050	Inlet
G09O010	Outfall	G11D009	Cross Drain	G11D051	Cross Drain
G09O011	Outfall	G11D010	Cross Drain	G11D052	Inlet
G10D001	Inlet	G11D011	Cross Drain	G11D053	Cross Drain
G10D002	Culvert	G11D012	Cross Drain	G11D054	Cross Drain
G10D003	Inlet	G11D013	Cross Drain	G11D055	Cross Drain
G10D004	Inlet	G11D014	Cross Drain	G11D056	Culvert

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
G11D057	Cross Drain	G12D005	Inlet	G12D047	Inlet
G11D058	Cross Drain	G12D006	Cross Drain	G12D048	Inlet
G11D059	Cross Drain	G12D007	Inlet	G12D049	Culvert
G11D060	Cross Drain	G12D008	Inlet	G12D050	Culvert
G11D061	Inlet	G12D009	Inlet	G12D051	Inlet
G11D062	Inlet	G12D010	Inlet	G12D052	Inlet
G11D063	Cross Drain	G12D011	Inlet	G12D053	Inlet
G11D064	Cross Drain	G12D012	Inlet	G12D054	Inlet
G11D065	Cross Drain	G12D013	Inlet	G12D055	Inlet
G11D066	Cross Drain	G12D014	Inlet	G12D056	Inlet
G11D067	Cross Drain	G12D015	Inlet	G12D057	Inlet
G11D068	Cross Drain	G12D016	Inlet	G12D058	Inlet
G11D069	Cross Drain	G12D017	Inlet	G12D059	Inlet
G11D070	Cross Drain	G12D018	Culvert	G12D060	Inlet
G11D071	Cross Drain	G12D019	Inlet	G12D061	Inlet
G11D072	Cross Drain	G12D020	Culvert	G12D062	Inlet
G11D073	Cross Drain	G12D021	Inlet	G12D063	Inlet
G11D074	Cross Drain	G12D022	Inlet	G12D064	Inlet
G11D075	Cross Drain	G12D023	Inlet	G12D065	Inlet
G11D076	Inlet	G12D024	Inlet	G12D066	Inlet
G11D077	Inlet	G12D025	Inlet	G12D067	Inlet
G11D078	Inlet	G12D026	Inlet	G12D068	Cross Drain
G11D079	Inlet	G12D027	Inlet	G12D069	Inlet
G11D080	Cross Drain	G12D028	Inlet	G12D070	Inlet
G11D081	Cross Drain	G12D029	Inlet	G12D071	Inlet
G11D082	Inlet	G12D030	Inlet	G12D072	Inlet
G11D083	Inlet	G12D031	Inlet	G12D073	Inlet
G11D084	Cross Drain	G12D032	Inlet	G12D074	Inlet
G11D085	Cross Drain	G12D033	Inlet	G12D075	Inlet
G11D086	Cross Drain	G12D034	Inlet	G12D076	Retention Pond
G11D087	Cross Drain	G12D035	Inlet	G12D077	Detention Pond
G11D088	Cross Drain	G12D036	Inlet	G12D078	Detention Pond
G11D089	Cross Drain	G12D037	Inlet	G12D079	Detention Pond
G11D090	Cross Drain	G12D038	Inlet	G13D001	Inlet
G11D091	Cross Drain	G12D039	Inlet	G13D002	Inlet
G11D092	Cross Drain	G12D040	Inlet	G13D003	Inlet
G11D093	Cross Drain	G12D041	Inlet	G13D004	Inlet
G11D094	Cross Drain	G12D042	Inlet	G13D005	Inlet
G12D001	Inlet	G12D043	Inlet	G13D006	Inlet
G12D002	Cross Drain	G12D044	Inlet	G13D007	Inlet
G12D003	Inlet	G12D045	Inlet	G13D008	Inlet
G12D004	Inlet	G12D046	Inlet	G13D009	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
G13D010	Inlet	G13D052	Inlet	H08D023	Inlet
G13D011	Inlet	G13D053	Inlet	H08D024	Culvert
G13D012	Inlet	G13D054	Inlet	H08D025	Culvert
G13D013	Inlet	G13D055	Inlet	H08D026	Cross Drain
G13D014	Inlet	G14D001	Inlet	H08D027	Cross Drain
G13D015	Inlet	G14D002	Inlet	H08D028	Cross Drain
G13D016	Inlet	G14D003	Inlet	H08D029	Cross Drain
G13D017	Inlet	G14D004	Inlet	H08D030	Detention Pond
G13D018	Inlet	G14D005	Inlet	H08O001	Outfall
G13D019	Inlet	G14D006	Inlet	H08O002	Outfall
G13D020	Inlet	G14D007	Inlet	H08O003	Outfall
G13D021	Inlet	G14D008	Inlet	H08O004	Outfall
G13D022	Inlet	G14D009	Inlet	H08O005	Outfall
G13D023	Inlet	G14D010	Inlet	H08O006	Outfall
G13D024	Inlet	G14D011	Inlet	H08O007	Outfall
G13D025	Inlet	G14D012	Inlet	H08O008	Outfall
G13D026	Inlet	G14D013	Inlet	H08O009	Outfall
G13D027	Inlet	G14D014	Detention Pond	H08O010	Outfall
G13D028	Inlet	G15D001	Detention Pond	H08O011	Outfall
G13D029	Inlet	G15D002	Detention Pond	H08O012	Outfall
G13D030	Inlet	H08D001	Inlet	H08O013	Outfall
G13D031	Inlet	H08D002	Inlet	H08O014	Outfall
G13D032	Inlet	H08D003	Inlet	H08O015	Outfall
G13D033	Inlet	H08D004	Inlet	H08O016	Outfall
G13D034	Inlet	H08D005	Inlet	H08O017	Outfall
G13D035	Inlet	H08D006	Inlet	H08O018	Outfall
G13D036	Inlet	H08D007	Inlet	H08O019	Outfall
G13D037	Inlet	H08D008	Inlet	H08O020	Outfall
G13D038	Inlet	H08D009	Cross Drain	H08O021	Outfall
G13D039	Inlet	H08D010	Inlet	H08O022	Outfall
G13D040	Inlet	H08D011	Inlet	H08O023	Outfall
G13D041	Inlet	H08D012	Culvert	H08O024	Outfall
G13D042	Inlet	H08D013	Culvert	H09D001	Inlet
G13D043	Inlet	H08D014	Inlet	H09D002	Inlet
G13D044	Inlet	H08D015	Inlet	H09D003	Inlet
G13D045	Inlet	H08D016	Inlet	H09D004	Inlet
G13D046	Inlet	H08D017	Inlet	H09D005	Inlet
G13D047	Inlet	H08D018	Inlet	H09D006	Inlet
G13D048	Inlet	H08D019	Inlet	H09D007	Inlet
G13D049	Inlet	H08D020	Inlet	H09D008	Inlet
G13D050	Inlet	H08D021	Culvert	H09D009	Culvert
G13D051	Inlet	H08D022	Cross Drain	H09D010	Culvert

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
H09D011	Inlet	H09D053	Inlet	H09O015	Outfall
H09D012	Inlet	H09D054	Inlet	H09O016	Outfall
H09D013	Inlet	H09D055	Inlet	H09O017	Outfall
H09D014	Inlet	H09D056	Inlet	H09O018	Outfall
H09D015	Cross Drain	H09D057	Inlet	H09O019	Outfall
H09D016	Cross Drain	H09D058	Inlet	H09O020	Outfall
H09D017	Cross Drain	H09D059	Inlet	H10D001	Inlet
H09D018	Cross Drain	H09D060	Culvert	H10D002	Inlet
H09D019	Inlet	H09D061	Inlet	H10D003	Inlet
H09D020	Inlet	H09D062	Inlet	H10D004	Inlet
H09D021	Inlet	H09D063	Inlet	H10D005	Inlet
H09D022	Inlet	H09D064	Inlet	H10D006	Inlet
H09D023	Inlet	H09D065	Inlet	H10D007	Inlet
H09D024	Inlet	H09D066	Inlet	H10D008	Inlet
H09D025	Inlet	H09D067	Inlet	H10D009	Inlet
H09D026	Inlet	H09D068	Inlet	H10D010	Inlet
H09D027	Inlet	H09D069	Inlet	H10D011	Inlet
H09D028	Inlet	H09D070	Inlet	H10D012	Inlet
H09D029	Inlet	H09D071	Inlet	H10D013	Inlet
H09D030	Inlet	H09D072	Inlet	H10D014	Inlet
H09D031	Inlet	H09D073	Inlet	H10D015	Inlet
H09D032	Inlet	H09D074	Inlet	H10D016	Inlet
H09D033	Inlet	H09D075	Inlet	H10D017	Inlet
H09D034	Inlet	H09D076	Inlet	H10D018	Inlet
H09D035	Inlet	H09D077	Inlet	H10D019	Cross Drain
H09D036	Inlet	H09D078	Culvert	H10D020	Inlet
H09D037	Inlet	H09D079	Inlet	H10D021	Inlet
H09D038	Inlet	H09D080	Culvert	H10D022	Inlet
H09D039	Cross Drain	H09O001	Outfall	H10D023	Inlet
H09D040	Inlet	H09O002	Outfall	H10D024	Cross Drain
H09D041	Inlet	H09O003	Outfall	H10D025	Inlet
H09D042	Inlet	H09O004	Outfall	H10D026	Inlet
H09D043	Inlet	H09O005	Outfall	H10D027	Inlet
H09D044	Inlet	H09O006	Outfall	H10D028	Inlet
H09D045	Inlet	H09O007	Outfall	H10D029	Inlet
H09D046	Inlet	H09O008	Outfall	H10D030	Inlet
H09D047	Culvert	H09O009	Outfall	H10D031	Inlet
H09D048	Culvert	H09O010	Outfall	H10D032	Cross Drain
H09D049	Inlet	H09O011	Outfall	H10D033	Inlet
H09D050	Inlet	H09O012	Outfall	H10D034	Inlet
H09D051	Inlet	H09O013	Outfall	H10D035	Inlet
H09D052	Inlet	H09O014	Outfall	H10D036	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
H10D037	Inlet	H10D079	Inlet	H10O007	Outfall
H10D038	Inlet	H10D080	Culvert	H10O008	Outfall
H10D039	Inlet	H10D081	Culvert	H10O009	Outfall
H10D040	Inlet	H10D082	Inlet	H10O010	Outfall
H10D041	Inlet	H10D083	Inlet	H10O011	Outfall
H10D042	Inlet	H10D084	Inlet	H10O012	Outfall
H10D043	Inlet	H10D085	Inlet	H10O013	Outfall
H10D044	Inlet	H10D086	Inlet	H10O014	Outfall
H10D045	Inlet	H10D087	Culvert	H10O015	Outfall
H10D046	Inlet	H10D088	Culvert	H10O016	Outfall
H10D047	Inlet	H10D089	Inlet	H10O017	Outfall
H10D048	Inlet	H10D090	Inlet	H10O018	Outfall
H10D049	Inlet	H10D091	Inlet	H10O019	Outfall
H10D050	Inlet	H10D092	Inlet	H10O020	Outfall
H10D051	Inlet	H10D093	Inlet	H11D001	Cross Drain
H10D052	Inlet	H10D094	Inlet	H11D002	Cross Drain
H10D053	Inlet	H10D095	Inlet	H11D003	Cross Drain
H10D054	Cross Drain	H10D096	Inlet	H11D004	Cross Drain
H10D055	Inlet	H10D097	Culvert	H11D005	Cross Drain
H10D056	Inlet	H10D098	Inlet	H11D006	Cross Drain
H10D057	Cross Drain	H10D099	Inlet	H11D007	Cross Drain
H10D058	Inlet	H10D100	Inlet	H11D008	Cross Drain
H10D059	Inlet	H10D101	Inlet	H11D009	Cross Drain
H10D060	Inlet	H10D102	Inlet	H11D010	Cross Drain
H10D061	Inlet	H10D103	Inlet	H11D011	Cross Drain
H10D062	Inlet	H10D104	Inlet	H11D012	Inlet
H10D063	Inlet	H10D105	Inlet	H11D013	Inlet
H10D064	Inlet	H10D106	Inlet	H11D014	Inlet
H10D065	Inlet	H10D107	Inlet	H11D015	Inlet
H10D066	Cross Drain	H10D108	Inlet	H11D016	Inlet
H10D067	Cross Drain	H10D109	Inlet	H11D017	Inlet
H10D068	Inlet	H10D110	Inlet	H11D018	Catch Basin
H10D069	Inlet	H10D111	Inlet	H11D019	Culvert
H10D070	Culvert	H10D112	Inlet	H11D020	Inlet
H10D071	Culvert	H10D113	Inlet	H11D021	Inlet
H10D072	Inlet	H10D114	Detention Pond	H11D022	Inlet
H10D073	Inlet	H10O001	Outfall	H11D023	Inlet
H10D074	Inlet	H10O002	Outfall	H11D024	Inlet
H10D075	Cross Drain	H10O003	Outfall	H11D025	Inlet
H10D076	Cross Drain	H10O004	Outfall	H11D026	Inlet
H10D077	Inlet	H10O005	Outfall	H11D027	Inlet
H10D078	Inlet	H10O006	Outfall	H11D028	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
H11D029	Inlet	H11D071	Inlet	H11D113	Inlet
H11D030	Inlet	H11D072	Inlet	H11D114	Inlet
H11D031	Inlet	H11D073	Inlet	H11D115	Inlet
H11D032	Inlet	H11D074	Inlet	H11D116	Detention Pond
H11D033	Inlet	H11D075	Inlet	H11D117	Detention Pond
H11D034	Inlet	H11D076	Inlet	H11D118	Detention Pond
H11D035	Inlet	H11D077	Inlet	H11O001	Outfall
H11D036	Inlet	H11D078	Inlet	H11O002	Outfall
H11D037	Inlet	H11D079	Inlet	H11O003	Outfall
H11D038	Inlet	H11D080	Inlet	H11O004	Outfall
H11D039	Inlet	H11D081	Inlet	H11O005	Outfall
H11D040	Inlet	H11D082	Inlet	H11O006	Outfall
H11D041	Inlet	H11D083	Inlet	H11O007	Outfall
H11D042	Inlet	H11D084	Inlet	H11O008	Outfall
H11D043	Inlet	H11D085	Inlet	H11O009	Outfall
H11D044	Inlet	H11D086	Inlet	H11O010	Outfall
H11D045	Inlet	H11D087	Inlet	H11O011	Outfall
H11D046	Inlet	H11D088	Inlet	H11O012	Outfall
H11D047	Inlet	H11D089	Inlet	H11O013	Outfall
H11D048	Inlet	H11D090	Inlet	H11O014	Outfall
H11D049	Inlet	H11D091	Inlet	H11O015	Outfall
H11D050	Inlet	H11D092	Inlet	H11O016	Outfall
H11D051	Inlet	H11D093	Inlet	H11O017	Outfall
H11D052	Culvert	H11D094	Inlet	H11O018	Outfall
H11D053	Inlet	H11D095	Inlet	H11O019	Outfall
H11D054	Inlet	H11D096	Inlet	H11O020	Outfall
H11D055	Inlet	H11D097	Inlet	H11O021	Outfall
H11D056	Inlet	H11D098	Inlet	H11O022	Outfall
H11D057	Culvert	H11D099	Inlet	H11O023	Outfall
H11D058	Inlet	H11D100	Inlet	H11O024	Outfall
H11D059	Inlet	H11D101	Inlet	H11O025	Outfall
H11D060	Culvert	H11D102	Inlet	H11O026	Outfall
H11D061	Inlet	H11D103	Inlet	H11O027	Outfall
H11D062	Inlet	H11D104	Inlet	H11O028	Outfall
H11D063	Inlet	H11D105	Inlet	H11O029	Outfall
H11D064	Inlet	H11D106	Inlet	H11O030	Outfall
H11D065	Inlet	H11D107	Inlet	H11O031	Outfall
H11D066	Inlet	H11D108	Inlet	H11O032	Outfall
H11D067	Inlet	H11D109	Inlet	H11O033	Outfall
H11D068	Inlet	H11D110	Inlet	H11O034	Outfall
H11D069	Inlet	H11D111	Inlet	H11O035	Outfall
H11D070	Inlet	H11D112	Inlet	H11O036	Outfall

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
H11O037	Outfall	H12D023	Inlet	H12D065	Catch Basin
H11O038	Outfall	H12D024	Inlet	H12D066	Inlet
H11O039	Outfall	H12D025	Inlet	H12D067	Inlet
H11O040	Outfall	H12D026	Inlet	H12D068	Catch Basin
H11O041	Outfall	H12D027	Inlet	H12D069	Culvert
H11O042	Outfall	H12D028	Inlet	H12D070	Catch Basin
H11O043	Outfall	H12D029	Inlet	H12D071	Inlet
H11O044	Outfall	H12D030	Inlet	H12D072	Inlet
H11O045	Outfall	H12D031	Inlet	H12D073	Inlet
H11O046	Outfall	H12D032	Inlet	H12D074	Inlet
H11O047	Outfall	H12D033	Inlet	H12D075	Inlet
H11O048	Outfall	H12D034	Inlet	H12D076	Culvert
H11O049	Outfall	H12D035	Inlet	H12D077	Inlet
H11O050	Outfall	H12D036	Inlet	H12D078	Culvert
H11O051	Outfall	H12D037	Inlet	H12D079	Culvert
H11O052	Outfall	H12D038	Inlet	H12D080	Culvert
H11O053	Outfall	H12D039	Inlet	H12D081	Culvert
H11O054	Outfall	H12D040	Inlet	H12D082	Inlet
H11O055	Outfall	H12D041	Inlet	H12D083	Inlet
H11O056	Outfall	H12D042	Inlet	H12D084	Inlet
H12D001	Inlet	H12D043	Inlet	H12D085	Inlet
H12D002	Inlet	H12D044	Inlet	H12D086	Culvert
H12D003	Inlet	H12D045	Inlet	H12D087	Catch Basin
H12D004	Inlet	H12D046	Inlet	H12D088	Inlet
H12D005	Inlet	H12D047	Inlet	H12D089	Inlet
H12D006	Inlet	H12D048	Inlet	H12D090	Inlet
H12D007	Inlet	H12D049	Inlet	H12D091	Inlet
H12D008	Inlet	H12D050	Inlet	H12D092	Inlet
H12D009	Inlet	H12D051	Inlet	H12D093	Inlet
H12D010	Inlet	H12D052	Inlet	H12D094	Inlet
H12D011	Inlet	H12D053	Inlet	H12D095	Inlet
H12D012	Inlet	H12D054	Inlet	H12D096	Culvert
H12D013	Inlet	H12D055	Inlet	H12D097	Culvert
H12D014	Inlet	H12D056	Inlet	H12D098	Culvert
H12D015	Inlet	H12D057	Inlet	H12D099	Culvert
H12D016	Inlet	H12D058	Culvert	H12D100	Inlet
H12D017	Inlet	H12D059	Culvert	H12D101	Inlet
H12D018	Inlet	H12D060	Culvert	H12D102	Cross Drain
H12D019	Inlet	H12D061	Inlet	H12D103	Cross Drain
H12D020	Inlet	H12D062	Inlet	H12D104	Cross Drain
H12D021	Inlet	H12D063	Inlet	H12D105	Cross Drain
H12D022	Inlet	H12D064	Inlet	H12D106	Cross Drain

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
H12D107	Catch Basin	H12D149	Inlet	H13D013	Inlet
H12D108	Cross Drain	H12D150	Inlet	H13D014	Inlet
H12D109	Cross Drain	H12D151	Inlet	H13D015	Inlet
H12D110	Cross Drain	H12D152	Inlet	H13D016	Inlet
H12D111	Cross Drain	H12D153	Inlet	H13D017	Inlet
H12D112	Inlet	H12D154	Cross Drain	H13D018	Inlet
H12D113	Inlet	H12D155	Cross Drain	H13D019	Inlet
H12D114	Catch Basin	H12D156	Cross Drain	H13D020	Inlet
H12D115	Catch Basin	H12D157	Cross Drain	H13D021	Inlet
H12D116	Inlet	H12D158	Cross Drain	H13D022	Inlet
H12D117	Inlet	H12D159	Cross Drain	H13D023	Inlet
H12D118	Catch Basin	H12D160	Cross Drain	H13D024	Inlet
H12D119	Inlet	H12D161	Cross Drain	H13D025	Inlet
H12D120	Inlet	H12D162	Cross Drain	H13D026	Inlet
H12D121	Catch Basin	H12D163	Cross Drain	H13D027	Inlet
H12D122	Inlet	H12D164	Cross Drain	H13D028	Inlet
H12D123	Inlet	H12D165	Cross Drain	H13D029	Inlet
H12D124	Inlet	H12D166	Cross Drain	H13D030	Inlet
H12D125	Catch Basin	H12D167	Cross Drain	H13D031	Inlet
H12D126	Inlet	H12D168	Cross Drain	H13D032	Inlet
H12D127	Inlet	H12D169	Inlet	H13D033	Inlet
H12D128	Inlet	H12D170	Inlet	H13D034	Inlet
H12D129	Inlet	H12D171	Inlet	H13D035	Inlet
H12D130	Inlet	H12D172	Retention Pond	H13D036	Inlet
H12D131	Inlet	H12D173	Retention Pond	H13D037	Inlet
H12D132	Inlet	H12O001	Outfall	H13D038	Inlet
H12D133	Inlet	H12O002	Outfall	H13D039	Inlet
H12D134	Inlet	H12O003	Outfall	H13D040	Inlet
H12D135	Inlet	H12O004	Outfall	H13D041	Inlet
H12D136	Inlet	H12O005	Outfall	H13D042	Inlet
H12D137	Inlet	H13D001	Inlet	H13D043	Inlet
H12D138	Inlet	H13D002	Inlet	H13D044	Inlet
H12D139	Cross Drain	H13D003	Inlet	H13D045	Inlet
H12D140	Inlet	H13D004	Inlet	H13D046	Inlet
H12D141	Inlet	H13D005	Inlet	H13D047	Inlet
H12D142	Inlet	H13D006	Inlet	H13D048	Inlet
H12D143	Cross Drain	H13D007	Inlet	H13D049	Inlet
H12D144	Inlet	H13D008	Inlet	H13D050	Inlet
H12D145	Inlet	H13D009	Inlet	H13D051	Inlet
H12D146	Inlet	H13D010	Inlet	H13D052	Inlet
H12D147	Inlet	H13D011	Inlet	H13D053	Inlet
H12D148	Inlet	H13D012	Inlet	H13D054	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
H13D055	Inlet	H13D097	Inlet	H14D013	Inlet
H13D056	Inlet	H13D098	Inlet	H14D014	Inlet
H13D057	Inlet	H13D099	Inlet	H14D015	Inlet
H13D058	Inlet	H13D100	Inlet	H14D016	Inlet
H13D059	Inlet	H13D101	Inlet	H14D017	Inlet
H13D060	Inlet	H13D102	Inlet	H14D018	Inlet
H13D061	Inlet	H13D103	Inlet	H14D019	Inlet
H13D062	Inlet	H13D104	Inlet	H14D020	Inlet
H13D063	Inlet	H13D105	Inlet	H14D021	Inlet
H13D064	Inlet	H13D106	Inlet	H14D022	Inlet
H13D065	Inlet	H13D107	Inlet	H14D023	Inlet
H13D066	Inlet	H13D108	Inlet	H14D024	Inlet
H13D067	Inlet	H13D109	Inlet	I07D001	Detention Pond
H13D068	Inlet	H13D110	Inlet	I08D001	Culvert
H13D069	Inlet	H13D111	Inlet	I08D002	Culvert
H13D070	Inlet	H13D112	Inlet	I08D003	Culvert
H13D071	Inlet	H13D113	Inlet	I08D004	Culvert
H13D072	Inlet	H13D114	Inlet	I08D005	Inlet
H13D073	Inlet	H13D115	Inlet	I08D006	Inlet
H13D074	Inlet	H13D116	Inlet	I08D007	Inlet
H13D075	Inlet	H13D117	Inlet	I08D008	Inlet
H13D076	Inlet	H13D118	Inlet	I08D009	Culvert
H13D077	Inlet	H13D119	Inlet	I08D010	Culvert
H13D078	Inlet	H13D120	Inlet	I08D011	Culvert
H13D079	Inlet	H13D121	Inlet	I08D012	Inlet
H13D080	Inlet	H13D122	Inlet	I08D013	Inlet
H13D081	Inlet	H13D123	Inlet	I08D014	Inlet
H13D082	Inlet	H13D124	Inlet	I08D015	Culvert
H13D083	Inlet	H13D125	Inlet	I08D016	Culvert
H13D084	Inlet	H13D126	Inlet	I08O001	Outfall
H13D085	Inlet	H14D001	Inlet	I08O002	Outfall
H13D086	Inlet	H14D002	Inlet	I08O003	Outfall
H13D087	Inlet	H14D003	Inlet	I08O004	Outfall
H13D088	Inlet	H14D004	Inlet	I08O005	Outfall
H13D089	Inlet	H14D005	Inlet	I09D001	Inlet
H13D090	Inlet	H14D006	Inlet	I09D002	Inlet
H13D091	Inlet	H14D007	Inlet	I09D003	Inlet
H13D092	Inlet	H14D008	Inlet	I09D004	Inlet
H13D093	Inlet	H14D009	Inlet	I09D005	Inlet
H13D094	Inlet	H14D010	Inlet	I09D006	Cross Drain
H13D095	Inlet	H14D011	Inlet	I09D007	Cross Drain
H13D096	Inlet	H14D012	Inlet	I09D008	Cross Drain

