Stormwater Management Plan

For The

National Pollutant Discharge Elimination System (NPDES)
Phase I Municipal Separate Storm Sewer System Permit Reissuance

Prepared For

City of Buford

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Prepared By

INTEGRATED Science & Engineering

105 McIntosh Crossing
Fayetteville, GA 30214
(p) 770.461.4292
(f) 770.461.4801

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EXECUTIVE SUMMARY

The City of Buford received coverage under their existing NPDES Phase I Municipal Separate Storm Sewer System (MS4) Permit on June 15, 2004 as required by provisions of the Georgia Water Quality Control Act and the Federal Clean Water Act. Under this permit, the City was identified as a co-permittee with Gwinnett. This co-permittee status allows for the development and implementation of a countywide stormwater management plan (SWMP) in compliance with the requirements of the NPDES Phase I MS4 Permit. Implementation of the SWMP was lead by Gwinnett County, with the City of Buford taking a supporting role.

In 2004, Gwinnett County elected to form a Stormwater Utility to fund the implementation of the County stormwater management program including compliance with the NPDES Phase I MS4 Permit and the SWMP. Local governments that wished to continue participating in the countywide SWMP were required to join the utility and allow the County to charge user fees to City residents or alternatively pay the County for the services they provided to the City. The County agreed to continue to implement the countywide SWMP until December 31, 2007, at which time the City could elect to be a part of the County's Stormwater Utility and the County would implement their local stormwater management program under the County's Stormwater Utility. Alternatively, the City could withdraw from the countywide SWMP, and forego their NPDES Phase I MS4 co-permittee status, and develop and implement their own city-specific stormwater program in accordance with their community-specific NPDES Phase I MS4 Permit.

Accordingly, the City of Buford has elected to develop and implement their own, individual SWMP in accordance with their NPDES Phase I MS4 Permit. This approach will allow the City to ensure that the priorities of their SWMP as well as the funding method(s) are specific to the needs of their community.

In a letter dated November 14, 2006, the Georgia Environmental Protection Division (EPD) notified the City that should they opt out of their co-permittee status with Gwinnett County, they would be required to submit a new NPDES Phase I MS4 SWMP to the EPD for review by September 30, 2007. This would allow for EPD to review and provide comments on the SWMP to the City prior to implementation of their community specific stormwater program on January 1, 2008.

In an effort to develop and implement a Phase I compliant stormwater program by January 1, 2008, the City of Buford has developed a community specific SWMP in accordance with State and Federal requirements. The stormwater management program described within addresses the following programs, required by CFR 122.26(d)(2)(iv)(A) through 122.26(d)(2)(iv)(D):

- Structural and Source Control Measures
- Illicit Discharge Detection and Elimination
- Industrial Facility Stormwater Runoff Control
- Construction Site Runoff Management

Also included is a detailed description of municipal staff and equipment available to implement the SWMP, as well as programs developed to address modifications required by the current NPDES Phase I MS4 Permit. Required modifications included programs to address the issues listed below:

- Impaired Waterways (i.e. 303(d) Listed Stream Segments)
- Highly Visible Pollutant Sources
- Public Education
- Pollution Prevention/Good Housekeeping

1. STRUCTURAL & SOURCE CONTROL PROGRAMS

1.1. STRUCTURAL CONTROLS MAINTENANCE ACTIVITIES & SCHEDULING

1.1.1. Municipal Separate Storm Sewer System Operations & Maintenance Program

The City of Buford's MS4 is made up of the structures and facilities used for collecting, conveying, storing and/or treating stormwater from the source drainage area to the point of final outlet. In order to ensure that the stormwater system continues to operate as designed to safely convey stormwater volume, velocity, and quality, it is the City's responsibility to maintain the MS4. An adequate operations and maintenance (O&M) program is essential to maintain the functionality of the system and is a high priority for the City's SWMP. This section outlines the City's procedures for system inspection, maintenance, and documentation.

1.1.1.A. Extent & Level of Service

It is essential to establish an Extent of Service (EOS) and Level of Service (LOS) for the stormwater drainage system in order to develop a proactive plan for O&M of the system.

Extent of Service Policy

This EOS policy classifies the "responsibility status" of the various drainage infrastructure components based upon system component location and ownership factors. The City's EOS policy for the O&M program will include all drainage structures and systems within the City's public right-of-way and easements. Structural controls located on State or County routes will, however, remain the responsibility of those entities.

The City will provide limited inspection services to private stormwater controls (including detention ponds) as these facilities have the potential to adversely impact the public drainage system if they are not functioning as designed. Limited services will include inspection and owner notification if the control requires maintenance.

The inventory of the City's MS4 includes a detailed map of the drainage system components that lie within the City's public drainage system as well as private stormwater controls. A map of the system is included in the attachments. The City has contracted with a private firm to perform their own mapping inventory. Mapping of the entire system will be complete by June 2010.

The existing MS4 inventory is included in the table below. In addition, the frequency of inspection as well as the condition driven standard which would necessitate maintenance activities is also included. The inspection and maintenance procedures and policies are described in detail in the LOS Policy.

Gwinnett County MS4 Inventory for the City of Buford					
Structure	**Number**	**Mileage**	**Frequency of Inspection**	**Minimum Number Inspected**	**Standard for Maintenance**
Catch Basins	566		20% / year	113	Improper Operation
Drop Inlets	11		20% / year	2	Improper Operation
Flared End Sections	5		20% / year	1	Improper Operation
Junction Boxes	36		20% / year	7	Improper Operation
Headwalls	94		20% / year	18	Improper Operation
Yard Inlets	66		20% / year	13	Improper Operation
Ditches	163	44.9	20% / year	32	Improper Operation
Pipes	1627	5.2	20% / year	325	Improper Operation
Municipal Ponds	5		20% / year	1	Improper Operation
Private Ponds	123		20% / year	24	Improper Operation
Area Drains	207		20% / year	41	Improper Operation

Level of Service Policy

Once the EOS policy is established through the system inventory, the LOS policy(s) for each major portion of the system can be defined. LOS is defined as the types and frequencies of O&M activities that a community will provide to different components/elements of the drainage system (public or private). By defining the City's LOS for the various elements of the MS4, it will be easier to identify those tasks and responsibilities that need to be addressed by other parties (i.e. private property owners). Within the public right-of-way and for publicly-owned stormwater controls, the City will inspect and provide periodic, remedial and condition driven inspections and maintenance. However, for privately-owned control structures, the City will typically only inspect the condition and provide information and/or recommendations on proper maintenance to the private owners.

The LOS policy for the public system and private controls defines the type of maintenance, outline procedures and standards, and provides a schedule for each element of the drainage system. This O&M program generally incorporates three types of maintenance:

1. Remedial
2. Periodic
3. Condition driven

Remedial inspection and maintenance is performed on an as-needed basis established on evidence of system failure during regular inspections or citizen complaints. Periodic inspections and maintenance involves performing maintenance on a routine or set schedule.

Condition driven inspections and maintenance involve performing maintenance activities when certain criteria are met.

1.1.1.B. Municipal Structural Control Inspection & Maintenance

City of Buford staff will inspect all municipally-owned stormwater controls (i.e. detention ponds/areas and stormwater wetlands), and perform any maintenance activities that are required to keep these stormwater controls functioning at current levels or better. All material removed will be disposed of at a local landfill. If certain standards are not met during inspection, as defined below, City staff will perform applicable maintenance procedures.

Inspection Schedule

- 20% of municipal ponds will be inspected per year, and maintenance will be performed in accordance with the general standards outlined below.

Standards for Required Maintenance

- Sediment will be removed before 50% of the capacity has been lost (typically every five to seven years).
- Stormwater structural control facilities will be maintained according to criteria or procedures presented in Volume 2 of the City of Buford Development Regulations or Gwinnett County Design Manual. Maintenance requirements are detailed at the end of each structural control design criteria section of the City of Buford Development Regulations or Gwinnett County Design Manual.

The City of Buford has contracted with a private firm to perform a full system GIS inventory of the MS4. Mapping efforts will be completed by June 2010. After the initial inventory, the City will be responsible for integrating new infrastructure into the GIS database

1.1.1.C. Public Drainage System Inspection & Maintenance

City of Buford staff will inspect the storm sewer lines, culverts, catch basins, outfalls and any other elements of the closed drainage system. The MS4 will be inspected based on a prioritized schedule. This will not prevent staff from inspecting a suspected problem area, even if it is not within a scheduled area. If certain standards are not met during inspection (as defined below), City staff will perform applicable maintenance procedures including removal of litter, debris, or sediment; re-grading; minor repair; replacement; etc.

Open Drainage System

The City will maintain the open drainage system through the following procedures:

- City staff will inspect the length of the ditch/swale identified as being a responsibility of the City.
- City staff will maintain open drainage structures identified as being part of the City's maintenance responsibilities through the following procedures:
    - City staff will remove manmade and natural objects that are causing or could potentially cause a blockage to the system.

- City staff will manually remove excess emergent vegetation. Bankside vegetation and vegetation in the maintenance right-of-way will be mowed or trimmed, but not removed to protect against erosion. City staff will remove litter prior to mowing/trimming of vegetation.
- If the ditch is not draining properly, or exceeds the condition driven maintenance standard for sediment (see below), City staff will address the issue.

Closed Drainage Systems

The remaining closed drainage systems (i.e. pipes, catch basins, culverts, etc.) in the City of Buford will be inspected on a 5-year rotational basis, or 20% each year over five years, totaling 100% of the system. City staff will assess the system for condition, material, water quality issues, and structural issues. Maintenance activities will be conducted as needed based on the results of the inspection and the condition driven maintenance standards listed below.

Inspection Schedule

- *Open Drainage System* — Ditches and swales will be inspected and maintained once every five years or 20% per year.
- *Closed Drainage Systems* — Closed drainage systems will be inspected once every five years or 20% per year. Maintenance will be performed as needed.

