December 3, 2024

Lilly Colantuono
Environmental Compliance Specialist
Stormwater Unit, Watershed Protection Branch
Environmental Protection Division
2 Martin Luther King, Jr. Drive SE
Suite 1462 East Tower
Atlanta, Georgia 30334

RE: Revised SWMP
Phase I Medium MS4 Permit No. – GAS000129
City of Powder Springs, GA

Dear Ms. Colantuono,

The Georgia Environmental Protection Division (EPD) re-issued a Phase I Large National Pollutant Discharge Elimination System Phase I Medium Municipal Separate Storm Sewer System (MS4) Permit, No. GAS000129, to the City of Powder Springs that became effective on June 11, 2024 and will expire on June 10, 2029. Part 3 of the Permit specified that an amended Stormwater Management Plan (SWMP) must be submitted (postmarked) for EPD approval within 180 days, or by December 8, 2024.

Enclosed is a hard copy of the City's revised SWMP, which follows the format of the revised 2024-2029 MS4 Permit. Unless notified otherwise by the EPD, the City will implement the SWMP as written to ensure compliance with the City's MS4 Permit. Due to the large volume of appendices referenced in the SWMP, the appendices are included as electronic files on the enclosed flash drive. The Table of Contents within the SWMP lists the names and location of all documents that are provided as appendices.

If you have any questions, or require additional information, please contact me at (770) 943-1666.

Sincerely,

Pamela B Conner

Pamela B. Conner
City Manager

2024 - 2029

City of Powder Springs Stormwater Management Plan



city of powder springs

NPDES Phase I Large Municipal Separate Storm Sewer System (MS4) Permit #GAS000129

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APPENDICES

Appendix A NPDES Phase I MS4 Permit & NOI
1) Permit Reapplication Form
2) Phase I Large Permit
3) City Resolution

Appendix B Ordinances & Legal Documents
1) Bill of Sale
2) Unified Development Code (including Post Construction Ordinance update and E&S Ordinance update)

Appendix C Maps & Inventories
1) MS4 Inventory Map
2) MS4 Inventory Table
3) Municipal Facility Inventory
4) Industrial Facility Inventory
5) HVPS Facility Inventory

Appendix D Inspection Checklists & Procedures
1) MS4 Inspection Checklists (Catch Basins/Pipes; Underground Detention; & Ponds)
2) Existing Flood Analysis (Water Quality Assessment)
3) Municipal Facility Inspections
4) Pesticides, Fertilizers, and Herbicides Application Protocol
5) Cobb County Operational Guidelines for Incidents Other than Structural Fires
6) Sanitary Sewer Spill Log
7) Stormwater Site Inspection Checklist (HVPS & Industrial)
8) Construction/Erosion and Sedimentation Documents (Plan Review Checklist; Soil Erosion Affidavit, & E&S Inspection Documentation)
9) GIS Data Collection Summary

Appendix E Illicit Discharge Detection and Elimination Plan

Appendix F Green Infrastructure/Low Impact Development Program
1) GI/LID Plan
2) Ordinance Evaluation

Appendix G Enforcement Response Plan

Appendix H Impaired Waters Plan

Appendix I Municipal Employee Training Procedural Document

RESPONSIBLE PARTY AND PLAN CERTIFICATION

Responsible Official:
Al Thurman, Mayor
4426 Marietta Street
Powder Springs, GA 30127
Phone: (770) 943-1666

Designated Stormwater Management Program Contacts:

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Sharing Responsibility
The City of Powder Springs does not share responsibility with any other entity for implementation of the Best Management Practices outlined in this Plan.

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 gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Printed Name: Albert Thurman Title: Mayor

Signature: Albert Thurman Date: 12-2-24

PLAN REVIEW AND REVISION

This Stormwater Management Program (SWMP) is reviewed regularly to determine if the City of Powder Springs needs to replace ineffective or infeasible Best Management Practices (BMPs), improve stormwater control measures, and to ensure compliance with the City City's National Pollutant Discharge Elimination System (NPDES) Phase I Large Municipal Separate Storm Sewer System (MS4) Permit #GAS000129. Revisions, if needed, will be submitted to the Georgia Environmental Protection Division (EPD) for review at least 30 days prior to implementation of the modification. Plan revisions and their submittals to EPD may be documented in the log below.

DATE OF PLAN REVISION	DESCRIPTION OF PLAN REVISIONS	STATUS
December 2024	SWMP & ancillary plans revised to meet the requirements of Permit #GAS00129, which was re-issued and became effective for 06/11/24 - 6/10/29. Submitted to EPD for review & approval in December 2024.	EPD review pending

ACRONYMS/DEFINITIONS

AR	Stormwater Annual Report
BMPs	Best Management Practices
CES	Cobb Cooperative Extension Service
CIP	Capital Improvement Project
DoA	Georgia Department of Agriculture
E&S	Erosion & Sedimentation
EPD	Georgia Environmental Protection Division
ERP	Enforcement Response Plan
GESA	Georgia Erosion & Sedimentation Act
GI/LID	Green Infrastructure/Low Impact Development
GIS	Geographic Information System
GSMM	Georgia Stormwater Management Manual
GSWCC	Georgia Soil & Water Conservation Commission
HVPS	Highly Visible Pollution Source
IDDE	Illicit Discharge Detection and Elimination
IGP	Industrial General Permit
IWP	Impaired Waters Plan
LDA	Land Disturbing Activities
LEED	Leadership in Energy and Environmental Design
LIA	Local Issuing Authority
MNGWPD	Metropolitan North Georgia Water Planning District
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge & Elimination System
POC	Pollutant of Concern
ROW	Right-of-Way
SOP	Standard Operating Procedure
SWMP	Stormwater Management Program
SWP3	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UDC	Unified Development Code

EXECUTIVE SUMMARY

The City of Powder Springs renewed coverage under the National Pollutant Discharge and Elimination System (NPDES) Phase I Municipal Separate Storm Sewer System (MS4) Permit (GAS000129) on June 11, 2024, as required by provisions of the Georgia Water Quality Control Act and the Federal Clean Water Act. A copy of the City's MS4 Permit and Permit Reapplication Form are included in Appendix A. This permit requires the development of a Stormwater Management Program (SWMP), to address the following program elements:

- Structural and Source Control Measures
- Illicit Discharge Detection and Elimination Program (IDDE)
- Industrial Facility Stormwater Discharge Control
- Construction Site Management
- Highly Visible Pollutant Sources
- Enforcement Response Plan (ERP)
- Impaired Waters
- Municipal Employee Training
- Public Education
- Public Involvement
- Post-Construction Stormwater Controls

The Stormwater Management Program described within this document has been revised to meet the requirements of the City's 2024 – 2029 MS4 Permit and a copy of the City's Resolution to adopt and submit the revised Plan is included in Appendix A. These documents demonstrate the commitment of the City of Powder Springs to water resources protection.

1. STRUCTURAL & SOURCE CONTROL MEASURES

Permit Section 3.3.1: Structural and Source Control Measures, Table 3.3.1

1.1. MS4 STRUCTURE INVENTORY AND MAP

1.1.1. Description

The City of Powder Spring's MS4 is made up of the structures and facilities that are used for collecting, conveying, storing and/or treating stormwater from the source drainage area to the point of final outlet. The City's NPDES Phase I Large MS4 Permit defines the MS4 as follows:

"Municipal Separate Storm Sewer System or an MS4 means 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."

The City's stormwater system is comprised of the following structures that are regulated by the City's MS4 Permit and that are owned and/or operated by the City:

- Catch Basins
- Storm Drain Lines
- Ditches
- Municipal Detention / Retention Ponds and Underground Detention (i.e., water quality vaults)

The City has developed an inventory and map of the MS4 control structures owned and/or operated by the City within the City's permitted area. This inventory is in GIS format. Catch basins, ditches, detention/retention ponds/underground detention, and pipes/storm drain lines are included in this inventory. The City's most recently updated MS4 inventories and maps are included in Appendix C. The City's inventory of MS4 control structures will be updated annually each reporting period as new structures are added or identified through review of new development as-built maps as well as field inspections, and submitted to EPD in the Annual Report.

1.1.2. Measurable Goals:

- Provide an inventory and map of MS4 control structures.
- Update the inventory and map once each reporting period and provide the number of MS4 structures added or deleted during the reporting period in subsequent Annual Reports.

1.1.3. Schedule

- Annual, 2024 – 2029.

1.1.4. Annual Report Documentation:

- Updated inventory and map of the MS4.
- Number of MS4 structures added during the reporting period
- Total number of structures in the inventory

1.2. MS4 INSPECTION AND MAINTENANCE PROGRAM

1.2.1. Description

The City will inspect 100% of the MS4 system components included in the MS4 control structure inventory over the five-year period of the permit and will inspect, at a minimum, 5% of the MS4 structures each year. The City will visually inspect the MS4 in accordance with the following procedures:

The City will visually inspect MS4 structures and document the inspections in accordance with the following procedures:

- Inspections will generally include a visual condition assessment of the various system elements including catch basins, storm drain lines, ditches, and visible areas of detention/retention ponds and underground detention structures.
- Storm drain lines will be visually inspected where they outfall into a structure or open drainage way, unless access is restricted due to obstructions.
- Visible areas of underground detention structures, such as where stormwater enters or outfalls, will be visually inspected; underground components that are not visible without entry will not be inspected.
- MS4 structure inspections will be documented using paper checklists or through a field collection application that is downloaded on City-owned smart phones and/or tablets and will be recorded within the City's GIS layer. The field collection application and paper inspection checklists contain the same questions. Example paper checklists and/or a table listing the information that will be collected and documented during site inspections within a GIS database is provided in Appendix D.

Table 1: MS4 Inspection & Maintenance Criteria

Structure	Standard for Maintenance
Catch Basins	Sediment or debris accumulation that exceeds the depth of the invert of the lowest pipe into or out of the basin.
Ditches	1/2 filled with sediment or debris
Pipes	1/2 filled with sediment or debris
Detention Ponds	1/2 filled with sediment, debris or trash blocking the outlet

Upon completion of an inspection, the City will determine if maintenance is needed based on inspection results and the City's maintenance criteria. The City will prioritize maintenance needs based on their potential impact to the functionality of the public MS4. Maintenance shall be prioritized and performed in general accordance with the following standards:

- The City will schedule appropriate maintenance as needed and in accordance with available City resources.
- The City will respond to all citizen complaints related to MS4 structures, and will perform maintenance as needed.
- Sediment will be removed before 50% of the capacity of the structure has been lost.
- Trash and debris will be removed from structures.
- Manmade and natural objects that are causing or could potentially cause a blockage to the system will be removed.
- Excess emergent vegetation will be removed.
- Bank side vegetation and vegetation in the maintenance right-of-way will be mowed or trimmed, but not removed to protect against erosion.
- Ditches that are not draining properly will be re-graded to match existing pipe invert grades, to the extent possible.
- Materials removed from the MS4 during maintenance will be properly disposed of by the City or a contractor hired by the City.
- Maintenance activities for MS4 structures are documented through the use of a Work Order database maintained by the City.

Maintenance activities will be recorded in the City's Work Order database, tracking table, or through a field collection application that is downloaded on City-owned smart phones and/or tablets and recorded within the City's GIS layer.

1.2.2. Measurable Goals

- Inspect 100% of the MS4 system components included in the MS4 control structure inventory over the five-year period of the permit. Inspect, at a minimum, 5% of the MS4 structures each year.
- Conduct maintenance on MS4 structures as needed.

1.2.3. Schedule

a. Ongoing as needed, 2024-2029.

1.2.4. Annual Report Documentation:

- Summary of MS4 Inspections, including the number and percentage of total structures inspected during the reporting period.
- Table summarizing individual inspections with a record for each structure inspected, and the findings of that inspection.
- Summary of maintenance activities and/or copy of maintenance logs, tracking table, or comparable documentation.

1.3. PLANNING PROCEDURES

1.3.1. Description

1.3.1.A. Comprehensive Plan

The City's Comprehensive Plan, titled "*Springs in Motion*," outlines goals and specific policies that are designed to protect the local quality of life and guide the City. The City's Plan was updated in 2021, and the update was adopted on December 6, 2021. The Plan guides future land use, provides the framework for the City's Zoning Ordinance, addresses natural resource protection and expanding its network of parks and greenways, and is consistent with the regional water plan and environmental planning criteria. The short-term work program is reviewed and updated annually as part of the City's Capital Improvement Element (CEI).

The City's Comprehensive Plan can be viewed on the City's website at the following URL: https://www.cityofpowdersprings.org/669/Planning-Documents

1.3.2. Measurable Goals

- Review the Comprehensive Plan each reporting period and update the plan, as needed.

1.3.3. Schedule

- Annual, 2024 - 2029: Review planning procedures.

1.3.4. Annual Report Documentation

- Description of any changes made to the Comprehensive Plan or planning procedures.

1.4. STREET MAINTENANCE

1.4.1. Description

The City of Powder Springs implements a street sweeping program to reduce polluted runoff originating from streets with curb and gutter systems. The City will continue to perform routine street sweeping activities for curb and gutter roads, with a minimum of at least 1 mile swept during each reporting period. Records of street sweeping activities will be maintained by the City and submitted in the Annual Report.

1.4.2. Measurable Goals

- Perform routine street sweeping activities for curb and gutter roads, with a minimum of at least one (1) mile swept during the reporting period.

1.4.3. Schedule

- Ongoing, 2024 - 2029.

1.4.4. Annual Report Documentation

- Provide documentation of street sweeping activities, including length of streets swept.

1.5. FLOOD MANAGEMENT PROJECTS

1.5.1. Description

1.5.1.A. New Flood Management Projects

The City will ensure that all new flood control projects are assessed for water quality impacts during the design phase. For the purposes of this BMP, the City interprets "Flood Control Projects" to refer to detention/retention ponds and underground detention. All new developments are currently required to comply with the City's Stormwater Management Ordinance and Georgia Stormwater Management Manual (GSMM), which require that stormwater management controls address water quality as well as water quantity. The City currently reviews all development projects that include flood control structures pursuant to the Stormwater Management Ordinance and GSMM to ensure stormwater management controls address water quality as well as water quantity protection. The Stormwater Management Ordinance is included in Article 11 of the Unified Development Code (UDC) located in Appendix B.

The City of Powder Springs also has Floodplain Management Ordinance in place that serves to protect water quality by limiting the impacts that flood waters can have on the environment. A Floodplain Management ordinance is required by the Metropolitan North Georgia Water Planning District (MNGWPD) and for participation in the National Flood Insurance Program. The Floodplain Management Ordinance is included in Article 10 of the UDC located in Appendix B.

1.5.1.B. Existing Flood Management Projects

The City or a third-party contractor will perform Water Quality Assessments for 100% of all City-owned detention / retention ponds and water quality vaults during the 5-year permit period to assess the potential to retrofit these publicly-owned structures to incorporate additional control measures to improve water quality treatment. If more than five flood management structures are listed on the inventory, the City will assess at least one of the flood management structures annually. If, however, an assessment was previously performed on an existing flood management structure using the 2016 GSMM, prior to the effective date of this permit, then an additional assessment does not need to be performed. Inspections of flood management structures will be documented through a field collection application that is downloaded on City-owned smart phones and/or tablets and recorded within the City's GIS layer or using a paper checklist. The field collection application and paper inspection checklist contain the same questions. A table listing the information that will be collected and documented during site inspections within a GIS database and a copy of a paper inspection checklist are provided in Appendix D.

Retrofitting activities will be conducted as funding becomes available for their implementation. If retrofitting activities are conducted during the reporting period, the City will maintain documentation showing the status of the retrofitting and information about what retrofitting activities were conducted.

1.5.2. Measurable Goal:

a. Ensure 100% of new/proposed flood management projects (i.e., detention/retention ponds and water quality vaults) comply with the City's Stormwater Management Ordinance, GSMM and other applicable local codes and ordinances.
b. Perform Water Quality Assessment for 100% of City-owned detention / retention ponds and water quality vaults within the 5-year permit period (unless a previous assessment was conducted using the 2016 GSMM and the City has documentation, in which case the assessment does not need repeated).
c. Evaluate potential retrofitting, if applicable and as funding permits.