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
I09D009	Cross Drain	I09D051	Cross Drain	I09D093	Cross Drain
I09D010	Cross Drain	I09D052	Cross Drain	I09D094	Cross Drain
I09D011	Cross Drain	I09D053	Cross Drain	I09O001	Outfall
I09D012	Cross Drain	I09D054	Cross Drain	I09O002	Outfall
I09D013	Cross Drain	I09D055	Cross Drain	I09O003	Outfall
I09D014	Cross Drain	I09D056	Cross Drain	I09O004	Outfall
I09D015	Cross Drain	I09D057	Cross Drain	I09O005	Outfall
I09D016	Cross Drain	I09D058	Cross Drain	I09O006	Outfall
I09D017	Cross Drain	I09D059	Cross Drain	I09O007	Outfall
I09D018	Cross Drain	I09D060	Cross Drain	I09O008	Outfall
I09D019	Cross Drain	I09D061	Cross Drain	I09O009	Outfall
I09D020	Cross Drain	I09D062	Cross Drain	I09O010	Outfall
I09D021	Cross Drain	I09D063	Cross Drain	I09O011	Outfall
I09D022	Cross Drain	I09D064	Cross Drain	I09O012	Outfall
I09D023	Cross Drain	I09D065	Cross Drain	I09O013	Outfall
I09D024	Cross Drain	I09D066	Cross Drain	I09O014	Outfall
I09D025	Cross Drain	I09D067	Cross Drain	I09O015	Outfall
I09D026	Cross Drain	I09D068	Cross Drain	I09O016	Outfall
I09D027	Cross Drain	I09D069	Cross Drain	I09O017	Outfall
I09D028	Cross Drain	I09D070	Cross Drain	I09O018	Outfall
I09D029	Cross Drain	I09D071	Cross Drain	I09O019	Outfall
I09D030	Cross Drain	I09D072	Cross Drain	I09O020	Outfall
I09D031	Cross Drain	I09D073	Cross Drain	I09O021	Outfall
I09D032	Cross Drain	I09D074	Cross Drain	I09O022	Outfall
I09D033	Cross Drain	I09D075	Cross Drain	I09O023	Outfall
I09D034	Cross Drain	I09D076	Cross Drain	I09O024	Outfall
I09D035	Cross Drain	I09D077	Cross Drain	I10D001	Inlet
I09D036	Cross Drain	I09D078	Cross Drain	I10D002	Inlet
I09D037	Cross Drain	I09D079	Cross Drain	I10D003	Inlet
I09D038	Cross Drain	I09D080	Cross Drain	I10D004	Inlet
I09D039	Cross Drain	I09D081	Cross Drain	I10D005	Inlet
I09D040	Cross Drain	I09D082	Cross Drain	I10D006	Inlet
I09D041	Cross Drain	I09D083	Cross Drain	I10D007	Inlet
I09D042	Cross Drain	I09D084	Cross Drain	I10D008	Inlet
I09D043	Cross Drain	I09D085	Cross Drain	I10D009	Inlet
I09D044	Cross Drain	I09D086	Cross Drain	I10D010	Inlet
I09D045	Cross Drain	I09D087	Cross Drain	I10D011	Inlet
I09D046	Cross Drain	I09D088	Cross Drain	I10D012	Culvert
I09D047	Cross Drain	I09D089	Cross Drain	I10D013	Culvert
I09D048	Cross Drain	I09D090	Cross Drain	I10D014	Culvert
I09D049	Cross Drain	I09D091	Cross Drain	I10D015	Culvert
I09D050	Cross Drain	I09D092	Cross Drain	I10D016	Culvert

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
I10O001	Outfall	I11D038	Inlet	I12D042	Inlet
I10O002	Outfall	I12D001	Inlet	I12D043	Inlet
I10O003	Outfall	I12D002	Cross Drain	I12D044	Inlet
I10O004	Outfall	I12D003	Cross Drain	I12D045	Cross Drain
I10O005	Outfall	I12D004	Inlet	I12D046	Inlet
I11D001	Inlet	I12D005	Inlet	I12D047	Inlet
I11D002	Inlet	I12D006	Inlet	I12D048	Inlet
I11D003	Inlet	I12D007	Inlet	I12D049	Inlet
I11D004	Inlet	I12D008	Inlet	I12D050	Catch Basin
I11D005	Inlet	I12D009	Inlet	I12D051	Inlet
I11D006	Inlet	I12D010	Catch Basin	I12D052	Inlet
I11D007	Inlet	I12D011	Inlet	I12D053	Inlet
I11D008	Inlet	I12D012	Catch Basin	I12D054	Inlet
I11D009	Inlet	I12D013	Inlet	I12D055	Inlet
I11D010	Inlet	I12D014	Inlet	I12D056	Culvert
I11D011	Inlet	I12D015	Inlet	I12D057	Catch Basin
I11D012	Inlet	I12D016	Inlet	I12D058	Inlet
I11D013	Inlet	I12D017	Inlet	I12D059	Inlet
I11D014	Inlet	I12D018	Cross Drain	I12D060	Catch Basin
I11D015	Inlet	I12D019	Cross Drain	I13D001	Inlet
I11D016	Inlet	I12D020	Inlet	I13D002	Inlet
I11D017	Inlet	I12D021	Inlet	I13D003	Inlet
I11D018	Inlet	I12D022	Inlet	I13D004	Inlet
I11D019	Inlet	I12D023	Inlet	I13D005	Inlet
I11D020	Inlet	I12D024	Inlet	I13D006	Inlet
I11D021	Inlet	I12D025	Inlet	I13D007	Inlet
I11D022	Inlet	I12D026	Inlet	I13D008	Inlet
I11D023	Inlet	I12D027	Culvert	I13D009	Inlet
I11D024	Inlet	I12D028	Culvert	I13D010	Inlet
I11D025	Inlet	I12D029	Culvert	I13D011	Inlet
I11D026	Inlet	I12D030	Cross Drain	I13D012	Inlet
I11D027	Inlet	I12D031	Cross Drain	I13D013	Inlet
I11D028	Inlet	I12D032	Inlet	I13D014	Inlet
I11D029	Inlet	I12D033	Inlet	I13D015	Inlet
I11D030	Inlet	I12D034	Inlet	I13D016	Inlet
I11D031	Inlet	I12D035	Cross Drain	I13D017	Inlet
I11D032	Inlet	I12D036	Cross Drain	I13D018	Inlet
I11D033	Inlet	I12D037	Inlet	I13D019	Inlet
I11D034	Inlet	I12D038	Inlet	I13D020	Inlet
I11D035	Inlet	I12D039	Inlet	I13D021	Inlet
I11D036	Inlet	I12D040	Inlet	I13D022	Inlet
I11D037	Inlet	I12D041	Inlet	I13D023	Inlet

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City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
I13D024	Inlet	I14D017	Inlet	J09D011	Cross Drain
I13D025	Inlet	I14D018	Inlet	J09D012	Cross Drain
I13D026	Inlet	I14D019	Inlet	J09D013	Cross Drain
I13D027	Inlet	I14D020	Inlet	J09D014	Cross Drain
I13D028	Inlet	I14D021	Inlet	J09D015	Cross Drain
I13D029	Inlet	I14D022	Inlet	J09D016	Cross Drain
I13D030	Inlet	I14D023	Inlet	J09D017	Cross Drain
I13D031	Inlet	I14D024	Inlet	J09D018	Cross Drain
I13D032	Inlet	I14D025	Inlet	J09D019	Cross Drain
I13D033	Inlet	I14D026	Inlet	J09D020	Cross Drain
I13D034	Inlet	I14D027	Inlet	J09D021	Cross Drain
I13D035	Inlet	I14D028	Inlet	J09D022	Cross Drain
I13D036	Inlet	I14D029	Inlet	J09D023	Cross Drain
I13D037	Inlet	I14D030	Inlet	J09D024	Cross Drain
I13D038	Inlet	I14D031	Inlet	J09D025	Cross Drain
I13D039	Inlet	I14D032	Inlet	J09D026	Cross Drain
I13D040	Inlet	I14D033	Inlet	J10D001	Cross Drain
I13D041	Inlet	I14D034	Inlet	J10D002	Inlet
I13D042	Inlet	I14D035	Inlet	J10D003	Culvert
I13D043	Inlet	I14D036	Inlet	J10D004	Culvert
I13D044	Inlet	I14D037	Inlet	J10D005	Culvert
I13D045	Inlet	I14D038	Inlet	J10D006	Culvert
I13D046	Inlet	I14D039	Inlet	J10D007	Culvert
I13D047	Inlet	I14D040	Inlet	J10O001	Outfall
I13D048	Inlet	I14D041	Inlet	J10O002	Outfall
I13D049	Detention Pond	I14D042	Inlet	J11D001	Culvert
I14D001	Inlet	I14D043	Inlet	J11D002	Inlet
I14D002	Inlet	I14D044	Inlet	J11D003	Inlet
I14D003	Inlet	I14D045	Inlet	J11D004	Inlet
I14D004	Inlet	I14D046	Inlet	J11D005	Culvert
I14D005	Inlet	I14D047	Inlet	J11D006	Inlet
I14D006	Inlet	I14D048	Inlet	J11D007	Inlet
I14D007	Inlet	J09D001	Cross Drain	J11D008	Inlet
I14D008	Inlet	J09D002	Cross Drain	J11D009	Culvert
I14D009	Inlet	J09D003	Cross Drain	J11D010	Culvert
I14D010	Inlet	J09D004	Cross Drain	J11D011	Inlet
I14D011	Inlet	J09D005	Cross Drain	J11D012	Inlet
I14D012	Inlet	J09D006	Cross Drain	J11D013	Catch Basin
I14D013	Inlet	J09D007	Cross Drain	J11D014	Inlet
I14D014	Inlet	J09D008	Cross Drain	J11D015	Culvert
I14D015	Inlet	J09D009	Cross Drain	J11D016	Culvert
I14D016	Inlet	J09D010	Cross Drain	J11D017	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
J11D018	Inlet	J12D032	Inlet	J12D074	Inlet
J11D019	Inlet	J12D033	Inlet	J12D075	Inlet
J11D020	Inlet	J12D034	Inlet	J12D076	Inlet
J11D021	Inlet	J12D035	Inlet	J12D077	Detention Pond
J11D022	Inlet	J12D036	Inlet	J12D078	Retention Pond
J11D023	Inlet	J12D037	Inlet	J12D079	Detention Pond
J11D024	Inlet	J12D038	Inlet	J13D001	Inlet
J11D025	Retention Pond	J12D039	Inlet	J13D002	Inlet
J11D026	Detention Pond	J12D040	Inlet	J13D003	Culvert
J11D027	Detention Pond	J12D041	Inlet	J13D004	Inlet
J11O001	Outfall	J12D042	Inlet	J13D005	Inlet
J12D001	Culvert	J12D043	Inlet	J13D006	Inlet
J12D002	Inlet	J12D044	Inlet	J13D007	Inlet
J12D003	Inlet	J12D045	Inlet	J13D008	Inlet
J12D004	Inlet	J12D046	Inlet	J13D009	Inlet
J12D005	Inlet	J12D047	Inlet	J13D010	Inlet
J12D006	Inlet	J12D048	Inlet	J13D011	Inlet
J12D007	Inlet	J12D049	Inlet	J13D012	Inlet
J12D008	Inlet	J12D050	Inlet	J13D013	Inlet
J12D009	Inlet	J12D051	Inlet	J13D014	Inlet
J12D010	Inlet	J12D052	Inlet	J13D015	Inlet
J12D011	Culvert	J12D053	Inlet	J13D016	Inlet
J12D012	Inlet	J12D054	Inlet	J13D017	Inlet
J12D013	Inlet	J12D055	Inlet	J13D018	Inlet
J12D014	Inlet	J12D056	Inlet	J13D019	Inlet
J12D015	Inlet	J12D057	Inlet	J13D020	Inlet
J12D016	Inlet	J12D058	Inlet	J13D021	Inlet
J12D017	Inlet	J12D059	Inlet	J13D022	Inlet
J12D018	Inlet	J12D060	Inlet	J13D023	Inlet
J12D019	Inlet	J12D061	Inlet	J13D024	Inlet
J12D020	Inlet	J12D062	Inlet	J13D025	Inlet
J12D021	Inlet	J12D063	Inlet	J13D026	Inlet
J12D022	Inlet	J12D064	Inlet	J13D027	Inlet
J12D023	Inlet	J12D065	Culvert	J13D028	Inlet
J12D024	Inlet	J12D066	Inlet	J13D029	Inlet
J12D025	Inlet	J12D067	Inlet	J13D030	Inlet
J12D026	Inlet	J12D068	Inlet	J13D031	Inlet
J12D027	Inlet	J12D069	Inlet	J13D032	Inlet
J12D028	Inlet	J12D070	Inlet	J13D033	Inlet
J12D029	Inlet	J12D071	Inlet	J13D034	Inlet
J12D030	Inlet	J12D072	Inlet	J13D035	Inlet
J12D031	Inlet	J12D073	Inlet	J13D036	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
J13D037	Inlet	J13D079	Inlet	J14D012	Inlet
J13D038	Inlet	J13D080	Inlet	J14D013	Inlet
J13D039	Inlet	J13D081	Inlet	J14D014	Inlet
J13D040	Inlet	J13D082	Inlet	J14D015	Inlet
J13D041	Inlet	J13D083	Inlet	J14D016	Inlet
J13D042	Inlet	J13D084	Inlet	J14D017	Inlet
J13D043	Inlet	J13D085	Inlet	J14D018	Inlet
J13D044	Inlet	J13D086	Inlet	J14D019	Inlet
J13D045	Inlet	J13D087	Inlet	J14D020	Inlet
J13D046	Inlet	J13D088	Inlet	J14D021	Inlet
J13D047	Inlet	J13D089	Inlet	J14D022	Inlet
J13D048	Inlet	J13D090	Inlet	J14D023	Inlet
J13D049	Inlet	J13D091	Inlet	J14D024	Inlet
J13D050	Inlet	J13D092	Inlet	J14D025	Inlet
J13D051	Inlet	J13D093	Inlet	J14D026	Inlet
J13D052	Inlet	J13D094	Inlet	J14D027	Inlet
J13D053	Inlet	J13D095	Inlet	J14D028	Inlet
J13D054	Inlet	J13D096	Inlet	J14D029	Inlet
J13D055	Inlet	J13D097	Inlet	J14D030	Inlet
J13D056	Inlet	J13D098	Inlet	J14D031	Inlet
J13D057	Inlet	J13D099	Inlet	J14D032	Inlet
J13D058	Inlet	J13D100	Inlet	J14D033	Inlet
J13D059	Inlet	J13D101	Inlet	J14D034	Inlet
J13D060	Inlet	J13D102	Inlet	J14D035	Inlet
J13D061	Inlet	J13D103	Inlet	J14D036	Inlet
J13D062	Inlet	J13D104	Inlet	J14D037	Inlet
J13D063	Inlet	J13D105	Inlet	J14D038	Inlet
J13D064	Inlet	J13D106	Inlet	J14D039	Inlet
J13D065	Inlet	J13D107	Inlet	J14D040	Inlet
J13D066	Inlet	J13D108	Inlet	J14D041	Inlet
J13D067	Inlet	J13D109	Retention Pond	J14D042	Inlet
J13D068	Inlet	J14D001	Inlet	J14D043	Inlet
J13D069	Inlet	J14D002	Inlet	J14D044	Inlet
J13D070	Inlet	J14D003	Inlet	J14D045	Inlet
J13D071	Inlet	J14D004	Inlet	J14D046	Inlet
J13D072	Inlet	J14D005	Inlet	J14D047	Inlet
J13D073	Inlet	J14D006	Inlet	J14D048	Inlet
J13D074	Inlet	J14D007	Inlet	J14D049	Inlet
J13D075	Inlet	J14D008	Inlet	J14D050	Inlet
J13D076	Inlet	J14D009	Inlet	J14D051	Inlet
J13D077	Inlet	J14D010	Inlet	J14D052	Inlet
J13D078	Inlet	J14D011	Inlet	J14D053	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
J14D054	Inlet	K12D029	Inlet	K13D010	Inlet
J14D055	Inlet	K12D030	Inlet	K13D011	Inlet
J14D056	Inlet	K12D031	Inlet	K13D012	Inlet
J14D057	Inlet	K12D032	Inlet	K13D013	Inlet
J14D058	Inlet	K12D033	Inlet	K13D014	Inlet
J14D059	Inlet	K12D034	Inlet	K13D015	Inlet
J14D060	Inlet	K12D035	Inlet	K13D016	Cross Drain
J14D061	Inlet	K12D036	Inlet	K13D017	Cross Drain
J14D063	Detention Pond	K12D037	Culvert	K13D018	Cross Drain
K09D001	Inlet	K12D038	Culvert	K13D019	Cross Drain
K09D002	Inlet	K12D039	Inlet	K13D020	Culvert
K09D003	Inlet	K12D040	Inlet	K13D021	Culvert
K09D004	Inlet	K12D041	Inlet	K13D022	Inlet
K09D005	Culvert	K12D042	Inlet	K13D023	Inlet
K12D001	Inlet	K12D043	Inlet	K13D024	Inlet
K12D002	Inlet	K12D044	Inlet	K13D025	Inlet
K12D003	Inlet	K12D045	Inlet	K13D026	Inlet
K12D004	Inlet	K12D046	Inlet	K13D027	Inlet
K12D005	Inlet	K12D047	Inlet	K13D028	Inlet
K12D006	Inlet	K12D048	Inlet	K13D029	Inlet
K12D007	Inlet	K12D049	Inlet	K13D030	Inlet
K12D008	Inlet	K12D050	Inlet	K13D031	Inlet
K12D009	Inlet	K12D051	Inlet	K13D032	Inlet
K12D010	Inlet	K12D052	Inlet	K13D033	Inlet
K12D011	Inlet	K12D053	Inlet	K13D034	Inlet
K12D012	Inlet	K12D054	Inlet	K13D035	Inlet
K12D013	Inlet	K12D055	Inlet	K13D036	Inlet
K12D014	Inlet	K12D056	Inlet	K13D037	Inlet
K12D015	Inlet	K12D057	Inlet	K13D038	Inlet
K12D016	Inlet	K12D058	Inlet	K13D039	Inlet
K12D017	Inlet	K12D059	Inlet	K13D040	Inlet
K12D018	Inlet	K12D060	Inlet	K13D041	Inlet
K12D019	Inlet	K12D061	Detention Pond	K13D042	Retention Pond
K12D020	Inlet	K13D001	Inlet	K13D043	Detention Pond
K12D021	Inlet	K13D002	Inlet	K14D001	Catch Basin
K12D022	Inlet	K13D003	Inlet	K15D001	Detention Pond
K12D023	Inlet	K13D004	Inlet	K16D001	Inlet
K12D024	Inlet	K13D005	Inlet	K17D001	Inlet
K12D025	Inlet	K13D006	Inlet	K17D002	Catch Basin
K12D026	Inlet	K13D007	Inlet	K17D003	Inlet
K12D027	Inlet	K13D008	Inlet	K17D004	Inlet
K12D028	Inlet	K13D009	Inlet	K17D005	Detention Pond

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)					
K17D006	Detention Pond	L11D017	Inlet	L13D007	Ditch
L10D001	Inlet	L11D018	Inlet	L15D001	Detention Pond
L10D002	Culvert	L11D019	Inlet	L17D002	Inlet
L10D003	Culvert	L11D020	Inlet	L17D003	Inlet
L10D004	Inlet	L11D021	Inlet	L17D004	Inlet
L10D005	Inlet	L11D022	Inlet	L17D005	Inlet
L10D006	Culvert	L11D023	Cross Drain	L17D006	Inlet
L10D007	Inlet	L11D024	Inlet	L17D007	Inlet
L10D008	Inlet	L11D025	Inlet	L17D008	Inlet
L10D009	Inlet	L11D026	Culvert	L17D009	Inlet
L10D010	Inlet	L11D027	Inlet	L17D010	Inlet
L10D011	Inlet	L11D028	Inlet	M11D001	Inlet
L10D012	Inlet	L11D029	Detention Pond	M11D002	Inlet
L10D013	Inlet	L12D001	Inlet	M11D003	Inlet
L10D014	Cross Drain	L12D002	Inlet	M11D004	Inlet
L10D015	Inlet	L12D003	Inlet	M11D005	Inlet
L10D016	Inlet	L12D004	Inlet	M11D006	Inlet
L10D017	Inlet	L12D005	Inlet	M11D007	Cross Drain
L10D018	Inlet	L12D006	Inlet	M11D008	Inlet
L10D019	Inlet	L12D007	Inlet	M11D009	Inlet
L10D020	Inlet	L12D008	Inlet	M11D010	Inlet
L10D021	Inlet	L12D009	Inlet	M11D011	Inlet
L10D022	Inlet	L12D010	Inlet	M11D012	Inlet
L10D023	Inlet	L12D011	Inlet	M11D013	Inlet
L10D024	Inlet	L12D012	Inlet	M11D014	Inlet
L10D025	Cross Drain	L12D013	Inlet	M11D015	Inlet
L11D001	Inlet	L12D014	Inlet	M11D016	Inlet
L11D002	Inlet	L12D015	Inlet	M11D017	Inlet
L11D003	Inlet	L12D016	Inlet	M11D018	Inlet
L11D004	Inlet	L12D017	Inlet	M11D019	Detention Pond
L11D005	Inlet	L12D018	Inlet	M12D001	Inlet
L11D006	Inlet	L12D019	Inlet	M12D002	Inlet
L11D007	Inlet	L12D020	Inlet	M12D003	Inlet
L11D008	Inlet	L12D021	Inlet	M12D004	Inlet
L11D009	Inlet	L12D022	Inlet	M12D005	Inlet
L11D010	Inlet	L12D023	Inlet	M12D006	Inlet
L11D011	Inlet	L13D001	Inlet	M12D007	Inlet
L11D012	Inlet	L13D002	Inlet	M12D008	Inlet
L11D013	Inlet	L13D003	Inlet	M12D009	Inlet
L11D014	Inlet	L13D004	Ditch	M12D010	Inlet
L11D015	Inlet	L13D005	Ditch	M12D011	Inlet
L11D016	Inlet	L13D006	Ditch	M12D012	Inlet

City of Cordele Stormwater Structures: Structure ID and Type (ORDERED BY ID)	
M12D013	Inlet
M12D014	Inlet
M12D015	Inlet
M12D016	Inlet
M12D017	Detention Pond
M13D001	Ditch
M13D002	Ditch
M13D003	Cross Drain
M13D004	Cross Drain
M13D005	Ditch
N11D001	Inlet
N11D002	Inlet
N11D003	Inlet
N11D004	Inlet
N11D005	Inlet
N11D006	Inlet
N11D007	Inlet
N12D001	Inlet
N12D002	Inlet
N12D003	Inlet
N12D004	Inlet
N12D005	Inlet
N12D006	Inlet
N12D007	Inlet
N12D008	Inlet
N12D009	Inlet
N12D010	Inlet
N12D011	Inlet
Total Number of Structures, Ponds and Outfalls:	2170
Last Updated: 5/22/2018	

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F2	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 2	**MS4 Inspection Program**	
1. Description of BMP	The City will conduct inspections on the MS4 control structures so that 100% of the structures are inspected within a 5-year period. Each inspection will be documented. See F2.01 for "Stormwater Maintenance Record"	
2. Measureable Goals	The City will inspect 100% of the MS4 control structures during the 5-year Permit Period.	
3. Documentation to be submitted with each annual report	The City will provide the number and percentage of control structures inspected in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	N/A
	c) Frequency of actions	Continuous
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Routinely inspecting control structures will help prevent potential nuisances, reduce the need for repair maintenance, and reduce the chance of polluting stormwater run-off by finding and fixing problems.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Inspecting control structures on a routine basis will help ensure that they are being properly maintained, functioning, and that any deficiencies found are addressed in a timely manner.	