Standards for Required Maintenance

Standards will meet North Georgia Metropolitan Design Criteria and Maintenance Standards as tailored to the City of Buford's specific needs.

1.1.1.D. Private Structural Control Maintenance Program

The City of Buford will begin an inspection program for private commercial controls, such as detention ponds, etc. The City will inspect privately-owned commercial structural controls (detention/retention ponds, etc.) to determine if any maintenance is required. A log will be maintained by the City of inspection, maintenance, and enforcement activities.

Currently, the City estimates that there are approximately 123 private detention ponds throughout the City. Based on this estimate, approximately 25 ponds will be inspected annually. Due to continued development and installation of new private ponds, however, the number of ponds inspected each year will increase. New private controls will be added to the database annually and a map will be submitted with the MS4 Annual Report each year.

If maintenance is needed, the City will address new and existing private structural controls as described below.

Privately-Owned Structural Controls with Maintenance Agreements

During inspection, when a control is found to be in need of maintenance, the City will enforce the City Stormwater Ordinance and ensure that private structural control owners maintain their controls in accordance with their accepted maintenance agreement. The City's

Post-Construction Stormwater Ordinance, adopted on April 1, 2004, requires that developers enact a maintenance agreement that includes an inspection and maintenance program for the pond and identifies the responsible party. Upon inspection, if the City identifies a deficiency, they will notify the owner of the problem found, provide information on necessary remedial actions, and provide a required schedule for maintenance to be performed. If the private owner does not take necessary action within the allotted time frame, the private owner will be considered in violation of their Maintenance Agreement, and the City will enforce the maintenance provisions of the Stormwater Ordinance and the Maintenance Agreement.

Existing Privately-Owned Structural Controls without Maintenance Agreements
Where existing privately-owned controls were constructed without any agreements, prior to the adoption of the Post Construction Stormwater Ordinance, without any agreements or regulations stipulating owner responsibility for maintenance or City of Buford's enforcement of such obligations, it shall be the private property owner's responsibility to ensure the pond continues to function properly. The City will notify the private owner upon completion of an inspection if the pond is deemed deficient in some manner. Enforcement will be dealt with on a case by case basis.

If necessary, the City will perform maintenance on an emergency basis only. The City will seek to secure maintenance agreements and/or easements on such existing private controls and detention ponds, prior to performing such maintenance. The City will recover the cost of such maintenance through liens on the affected properties.

1.1.1.E. Complaint Response Maintenance

Complaint response maintenance is performed based on evidence of system impairment or failure identified through citizen complaints or City staff inspection. This maintenance is performed on an as-needed basis and is performed through a work order system. This type of maintenance can include sediment/litter removal, vegetation clearing, channel stabilization, and outlet structure repairs.

Upon receipt of a complaint, the Customer Service Department will generate a work order for the individual project. City staff will perform an inspection of that complaint within 30 business days. The inspector will assess the system for condition, material, water quality issues, structural issues, etc. Maintenance will be recommended, recorded in a work order database, and performed based on the maintenance standards established above. If recommended remedial maintenance calls for more specialized expertise and equipment, then the work order may be transferred to another department or an outside entity specializing in that activity. A database of complaints received and actions taken will be maintained by the City as described in Section 2.5.1.

1.1.2. MS4 Inventory Update Program

The City of Buford will continue to update the inventory and map of the MS4. This will be accomplished through review of new development as-built maps of the storm sewer, as well as collecting data during the inspection process described above.

1.2. PLANNING PROCEDURES FOR POLLUTANT CONTROL

1.2.1. Post-Construction Runoff Control Requirements

1.2.1.A. Site Stormwater Management Plan

The City of Buford currently requires developers to comply with the Stormwater Ordinance, which details the rules and regulations governing post-development stormwater management practices for new development and redevelopment. The regulations require developers to submit a site stormwater management plan for developments disturbing more than a certain number of acres or including a certain square footage of impervious surface. Site stormwater management plan must address water quality and water quantity issues in accordance with the requirements of the NPDES Phase I MS4 Permit and applicable local development regulations. This site stormwater management plan must be reviewed by a Georgia-certified Professional Engineer (contracted or City staff) and approved by the City before a Land Disturbing Activity (LDA) Permit is issued and construction can begin.

1.2.1.B. Design Criteria/Guidelines

The City of Buford has developed construction design criteria and performance standards of stormwater drainage systems and structures. These are included in the Development Regulations. In addition, the City has adopted by reference the Gwinnett County Stormwater Design Manual, which includes design criteria/guidelines to assist developers in designing a site plan that will manage post-construction runoff quality and quantity as required by the NPDES Phase I Permit and the Metropolitan North Georgia Water Planning District (the District). This design manual requires that stormwater site plans, system design, and construction comply with the requirements in the GSMM.

1.2.2. Comprehensive Plan

The City of Buford is currently drafting a Comprehensive Plan that will outline the goals of the City through 2030. This Plan will outline specific policies that are designed to protect the local quality of life, will guide future land use and provide the framework for the Zoning Ordinance. The Plan will also include goals and policies which apply directly or indirectly to issues of water quality. The expected date of completion for the Comprehensive Plan is February 2009.

1.2.3. Zoning Ordinance

The City of Buford administers a Zoning Ordinance to regulate land use. The Zoning Ordinance allows the City to guide development, manage urban sprawl, and protect valuable natural resources. The following policies and guidelines of the Zoning Ordinance protect water quality. The following policies and guidelines of the Zoning Ordinance protect water quality.

- *Conservation Subdivision Overlay (CSO) Zoning District – Conservation Subdivision Overlay* (CSO) Zoning permits flexibility of site design in order to promote environmentally sensitive and efficient uses of the land.

1.2.4. Tree/Landscape Regulations

Protection of the tree canopy reduces runoff through evapotranspiration. In addition, preservation of the tree canopy also reduces the heat island effect that is the result of impervious surfaces such as rooftops and roadways. The City of Buford has an adopted Tree Protection Ordinance in order to preserve and enhance the City's natural environment and further the City's policy to plant new trees as a part of the land development process.

1.2.5. Openspace/Greenspace Preservation

Preservation of greenspace/openspace is a very effective non-structural stormwater management control. Greenspace/openspace in its natural state will increase the amount of stormwater that is infiltrated, which in turn increases groundwater recharge and reduces runoff.

- *Conservation Subdivision Overlay Zoning District* – CSO Zoning permits flexibility of site design in order to promote environmentally sensitive and efficient uses of the land. The City of Buford's conservation subdivision/openspace development overlay is intended to provide for the preservation of openspace and greenspace for watershed protection and the nonstructural management of stormwater runoff.

1.2.6. Riparian Buffer Protection

Protection of naturally vegetated riparian buffers provides a multitude of water quality benefits including, but not limited to:

- Infiltration of stormwater runoff prior to reaching the stream
- Reduction of the velocity of stormwater runoff to stream
- Treatment of stormwater quality through the filtering effects and uptake of the riparian fauna
- Stream bank stabilization
- Shading of the stream

The City of Buford mandates preservation of riparian buffers through enforcement of a 50-foot undisturbed buffer with an additional 25-foot impervious surface buffer along perennial and intermittent streams, as required by the District.

1.3. STREET, ROAD & HIGHWAY OPERATING PROCEDURES

1.3.1. Roadway Maintenance

To reduce polluted runoff originating from streets, roads, and highways from vehicle traffic, leaks and spills, and atmospheric deposition, the City of Buford sweeps curb and gutter roads in the commercial and industrial districts within the City. Approximately 40 miles of streets are swept each year. Debris collected by the street sweeper is disposed at a local landfill. All State and County routes will remain the responsibility of those entities.

1.3.2. Roadside Ditch Maintenance

Roadside ditches are inspected and maintained by the Public Works Department to ensure effective operation. Drainage ditches will be inspected on a regular schedule and maintained if accumulated sediment, debris or other deposits restrict flow as designed. Excess vegetation will be removed manually if it is restricting flow or is unsightly, but will not be over-culled to protect against erosion. Turf will be mowed regularly during the growing season and right-of-way litter will be removed and properly disposed of prior to mowing.

1.3.3. De-icing Procedures

The City of Buford does not perform de-icing on City roads or store sand, salt or a sand/salt mixture to do so. The Georgia Department of Transportation is responsible for any deicing performed on state routes within the City.

1.3.4. Roadway Construction Erosion & Sedimentation Control

All road construction projects implemented by the City of Buford are required to have an approved Erosion and Sedimentation (E&S) Control Plan. The City will ensure that the minimum measures outlined in the City's E&S Control Ordinance are implemented during the construction phase of roadway projects performed by the City.

1.3.5. Litter Pickup

The City of Buford Public Works Department staff picks up roadside litter and debris on a daily basis. A log of the amount of debris collected is maintained by the City.

1.4. FLOOD MANAGEMENT MEASURES

1.4.1. Flood Management Capital Improvement Project Water Quality Impact Assessment

The City of Buford, or contracted consultant, will conduct a water quality impact assessment for new City Capital Improvement Projects (CIPs) related to flood management and drainage. The assessment will include a description of potential water quality impacts from the proposed CIP and a report on the feasibility and/or cost of incorporating water quality enhancements in the CIP that would address the City's water quality requirements as outlined in their Stormwater Ordinance. The assessment must be completed before land disturbing activities for any CIP are initiated.

1.4.2. Site Plan Review for Private Flood Management Controls

The City of Buford currently requires developers to comply with the Stormwater Ordinance, which details the rules and regulations governing post-development stormwater management practices for new development and redevelopment. The regulations require developers to submit a site stormwater management plan for developments disturbing more than a certain number of acres or including a certain square footage of impervious surface. Site stormwater management plans must address water quality and water quantity issues in accordance with the requirements of the NPDES Phase I MS4 Permit, the District and applicable local development regulations.