1.5.3. Schedule

- Ongoing, 2024 – 2029.

1.5.4. Annual Report Documentation

- Number of plans reviewed where new / proposed flood management projects were assessed for water quality impacts during the reporting period.
- Documentation all water quality assessments of existing flood management control structures that occurred during the reporting period and status of any retrofitting activities.
- Documentation of any water quality assessments conducted prior to June 11, 2024 of existing flood management control structures and status of any retrofitting activities (with the 2024 – 2025 Annual Report).
- For each reporting period after 2024-2025, a table listing the date and results of the assessment and the status of any retrofitting activities.

1.6. MUNICIPAL FACILITIES (EXCLUDING ANY FACILITIES ADDRESSED IN SECTION 3.3.3)

1.6.1. Description

This program element addresses municipally-owned facilities with the potential to pollute stormwater (excluding municipal industrial facilities that are covered in Section 3 of this Plan), and they will be referred to collectively as "Municipal Facilities." This includes facilities such as drinking water treatment plants, wastewater plants with a treatment capacity less than 1.0 million gallons per day; recycling facilities; waste transfer facilities; and materials recovery facilities; additional facilities may be included if they are have the potential to pollute stormwater.

Powder Springs has developed a municipal facility inventory to document the location of each facility owned and/or maintained by the City with the potential to cause pollution, excluding any facilities that are addressed in Section 3.3.3 (Industrial Facilities). The inventory includes any municipal facilities owned by the City that are located in another jurisdiction that have the potential to cause pollution, if applicable. A copy of the City's Municipal Facility Inventory is provided in Appendix C.

City staff will inspect municipal facilities with the potential to discharge pollutants to the MS4, and all municipal facilities sites will be inspected at least once every 5 years, with a minimum of 5% or one facility per year, until all facilities have been inspected. The Facilities Municipal Inspection Checklist, found in Appendix D, will be used for municipal site inspections, and records shall be maintained on problems found and actions taken. If sites are found to need improvements, the appropriate department will be notified of the problem. City staff will then perform a re-inspection, after the stipulated timeframe or request follow up documentation from the facility, if deemed necessary, to ensure that proper action has been taken.

1.6.2. Measurable Goals

- Update the municipal facilities inventory annually, if needed. Annually inspect the municipal facilities listed in the municipal facilities inventory such that 100% of all the facilities are inspected every 5 years.
- Document site inspections conducted during the permit period using the Stormwater Inspection Checklist.

1.6.3. Schedule

- Ongoing, 2024 - 2029.

1.6.4. Annual Report Documentation

- Updated Municipal Facility Inventory
- Copy of the completed inspection checklist for each municipal facility.
- Summary of any activities conducted to address issues found during inspection, if necessary.

1.7. PESTICIDE, HERBICIDE, & FERTILIZER APPLICATION

1.7.1. Description

1.7.1.A. Pesticide Applicator Certification Program

The City of Powder Springs relies on the Georgia Department of Agriculture (DoA) and the Cobb Cooperative Extension Service (CES) to address requirements for Pesticide Applicator Training and Certification. The DoA requires commercial applicators of restricted use pesticides (including herbicides, insecticides, fungicides, plant growth regulators, and defoliants) to obtain and retain a "Commercial Pesticide Applicators License." The DoA also requires that distributors of restricted pesticides obtain and retain a "Pesticide Dealer's License." Continuing education units are required each year to maintain the license.

Prior to issuing a business license, the City of Powder Springs will require applicants who are likely to require a commercial pesticide applicators license to provide proof that they hold the appropriate State 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 licensing) is designed to assist persons in passing the state exam, which is required to obtain a license.

1.7.1.B. Municipal Fertilizer, Pesticide, and Herbicide Use Program

The City does not store, use or apply any restricted-use pesticides, fertilizers, or herbicides (PFHs). Therefore, the City is not subject to the DoA requirements for restricted-use PFHs and is not required to maintain an inventory, conduct specific training nor do staff need to obtain DoA certifications (such as an applicator's license). The City utilizes a 3rd-party contractor for application of lawn care chemicals and ensures the contractor is properly licenses through the DoA.

PFHs that may be purchased over-the counter and available to the general public (i.e., referred to herein as "general-use" PFHs) are occasionally used on an as-needed basis by City staff. The City has prepared a PFH Standard Operating Procedure (SOP) that lists operational best management practices (BMPs) developed to minimize or prevent the discharge of chemicals into the City's stormwater drainage system by promoting proper storage and application of general-use PFHs during landscape maintenance activities. A copy of the City's PFH SOP is included in Appendix D. This SOP would also be utilized if the City were to store, use or apply restricted-use PFHs in the future. The City discusses these standard operating procedures during staff meetings and during annual refresher training. The procedures listed below are critical steps that must be included in every landscape maintenance activity that includes chemical application to either control weeds and pests or to provide adequate fertilization.

1.7.2. Measurable Goals:

- Continue to utilize GDoA Program to certify commercial applicators and distributors within the City
- Continue to adhere to the City's PFH Chemical Application SOP when performing any landscape chemical application within the City.

1.7.3. Schedule:

- Ongoing, 2024 - 2029.

1.7.4. Annual Report Documentation:

- Documentation of any program activities conducted during the reporting period related to the chemical application of PFHs.

2. ILLICIT DISCHARGE DETECTION & ELIMINATION (IDDE)

Permit Section 3.3.2: Illicit Discharge Detection and Elimination Program (IDDE), Table 3.3.2

2.1. LEGAL AUTHORITY

2.1.1. Description

The City adopted the MNGWPD's model Illicit Discharge and Illegal Connection Ordinance as Article 19 of the City's UDC, a copy of which is provided in Appendix B. This existing ordinance prohibits non-stormwater discharges into the storm sewer system and establishes appropriate enforcement procedures associated with the City's Illicit Discharge Detection & Elimination (IDDE) Program. This ordinance prohibits illicit discharges to the public MS4, grants the City the authority to enter private property to investigate suspected illicit discharges, and provides the City with the means to enforce violations of this ordinance.

The City will review the Illicit Discharge and Illegal Connection Ordinance each reporting period, and revise it as needed to ensure illicit discharges are prohibited and submit a copy of the Ordinance, if revised, to the Georgia EPD with the Annual Report.

2.1.2. Measurable Goal

a. Prohibit illicit discharges through the City's Illicit Discharge Ordinance.
b. Review the ordinance each reporting period to determine if any updates are needed.

2.1.3. Schedule

- Annual, 2024 – 2029.

2.1.4. Annual Report Documentation

- Copy of ordinance, if revised during the reporting period.

2.2. OUTFALL INVENTORY & MAP

2.2.1. Description

The NPDES Phase I MS4 permit defines an "MS4 Outfall" to be *"the most downstream point (i.e. final discharge point) on an MS4 where it discharges to waters of the State."* The City of Powder Springs has developed a GIS-based inventory and a map showing the location of outfalls from the MS4 and the names and location of all Waters of the State that receive discharges from those outfalls. A copy of the City's MS4 outfall map and inventory is provided in the IDDE Plan in Appendix E. Each year, the City will update the MS4 outfall map and inventory to reflect the addition of outfalls from new infrastructure projects or developments, and the removal of outfalls that have been reclassified or removed.

2.2.2. Measurable Goals

a. Each reporting period, maintain and update an outfall inventory database and map showing the location of all outfalls from the MS4 and the names and location of all Waters of the State that receive discharges from those outfalls.

2.2.3. Schedule

- Annual, 2024 - 2029.

2.2.4. Annual Report Documentation

- Updated inventory and map of the MS4 outfalls, identifying the names and locations of all waters of the State that receive discharges from those outfalls.
- The number of outfalls added during the reporting period and the total number of outfalls in the inventory.

2.3. IDDE PLAN

2.3.1. Description

The City of Powder Springs has established an IDDE Plan to inspect MS4 outfalls to determine if upstream facilities / connections are discharging non-stormwater flows to the drainage system and to eliminate those illicit discharges. A copy of the IDDE Plan is included in Appendix C.

The City will perform inspections and / or dry weather screening of the MS4 outfalls within its current inventory, and investigate any potential illicit discharges, in accordance with the procedures outlined in the IDDE Plan. Suspect or obvious illicit discharges require follow-up actions and activities, as specified in the IDDE Plan to determine the specific source(s) of contamination. Should the City positively identify any illicit discharges, the City will perform enforcement actions as dictated by the Illicit Discharge Ordinance, the IDDE Plan, and the City's Enforcement Response Plan (ERP) to remove positively identified illicit discharges. The City's ERP is included in Appendix G.

Each reporting period, the City will screen at least 5% of the total number of stormwater outfalls listed on the City's most current inventory of MS4 outfalls, and 100% of the inventory will be screened over the five-year permit period.

2.3.2. Measurable Goals

- Implement the IDDE plan outlined in the SWMP.
- Dry weather screen 100% of all MS4 outfalls over a five-year period, with at least 5% of listed stormwater outfalls screened each reporting period.
- Investigate and perform source tracing for 100% of suspected illicit discharges.
- Enforce the Illicit Discharge Ordinance and ERP for 100% of positively identified illicit discharges.

2.3.3. Schedule

- Ongoing, 2024 – 2029.

2.3.4. Annual Report Documentation

a. Number and percentage of MS4 outfalls inspected during the reporting period.
b. Documentation of inspections and dry weather screening, such as a table of individual inspection reports with a record for each outfalls inspected and the findings of that inspection, or a copy of the completed dry weather screening forms (MS4 Outfall Inspection Checklist) for all MS4 Outfalls screened within the reporting period.
c. Records of any source tracing or enforcement activities conducted as a result of dry weather screening activities.

2.4. SPILL RESPONSE PROCEDURES

2.4.1. Description

The Powder Springs Public Works and public safety departments will respond to all spills that occur within the City limits. Documentation on spill occurrences during the reporting period will be provided with the annual report. Generally, spills of known, nonhazardous substances less than 55 gallons or 300 pounds (dry volume) can be contained on an impervious surface using in-house spill equipment. All spills of unknown substances, spills larger than 55 gallons (liquid volume) or 300 pounds (dry volume), and/or those that enter the storm sewer and/or waterway require that the Cobb County Fire & Emergency Services personnel be notified immediately to handle the cleanup. A hazardous materials incident requires more caution and deliberation in size-up than most fire situations. The City will exercise size-up tactics which do not expose the response crew to risk and rely upon Cobb County Fire & Emergency Services to take the lead on significant spills.

Cobb County Fire & Emergency Services responds to spills according to the Cobb County Operational Guidelines for Incidents Other than Structural Fires, included in Appendix B. Records of spills attended by Cobb County Fire & Emergency Services personnel are held by the Cobb County Fire Department and are stored within a computer database.

2.4.2. Measurable Goal

- Respond to 100% of spills within 24 hours of the release.
- Maintain documentation on any spill occurrences and cleanup performed by City staff.

2.4.3. Schedule

- Annual, 2024 – 2029.

2.4.4. Annual Report Documentation

- Documentation on any spill occurrences and cleanup performed by City staff.
- Documentation on any notification of spill occurrences to Cobb County (i.e. emails, log sheet, etc.)

2.5. PUBLIC REPORTING PROCEDURES

2.5.1. Description

The City of Powder Springs has established procedures for encouraging and addressing citizen complaints about water quality and reports of illicit discharges/illegal dumping. The City has developed a webpage that provides information about how citizens can report a drainage issue or an illicit discharge at the following URL. Complaints can be made through the City's official stormwater website that allows citizens and visitors to report concerns, including illicit discharges and illegal dumping. See https://www.cityofpowdersprings.org/522/Report-Drainage-Problems-or-Illicit-Disc.

This webpage also provides a link and phone number (770) 943-8010 for City residents to contact the City for any purpose, including to report illicit discharges or illegal dumping in the storm sewer system as well as an after-hours phone number (770) 943-8010 for reporting illicit discharges outside of City hours. A copy of the City's Stormwater Complaint form is included in Appendix E. Information received through the website will be referred to the appropriate department. The City promotes this website as a part of other public education initiatives (City sanitation bill and Stormwater website).

City administrative staff are responsible for receiving citizen complaint calls, and using the caller's information to generate a work order. The work order is then passed to the Public Works Department, which is responsible for taking action to address calls that relate to water quality within three (3) business days. The Public Works staff will record actions taken to address the complaint in the work order and maintain a database of all finished work orders related to potential illicit discharges, illegal dumping, and other water quality violations. The Public Works Department maintains a database of all finished work orders and provides monthly reports to Council.

2.5.2. Measurable Goals

- Promote phone number and City of Powder Spring's webpage to encourage the public to report illicit discharges/illegal dumping in the storm sewer system.
- Perform at least one notification per reporting period to inform the public on methods to report an observed illicit discharge.
- Investigate 100% of all water quality complaints received within three (3) business days and take appropriate action for 100% of complaints requiring action.
- Record IDDE complaints and actions taken in the City's Work Order Database.

2.5.3. Schedule

- Annual, 2024 - 2029.

2.5.4. Annual Report Documentation

- Copy of formal notification used to inform the public on methods to report an observed illicit discharge or illegal dumping in the storm sewer system.

- Summary from the Work Order Database or other comparable documentation, including documentation of citizen complaints, investigations, and actions taken during the reporting period and the status of those actions.

2.6. PROPER MANAGEMENT & DISPOSAL OF USED OIL & TOXIC MATERIALS

2.6.1. Description

2.6.1.A. Hazardous Material Public Education

The City performs multiple activities to promote the proper management and disposal of used oil and toxic materials by the public. The City maintains a display of proper management and disposal related informational materials (i.e. brochures, pamphlets, etc.) at City Hall and refills the display on a regular basis. These brochures may address such topics as the following:

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

Other activities include:

- The City has developed a "Public Education & Participation" webpage that lists vendors that accept used oil from the general public. See https://www.cityofpowdersprings.org/395/Public-Education-Participation.
- The City's "Public Education Resources" webpage (https://www.cityofpowdersprings.org/521/Public-Education-Resources) features downloadable electronic educational brochures that provide information about proper waste management & disposal of hazardous household wastes and other common household and commercial wastes. This webpage also provides links to other resource websites such as the Cobb County Stormwater website, Keep Cobb Beautiful, Rivers Alive, and many other federal, state and local websites.

2.6.2. Measurable Goals:

Perform at least one of the following stormwater-related educational outreach activities each reporting period:

a. Restock brochures distributed at City Hall once each reporting period; or
b. Maintain educational information and materials related to proper management and disposal of used oil and toxic materials on the City's webpages. The webpage will be reviewed for updates once each reporting period.

2.6.3. Schedule

- Ongoing, 2024 - 2029.

2.6.4. Annual Report Documentation

The following documentation for the selected public outreach event will be provided:

a. Tracking database showing the name and number of educational brochure(s) distributed at City Hall and a copy of the brochure/flier;
b. Screenshot of the City's webpage(s) that provide educational information and materials related to waste management to the public.

2.7. SANITARY SEWER INFILTRATION CONTROLS

2.7.1. Description

The City of Powder Springs does not own or operate the sanitary sewer system within its jurisdiction. The City relinquished this responsibility to Cobb County on June 25, 2019 and documentation of this ownership transfer is provided in Appendix B.

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 the IDDE Plan included in Appendix E of this SWMP. Confirmed or suspected sewage spills from the sanitary sewer system will immediately be reported to Cobb County Water System at (770) 419-6201. The City will follow up with the County to confirm that suspected and confirmed sewage spills were appropriately addressed. The actions taken to address the spill will be recorded in a log that will be included in the Annual Report.

2.7.2. Measurable Goal:

- Notify Cobb County within 24 hours of identifying suspected infiltration of sewage into the City's MS4.
- Log of all confirmed or suspected sewage spills from the sanitary sewer system reported to Cobb County Water System.

2.7.3. Schedule

- Ongoing, 2024 – 2029.

2.7.4. Annual Report Documentation

- Details on activities performed during the reporting period as recorded in the sanitary sewer spill log, included in Appendix D.