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F2.01

DATE:

_____ /_____ /_____

CITY OF CORDELE ENGINEERING DEPARTMENT
STORMWATER DAILY MAINTENANCE RECORD

COMPLETED BY (INITIALS)	WORK ORDER #*				VEHICLE #**	Time Begin / Time End / Total Hours	Type of Debris Removed	
	STREET*	WATER*	GAS*	SHOP*				
								No Debris
								Silt
					83			Leaves
								Trash
	ST	WS	GA	SH				Roots
					82			_____

MS4 STRUCTURE INFO

ID (7 Digit) ***							Structure Type	
Location Description (direction)								
			D					Inlet
								Culvert
_____								Junction Box
_____								_____
_____								_____
_____								_____

DITCH / LATERAL / REACH / PIPE INFORMATION

PIPES					DITCHES		REACH (PIPE OR DITCH) ID (15 Digit) ****																		
Length Cleaned	Size		Material Type		Structure		REACH LOCATION INFO (Nearest Adjacent Streets / Direction)																		
										D				—				D						
		15"		Concrete		Ditch																			
		18"		PVC		Driveway																			
___'		24"		Corrugated		_____	_____																		
		30"		Terra Cotta		_____	_____																		
		36"		Cast Iron		_____	_____																		
		___"		_____		_____	_____																		

CITY OF CORDELE ENGINEERING DEPARTMENT
STORMWATER DAILY MAINTENANCE RECORD
(continued)

* For work done for other departments, please notate the associated Work Order number and CHECK the appropriate box for the department that work was done for.
** Vehicle used in part for planning of routine maintenance and vehicle usage time for replacement of vehicle
*** The MAP ID is the 7 Digit Identification found in the City of Cordele Master GIS file. If a structure is not identified (or unavailable) at the time of the log, write a narrative description.
**** Pipe Identification is based on a "structure-to-structure" ("node-to-node") basis. ID is based on the UPSTREAM structure to the DOWNSTREAM structure. If one or both of the Structure ID's are missing, indicate the direction of cleaning in location description.

BJM	=	Brandon J. McGirt
JJ	=	Joseph Jackson
	=	

82 = PICKUP TRUCK
83 = JET-VAC TRUCK

F F

F3	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 3	**MS4 Maintenance Program**	
1. Description of BMP	The City conducts maintenance on the MS4 control structures (e.g. catch basins, ditches, and storm pipes) as needed. Maintenance will be documented where applicable. See F6.01 for "MS4 Inspection, Maintenance, and Waste Disposal Program Procedures."	
2. Measureable Goals	The City will perform maintenance, as needed, on MS4 control structures and document activities during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the number of each type of structure maintained in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	N/A
	c) Frequency of actions	Continuous
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Routine maintenance of catch basins, ditches, and storm pipes helps to prevent potential nuisances, reduce the need for repair maintenance, and reduce the chance of polluting stormwater runoff by finding and fixing problems.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By performing regular maintenance this will help maintain the proper operation of the MS4, while also reducing the amount of debris reaching the waters of the State.	

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F4	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 4	**Street and Parking Lot Cleaning**	
1. Description of BMP	The City utilizes a street sweeper to remove debris from City streets with curb to reduce the amount entering the stormwater system and aesthetic purposes. The street sweeper is operated / maintained by the Public Works Department. The City does not engage in parking lot cleaning.	
2. Measureable Goals	The City will sweep at a minimum 300 miles of streets during the reporting period. The City will track the final disposal location and the amount of debris disposed. This information will be reported in the Annual Report.	
3. Documentation to be submitted with each annual report	The City will provide the total number of miles swept in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	N/A
	c) Frequency of actions	As weather permits
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	Removing debris from the streets will help improve safety along the roads and reduce debris from entering the catch basins, storm pipes and waterways.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Street sweeping reduces pollutants from entering the waters of the State.	

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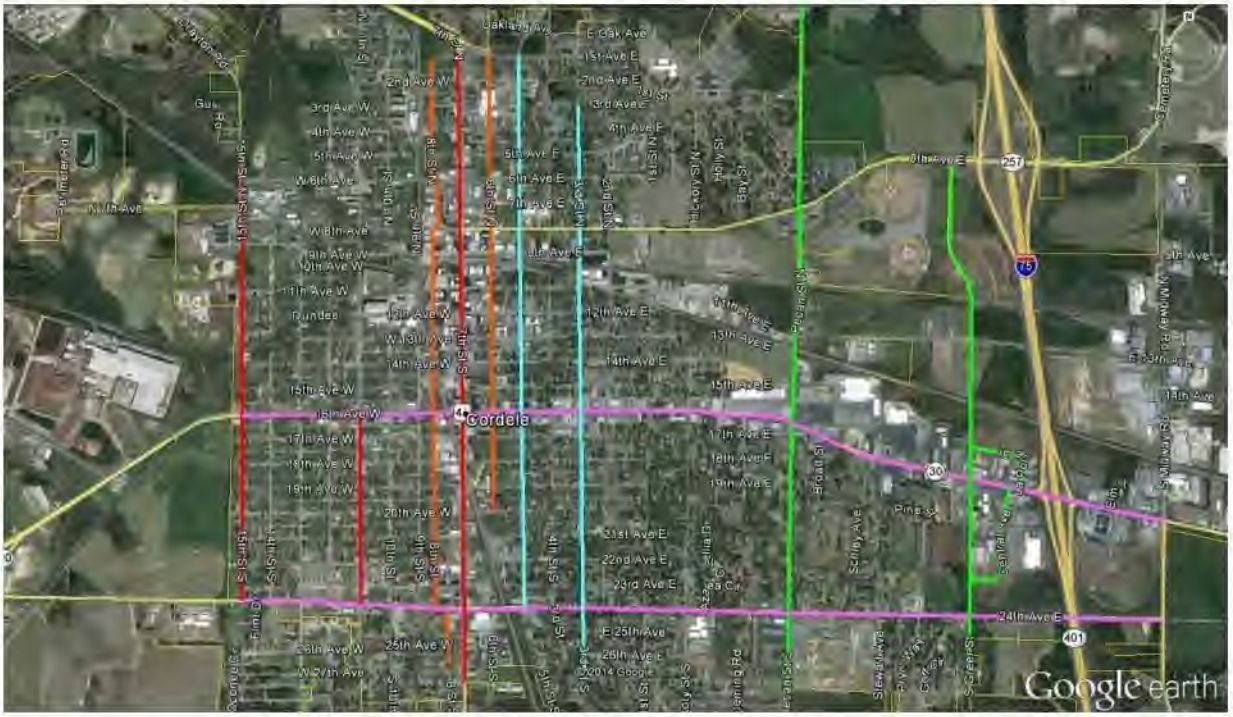
STREET SWEEPER ROUTES



Aerial Image Copyright Google, Inc.

MONDAY	3rd Street (From 3rd Avenue to 27th Avenue)
	5th Street (from 1st Avenue to 24th Avenue
TUESDAY	8th Street (from 1st Avenue to 27th Avenue)
	6th Street (from 1st Avenue to 20th Avenue)
WEDNESDAY	16th Avenue (from Midway Road to 15th Street)
	24th Avenue (from Midway Road to 15th Street)
THURSDAY	Pecan Street
	Greer Street
	LaPorte Street
	Central Avenue
FRIDAY	7th Street (from 1st Avenue to 27th Avenue)
	11th Street (from 16th Avenue to 24th Avenue)
	15th Street (from 6th Avenue to 24th Avenue)

Residential areas are completed as time permits after the daily routes. The residential areas are divided as follows:

8th Ave to 16th Ave. – 5th St. to Hickory St.
16th Ave. to County – 5th St, to Hickory St.
8th Ave. to 16th Ave. – 5th St. to 15th St.
16th Ave. to County – 5th St. to 15th St.
8th Ave. to 1st Ave.

There are approximately 87.45 miles of curb & gutter in the City of Cordele. Our street sweepers sweep approximately 58.3 miles a month, or 699.6 miles a year.

F5	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 5	**Employee Training**	
1. Description of BMP	The City provides educational opportunities to employees on the importance of stormwater management and pollution prevention via e-newsletters, online training, classroom training, or other similar methods.	
2. Measureable Goals	The City will provide at least one educational opportunity to City employees within the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide documentation of the number of employees and the educational information shared in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2008
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	By educating employees on stormwater pollution, this will increase their awareness on illicit discharges, dumping and spills so that they can recognize, change and report problems.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	Educating city employees is one of the most important aspects of pollution prevention and good housekeeping.	

F6	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 6	**Waste Disposal**	
1. Description of BMP	The City removes debris from catch basins, other structures, and during street sweeping activities as part of the maintenance of the MS4. The debris is then collected and taken to the landfill. See F6.01 for "MS4 Inspection, Maintenance, and Waste Disposal Program Procedures."	
2. Measureable Goals	The City will follow the waste disposal procedures when debris is removed from the MS4 during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the total number of structures cleaned during the reporting period and will report the total amount of MS4 waste transported for final disposal to a landfill in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2013 - Develop Procedures
	c) Frequency of actions	Continuous
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	The cleaning and removal of debris from the MS4 will reduce the amount of pollutants and trash from entering the waters of the State.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	The Stormwater Technician, or his/her designee, will document MS4 inspections and cleanings.	

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MS4 INSPECTION, MAINTENANCE AND WASTE DISPOSAL PROCEDURES

Catch Basins and Storm Pipes

1. 100% of city maintained catch basins will be inspected within the 5-year permit period.
2. Each inspection / maintenance / repair will be documented on the "*Stormwater Daily Maintenance Record*."
3. Debris will be removed from the opening of the catch basin and inside to prevent obstruction of the flow.
4. Storm pipes will be inspected and cleaned as part of the catch basin inspection and documented on the inspection form.
5. Debris / waste collected will be removed from the site and taken to a landfill.
6. The infrastructure will be evaluated to determine if there are any structural problems.
7. If an issue with the catch basin and/or storm pipe is found, but cannot be addressed at the time of inspection (e.g. cleaning or repairs), a work order will be issued.
8. All final inspections and/or work orders will be turned into the Street Superintendent or Stormwater Technician.

Ditches / Canals

1. All city maintained ditches / canals will be inspected annually.
2. Obstructions found will be documented through a daily report and/or work order and removed.
3. If a water quality problem is found, such as discoloration, fish kills, oily sheens, etc., the Street Superintendent or Stormwater Technician will be notified to determine if an investigation is needed.
4. Maintenance will be provided twice a year to cut back overgrowth and remove trash, etc.
5. Tree and shrub debris will be removed and taken to the city compost site, then grinded into mulch. Trash will be removed from the site and taken to a landfill.
6. Inspection / maintenance will be documented through daily reports and/or work orders and turned into the Street Superintendent or Stormwater Technician.

Ponds

1. 100% of all City maintained ponds will be inspected within the 5-year permit period.
2. Each inspection will be documented on an *Operation and Maintenance Inspection Report for Stormwater Management Ponds Form.*
3. The pond owner(s) will be notified by the Stormwater Technician if any maintenance and/or repairs are needed.
4. City pond maintenance is provided by the Public Works Department.
5. Work orders will be issued for city ponds that require maintenance and/or repairs.
6. All inspections will be documented and provided to the Stormwater Technician.

F7	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 7	**New Flood Management Projects**	
1. Description of BMP	The City will evaluate new municipal flood management projects as of February 2015 to ensure they are reviewed for water quality impacts during the design phase.	
2. Measureable Goals	The City will document the plans reviewed where flood management projects were considered for water quality during the reporting period.	
3. Documentation to be submitted with each annual report	The City will provide the number of plans reviewed where flood management projects were assessed for water quality impacts in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2015
	c) Frequency of actions	As needed
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	To ensure all proposed flood management projects are designed for water quality to prevent further degradation of waters of the State.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By addressing water quality impacts at the design phase, pollution will be reduced significantly and provide long term water quality benefits.	

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F8	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 8	**Existing Flood Management Projects**	
1. Description of BMP	The City will conduct an assessment of the existing publicly-w\owned flood management projects for potential retrofitting to address water quality impacts so that 100% are evaluated during the 5-year permit period. See F8.01 for the "Water Quality Improvement Worksheet: Existing MS4 Facility Form."	
2. Measureable Goals	The City will assess 100% of the existing publicly – owned flood management projects during the 5-year permit period.	
3. Documentation to be submitted with each annual report	The City will provide a summary of the flood management projects assessed in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	N/A
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	By evaluating the existing ponds, it will provide the potential to expand the function of the ponds.	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By identifying the ponds that need to be revised and following the completion date of each retrofit.	

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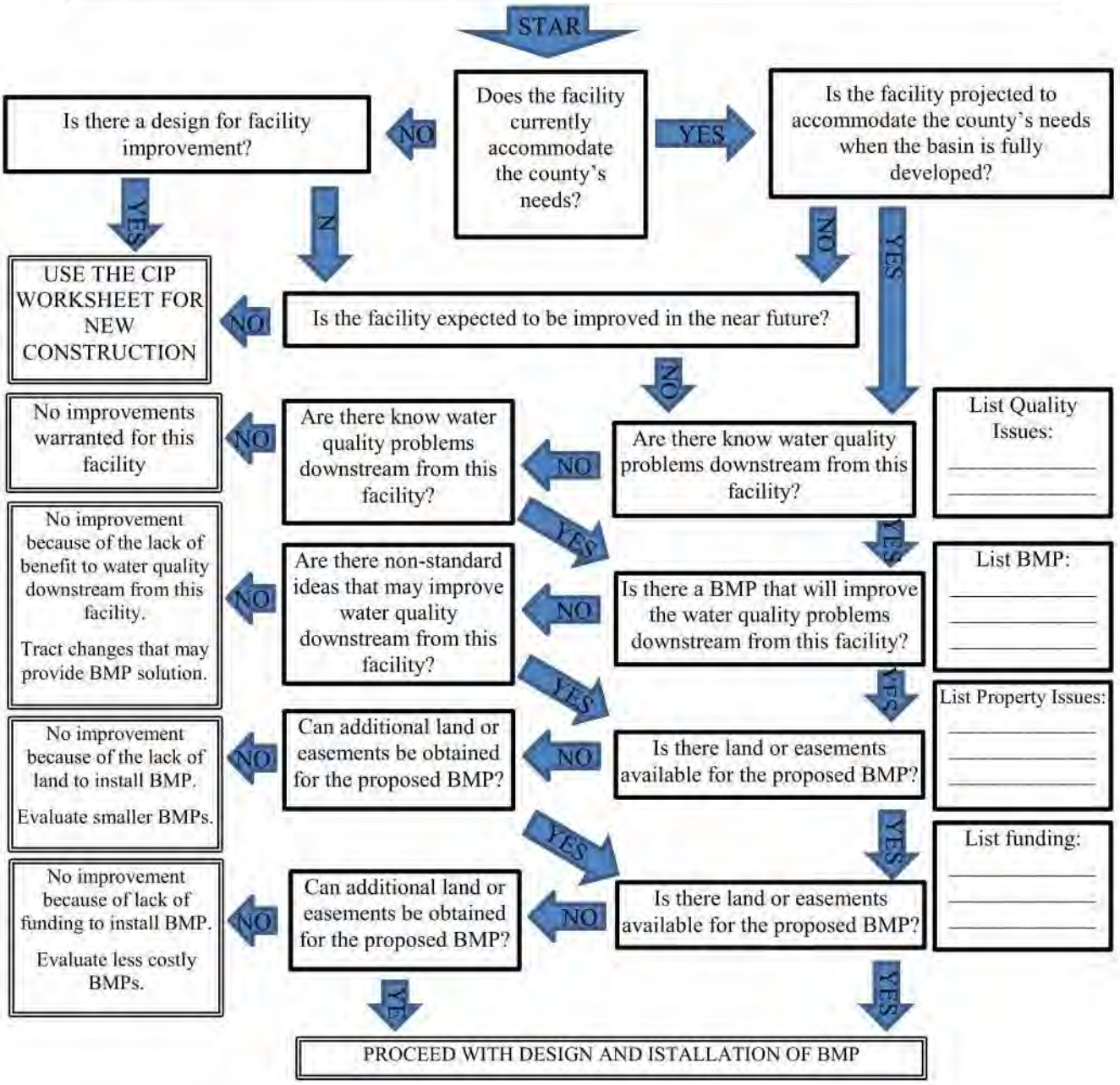
WATER QUALITY IMPROVEMENT WORKSHEET: EXISTING MS4 FACILITY FORM

Facility Name:	**Analysis By:**
Facility Location:	**Facility Type:**
Basin Area to Facility:	**Basin Outfall Flows to Water of the State:**
Date of Analysis:	



F9	Pollution Prevention / Good Housekeeping for Municipal Operations	
MCM F, BMP 9	**Municipal Facilities**	
1. Description of BMP	The City will maintain the inventory of municipal facilities with the potential to cause pollution. See F9.01 for the "Facilities Inspection List and Procedures". The Pollution Prevention Plan of each facility with a significant capability to discharge hazardous chemicals into the waters of the State will be audited. See F9.02 for the "Municipal Facility Pollution Prevention Plan Inspection Form."	
2. Measureable Goals	The City will inspect all facilities within the 5-year permit term.	
3. Documentation to be submitted with each annual report	The City will provide documentation of the inspections conducted in each annual report.	
4. Schedule	a) Interim Milestone Date	N/A
	b) Implementation dates	2013
	c) Frequency of actions	Annually
	d) Month/Year of Action	N/A
5. Person (position) responsible for overall management and implementation of the BMP	Public Works Director or his/her designee	
6. Rationale for choosing BMP and setting measureable goal(s)	By providing proper storage and chemicals containment we can prevent accidental discharge to the waters of the State	
7. How you will determine whether this BMP is effective in reducing pollution to storm water in accordance with part 5.1.4 of the permit	By inventorying all facilities with the potential to negatively impact water quality and routinely inspecting each facility, the City will be able to take the necessary actions to prevent pollutants from being released into waters of the State.	

MUNICIPAL FACILITIES INSPECTION LIST & PROCEDURES

Name	Address
Automotive / Fleet Maintenance Center	808 East 11th Avenue
Advanced Disposal	809 East 11th Avenue
Fire Station #1	509 North 7th Street
Fire Station #2	316 Wet 24th Avenue
Cordele Wastewater Treatment Plant	801 Perimeter Road

INSPECTION PROCEDURES

1. Utilize form found in the current SWMP as "Municipal Facility Pollution Prevention Plan Inspection Form"
2. Review records on site and notate on form.
3. Inspect for proper storage of chemicals.
4. Inspect for proper labeling of containers.
5. Check for secondary containment in the chemical storage areas.
6. Check floor drains that are present in chemical storage areas.

MUNICIPAL FACILITY POLLUTION PREVENTION PLAN INSPECTION FORM

Facility Name					
Physical Address					
City	CORDELE	**State**	GA	**Zip**	31015
Primary Activity of Facility					

PART ONE: RECORDS AND PLANS INSPECTION	1. Does the facility maintain a list of chemicals stored on site?	**YES**		**NO**	
	Comments				
	2. Does the facility maintain a Material Safety Data Sheet log with a current MSDS for each chemical stored on site?	**YES**		**NO**	
	Comments				
	3. Does the facility maintain a written plan for routing, collection, and disposal of stormwater contaminated by a chemical spill?	**YES**		**NO**	
	Comments				
	4. Does the facility maintain a written clean-up procedure for chemical spills?	**YES**		**NO**	
	Comments				

PART TWO: PHYSICAL INSPECTION	1. Are chemicals on site properly stored?	**YES**		**NO**	
	Comments				
	2. Are the chemical containers properly labeled?	**YES**		**NO**	
	Comments				
	3. Is there secondary containment in chemical storage areas?	**YES**		**NO**	
	Comments				
	4. If floor drains are present in chemical storage areas, can they be plugged for containment and cleanup of a spill?	**YES**		**NO**	
	Comments				

Inspector Name (Type or Print)	**Title**
Inspector Signature	**Date of Inspection**

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CITY OF CORDELE, GEORGIA
STORM WATER MANAGEMENT PROGRAM

ERP

ENFORCEMENT RESPONSE PLAN
2017-2022

ERP

ERP

ACRONYMS

BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit
CSS	Coastal Stormwater Supplement
CWA	Clean Water Act
DWS	Dry Weather Screening
E&S	Erosion and Sediment
EPD	Environmental Protection Division of the GA Dept. of Natural Resources
ERP	Enforcement Response Plan
GI/LID	Green Infrastructure/Low Impact Development
GP	General Permit
GSMM	Georgia Stormwater Management Manual
GSWCC	Georgia Soil and Water Conservation Commission
HVPS	High Visible Pollutant Source
IDDE	Illicit Discharge Detection and Elimination
IGP	Industrial General Permit
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
POC	Pollutant of Concern
POTW	Publicly Owned Treatment Works
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency

ERP

AUTHORITY AND DESCRIPTION

This Stormwater Enforcement Response Plan (ERP) codifies enforcement procedures used by the City of Cordele, Georgia, to enforce provisions of the Storm Water Management Program (SWMP) adopted by the Cordele City Commission. This legal authority authorizes the City of Cordele to implement a range of enforcement actions including the authority to carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges to Municipal Separate Storm Sewer System (MS4). These ordinances also provide the City of Cordele with the right of entry and inspection as necessary for the enforcement of the ERP and the SWMP.