The site stormwater management plan is reviewed by a Georgia-certified Professional Engineer (contracted or City staff) and approved by the Planning and Development Department before a LDA Permit is issued and construction can begin.

1.4.3. Flood Control Ordinance

The City of Buford currently has a Flood Damage Prevention Ordinance in place that serves to protect water quality by limiting the impacts that flood waters can have on the environment. This ordinance is required for participation in the National Flood Insurance Program.

1.4.4. Floodplain Mapping

Gwinnett County maintains and updates the FEMA 100-Year Floodplain Regulatory maps countywide. Gwinnett County has also mapped all "future conditions floodplains" with drainage areas larger than 640 acres. It is the responsibility of the City of Buford to ensure that the provisions of the floodplain management program requiring developers to "map" those future conditions floodplains with drainage areas smaller than 640 acres and larger than 100 acres are implemented. The City will enforce this provision during the site plan review process outlined in Section 1.2.1.A.

1.4.5. Water Quality Retrofits for Existing Flood Control Devices

The City of Buford will conduct a water quality impact assessment for existing flood management devices. The assessment will identify potential water quality impacts from the existing control devices, assess the feasibility of retrofitting the devise to provide additional pollutant removal from stormwater, and assess potential benefit to water quality from the retrofit. The *Water Quality Improvement Worksheet for an Existing MS4 Facility* (included in the Attachments) will be used to perform the analysis. One structural control device will be assessed annually.

The Stormwater Management Program for the City of Buford is funded entirely by the General Fund, development permits, and planning and development review fees. Should a retrofit prove to be feasible and desirable (i.e. the benefits to water quality outweigh the cost to retrofit the devise) the retrofit will be identified for future funding as a capital improvement project. This program will be implemented in July 2008, and the results will be included in the 2009 Annual Report.

In addition, Gwinnett County has systematically assessed individual drainage basins/watersheds within Gwinnett County to determine conditions within the watershed and the health of the streams within these basins. This has been achieved through the development of basin specific Watershed Improvement Plans (WIPs). The goal of each WIP is to complete an assessment of streams and structural best management practices (BMPs) within the basin and identify retrofit opportunities, that if implemented, would have a positive effect on water quality and habitat within the basin's waterways. The major outcomes of each WIP are the development of conceptual plans and a CIP program with cost estimates for implementation of suggested retrofits.

As a part of the WIP process, the County has identified floodplain management projects within the City of Buford's limits that would provide a positive benefit to water quality. In addition, the County has also identified existing structural flood control devices located within the City of Buford's limits, that if retrofitted, would also provide water quality benefits. The County has dedicated resources to the implementation of the various WIPs on a prioritized basis.

Funding for eligible WIP projects will be provided by the County's Water and Sewer Enterprise Fund. This funding is discretionary, however, and may not be available for projects year in and year out. The County is working to develop an official plan to determine how funding will be allocated to municipalities to fund prioritized projects within their jurisdictions. Once this plan is formalized, the City will make an application to the County to receive a share of dedicated funding to implement projects within the City according to their priority status. The following table lists those projects identified within the City of Buford in the Suwanee Creek and Richland Creek sub-watersheds.

Project ID	Project Type	Watershed	Cost	Reach Level CIP	HUC 12 Level CIP
US-298-S	Stream Restoration LOR 5	Upper Suwanee Creek	$39,150	NO	NO
US-3679-E	Online Structure	Upper Suwanee Creek	$90,296	NO	NO
RC-258-S	Stream Restoration LOR 3	Richland Creek	$886,877	NO	NO
RC-260-S	Stream Restoration LOR 3	Richland Creek	$308,902	NO	NO
RC-4086-E	Dry Detention Basin	Richland Creek	$47,023	YES	YES
RC-246-S	Stream Restoration LOR 3	Richland Creek	$929,611	YES	YES
RC-255-S	Stream Restoration LOR 2	Richland Creek	$2,421,072	YES	NO

1.5. MUNICIPAL LANDFILL & WASTE CONTROL FACILITY POLLUTANT MONITORING PROGRAMS

1.5.1. Municipal Landfills & Other Municipal Waste Treatment Handling & Disposal Facilities

This program element will address the following publicly-owned facilities, which will be referred to collectively as "Municipal Facilities":

- City Hall
- Public Works Facility
- Old City Hall
- Water Treatment Plant (1)
- Southside Wastewater Treatment Plant
- Westside Wastewater Treatment Plant
- City School System Grounds (5)
- City-owned Parks
- City Cemetery
- McEver Road Landfill (closed, inert)
- Richland Creek Road Landfill (operated by BFI)
- Peachtree Industrial Boulevard Landfill (closed, inert)

Implementation of this element of the program will be completed in accordance with the inspection and control measure establishment and implementation procedures described within this section.

The City's Richland Creek Road landfill is operated by BFI. BFI is the permittee for this landfill, therefore all permit conditions, including inspections and water quality monitoring, are the responsibility of the landfill operator. The McEver Road landfill and the Peachtree Industrial Boulevard Landfill are formally closed and have been covered. The City conducts ongoing groundwater monitoring as part of their closure plan.

1.5.2. NPDES Industrial Stormwater Permit NOI & SWP3

The City has submitted a Notice of Intent (NOI) for coverage under the NPDES General Industrial Stormwater Permit and created a Stormwater Pollution Prevention Plan (SWP3) for the Southside WWTP. This plan was completed in November 2007 and is currently being implemented by City staff. The plan includes programs to address spill prevention and response, employee training, water quality monitoring, site inspections, and good housekeeping at this particular municipal site. The City will submit a summary of all activities conducted under the SWP3 at this site in the 2008 NPDES Phase I MS4 Annual Report.

The City has also determined that the Public Works Facility requires coverage under the NPDES General Industrial Stormwater Permit and is currently working to submit the NOI and develop the SWP3. The City will complete development of the SWP3 and begin implementation of the plan by December 2008. The City will submit a summary of all activities conducted under the SWP3 at this site in the 2009 NPDES Phase I MS4 Annual Report.

1.5.3. Municipal Stormwater Inspection Program

City of Buford staff will inspect on an annual basis municipal sites with the potential to discharge pollutants to the MS4. A standard municipal site stormwater inspection checklist will be used for municipal site inspections, and a database will be maintained on inspections, problems found and actions taken. Please see the Appendix for a copy of the inspection checklist. If a SWP3 (see Section 1.5.2.) has been prepared for the site under inspection, City staff will inspect the site for compliance with the SWP3. If sites are found to need improvements, the appropriate department will be notified of the problem. City staff will perform a re-inspection, after the stipulated time frame, to ensure that proper action has been taken. Sites that will be inspected include:

- City Hall
- Public Works Facility
- Old City Hall
- Water Treatment Plant (1)
- Southside Wastewater Treatment Plant
- Westside Wastewater Treatment Plant
- City School System Grounds (5)
- City-owned Parks
- City Cemetery
- Richland Creek Road Landfill (operated by BFI)

1.5.4. Employee Training Program

The City will implement an employee pollution prevention program for all new and existing employees who work with potentially polluting materials or on sites where industrial activities are taking place. This training program will address topics such as:

- NPDES Regulations and Requirements
- Spill Prevention and Response
- Good Housekeeping
- Materials Handling and Storage
- Pollution Prevention

Training sessions will take place annually, and a record of employees attending the training will be maintained and submitted to EPD in the NPDES Phase I MS4 Annual Report.

1.6. PESTICIDE, HERBICIDE & FERTILIZER CONTROLS

1.6.1. Pesticide, Herbicide & Fertilizer Public Education

The Clean Water Campaign (CWC) administers a public education program on behalf of the City of Buford. The City will provide a link to the CWC on the City's website, and make a selection of these brochures available on-line and/or at City Hall. Website updates will be completed by June 2009. Educational brochures on the following topics related to pesticide, herbicide, and fertilizers have been developed:

- Commercial Landscaping (English and Spanish)
- Residential Lawn Care (English and Spanish)
- Integrated Pest Management

1.6.2. Pesticide Applicator Certification Program

The City of Buford relies heavily on the State Department of Agriculture (DoA) and Gwinnett's Cooperative Extension Service (CES) for assistance in addressing requirements for this part of the program. The State DoA requires commercial applicators of pesticides (herbicides and insecticides) to obtain and retain a "Commercial Pesticide Applicators License." The State DoA also requires that distributors of restricted pesticides obtain and retain "Distributor Licenses." Continuing education units are required each year to maintain the license.

The CES provides training opportunities to homeowners, private applicators, commercial applicators and municipal applicators that desire education on the appropriate management and use of pesticides. This training (though not required for state DoA licensing) is designed to assist persons in passing the state exam, which is required to obtain a license. The CES offers the following programs to the public:

- Landscape Professionals Training
- Commercial Pesticide Applicators Training
- Pesticide Safety and Use
- Satellite Pesticide Conference (a basic pesticides conference held yearly in Gwinnett that is broadcast via satellite to several other locations around the state)

Each of these programs contains a component that addresses the potential impacts on water quality associated with the misuse of pesticides. The Landscaping Professionals training also contains information on the proper use of fertilizers and their potential for water quality impacts.

1.6.3. Municipal Pesticide Use Standard Operating Procedures

City use of pesticides, fertilizers and herbicides is limited to 10-10-10 fertilizer (or similar) for use in parks and recreational areas. "Round Up" is used to control kudzu and other weeds. To prevent accidental spillage, herbicides are mixed at the Public Works facility and then transported to locations to be treated. Crew Supervisors in charge of herbicide application are well versed in SOPs. Herbicide application is limited to approximately three times per year, mainly during the growing season. Total usage of herbicide in the City is estimated at less than 10 gallons per year. A SOP for the use of Pesticides, Herbicides and Fertilizers is included in the Appendix of this report.

2. ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAMS

2.1. ILLICIT DISCHARGE ORDINANCE & INSPECTIONS

2.1.1. Existing Illicit Discharge Regulations

The City of Buford currently regulates illicit discharges into the MS4 through its Stormwater Ordinance. The following ordinance language addresses illicit discharges:

> *Section 3.1 – No person shall throw, drain, or otherwise discharge, cause, or allow others under its control to throw, drain, or otherwise discharge into the City separate storm sewer system any pollutants or waters containing any pollutants, other than stormwater.*
>
> *Section 3.2 – The construction, connection, use, maintenance or continued existence of any illegal connection to the City separate storm sewer system is prohibited.*
>
> *Section 3.2(3) – Improper connections in violation of this Ordinance must be disconnected and redirected, if necessary, to an approved onsite wastewater management system or the sanitary sewer system upon approval of the City of Buford or, if applicable, the appropriate County jurisdiction.*

2.1.2. Litter Ordinance

The City of Buford has adopted and enforces a Litter Ordinance that prohibits the improper disposal of litter. The following ordinance language addresses the prohibition of litter and enforcement of the ordinance by the City:

> *Section 3. – It shall be unlawful for any person or persons to dump, deposit, throw or leave or to cause or permit the dumping, depositing, placing, throwing or leaving of litter on any public or private property in this City of Buford or any waters in this City of Buford unless:*
> *(1) The property is designated by the State of by any of its agencies or political subdivisions for the disposal of such litter, and such person is authorized by the proper public authority to use such property;*
>
> *(2) The litter is placed into a receptacle or container installed on such property;*
>
> *Section 4. – No person shall operate any motor vehicle with a load on or in such vehicle unless the load on or in such vehicle is adequately secured to prevent the dropping or shifting of materials from such load onto the roadway.*
>
> *Section 5.4 – All law enforcement agencies, officers and officials of this state or any political subdivision thereof, or any enforcement agency, officer or any official of any commission of this state or any political subdivision thereof, are hereby authorized, empowered and directed to enforce compliance with this article.*

2.1.3. Illicit Discharge Inspection Program

The City of Buford has established adequate legal authority through its Illicit Discharge and Illegal Connection Ordinance to conduct an Illicit Discharge Inspection Program. Inspections are conducted in response to citizen complaints to investigate potential illicit discharges found during dry weather screening, and as part of the sanitary sewer Inflow and Infiltration program. Methods that are used to investigate potential illicit discharges include: visual inspections, site inspections, water quality sampling, dye testing, smoke testing, and line televising. Details regarding the illicit discharge source tracing programs are included in Section 2.3.1. The following ordinance language addresses illicit discharges:

> *Section 5 – The City of Buford shall be permitted to enter and inspect properties and facilities at reasonable times as often as may be necessary to determine compliance with this ordinance.*

2.2. DRY WEATHER SCREENING PROGRAM FOR ILLICIT DISCHARGE DETECTION

2.2.1. Identifying Outfalls for Dry Weather Screening

The City of Buford will conduct dry weather screening at outfalls within the City's jurisdiction. The City's current drainage system inventory includes 126 outfalls. A map of this inventory is included in the Appendix. The City intends to systematically build the dry weather screening program so that the City will be able to screen 20% of all outfalls annually within five years. This will allow the City to screen all outfalls citywide within a 5-year period beginning in 2012. As the City is gathering resources and developing the program, the City will screen outfalls according to the following schedule:

- Year 1 (2008) — 6 outfalls
- Year 2 (2009) — 5% of outfalls
- Year 3 (2010) — 10% of outfalls
- Year 4 (2011) — 15% of outfalls
- Year 5 (2012) — 20% of outfalls

This schedule allows for City staff to incrementally increase the number of outfalls screened each year as staff and financial resources increase. After five years, the City will be sampling 20% of outfalls per year, a rate which will continue into subsequent permitting periods, allowing for 100% of the outfalls to be screened each permitting cycle.

Outfalls sampled each year will be rotated, unless a potential illicit discharge has been found, in which case that outfall will be resampled the following year. Outfalls to be sampled in any given year will be prioritized based on the following criteria:

- Outfall leads to 303(d) listed stream
- Age of infrastructure (i.e. older areas of town will receive priority for dry weather screening)
- Previous sampling results or other evidence of illicit discharge
- Proximity to industrial or commercial facilities

Outfalls sampled during each year will be mapped, and that map will be provided to EPD in the NPDES Phase I MS4 Annual Report.

2.2.2. Dry Weather Screening Procedures

Dry weather screening procedures described in the following subsections have been developed using the ARC's *Stormwater Monitoring Program Handbook,* the New England Interstate Water Pollution Control Commission's *Illicit Discharge Detection and Elimination Manual*, and the Galveston County Health District, Pollution Control Division's *A Guidance Manual for Identifying and Eliminating Illicit Connections to Municipal Separate Storm Sewer Systems,* and the EPA's water quality guidelines.

2.2.2.A. Field Screening/Sampling

Screening will take place during dry weather conditions (i.e. no rain event for 72 hours previous to sample event). If there is no flowing water at the time of field screening, the sample team will record "No Flow Observed" and the screening is complete. If flow is observed, the sample team will perform the following task to determine if there is illicit discharge:

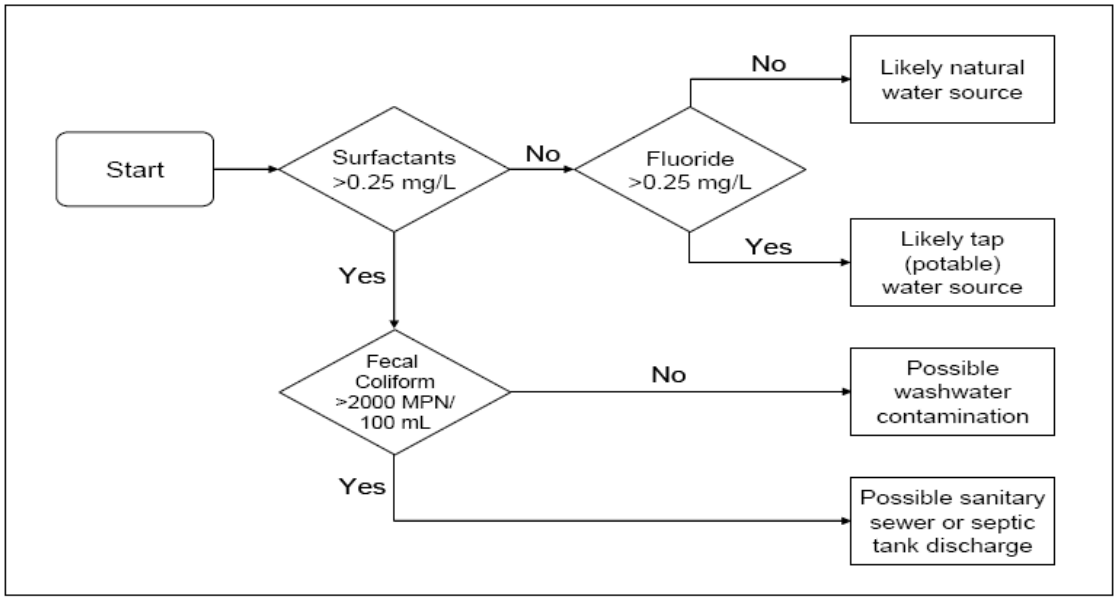
- Visually inspect the discharge for rate of flow, color, turbidity, oil sheen, floatables, stains from illicit dumping, and odor.
- Visually inspect discharge for biological indicators including: emergent vegetation, algae blooms, lack of or stunted vegetation, presence or absence of aquatic life, and fish kills.
- Measure the discharge in-stream for the following parameters using a probe(s), such as the Horiba U-10: pH, temperature, conductivity, and turbidity.
- Sample the discharge for surfactants and fluoride using a Colorimeter or Field Kit.
- Collect grab samples for fecal coliform if conductivity is measured above 300 μmho/cm, pH is higher than 7.5 or lower than 6.5, evidence of a sanitary sewer cross connection (including milky white or gray color, floatables, and sewage odor), or other applicable evidence of a potential illicit discharge. Fecal grab samples will be cooled with ice and taken to an accredited laboratory for fecal coliform analysis within six hours of sample event. Fecal samples will be dechlorinated with sodium thiosulfate.

2.2.2.B. Baseline Limits for Sampling Parameters

If dry weather field sampling detects limits of the above mentioned parameters exceeding the baseline limits described below, an illicit discharge is likely, and an attempt to trace the source using the procedures outlined in Section 2.3.1. must be performed. The City of Buford will also be responsible for any source tracing that is necessary as a result of dry weather screening or sampling.

Parameter	Baseline Limit	Considerations	Potential Source of Contamination
pH	< 6.5 or > 7.5		Low pH – Industries including textile mills, pharmaceuticals, metal finishers/fabricators, companies dealing in resins, fertilizers or pesticides.
			High pH – Industries including soap manufacturers, metal plating, concrete, lime, and rubber or plastic producers.
Turbidity	> 50 NTU		Construction site runoff.
Conductivity	300 μmho/cm		Presence of contaminating ions from wastewater (sanitary or industrial).
Surfactant	> 0.25 mg/l		Industrial detergents, sanitary sewage.
Fluoride	> 0.25 mg/l	Fluoride can be naturally occurring in groundwater.	Presence of potable (treated) water.
Fecal Coliform	Apr – Oct 200 col/100ml Nov – Mar 1000 col/100ml	Fecal coliform in excess of standards does not necessarily indicate high levels of sanitary sewage.	Animal waste or sanitary sewage.

The following flowchart was provided by the District to assist communities with identifying the source of illicit discharges based on dry weather screening results.