3. INDUSTRIAL FACILITIES STORMWATER DISCHARGE CONTROL

Permit Section 3.3.3: Industrial Facility Stormwater Discharge Control, Table 3.3.3

3.1. INDUSTRIAL FACILITY INVENTORY

3.1.1. Description

The City of Powder Springs maintains an Industrial Facility Inventory. This inventory is based on a database posted on the Georgia EPD's website about facilities that have applied for coverage under the Industrial Storm Water General Permit (IGP) and/or submitted a No Exposure Exclusion (NEE) for permit exemption. Each reporting period, the City reviews the most recent listing of industrial sites posted to EPD's website and updates the Industrial Facility Inventory accordingly.

3.1.2. Measurable Goals

- Annually review EPD database of industrial facility permittees and update Industrial Facility Inventory.

3.1.3. Schedule

- Annual, 2024 – 2029.

3.1.4. Annual Report Documentation

- Copy of updated Industrial Facility Inventory

3.2. INDUSTRIAL STORMWATER INSPECTION PROGRAM

3.2.1. Description

The City of Powder Springs will inspect 100% of the facilities listed on the City's Industrial Facility Inventory over the course of the five (5) year permit period (2024 – 2029), with a minimum of at least one industrial inspection conducted each reporting period. If more than five (5) industrial sites are listed on the City's inventory, the City will inspect a minimum of 5% of the industrial facilities each year.

- City staff will first determine whether the industrial facility discharges to the City MS4. If the facility does not discharge to the City MS4, it will be removed from the Industrial Facility Inventory.
- City staff will check to ensure that the facility has submitted a Notice of Intent to be covered under the NPDES Industrial General Permit (IGP), if it is required.
- City staff will perform a cursory review of the implementation status of the facility's associated Stormwater Pollution Prevention Plan (SWP3).
- Industrial site inspections will be documented using a paper checklist or through a field collection application that is downloaded on City-owned smart phones and/or tablets and will be recorded within the City's GIS layer. The field collection application and paper inspection checklist contain the same questions.
- A table listing the information that will be collected and documented during site inspections within a GIS database and a copy of a paper inspection checklist is provided in Appendix D.
- Should an inspection reveal a potential threat to water quality in the MS4, City staff will notify the industry or business, provide them with a copy of the inspection checklist and/or relevant information. If deemed necessary, the City will later perform a re-inspection to ensure that all necessary corrections were made.
- Enforcement of any identified illicit discharges will be handled in accordance with the City's Illicit Discharge Ordinance and ERP.
- If the violation is not corrected, EPD will be notified of the problem. The City will also notify EPD if assistance is needed for enforcement of the NPDES IGP or if there is a threat to Waters of the State. The City may elect to perform water quality monitoring to monitor stormwater runoff and/or use monitoring data provided by the industrial facility in order to secure evidence to support the alleged violation.
- The City will maintain records of inspections results, problems found, and actions taken.

As required by Section 3.3.3.2.b of the MS4 Permit, the City has implemented a monitoring program for stormwater runoff from industrial facilities, waste facilities, and hazardous waste treatment, storage and disposal facilities that the City determines are contributing a substantial pollutant load to the MS4. In order to determine if an industrial facility has the potential to contribute a substantial pollutant load to the MS4, the City will perform the following steps:

a. Identify all industrial facilities that are listed on the City's most current Industrial Facility Inventory, as described above, and have a discharge that drains to and is located within one (1) mile of an impaired waterbody listed on Georgia's latest approved 305(b)/303(d) List of Waters.
b. If an industrial facility planned for inspection during the current reporting period discharges to and is located within one (1) mile of a listed impaired waterbody, the City will verify that the industrial facility discharges stormwater to the MS4 during the site inspection and evaluate whether the industrial facility may be contributing a substantial pollutant load to the impaired stream. This evaluation may include any or all of the following: 1) a visual inspection of the outfall to identify possible evidence of pollutant discharges including discoloration, foam, floatables, odor, etc.; 2) a review of hazardous waste manifests; 3) a review of the facility's existing stormwater pollution prevention plan (SWP3); 4) a review of material safety data sheets for materials located onsite; and/or review monitoring data maintained by the industrial facility to determine if the facility may be discharging a pollutant(s) that are contributing to the impairment or for which a Total Maximum Daily Load (TMDL) has been established for the impaired stream.

If the City determines that the industrial facility may be discharging a substantial pollutant load to the MS4 and has conducted the monitoring required by the IGP, the City will provide the results of the monitoring conducted by the facility during the current reporting period in the Annual Report. If the City has evidence that the industrial facility is discharging a substantial pollutant load to the MS4 and has not conducted any water quality monitoring, the City may elect to conduct water quality monitoring (or retain the services of a third party contractor) for the listed impairment and will submit the results of monitoring activities it conducts or oversees for the industrial facility in the Annual Report.

3.2.2. Measurable Goals

- Inspect 100% of industrial facilities in the City's inventory over the 5-year permit period. Inspect at least one industrial site each reporting period, or, if there are more than five sites listed on the City's inventory, inspect at least 5% of the industrial facilities in the inventory annually.
- Document site inspections and recommended corrective actions/violations.
- Enforce the Illicit Discharge Ordinance, IDDE Plan, and ERP as needed.
- Conduct water quality monitoring at industrial facilities if deemed necessary by the City and/or obtain water quality monitoring data from the industrial facility.

3.2.3. Schedule

- Ongoing, 2024 - 2029.

3.2.4. Annual Report Documentation

- Inspect 100% of industrial facilities in the City's inventory over the 5-year permit period. Inspect at least one industrial site each reporting period, or, if there are more than five sites listed on the City's inventory, inspect at least 5% of the industrial facilities in the inventory annually.
- Total number of facilities and number / percentage of inspections completed during the reporting period.
- Summary of water quality monitoring results, if applicable.

3.3. ENFORCEMENT PROCEDURES

3.3.1. Description

If upon inspection, an industrial site is found to have issues that would be considered an illicit discharge, then the City will take enforcement action(s) as outlined in the ERP (Appendix G) and maintain documentation. If an illicit discharge has not taken place but practices on-site indicate a high probability that such a discharge could occur, then the City will discuss with the property owner and/or the operator of the site the issues uncovered by the inspection. The City will also make the operator aware of Volume 3 of the GSMM that discusses pollution prevention and good housekeeping.

3.3.2. Measurable Goals:

- Implement enforcement procedures when violations are discovered during inspections of industrial facilities.
- Ensure enforcement is taken for 100% of noted violations.
- Document enforcement actions taken in violation / enforcement action log.

3.3.3. Schedule

- Ongoing, 2024 - 2029.

3.3.4. Annual Report Documentation

- Documentation of enforcement actions taken during the reporting period.

3.4. EDUCATIONAL ACTIVIITIES

3.4.1. Description

The City performs multiple educational activities that target industrial operations/industrial facilities, including:

- When performing site inspections, if possible, City staff will have a face-to-face meeting with the manager or staff member during or immediately following a site inspection to provide information and tips on pollution prevention control measures at their facility and proper materials/waste storage practices.
- City staff will distribute educational materials during site inspections, and provide educational materials with site inspection letters or other written information that may be sent to a site after the site inspection is completed. Based on the type of facility and operations, City staff select appropriate handouts and brochures from this collection to distribute to facility personnel, such as the Georgia EPD's informational handout on the requirements of the NPDES IGP, Standard Industrial Classification Codes that subject facilities to permitting requirements, and/or other relevant stormwater best practices educational information to industrial facilities during industrial stormwater site inspections.
- The City's "Public Education Resources" webpage (https://www.cityofpowdersprings.org/521/Public-Education-Resources) features downloadable electronic educational brochures that provide information about proper waste management & disposal of hazardous household wastes and other common household and commercial wastes.

3.4.2. Measurable Goals

- Provide educational information to facilities during industrial site inspections.

3.4.3. Schedule

- Annual, 2024 – 2029.

3.4.4. Annual Report Documentation

- Copy of educational information distributed to industrial facilities.

4. CONSTRUCTION SITE MANAGEMENT

Permit Section 3.3.4: Construction Site Management, Table 3.3.4

4.1. LEGAL AUTHORITY

Powder Springs has established legal authority to require and enforce appropriate erosion and sediment controls by adopting the State model Soil Erosion, Sedimentation and Pollution Control Ordinance (E&S Ordinance) that reflects the most recent amendments to the Georgia Erosion and Sedimentation Act (GESA). The City's E&S Ordinance, located in Article 9 of the City's Land Development Code, was updated in January 2019 and again most recently in June 2024. A copy of the updated E&S Ordinance is provided in Appendix B. The City will review the E&S ordinance annually and make revisions as needed to ensure appropriate erosion and sediment controls are in place at construction sites.

The City of Powder Springs is currently a Local Issuing Authority (LIA) for LDA Permits as defined by the Georgia Erosion & Sedimentation Act (GESA). 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. Measurable Goals

- Annually evaluate the Erosion and Sedimentation ordinance for compliance with the NPDES Phase I permit.

4.1.2. Schedule

- Annual, 2024 - 2029.

4.1.3. Annual Report Documentation

- Copy of the E&S Ordinance, if revised during the reporting period.

4.2. SITE PLAN REVIEW PROCEDURES

4.2.1. Description

Powder Springs has been designated as a Local Issuing Authority (LIA) and remains in compliance with Georgia Erosion and Sediment Control Act (GESA) of 1975 as amended. Accordingly, all developers are required to comply with the local E&S Ordinance and obtain a land disturbance permit prior to the start of any land disturbing activities that will disturb one (1) or more acres of land or are part of a larger common development that disturb more than one (1) acre of land. In addition to review of plans for compliance with the City's Erosion and Sediment Control Ordinance, construction plans are reviewed for compliance with numerous other City regulations including: the UDC; Post-development Stormwater Management Ordinance; Stream Buffer Ordinance; and Floodplain Management Ordinance.

The City of Powder Springs requires submittal of Erosion, Sedimentation and Pollution Control Plans (ESPCP). 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. The City administers the programs described below in accordance with the responsibilities related to being an issuing authority:

Both the plan preparers and plan reviewers are required to utilize ESPC Plan Review Checklists to ensure compliance with City regulations. A copy of the checklist is included in Appendix D.

The Community Development Department oversees plan review, permitting and enforcement of City development codes, ordinances and other applicable regulations governing land disturbance and land use. A preliminary plat or site plan should be submitted to Community Development for approval along with 4 sets of civil construction plans. The applicant is required to pay the plan review fees, application fees, and land disturbance fees. The permits coordinator will submit the application and plans to public works, stormwater and zoning for review. Following city approval, the permits coordinator will submit the plans to Georgia Soil & Water Conservation Commission (GSWCC) for approval of the Erosion & Sediment Control and Pollution Prevention Plans. The ESPCP must be approved prior to the City issuing a LDA permit.

4.2.2. Measurable Goals

- All qualifying developments within Powder Springs will have their ES&PC plans reviewed for compliance with the City's Erosion and Sediment Control Ordinance.

4.2.3. Schedule

- Ongoing, 2024 – 2029.

4.2.4. Annual Report Documentation

- Number of plans that were reviewed, approved or denied in the reporting year. Number of LDA permits issued in the reporting year.

4.3. INSPECTION PROCEDURES

4.3.1. Description

The City of Powder Springs is responsible for inspecting construction projects located 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. A copy of the completed NOI, sent to the EPD, will be provided from each developer to the City. The City meets with each developer prior to land disturbance activities to review erosion and sediment control requirements. Each developer must sign an Erosion and Sediment Control affidavit prior to issuance of the LDA permit. A copy of the Plan Review checklist is included in Appendix D.

The City conducts comprehensive site inspection(s) after land disturbing activities commence to verify compliance with applicable E&S requirements. Active construction sites with an LDA permit will be inspected at least once during each reporting period as required by the City's MS4 permit. The City will conduct additional site inspections as/if needed 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 Permit 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. The E&S Inspector will issue a Notice of Violation and/or Stop Work Order (depending upon the severity of the problem) if the site is found in non-compliance. A database listing inspections, violations and enforcement actions are maintained by City staff.

4.3.2. Measurable Goals

a. Inspect active construction sites, with at least one site inspection of each active site occurring during the reporting period.
b. Complete and maintain E&S Inspection Checklists.
c. Maintain documentation required for Annual Report.

4.3.3. Schedule

- Ongoing, 2024 – 2029.

4.3.4. Annual Report Documentation

- A list or table identifying active construction sites and the number and dates of inspections conducted by the City during the reporting year. (Inspection documentation will be maintained on file and is available upon request.)

4.4. ENFORCEMENT PROCEDURES

4.4.1. Description

The City will implement enforcement procedures for E&S violations documented at construction sites in accordance with the E&S Ordinance included in Article 9 of the UDC located in Appendix B. The City's E&S Ordinance specifically includes an escalating series of enforcement mechanisms available to the City staff, which are outlined in the City's ERP located in Appendix G.

4.4.2. Measurable Goals

a. Implement enforcement actions for 100% of identified violations in accordance with the City's E&S Ordinance and ERP.
b. Maintain a log / tracking database of all violations and enforcement procedures undertaken during the reporting period, including the number and type (e.g. Notice of Violation, Stop Work Order), status (e.g. pending, resolved), and amount of any assessed penalties.

4.4.3. Schedule

- Ongoing, 2024 -2029.

4.4.4. Annual Report Documentation

- Log / tracking database of all violations and enforcement procedures undertaken during the reporting period, including the number and type (e.g. Notice of Violation, Stop Work Order), status (e.g. pending, resolved), and amount of any assessed penalties.

4.5. CERTIFICATION

4.5.1. Description

GESA requires all 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 requires all construction site operators to provide evidence in their LDA Permit application that they have received the appropriate certification. Evidence of site personnel certification must also be produced during an inspection, upon request. The City also requires all applicable staff to receive this training as soon as possible after the start of their employment and maintain active certifications.

4.5.2. Measurable Goals

a. Provide all City employees involved in the E&S Program with applicable E&S training and certification.
b. Ensure all construction site operators with LDP permits have applicable E&S certification.

4.5.3. Schedule

- Ongoing, 2024 – 2029.

4.5.4. Annual Report Documentation

- Copies of current certification cards, printouts from the GSWCC, or copies of training certificates for City staff.

5. HIGHLY VISIBLE POLLUTION SOURCES (HVPS)

Permit Section 3.3.5: Highly Visible Pollution Sources, Table 3.3.5

5.1. HVPS FACILITY INVENTORY

5.1.1. Description

The City maintains an inventory of commercial businesses and facilities that are considered to be highly visible pollutant sources (HVPS). A copy of the HVPS inventory is included in Appendix C. Based on the types of facilities and results of HVPS inspections conducted over the previous permit cycle, the City considers the following types of businesses to be HVPS:

- Landscape and Garden Related Businesses
- Automotive Repair and Car Washes
- Building Contractors with Construction Yards
- Gas Stations
- Pet Grooming/Kennels

The inventory is updated annually based on changes to the business license database, and will be included in each annual report. The City reserves the right to add additional facilities that do not fall within any of the "HVPS categories" above that demonstrate the potential to pollute stormwater.

5.1.2. Measurable Goals

- Update the HVPS Inventory on an annual basis.

5.1.3. Schedule

- Annual, 2024 - 2029.

5.1.4. Annual Report Documentation

- Updated HVPS Inventory.

5.2. HVPS STORMWATER INSPECTION PROGRAM

5.2.1. Description

Powder Springs will inspect 100% of the facilities listed on the City's HVPS Inventory over the course of the five (5) year permit period (2024 – 2029), with a minimum of at least one HVPS inspection conducted each reporting period. If more than five (5) HVPS facilities are listed on the City's inventory, the City will inspect a minimum of 5% of the HVPS facilities each year.