The following are a list of the ordinances which provide for enforcement (see the Cordele, Georgia Code of Ordinances, Part II – Code of the City):

Chapter 10: Flood Damage Prevention
Chapter 13: Soil Erosion and Sedimentation Control
Chapter 18: Utilities, Article X, Division 1: Post Construction Stormwater Management
Chapter 18: Utilities, Article X, Division 2: Illicit Discharge and Illegal Connections

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EROSION, SEDIMENT AND POLLUTION CONTROL ENFORCEMENT ACTIONS

ERP

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POTENTIAL VIOLATIONS

- Failure to obtain a land disturbing permit.
- Failure to maintain a stream buffer
- Significant amounts of sediment discharged into state waters.
- Best management practices not properly designed, installed, or maintained.
- Failure to comply with approved plans.
- The contribution of pollutants to the City of Cordele by stormwater and non-stormwater discharge associated with industrial activity and the quality of stormwater discharged from sites of industrial activity.
- Illicit discharges to the City of Cordele (SEE: the "City of Cordele Illicit Discharge Detection and Elimination Guidance Manual")
- Discharges of spills, dumping, or disposal of materials other than stormwater
- Failure to comply with conditions in State statues, rules, permits, contracts, and orders.
- Any illicit discharges into waters of the State
- Discharges that cause or contribute to conditions which exceed water quality standards.
- Illegal connection to a stormwater system

ERP

ENFORCEMENT MECHANISMS

Verbal Warning
These may consist of phone calls or face-to-face discussions. The conversation should specify the nature of the violation and the required corrective action. These conversations should be notated in an appropriate tracking device or log book which is maintained by the City of Cordele Stormwater Technician.

Written Notice to Comply
This is required when, through inspection, it is deemed that a person engaged in land disturbing activities has failed to comply with approved plans. The notice shall set forth the measures necessary to achieve compliance and shall state the time within which such measures must be completed.

Revocation of Business License
Work Permit and/or Other Authorization to Conduct Business. If any person or business commences any land disturbing activity requiring a permit without first obtaining such permit, that person may be subject to revocation of business license, work permit or other authorization for the conduct of a business and associated work activities within the jurisdictional boundaries of the City of Cordele.

Stop Work Order
A stop work order requires the violator to stop all land disturbing activities until the necessary corrective action or mitigation has occurred.

Bond Forfeiture
When the person or organization engaged in land disturbing activity has been required to post a bond and has been deemed in violation of any of the stormwater management regulations, they may be required to forfeit their performance bond. The issuing authority 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.

Civil Penalty
Any person who violates any provisions of the stormwater management regulations, or any permit condition of limitation established pursuant to these regulations, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the issuing authority shall be liable for a civil penalty of not to exceed $2,500 per day. Each day during which violation or failure or refusal to comply shall be a separate violation.

Documentation.
All enforcement actions must be documented. The inspector should address all violations at the time of the inspection and give a copy of the inspection report to the stormwater technician for tracking purposes.

ERP

APPROPRIATE RESPONSES

Appropriate responses are noted in the sections on enforcement mechanisms and the section on time frames. Some latitude may be given, however, in determining the severity of the responses based on several factors involved in the violation. These factors include:

- **Magnitude of the Problem.**
  Isolated instances of noncompliance may only require a phone call or a NOV. Duration of the Problem. If the violations persist for a long period of time, then enforcement options must be escalated.

- **Effect on waters of the State.**
  If the violation results in environmental harm to receiving waters, then a more severe response is required.

- **Effect on the City of Cordele.**
  If the violation damages or causes additional costs to the City of Cordele, then the City of Cordele should take enforcement action to recover these costs.

- **Compliance History.**
  The history of compliance may be taken into account in determining the severity of the enforcement, that is, whether to take informal or severe enforcement action.

- **Good Faith.**
  In the instance where the violator has shown good faith and honest intent to correct the instance of noncompliance, the severity of enforcement action should be reduced.

ERP

TIME FRAMES

Once a violator has been notified of noncompliance, the violator must respond within required time frames. These time frames should be stated along with the enforcement notifications. Appropriate time frames are listed below:

- **Verbal Warning**
  Verbal warnings are usually given for minor violations. The violator shall comply immediately or a written notice to comply shall be given.

- **Written Notice to Comply**
  For the first and second violations of stormwater related provisions, the local issuing authority shall issue a written warning to the violator. The violator shall have 5 days to correct the violation. If, however, 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, an immediate stop work order shall be issued.

- **Revocation of Business License**
  Work Permit and/or Other Authorization to Conduct Business. If any person or business commences any land disturbing activity requiring a permit without first obtaining such permit, that person or business shall be notified in writing and have 5 days to obtain the required authorizations. If proper authorization is not obtained within the 5 days, then the City of Cordele may revoke the business license, work permit or other authorization for the conduct of a business and associated work activities within the jurisdictional boundaries of the City of Cordele.

- **Stop Work Order**
  If a violation presents an imminent threat to public health or waters of the state, or if land-disturbing activities are conducted without obtaining the necessary permit, the local issuing authority shall issue an immediate stop work order. Where a written notice to comply has been given, and if a violation is not corrected within 5 days, the local issuing authority shall issue an immediate stop work order. For a third and subsequent violation, the local issuing authority shall issue an immediate stop work order. When a violation is in the form of taking action without a permit, failure to maintain a stream buffer, or significant amounts of sediment, as determined by the local issuing authority have been or are being discharged into state waters, or where best management practices have not been properly designed, installed, and maintained, the local issuing authority shall immediately issue a stop work order. All stop work orders shall be effective immediately upon issuance and shall remain in effect until the necessary corrective action or mitigation has occurred.

- **Bond Forfeiture**
  If a person or organization fails to comply within the time specified in the written notice to comply, that person or organization shall be deemed in violation of the stormwater management requirements and, in addition to other penalties, shall be deemed to have forfeited their performance bond if they were required to post one.

- **Civil Penalty**
  In addition to other penalties, municipal courts, magistrate courts, or any other courts of competent jurisdiction trying cases brought as a violation to the stormwater management program or the erosion and sediment control regulations may impose civil penalties of not more than $2,500 per day for each violation. When all other methods of enforcement have not resulted in the necessary corrective action, then the local issuing authority shall, as a last resort, appeal to the appropriate courts for enforcement and civil penalty as allowed by law.

ERP

TRACKING

The City of Cordele Stormwater Technician, or their designee, will be responsible for tracking items related to this enforcement response plan and ensuring that all appropriate items are included in the annual report. When inspections are made by other departments, the results of those inspections will be given to the City of Cordele Stormwater Technician within 5 working days of the inspection so that he or she can make the appropriate entries. The data may be tracked manually or electronically, but should include the following information:

- Name of owner/operator of the facility and/or location or address
- Type of site (i.e., Industrial, Commercial, Residential)
- Description of noncompliance
- Description of enforcement mechanisms/actions used
- Time frames for each step
- Dates of inspection
- Dates for issuance of enforcement actions
- Deadline date for a violator returning to compliance
- Date of violation resolution

ERP

ILLICIT DISCHARGE AND ILLEGAL CONNECTIONS ENFORCEMENT ACTIONS

ERP

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POTENTIAL VIOLATIONS

- Best management practices not properly designed, installed, or maintained.
- The contribution of pollutants to the City of Cordele by stormwater and non-stormwater discharge associated with industrial activity and the quality of stormwater discharged from sites of industrial activity.
- Illicit discharges to the City of Cordele (SEE: the "City of Cordele Illicit Discharge Detection and Elimination Guidance Manual")
- Discharges of spills, dumping, or disposal of materials other than stormwater
- Failure to comply with conditions in State statues, rules, permits, contracts, and orders.
- Any illicit discharges into waters of the State
- Discharges that cause or contribute to conditions which exceed water quality standards.
- Illegal connection to a stormwater system

ERP

ENFORCEMENT MECHANISMS

- **Verbal Warning**
  These may consist of phone calls or face-to-face discussions. The conversation should specify the nature of the violation and the required corrective action. These conversations should be notated in an appropriate tracking device or log book which is maintained by the City of Cordele Stormwater Technician.

- **Written Notice to Comply**
  This is required when, through inspection, it is deemed that a person engaged in illicit discharges or an illegal connection activities has failed to comply with approved plans. The notice shall set forth the measures necessary to achieve compliance and shall state the time within which such measures must be completed.

- **Revocation of Business License**
  Work Permit and/or Other Authorization to Conduct Business. If any person or business commences any land disturbing activity requiring a permit without first obtaining such permit, that person may be subject to revocation of business license, work permit or other authorization for the conduct of a business and associated work activities within the jurisdictional boundaries of the City of Cordele.

- **Civil Penalty**
  Any person who violates any provisions of the Illicit Discharge and Illegal Connections regulations, or any permit condition of limitation established pursuant to these regulations, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the issuing authority shall be liable for a civil penalty of not to exceed $1,000 per day. Each day during which violation or failure or refusal to comply shall be a separate violation.

- **Documentation**
  All enforcement actions must be documented. The inspector should address all violations at the time of the inspection and give a copy of the inspection report to the stormwater technician for tracking purposes.

ERP

APPROPRIATE RESPONSES

Appropriate responses are noted in the sections on enforcement mechanisms and the section on time frames. Some latitude may be given, however, in determining the severity of the responses based on several factors involved in the violation. These factors include:

- **Magnitude of the Problem**
  Isolated instances of noncompliance may only require a phone call or a NOV.

- **Duration of the Problem**
  If the violations persist for a long period of time, then enforcement options must be escalated.

- **Effect on waters of the State**
  If the violation results in environmental harm to receiving waters, then a more severe response is required.

- **Effect on the City of Cordele**
  If the violation damages or causes additional costs to the City of Cordele, then the City of Cordele should take enforcement action to recover these costs.

- **Compliance History**
  The history of compliance may be taken into account in determining the severity of the enforcement, that is, whether to take informal or severe enforcement action.

- **Good Faith**
  In the instance where the violator has shown good faith and honest intent to correct the instance of noncompliance, the severity of enforcement action should be reduced.

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- **Written Notice to Comply**
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- **Revocation of Business License**
  Work Permit and/or Other Authorization to Conduct Business. If any person or business commences any land disturbing activity requiring a permit without first obtaining such permit, that person or business shall be notified in writing and have 5 days to obtain the required authorizations. If proper authorization is not obtained within the 5 days, then the City of Cordele may revoke the business license, work permit or other authorization for the conduct of a business and associated work activities within the jurisdictional boundaries of the City of Cordele.

- **Stop Work Order**
  If a violation presents an imminent threat to public health or waters of the state, or if land-disturbing activities are conducted without obtaining the necessary permit, the local issuing authority shall issue an immediate stop work order. Where a written notice to comply has been given, and if a violation is not corrected within 5 days, the local issuing authority shall issue an immediate stop work order. For a third and subsequent violation, the local issuing authority shall issue an immediate stop work order. When a violation is in the form of taking action without a permit, failure to maintain a stream buffer, or significant amounts of sediment, as determined by the local issuing authority have been or are being discharged into state waters, or where best management practices have not been properly designed, installed, and maintained, the local issuing authority shall immediately issue a stop work order. All stop work orders shall be effective immediately upon issuance and shall remain in effect until the necessary corrective action or mitigation has occurred.

- **Civil Penalty**
  In addition to other penalties, municipal courts, magistrate courts, or any other courts of competent jurisdiction trying cases brought as a violation to the stormwater management program or the erosion and sediment control regulations may impose civil penalties of not more than $2,500 per day for each violation. When all other methods of enforcement have not resulted in the necessary corrective action, then the local issuing authority shall, as a last resort, appeal to the appropriate courts for enforcement and civil penalty as allowed by law.

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- Description of enforcement mechanisms/actions used
- Time frames for each step
- Dates of inspection
- Dates for issuance of enforcement actions
- Deadline date for a violator returning to compliance
- Date of violation resolution

ERP

POST-DEVELOPMENT ENFORCEMENT ACTIONS

ERP

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POTENTIAL VIOLATIONS

- Best management practices not properly designed, installed, or maintained.
- The contribution of pollutants to the City of Cordele by stormwater and non-stormwater discharge associated with industrial activity and the quality of stormwater discharged from sites of industrial activity.
- Discharges of spills, dumping, or disposal of materials other than stormwater
- Failure to comply with conditions in State statues, rules, permits, contracts, and orders.
- Any illicit discharges into waters of the State (SEE: the "City of Cordele Illicit Discharge Detection and Elimination Guidance Manual")
- Discharges that cause or contribute to conditions which exceed water quality standards.
- Illegal connection to a stormwater system
- Violations of maintenance agreement specifications
- Lack of maintenance of a post-construction structure

ERP

ENFORCEMENT MECHANISMS

- **Verbal Warning**
  These may consist of phone calls or face-to-face discussions. The conversation should specify the nature of the violation and the required corrective action. These conversations should be notated in an appropriate tracking device or log book which is maintained by the City of Cordele Stormwater Technician.

- **Written Notice to Comply**
  This is required when, through inspection, it is deemed that a person engaged in illicit discharges or an illegal connection activities has failed to comply with approved plans. The notice shall set forth the measures necessary to achieve compliance and shall state the time within which such measures must be completed.

- **Revocation of Business License**
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- **Civil Penalty**
  Any person who violates any provisions of the Illicit Discharge and Illegal Connections regulations, or any permit condition of limitation established pursuant to these regulations, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the issuing authority shall be liable for a civil penalty of not to exceed $1,000 per day. Each day during which violation or failure or refusal to comply shall be a separate violation.

- **Documentation**
  All enforcement actions must be documented. The inspector should address all violations at the time of the inspection and give a copy of the inspection report to the stormwater technician for tracking purposes.

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- **Effect on waters of the State**
  If the violation results in environmental harm to receiving waters, then a more severe response is required.

- **Effect on the City of Cordele**
  If the violation damages or causes additional costs to the City of Cordele, then the City of Cordele should take enforcement action to recover these costs.

- **Compliance History**
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- **Civil Penalty**
  In addition to other penalties, municipal courts, magistrate courts, or any other courts of competent jurisdiction trying cases brought as a violation to the stormwater management program or the erosion and sediment control regulations may impose civil penalties of not more than $2,500 per day for each violation. When all other methods of enforcement have not resulted in the necessary corrective action, then the local issuing authority shall, as a last resort, appeal to the appropriate courts for enforcement and civil penalty as allowed by law.

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FLOODPLAIN MANAGEMENT ENFORCEMENT ACTIONS

ERP

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POTENTIAL VIOLATIONS

- Best management practices not properly designed, installed, or maintained.
- The contribution of pollutants to the City of Cordele by stormwater and non-stormwater discharge associated with industrial activity and the quality of stormwater discharged from sites of industrial activity.
- Discharges of spills, dumping, or disposal of materials other than stormwater
- Failure to comply with conditions in State statues, rules, permits, contracts, and orders.
- Any illicit discharges into waters of the State (SEE: the "City of Cordele Illicit Discharge Detection and Elimination Guidance Manual")
- Discharges that cause or contribute to conditions which exceed water quality standards.
- Illegal connection to a stormwater system

ERP

ENFORCEMENT MECHANISMS

- **Verbal Warning**
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- **Written Notice to Comply**
  This is required when, through inspection, it is deemed that a person engaged in illicit discharges or an illegal connection activities has failed to comply with approved plans. The notice shall set forth the measures necessary to achieve compliance and shall state the time within which such measures must be completed.

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- **Civil Penalty**
  Any person who violates any provisions of the Illicit Discharge and Illegal Connections regulations, or any permit condition of limitation established pursuant to these regulations, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the issuing authority shall be liable for a civil penalty of not to exceed $1,000 per day. Each day during which violation or failure or refusal to comply shall be a separate violation.

- **Documentation**
  All enforcement actions must be documented. The inspector should address all violations at the time of the inspection and give a copy of the inspection report to the stormwater technician for tracking purposes.

ERP

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ERP

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- **Revocation of Business License**
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- **Civil Penalty**
  In addition to other penalties, municipal courts, magistrate courts, or any other courts of competent jurisdiction trying cases brought as a violation to the stormwater management program or the erosion and sediment control regulations may impose civil penalties of not more than $2,500 per day for each violation. When all other methods of enforcement have not resulted in the necessary corrective action, then the local issuing authority shall, as a last resort, appeal to the appropriate courts for enforcement and civil penalty as allowed by law.

ERP

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- Dates for issuance of enforcement actions
- Deadline date for a violator returning to compliance
- Date of violation resolution

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CITY CODE REFERENCES

Refer to the following codes & ordinances as pertains to this Enforcement Response Plan:

- **"Flood Damage Prevention", City Code, Chapter 10**
- **"The Cordele Georgia 2011 Soil Erosion, Sedimentation and Pollution Control Ordinance as amended and as further amended on August 15, 2017", City Ordinance 0-17-05**
- **"Storm Water Management, Part One and Part Two", City Code, Chapter 18, Utilities, Article IX**
- **"An ordinance to amend the Code of the City of Cordele so as to amend Section 18-435(a) of the Stormwater Management Ordinance 2006 approved and adopted November 7, 2006, so as to encourage the use of green infrastructure/low impact development (GI/LID) practiced and to ensure that building codes, ordiances and other regulations do not prohibit or impede the use of GI/LID practices, and for other purposes not inconsistent with the provisions of said amendment", City Ordinance 0-15-01**

Copies and/or verbiage contained in these documents can be found in the current "Storm Water Management Program" (SWMP) for the City of Cordele.

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CITY OF CORDELE, GEORGIA
STORM WATER MANAGEMENT PROGRAM

IWP

IMPAIRED WATERS PLAN
2017-2022

IWP

IWP

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BACKGROUND

The City of Cordele operates as an MS4 under the State of Georgia, Department of Natural Resources, Environmental Protection Division, Permit Number GAG6100000 (hereafter referred to simply as the "Permit". The City of Cordele meets **Part 4.4.2** of the Permit which applies "to those permittees with a population exceeding 10,000 at the time of permit issuance or at the time of designation."[1]

IMPAIRED WATERS IDENTIFIED

There is one waterway identified as an "Impaired Waters" segment within the jurisdiction of the City of Cordele. This segment is part of Gum Creek from a point along the edge of the City line and running six (6) miles downstream to Lake Blackshear.

Reach Name	Gum Creek	
Reach ID	R031300060606	
Reach Location	Downstream cordele to Lake Blackshear	
County	Crisp	
River Basin	Flint	
Use	Fishing	
Criterion Violated	FC	Fecal Coliform Bacteria
	Bio F	Biota Impacted (Fish Community)
Potential Causes	UR	Urban Runoff / Urban Effects
Extent	6 Miles	
Category	4a	Data indicate that at least one designated use is not being met, but a TMDL(s) has been completed for the parameter(s) that is causing a water not to meet its use(s).
Priority		
Notes	TMDLs completed FC (2003), Bio F (2003).	

* Data from 2014 Integrated 305(b)/303(d) List Documents[2]. The more recent 2016 version has not been approved as of the time of the writing of this Plan.

Figure 1: 305(b)/303(d) Information

IWP

[1] (General NPDES Stormwater Permit No. GAG610000, 2017, p. 39)
[2] (2014 Integrated 305(b)/303(d) List: Streams—Not Supporting Designated Uses, p. A-205, https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/CY_2014_305b303d_Streams.pdf, Approved May 13, 2016)

Surrounding Land Use

Land use varies within the one (1) mile buffer from the beginning point of the impaired stream segment. Immediately adjacent to the stream is the Cordele Wastewater Treatment Plant, where the effluent from the treatment of sanitary waste is discharged after it has been treated. Also in the immediate vicinity is a stream crossing for the CSX Railroad and a warehousing facility. Near the edge of the buffer is the wood milling facility Norbord.

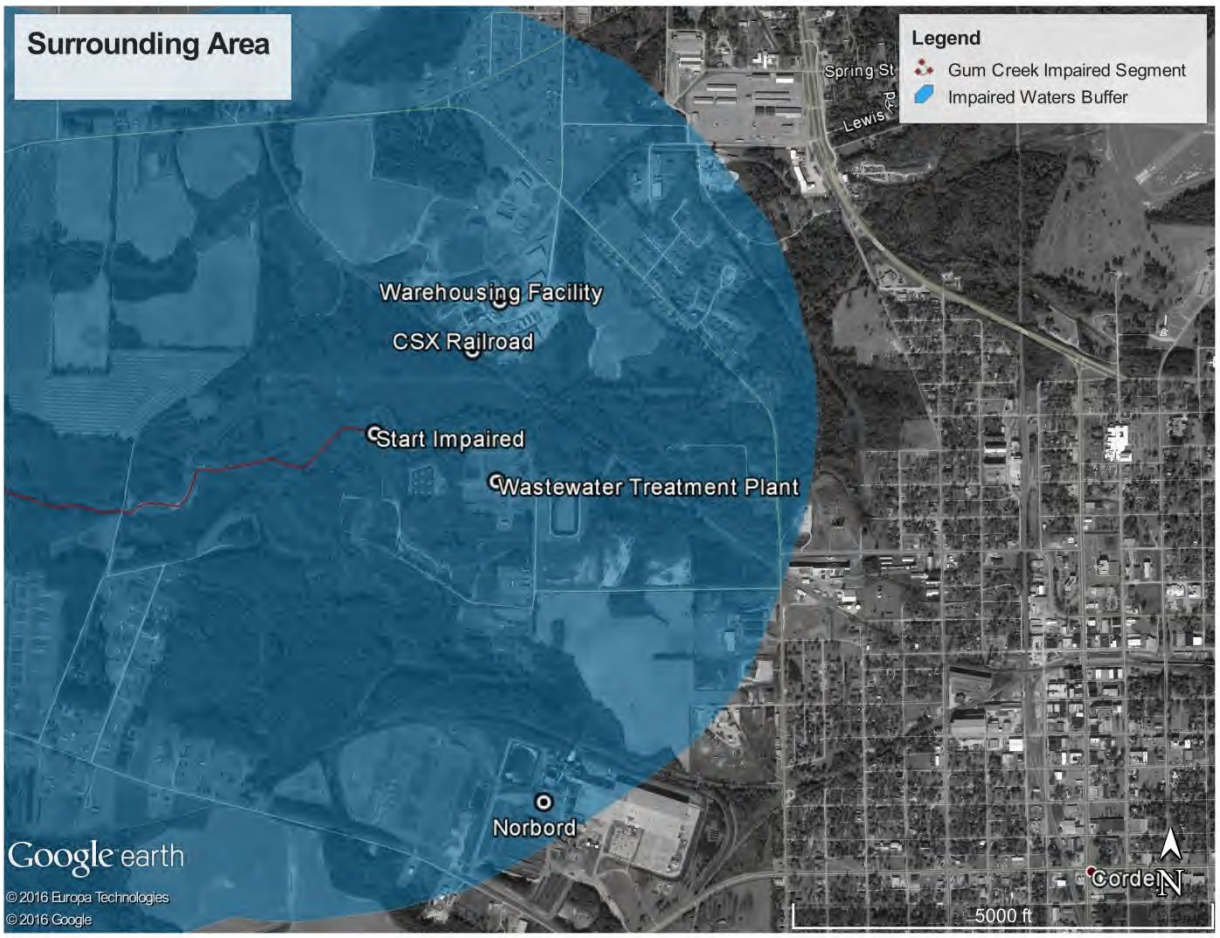

Figure 2: Surrounding Area

Definitions

Bio F

Biota Impacted (Fish Communities) - Excessive sediment buildup in the stream which impacts fish habitats.