2.2.2.C. Quality Assurance/Quality Control Procedures

- Field tests must be performed twice during each sampling event to confirm results.
- Horiba U-10 and any other probes used to measure temperature, turbidity, conductivity, and pH must be calibrated at the start of each day when sampling will take place. Readings should be taken directly in outfall flow, if possible. If in-flow sampling is not possible, then a container or bucket should be used to collect a sample to take readings. The bucket should be rinsed twice with flow from outfall and readings taken on the third fill. Dissolved oxygen should only be taken if a reading can be taken in-flow. A bucket with flow from an outfall will not give an accurate dissolved oxygen reading. Probes should be washed with distilled water before and after a reading is taken.
- Containers used to test samples in the colorimeter must be rinsed twice with sample water before a sample is analyzed. Manufacturer's directions should be followed for all reagents used in the measurement of surfactants and fluoride. After a sample has been analyzed, the container should be rinsed with distilled water. All reagent waste must be disposed of properly. Reagents will be checked and replaced annually.
- Fecal coliform samples must be taken directly in the outfall flow in a sterilized container to avoid contamination. Samples will be dechlorinated with sodium thiosulfate, and stored in a cooler with ice. Samples will be processed within six hours of the event.

2.2.2.D. Data Collection & Reporting

The City of Buford will be responsible for collecting dry weather screening data, recording it on the dry weather screening checklist provided by the District (included in the Appendix), keeping a copy onsite, and including a copy in the Annual Report to EPD. The City will work to develop a procedure to link the information collected during the screening exercise with the location of the outfalls through GIS. Ultimately, the City's goal is to utilize the Mobile Mapper GPS units to record the location of the outfall in the field, assign a unique identification number to the outfall, and record the screening and sampling information electronically within the GIS database. The City will then be able to produce a map with each outfall screened identified with its unique identification number. The City will also be able to produce a database spreadsheet that includes the same unique identification number as well as the information collected during the dry weather screening event.

2.2.3. Illicit Discharge Detection & Elimination Program Evaluation

In order to ensure that the illicit discharge detection and elimination (IDDE) program is effectively removing illicit discharge from the City of Buford's MS4, a review of the City's IDDE program will be conducted annually after collecting data from dry weather screening with the results included in the NPDES Phase I MS4 Annual Report. It is expected that water quality will improve from year to year as illicit connections are discovered and removed. The appropriateness of locations screened will also be included. The report will also include the number of illicit discharge sources identified, and which method was used to identify the source (dye testing, line televising, field sampling, or inspection). This will allow the City to determine which method of illicit discharge source tracing is most valuable and efficient. Lastly, the analysis will address the amount of illicit connections removed, and if the regulations were sufficient to remove illicit connections located. This program evaluation will be conducted as part of the NPDES Phase I MS4 Annual Report write-up.

2.3. INVESTIGATIVE PROCEDURES FOR SUSPECTED ILLICIT DISCHARGES

2.3.1. Source Tracing

Once an illicit discharge has been detected, it will be the responsibility of the Street Department to trace the source of the illicit discharge as soon as possible after it is detected. Depending on the type of illicit discharge detected and access to the storm sewer system, City of Buford staff may employ one or more of the following methods:

2.3.1.A. Visual Inspections

City of Buford staff will walk the stormwater system upstream from the field screening outfall to inspect for evidence of illicit discharge such as land disturbing activities near the stormwater system, water color associated with illicit discharge, or stains and deposits showing the path of a discharge or spill.

2.3.1.B. Site Inspections

When a specific private site is suspected as the source of an illicit discharge, City of Buford staff may elect to perform a stormwater inspection onsite at that facility, business or residence. The inspection will search for the potential source including improperly stored material and floor drains connected to the storm sewer system. City staff will keep a record of the inspection and the findings. The checklist created for industrial/commercial stormwater inspections will be used if the site is a commercial business or industry.

2.3.1.C. Upstream Sampling

The City of Buford, or a contracted consultant, may sample upstream from the field-sampling site for the parameter that was above baseline limits. A sample will be taken above each pipe/connection to the system. When a sample is taken, and the parameter is no longer detectable, the pipe/connection to the system above which the sample is taken is likely to be the illicit discharge.

2.3.2. Source Removal

Once a source has been traced by the Street Department, and they have informed Code Enforcement or his designee, it shall be Code Enforcement, the City Inspector, or their designee's responsibility to enforce the applicable provisions of the Illicit Discharge Ordinance. This ordinance gives the City of Buford the authority to enter the property from which the illicit discharge is suspected, and to require the responsible party to remove the source and pay for related costs. The City may also choose to require the responsible party to pay fines.

2.4. SPILL PREVENTION, CONTAINMENT & RESPONSE PROCEDURES

2.4.1. Hazardous Material Spill Containment & Response Procedures

2.4.1.A. Gwinnett County Hazardous Material Spill Response Procedures

Gwinnett County's HazMat team completes spill response for major spills. A copy of their procedure is attached in the Appendix. Records of spills attended by Gwinnett County HazMat are held by the Gwinnett County Fire Department and are stored within a computer database. It should be noted that Gwinnett HazMat staff does not accept responsibility for clean-up, however, the team facilitates clean-up through contractors.

Current clean-up contractors used by HazMat include, Hepaco, Inc., HazTech Environmental, and Georgia Environmental. Spill response is handled in the following manner:

- Where the company who caused the spill has a clean-up company on retainer to deal with these incidents (generally gas stations, trucking companies and others that are more likely to be involved in spills), Gwinnett HazMat will notify the clean-up

company of the need for clean-up and provide information as necessary to assist in the clean-up and appropriate response.

- Where the company or individual does not have a retainer with a clean-up company and:
    - *The company or individual responsible for the spill is willing to work with the HazMat teams and have the spill cleaned up and are willing to pay for such clean-up.* The Hazmat team will provide a list of clean-up companies the company or individual can choose from. All HazMat trucks have fax machines that can be used by the clean-up company to secure signed paperwork from the company or individual responsible for the spill stating that they accept responsibility for the costs associated with the clean-up. Once the signed statement is received, that clean-up company will commence its response and clean-up.
      Or
    - *The company or individual responsible for the spill is not willing to work with the HazMat teams and have the spill cleaned up.* The HazMat teams will notify EPD emergency response of the situation and ask for assistance in encouraging the company or individual to clean up the spill. EPD emergency response is notified at any time any hazardous materials enter any drainage structure or water.

2.4.1.B. Municipal Site Stormwater Pollution Prevention Plan

The City has submitted an NOI for coverage under the NPDES General Industrial Stormwater Permit and created an SWP3 for the WWTP. This plan was completed in November 2007 and is currently being implemented by City staff. The plan includes programs to address spill prevention and response, employee training, water quality monitoring, site inspections, and good housekeeping at this particular municipal site. The City will submit a summary of all activities conducted under the SWP3 at this site in the 2008 NPDES Phase I MS4 Annual Report.

The City has also determined that the Public Works Facility requires coverage under the NPDES General Industrial Stormwater Permit and is currently working to submit the NOI and develop the SWP3. The City will complete development of the SWP3 and begin implementation of the plan by December 2008. The City will submit a summary of all activities conducted under the SWP3 at this site in the 2009 NPDES Phase I MS4 Annual Report. All SWP3s developed for Buford municipal sites will describe the following at a minimum:

- BMPs for spill prevention
- Materials needed and available for spill response
- Party responsible for plan implementation
- Numbers of agencies to call in the event of a spill

2.4.1.C. Sanitary Sewer Overflow Spill Prevention & Response

The City of Buford operates the sanitary sewer within the City's limits. Records of all spills are maintained by the City. Procedures for sanitary sewer spill containment are outlined within the Sewer System Maintenance Procedures which is included in the Appendix.

2.4.2. Hazardous Material Spill Prevention Program

2.4.2.A. Municipal Staff Training

Staff will receive training at the onset of the program. Hazardous materials to be addressed by this training program will include oil and other petroleum products, pesticides, and any other material for which a Materials Safety Data Sheet (MSDS) is provided. This training program will be developed in 2008, and classes will begin in 2009.

2.4.2.B. Hazardous Material Record Keeping

Departments within the City of Buford will be responsible for creating and updating an inventory of hazardous materials stored or used on appropriate publicly-owned sites for which a MSDS is provided. The inventory database shall be developed by June 2009, and will be updated annually.

2.4.3. Groundwater Contamination Prevention

The City of Buford will evaluate the need to adopt the Part V Environmental Planning Criteria for Groundwater Recharge Areas to protect groundwater from contamination by spills or stormwater runoff during the upcoming Comprehensive Plan update.

2.5. PROGRAMS TO PROMOTE, PUBLICIZE & FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES

2.5.1. Citizen Complaint Program

The City of Buford will address citizen complaints about water quality. Citizens who wish to report illicit discharges may call (770) 945-6761. Customer Service is responsible for receiving citizen complaint calls, and reporting them to the appropriate department responsible for taking action to address calls. Actions taken by the various departments may include visual inspections, field screening, or contacting another agency to investigate. Customer Service will maintain a log of citizen's complaints.

2.5.2. Stormwater Management Webpage

The City of Buford will maintain a webpage on the City's official website that contains information on stormwater management issues. This website will be used to promote the City's and other local educational programs, workshops and public meetings. The website will also contain a link to the approved SWMP, and a description of the City's stormwater

program. This website will list the number for City residents to call to report problems or illicit discharges to the storm sewer system. The City will promote this webpage as a part of other public education initiatives. This page will be added to the City's existing website (www.cityofbuford.com) by March 2009.

2.6. PROGRAMS TO PROMOTE THE PROPER MANAGEMENT & DISPOSAL OF USED OIL & OTHER HAZARDOUS SUBSTANCES

2.6.1. Hazardous Material Public Education

Gwinnett Clean & Beautiful (GCB) maintains a website that contains a listing of local sites that will accept waste oil, other toxics and recyclables from the general public. The website also provides information on source reduction, recycling, and proper handling procedures for these materials. The City of Buford will maintain a link on the City's stormwater webpage to CES and GCB websites and the hazardous material public information contained therein. The City will also maintain this list at City Hall and will provide the information to interested citizens upon request.