A City inspector will visit the HVPS site and assess the condition and presence of stormwater pollutants onsite. City staff will inspect the site for evidence of stormwater pollution in the following areas and determine if there is any evidence of an illicit discharge:

- Areas around machinery and/or equipment
- Areas prone to leaks and spills
- Outdoor storage and handling areas
- Waste generation, storage, treatment, and disposal areas
- Vehicle wash-down areas
- Fueling areas
- Loading and unloading areas

The following procedures will be followed during HVPS inspections and as follow-up to the inspections:

- The City inspector will meet with facility staff, if possible, before/during/or after the site visit to discuss the purpose of the inspection, any issues, noted, and steps the facility can take to prevent stormwater pollution. Facility staff may be invited to accompany the City inspector during the site visit, if this is deemed appropriate by the City inspector.
- All HVPS inspections will be documented. HVPS inspections will be documented using a paper inspection checklist or through a field collection application that is downloaded on City-owned smart phones and/or tablets and will be recorded within the City's GIS layer. The field collection application and paper inspection checklist contain the same questions. A table listing the information that will be collected and documented during site inspections within a GIS database and a copy of a paper inspection checklist is provided in Appendix D.
- Educational literature, including literature about proper waste management and disposal and other relevant topics, may be supplied at the time of the site inspection or as follow-up to the site inspection if needed.
- Should an inspection reveal a potential threat to water quality in the MS4, City staff will notify the industry or business, and provide them with a copy of the inspection checklist and/or written notification of the issue if deemed necessary. The City may request follow-up documentation and/or perform a re-inspection to ensure that all necessary corrections were made if deemed necessary. Electronic

correspondence may also be used to communicate site findings and issues to facility personnel.

- Enforcement of any identified illicit discharges will be handled in accordance with the City's Illicit Discharge Ordinance, IDDE Plan, and ERP.
- If the violation is not corrected, the EPD may be notified of the problem. The City will also notify the EPD if assistance is needed for enforcement or if there is a threat to Waters of the State. The City may, during the investigation of a violation of the City's IDDE Ordinance, complete or require monitoring of a suspected HVPS, in order to secure evidence to support the alleged violation.
- The City will maintain records of inspections results, problems found, and actions taken.

5.2.2. Measurable Goals

a. Inspect 100% of HVPS facilities in the City's inventory over the 5-year permit period. Inspect at least one HVPS site each reporting period, or, if there are more than five sites listed on the City's inventory, inspect at least 5% of the HVPS facilities in the inventory annually.
b. Document site inspections and recommended corrective actions/violations.
c. Enforce the Illicit Discharge Ordinance, IDDE, and ERP as needed.

5.2.3. Schedule

- Annual, 2024 - 2029.

5.2.4. Annual Report Documentation

- Total number of HVPS facilities and the number and percentage of inspections conducted during the reporting period.
- Documentation of inspections, such as a table of individual inspection reports with a record for each site inspected and the findings of that inspection, or a copy of the completed site inspection checklist for each HVPS facility inspected during the reporting period and any available follow-up documentation.

5.3. ENFORCEMENT PROCEDURES

5.3.1. Description

If upon inspection, an HVPS site is found to have issues that would be considered an illicit discharge, then the City will initiate investigative and enforcement actions as outlined in the IDDE Plan and/or the ERP. If an illicit discharge has not taken place but practices onsite indicate a high probability that such a discharge could occur, then the City will discuss with the property owner and/or the operator of the site the issues uncovered by the inspection and provide them with a copy of the inspection checklist. Generally, the City will attempt to notify property owners / operators within 10 business days of the initial inspection, if not sooner, if issues are discovered. The City may re-inspect the site within 1 year to determine if corrective actions have been taken, depending on the severity of the identified issues and whether the City determines a re-inspection is necessary.

For violations that continue unabated, the City will implement the enforcement provisions of the IDDE Plan and the ERP, including issuing violations, sending notifications, and taking enforcing measures necessary to abate the violation and/or restore the property.

5.3.2. Measurable Goal(s)

- Implement enforcement procedures for violations noted during HVPS inspections, as specified in the ERP.
- Notify property owners / operators within 10 business days of the initial inspection if issues are discovered.

5.3.3. Schedule

- Ongoing, 2024 - 2029.

5.3.4. Annual Report Documentation

- Documentation of enforcement actions taken on HVPS sites during the reporting period.

5.4. EDUCATIONAL ACTIVITIES

5.4.1. Description

The City performs multiple educational activities that target industrial operations/industrial facilities, including:

- When performing site inspections, if possible, City staff will have a face-to-face meeting with the manager or staff member during or immediately following a site inspection to provide information and tips on pollution prevention control measures at their facility and proper materials/waste storage practices.
- City staff will distribute educational materials during site inspections, and provide educational materials with site inspection letters or other written information that may be sent to a site after the site inspection is completed. Based on the type of facility and operations, City staff select appropriate handouts and brochures from this collection to distribute to facility personnel that discussed proper stormwater management practices and how to avoid polluting stormwater.
- The City's "Public Education Resources" webpage (https://www.cityofpowdersprings.org/521/Public-Education-Resources) features downloadable electronic educational brochures that provide information about proper waste management & disposal of hazardous household wastes and other common household and commercial wastes.

5.4.2. Measurable Goal(s)

- Provide educational information to facilities during HVPS site inspections

5.4.3. Schedule

- Annual, 2024 - 2029.

5.4.4. Annual Report Documentation

- Copy of HVPS educational materials distributed during HVPS inspections.

6. PUBLIC EDUCATION

Permit Section 3.3.9: Public Education

6.1. STORMWATER WEBPAGE

6.1.1. Description

The City maintains dedicated stormwater webpages, linked to the City's official website, for disseminating information to the public. The stormwater webpages may be accessed at: https://www.cityofpowdersprings.org/394/Stormwater.

The City's stormwater webpages include information on stormwater runoff; proper stormwater management practices and how to prevent stormwater pollution; public education and participation; a complaint or concern link and telephone number to report illegal dumping, illicit discharges, and other stormwater problems; and proper waste management and disposal practices. Copies of the most recent SWMP and Stormwater Annual Reports will be posted to the Stormwater webpage as described in BMP 7.1.

Educational Topics

Educational topics that may be considered for inclusion on the City's stormwater webpages and/or other Public Education & Public Involvement outreach activities discussed in this Plan include:

- Nonpoint source pollution and its impact on waterways and wildlife;
- Promote use of City's stormwater webpage(s) for stormwater education and provide link;
- Septic Tank Maintenance
- Stormwater Pollution Prevention and Education for Citizens & Commercial Businesses such as:
    - Proper household chemical and waste management and disposal (litter reduction; pet waste management; lawncare; and disposal of fats, oils & greases)
    - Proper storage and application practices for pesticides, fertilizers, and herbicides
    - Education about the difference between management of sanitary wastewater versus stormwater (i.e., stormwater is discharged directly into waterways without chemical/biological treatment)
    - Recycling opportunities for hard-to-recycle wastes
    - Reporting mechanisms for citizens to report water quality violations and illicit discharges
- Promotion of Public Involvement Activities

    - Providing information about citizen involvement opportunities with the City's Stormwater Management Program and important events (trash clean-ups, storm drain marking, festivals, recycling opportunities, etc.)
- Pollution prevention for construction sites
- GI/LID practices and techniques;
- Industry-specific education about proper waste and chemical management and how to prevent stormwater pollution (automobile maintenance; restaurants; landscaping; construction yards; vet kennels; mobile pet grooming and car wash services; etc.)
- Resources for Industrial Facilities (link to GA EPD website, Industrial General Stormwater Permit, etc.)

The City will review its stormwater webpages each reporting period to ensure all embedded links are working properly and direct the readers to the most up-to-date resources. For example, the City will ensure that the most recent SWMP and Annual Report are posted to the webpage. The City will also monitor how many people visit the webpages each year and/or take active steps to promote use of the City's stormwater webpages. The City may opt to update stormwater webpages with new stormwater-related information and links on an "as-needed" basis.

6.1.2. Measurable Goals

a. Maintain stormwater webpage(s) linked to the City's official website.
b. Review stormwater webpage each reporting period to ensure embedded links are working properly and direct readers to the most updated resources. Updates (new content) may be made to the stormwater webpage on an as-needed basis.
c. Record the number of webpage hits using a tracker, such as Google Analytics or other comparable counting mechanism OR promote the use of the City's stormwater webpages through social media, utility bills, newsletters, or other methods that reach the general public.

6.1.3. Schedule

- Annual, 2024 - 2029.

6.1.4. Annual Report Documentation

- Link to educational information on City's website.
- Screenshot of Stormwater website.
- Number of stormwater webpage views OR documentation of one activity that the City took to advertise the City's webpage to the general public (screenshot of social media posting, copy of utility bill header, newsletter, etc.)

6.2. PUBLIC INFORMATION BROCHURES

6.2.1. Description

The City will distribute stormwater-related educational brochures designed to educate the public about stormwater pollution prevention and other water resources-related topics at City Hall and during City Events. Examples of relevant educational topics for which brochures may be provided for are identified in BMP 6.1. The City may opt rotate public education brochures to reach intended target audiences and/or provide specific types of stormwater-related education based on areas of concern identified by HVPS/Industrial site inspections, citizen complaints, and/or common illicit discharges.

Brochures will be reviewed on an annual basis and new brochures may be chosen and distributed. Brochures will be restocked as they run out. If available, electronic versions of the brochures will be posted on the City's stormwater webpage(s).

6.2.2. Measurable Goals

- Review brochures on an annual basis and update/replace as needed.
- Display brochures and restock as they run out.
- Track how many brochures are distributed.

6.2.3. Schedule

- Annual, 2024 - 2029.

6.2.4. Annual Report Documentation

- Copies of any brochures distributed during the reporting period. Alternatively, the City may provide a screenshot and/or webpage link to the brochure in the Annual Report.
- Log summarizing how many brochures were distributed during the year.

6.3. SOCIAL MEDIA PROGRAM

6.3.1. Description

The City of Powder Springs manages a social media account that addresses and educates the public about issues within Powder Springs such as proper household garbage and recycling efforts, zoning issues, current and future Public Works projects, and advertisements for public education events. Each year, the City will post a stormwater educational message that will include information related to stormwater and water resource issues and prevention practices and advertise the City's stormwater webpage. Examples of relevant educational topics for social media postings are identified in BMP 6.1. The City will select the content for social media postings to reach intended target audiences and/or provide specific types of stormwater-related education based on areas of concern identified by HVPS/Industrial site inspections, citizen complaints, and/or common illicit discharges. The City's Social Media platforms include:

Facebook: https://www.facebook.com/cityofpowdersprings/
Twitter: https://twitter.com/powdersprings01?lang=en
Instagram: https://www.instagram.com/powder_springs/

6.3.2. Measurable Goals

- Produce Social Media post at least once/reporting year that includes a stormwater and water resources related topic and advertises the City's stormwater webpage(s).

6.3.3. Schedule

- Annual, 2024 - 2029.

6.3.4. Annual Report Documentation

- Summary of and/or copy of stormwater and water resources topic posted on social media during the reporting period.
- Date of the stormwater-related posting to social media.

6.4. PUBLIC EDUCATION OUTREACH

6.4.1. Description

The City will conduct one public stormwater educational outreach activity from the list below in Section 6.4.2 each reporting period to educate the public about stormwater topics and maintain documentation of the activity. This may include information about the educational topics listed in BMP 6.1 of this Plan and/or other appropriate educational topics. The City may opt to rotate the content of these public education activities to reach intended target audiences and/or provide specific types of stormwater-related education based on areas of concern identified by HVPS/Industrial site inspections, citizen complaints, and/or common illicit discharges.

6.4.2. Measurable Goals

Perform at least one of the following stormwater-related educational outreach activities each reporting period:

a. Provide one educational insert with utility bills or include educational messages as a utility bill header and mail the insert or message to City residents; OR
b. Publish educational information in the local newspaper, City newsletter, or other comparable media outlet that reaches a wide City audience; OR
c. Mark at least 5 storm drains with a storm drain marker to discourage illegal dumping and raise awareness about proper stormwater management. This activity may be performed by City staff, City residents, and/or other groups.

6.4.3. Schedule

- Annual, 2024 - 2029.

6.4.4. Annual Report Documentation

The following documentation for the selected public outreach event will be provided:

a. Copy of utility bill insert or copy of utility bill header with a stormwater-relevant topic distributed during the reporting period.
b. Copy of educational information posted in the newspaper, City newsletter, or comparable media outlet.
c. Documentation for storm drain marking:
    - Log documenting the date of the storm drain marking activity, number of drains marked, and location of storm drains marked.
    - Copy of a sign-in sheet and/or a photograph.

7. PUBLIC INVOLVEMENT

Permit Section 3.3.10: Public Involvement

7.1. PUBLIC INPUT ON STORMWATER PROGRAM

7.1.1. Description

The City maintains a webpage titled "Stormwater Management Plan" at the following link where copies of the City's most recently-revised SWMP and Annual Report are posted for the public to review and provide input. https://www.cityofpowdersprings.org/397/NPDES. The website contains a link that allows the public to submit comments to the City on the proposed best management practices included within the SWMP as well as on the activities summarized in the Annual Report.

The City of Powder Springs will invite the public to provide input and engage as community stakeholders by continuing to post a copy of the City's most recently-revised SWMP as well as the most recently-revised Stormwater Annual Report on the City's Stormwater website. ("Most recently-revised" refers to the most recent submission to the Georgia EPD, even if the Plan or Annual Report has not yet been reviewed and approved. If updates are made to the SWMP and/or Annual Report after the Georgia EPD's review, the City will update the postings to ensure the most recent versions are available for public review and commenting.) The City will incorporate any needed revisions to the SWMP, if needed, and address any comments provided on the Annual Report and/or SWMP.

7.1.2. Measurable Goals

- Post the City's most recently-revised SWMP and Stormwater Annual Report.
- Maintain a link on the City's webpage for citizens to submit questions or provide suggestions for program improvements.
- Maintain documentation of any questions or other feedback provided by City residents and follow-up actions taken by the City.

7.1.3. Schedule

- Annual, 2024 - 2029.

7.1.4. Annual Report Documentation

- Screenshot and/or webpage link of the City's webpage where the most recently-revised SWMP and Annual Report are posted.
- Summary of comments received by the City on the SWMP or Annual Report and a description of how they were addressed and information about whether the SWMP was revised.

7.2. CITIZEN REPORTING HOTLINE

7.2.1. Description

The City of Powder Springs has established procedures for encouraging and addressing citizen complaints about water quality and reports of illicit discharges/illegal dumping. The City has developed a webpage that provides information about how citizens can report a drainage issue or an illicit discharge at the following URL. Complaints can be made through the City's official stormwater website that allows citizens and visitors to report concerns, including illicit discharges and illegal dumping. See https://www.cityofpowdersprings.org/522/Report-Drainage-Problems-or-Illicit-Disc.

This webpage also provides a link and phone number (770) 943-8010 for City residents to contact the City for any purpose, including to report illicit discharges or illegal dumping in the storm sewer system as well as an after-hours phone number (770) 943-8010 for reporting illicit discharges outside of City hours. Information received through the website will be referred to the appropriate department. The City promotes this website as a part of other public education initiatives (see BMP 6.1 of this Plan).

City administrative staff are responsible for receiving citizen complaint calls, and using the caller's information to generate a work order. The work order is then passed to the Public Works Department, which is responsible for taking action to address calls that relate to water quality within three (3) business days. The Public Works staff will record actions taken to address the complaint in the work order and maintain a database of all finished work orders related to potential illicit discharges, illegal dumping, and other water quality violations. The Public Works Department maintains a database of all finished work orders and provides monthly reports to Council.

7.2.2. Measurable Goals

- Promote phone number and City of Powder Spring's webpage to encourage the public to report illicit discharges/illegal dumping in the storm sewer system.
- Perform at least one notification per reporting period to inform the public on methods to report an observed illicit discharge.
- Investigate 100% of all water quality complaints received within three (3) business days and take appropriate action for 100% of complaints requiring action.
- Record IDDE complaints and actions taken in the City's Work Order Database.

7.2.3. Schedule

- Annual, 2024 - 2029.

7.2.4. Annual Report Documentation

- Copy of formal notification used to inform the public on methods to report an observed illicit discharge or illegal dumping in the storm sewer system.

- Summary from the Work Order Database or other comparable documentation, including documentation of citizen complaints, investigations, and actions taken during the reporting period and the status of those actions.