Category 4a

"Data indicate that at least one designated use is not being met, but a TMDL(s) has been completed for the parameter(s) that is causing a water not to meet its use(s)."

Fecal Coliform (FC)

"Fecal coliform bacteria are simple, single-celled organisms found in the digestive systems of warm-blooded animals, and also occur naturally in the soil. … Fecal coliform bacteria are indicator of a potential public health risk, and not an actual cause of disease. … Fecal coliform bacteria suggest the co-presence of bacterial pathogens (disease-causing microbes) which can cause dysentery, gastrointestinal illness, cholera, typhoid fever, and 'staph' infections."[3]

SWMP

Storm Water Management Program

TMDL

Total Maximum Daily Load

IWP

[3] (State of Georgia TMDL Implementation Plan: Gum Creek (Fecal Coliform), 2002, p. 8)

MONITORING AND IMPLEMENTATION PLAN

Pollutants of Concern to be Addressed

As noted in Figure 1, the main Pollutants of Concern are Fecal Coliform Bacteria (FC) and Biota Impacted (Fish Community) (Bio F). According to the State calculated TMDL's, the "needed reduction from TMDL" for FC is 47%[4] and for Bio F is 33%.[5]

Correlating Data

As part of an ongoing effort on behalf of the City of Cordele to protect the State's waters, Cordele has partnered with TTL, Inc. of Albany, Georgia to perform an ongoing Watershed Assessment of the three watersheds directly related to the City – Gum Creek, Cedar Creek and Gully Creek. Of the three watersheds only Gum Creek is of concern for this IWP. The report is provided by TTL annually in June for the preceding year.

Included in the Watershed Assessment by TTL, Inc. is a calculation of the Index of Biotic Integrity (IBI). For the basis of this IWP, this portion of the Assessment will be used for monitoring the Bio F pollutant of concern and will be addressed later.

IWP

[4] (State of Georgia TMDL Implementation Plan: Gum Creek (Fecal Coliform), 2002, p. 2)

[5] (State of Georgia TIER 2 TMDL Implementation Plan (Biota F), Revision 1, Gum Creek Watershed, HUC 10#0313000606, 2004, p. 7)

Sample Locations

As part of this plan, there are two (2) sampling locations from which to collect water samples. (See Figures.)

Sampling Point	Location Description	LAT	LONG
Upstream	Gum Creek at 15th Street Crossing	31.974500° N	83.794321° W
Downstream	Gum Creek at old bridge & dam at Cordele Fish Hatchery	31.975257° N	83.819698° W

Figure 3: Sample Locations (Table)

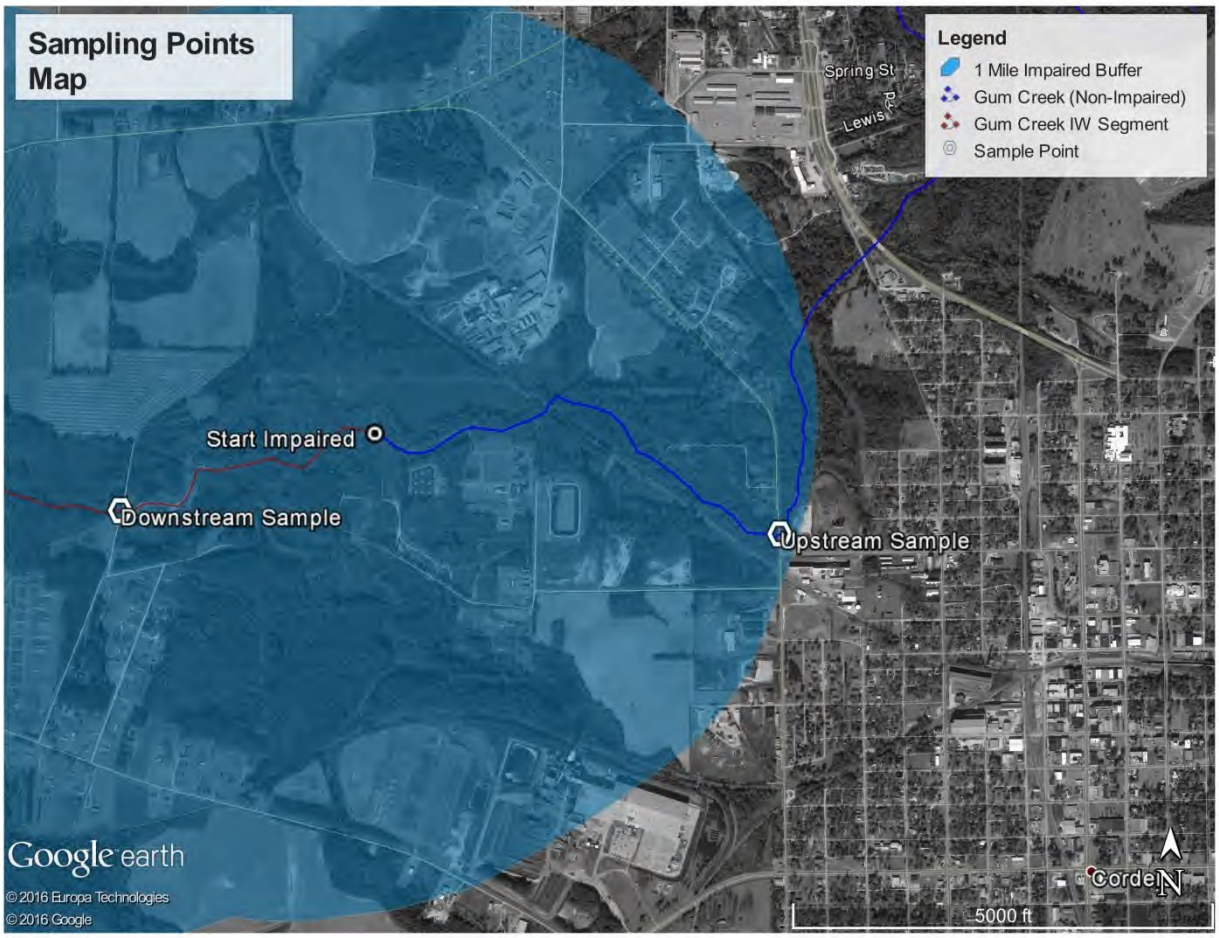

Figure 4: Sampling Points (Map)

Sample Type

Sampling will be performed by collecting manual "grab" samples for analysis. Samples will be taken from the stream at a point as near to the centerline of the stream as possible. Where possible, the sample will be collected directly into the sample container. If direct access to the stream is not possible, then supplemental sampling equipment (such as an extension rod with a sterile collection container) may be used.

Fecal Coliform Sample Testing

After the sample has been collected, it shall be delivered to the testing laboratory no later than six hours after collection. The City of Cordele Waste Water Treatment Plant is a certified testing facility for Fecal Coliform and samples will be tested at this location.

Bio F Sample Testing

Bio F will be analyzed by TTL, Inc. The data collected is reported in their annual Watershed Assessment. For reporting purposes, a copy of this Assessment will be included with the City's SWMP Annual Report.

Sample Frequency

Fecal Coliform

Fecal coliform sampling frequency will be performed according to requirements for submitting data to EPD, outlined in "Guidance On Submitting Water Quality Data For Use By The Georgia Environmental Protection Division In 305(b)/303 (d) Listing Assessments". As such, EPD requires a total of four (4) geometric means to be calculated annually, consisting of four (4) samples collected within a 30 day period for each of the calendar quarters.[6] The City will generally collect samples for Fecal Coliform on the following schedule, but at the least one month out of each calendar quarter:

Quarter	Sampling Month
1	January
2	April
3	July
4	October

Figure 5: Fecal Coliform Sampling Dates

The sampling will be performed weekly during the sampling months and a geometric mean will be calculated. This data will then be reported with the City's SWMP Annual Report.

Bio F

Sampling for Bio F will be performed at least once annually.

[6] (Guidance On Submitting Water Quality Data For Use By The Georgia Environmental Protection Division In 305(b)/303 (d) Listing Assessments, 2002, p. 6)

Implementation Schedule

Fecal Coliform

Sampling for Fecal Coliform has been ongoing since the last quarter of 2016.

Bio F

Since 2014, TTL, Inc. has analyzed the samples they collect regarding the City's annual Watershed Assessment for Bio F.

Location Map

See Figures 2 & 4.

Best Management Practices

Proposed BMPs

The following BMPs are designed to help monitor and ultimately trace the source of pollution, where possible.

ALL BMPs WILL BE REVIEWED ANNUALLY FOR EFFECTIVENESS AND BE MODIFIED, AS NEEDED, TO MEET THE REQUIRED GOALS SET FORTH BY THE PERMIT.

IWP

BMP IMP01	WATER QUALITY MONITORING
1. Description of BMP	Routinely monitor impaired waters within the City's jurisdictional area for impacts of pollution or other contaminants as related to the Pollutants of Concern for the impaired segment.
2. Measureable Goals	Quarterly sampling producing four (4) geometric means for Fecal Coliform data for two sampling points along Gum Creek.[7] Annual analysis of the streams at the sample points for Bio F impact on aquatic life numbers. Data collected by TTL, Inc. is reported annually in their report on the City's annual Watershed Assessment. The data is summarized in a chart of the "Index of Biotic Integrity (IBI)". [8] The IBI analyses the numbers of fish and other aquatic life at the different sample locations. The "Total IBI Score" is an indicator to show the quantity of aquatic life at specific points. This information in time can then be utilized to show how the aquatic life population changes over time.
3. Documentation to be submitted with each annual report	Fecal Coliform: The geometric mean for the four reporting quarters will be submitted with the Annual Report. Additionally, the actual data sheets may be submitted as a supplement. Bio F: The latest TTL, Inc. submitted Watershed Assessment will be included with the Annual Report.
4. Rationale for choosing BMP and setting measureable goal(s)	Routine monitoring, sampling and documentation is the best method for seeing the current condition of the steam and if any environmental / surrounding land use changes are impacting the stream.
5. How you will determine whether this BMP is effective?	By collecting the geometric means, over time a trend can be demonstrated to show if the levels are improving to more acceptable levels for the steam's intended use.

[7] Per "Georgia Rules and Regulations – Water Quality Control: Chapter 391-3-6-.03(6)(a)(i):

> "Bacteria: For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria."

[8] (REPORT OF CORDELE, GEORGIA WATERSHED ASSESSMENT 2014, 2015, p. 29)

BMP IMP02	SAMPLING LOCATION EVALUATION
1. Description of BMP	Routinely evaluate if the present sampling locations are adequate.
2. Measureable Goals	Annually review to determine if the currently identified sampling locations adequately provide the information necessary for data collection.
3. Documentation to be submitted with each annual report	An updated map with updated sampling points will be provided as needed.
4. Rationale for choosing BMP and setting measureable goal(s)	Over time, land uses and other environmental conditions may change, indicating a need to modify sampling locations.
5. How you will determine whether this BMP is effective?	If numbers from the monitoring process (BMP IMP01) are consistent or improving, then the sampling locations will be considered adequate and will not need modification.

IWP

BMP IMP03	IDDE Outfall Sampling
1. Description of BMP	Any outfalls identified in the City's "Outfall Map" that fall within the buffer area of the Impaired Waters, will be checked during the Dry Weather Screening inspections. If flow is present, then samples will be collected and analyzed for the POCs. See **Figure 6** for the locations to be monitored.
2. Measureable Goals	All outfalls located within the Impaired Waters one mile buffer zone will be inspected annually following Dry Weather Screening procedures. If an outfall is producing outflow, then a sample will be collected and tested according to the City's IDDE Manual.
3. Documentation to be submitted with each annual report	A Dry Weather screening report will be collected for each identified outfall within the one mile buffer of the Impaired Waters.
4. Rationale for choosing BMP and setting measureable goal(s)	Inspecting outfalls directly impacting the Impaired Waters stream segment is necessary for attempting to trace the sources of the POCs. If sources can be identified and corrective actions taken, the levels of the POCs will decrease.
5. How you will determine whether this BMP is effective?	As containment sources are identified and eliminated, the POCs will decrease.

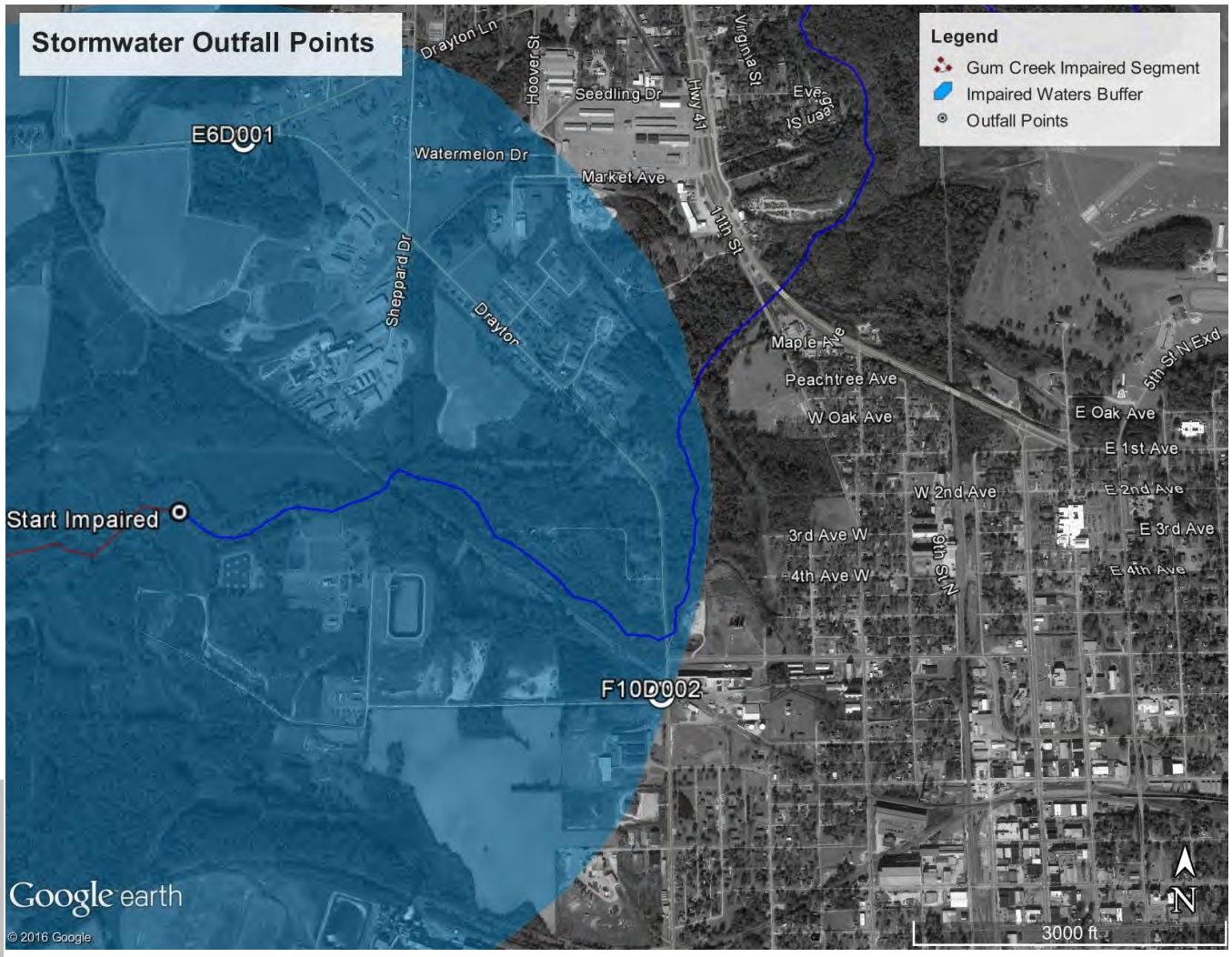

Figure 6: Stormwater Outfall Points within One Mile Buffer

Future BMPs

As an ongoing effort to eliminate the pollutants of concern from the Impaired Stream Segment of Gum Creek, an annual review of the data collected may shed light on the circumstances and environmental conditions that are directly contributing to the pollutants of concern.

Future BMPs may include public education (on reducing certain types of pollutants) or even structural BMPs may need to be installed. **At the beginning stages of the implementation of this plan, it is difficult to indicate which BMPs would be the most effective for the reduction of the POCs.**

The City will add additional BMPs as the data is analyzed. Any new BMPs as pertaining to this IMP will be submitted to EPD for review and approval prior to implementation.

Annual Reporting

Fecal Coliform

The four (4) geometric means collected will be reported to EPD once annually with the City SWMP Annual Report. The data sheets may be included as well for supporting documentation. (See BMP IMP01, in this document, for more information.)

Bio F

Data collected by TTL, Inc. is reported annually in their report on the City's annual Watershed Assessment. (See BMP IMP01, in this document, for more information.)

BMPs

1. BMPs will be reported on individually & annually with the City's SWMP Annual Report.
2. Any new BMPs as pertaining to this IMP will be submitted to EPD for review and approval prior to implementation.
3. BMPs will be examined annually to evaluate the effectiveness of the BMP with the reduction of the POCs.

IMP

REFERENCES

Georgia Department of Natural Resources, Environmental Protection Division. (2002, October). Guidance On Submitting Water Quality Data For Use By The Georgia Environmental Protection Division In 305(b)/303(d) Listing Assessments. Atlanta, Georgia, USA.

Georgia Department of Natural Resources, Environmental Protection Division. (2004, December). State of Georgia TIER 2 TMDL Implementation Plan (Biota F), Revision 1, Gum Creek Watershed, HUC 10#0313000606. Atlanta, Georgia, USA.

Georgia Department of Natural Resources, Environmental Protection Division. (2012, December 6). General NPDES Stormwater Permit No. GAG610000. Atlanta, Georgia, USA.

Georgia Department of Natural Resources, Environmental Protection Division. (2012). Water Quality in Georgia 2010-2011. Atlanta, Georgia, USA.

Georgia Department of Natural Resources, Environmental Protection Division. (2002, August 15). State of Georgia TMDL Implementation Plan: Gum Creek (Fecal Coliform). Atlanta, Georgia, USA.

Georgia Department of Natural Resources, Environmental Protection Division. (2003, January). Tolal Maximum Daily Load Evaluation for Twenty-eight Stream Segments in the Flint River Basin For Sediment (Biota Impacted). Atlanta, Georgia, USA.

Georgia Department of Natural Resources, Environmental Protection Division. (2003, February). Total Maximum Daily Load Evaluation for Twenty-Eight Stream Segments in the Flint River Basin for Fecal coliform. Atlanta, Georgia, USA.

TTL. (2015, June 17). REPORT OF CORDELE, GEORGIA WATERSHED ASSESSMENT 2014. Albany, Georgia, USA.

IWP

General NPDES
Stormwater Permit
No. GAG610000

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORM WATER DISCHARGES ASSOCIATED WITH SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Clean Water Act, as amended (33 U.S.C. 1251 et seq.), hereinafter called the "Clean Water Act," and the Rules and Regulations promulgated pursuant to each of these Acts, all new and existing stormwater point sources associated with small municipal separate storm sewer systems, upon submittal of a Georgia Notice of Intent, are authorized to discharge stormwater to the waters of the State of Georgia in accordance with the limitations, monitoring requirements and other conditions set forth in Parts 1 through Appendix B hereof.

This permit shall become effective on December 6, 2017.

This permit and the authorization to discharge shall expire at midnight, December 5, 2022.

Signed this 15 day of Nov 2017.

Director,
Environmental Protection Division

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PART 1. COVERAGE UNDER THIS PERMIT

1.1 Coverage

1.1.1 This permit covers all new and existing point source discharges of stormwater from a small municipal separate storm sewer system (MS4) as defined in Title 40 of the Code of Federal Regulations (CFR) Part 122.26 (b)(16) to the waters of the State of Georgia, except for those stormwater discharges identified under Part 1.1.4.

1.1.2 The permittee is authorized to discharge stormwater under the terms and conditions of this general permit if it:

1.1.2.1 Owns or operates an MS4 within the permitted area; and

1.1.2.2 Is not a "large" or "medium" MS4 as defined in 40 CFR Part 122.26(b)(4) or (7); and

1.1.2.3 Submits a Georgia Notice of Intent (NOI) in accordance with Part 3 of this permit; and

1.1.2.4 Is fully or partially located within an urbanized area as determined by the latest Decennial Census by the Bureau of the Census; or

1.1.2.5 Is designated for permit coverage by the State of Georgia pursuant to 40 CFR Part 122.32.

1.1.3 The permittee is liable for permit compliance within the permitted area for all discharges from the MS4 for which it is owner and/or operator.

1.1.4 The following discharges are not regulated by this permit:

1.1.4.1 NPDES permitted stormwater discharges associated with any of the industries covered by the Industrial General NPDES Permit No. GAR050000;

1.1.4.2 Conveyances that discharge stormwater runoff combined with municipal sewage;

1.1.4.3 Discharges from a Publicly Owned Treatment Works (POTW);

1.1.4.4 Stormwater discharges that enter the waters of the State other than from a point source;

1.1.4.5 Stormwater discharges from construction sites which result in a land disturbance of less than one acre unless part of a larger common plan of development or sale; and

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1.1.4.6 NPDES permitted non-stormwater discharges, such as process and non-process wastewater.

1.2 Definitions – See Appendix A
All terms used in this permit shall be interpreted in accordance with the definitions as set forth in the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended, unless otherwise defined in Appendix A.

PART 2. CRITERIA FOR RECEIVING WATERS

The permittee shall implement controls to reduce pollutants to the maximum extent practicable in discharges from the MS4 to the waters of the State, so as not to cause the following criteria to be exceeded in the receiving waters:

2.1 All waters shall be free from materials associated with municipal or domestic sewage, industrial waste or any other waste which will settle to form sludge deposits that become putrescent, unsightly, or otherwise objectionable;

2.2 All waters shall be free from oil, scum and floating debris associated with municipal or domestic sewage, industrial waste or other discharges in amount sufficient to be unsightly or to interfere with legitimate water uses;

2.3 All waters shall be free from material related to municipal, industrial or other discharges which produce turbidity, color, odor, or other objectionable conditions which interfere with legitimate water uses;

2.4 All waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity. The upstream appearance of a body of water shall be as observed at a point immediately upstream of a turbidity-causing man-made activity. That upstream appearance shall be compared to a point which is located sufficiently downstream from the activity so as to provide an appropriate mixing zone. For land disturbing activities, proper design, installation, and maintenance of best management practices and compliance with issued permits shall constitute compliance with this criterion; and

2.5 All waters shall be free from toxic, corrosive, acidic and caustic substances discharged from municipalities, industries, or other sources, such as nonpoint sources, in amounts, concentrations, or combinations which are harmful to humans, animals or aquatic life.