The CWC has developed a brochure on the management of household hazardous materials and will be included electronically on the City's stormwater webpage and is distributed to the public at City Hall.

2.7. CONTROLS LIMITING SANITARY SEWER INFILTRATION

2.7.1. Sanitary Sewer Overflow Prevention Program

The City of Buford maintains and operates the sanitary sewer system within the City. The City's Sanitary Sewer Procedures that describe the routine preventative operations and maintenance measures to prevent overflows or discharges from the sanitary sewer to the MS4 are included in the Appendix. Where the dry weather screening program returns results that could indicate infiltration of sewage into the MS4, the City will investigate the matter in accordance with procedures described in Section 2.3. of this SWMP. Confirmed or suspected sewage spills from the sanitary sewer system will immediately be reported to (770) 945-6761 during business hours and (770) 932-7986 after hours.

2.7.2. Septic System Education Program

The CES has developed brochures entitled, *"Onsite Wastewater Management Systems and their Environmental Impacts."* This brochure contains information on proper construction and maintenance of individual septic systems, including a recommended schedule for inspections and pumping. The City of Buford will make this information available at City Hall and will include a link to the brochure on the City's stormwater webpage.

2.7.3. Septic System Inspection Program

The Gwinnett County Health Department inspects septic systems in the City of Buford during construction of the system to ensure proper design. Gwinnett County Health Department will also inspect existing septic systems if there are any indications of failure including complaints, odor, high fecal coliform levels detected during dry weather screening or other sampling, etc. If the Health Department discovers a malfunctioning septic system, it will require the owner to have the system pumped and otherwise maintained as necessary.

3. WASTE HANDLING & INDUSTRIAL FACILITIES POLLUTION CONTROL PROGRAMS

3.1. PRIORITIES & PROCEDURES FOR INSPECTIONS & ESTABLISHMENT OF CONTROLS

3.1.1. Industrial Facility Inventory

The City of Buford currently maintains an industrial facility inventory list which is included in the Appendix. This list is based on the current industrial NOI list maintained by the EPD. The inventory will list any industries using, storing or manufacturing hazardous or potentially polluting materials onsite. The inventory will contain the following information: name of facility, street address, type of operation, Standard Industrial Classification (SIC) code (where appropriate), hazardous or potentially polluting materials onsite (where known). The City will continue to modify and update this list on an annual basis in accordance with the informational sources listed above.

3.1.2. Industrial Stormwater Inspection Program

The City of Buford will be responsible for conducting stormwater inspections onsite at industries on the industrial inventory list. A standardized Industrial Site Stormwater Inspection checklist shall be used, and a database shall be maintained on inspections, problems found, and actions taken. The checklist is included in the Appendix. City of Buford staff will check to ensure that an NOI has been submitted (if it is required) and will review and check the implementation status of the associated SWP3. Should an inspection reveal a potential threat to water quality in the MS4, City staff will notify the industry, provide them with a copy of the inspection checklist, and perform a re-inspection to ensure that necessary corrections were made. City staff will also notify the GA EPD if assistance is needed for enforcement, if there is a threat to Waters of the State, or if a regulated facility has not submitted an NOI. Twenty percent of the facilities in the inventory database will be inspected annually. Inspections shall be prioritized based on the following criteria:

- Complaints or history of bad housekeeping or illicit discharge to MS4
- Hazardous nature of materials onsite
- Proximity to environmentally sensitive areas including 303(d) listed watersheds

The City will help to educate these industrial facility owners by providing them with educational materials during site inspections/visits. The materials will be specific to activities onsite, or general good housekeeping and pollution prevention. The City will utilize educational materials developed by the CWC in addition to any other applicable materials for this educational outreach effort.

3.1.3. Site Plan Review for Private Flood Management Controls

The City of Buford currently requires industrial developers to comply with the Stormwater Ordinance, which details the rules and regulations governing post-development stormwater management practices for new development and redevelopment. The regulations require developers to submit a site stormwater management plan for developments disturbing more than a certain number of acres or including a certain square footage of impervious surface. Site stormwater management plans must address water quality and water quantity issues in accordance with the requirements of the NPDES Phase I MS4 Permit, the District and applicable local development regulations.

The site stormwater management plan is reviewed by a Georgia-certified Professional Engineer (contracted or City staff) and approved by the Planning and Development Department before an LDA Permit is issued and construction can begin.

3.2. MONITORING PROGRAM FOR FACILITY DISCHARGE

3.2.1. Facility Monitoring Program

In order to monitor industrial facilities discharging to the City of Buford MS4, City staff will continue to operate the industrial and municipal inspections program. If evidence is found during the inspection process that activities onsite are contributing to pollution in the MS4, the site owners will be notified of the violation. Site owners will be given a specific time period, proportional to the violation, in which to correct the problem. If the problem is not corrected, enforcement actions as described above and in the Illicit Discharge regulations will be taken. If the violation is still not corrected, EPD will be notified of the problem. If EPD intervention does not ensure a resolution to the problem, the City of Buford may elect to perform priority pollutant sampling at the facility outfall, as described in the CFR 126.26.

In addition, the City may, during the investigation of a violation of the City's IDDE Ordinance, complete or require monitoring of a suspected industrial facility in order to secure evidence to support the alleged violation.

4. CONSTRUCTION SITE STRUCTURAL & NON-STRUCTURAL CONTROL PROGRAMS

4.1. SITE PLANNING PROCEDURES FOR WATER QUALITY

The City of Buford is currently an issuing authority for LDA Permits as defined by the Georgia Erosion and Sedimentation Act (GESA). The model Soil E&S Ordinance, as written and distributed by EPD, was adopted on April 1, 2004. Accordingly, the City administers the programs described below in accordance with the responsibilities related to being an issuing authority. EPD has taken the position that any program in compliance with the regulations of GESA will also be considered in compliance with those requirements of the NPDES MS4 program that relate to E&S.

4.1.1. Plan Review

The City of Buford currently requires submittal of approved Erosion, Sedimentation and Pollution Control Plans (ESPCP) prior to issuance of a LDA Permit. This ensures the proposed sedimentation and erosion plan and post-construction stormwater control measures will comply with the City's E&S Ordinance and effectively reduce pollutants entering the MS4. Plans are reviewed by City of Buford staff or their designee under a Memorandum of Agreement with the Georgia Soil and Water Conservation Commission (GSWCC). The ESPCP must be approved by the City of Buford prior to the City issuing a LDA permit.

4.1.2. Land Disturbing Activity Permit

The City of Buford is its own issuing authority, and remains in compliance with GESA of 1975 as amended in 2003. Accordingly, developers are required to comply with the local E&S Ordinance and obtain a LDA prior to the start of any land disturbing activities within the City limits. The local ordinance includes a requirement that a NRCS approved ESPCP is included with the site plan. This plan must meet the requirements of GESA and the City of Buford's E&S Ordinance which includes the requirement to control turbidity in the site runoff, control impacts on receiving streams, and the implementation of the minimum control measures. The City also requires, through its E&S Ordinance, that local developers pay permit fees of $40.00 per disturbed acre to the City of Buford.

4.2. STRUCTURAL & NON-STRUCTURAL BEST MANAGEMENT PRACTICE REQUIREMENTS

The BMPs described in the following sections include, but are not limited to, the requirements with which developers must comply to meet the provisions of the GESA. The City of Buford requires development to comply with the provisions of the Buford E&S Ordinance and to meet the following site-specific BMP requirements. A complete list of structural and non-structural BMPs can be found in the *Manual for Erosion and Sedimentation Control in Georgia* (the Manual) amended in 2000. The Manual is commonly referred to as the "Green Book" and is produced by GSWCC.

4.2.1. Structural Controls

The structural controls required of developers are necessarily site-dependent; however the following list outlines some of the more common structural approaches recently and currently employed at local construction sites: silt fencing, inlet structure filter bags, infiltration basins, detention/retention ponds, riprap, gabions, check dams, hay bales, and graveled construction site exits. The minimum standards for structural controls are listed in the City of Buford's E&S Ordinance and are included in the Appendix.

4.2.2. Non-structural Controls

Typical non-structural controls that are currently required and in use include the following: 50-foot undisturbed riparian buffers, site planning procedures, and good housekeeping. These minimum standards are also outlined in the City of Buford's E&S Ordinance.

4.3. CONSTRUCTION SITE PRIORITY IDENTIFICATION FOR INSPECTIONS

4.3.1. Erosion & Sedimentation Inspection & Enforcement Program

The City of Buford is responsible for the inspection program that targets construction projects within the city limits. The inspections include checking E&S control measures for compliance with the approved E&S plans and LDA permit. The authority for such inspections follows the City's E&S Ordinance. If, upon inspection, a construction site is found to be in non-compliance with its approved E&S plan, LDA Permit, and the minimum requirements of the E&S Ordinance, the Planning and Development Department will be responsible for enforcing the provisions of the E&S Ordinance. Enforcement measures can include notices of violation, stop work orders, and fines.

The City will conduct a comprehensive site inspection after land disturbing activities commence to verify compliance with applicable E&S requirements. Sites that have an LDA Permit will be inspected at the start of land disturbing activities and on a regular basis until the site is stabilized. Subsequent inspections during the construction process will be prioritized as follows:

- Evidence of poor housekeeping
- History of poor compliance
- Evidence of absent or malfunctioning controls
- Proximity to local waterways

Additionally, follow-up inspections by City representatives will take place to verify that corrective measures have been taken for previously documented deficiencies. A final inspection will be conducted at LDA sites after land disturbing activities have ceased to ensure that the site has been adequately stabilized and that excess materials have been removed.