7.3. PUBLIC CLEAN-UP / RECYCLING EVENT #1

7.3.1. Description

The City of Powder Springs will coordinate one clean-up event each reporting year within the City to remove trash and/or collect wastes for recycling. The beautification event will be advertised to the public and the public will be encouraged to participate. Event advertisements may be made using one or a variety of outlets, including social media, press release; City website; kiosk; promotional fliers; or other outlets to invite the public's participation. This could include a neighborhood clean-up; stream clean-up; or recycling collection event. The City may opt to coordinate the event with another affiliate agency, such as Keep Cobb Beautiful, Rivers Alive, or host a local event such as Reside with Pride or Pick It Up Powder Springs. All debris and trash will be properly recycled and/or disposed of and the City will keep documentation of trash disposal, recycling, and public participation.

The City currently hosts a semi-annual community pick-up event, Reside with Pride, that is coordinated by the City's Public Works Department to provide a special collection service cent to its sanitation customers who live within City limits. On a designated Reside with Pride day(s), extra trash and bulk items are picked on the same day as regular trash pick-up at no additional cost. Event information is posted to a City webpage dedicated to this event: https://www.cityofpowdersprings.org/423/Reside-With-Pride

The City also currently hosts another beatification event, Pick It Up Powder Springs, on a designated day to collect trash and litter from neighborhood streets. Citizens, neighborhood groups, and local businesses are encouraged to participate. Supplies are made available to participants and the City has a Stormwater webpage dedicated to sharing information about this event at https://www.cityofpowdersprings.org/799/Pick-It-Up-Powder-Springs-and-Shred-Even.

7.3.2. Measurable Goals

- Hold one clean-up event each reporting year within the City of Powder Springs that is open to the public.
- Advertise clean-up event to the public, and maintain documentation to show the event was conducted.

7.3.3. Schedule

- Annual, 2024 - 2029.

7.3.4. Annual Report Documentation

- Documentation of the event advertisement to City residents (such as a screenshot and/or copy of the press release or event flier).
- At least two forms of documentation as "proof" that the event was held (such as photographs; quantity of wastes/recyclables collected at the event; sign-up sheet; landfill receipt for wastes collected and disposed of / recycled, or other comparable documentation.).

7.4. PUBLIC CLEAN-UP / RECYCLING EVENT #2

7.4.1. Description

The City of Powder Springs will coordinate a second clean-up event each reporting year within the City to remove trash and/or collect wastes for recycling. The beautification event will be advertised to the public and the public will be encouraged to participate. Event advertisements may be made using one or a variety of outlets, including social media, press release; City website; kiosks; promotional fliers; or other outlets to invite the public's participation. This could include a neighborhood clean-up; stream clean-up; or recycling collection event. The City may opt to coordinate the event with another affiliate agency, such as Keep Cobb Beautiful, Rivers Alive, or host a local event such as Reside with Pride or Pick It Up Powder Springs. All debris and trash will be properly recycled and/or disposed of and the City will keep documentation of trash disposal, recycling, and public participation.

The City currently hosts a semi-annual community pick-up event, Reside with Pride, that is coordinated by the City's Public Works Department to provide a special collection service cent to its sanitation customers who live within City limits. On a designated Reside with Pride day(s), extra trash and bulk items are picked on the same day as regular trash pick-up at no additional cost. Event information is posted to a City webpage dedicated to this event: https://www.cityofpowdersprings.org/423/Reside-With-Pride

The City also currently hosts another beatification event, Pick It Up Powder Springs, on a designated day to collect trash and litter from neighborhood streets. Citizens, neighborhood groups, and local businesses are encouraged to participate. Supplies are made available to participants and the City has a Stormwater webpage dedicated to sharing information about this event at https://www.cityofpowdersprings.org/799/Pick-It-Up-Powder-Springs-and-Shred-Even.

7.4.2. Measurable Goals

- Hold one clean-up event each reporting year within the City of Powder Springs that is open to the public.
- Advertise clean-up event to the public, and maintain documentation to show the event was conducted.

7.4.3. Schedule

- Annual, 2024 - 2029.

7.4.4. Annual Report Documentation

- Documentation of the event advertisement to City residents (such as a screenshot and/or copy of the press release or event flier).
- At least two forms of documentation as "proof" that the event was held (such as photographs; quantity of wastes/recyclables collected at the event; sign-up sheet; landfill receipt for wastes collected and disposed of / recycled, or other comparable documentation.).

8. POST CONSTRUCTION

Permit Section 3.3.11(a): Post-Construction Stormwater Controls

8.1. POST-CONSTRUCTION STORMWTER CONTROLS

8.1.1. Ordinance Review & Performance Standards

8.1.1.A. Description

The City has established legal authority to enforce a program to address stormwater runoff into the MS4 from new development and redevelopment projects through the adoption of Post Construction Stormwater Runoff standards that are included in the City's Stormwater Management Ordinance. In accordance with Section 3.3.11(a)(2) of the City's MS4 Permit, the City adopted performance standards in October 2020 that require stormwater management systems to retain the first 1.0 inch of rainfall on the site, to the maximum extent practicable. A copy of the City's updated Stormwater Management Ordinance (Article 11 of the UDC) is included in Appendix B.

This ordinance requires the use of post-construction stormwater management and site planning and design criteria to protect stormwater from negative impacts associated with land development, including the stormwater design criteria established in the GSMM. The design criteria and performance standards listed in the City's Ordinance are consistent with the latest version of the GSMM, and the requirements of Section 3.3.11(a)(2) of the City's MS4 permit. The ordinance and design manual apply to new development and redevelopment that creates or adds more than 5,000 square feet of impervious surface or that involves land disturbing activities of 1 acre or more, including projects less than 1 acre if they are part of a larger common plan of development or sale.

The City will apply their adopted performance standards during the design of City-construction projects. The City will review its Stormwater Management Ordinance each reporting period and revise it as needed to ensure appropriate post-construction stormwater controls are in place and submit a copy of the ordinance, if revised, to the Georgia EPD with the Annual Report.

8.1.1.B. Measurable Goal

a. Enforce the use of the Post-Construction Standards in the City's Stormwater Management Ordinance for applicable development and redevelopment.
b. Each reporting period, evaluate the City's Stormwater Management Ordinance for post-construction stormwater runoff requirements to determine if revisions are required.
c. Update the ordinance, if required.

8.1.1.C. Schedule

- Annual, 2024 – 2029.

8.1.1.D. Annual Report Documentation

- Number of post construction stormwater runoff plans reviewed and approved during the reporting period.
- A copy of the Stormwater Management Ordinance, if revised during the reporting period.

8.1.2 Linear Transportation Projects

8.1.2.A Description

The City will apply the adopted performance standards during the design of City-construction projects as discussed in Section 8.1.1, with the possible exception of linear projects. If the City designs a linear construction project, for which it would be impossible to apply the performance standards, the City will develop a feasibility program which sets reasonable criteria for determining when implementing performance standards for linear projects is infeasible. This will be submitted to EPD, and applied to future linear construction projects only upon approval.

8.1.2.B Measurable Goal

- If and when needed, develop linear project feasibility program to apply to future linear projects.

8.1.2.C Schedule

- If needed, develop linear project feasibility program, and submit to EPD for approval.

8.1.2.D Annual Report Documentation

- If developed, linear project feasibility program.

8.2. GREEN INFRASTRUCTURE/LOW IMPACT DEVELOPMENT (GI/LID)

Permit Section 3.3.11: Post-Construction, Table 3.3.11(b)(2)

8.2.1. Legal Authority

8.2.1.A. Description

The City completed an evaluation of the City's development regulations (such as transportation design specifications, plumbing codes, landscaping requirements, and other standards) that might prohibit the use of LID practices in 2015 using the US Environmental Protection Agency (EPA) Water Quality Scorecard. A copy of the ordinance evaluation is included in Appendix B. The results of this review were considered and recommendations were included in the Powder Springs UDC, which was adopted in December 2015. Sec. 5-35 of the UDC "Drainage and Low Impact Development" requires the following:

> *Land developers shall utilize, to the maximum extent practicable, stormwater better site design practices as described in the Georgia Stormwater Management Manual. During the land development permitting process, a stormwater management plan is required (see article 11 of this development code). As specified in article 11, the city will require the land development applicant to examine and where feasible implement stormwater management methods broadly referred to as "low-impact development" and as specifically referred to in the Georgia Stormwater Management Manual as stormwater better site design practices and limited application structural stormwater controls (i.e., filter strips, grassed channels, and porous concrete, among others (reference: GSMM, Vol. 2, Sec. 3.3).*

To meet the requirements of Section 3.3.11(b)(2) of the City's 2024-2029 MS4 permit, the City will perform an updated comprehensive review of building codes, ordinances, and other applicable regulations during the 2024-2025 reporting period. At a minimum, this review will assess regulations that govern residential and commercial development, road design, land use, and parking requirements using applicable sections of the Code and Ordinance Worksheet developed by the Center for Watershed Protection (CWP), the US EPA Water Quality Scorecard or another similar comprehensive code evaluation tool. If any revisions are necessary, the City will provide information about the ordinance revisions needed, adopted ordinances, and/or a schedule for when the revisions will be completed. Thereafter for reporting years 2025-2026, 2026-2027, 2027-2028, and 2028-2029, the City will either complete another comprehensive evaluation or reference the first-year evaluation and certify that additional revisions are not necessary. Documentation of the annual reviews will be maintained.

If revisions to the ordinances and codes are necessary, the permittee should include a report on any proposed revisions, including a schedule for completion of the revisions. In subsequent reporting years, the permittee should provide a status report on the ordinance revisions and/or any adopted ordinances.

8.2.1.B. Measurable Goals

a. During the 2024-2025 reporting year, perform a comprehensive review of building codes, ordinance, and other applicable regulations that, at a minimum, assesses regulations that govern residential and commercial development, road design, land use, and parking requirements using applicable sections of the Code and Ordinance Worksheet developed by the CWP, the US EPA Water Quality Scorecard or another similar comprehensive code evaluation tool.
b. For 2025-2026, 2026-2027, 2027-2028, and 2028-2029, the City will either complete another comprehensive evaluation or reference the first-year evaluation and certify that additional revisions are not necessary.
c. Document the annual ordinance reviews.
d. If revisions to the ordinances and codes are necessary, include a report on any proposed revisions, including a schedule for completion of the revisions. annual reports.

8.2.1.C. Schedule

- Annual, 2024 – 2029.

8.2.1.D. Annual Report Documentation

a. Documentation of regulatory review conducted each reporting year.
b. If revisions to the ordinances and codes are necessary, include a report on any proposed revisions, including a schedule for completion of the revisions.
c. Copies of any updated code(s), if revisions were made

8.2.2. GI/LID Program

8.2.2.A. Description

The City of Powder Springs has developed and implemented a GI/LID Plan to address the following elements of the City's GI/LID program:

1. Legal Authority
2. GI/LID Program
    a. New Development and Redevelopment
    b. Criteria to Determine Site Feasibility and Applicability
    c. Stormwater Management Plan Requirements and Site Plan Review
3. GI/LID Structure Inventory
4. GI/LID Structure Inspection and Maintenance Program

The City revised the GI/LID plan in 2019 and the EPD approved the revised Plan on July 22, 2020. A copy of the approved GI/LID Program is included in Appendix F. The City will annually review the GI/LID Program and make changes as needed.

8.2.2.B. Measurable Goals

- Review the GI/LID Plan annually and make updates as needed.

8.2.2.C. Schedule

- Annual, 2024 - 2029.

8.2.2.D. Annual Report Documentation

- A copy of the GI/LID Program, if updated, or a copy of the relevant plan updates.

8.2.3. GI/LID Structure Inventory

8.2.3.A.Description

The City has developed an inventory of water quality-related GI/LID structures constructed after **June 11, 2014** as required by the City's MS4 Permit. A copy of the City's GI/LID Inventory is provided in the GI/LID Plan in Appendix F. Powder Springs considers the following structures to be GI/LID structures:

- Bioretention Areas / Rain Gardens
- Dry Enhanced Swale (Bioswale)
- Green Roofs
- Rainwater Harvesting
- Grass Channel/ Bioswale
- Infiltration Practices / Vegetated Filter Strip
- Permeable pavers / pavement (pervious concrete, porous asphalt, concrete grid pavers, permeable interlocking pavers, plastic grid pavers, etc.)

Ownership categories listed on the inventory include:

1) City-owned structures and/or structures that are the operational responsibility of the City;
2) Structures that are owned by a public entity other than the City (such as the Board of Education and other entities not covered by an NPDES permit); and
3) Privately-owned, non-residential GI/LID structures.

New GI/LID structures added during new development/redevelopment will be identified through the site plan development process, and the City will update the GI/LID inventory during each reporting period if new structures were added. The City will also ensure that maintenance agreements are executed for all new non-permittee owned structures constructed after the effective date of the City's current permit (**June 11, 2024**).

8.2.3.B. Measurable Goals

a. Identify new GI/LID structures during site plan review.
b. Update inventory with new GI/LID structures, if needed.
c. Ensure maintenance agreements are executed for all new non-permittee owned GI/LID structures constructed after June 11, 2024.

8.2.3.C. Schedule

- Annual, 2024 - 2029.

8.2.3.D. Annual Report Documentation

a. Copy of most updated GI/LID Inventory, including the type, ownership, and total number of structures.

8.2.4. Inspection and Maintenance Program

8.2.4.A.Description

Inspections

The City will inspect 100% of inventoried GI/LID structures within the 5-year permit period and at least one inspection will be conducted each reporting period. If more than five (5) GI/LID structures are listed on the inventory, the City will inspect at least 5% of the structures annually.

Inspections will be documented using the inspection sheets included within the City's GI/LID Plan or through a field collection application that is downloaded on City-owned smart phones and/or tablets and recorded within the City's GIS layer. The field collection application and paper inspection checklist contain the same questions. A table listing the information that will be collected and documented during site inspections within a GIS database and copies of paper inspection checklists (contained within the GI/LID Plan) are provided in Appendix D and F, respectively.

Maintenance

If inspections indicate that a City-owned GI/LID structure is in need of maintenance, the City will perform that maintenance, as appropriate, in accordance with the recommendations set forth in the GSMM.

In order to ensure that private, non-residential GI/LID structures and publicly-owned structures owned by other entities are maintained by their owner in accordance with the CSS, the City requires developers of GI/LID structures not owned by the City to complete a maintenance agreement with the City, prior to the issuance of an LDA permit. The maintenance agreement and stormwater management design plan is approved by the City and recorded with the deed upon approval during the site plan review process. The maintenance agreement, a model of which is included as an attachment to the GI/LID Plan in Appendix F, details the following information:

- The person(s) responsible for carrying out the inspection and maintenance.
- A maintenance schedule stating when and how often routine inspection and maintenance will occur.
- Plans for annual inspections to ensure proper performance of the stormwater management system between scheduled maintenance.

The City will retain copies of maintenance agreements finalized after the effective date of the current permit (June 11, 2024) and develop a summary list of the new agreements. This list will also include any maintenance agreements that were obtained for GI/LID structures constructed in previous permit periods. The summary list will be reviewed and updated each reporting period.

During routine inspections, if the City staff determine that the owner is not properly maintaining their GI/LID structures, they will enforce the provisions of the maintenance agreement and the Stormwater Management Ordinance.

8.2.4.B. Measurable Goals

a. Inspect 100% of inventoried structures every 5 years, with at least one structure inspected annually. If there are more than five (5) structures on the inventory, 5% of the structures will be inspected annually.
b. Document inspections on the City's approved inspection checklists.
c. Conduct maintenance of City-owned structures as needed.
d. Ensure maintenance of structures not owned by the City is conducted in accordance with the Inspection & Maintenance Agreement.
e. Enforce provisions of the Inspection & Maintenance Agreement and the Stormwater Management Ordinance.
f. Retain copies of new maintenance agreements and maintain/update a summary list of maintenance agreements.

8.2.4.C. Schedule

- Annual, 2024-2029.