PART 3. NOTICE OF INTENT

3.1 Obtaining Coverage

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3.1.1 To be authorized to discharge stormwater from a small MS4, the permittee must submit an NOI. The NOI must be signed and dated in accordance with Part 6.10 of this permit.

3.1.2 Where the operator changes, or where a new operator is added after submittal of an NOI, a new NOI must be submitted.

3.1.3 The NOI form may be obtained on EPD's website at www.epd.georgia.gov/storm-water-forms.

3.1.4 The completed NOI and signed copies of all reports required herein shall be submitted to the following address:

Georgia Environmental Protection Division
Watershed Protection Branch
NonPoint Source Program, Stormwater Unit
2 Martin Luther King, Jr. Drive
Suite 1462, East Tower
Atlanta, Georgia 30334

An electronic method of reporting is being developed. Once the system is available for use, EPD will notify the permittee and all documents will be required to be filed electronically.

3.2 Submittal Deadline

3.2.1 If the permittee was covered under previous permit iterations due to meeting the criteria specified in 40 CFR Part 122.32(a)(1) or due to designation by EPD as specified in 40 CFR Part 122.32(a)(2), then they are required to submit a new NOI in accordance with Part 3.1 and Part 6.3 of the permit, and if notified by EPD, a new SWMP, within 180 days after the effective date of this permit. If designated under the previous permit iteration, then the permittee is considered an existing permittee, not a new permittee, under this permit iteration.

3.2.2 If the permittee is newly designated by EPD under 40 CFR Part 122.32(a)(2) after the issuance date of this permit, then they are considered a new permittee and are required to submit an NOI and SWMP within 180 days of written notification from EPD.

PART 4. STORMWATER MANAGEMENT PROGRAM

The permittee shall implement and enforce a program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable in order to protect water quality and to satisfy the appropriate water quality requirements of the State Act and Rules (Chapter 391-3-6-.16). The permittee must comply with the requirements of this Permit. The SWMP shall be considered a supplement to the Permit, containing the standard operating procedures, schedules,

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inspection forms, and other documents needed to support the implementation of the Permit requirements (40 CFR Part 122.34(b)). EPD will review and approve the SWMP. The permittee must utilize the procedures and other supplemental documents contained in the SWMP during the activities performed to attain Permit compliance. The SWMP must include, at a minimum, the following information for each of the six minimum control measures:

4.1 Requirements

4.1.1 The best management practices (BMPs) that will be implemented for each of the six stormwater minimum control measures. The SWMP must include at least the BMPs listed in each minimum control measure section below.

4.1.2 The measurable goals set for each of the BMPs.

4.1.3 The method of documentation of activities performed during the reporting period in each annual report.

4.1.4 The implementation schedule for each BMP, including, as appropriate, the date of implementation, the months and years in which each specific required action will be undertaken, any interim milestone dates and/or the frequency of the action(s).

4.1.5 The office or position(s) responsible for implementing or coordinating each BMP.

4.2 Minimum Control Measures

4.2.1 Public Education and Outreach on Stormwater Impacts

The permittee must implement a Public Education Program to distribute educational materials to the community and/or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

The program should consider topics, such as litter control, illicit discharges, household hazardous waste disposal, residential pesticide, fertilizer, and herbicide application, Fats, Oils and Grease (FOG) and GI/LID techniques. Public education materials are available at numerous websites, including these suggested sites: U.S.EPA (www.epa.gov), Clean Water Campaign (www.cleanwatercampaign.org), and the Center for Watershed Protection (www.cwp.org).

For those permittees with a population less than 10,000 at the time of the permit issuance or at the time of designation, the public education program must contain a minimum of **two** BMPs. For those permittees with a population greater than 10,000 at the time of this permit issuance or at the time of designation, the public education program must contain a minimum of **four** BMPs.

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For existing permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.1(a) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.1(a) Public Education - Best Management Practices (Existing Permittees)

BMPs	Measurable Goals
1. Public Education Program	1.a. Evaluate your existing program to ensure that it meets the needs of your community. Continue to implement, and revise if necessary, the stormwater education program described in the SWMP. The Public Education Program must include BMPs chosen from the following list, or other BMPs proposed for EPD approval: • School presentations; • Brochures placed in public places; • Municipal website; • Presentations to government officials; • Newsletter; • Utility Bill Insert; • Ongoing Social Media program; • Promotional items/giveaways; • Booth at community event; • Local access channel educational postings. 1.b. The measurable goal must be specified for each BMP. Each BMP must be executed at least annually. 1.c. For newly added BMPs, implement the BMP in accordance with the implementation schedule specified for that BMP. Details on the implementation of each BMP must be provided in each annual report.

For new permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.1(b) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.1(b) Public Education – Best Management Practices (New Permittees)

BMPs	Measurable Goals
1. Public Education Program	1.a. Develop a stormwater public education program. Describe the stormwater public education program in the SWMP and submit the program to EPD for review and

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	approval, in accordance with Part 3.2.2 of this permit. The Public Education Program must include the minimum number of BMPs detailed in Part 4.2.1 and include BMPs chosen from the list in Table 4.2.1(a), BMP 1.a. 1.b. Implement the public education program in accordance with the implementation schedule specified for each BMP. The measurable goal must be specified for each BMP. Each BMP must be executed at least annually. 1.c. Details on the implementation of each BMP, including the status of implementation, must be provided in each annual report.

4.2.2 Public Involvement/Participation

The permittee must develop and implement a Public Involvement/Participation program. The permittee must, at a minimum, comply with State and local public notice requirements when implementing a public involvement/participation program. The program should address the need for the public to be included in developing, implementing, and/or reviewing the stormwater management program. The program must make efforts to reach out and engage all economic and ethnic groups.

If the permittee has a website, the SWMP, as well as any updates, must be posted on the website.

For those permittees with a population less than 10,000 at the time of the permit issuance or at the time of designation, the public involvement/participation program must contain a minimum of **two** BMPs. For those permittees with a population greater than 10,000 at the time of this permit issuance or at the time of designation, the public involvement/participation program must contain a minimum of **four** BMPs.

For existing permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.2(a) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.2(a) Public Involvement/Participation - Best Management Practices (Existing Permittees)

BMPs	Measurable Goals
1. Public	1.a. Evaluate your existing program to ensure that it

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Involvement/Participation Program	meets the needs of your community. Continue to implement, and revise if necessary, the public involvement/participation program described in the SWMP. The Public Involvement/Participation Program must include BMPs chosen from the following list, or other BMPs proposed for EPD approval: • Stream cleanup (e.g. Rivers Alive): • Great American Cleanup; • Citizen hotline; • Citizen science/volunteer monitoring (e.g. Adopt-A-Stream); • Adopt-A-Road; • Storm drain marking; • Household hazardous waste disposal event; • Recycling facility or event; • Local stormwater management panel; • Pet waste stations. 1.b. The measurable goal must be specified for each BMP. Each BMP must be executed at least annually. 1.c. Details on the implementation of each BMP must be provided in each annual report.

For new permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.2(b) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.2(b) Public Involvement/Participation - Best Management Practices (New Permittees)

BMPs	Measurable Goals
1. Public Involvement/Participation Program	1.a. Develop a public involvement/participation program. Describe the program in the SWMP and submit the program to EPD for review and approval in accordance with Part 3.2.2 of this permit. The Public Involvement/Participation Program must include the minimum number of BMPs detailed in Part 4.2.2 and include BMPs chosen from the list in Table 4.2.2(a), BMP 1.a. 1.b. Implement the public involvement/participation program in accordance with the implementation

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	schedule specified for each BMP in the SWMP. The measurable goal must be specified for each BMP. Each BMP must be executed at least annually. 1.c. Details on the implementation of each BMP, including the status of implementation, must be provided in each annual report.

4.2.3 Illicit Discharge Detection and Elimination (IDDE)
The permittee must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 40 CFR Part 122.26(b)(2)) into its MS4. The permittee must:

4.2.3.1 Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the State that receive discharges from those outfalls;

4.2.3.2. Prohibit through ordinance, or other regulatory mechanisms, non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions;

4.2.3.3 Develop and implement a plan to detect and address non-stormwater discharges including illegal dumping to the MS4;

4.2.3.4 Inform public employees, businesses, and the general public of the hazards associated with illegal discharges and improper disposal of wastes; and

4.2.3.5 Address the following categories of non-stormwater discharges or flows only if they are identified as significant contributors of pollutants to the MS4:

- water line flushing;
- landscape irrigation;
- diverted stream flows;
- rising ground waters;
- uncontaminated ground water infiltration (as defined in 40 CFR Part 35.2005(20));
- uncontaminated pumped ground water;
- discharges from potable water sources;
- foundation drains;
- air conditioning condensation;
- irrigation water;
- springs;

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- water from crawl space pumps;
- footing drains;
- lawn watering;
- individual residential car washing;
- flows from riparian habitats and wetlands;
- swimming pool discharges;
- street wash water; and
- flows from fire fighting activities.

For existing permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.3(a) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.3(a) Illicit Discharge Detection and Elimination – Best Management Practices (Existing Permittees)

BMPs	Measurable Goals
1. Legal Authority	1.a. Evaluate, and if necessary, modify the existing ordinance. If the ordinance is revised during the reporting period, submit a copy of the adopted ordinance with the annual report.
2. Outfall Map and Inventory	2.a. Maintain an updated map and an inventory showing the location 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 must be submitted with each annual report. 2.b. Provide the number of outfalls added during the reporting period and the total number of outfalls in each annual report.
3. IDDE Plan	3. Implement the IDDE Plan below, following procedures described in the SWMP, to detect and address non-stormwater discharges to the MS4. The components of the IDDE Plan are as follows: 3.a. Conduct dry weather screening (DWS) inspections on 100% of the total outfalls within the 5-year permit term or use an alternate method approved by EPD. At a minimum, the permittee must conduct DWS inspections on 5% of the outfalls annually, or if the inspections are done by a geographical area, then one area or sector must be inspected each year, so that inspections are performed during each reporting period. If the permittee

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	conducts stream walks of intermittent and perennial streams in conjunction with the DWS inspection, then 100% of the stream miles containing or downstream of an MS4 outfall must be inspected within the 5-year permit term. At a minimum, the permittee must conduct stream walks on 5% of the stream miles annually, or if walks are done by a geographical area, then streams within one area or sector must be walked each year. The permittee must document and report the number of stream miles walked, as well as the number of outfalls screened using each method (e.g. dry weather screening, stream walks, alternate approved method). Provide the number of outfall inspections conducted during the reporting period and documentation of the outfall inspections in each annual report. 3.b. Implement investigative and follow-up procedures when the results of the DWS indicate a potential for an illicit discharge, including the sampling and/or inspection procedures described in the IDDE Plan. If the source of the illicit discharge is identified as deriving from an adjacent MS4, the permittee must notify that MS4. Provide information on any illicit discharge detection activities performed during the reporting period in each annual report. 3.c. Ensure any identified illicit discharges are eliminated. If necessary, implement enforcement procedures described in the Enforcement Response Plan (ERP) in Part 4.3 of this permit. Provide information on any eliminated discharges or on any enforcement actions taken to eliminate illicit discharges, such as through a spreadsheet or table, during the reporting period in each annual report.
4. Education	4.a. Continue to implement a program to educate the public, businesses, and government employees about the hazards of illicit discharges as described in the SWMP. Conduct an educational activity for each target audience at least annually. Provide documentation of any activities conducted during the reporting period in each annual report.
5. Complaint Response	5.a. Implement the EPD approved procedures for receiving, investigating, and tracking the status of illicit discharge complaints. Provide a report on each illicit

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	discharge related complaint received and investigated during the reporting period (e.g. complaint date, type of complaint, complaint status) in each annual report.

For new permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.3(b) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.3(b) Illicit Discharge Detection and Elimination – Best Management Practices (New Permittees)

BMPs	Measurable Goals
1. Legal Authority	1.a. Develop and adopt an IDDE ordinance that prohibits non-stormwater discharges to the MS4. Submit a copy of the adopted ordinance to EPD within one year of designation with that year's annual report.
2. Outfall Map and Inventory	2.a. Develop or update a map and an inventory showing the location of all outfalls from the MS4 and the names and locations of all waters of the State that receive discharges from those outfalls. The SWMP must include a schedule for completing the map and inventory, with a final completion date of no later than four years following the date of designation. The completed map and inventory must be submitted to EPD with the first annual report following completion of the map and inventory. 2.b. Provide a status of the mapping and the inventory of identified outfalls in each annual report. 2.c. After completion of the initial outfall map and inventory, provide an updated map and inventory showing any outfalls added during the reporting period and the total number of outfalls on the MS4 in subsequent annual reports.
3. IDDE Plan	3.a. Develop an IDDE Plan, including field screening procedures, source tracing procedures, and discharge elimination procedures. The program must include example forms, such as an inspection form, example enforcement letters, etc. Submit the IDDE Plan to EPD for review and approval within one year following the date of designation with that year's annual report. 3.b. Implement the IDDE Plan by conducting DWS

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	inspections on outfalls as the mapping occurs in Item 2.a. above. Provide documentation of the outfall inspections conducted during the reporting period with each annual report. 3.c. Upon completion of the mapping, conduct DWS inspections on 100% of the outfalls within a 5-year period, or use an alternate method approved by EPD, in accordance with the procedures contained in the SWMP. At a minimum, the permittee must conduct DWS inspections on 5% of the outfalls annually, or if inspections are done by a geographical area, then one area or sector must be inspected each year, so that inspections are performed during each reporting period. If the permittee conducts stream walks of intermittent and perennial streams in conjunction with the DWS inspections, then 100% of the stream miles containing or downstream of an MS4 outfall must be inspected within the 5-year period. At a minimum, the permittee must conduct stream walks on 5% of the stream miles annually, or if walks are done by a geographical area, then streams within one area or sector must be walked each year. The permittee must report the number of stream miles walked as well as the number of outfalls screened using each method (i.e. DWS, stream walks, alternate approved method). Provide the number of outfall inspections conducted during the reporting period and documentation of the outfall inspections in each annual report. 3.d. Implement investigative and follow-up procedures when the results of the DWS indicate a potential for an illicit discharge, including the sampling and/or inspection procedures described in the IDDE Plan. If the source of the illicit discharge is identified as deriving from an adjacent MS4, then the permittee must notify that MS4. Provide information on any investigative activities performed during the reporting period in each annual report. 3.e. Ensure any identified illicit discharges are eliminated. If necessary, implement enforcement procedures described in the ERP in Part 4.3 of this permit. Provide information on any eliminated

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	discharges or on any enforcement actions taken to eliminate illicit discharges, such as through a spreadsheet or table, during the reporting period in each annual report.
4. Education	4.a. Develop a program to educate the public, businesses, and government employees about the hazards of illicit discharges. Conduct an educational activity for each target audience at least annually. Submit the program to EPD for review and approval within one year of designation with that year's annual report. 4.b. Implement the education program. Provide documentation of any activities conducted during the reporting period in each annual report.
5. Complaint Response	5.a. Develop procedures for receiving, investigating, and tracking the status of illicit discharge complaints and submit the procedures to EPD for review and approval within one year of designation with that year's annual report. 5.b. Implement the complaint response procedures. Provide a report on each illicit discharge related complaint received and investigated during the reporting period (e.g. complaint date, type of complaint, complaint status) in each annual report.

4.2.3.6 The inventory and inspection of industrial and commercial facilities can help identify illicit discharges and the potential for pollution in stormwater runoff from these facilities. EPD recommends that the permittee pursue a program addressing these types of facilities in the permitted area, including the development of an inventory, inspection of facilities, and possible enforcement. The permittee may establish its inventory of industrial facilities using EPD's Industrial General Permit (IGP) Notice of Intent and No Exposure Exclusion online listing. For commercial facilities, the permittee may use its business license list to identify facilities with the potential to have higher than normal levels of pollutants in stormwater runoff. If the permittee chooses to implement a program to address industrial and/or commercial facilities, the details may or may not be defined as a separate BMP in the SWMP. If a BMP is included in the SWMP, then the permittee must fully implement the activities associated with the BMP and report on these activities in each annual report. Failure to fully implement the additional BMP may be considered permit noncompliance.

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4.2.4 Construction Site Stormwater Runoff Control

The permittee must develop, implement and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Stormwater discharges from construction activity disturbing less than one acre must be included in the permittee's program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the permittee is certified as a Local Issuing Authority, then the program must be implemented by the permittee and detailed procedures must be specified in the SWMP. If the permittee is not a Local Issuing Authority, then the procedures in the SWMP must describe implementation of the program by EPD. The permittee must develop and implement a construction site stormwater runoff control program that contains the following elements:

4.2.4.1 An ordinance or other regulatory mechanism to require erosion and sediment (E&S) controls, as well as sanctions to ensure compliance, to the extent allowable, under State or local law;

4.2.4.2 Requirements for construction site operators to implement E&S control best management practices;

4.2.4.3 Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse water quality impacts;

4.2.4.4 Procedures for site plan review that incorporate consideration of potential water quality impacts;

4.2.4.5 Procedures for receipt and consideration of information submitted by the public; and

4.2.4.6 Procedures for site inspection and enforcement of control measures.

For existing permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.4(a) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.4(a) Construction Site Stormwater Runoff Control – Best Management Practices (Existing Permittees)

BMPs	Measurable Goals
1. Legal Authority	1.a. Evaluate, and if necessary, modify the existing E&S ordinance for compliance with this permit. Ensure either

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	the E&S or litter ordinance requires construction site operators to control waste at the construction site, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. If the ordinance is revised during the reporting period, submit a copy of the adopted ordinance with the annual report.
2. Site Plan Review Procedures	2.a. Implement the site plan review procedures in accordance with the Georgia Soil and Water Conservation Commission (GSWCC) requirements. 2.b. Provide a list of the site plans received and the number of site plans reviewed, approved, or denied during the reporting period in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
3. Inspection Program	3.a. Implement the construction site inspection procedures in accordance with the GSWCC requirements. 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. 3.b. Provide a list of active construction sites and any inspections conducted during the reporting period in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
4. Enforcement Procedures	4.a. Implement enforcement procedures for E&S violations documented at construction sites during the reporting period as described in the ERP required by Part 4.3 of this permit. 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). If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
5. Complaint Response	5.a. Implement the EPD approved E&S complaint receipt, investigation, response, and tracking procedures developed as part of the SWMP. Provide information on complaints received and investigated during the reporting period (e.g. complaint date, type of complaint, complaint status) in each annual

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	report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
6. Certification	6.a. 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 GSWCC. 6.b. Provide the number and type of current certifications held by MS4 staff in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.

For new permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.4(b) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.4(b) Construction Site Stormwater Runoff Control - Best Management Practices (New Permittees)

BMPs	Measurable Goals
1. Legal Authority	1.a. Develop an ordinance(s) that requires construction site operators to implement E&S controls and control waste at the construction site, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. Submit the adopted ordinance(s) to EPD within one year of designation with that year's annual report. 1.b. After adoption, evaluate the ordinance annually. If necessary, modify the E&S ordinance for compliance with this permit. If the ordinance is revised during the reporting period, submit a copy of the adopted ordinance with that year's annual report.
2. Site Plan Review Procedures	2.a. Develop procedures for conducting site plan reviews in accordance with the GSWCC requirements. Submit the procedures to EPD for review and approval within one year of designation. If the permittee is not a Local Issuing Authority, the procedures must describe implementation of the BMP by EPD. 2.b. Implement the site plan review procedures upon approval by EPD. Submit a list of the site plans received and the number of site plans reviewed, approved, or

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	denied during the reporting period in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
3. Inspection Program	3.a. Develop construction site inspection procedures in accordance with the GSWCC requirements. 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. Submit the procedures to EPD for review and approval within one year of designation with that year's annual report. If the permittee is not a Local Issuing Authority, the procedures must describe implementation of the BMP by EPD. 3.b. Implement the inspection procedures. Provide a list of active construction sites and any E&S inspections conducted during the reporting period in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
4. Enforcement Procedures	4.a. Upon approval of the ERP (required by Part 4.3 of this permit) by EPD, implement enforcement procedures for E&S violations documented at construction sites during the reporting period. 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). If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.
5. Complaint Response	5.a. Develop E&S complaint receipt, investigation, response, and tracking procedures. Submit the procedures to EPD for review and approval within one year of designation with that year's annual report. If the permittee is not a Local Issuing Authority, the procedures must describe implementation of the BMP by EPD. 5.b. Implement the E&S complaint response procedures. Provide information on complaints received and investigated during the reporting period (e.g. complaint date, type of complaint, complaint status) in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented

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	by EPD.
6. Certification	6.a. Ensure that any MS4 staff involved in construction activities subject to the CGPs are trained and certified in accordance with the rules adopted by the GSWCC. 6.b. Provide the number and type of current certifications held by MS4 staff in each annual report. If the permittee is not a Local Issuing Authority, explain in the annual report that the BMP is implemented by EPD.

4.2.5 Post-Construction Stormwater Management in New Development and Redevelopment

The permittee must develop, implement and enforce a program to address stormwater runoff into the MS4 from new development and redevelopment projects, including projects less than one acre if they are part of a larger common plan of development or sale, as described in Parts 4.2.5.1 and 4.2.5.2. The program must ensure that controls are in place that will prevent or minimize water quality impacts. At a minimum, the Post-Construction Stormwater Management in New Development and Redevelopment Program must contain the following requirements:

- Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for your community;
- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State and local law; and
- Ensure adequate long-term operation and maintenance of the BMPs.

4.2.5.1 Stormwater Design Manual

The permittee must implement either the appropriate parts of the latest version of the Georgia Stormwater Management Manual (GSMM) (http://atlantaregional.org/georgia-stormwater-management-manual/) or an equivalent or more stringent local design manual. For those permittees located in the 11-county coastal management program service area (Bryan, Brantley, Camden, Charlton, Chatham, Effingham, Glynn, Liberty, Long, McIntosh, and Wayne), the adopted manual must include the applicable parts of the Coastal Stormwater Supplement (CSS) to the GSMM (http://documents.atlantaregional.com/gastormwater/Georgia-CSS-Final-Apr-09.pdf). All permittees must implement the GSMM and/or CSS to the maximum extent practicable. The permittee must provide documentation to EPD in the 2018 annual report to demonstrate the date of the adoption of the appropriate design manual(s).

For new permittees, the adoption of the GSMM or a local design manual and/or the CSS must be completed within one year of designation.

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Documentation of the design manual adoption must be provided to EPD with that year's annual report. Implementation must begin upon adoption.

At a minimum, the permittee shall apply the standards for new development and redevelopment to any site that meets one or more of the following criteria:

- New development that creates or adds 5,000 square feet or greater of new impervious surface area, or that involves land disturbing activity of one acre of land or greater.
- Redevelopment that creates, adds, or replaces 5,000 square feet or greater of new impervious surface area, or that involves land disturbing activity of 1 acre or more, including projects less than 1 acre if they are part of a larger common plan of development or sale.