An E&S Inspection Checklist will be completed during inspections. This checklist is important to document the inspection history and the record of compliance. Log books of inspections, violations and enforcement actions will be kept by the Planning and Development Department. The frequency of inspections of developments is as follows:

- At the start of land disturbing activities
- Weekly during land disturbing activities
- At final stabilization

4.4. CONSTRUCTION SITE OPERATOR EDUCATIONAL & TRAINING ACTIVITIES

4.4.1. Construction Site Operator Certification Program

GESA now requires local government employees involved with plan review, site inspections, or E&S Ordinance enforcement, as well as construction site operators to undergo the applicable training seminars developed by the GSWCC. The City of Buford requires construction site operators to provide evidence in their LDA Permit application that they have received this training. Evidence of certification must also be produced during an E&S inspection. The City also requires applicable staff to receive this training as soon as possible after the start of their employment.

5. PROPOSED MODIFICATIONS TO THE SWMP

5.1. INCREASE THE FOCUS & IMPLEMENTATION OF SWMP ACTIVITIES WITHIN THE DRAINAGE BASINS OF WATERS LISTED ON THE ACTIVE 303(D) LIST

There are two stream segments within the City of Buford that are currently identified on the 2006 303(d) list for impaired stream segments. They are included in the table below:

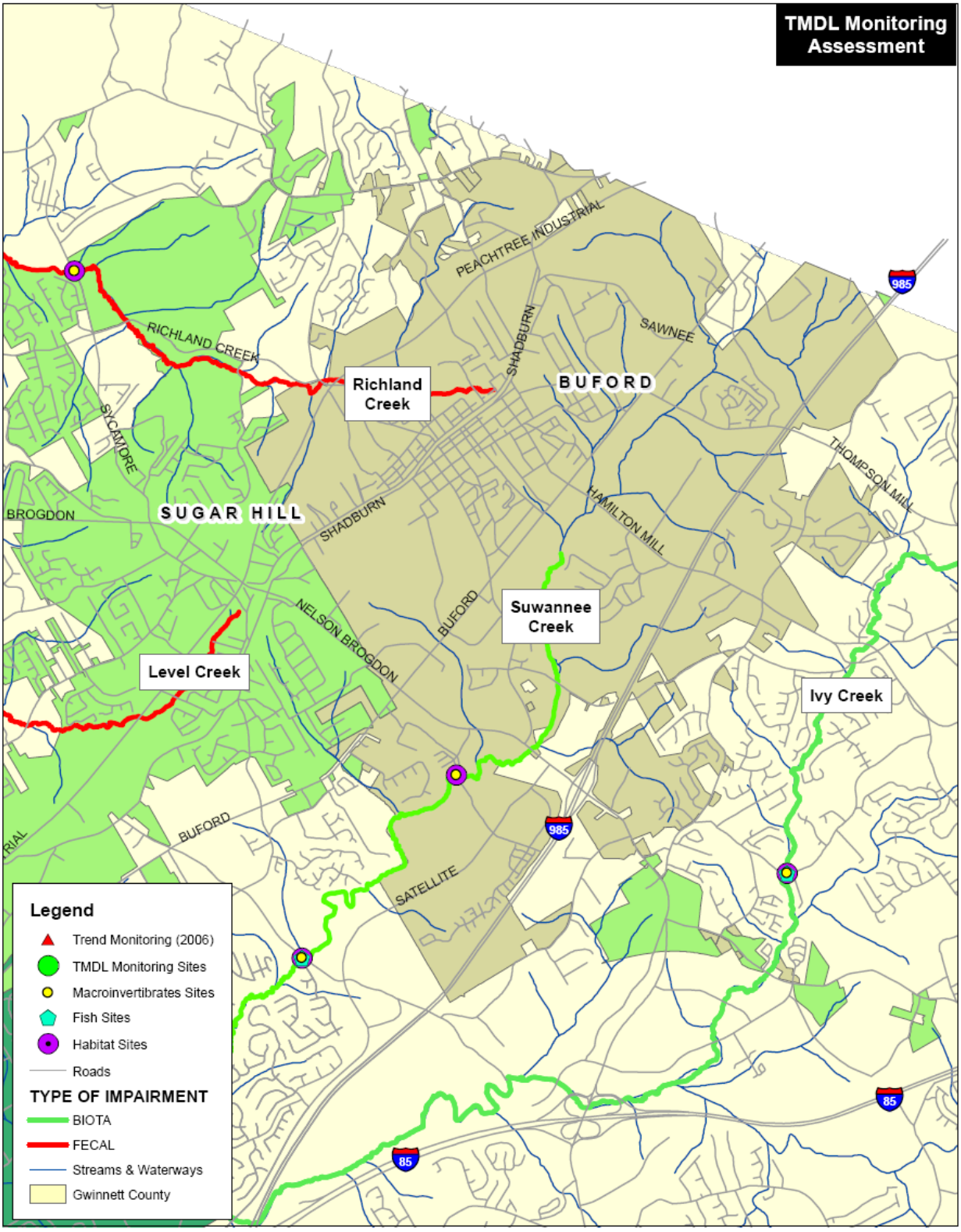
Stream Segment	Reach Location	Evaluation/Use	Criterion Violated	Potential Cause	TMDL
Richland Creek	Headwaters to Chattahoochee	Not Supporting/Fishing	Fecal Coliform	Urban Runoff	Yes
Suwanee Creek	Suwanee Creek Lake to Ivy Creek	Partially Supporting/Fishing	Biota Toxicity	Municipal WCPC and Urban Runoff	Yes

5.1.1. TMDL Water Quality Monitoring

Gwinnett County is currently implementing a water quality monitoring program that addresses the 303(d) listed waterways within the City that have established TMDLs, and has an EPD approved SQAPs for each site. A map of the listed stream segments and the location of the County's monitoring sites is shown below. The monitoring program includes monitoring for those parameters for which the stream segment is listed. The City will work with the County to gather and review the data collected at these sites during the current and upcoming permit cycles, (i.e. 2007-2008 and 2008-2009). The analysis of the monitoring results will be included in the 2008 and 2009 Annual Report. If, upon review of this monitoring data, and any additional monitoring data pertinent to the listed stream segments, and the City determines there is a water quality impairment, the City will establish a TMDL water quality monitoring program with sampling locations within the city limits. This program will be designed to narrow down the source of impairment and determine if it is a City responsibility. The TMDL Monitoring Plan will be included in the 2009 Annual Report and monitoring will commence in 2009 such that the data compiled by the City will be reported beginning with the 2010 Annual Report. The TMDL Plan will be coordinated with the City's Long-Term Monitoring Program developed as part of the Watershed Protection Plan in compliance with the City's NPDES Wastewater Discharge Permit.

The City will also implement a dry weather screening program that will address outfalls discharging to waters of the State. The City will prioritize outfalls discharging to any 303(d) listed waterways (or within a mile upstream) in order to determine if those outfalls are discharging any pollutants of concern. These outfalls will be identified during the 2007-2008 permit period and a map of the outfalls will be included in the 2008 Annual Report. These outfalls will be prioritized for dry weather screening during the 2008-2009 reporting period.

City of Buford



5.1.2. Implementation Plan to Address 303(d) Listed Waterways

The City has reviewed the streams listed on the 2006 303(d) list within Gwinnett County. The City will prioritize the following programs to address the listed pollutants of concern, which include fecal coliform, biota and toxicity:

- Industrial Inspections
- Dry Weather Screening Program
- Public Education Materials including:
    - CWC Pet Waste Education Brochures
    - CES Septic System Brochure

TMDL implementation plans have been prepared for Richland Creek and Suwanee Creek. The City of Buford will work to implement these approved TMDL implementation plans in accordance with their identified responsibilities.

5.2. ENHANCED EDUCATION & ENFORCEMENT EFFORTS ADDRESSING HIGHLY VISIBLE POLLUTANT SOURCES & ILLICIT DISCHARGES

5.2.1. Highly Visible Pollutant Source/Facility Inventory

The City of Buford currently maintains an inventory of commercial businesses and facilities that are considered to be highly visible sources of pollutants. The types of businesses included in this list are as follows:

- Gas Stations
- Lawn and Garden Services
- Retail Nurseries, Lawn and Garden Supply Stores
- Commercial Car Washing and Detailing
- Retail Automotive Supply Stores
- Carpet Cleaning

This list was developed and is updated based on the current business license database. The inventory will contain the following information: name of facility, street address, and type of operation. The City of Buford will continue to modify and update this list on an annual basis in accordance with the informational sources listed above. The current inventory is included in the Appendix.

5.2.2. Highly Visible Pollutant Stormwater Inspection Program

The City of Buford will be responsible for conducting stormwater inspections onsite at facilities on the highly visible pollutant (HVP) inventory list. A standardized HVP Site Stormwater Inspection checklist shall be used, and a database shall be maintained on inspections, problems found, and actions taken. The checklist is included in the Appendix. Should an inspection reveal a potential threat to water quality in the MS4 that violates the IDDE Ordinance, City staff will notify the industry or business, provide them with a copy of

the inspection checklist, and perform a re-inspection (if necessary) to ensure that any mandatory corrections are made. If available, the City will also provide the business owner with educational materials to assist them with making the necessary corrections.

As the City is gathering resources and developing the program, the City will perform HVPs inspection according to the following schedule:

- Year 1 (2008) — 5% of HVPs
- Year 2 (2009) — 8% of HVPs
- Year 3 (2010) — 12% of HVPs
- Year 4 (2011) — 16% of HVPs
- Year 5 (2012) — 20% of HVPs

This schedule allows for City staff to incrementally increase the number of HVPs inspected each year as staff and financial resources increase. After five years, the City will be inspecting 20% of HVP sites per year, a rate which will continue into subsequent permitting periods, allowing for 100% of the HVP sites to be inspected each permitting cycle. Inspections will be prioritized based on the following criteria:

- Complaints or history of bad housekeeping or illicit discharge to MS4
- Hazardous nature of HVP
- Proximity to environmentally sensitive areas including 303(d) listed watersheds

5.3. INCREASE PUBLIC EDUCATION EFFORTS

5.3.1. Utility Bill Inserts

The City of Buford supplies water and sewer service to approximately 3,000 customers within the City. Each month water and sewer bills are distributed to each of these customers. The City distributes bill inserts to each of these customers a minimum of once per year. These bill inserts address a range of water quality issues including upcoming events, workshops, public meetings, general non-point source pollution issues and basic non-structural BMP information that is relevant to homeowners and business owners. During each reporting period, one of these bill inserts will be used to encourage the reporting of illicit discharges.