8.2.4.D. Annual Report Documentation

a. Number and percentage of GI/LID structures inspected and maintained during the reporting period.
b. Documentation of inspections conducted, such as a table of individual inspection reports with a record for each site inspected and the findings of that inspection, or a copy of the completed inspection checklist for each structure inspected during the reporting period.
c. Documentation of any maintenance and/or enforcement activities conducted to address issues identified during the GI/LID inspections.
d. Updated summary list of Inspection & Maintenance Agreements.

9. ENFORCEMENT RESPONSE PLAN (ERP)

Permit Section 3.3.6: Enforcement Response Plan (ERP)

9.1. ERP IMPLEMENTATION

9.1.1. Description

The City of Powder Springs has developed an Enforcement Response Plan (ERP) to describe the actions to be taken for violations of the City's Storm Water Management Program. A revised ERP was revised and approved in the previous permit cycle.

The City's ERP, which is included in Appendix G, includes the ordinances providing legal authority, types of enforcement mechanisms available, escalation of enforcement, timeframes for investigation, and the method to be used to track instances of non-compliance. The City will continue to implement its ERP and each reporting year, the City will review the ERP and revise it as necessary. If the ERP is revised, the City will submit it to EPD for review.

9.1.2. Measurable Goal(s)

- Review the ERP each reporting period.

9.1.3. Schedule

- Annual, 2024 – 2029.

9.1.4. Annual Report Documentation

- Copy of revised ERP, if updates were completed during the reporting period.

10. IMPAIRED WATERS PLAN (IWP)

Permit Section 3.3.7: Impaired Waterbodies

10.1. IWP IMPLEMENTATION

10.1.1. Description

Powder Springs has developed an Impaired Waters Plan (IIWP) for all 305(b)/303(d) listed waters to reduce the pollutant of concern (POC) in each impaired segment. This plan includes procedures for water quality monitoring that will be performed for impaired streams and BMP implementation. A copy of the City's IWP based on the 2022 305(b)/303(d) impaired list was submitted to EPD with the City's 2023-2024 Annual Report for EPD's review and approval. The Plan has since been updated to reference the 2024 305(b)/303(d) impaired list which was recently finalized.

The City will perform water quality monitoring as summarized in the City's IWP and analyze the results each reporting period. Over the course of this program, the City will attempt to identify water quality trends and potential sources of any water quality impairments or improvements. The City will also perform an assessment to determine the effectiveness of the BMPs employed and what, if any, adaptive BMP measures may be necessary to return the water to compliance with State water quality standards.

The City will also review the latest 305(b)/303(d) list each reporting period to determine if any new impaired waters have been added. If there are newly-listed impaired waters, or if the City changes its procedures, the City will revise the IWP to address the POC and incorporate the information required by Section 3.3.7 of the Phase II MS4 permit.

Measurable Goal(s)

a. Approval by EPD of revised IWP.
b. Implement the IWP.
c. Review most recent 305(b)/303(d) list, and update IWP, if necessary.
d. Perform assessment of data trends over time for each POC, including a written characterization of baseline conditions and subsequent evaluations on whether water quality is improving, declining, fluctuating, or remaining constant.
e. Perform assessment to determine the effectiveness of the BMPs employed and if additional BMPS may be necessary.

Schedule

- Annual, 2024 - 2029.

Annual Report Documentation

a. Copy of IWP, if updated during the reporting period.
b. Monitoring Data.

c. Assessment of data trends over time for each POC.
d. Assessment to determine the effectiveness of the BMPs and if any additional BMPS are necessary.

11. MUNICIPAL EMPLOYEE TRAINING

Permit Section 3.3.8: Employee Municipal Training

11.1. TRAINING SUMMARY

11.1.1. Description

The City of Powder Springs will conduct annual employee training for those employees who work in any municipal facility or function that has the potential to contribute pollutants to the MS4. Training topics may be rotated throughout the 5-year permit period to ensure that City staff receive the training applicable to their job responsibilities and/or to cover topics relevant to issues the City may currently be experiencing. Training may be provided in a variety of ways, including in-person meetings, PowerPoint presentations, and/or using online videos.

Alternatively, the City may send employees to an applicable training course. City employees will be trained during each permit period on stormwater topics that are necessary for that employee to do their job, including good housekeeping practices at municipal facilities, IDDE, industrial and HVPS inspections, inspection and maintenance of MS4, green infrastructure/low impact development (GI/LID), pollution prevention procedures, and runoff reduction/quality. The City shall keep records of the training, including topic(s), training date(s), as well as a list of attendees for inclusion in the Annual Report.

More detailed information about the City's training program, including employee "categories" that may receive training and examples of training topics, is provided in Appendix I.

11.1.2. Measurable Goals

a. Provide annual stormwater training for applicable employees.
b. Document stormwater training activities.

11.1.3. Schedule

- Annual, 2024 - 2029.

11.1.4. Annual Report Documentation

- Documentation of training activities, including a summary of training materials or training agenda.
- Copy of sign-in sheets or other documentation showing the name and number of training attendees and the date of training.

Appendix A

NPDES Phase I MS4 Permit

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Jeffrey W. Cown, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1470A, East Tower
Atlanta, Georgia 30334
404-463-1511

Phase I Large Municipal Separate Storm Sewer System (MS4) NPDES Permit Reapplication Form

Part I. General Information

A. Name of Permittee: City of Powder Springs

B. Mailing Address (if providing a post office box, also provide a street address):
PO Box 46
4481 Atlanta St. Building 4
Powder Springs, GA 30127

C. Name of responsible official: Al Thurman
Title: Mayor
Mailing Address: PO Box 46
City: Powder Springs State: GA Zip Code: 30127
Telephone Number: 770-943-1666

D. Designated stormwater management program contact:
Name: Tina Garver
Title: Community Development Director
Mailing Address: PO Box 46
City: Powder Springs State: GA Zip Code: 30127
Telephone Number: 770-943-1666
Email Address: tgarver@cityofpowdersprings.org

E. NPDES Phase I MS4 Permit Number: GAS000129

F. Provide the river basin(s) to which your MS4 discharges: Chattahoochee

G. Provide the latitude and longitude of the MS4 center (e.g. City Hall, County offices, MS4 mailing address) using Global Positioning System (GPS) - WGS 84:
Latitude: 33.856567 Longitude: -84.676550

Part II. Stormwater Management Program (SWMP) Changes

A. Are you proposing any significant changes to your SWMP? Yes ____ No X____
If no, skip to Part III.

B. Please describe any proposed changes to your municipality's SWMP:

_____

_____

_____

Part III. Sharing Responsibility

A. Has another entity agreed to implement a SWMP activity on your behalf?
Yes ____ No X___ (If No, skip to Part IV)

B. Describe any activities being performed by another entity on your behalf, including the activity and the name of the entity. Attach additional pages if necessary to list activities. **It is mandatory that you attach a copy of a written agreement (e.g. Memorandum of Understanding) between your MS4 and the other entity demonstrating acceptance of responsibility. _____**

_____

_____

_____

_____

Part IV. Certification Statement

I certify under penalty of law that this document and all attachments were prepared with 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.

Signature: 

Printed Name: Albert Thurman

Title: Mayor Date: 12/27/23

(Version 10/23)

Phase I Large MS4
NPDES Permit No. GAS000129

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Discharges From The

City of Powder Springs

Municipal Separate Storm Sewer System

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 covered under this permit are authorized to discharge stormwater from this municipal separate storm sewer system to the waters of the State of Georgia in accordance with the limitations, monitoring requirements and other conditions set forth in Part I through Appendix B hereof.

This permit shall become effective on June 11, 2024.

This permit and the authorization to discharge shall expire at midnight, June 10, 2029.

Jun 05, 2024

Signed on _____

Jeffrey W. Cown

_____

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 the authorized municipal separate storm sewer system (MS4) to waters of the State of Georgia.

1.1.2 The permittee is liable for permit compliance and the implementation of the Storm Water Management Program (SWMP) for all point source discharges from the MS4 for which it is owner or operator.

1.1.3 Stormwater discharges regulated by other National Pollutant Discharge Elimination System (NPDES) permits that do not discharge to the MS4 are not covered by this permit (e.g., Publicly Owned Treatment Works and Combined Sewer Overflows).

1.1.4 Discharges which are subject to regulation by other NPDES permits that discharge to waters of the State through the MS4 are still subject to those other NPDES permit requirements.

1.1.5 In order to continue coverage, the permittee must submit a permit application at least 180 days prior to the expiration date of the existing permit on a form provided by the Georgia Environmental Protection Division (EPD).

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 (CWA), as amended, unless otherwise defined in Appendix A.

PART 2. CRITERIA FOR RECEIVING WATERS

2.1 Receiving Water Standards

The permittee shall implement controls to reduce pollutants to the maximum extent practicable (MEP) in discharges from the MS4 to the waters of the State so as to not cause the general criteria to be exceeded in the receiving waters per Rules 391-3-6-.03(5)(a) – (e).

PART 3. STORM WATER MANAGEMENT PROGRAM

The permittee shall update, implement, and enforce a SWMP designed to reduce the discharge of pollutants from the MS4 to the MEP, in order to protect water quality and to satisfy the appropriate water quality requirements of the State Act and Rules (391-3-6-.16). The SWMP must include management practices, control techniques and system design and engineering methods, and other provisions appropriate for the control of such pollutants. Regardless if the permittee's SWMP has been approved by EPD, the permittee must comply with the requirements of this Permit. The

SWMP shall be considered as a supplement to the Permit containing the standard operating procedures, schedules, inspection forms, and other documents needed to support the implementation of Permit requirements. 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 shall be submitted for approval to EPD within 180 days of the effective date of this permit. The SWMP and its amendments, upon approval by EPD, shall become a part of this permit.

3.1 Legal Authority

The permittee must have adequate legal authority to control pollutant discharges into and from its MS4, and to meet the legal requirements of this permit.

3.2 Sharing Responsibility

The permittee may share implementation of one or more of the SWMP components with another entity, or the entity may assume full responsibility for that component. However, the permittee may rely on another entity only if:

3.2.1 The other entity is either implementing or will be implementing the SWMP component;

3.2.2 The particular component is at least as stringent as the corresponding permit requirement; and

3.2.3 The other entity agrees to implement the component on the permittee's behalf through a written agreement, memorandum of understanding, memorandum of agreement, contract, or other signed document that establishes the obligations of each party.

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 component implementation, it is the permittee's responsibility to submit all Permit Applications, Annual Reports, Certification Statements, or any other information requested by EPD.

If the other entity fails to implement the component on the permittee's behalf, the permittee remains liable for any enforcement actions due to the failure to implement and/or report.

3.3 SWMP Components

The following information is to be used in developing and implementing the permittee's SWMP. The specific requirements can be found in Title 40 of the Code of Federal Regulations (CFR), Part 122.26. Each SWMP component must include a description of the activity, a measurable goal and how it will be measured and tracked, and a description of the documentation to be submitted in each annual report. A detailed description of the activities related to each requirement must be reported on the Annual Report form provided by EPD.

3.3.1 Structural and Source Control Measures

The permittee must implement a program which incorporates structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the MS4 and includes a schedule for implementing the controls. At a minimum, the program must include the elements listed in Table 3.3.1 below and descriptions of how they are implemented:

Table 3.3.1

SWMP Component	**Measurable Goals**
1. MS4 Structure Inventory and Map	1.a. Each reporting period, update the inventory and map of MS4 structures. At a minimum, the inventory and map must include catch basins, ditches (miles or linear feet), detention/retention ponds and underground detention, and storm drain lines (miles or linear feet). 1.b. Provide the updated inventory and map, the number of MS4 structures added or deleted during the reporting period, and the total number of structures in the inventory, in each annual report.
2. MS4 Inspection and Maintenance Program	2.a. Conduct inspections of the MS4 structures 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 total structures so that some inspections are performed during each reporting period, or if inspections are done by geographical area, then one entire area or sector must be inspected each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the structures are inspected within a 5-year permit term. The MS4 inspections shall be executed in accordance with the schedule contained in the SWMP. Provide the number and percentage of the total structures inspected during the reporting period and documentation in each annual report. 2.b. Conduct maintenance on the MS4 structures as needed. Provide the number of the total structures maintained during the reporting period and documentation of the maintenance performed in each annual report.
3. Planning Procedures	3.a. Develop or update, as needed, a comprehensive planning document which addresses, in part, areas of new development and redevelopment to reduce pollutants in discharges from the MS4. Describe any changes made to the stormwater portion of the document during the reporting period in each annual report.

4. Street Maintenance	4. Conduct street cleaning using either of the following methods: 4.a. Conduct street maintenance and cleaning at a frequency of at least one mile per reporting period. 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 permittee does not engage in street sweeping, then implement an alternate method of street cleaning, such as trash/litter removal. This activity must be conducted at least once each reporting period. Describe the procedures in the SWMP. Provide documentation of the litter removal activities conducted during the reporting period in each annual report.
5. Flood Management Projects	5.a. Ensure proposed flood management projects (e.g., detention and retention ponds) are assessed for water quality impacts during the design phase. Describe the assessment procedures in the SWMP. Provide the number of plans reviewed where flood management projects are assessed for water quality impacts during the reporting period in each annual report. 5.b. Conduct an assessment, using the procedures described in the SWMP, of existing (i.e., those designed prior to the April 15, 2016 GSMM publication date) permittee-owned flood management projects (e.g., detention and retention ponds) for potential retrofitting to address water quality impacts and conduct any feasible retrofitting activities. If the permittee has more than five structures, then assess 100% within a 5-year permit term, with at least one structure assessed each reporting period. If the permittee has fewer than five structures, then assess 100% within a 5-year permit term. Provide information on any assessment and/or retrofitting activities conducted during the reporting period in each annual report. If an assessment was previously performed on an existing flood management project using the 2016 GSMM or latest edition, prior to the effective date of this permit, then an additional assessment does not need to be performed. For the previously assessed structures, provide documentation of the completed assessment and the status of any retrofitting activities in the first annual report submitted after the permit issuance date. In each subsequent annual report, provide a table listing the existing flood management structures, the date of assessment, the results of the assessment, and the status of any retrofitting activities.

6. Municipal Facilities Excluding Any Facilities Addressed in Section 3.3.3	6.a. Each reporting period, update the inventory of municipal facilities with the potential to cause pollution (e.g. drinking water treatment plants, wastewater plants <1.0 MGD, recycling facilities, waste transfer facilities, materials recovery facilities (MRFs)) and provide in each annual report. 6.b. Implement the program to control runoff from municipal facilities with the potential to cause pollution. The program shall include the facility inspection prioritization, inspection frequency, and inspection documentation protocol as described in the SWMP. Conduct an inspection on 100% of the inventoried facilities within the 5-year permit term. For permittees with less than five municipal facilities, at least 1 inspection must be conducted each reporting period. For permittees with five or more municipal facilities included on the inventory, at a minimum, the permittee must conduct inspections on 5% of the municipal facilities each reporting period, or if inspections are done by geographical area, then one entire area or sector must be inspected in each reporting period, so that inspections are conducted each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the municipal facilities are inspected within the 5-year permit term. Provide documentation of inspections and documentation of follow-up actions taken to address noncompliance issues in each annual report.
7. Pesticide, Fertilizer, and Herbicide Application	7.a. Utilize a program to reduce pollution by the application of pesticides, fertilizer, and herbicides by commercial applicators and distributors in accordance with the Georgia Department of Agriculture requirements. 7.b. Implement the program to reduce pollution caused by the municipal use of pesticides, fertilizers, and herbicides, as described in the SWMP. If municipal staff performs the application of pesticides, fertilizers, and herbicides, ensure that they are certified by the Georgia Department of Agriculture. Provide documentation of program activities in each annual report.