For sites meeting the above criteria, the permittee shall ensure that the minimum performance standards are applied during the site plan preparation and/ or review process. The performance standards must be implemented to the maximum extent practicable.

The performance standards to be implemented are as follows:

Stormwater Runoff Quality/Reduction:
Stormwater runoff shall be adequately treated prior to discharge.

1. From the issuance date of the Permit until December 6, 2020, the permittee must address stormwater runoff using either Option (a) or Option (b) below:

a) The stormwater management system shall be designed to retain the first 1.0 inch of rainfall on the site, to the maximum extent practicable. The determination by the MS4 that it is infeasible to apply the stormwater runoff quality/reduction standard, on part or all of a project, must be documented with the site plan review documents. If the first 1.0 inch of rainfall can be retained onsite using runoff reduction methods, then additional water quality treatment is not required. If the 1.0 inch cannot be retained onsite, the remaining runoff from a 1.2 inch rainfall event must be treated to remove at least 80% of the calculated average annual post-development total suspended solids (TSS) load or equivalent as defined in the GSMM or in the equivalent manual.

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For those permittees located in the 11-county coastal management program service area and subject to the CSS, stormwater runoff shall be retained onsite or adequately treated prior to discharge. As identified in CSS, reducing the runoff generated by 1.2 inches of rainfall is a reasonable initial target. If the target cannot be met, the permittee must ensure that adequate documentation is provided to show that no additional runoff reducing green infrastructure practices can be used on the development site. At a minimum, appropriate green infrastructure practices must be used to reduce the stormwater runoff volume generated by the 0.6 inch rainfall event (and the first 0.6 inches of all larger rainfall events). Any of the stormwater runoff generated by the 1.2 inch storm event (and the first 1.2 inches of all larger rainfall events) that is not reduced on the development site should be intercepted and treated in one or more stormwater management practices that provide at least an 80% reduction in TSS loads and that reduce nitrogen and bacteria loads to maximum extent practicable.

b) The stormwater management system shall be designed to remove 80% of the average annual post-development TSS load or equivalent as defined in the GSMM or in the equivalent manual. Compliance with this performance standard is presumed to be met if the stormwater management system is sized to capture and treat the water quality treatment volume, which is defined as the runoff volume resulting from the first 1.2 inches of rainfall from a site.

No later than December 6, 2020, all permittees must be using approach 1(a) above to achieve compliance with this performance standard. This timeframe is to allow sufficient study, training, and planning on the part of the municipality. All site plan reviewers, construction site inspectors, and other personnel whose duties involve post construction stormwater runoff are encouraged to receive training in the new GSMM and the runoff quality/reduction standard during that implementation phase. Pilot projects, advisory committees, and other programs intended to study and implement the runoff quality/reduction requirement are recommended.

Stream Channel/Aquatic Resource Protection:
Stream channel and/or aquatic resource protection shall be provided by using the following approaches: 1) 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event; 2)

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erosion prevention measures such as energy dissipation and velocity control; and 3) preservation of the applicable stream buffer.

Overbank Flood Protection:
Downstream overbank flood protection shall be provided by controlling the post-development peak discharge rate to the predevelopment rate for the 25-year, 24-hour storm event.

Extreme Flood Protection:
Extreme flood protection shall be provided by controlling the 100-year, 24-hour storm event such that flooding is not exacerbated.

Trout Stream Protection
For receiving waters with a trout stream designation, which contain outfalls from the permittee's MS4, the permittee's SWMP must address the protection of trout waters from impacts from the MS4 outfalls due to elevated temperature.

4.2.5.2 Linear Transportation Projects

The performance standards in Part 4.2.5.1 must be applied during the design of all construction projects. However, the performance standards may be infeasible to apply, all or in part, for linear transportation projects being constructed by the permittee, local governments, or authorities. The permittee may develop a feasibility program which sets reasonable criteria for determining when implementing the performance standards in linear transportation projects is infeasible. The permittee may develop this feasibility program and submit it to EPD for review. Upon submittal to EPD, the permittee, local governments, and authorities may begin implementation of this feasibility program for linear transportation projects only.

4.2.5.3 Green Infrastructure/Low Impact Development (GI/LID)

The requirements of Part 4.2.5.3 of this permit only apply to those permittees with a population exceeding 10,000 at the time of this permit issuance or at the time of designation. Permittees with a population less than 10,000 are exempt from this requirement at this time (See Appendix B).

The permittee shall continue to review and revise, where necessary, building codes, ordinances, and other regulations to ensure they do not prohibit or impede the use of GI/LID practices, including infiltration,

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reuse, and evapotranspiration. At a minimum, the permittee shall assess those regulations governing road design and parking requirements. During the review, the permittee should consider the inclusion of incentives for use of GI/LID practices into the regulatory documents. For existing permittees, the evaluation should have been completed, a written report submitted to EPD, and any necessary revisions completed and adopted ordinances submitted to EPD during the previous permit iteration (due by December 6, 2016). For new permittees, the evaluation must be completed within two years of designation and a written report submitted to EPD with the subsequent annual report. Any necessary revisions must be completed, and adopted ordinances submitted to EPD within four years after designation.

Design information on GI/LID practices can be found on the Atlanta Regional Commission's website (http://www.atlantaregional.com/) for the GSMM and the CSS. Additional information on GI/LID and better site design can be found on numerous websites, including these suggested sites: USEPA (www.epa.gov), Center for Watershed Protection (www.cwp.org), Georgia Coastal Resource Division's "Georgia's Green Growth Guidelines" (http://coastalgadnr.org/cm/green.guide)), and Green Infrastructure Center (www.gicinc.org). In addition, you may want to consult the following webpage on EPA's website: www.epa.gov/nps/lid.

For existing permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.5(a) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.5(a) Post-Construction Stormwater Management - Best Management Practices (Existing Permittees)

BMPs	Measurable Goals
1. Legal Authority	1.a. Evaluate, and if necessary, modify the existing ordinance. If the ordinance is revised during the reporting period, submit a copy of the adopted ordinance with the annual report.
2. Inventory	2.a. Annually update an inventory of all publicly-owned post-construction stormwater management structures (e.g. detention/retention ponds, water quality vaults) and only those privately-owned structures designed after the December 9, 2008 deadline for adoption of the GSMM (i.e. new structures). The inventory shall include information on the number and type of structures, and ownership (i.e. publicly-owned, privately-owned). The

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	inventory must be updated as new structures are completed or existing structures are identified. The permittee may choose to also include privately-owned structures designed prior to the December 9, 2008 deadline for adoption of the GSMM on the inventory. 2.b. Provide the updated inventory of post-construction stormwater management structures, including those structures added during the reporting period in each annual report.
3. Inspection Program	3.a. Conduct inspections of all post-construction stormwater management structures included on the inventory required in BMP #2 above, so that 100% of the structures are inspected within the 5-year permit term. At a minimum, the permittee must conduct inspections on 5% of the structures annually, or if inspections are done by geographical area, then one entire area or sector must be inspected each year. Provide documentation of the inspections conducted during the reporting period in each annual report.
4. Maintenance Program	4.a. Implement the long-term operation and maintenance program for post-construction stormwater management structures. Describe detailed procedures in the SWMP. At a minimum, the maintenance program must address all permittee-owned structures, those publicly-owned structures owned by other entities (e.g. Board of Education), and those privately-owned structures with construction completed after the effective date of the previous permit iteration (December 6, 2012). The permittee may choose to also address privately-owned structures constructed prior to the December 6, 2012 date. The maintenance may be performed by the permittee or by the owner/operator of the structure. Maintenance must be performed to the maximum extent practicable. 4.b. For permittee-owned structures, provide a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed during the reporting period with each annual report. 4.b.1. For publicly-owned structures owned by other entities and those privately-owned structures with

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	construction completed after the December 6, 2012 date, the permittee must either conduct maintenance or require maintenance agreements. • If the permittee conducts the maintenance, provide a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed during the reporting period in each annual report. • If maintenance is to be performed by an owner/operator in accordance with a maintenance agreement, the permittee must retain copies of maintenance agreements finalized after December 6, 2012, and submit a summary list of these agreements with each annual report. Any maintenance agreements executed during subsequent reporting periods must be included on the summary list submitted with each annual report. The total number of executed maintenance agreements must be provided in each annual report. 4.b.2. If the permittee addresses privately-owned structures constructed prior to December 6, 2012, then provide a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed during the reporting period in each annual report.
5. GI/LID Structure Inventory	5.a. Annually update an inventory of water quality-related GI/LID structures located within the permitted area and at a minimum, constructed after December 6, 2012, including the total number of each type of structure (e.g. bioswales, pervious pavement, rain gardens, cisterns, and green roofs). The inventory must, at a minimum, include permittee-owned GI/LID structures, those publicly-owned structures owned by other entities, and privately-owned non-residential GI/LID structures. Track the addition of new water quality-related GI/LID structures through the plan review process and ensure the structures are added to the inventory.

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	5.b. Provide an updated inventory, including those structures added during the reporting period, in each annual report.
6 GI/LID Program	6.a. For those permittees with a population exceeding 10,000 at the time of this permit issuance, develop a program describing the GI/LID practices (e.g. better site planning techniques, better site design techniques) to be implemented by the permittee. The program shall include: • procedures for evaluating the feasibility and site applicability of different GI/LID techniques and practices to be considered; • the GI/LID structures allowed to be constructed within the permittee's jurisdiction; • procedures for the inspection and maintenance of the GI/LID structures, including permittee-owned structures, publicly-owned structures owned by other entities, and privately-owned non-residential (e.g. who inspects, who maintains, inspection and maintenance schedule, method of documentation of inspection and maintenance activities). The GI/LID program must be submitted to EPD by February 15, 2020. The program must be included in the SWMP and must be implemented by the permittee. 6.b. For those permittees with a population less than 10,000 at the time of this permit issuance, develop a program for the inspection and maintenance of the GI/LID structures, including permittee-owned, publicly-owned structures owned by other entities, and privately-owned non-residential (e.g. who inspects, who maintains, inspection and maintenance schedule, method of documentation of the inspection and maintenance activities). The GI/LID inspection and maintenance program must be submitted to EPD by February 15, 2020. The program must be included in the SWMP and must be implemented by the permittee. 6.c. If the GI/LID program is revised during the reporting period, submit the revised program to EPD for review with the annual report.
7. GI/LID Inspection and Maintenance Program	7.a. Beginning in 2020, conduct inspections and/or ensure inspections are conducted on 100% of the GI/LID

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	structures included in the inventory created in BMP 5.a above, within a 5-year period. The inspections must be completed in accordance with the schedule submitted in the GI/LID program submitted in BMP 6 above. Provide documentation of the inspections conducted during the reporting period in each annual report. 7.b. Conduct maintenance on the permittee-owned GI/LID structures, as needed. Provide the number of structures and percentage of the total structures maintained during the reporting period in each annual report. 7.c. Implement the maintenance procedures in accordance with the GI/LID program submitted in BMP 6 above for ensuring publicly-owned structures owned by other entities and privately-owned non-residential GI/LID structures are maintained as needed. Provide documentation of these activities in each annual report.

For new permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.5(b) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.5(b) Post-Construction Stormwater Management - Best Management Practices (New Permittees)

BMPs	Measurable Goals
1. Legal Authority	1.a. Develop and adopt a post-construction ordinance that includes the adoption of the GSMM or a local design manual. Submit a copy of the adopted ordinance to EPD within one year of designation with that year's annual report.
2. Inventory	2.a. Develop an inventory of all publicly-owned post-construction stormwater management structures (e.g. detention/retention ponds, water quality vaults) and those privately-owned structures designed after the adoption of the GSMM or within one year of designation, whichever is later. The inventory shall include information on the number and type of structures, and ownership (i.e. publicly-owned, privately-owned). The permittee may choose to also include other privately-owned structures on the inventory. The SWMP must include a schedule for completing the inventory with a final completion date of

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	no later than 3 years following designation. The completed inventory must be submitted to EPD with the first annual report following completion. 2.b. Provide the status of the inventory development and/or update of the inventory in each annual report. 2.c. After completion of the initial inventory, update the inventory as new structures are completed or additional structures are identified. Provide an updated inventory of post-construction stormwater management structures, including those structures added during the reporting period, in each subsequent annual report.
3. Inspection Program	3.a. Develop an inspection program. Describe the program details in the SWMP. The program must include a schedule for conducting inspections on all post-construction stormwater management structures included on the inventory required in BMP #2 above, so that 100% of the structures are inspected within a 5-year period. At a minimum, the permittee must conduct inspections on 5% of the structures annually, or if inspections are done by geographical area, then one entire area or sector must be inspected each year. Submit the program to EPD for review and approval no later than 3 years following designation with that year's annual report. 3.b. Conduct inspections in accordance with the approved program. Describe the program details in the SWMP. Provide documentation of the inspections conducted during the reporting period in each annual report.
4. Maintenance Program	4.a. Develop a long-term operation and maintenance program for post-construction stormwater management structures. At a minimum, the program must address all permittee-owned structures, publicly-owned structures owned by other entities (e.g. Board of Education), and those privately-owned structures with construction completed after the date of designation. The permittee may choose to also address privately-owned structures constructed prior to the date of designation. Submit the program to EPD for review and approval no later than 3 years following designation with that year's annual report.

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	4.b. Upon approval by EPD, implement the long-term operation and maintenance program for post-construction stormwater management structures. The maintenance may be performed by the permittee or by the owner/operator of the structure. 4.b.1. For permittee-owned structures, provide a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed during the reporting period with each annual report. 4.b.2. For publicly-owned structures owned by other entities and those privately-owned structures with construction completed after the date of designation, the permittee must either conduct maintenance or require maintenance agreements. • If the permittee conducts the maintenance, provide a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed during the reporting period in each annual report. • If maintenance is to be performed by an owner/operator in accordance with a maintenance agreement, the permittee must submit a summary list of finalized maintenance agreements with the first annual report following program implementation. Any maintenance agreements executed during subsequent reporting periods must be added to the summary list and submitted with each annual report. The total number of executed maintenance agreements must be provided in each annual report. 4.b.3. If the permittee addresses privately-owned structures constructed prior to the date of designation in their program, then provide a list of structures maintained and the type of maintenance performed, including documentation of maintenance activities performed during the reporting period in each annual

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	report.
5. GI/LID Structures	5.a. Develop an inventory of water quality-related GI/LID structures located within the permitted area and at a minimum, constructed after the date of designation, including the total number of each type of structure (e.g. bioswales, pervious pavement, rain gardens, cisterns, and green roofs). Provide the inventory within one year of designation with that year's annual report. 5.b. Track the addition of new water quality-related GI/LID structures through the plan review process and ensure the structures are added to the inventory. Provide an updated inventory, including those structures added during the reporting period, in subsequent annual reports.

4.2.6 Pollution Prevention/Good Housekeeping for Municipal Operations

The permittee must develop and implement an operation and maintenance program that includes a training component with the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials available from the USEPA and other organizations as guidance, the permittee must, as a part of this program, include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance. The program shall, at a minimum, contain all the following requirements:

For existing permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.6(a) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.6(a) Pollution Prevention/Good Housekeeping for Municipal Operations - Best Management Practices (Existing Permittees)

BMPs	Measurable Goals
1. MS4 Control Structure Inventory and Map	1.a. Annually update an inventory and map of the MS4 control structures. At a minimum, the inventory and map must include catch basins, ditches (miles or linear feet), detention/retention ponds, and storm drain lines (miles or linear feet). 1.b. 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.
2. MS4 Inspection Program	2.a. Conduct inspections on the MS4 control structures so that 100% of the structures are inspected within a 5-

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	year period. All permittees must conduct at least one inspection per year. The MS4 must develop an inspection schedule and include the schedule in the SWMP. Provide the number and percentage of structures inspected during the reporting period in each annual report.
3. MS4 Maintenance Program	3.a. Conduct maintenance on the MS4 control structures as needed. Provide the number of each type of structure maintained during the reporting period in each annual report.
4. Street and Parking Lot Cleaning	4. Conduct street and parking lot cleaning using either of the following methods: 4.a. Conduct street sweeping at a frequency of at least 1 mile per year. Develop procedures and include the procedures in the SWMP. Provide documentation of any street sweeping activities conducted during the reporting period in each annual report. 4.b. If the MS4 does not engage in street sweeping, then implement an alternate method of street cleaning, such as trash/litter removal. Describe the procedures in the SWMP. Provide documentation of the litter removal activities conducted during the reporting period in each annual report.
5. Employee Training	5.a. Implement the employee training program described in the SWMP. At a minimum, employee training must occur annually. The training should include such topics as good housekeeping at municipal facilities, illicit discharge detection, construction site inspections, and green infrastructure. Provide documentation of the educational activities conducted during the reporting period in each annual report.
6. Waste Disposal	6.a. Implement procedures regarding the proper disposal of waste removed from the MS4 as described in the SWMP. Provide documentation of activities performed during the reporting period in each annual report.
7. New Flood Management Projects	7.a. Ensure proposed flood management projects (e.g. detention and retention ponds) are assessed for water quality impacts during the design phase. Provide the number of plans reviewed where flood management projects were assessed for water quality impacts during the reporting period in each annual report.
8. Existing Flood	8.a. Conduct an assessment of existing permittee-owned

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Management Projects	flood management projects (e.g. detention and retention ponds) for potential retrofitting to address water quality impacts and conduct any retrofitting activities. Assess at least 1 structure annually or if the permittee has less than 5 structures, then assess 100% within a 5-year period. Provide information on any assessment and/or retrofitting activities conducted during the reporting period in each annual report.
9. Municipal Facilities	9.a. Annually update an inventory of municipal facilities with the potential to cause pollution. The inventory must be submitted with each annual report. 9.b. Conduct inspections on 100% of the municipal facilities within the 5-year period in accordance with the procedures described in the SWMP. At a minimum, the permittee must conduct inspections on 5% of the municipal facilities annually, or if inspections are done by geographical area, then one entire area or sector must be inspected. Provide documentation of the inspections conducted during the reporting period in each annual report.

For new permittees, the program shall, at a minimum, implement the requirements shown in Table 4.2.6(b) below and include descriptions of how they are implemented in the SWMP:

Table 4.2.6(b) Pollution Prevention/Good Housekeeping for Municipal Operations - Best Management Practices (New Permittees)

BMPs	Measurable Goals
1. MS4 Control Structure Inventory and Map	1.a. Develop an inventory and map of the MS4 control structures. At a minimum, the inventory and map must include catch basins, ditches (miles or linear feet), detention/retention ponds, and storm drain lines (miles or linear feet). The completion date for development of the inventory and map must not exceed 4 years from the date of designation. Submit the completed inventory and map with the annual report following inventory and map completion. 1.b. Upon completion of the inventory and map, update the inventory and map as necessary. Provide the number of structures added during the reporting period and the total number of structures in each annual report.
2. MS4 Inspection Program	2.a. Develop an inspection program. Describe the

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	program details, including the method that will be used to document inspections (e.g. example inspection form), in the SWMP. The program must include a schedule for conducting inspections of the MS4 control structures so that 100% of the structures are inspected within a 5-year period. The permittee must conduct at least one inspection per year. Submit the program to EPD for review and approval with the SWMP. 2.b. Implement the inspection program. The MS4 inspections may be performed during mapping of the system or in accordance with the schedule contained in the approved inspection program. Provide the number and percentage of structures inspected during the reporting period in each annual report.
3. MS4 Maintenance Program	3.a. Develop a storm sewer system maintenance program specifying such things as prioritization, factors determining the need for maintenance, the method that will be used to document inspections (e.g. an example form), etc. Submit the program to EPD for review and approval with the first annual report following designation. 3.b. Implement the maintenance program for the MS4 control structures. Provide the number of each type of structure maintained during the reporting period in each annual report.
4. Street and Parking Lot Cleaning	4.a. Develop street and parking lot cleaning procedures. The procedures may address the use of a street sweeper, trash/litter removal, or another method. Submit the procedures to EPD for review and approval with the first annual report following designation. 4.b. Implement the street and parking lot cleaning procedures. Provide documentation of the litter removal activities conducted during the reporting period in each annual report.
5. Employee Training	5.a. Develop an employee training program and submit the program to EPD for review and approval with the SWMP. The training should include such topics as good housekeeping at municipal facilities, illicit discharge detection, construction site inspections, and green infrastructure. At a minimum, employee training must occur annually.

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	5.b. Implement the employee training program. Provide documentation of the educational activities conducted during the reporting period in each annual report.
6. Waste Disposal	6.a. Develop procedures for the proper disposal of waste removed from the MS4. Submit the procedures to EPD for review and approval with the SWMP. 6.b. Implement procedures regarding the proper disposal of waste removed from the MS4. Provide documentation of activities performed during the reporting period in each annual report.
7. New Flood Management Projects	7.a. Develop procedures for ensuring proposed flood management projects (e.g. detention and retention ponds) are assessed for water quality impacts during the design phase. Submit the procedures to EPD for review and approval with the SWMP. 7.b. Implement the procedures. Provide the number of plans reviewed where flood management projects were assessed for water quality impacts during the reporting period in each annual report.
8. Existing Flood Management Projects	8.a. Develop procedures for assessing existing permittee-owned flood management projects (e.g. detention and retention ponds) for potential retrofitting to address water quality impacts. At least 1 structure must be assessed annually or if the permittee has less than 5 structures, assess 100% of the structures within a 5-year period. Submit the procedures to EPD for review and approval with the first annual report following designation. 8.b. Implement the approved procedures. Provide information on any assessment and/or retrofitting activities conducted during the reporting period in each annual report.
9. Municipal Facilities	9.a. Develop an inventory of municipal facilities with the potential to cause pollution. The inventory must be submitted to EPD within one year of designation with that year's annual report. The inventory must be updated annually and submitted with each subsequent annual report. 9.b. Develop inspection procedures, including an

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	example inspection form. Submit the procedures to EPD for review and approval within one year of designation with that year's annual report. 9.c. Implement the inspection procedures. Conduct inspections on 100% of the municipal facilities within the 5-year period in accordance with the approved procedures. At a minimum, the permittee must conduct inspections on 5% of the municipal facilities annually, or if inspections are done by geographical area, then one entire area or sector must be inspected. Provide documentation of the inspections conducted during the reporting period in each annual report.

4.3 Enforcement Response Plan (ERP)

The permittee must develop and implement an ERP that describes the action to be taken for violations associated with the permittee's ordinances and other legal authorities. The ERP will detail the permittee's responses to any noted stormwater violations, including escalating enforcement responses to address repeat and continuing violations. The plan must detail:

- Names of ordinances providing the legal authority to undertake enforcement, including citation of specific ordinance sections;
- Types of enforcement mechanisms available for each area (e.g. IDDE, Construction, Post-Construction). The ERP must list the enforcement actions the permittee has the authority to use, including such actions as:
    - verbal warnings;
    - written notice of violations;
    - citations (with fines);
    - stop work orders;
    - withholding plan approval or other authorizations; and
    - any other available enforcement mechanisms.
- Description of when each enforcement mechanism will be employed, including the path of escalation;
- Time frames for each step, including investigation of noncompliance, sequence and use of enforcement mechanisms, corrective action by responsible party, re-inspection of site, etc.
- Description of the methods to be used to track, either manually or electronically, instances of noncompliance, including such items as:
    - name of owner/operator of facility and/or the location or address;
    - type of site (e.g. IDDE, construction);
    - description of noncompliance;
    - description of enforcement action(s) used;
    - time frames for each step (e.g. investigation, corrective action, re-inspection);

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- documentation of inspection and enforcement actions taken;
- documentation of referral to other departments or agencies; and
- date of violation resolution.