5.3.2. Adopt-A-Stream

Adopt-A-Stream (AAS) is a program of the Georgia Department of Natural Resources (GaDNR) that encourages local volunteer groups to adopt waterways and perform visual, biological, and or chemical monitoring at their adopted site. The goal of the program is to increase public awareness of the State's nonpoint source pollution and water quality issues, and to provide citizens with the tools and training to evaluate and protect their local waterways. Through participation in the program, citizens learn about stormwater pollution, the effects of illegal discharge and dumping, and what to do if they discover illicit dumping

or connections. The GaDNR provides free training and program materials to local AAS programs and volunteers.

Gwinnett County coordinates the countywide AAS program that enlists volunteer groups to both monitor the health as well as clean up local waterways for a year. The AAS program has been operating in Gwinnett County since 1991. The main focus of the program is to educate the public on water quality issues. Stream Clean-Up events are organized each year within different waterways located in Gwinnett. Streams are chosen based on their accessibility by boat. These events draw volunteers from the community who are primarily interested in removing trash from the County's waterways. Volunteers access streams in boats and remove any trash they find along the way. A pre-clean-up safety briefing also includes information about illicit discharges. Volunteers are encouraged to keep a look-out for pipes that may be discharging wastes into the streams. Illicit discharges have been identified through this program in the past.

The City of Buford will help to promote this program by providing information/links on the City's website related to this program by June 2009 and by displaying promotional material including brochures and posters at City Hall.

5.3.3. Clean Water Campaign

The CWC is a collaborative public education initiative that brings together local, state and federal government agencies, environmental and community groups and corporate partners who all share the common vision of protecting water quality in metro-Atlanta. The mission of the CWC is to educate the general public about the sources of water pollution due to stormwater runoff, and its negative effects on our water supply, recreational opportunities, aquatic ecosystems and quality of life. The Campaign encourages the protection of our water resources by informing residents and businesses on how to reduce the impacts of those activities that lead to non-point source pollution and polluted runoff.

To reduce redundancy and deliver a consistent message, the NPDES Phase I MS4 permittees in the five counties of Clayton, Cobb, DeKalb, Fulton and Gwinnett developed a single regional public education program which would be able to deliver the sorts of broad media efforts and coordination that was needed to effectively reach the public in the metro-Atlanta area. The CWC was born in 2001 and soon became a collaborative initiative bringing together state and federal government agencies, groups involved in water quality and water resources protection, and the business community.

The CWC has developed numerous brochures, posters and fact sheets to help educate residents and businesses about stormwater and to provide tips on how to prevent water pollution. The following list of resources is available on the CWC website at http://www.cleanwatercampaign.com.

- Automobile Service Brochure
- Automobile Service Poster
- Care of Ornamentals
- Care of Turf
- Commercial Landscaping
- Commercial Landscaping Brochure in Spanish
- Composting
- Composting Brochure
- CWC Billboard Posters
- CWC Fact Sheet
- CWC Magnet
- Do-It-Yourself Auto Repair Brochure
- Do-It-Yourself Household Water Assessment
- EPA Pesticide Guide
- Food Service Brochure (Menu For A Cleaner Environment)
- Garden to Protect Water Quality (created by UGA)
- Hazardous Waste
- Integrated Pest Management
- New Billboard Magnets
- Pet Waste Brochure
- Pet Waste Fact Sheet
- Pet Waste Magnet
- Pet Waste Poster (8.5 x 11)
- Pick Up After Pet
- Rain Garden Brochure
- Rain Garden Spanish Brochure
- Residential Lawn Care
- Residential Lawn Care in Spanish
- Septic Tank Brochure
- Septic Tank Maintenance (UGA)
- Storm Drain Stenciling Brochure
- Trash
- Tree Planting Fact Sheet
- Video Public Service Announcements
- When It Rains, It Pollutes! (CWC Background Brochure)
- WSB Brochure
- Youth Activity Book

The CWC has also developed and continues to facilitate workshops free of charge for all interested citizens on the following subjects:

- *Rain Gardens* – Learn to plant a flower garden that relies on rain water and prevents water pollution.
- *Automobile Service* – Learn how to reduce pollution and save money.
- *Water Efficient Landscapes* – Learn about alternative practices to help reduce water use and prevent runoff.
- *Lawn Care* – Learn how to manage your lawn without creating water pollution.
- *Composting* – Learn how to compost yard materials.
- *You're the Solution to Water Pollution* – Learn how to prevent water pollution at home.
- *Septic Tank Maintenance* – Learn how to properly care for a septic system.
- *Planting Trees to Protect Streams*

In order to ensure that residents of the City of Buford receive the benefit of this program, the City will provide a link to the CWC website on the City's webpage.

5.3.4. Gwinnett Clean & Beautiful Programs

5.3.4.A. Storm Drain Stenciling

The GCB has developed a storm drainage stenciling program to educate others about the importance of preventing harmful runoff by stenciling the message "No Dumping – Leads to Stream" on storm drains in Gwinnett County. Volunteers are provided a stenciling kit that includes: the stencil, blue spray paint and thorough instructions. Additionally, volunteers hang door-hangers on the homes in the neighborhood to educate the residents about what they are doing. Contact information for both GCB and City personnel will be listed so that residents and groups may call to gain information and participate in the program.

5.3.5. Gwinnett County Cooperative Extension Service Educational Programs

The CES provides information and educational opportunities for all citizens of Gwinnett County, including those in the City of Buford. Research based information concerning the environment and water quality is presented through community educational classes, exhibits, radio, television, brochures, and other available media. While many of the CES efforts target homeowners, they also design training for professional green industry employees, who apply pesticides and fertilizers to thousands of commercial and home properties in Gwinnett. Livestock producers are also targeted and provided with animal waste disposal information to reduce the impact of livestock related waste on local watersheds. A few of the educational programs offered by the Gwinnett CES includes:

- Ornamental Planting Methods
- Master Gardener Training
- Agricultural Safety and Security Training
- Ornamental Disease Control and Pesticide Use
- Xeriscaping – (low water use landscaping)
- Certified Landscape Professional Exam
- Landscape Maintenance Seminar

The City of Buford will provide a link to the CES website on the City's official stormwater webpage by June 2009 and will also display a selection of educational materials at City Hall.

5.3.6. Stormwater Management Webpage

The City of Buford will maintain a webpage on the City's official website that contains information on stormwater management issues. This website will be used to promote the City's and other local educational programs, workshops and public meetings including the following:

- Clean Water Campaign
  - Public Information Brochures and Posters
  - Workshops
- Gwinnett County Adopt-A-Stream

    - Volunteer Monitoring
    - Rivers Alive
- Gwinnett County Cooperative Extension Service
    - Xeriscape
    - Pesticide, Herbicide and Fertilizer Proper Handling and Storage
    - Septic System Maintenance
- Gwinnett Clean & Beautiful
    - Storm Drain Stenciling
    - Great American Cleanup

The website will also contain a link to the approved SWMP, and a description of the City's stormwater program. The City will promote this webpage as a part of other public education initiatives. This page will be added to the City's existing website (www.cityofbuford.com) by March 2009.

5.3.7. Public Information Brochures

The City will distribute brochures designed to address stormwater pollution prevention at City Hall. These brochures will be chosen to address the following topics:

- Stormwater Pollution Prevention
- Good Housekeeping for Commercial Establishments
- Picking Up After Your Pet
- Proper Handling and Disposal of Hazardous Waste
- Septic System Maintenance
- Promotion of Public Involvement Activities

Brochures will be reviewed on an annual basis and new brochures may be chosen and distributed. Brochures will be restocked as needed. If available, electronic versions of the brochures will be available on the website. The website will be online by December 2008. Brochures will be distributed at City Hall beginning in June 2008.

5.4. INCREASE INDUSTRIAL STORMWATER CONTROL EFFORTS, POLLUTION PREVENTION & GOOD HOUSEKEEPING ACTIVITIES INCLUDING INDUSTRIAL OPERATIONS

It is the City's contention that the Plan (as described within Section 3.) should address the requirements of this element as it relates to completing inspections of industrial and municipal facilities.

APPENDICES OUTLINE

A. MS4 Maps/Inventory
1) Map of Outfalls into Waters of the State
2) Map of the Storm Drainage System
3) Inventory of Detention Ponds
4) Gwinnett County Acquired Inventory Data

B. List of Staff & Equipment Available for SWMP Implementation

C. Inspection Checklists
1) Industrial/HVP/Municipal Stormwater Inspection Checklist
2) Erosion & Sedimentation Inspection Checklist
3) Dry Weather Screening Checklist
4) MS4 Structural Control Inspection Checklist

D. Standard Operating Procedures
1) EPA Herbicide & Pesticide Application
2) GSMM Detention Pond Maintenance Procedures

E. Ordinances
1) Illicit Discharge & Illegal Connection Ordinance
2) Post-Development Stormwater Management for New Development & Redevelopment
3) Flood Ordinance
4) Erosion & Sedimentation Ordinance
5) Stream Buffer Ordinance
6) Litter Ordinance
7) Conservation Subdivision Ordinance
8) Council Meeting Minutes

F. Spill Prevention & Response Plans
1) Gwinnett County Hazardous Material Spill Response Procedures
2) Sewer System Maintenance Program

G. Review Checklists
1) Flood Management Project Water Quality Analysis Review Checklist
2) ESPCP Site Plan Review Checklist(s)

H. Inventories
1) Industrial Sites
2) HVP Sites
3) Municipal Sites