3.3.2 Illicit Discharge Detection and Elimination Program (IDDE)

The permittee must implement and enforce a program to detect and eliminate illicit discharges and improper disposal of pollutants into the MS4. At a minimum, the program, described in the SWMP, must include the elements listed in Table 3.3.2 below and descriptions of how they are implemented:

Table 3.3.2

SWMP Component	Measurable Goals
1. Legal Authority	1.a. Re-evaluate and modify the existing IDDE ordinance when necessary for compliance with this permit. The permittee must ensure that the ordinance provides the authority to conduct inspections and monitoring, control illicit discharges and connections, and control illegal dumping and spills into the MS4. The ordinance must include the permittee's authority to take legal action to eliminate illicit discharges or connections. If the ordinance is revised during the reporting period, submit a copy of the adopted ordinance with the annual report.
2. Outfall Inventory and Map	2.a. Each reporting period, update the inventory and map showing the location of all outfalls from the MS4 and the names and location of all waters of the State that receive discharges from those outfalls with each annual report. 2.b. Provide the updated inventory, the number of outfalls added during the reporting period, and the total number of outfalls in the inventory 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 total outfalls within the 5-year permit term, or use an alternate method approved by EPD. At a minimum, the permittee must conduct DWS or approved alternate method inspections on 5% of the outfalls in each reporting period, or if inspections are done by a geographical area, then one area or sector must be inspected each reporting period so that some inspections are performed each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the outfalls are inspected within a 5-year permit term. If the permittee 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 in each reporting period, or if walks are done by a geographical area, then streams within one area or sector must be walked each reporting period so that some stream miles are walked during each reporting period. If the permittee conducts stream walks for a reason other than DWS, then the permittee

	does not need to walk a specific number of miles. The permittee must document and report the number of stream miles walked, as well as the number of outfalls screened using each method (i.e., DWS, stream walks, approved alternate method). In addition, the permittee may conduct both standard DWS of its outfalls and perform DWS of outfalls during stream walks. Provide the number and percentage of outfall inspections conducted during the reporting period and documentation of the inspections in each annual report. 3.b. Implement investigative and follow-up procedures when the results of the screening indicate a potential illicit discharge, including the sampling and/or inspection procedures described in the SWMP. If the source of the illicit discharge is identified as deriving from an adjacent MS4, the permittee must notify that MS4. Provide information on illicit discharge detection activities performed to identify any illicit discharges identified during the reporting period in each annual report. 3.c. Ensure any identified illicit discharges are eliminated. If necessary, implement the enforcement procedures described in the SWMP and in accordance with the Enforcement Response Plan (ERP) in Part 3.3.6 of this Permit. Provide information, using a spreadsheet or table, on any eliminated discharges or on any enforcement actions taken for illicit discharges during the reporting period in each annual report.
4. Spill Response Procedures	4.a. Implement the procedures described in the SWMP to prevent, contain, and respond to spills that may discharge to the MS4. Provide documentation on spill occurrences during the reporting period in each annual report.
5. Public Reporting Procedures	5.a. Implement the procedures described in the SWMP to promote, publicize, and facilitate public reporting of illicit discharges. The permittee must perform at least one formal notification to the public of methods available to report an observed illicit discharge (e.g. website posting, newsletter, bill insert) at least once each reporting period. Provide documentation on any activities conducted during the reporting period in each annual report. 5.b. Implement the procedures for receiving and responding to complaints related to illicit discharges described in the SWMP. Provide information on each complaint related to IDDE that was received and investigated during the reporting period in each annual report, including its status.

6. Proper Management and Disposal of Used Oil and Toxic Materials	6.a. Implement the activities to facilitate the proper management and disposal of used oil and toxic materials, including educational activities, household waste collection programs, etc., described in the SWMP. The permittee must perform at least one activity to facilitate the proper management and disposal of used oil and toxic materials at least once each reporting period. Provide details, including the date(s), of any activities performed during the reporting period in each annual report.
7. Sanitary Sewer Infiltration Controls	7.a. If the permittee owns or operates the sanitary sewer system within its jurisdiction, implement the activities to detect and eliminate seepage and spillage from municipal sanitary sewers to the MS4 described in the SWMP. The permittee must perform at least one activity to detect and eliminate seepage and spillage from municipal sanitary sewers to the MS4 at least once each reporting period. Provide details, including the date(s), of any activities performed during the reporting period in each annual report.

The following categories of non-stormwater discharges or flows must be addressed 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;
- 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.

3.3.3 Industrial Facility Stormwater Discharge Control

The permittee must implement and enforce a program to monitor and control pollutants in stormwater discharges from industrial facilities into the MS4. At a minimum, the program must contain the elements listed in Table 3.3.3 below and descriptions of how they are implemented:

Table 3.3.3

SWMP Component	Measurable Goals
1. Industrial Facility Inventory	1.a. Each reporting period, update the inventory of facilities with industrial activities that potentially discharge to the MS4. At a minimum, this shall include facilities listed on EPD's Industrial Stormwater General Permit (IGP) Notice of Intent (NOI) and No Exposure Exclusion (NEE) online listings. Provide an updated inventory in each annual report.
2. Inspection Program	2.a. Implement the industrial facility inspection program which includes the facility inspection prioritization, inspection frequency, and inspection documentation protocol described in the SWMP. Conduct inspections on 100% of the inventoried facilities that discharge to the MS4 within the 5-year permit term. For permittees with less than five inventoried industrial facilities, at least 1 inspection must be conducted each reporting period. For permittees with five or more industrial facilities included on the inventory, at a minimum, the permittee must conduct inspections on 5% of the industrial facilities on the inventory each reporting period, or if inspections are done by geographical area, then one area or sector must be inspected each reporting period so that some inspections are performed during each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the facilities are inspected within the 5-year permit term. Provide the total number of facilities, the number and percentage of inspections conducted during the reporting period, and documentation of the inspections in each annual report. 2.b. Implement a monitoring program for stormwater runoff from industrial facilities, waste facilities and hazardous waste treatment, storage and disposal facilities, as defined in the SWMP. Provide the results of any monitoring conducted during the reporting period in each annual report. The permittee may use monitoring results provided by the industrial facility. This shall include all facilities that the permittee determines are contributing a substantial pollutant loading to the MS4.
3. Enforcement Procedures	3.a. Implement enforcement procedures described in the SWMP and in accordance with the ERP in Part 3.3.6 of this permit if a stormwater violation is noted at an industrial facility that discharges to the MS4. Provide documentation on any enforcement actions taken during the reporting period in each annual report.

4. Educational Activities	4.a. Implement educational activities for industrial facilities (e.g., brochure distribution, website posting) during the reporting period. Conduct an educational activity related to industrial facilities at least once each reporting period. Provide documentation of any educational activities performed during the reporting period in each annual report.

3.3.4 Construction Site Management

The permittee must implement and enforce a program to maintain structural and/or non- structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4 as defined in the SWMP. At a minimum, the program must contain the elements listed in Table 3.3.4 below and descriptions of how they are implemented:

Table 3.3.4

SWMP Component	**Measurable Goals**
1. Legal Authority	1.a. Re-evaluate and modify the existing Erosion and Sedimentation (E&S) ordinance when necessary for compliance with this permit. The permittee must ensure that the E&S ordinance provides the authority to issue land disturbing activity permits; require BMPs to prevent and minimize E&S; require erosion, sedimentation and pollution control plan submission and review prior to commencing construction, conduct inspections and enforcement, including stop work orders, bond forfeiture, and monetary penalties; and require education and certification for persons involved in land development, design, review permitting, construction, monitoring, inspection, and other land disturbing activities. If the E&S ordinance is revised during the reporting period, submit a copy of the adopted ordinance in the annual report.
2. Site Plan Review Procedures	2.a. Ensure that 100% of the site plans are reviewed in accordance with the site plan review procedures described in the SWMP. If the permittee is not a Local Issuing Authority (LIA), then the procedures should state that the activity is implemented by EPD. 2.b. Provide a list of the site plans received and the number of plans reviewed, approved, or denied during the reporting period in each annual report. If the permittee is not an LIA, explain in the annual report that the activity is implemented by EPD. 2.c. Provide the number of Land Disturbance Activity (LDA) permits issued during the reporting period in each annual report or if the permittee is not an LIA, explain that the activity is implemented by EPD.

3. Inspection Program	3.a. Implement the construction site inspection program. The purpose of the inspections is to ensure that structural and non-structural BMPs at construction sites are properly designed and maintained as specified in the Construction General Permits (CGPs). 3.b. The construction site inspection program shall include the facility inspection prioritization, inspection frequency, and inspection documentation protocol described in the SWMP or in accordance with the Manual for Erosion and Sediment Control in Georgia. At a minimum, the permittee must conduct at least one inspection at each active construction site during the reporting period. If the permittee is not an LIA, then the procedures should state that the activity is implemented by EPD. 3.c. Provide a list or table of active sites and the number and dates of inspections conducted by the permittee during the reporting period in each annual report. If the permittee is not an LIA, explain in the annual report that the activity is implemented by EPD.
4. Enforcement Procedures	4.a. Implement enforcement procedures for 100% of the E&S violations documented at construction sites as described in the SWMP and in accordance with the ERP in Part 3.3.6 of this permit. Provide documentation on any enforcement actions taken by the permittee during the reporting period in each annual report, including the number, type (Notice of Violation, Stop Work Order, etc.) and the amount of any assessed penalties. If the permittee is not an LIA, explain in the procedures and the annual report that the activity is implemented by EPD.
5. Certification	5.a. All builders, developers, contractors, and other entities involved in construction activities subject to the CGPs shall comply with the certification requirements of the Georgia Erosion and Sedimentation Act and the rules adopted by the Georgia Soil and Water Conservation Commission (GSWCC). 5.b. Ensure that MS4 staff involved in construction activities subject to the CGPs are trained and certified in accordance with the rules adopted by the GSWCC. Provide documentation of current certifications in each annual report. If the permittee is not an LIA, explain in the annual report that the activity is implemented by EPD.

3.3.5 Highly Visible Pollutant Sources (HVPS)

The permittee must implement and enforce a program to control pollutants in stormwater runoff from HVPS facilities into the MS4. At a minimum, the program must contain the elements listed in Table 3.3.5 below and descriptions of how they are implemented:

Table 3.3.5

SWMP Component	**Measurable Goals**
1. HVPS Facility Inventory	1.a. Each reporting period, update the inventory of HVPS facilities that discharge to the MS4. Provide an updated inventory in each annual report.
2. Inspection Program	2.a. Implement the HVPS facility inspection program which includes the facility inspection prioritization, inspection frequency, and inspection documentation protocol described in the SWMP. Conduct inspections on 100% of inventoried facilities that discharge to the MS4 during the 5-year permit term. For permittees with less than five inventoried HVPS facilities, at least 1 inspection must be conducted each reporting period For permittees with five or more HVPS facilities included on the inventory, at a minimum, the permittee must conduct inspections on 5% of the structures each reporting period, or if inspections are done by a geographical area, then one area or sector must be inspected each reporting period so that some HVPS facilities are inspected each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the HVPS facilities are inspected within the 5-year permit term. Provide the total number of facilities, the number and percentage of inspections conducted during the reporting period, and documentation in each annual report.
. Enforcement Procedures	3.a. Implement enforcement procedures to be utilized if a stormwater violation is noted at an HVPS facility that discharges to the MS4 as described in the SWMP and in accordance with the ERP in Part 3.3.6 of this permit. Provide documentation on any enforcement actions taken at HVPS facilities during the reporting period in each annual report.
4. Educational Activities	4.a. Implement educational activities for HVPS facilities (e.g., brochure distribution, website posting) during the reporting period. Conduct an educational activity related to HVPS facilities at least once each reporting period. Provide documentation of any educational activities performed during the reporting period in each annual report.

3.3.6 Enforcement Response Plan (ERP)

The permittee must develop and implement an ERP that describes the action to be taken for violations associated with the IDDE, construction, industrial, HVPS, and other SWMP programs. The ERP will detail the permittee's responses to any noted stormwater violations, including escalating enforcement responses to address repeat and continuing violations. The ERP 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 (IDDE, construction, industrial, HVPS, etc.). The ERP must list the enforcement actions that 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;
    - order of cessation or elimination of discharge;
    - referral for judicial action/enforcement; 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 (IDDE, construction, industrial, HVPS, etc);
    - description of noncompliance;
    - description of enforcement action(s) used;
    - time frames for each step (e.g. investigation, corrective action, re-inspection);
    - documentation of inspection and enforcement actions taken;
    - documentation of referral to other departments or agencies; and
    - date of violation resolution.

The ERP must be reviewed each reporting period and revised as necessary. If revised during the reporting period, submit the ERP to EPD for review. 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.

3.3.7 Impaired Waters

The permittee must identify any impaired waters located within its jurisdictional area, using the latest approved Georgia 305(b)/303(d) List of Waters (http:// www.epd.georgia.gov/georgia-305b303d-list-documents), which contain MS4 outfalls or are within one linear mile downstream of MS4 outfalls and within the same watershed. Also, the pollutant of concern must be identified. For those impaired waters, the permittee shall propose an Impaired Waters Plan (IWP) addressing each pollutant of concern. The permittee must check annually whether an impaired water, within

its jurisdiction, has been added to the latest 305(b)/303(d) list. Newly listed waters must be addressed in the IWP and the SWMP must be revised accordingly. The permittee must submit a modified IWP for any newly listed waters in subsequent annual reports. The permittee must report on all monitoring activities in subsequent annual reports. 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 jurisdictional areas must be included in either the proposed IWP or a revision to the existing IWP.

The IWP 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 waterbody, 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 the waters, or a schedule for confirming the location of these outfalls; and
- Description of proposed BMPs to be used to control and reduce the pollutants of concern and a schedule for implementation of these BMPs.

Waters requiring bacteriological monitoring:
Permittees with a population less than 10,000 at the time of permit issuance are exempt from Options (a) and (b) below, but must otherwise meet all sampling requirements above for bacteria. For those permittees with a population equal to or exceeding 10,000 at the time of this permit issuance (see Appendix B), the permittee must comply with either Option (a) or Option (b) below:

a) For those waters impaired for bacteria, the permittee must collect four geometric means during the reporting period (16 samples total). Each geometric mean must consist of four grab samples collected during a 30-day period, without regard to weather. Two of the geometric means must be collected during May-October and two must be collected during November-April.

   The samples must be collected and the four geometric means calculated each year for the permit term. In the event that two years of data demonstrate that the level of bacteria is consistently below numeric criteria, then the permittee must prepare a Sampling Quality and Assurance Plan (SQAP). The SQAP must be submitted to EPD for approval.

   In the event the monitoring is performed in accordance with an EPD-approved SQAP, then the results must be submitted in the annual report, but also submitted separately to EPD's Watershed Planning & Monitoring Program. EPD will use the permittee's data, along with data obtained from other sources to determine if bacteria can be removed as an impairment on the 305(b)/303(d) list of waters.

b) For those waters impaired for bacteria, the permittee must collect monthly samples during the reporting period (12 samples total). The permittee must collect the monthly samples on a regular, defined interval (e.g., the first Tuesday of each month) without regard to the weather.

In the event that 10% or fewer of the monthly samples exceed the applicable Statistical Threshold Value (STV) for bacteria in accordance with Rule 391-3-6-.03(6) of the Rules and Regulations for Water Quality Control over two years of data, then the permittee must prepare a Sampling Quality and Assurance Plan (SQAP). The SQAP must be submitted to EPD for approval.

In the event the monitoring is performed in accordance with an EPD-approved SQAP, then the results must be submitted in the annual report, but also submitted separately to EPD's Watershed Planning & Monitoring Program. EPD will use the permittee's data, along with data obtained from other sources to determine if bacteria can be removed as an impairment on the 305(b)/303(d) list of waters.

A permittee can voluntarily prepare a SQAP at any time, regardless of population. Sampling conducted in accordance with a SQAP may result in a water being removed from the 303(d) list of impaired waters. If the water is delisted, then monitoring conducted under the IWP may cease.

Following review and comment on the IWP by EPD, the permittee will incorporate necessary changes into the IWP. For those waters where the permittee is conducting monitoring, the data must be made available to other MS4 permittees upon request.

Each Annual Report shall include:

- All 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 shall 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 graph, narrative). If monitoring identifies that an upstream MS4 is the source of the pollutant of concern, then the permittee must notify the 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 water to compliance with State water quality standards. If BMP revisions and/or additional BMPs are necessary, then the revised IWP must be submitted to EPD for review.