For existing permittees, the ERP must be reviewed annually and revised as needed. If revised during the reporting period, submit the ERP to EPD for review. For permittees designated after the issuance date of the permit, the ERP must be submitted within one year, with that year's annual report. The ERP must be implemented within six (6) months of EPD approval. Once approved, the ERP will become an addendum to the permittee's SWMP.

4.4 Impaired Waters

4.4.1 The requirements of Part 4.4.1 of this permit apply to those permittees with a population less than 10,000 at the time of permit issuance (see Appendix B) or at the time of designation:

The permittee must identify any impaired waters located within its permitted area, using the latest approved 305(b)/303(d) List of Waters (http://www.epd.georgia-305b303d-list-documents), which contain MS4 outfalls or are within one (1) linear mile downstream of MS4 outfalls. Also, the pollutant(s) of concern must be identified. If a Total Maximum Daily Load (TMDL) containing a wasteload allocation specific to one or more of the permittee's outfalls is approved, then the wasteload allocation must be incorporated into the SWMP. All previous and newly approved TMDLs within the permitted areas must be included in either the proposed Impaired Waters Plan (Plan) or a revision to the existing Plan. The permittee must develop a Plan to reduce the pollutant of concern, including:

- A list of the impaired waters and 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.

For existing permittees, the Plan must be reviewed annually and if revisions are needed, submit the Plan to EPD for review with the subsequent annual report. For permittees designated after the issuance date of the permit, the Plan must be submitted with the annual report due within 4 years of designation. Once approved, the Plan will become an addendum to the SWMP.

Upon EPD approval of the Plan, the permittee must implement the chosen BMPs. After BMP implementation, each annual report must include an evaluation of the effectiveness of the chosen BMPs, and if necessary, revisions to existing BMPs or implementation of additional BMPs to reduce the pollutant of concern.

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Each year, the permittee must review the List of Waters to determine if additional impaired waters within the permitted area have been listed. If additional impaired waters are present, then the permittee must amend the Plan to include a map showing these impaired waters and the outfalls to these waters, identify BMPs to address the pollutant of concern and a BMP implementation schedule. Each subsequent annual report must address Plan activities related to all of the impaired waters.

4.4.2 The requirements of Part 4.4.2 of this permit apply to those permittees with a population exceeding 10,000 at the time of permit issuance (see Appendix B) or at the time of designation:

The permittee must identify any impaired waters located within its permitted area, using the latest approved 305(b)/303(d) List of Waters (http://www.georgia.gov/georgia-305b303d-list-documents), which contain MS4 outfalls or are within one (1) linear mile downstream of MS4 outfalls. Also, the pollutant(s) of concern must be identified. For those impaired waters, the permittee shall propose a Monitoring and Implementation Plan (Plan) addressing each pollutant of concern. The permittee must annually check whether an impaired water within its permitted area has been added to the latest 305(b)/303(d) list. Newly listed waters must be addressed in the Plan and the SWMP must be revised accordingly. The permittee must report on all monitoring activities in subsequent annual reports. If a TMDL containing a wasteload allocation specific to one or more of the permittee's outfalls is approved, then the wasteload allocation must be incorporated into the SWMP. All previous and newly approved TMDLs within the permitted areas must be included in either the proposed Plan or a revision to the existing Plan.

The Plan shall include:

- Sample location, whether samples are collected instream (i.e. upstream and downstream), from outfalls during wet weather events, or a combination of both locations. Bacteriological samples must be collected instream. If the permittee chooses to conduct outfall sampling and there are multiple outfalls located on an impaired stream, then the permittee may choose representative outfalls for sampling in place of sampling all outfalls;
- Sample type, frequency, and any seasonal considerations;
- Implementation schedule to start monitoring for each pollutant of concern;
- Map showing the location of the impaired waters, the monitoring location, and all identified MS4 outfalls located on the impaired waters or occurring within one linear mile upstream of these waters, or a schedule for confirming the location of these outfalls; and
- Description of proposed BMPs to be used to control and reduce the pollutant(s) of concern and a schedule for implementation of these BMPs.

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Each Annual Report shall include:

- Any monitoring data collected during the reporting period;
- An assessment of the data trends over time for each pollutant of concern. The assessment shall initially include a characterization of baseline conditions. The data assessment must include a written evaluation of whether water quality is improving, declining, fluctuating, or remaining constant. This assessment can be provided in the method chosen by the permittee (e.g. line graphs, narrative). If monitoring identifies that an upstream MS4 is the source of the pollutant of concern, then the permittee must notify the immediately adjacent MS4.
- An assessment to determine the effectiveness of the BMPs employed and what, if any, additional adaptive BMP measures may be necessary to return the waters to compliance with State water quality standards. If BMP revisions and/or additional BMPs are necessary, then the revised Plan must be submitted to EPD for review.

For those waters where the permittee is conducting monitoring, the data must be made available to other MS4 permittees upon request. In the event that monitoring is performed in accordance with an EPD-approved Sampling Quality and Assurance Plan, and a water is removed from the 303(d) list of impaired waters, then monitoring conducted under the Plan may cease. Monitoring for the purpose of de-listing an impaired water will benefit the permittee through reduced expenses associated with long-term testing.

Existing permittees must submit a modified Plan for any newly listed waters with the subsequent annual report. For permittees designated after the issuance date of the permit, the Plan must be submitted with the annual report due within 4 years of designation. Following review and comment on the Plan by EPD, the permittee will incorporate necessary revisions into the Plan. Once approved, the Plan will become an addendum to the SWMP.

4.5 Sharing Responsibility

4.5.1 The permittee may share implementation of one or more of the minimum measures with another entity, or the entity may assume full responsibility for that measure. However, the permittee may rely on another entity only if:

4.5.1.1 The other entity is either implementing or will be implementing the control measure;

4.5.1.2 The particular control measure or component of that measure is at least as stringent as the corresponding permit requirement; and

4.5.1.3 The other entity agrees to implement the control measure on the permittee's behalf through a written agreement, memorandum of

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understanding, memorandum of agreement, contract, or other signed document that establishes the obligations of each party.

4.5.1.4 Written acceptance of this obligation is mandatory and must be maintained as a part of the SWMP. Conducting maintenance on a structure does not imply that the entity conducting the maintenance is the owner or operator of that structure. Even though the permittee may contract with another entity for control measure implementation, it is the permittee's responsibility to submit all NOIs, Annual Reports, Certification Statements, or any other information requested by EPD.

4.5.2 If the other entity fails to implement the control measure on the permittee's behalf, the permittee remains liable for any enforcement actions due to the failure to implement and/or report.

4.6 Stormwater Management Program Modifications

4.6.1 The SWMP may be modified by the permittee at any time. Written notification of any modifications must be submitted and EPD approval of the SWMP modification received.

4.6.2 EPD may require the permittee to modify the SWMP as needed to comply with the goals and requirements of the State Act, but specifically for any of the following reasons:

4.6.2.1 A change has occurred which will significantly impact the potential for the discharge of pollutants to the waters of the State of Georgia;

4.6.2.2 The permittee's program proves ineffective in controlling pollutants from the MS4 to the maximum extent practicable;

4.6.2.3 An adverse impact to water quality has been documented as a result of discharges from the MS4; or

4.6.2.4 To include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements.

The Director shall notify the permittee of the required modifications in writing and set forth a schedule for the permittee to develop and implement the modification(s). The permittee may propose alternative SWMP modifications to EPD.

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PART 5. MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

5.1 Annual Report

The permittee shall prepare and submit an annual report to EPD. The report shall cover the period from January 1 – December 31 and shall be submitted by February 15th following the reporting period. For new permittees designated after the issuance date of this permit, the first annual report is due upon notification by EPD and February 15th of each subsequent year. EPD is preparing an electronic method of reporting (eReporting). EPD will notify the permittee when the system is available for use. Upon notification, the permittee will be required to submit the annual report electronically. The report must include for each BMP, at a minimum, the following:

5.1.1 The activities conducted during the reporting period, progress towards achieving the measurable goal(s), and compliance with the implementation schedule;

5.1.2 Any information necessary to support documentation of the activities completed during the reporting period;

5.1.3 A summary of the stormwater activities proposed for the next reporting period, including implementation schedules;

5.1.4 An evaluation of the effectiveness of the BMPs for each minimum control measure. A summary of any proposed changes to a BMP, measurable goal, implementation schedule, or any other changes to any of the minimum control measure; and

5.1.5 Notice if the permittee is relying on another entity to satisfy some portion of the permit obligations (as applicable).

5.2 Monitoring Requirements

Water quality monitoring, except for illicit discharge detection screening specified in Section 4.2.3 and monitoring of impaired waters specified in Section 4.4.2, is not required by this permit. If, however, the permittee conducts water quality monitoring at its MS4, it is required to comply with the following:

5.2.1 Samples and measurements taken for the purpose of monitoring shall be representative. Monitoring must be conducted according to approved test procedures set forth in 40 CFR Part 136, unless other approved test procedures have been specified, excluding IDDE field screening procedures.

5.2.2 Parameters shall be analyzed to the detection limits specified by EPD. If a parameter is not detected at or above the detection limit, a value of "NOT DETECTED" will be reported for that sample and the detection limit will also be reported.

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5.2.3 If the permittee monitors any parameter at the designated location(s) more frequently than required by this permit, the permittee shall analyze all samples using approved analytical methods specified in Part 5.2.1 of this permit. EPD may require more frequent monitoring or the monitoring of other parameters not specified in this permit or the SWMP by written notification to the permittee.

5.2.4 All monitoring data not prepared in situ shall be prepared by a laboratory accredited by the State of Georgia in accordance with EPD's Rules for Commercial Environmental Laboratories 391-3-26, or, where the permittee does their own analysis with their own personnel, by a Laboratory Analyst certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act. In situ means that the sample is analyzed at the point of collection and has not been transported any distance.

5.3 Retention of Records

5.3.1 The permittee shall retain copies of all reports required by this permit, all monitoring information and records of all other data required by or used to demonstrate compliance with this permit, including any additional monitoring performed which is not required by this permit, for a period of at least three years. These periods may be modified by the Director by written notification at any time.

5.3.2 Records of monitoring information shall include:

- The date, exact place, time of sampling or measurement;
- The individual(s) who performed the sampling or measurement;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of the analyses.

5.3.3 The permittee must submit its records to EPD upon written request. The permittee must make its records, including the NOI and SWMP, available to the public as required by open records requirements.

PART 6. STANDARD PERMIT CONDITIONS

6.1 Duty to Comply

6.1.1 The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and/or the State Act and is grounds for:

- Enforcement action;
- Permit termination, revocation and reissuance, or modification; or
- Denial of a permit renewal application.

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6.1.2 The Clean Water Act and the State Act both provide that any person who falsifies or tampers with, or knowingly renders inaccurate any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit, including monitoring reports or reports of compliance or noncompliance, shall, if convicted, be punished by a fine or by imprisonment, or by both. Both Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director.

6.1.3 If, for any reason, the permittee does not comply with, or will be unable to comply with any condition specified in this permit, the permittee shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances, followed by a written report within five days. The written submission shall contain:

- Description of the noncompliance and its cause;
- Exact dates and times of noncompliance or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- Steps being taken to reduce, eliminate and prevent recurrence of the noncompliance.

6.1.4 The permittee shall give written notice to EPD at least ten days before any planned changes in the permitted activity, which may result in noncompliance with permit requirements.

6.2 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6.3 Duty to Reapply/Continuation of an Expired General Permit

6.3.1 If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit by submitting an NOI in accordance with the requirements of this permit, using an NOI form provided by EPD. The NOI must be submitted at least 30 days prior to the expiration date of this permit to remain covered under the continued permit.

6.3.2 If this permit is not reissued or replaced prior to the expiration date, it may be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until one of the following occurs:

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- Reissuance or replacement of this permit, at which time the permittee must comply with the NOI conditions of the new permit to maintain authorization to discharge; or
- Issuance of an Individual permit for the permittee's discharge; or
- A formal permit decision by the Director not to reissue this general permit. At that time, the permittee must seek coverage under an alternative permit or an individual permit.

6.4 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

6.5 Proper Operation and Maintenance

The permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), owned or operated by the permittee to achieve compliance with the terms and conditions of this permit and with the requirements of the SWMP. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of adequate backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

6.6 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for permit modification, revocation reissuance, or termination, a notification of planned changes or anticipated noncompliance does not negate any permit condition.

6.7 Property Rights

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property, any invasion of personal rights, or any infringement of Federal, State, or local laws and regulations.

6.8 Duty to Provide Information

The permittee shall provide to EPD, within a reasonable time frame, any information which the Director may request to determine compliance with this permit. The permittee shall also provide EPD with any requested copies of records required by this permit.

6.9 Inspection and Entry

The permittee shall allow the Director, the Regional Administrator of USEPA, or their authorized representatives, agents, or employees, after presentation of credentials to:

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6.9.1 Enter the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the terms and conditions of this permit;

6.9.2 Have access to and copy, at reasonable times, any records required under the terms and conditions of this permit;

6.9.3 Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

6.9.4 Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

6.10 Signatory Requirements

6.10.1 The NOI form or permit application submitted to EPD shall be signed by either a principal executive officer or ranking elected official.

6.10.2 All other information submitted to EPD shall be signed by either the person designated in 6.10.1 or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- The authorization is made in writing by the official person described in 6.10.1 and submitted to EPD.
- The authorization specifies either an individual or a position having responsibility for the overall operation of the SWMP such as the position of manager, operator, superintendent, or position of equivalent responsibility.
- If an authorization is no longer accurate because of a different individual or position having been authorized, then a new authorization must be submitted to EPD prior to or together with any report, information, or application signed by the authorized representative.

6.10.3 Any person signing documents under this section shall make the following certification:

"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 gather and evaluate the information submitted. Based on 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."

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6.11 Other Information

If the permittee becomes aware of a failure to submit any relevant facts or of submission of incorrect information in the NOI, Annual Report, or any report to EPD, the permittee shall promptly submit the relevant facts or information.

6.12 Availability of Reports

Except for data determined by EPD to be confidential under Section 16 of the State Act or by the Regional Administrator of the USEPA under 40 CFR Part 2, all reports prepared according to the terms of this permit shall be available for public inspection at an office of EPD under the Georgia Open Records Act. All monitoring data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

6.13 Severability

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

6.14 Contested Hearings

Any person who is aggrieved or adversely affected by any action of the Director shall petition the Director for a hearing within 30 days of notice of this action.

6.15 Civil and Criminal Liability

The permittee is liable for civil and criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

6.16 Transfer of Ownership

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

6.17 Previous Permits

The previous iteration of NPDES Permit No. GAG610000 is hereby revoked by the issuance of this permit.

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Appendix A

Definitions

Annual Report - the document submitted by the permittee on an annual basis summarizing the SWMP activities conducted during the previous reporting period.

Best Management Practice or **BMP** - both structural devices to store or treat stormwater runoff and non-structural programs or practices which are designed to prevent or reduce the pollution of the waters of the State of Georgia.

Construction Activity - the disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities which may result in soil erosion.

Construction General Permits or **CGPs** - the Georgia NPDES Permit for Stormwater Discharges Associated with Construction Activity Nos. GAR100001, GAR100002, and GAR100003, which identify the Manual for Erosion and Sediment Control in Georgia (Green Book) and stream buffer requirements.

Control Measure - any BMP or other method used to prevent or reduce the discharge of pollutants to the waters of the State of Georgia.

Clean Water Act or **CWA** - the Federal Clean Water Act (formerly known as the Federal Water Pollution Control Act or the Federal Water Pollution Control Act Amendments of 1972), as amended.

Director - the Director of the Environmental Protection Division of the Department of Natural Resources, State of Georgia.

Discharge - the discharge of a pollutant.

Discharge-related Activities - includes activities which cause, contribute to, or result in stormwater point source pollutant discharge; and measures to control stormwater discharges, including the siting, construction and operation of BMPs to control, reduce or prevent stormwater pollution.

EPA or **USEPA** - the United States Environmental Protection Agency.

EPD - the Environmental Protection Division of the Department of Natural Resources, State of Georgia.

Existing Permittee - a Phase II municipal separate storm sewer system designated by EPD for coverage under this permit prior to the issuance date of this permit.

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Illicit Connection - any man-made conveyance connecting a non-stormwater discharge directly to a municipal separate storm sewer system.

Illicit Discharge - any direct or indirect non-stormwater discharge to a municipal separate storm sewer system, including, but not limited to, sewage, process wastewater, and washwater. The discharge may be continuous or intermittent in occurrence.

Linear Transportation Projects – construction projects on traveled ways including but not limited to roads, sidewalks, multi-use paths and trails, and airport runways and taxiways.

Maximum Extent Practicable - the controls necessary for the reduction of pollutants discharged from a municipal separate storm sewer system. These controls may consist of a combination of BMPs, control techniques, system design and engineering methods, and such other provisions for the reduction of pollutants discharged from an MS4 as described in the SWMP.

Municipal Separate Storm Sewer System or **MS4** - a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains, owned or operated by a municipality or other public body, designed or used for collecting or conveying stormwater runoff and is not a combined sewer or part of a Publicly Owned Treatment Works.

National Pollutant Discharge Elimination System or **NPDES** - the program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.

New Development - land disturbing activities, structural development (construction, installation or expansion of a building or other structure), and/or creation of impervious surfaces on a previously undeveloped site.

New Permittee - a Phase II MS4 designated by EPD for coverage under this permit based on the 2020 or subsequent decennial U.S. Census, or based on other State designation criteria.

Notice of Intent or **NOI** - the mechanism used to register for coverage under this general permit.

Outfall - the most downstream point (i.e. final discharge point) on an MS4 where it discharges to receiving waters of the State.

Owner or **Operator** - the owner or operator of any MS4 or any activity subject to regulation under the NPDES program.

Permitted Area - the area of a City or County that is covered by this General NPDES Stormwater Permit. For a City, it refers to the entire City limits; for a County, it refers only to

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that part of the County contained within an "Urbanized Area" as defined by the latest Decennial Census by the Bureau of the Census.

Point Source - any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged into the waters of the State of Georgia. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant - dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

POTW - Publicly Owned Treatment Works.

Redevelopment - the structural development (construction, installation or expansion of a building or other structure), creation or addition of impervious surfaces, replacement of impervious surface not part of routine maintenance, and land disturbing activities associated with structural or impervious development. Redevelopment does not include such activities as exterior remodeling.

Small MS4 (defined in 40 CFR Part 122.26(b)(16)) - all separate storm sewers that are owned or operated by the United States, the State of Georgia, city, town, borough, county, parish, district, association, or other public body (either created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity or a designated and approved management agency under Section 208 of the CWA that discharges to the waters of the State of Georgia but is not defined as a "large" or "medium" MS4. This term includes systems similar to municipal MS4s, such as systems at military bases, large hospitals, universities, prison complexes, and highways and other thoroughfares. This definition does not include separate storm sewers in very discrete areas, such as individual buildings.

State Act - the Georgia Water Quality Control Act, as amended.

State Rules or **Rules** - the Georgia Rules and Regulations for Water Quality Control.

Stormwater - stormwater runoff, snow melt runoff, and surface runoff and drainage.

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SWMP or **Program** - the Stormwater Management Program required to be developed and implemented under the terms and conditions of this permit and refers to a comprehensive program to manage the quality of stormwater discharged from a MS4.

Waters of the State - any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all 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.

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Appendix B

Phase II MS4s by Population

Phase II MS4s with a population greater than 10,000

Counties

Athens-Clarke	Dougherty	Jackson	Oconee
Barrow	Douglas	Jones	Paulding
Bartow	Effingham	Lee	Peach
Carroll	Fayette	Liberty	Rockdale
Catoosa	Floyd	Long	Spalding
Cherokee	Glynn	Lowndes	Walker
Columbia	Hall	Madison	Walton
Coweta	Henry	Murray	Whitfield
Dawson	Houston	Newton	

Cities

Albany (Dougherty Co.)
Brookhaven (DeKalb Co.)
Brunswick (Glynn Co.)
Canton (Cherokee Co.)
Cartersville (Bartow Co.)
Conyers (Rockdale Co.)
Cordele (Crisp Co.)
Covington (Newton Co.)
Dallas (Paulding Co.)
Dalton (Whitfield Co.)
Douglasville (Douglas Co.)
Dunwoody (DeKalb Co.)
Fayetteville (Fayette Co.)
Gainesville (Hall Co.)
Griffin (Spalding Co.)
Grovetown (Columbia Co.)
Hinesville (Liberty Co.)
Johns Creek (Fulton Co.)
Loganville (Walton Co.)
McDonough (Henry Co.)
Milton (Fulton Co.)
Newnan (Coweta Co.)
Peachtree City (Fayette Co.)
Peachtree Corners (Gwinnett Co.)
Perry (Houston Co.)
Rome (Floyd Co.)
Sandy Springs (Fulton Co.)
Stockbridge (Henry Co.)
Valdosta (Lowndes Co.)
Villa Rica (Carroll Co.)
Warner Robins (Houston Co.)
Woodstock (Cherokee Co.)

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Appendix B (Continued)

Phase II MS4s with a population less than 10,000

Cities

Allenhurst (Liberty Co.)
Auburn (Barrow Co.)
Bogart (Oconee Co.)
Braselton (Jackson Co.)
Byron (Peach Co.)
Centerville (Houston Co.)
Chatsworth (Murray Co.)
Chickamauga (Walker Co.)
Cumming (Forsyth Co.)
Emerson (Bartow Co.)
Eton (Murray Co.)
Euharlee (Bartow Co.)
Flemington (Liberty Co.)
Flowery Branch (Hall Co.)
Fort Oglethorpe (Catoosa Co.)
Hahira (Lowndes Co.)
Hampton (Henry Co.)
Hephzibah (Richmond Co.)
Hiram (Paulding Co.)
Holly Springs (Cherokee Co.)
Hoschton (Jackson Co.)
Leesburg (Lee Co.)
Locust Grove (Henry Co.)
Lookout Mountain (Walker Co.)
Mountain Park (Fulton Co.)
Oakwood (Hall Co.)
Oxford (Newton Co.)
Porterdale (Newton Co.)
Remerton (Lowndes Co.)
Richmond Hill (Bryan Co.)
Ringgold (Catoosa Co.)
Rossville (Walker Co.)
Senoia (Coweta Co.)
Temple (Carroll Co.)
Tunnel Hill (Whitfield Co.)
Tyrone (Fayette Co.)
Varnell (Whitfield Co.)
Walnut Grove (Walton Co.)
Walthourville (Liberty Co.)
Watkinsville (Oconee Co.)
Winterville (Clarke Co.)

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DEVELOPED BY:

CITY OF CORDELE, GEORGIA
ENGINEERING DEPARTMENT
808 EAST 11TH AVENUE
CORDELE, GEORGIA 31015