3.3.8 Municipal Employee Training

The permittee must provide stormwater-related training for its employees at least once each reporting period. The SWMP should include a description of the training program to be implemented, including the employee categories to be trained, the methods for providing the training, the topics to be addressed, and the documentation to be provided (e.g., sign-in sheets, photographs, etc.). The training must address such stormwater topics as are necessary for the employee to do his/her job and may include topics such as the inspection and maintenance of the MS4, good housekeeping practices at municipal facilities, illicit discharge detection and

elimination, industrial facility inspections, construction site inspections, highly visible pollutant source inspections, green infrastructure and low impact development (GI/LID) training, and runoff reduction/quality training. Documentation of the training activity, including the topic(s), date(s), and attendees must be provided in each annual report.

3.3.9 Public Education

Conduct a public education program that addresses water quality issues and the protection of water resources and encourages the use of GI/LID. The program shall consider such things as litter control, illicit discharges, household hazardous waste disposal, and residential pesticide, fertilizer and herbicide application, pet waste, fats, oils, and grease, and GI/LID techniques. If the permittee participates in an existing regional program in addition to its own program, then the annual report must summarize the specific activities performed during the reporting period.

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

SWMP Component	Measurable Goal
1. Public Education Program	1.a. Evaluate your existing program to ensure that it meets the needs of your community. Implement, and revise, if necessary, the stormwater education program described in the SWMP. The Public Education Program must include activities chosen from the following list, or other activities 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 type of activity. Each type of activity must be executed at least once during the reporting period. 1.c. Details and documentation of each type of activity implementation must be provided in each annual report.

Public education materials are available on numerous websites, including these suggested sites: U.S. EPA (www.epa.gov), Clean Water Campaign (www.cleanwatercampaign.org) and Center for Watershed Protection (www.cwp.org).

3.3.10 Public Involvement

Conduct a public involvement program that creates opportunities for citizens to participate in the SWMP. This can include involving the public in planning and implementation of activities.

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

SWMP Component	Measurable Goals
1. Public Involvement Program	1.a Evaluate your existing program to ensure that it meets the needs of your community. Implement, and revise, if necessary, the public involvement program described in the SWMP. The Public Involvement Program must include activities chosen from the following list, or other activities 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 event; • Local stormwater management panel; • Comprehensive planning committees; • Stakeholder Advisory committees; • Pet waste stations. 1.b. The measurable goal must be specified for each type of activity. Each type of activity must be executed at least once during the reporting period. 1.c. Details and documentation of each type of activity implementation must be provided in each annual report.

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

3.3.11 Post-Construction

3.3.11(a) Post-Construction Stormwater Controls

3.3.11(a)(1) Ordinance Review

The permittee must adopt ordinances, or update existing ordinances, when necessary for compliance with this permit, to address development and redevelopment, and enforcement of post-construction controls. The ordinance must provide the authority to conduct plan reviews, conduct inspections, enter into inspection and maintenance agreements, and pursue enforcement. If the ordinance is revised during the reporting period, submit a copy of the adopted ordinance with the annual report.

The ordinance revisions must include the adoption and implementation of the appropriate parts of either the latest edition of the Georgia Stormwater Management Manual (GSMM) or an equivalent or more stringent local design manual, which must meet or exceed the performance standards listed in the GSMM. All permittees must implement the GSMM to the MEP.

3.3.11(a)(2) Performance Standards

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 or adds or replaces 5,000 square feet or greater of impervious surface area, or that involves land disturbing activity of one acre or more, including projects less than one 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 following minimum performance standards are considered during the site plan preparation and/or review process. The performance standards must be implemented to the MEP.

The performance standards to be implemented are as follows:

<u>Stormwater Runoff Quality/Reduction</u>
Stormwater runoff shall be retained onsite or adequately treated prior to discharge. 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.

<u>Stream Channel/Aquatic Resource Protection</u>

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) 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 trout stream designation, which contain outfalls from the permittee's MS4, the permittee's SWMP must address the protection of the trout waters from impacts from the MS4 outfalls due to elevated temperature.

3.3.11(a)(3) Linear Transportation Projects

The permittee must apply the performance standards listed in Part 3.3.11(a)(2) 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 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.

3.3.11 (b) Green Infrastructure/Low Impact Development (GI/LID)

The permittee must implement a program to address post-construction runoff. At a minimum, the program must contain the elements listed in Table 3.3.11(b)(2) below and descriptions of how they are implemented:

Table 3.3.11(b)(2)

GI/LID Program Elements	**Measurable Goals**
1. Legal Authority	1.a. Each reporting period, the permittee shall 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, reuse, and evapotranspiration. At a minimum, the permittee shall assess those regulations governing residential and commercial development, road design, land use, and parking requirements. During the regulatory review, the permittee should consider the inclusion of incentives for use of GI/LID practices into the ordinance. If the ordinance(s) are revised

	during the reporting period, submit a copy of the adopted ordinance(s) with the annual report. 1.b If revisions to the ordinances and codes are necessary, the permittee should include a report on any proposed revisions, including a schedule for completion of the revisions. In subsequent reporting years, the permittee should provide a status report on the ordinance revisions and/or any adopted ordinances. In addition, in subsequent annual reports following the first year of the permit, the permittee should either complete a comprehensive evaluation or reference the first year evaluation and certify that additional revisions to the codes and ordinances are not necessary.
2. GI/LID Program	2.a. Implement the GI/LID program approved by EPD. The GI/LID program shall include procedures for evaluating the feasibility and site applicability of different GI/LID techniques and practices, and various structures and practices to be considered. If the GI/LID Program is revised during the reporting period, submit the revised program to EPD for review with the annual report.
3. GI/LID Structure Inventory	3.a. Each reporting period, update the inventory of water quality-related GI/LID structures located within the permittee's jurisdiction and at a minimum, constructed after June 11, 2014, (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 GI/LID structures owned by other entities (e.g., Board of Education and other entities not covered by an MS4 permit and that the permittee has legal authority to inspect), and privately-owned non-residential GI/LID structures (e.g., any mixed use development, commercial, etc. structures that the permittee has legal authority to inspect). Track the addition of new water quality-related GI/LID structures through the plan review process, ensure that the structures are added to the inventory, and ensure that maintenance agreements are executed for all non-permittee-owned structures constructed after the effective date of this permit. 3.b. Provide an updated inventory, including the type, ownership, and total number of structures, in each annual report.

4. Inspection and Maintenance Program	4.a. Conduct inspections on 100% of the GI/LID structures included in the inventory created in 3 above, within the 5- year permit term. For permittees with less than five inventoried GI/LID structures, at least one inspection must be conducted each reporting period. For permittees with five or more GI/LID structures included on the inventory, at a minimum, the permittee must conduct inspections on 5% of the structures each reporting period, or if inspections are done by geographical area, then one entire area or sector must be inspected each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the GI/LID structures are inspected within the 5-year permit term. Provide the number and/or percentage of the total structures inspected and documentation of the inspections conducted during the reporting period in each annual report. 4.b. Conduct maintenance on the permittee owned GI/LID structures, as needed. Provide the number of the total structures maintained and documentation of the maintenance performed during the reporting period in each annual report. 4.c. Implement procedures for ensuring those publicly-owned structures owned by other entities and privately-owned non-residential GI/LID structures for which the permittee has legal authority to regulate are maintained as needed. The permittee must retain copies of maintenance agreements finalized after the effective date of this permit and develop a summary list of these agreements. If the permittee has obtained maintenance agreements for structures constructed prior to the effective date of this permit, then these agreements should also be included on the summary list. Update the summary list as new maintenance agreements are executed. Provide an updated summary list and documentation of any activities taken to ensure maintenance of these structure (e.g. letters to owners, enforcement actions) in each annual report.

Design information on GI/LID practices can be found on the Atlanta Regional Commission's website (https://atlantaregional.org/) for the GSMM and the CSS to the GSMM. Additional information on green infrastructure and better site design can be found on numerous websites, including these suggested sites: U.S. EPA (https://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.

3.4 Program Amendments

EPD may require a revision of the SWMP at any time it is deemed necessary by the Director to comply with the goals and requirements of the State Act, but specifically for any of the following reasons:

3.3.1 A change has occurred which will significantly impact the potential for the discharge of pollutants to the waters of the State of Georgia;

3.3.2 The permittee's program proves ineffective in controlling pollutants from the MS4 to the MEP;

3.3.3 An adverse impact to water quality has been documented as a result of discharges from the MS4; or

3.3.4 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 modified SWMP. The permittee may propose alternative SWMP modifications to EPD.

3.4 Program Approval

The SWMP may be modified by the permittee at any time. Written notification of proposed SWMP modifications must be submitted to EPD at least 30 days prior to implementation of the modification. EPD reserves the right to disapprove the SWMP modification.

PART 4. MONITORING AND REPORTING REQUIREMENTS

4.1 Annual Report

The permittee shall prepare an annual system-wide report covering the reporting period May 1 through April 30. The report shall be submitted by June 15th following the reporting period. EPD is preparing an electronic method of reporting (eReporting), and 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 shall be submitted using the form provided by EPD. The Phase I Large Annual Report form is available on EPD's website at epd.georgia.gov. All applicable information required to complete the annual report shall be filled out and the certification statement shall be signed prior to submittal. A summary of the annual report requirements is as follows:

4.1.1 The status of implementing the components of the SWMP that are established as permit conditions;

4.1.2 Proposed changes to the SWMP;

4.1.3 Revisions, if necessary, to the assessments of controls;

4.1.4 A summary of data, including monitoring data that was accumulated throughout

the reporting period;

4.1.5 Annual expenditures for the reporting period and the annual fiscal analysis for the upcoming reporting period. The permittee must submit its budget, including the necessary capital and operation and maintenance expenditures associated with MS4 permit compliance, including the funding source as supporting documentation with its annual report;

4.1.6 A summary describing the number and nature of enforcement actions, inspections, and public education programs; and

4.1.7 Identification of water quality improvements or degradation.

The permittee must conduct inspections on 100% of all MS4 structures and inventoried facilities within the 5-year permit term. In the final annual report prepared under this permit iteration, the permittee must demonstrate that they have complied with this measurable goal. The permittee shall be responsible for the content of the report or the failure to provide information for the report relating to the MS4 for which it is the owner or operator. The permittee shall sign and certify the annual report as required under Part 5.10 of this permit.

4.2 Monitoring Procedures

4.2.1 The permittee must perform all monitoring described in the SWMP per Table 3.3.2, Table 3.3.3, and Table 3.3.7. The purpose of the monitoring is to identify potential sources of pollution, determine the best method to address water quality issues, and allow evaluation of the effectiveness of the SWMP. Implement additional monitoring if needed to identify pollution sources. If monitoring is being conducted for another reason (e.g., watershed assessment, watershed protection plan), then the data may be used to conduct the evaluation described above.

4.2.2 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.

4.2.3 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.

4.2.4 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 4.2.2 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.

4.2.5 Laboratory and Analyst Accreditation. All monitoring data not prepared in situ shall be prepared by a laboratory accredited by the State of Georgia in accordance with EPD 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.

4.3 Retention of Records

4.3.1 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. After EPD's approval, the permittee will implement the latest revision of the SWMP, while retaining on file the previous version of the program for a period of at least three years. These periods may be modified by the Director by written notification at any time.

4.3.2 Records of monitoring information shall include:

- The date, exact place, time of sampling, or measurements;
- The individual(s) who performed the sampling or measurements;
- 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.

4.3.3 The permittee must submit its records to EPD upon written request. The permittee must make its records, including the SWMP, available to the public as required by open records requirements.

PART 5. STANDARD PERMIT CONDITIONS

5.1 Duty to Comply

5.1.1 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.

5.1.2 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.

5.1.3 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.

5.1.4 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.

5.2 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.

5.3 Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of the permit, the permittee must apply for and obtain a new permit.

5.4 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5.5 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.

5.6 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, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

5.7 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.

5.8 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.

5.9 Inspection and Entry

The permittee shall allow the Director, the Regional Administrator of USEPA, and their authorized representatives, agents, or employees, after presentation of credentials to:

5.9.1 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;

5.9.2 Have access to and copy at reasonable times, any records required under the terms and conditions of this permit;

5.9.3 Inspect at reasonable times any facilities, equipment, (including monitoring and control equipment) practices, or operations regulated or required under this permit; and

5.9.4 Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

5.10 Signatory Requirements

5.10.1 All information submitted to EPD or that this permit requires the permittee to maintain shall be signed by either a principal executive officer or ranking elected official, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

5.10.1(a) The authorization is made in writing by the official person described above and submitted to EPD.

5.10.1(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the municipality's

SWMP such as the position of manager, operator, superintendent, or position of equivalent responsibility.

5.10.1(c) 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.

5.10.2 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."

5.11 Other Information

If the permittee becomes aware of a failure to submit any relevant facts or of submission of incorrect information in the SWMP, Annual Report, or any report to EPD, the permittee shall promptly submit the relevant facts or information.

5.12 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.

5.13 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.

5.14 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.

5.15 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.

5.16 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.

5.17 Previous Permits

All previous State water quality permits issued to this permittee are hereby revoked by the issuance of this permit. The permit governs discharges from this MS4 under the NPDES.

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, in accordance with Part 4.1 of this permit.

Best Management Practice (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 (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.

Clean Water Act (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.

EPA or **USEPA** – the United States Environmental Protection Agency.

EPD – the Environmental Protection Division of the Department of Natural Resources, State of Georgia.

Green Infrastructure/Low Impact Development (GI/LID) – management approaches, such as better site design or conservation design, or systems and practices that use or mimic natural processes to reduce runoff and pollutant loading, that result in infiltration, evapotranspiration, or the harvesting and use of stormwater, or any of the stormwater best management practices described in the Georgia Stormwater Management Manual, Volume 2, or an equivalent local design manual.

Highly Visible Pollutant Source (HVPS) – a land use or activity that produces higher than normally found levels of pollutants in stormwater runoff. These facilities may include, but are not limited to, gasoline stations, auto repair shops, commercial car washes, home improvement stores, nurseries, kennels, veterinarian offices, etc. These facilities may also include industries that are not required to be covered under the IGP.

Illicit Connection – any man-made conveyance connecting a non-stormwater discharge directly to an MS4.

Illicit Discharge – any direct or indirect non-stormwater discharge to the separate storm sewer system, including but not limited to, sewage, process wastewater, and washwater. The discharge may be continuous or intermittent in occurrence.

Industrial Activity – the activities related to manufacturing, processing, or raw materials storage areas of an industrial plant.

Industrial Facility – a facility that is eligible to be permitted under the IGP because it has an industrial activity listed.

Industrial Storm Water General Permit (IGP) – the Georgia NPDES Permit(s) for Storm Water Discharges Associated with Industrial Activity.

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 (MEP) – the controls necessary for the reduction of pollutants discharged from an MS4. 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 a MS4 as described in the SWMP.

Municipal Separate Storm Sewer System (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 (NPDES) – the program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits under the CWA.

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.

Operator – the entity that has the primary day-to-day operational control of the activities necessary to ensure compliance with the SWMP requirements and the MS4 permit conditions.

Outfall – the most downstream point (i.e., final discharge point) on an MS4 where it discharges to the receiving waters of the State.

Owner – the legal title holder to the real property on which is located the facility or site where an SWMP activity takes place.

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 on a previously developed site. Redevelopment does not include such activities as exterior remodeling.

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, snowmelt runoff, and surface runoff and drainage.

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.

Appendix B
Phase I Large MS4s by Population

Population less than 10,000:

Austell	Grayson	Lithonia	Stone Mountain
Avondale Estates	Hapeville	Morrow	
Berkeley Lake	Jonesboro	Palmetto	
Dacula	Lake City	Pine Lake	

Population greater than 10,000:

Acworth	College Park	Fulton County	Powder Springs
Alpharetta	Decatur	Gwinnett County	Riverdale
Atlanta	DeKalb County	Kennesaw	Roswell
Buford	Doraville	Lawrenceville	Smyrna
Chamblee	Duluth	Lilburn	Snellville
Clayton County	East Point	Lovejoy	Sugar Hill
Clarkston	Fairburn	Marietta	Suwanee
Cobb County	Forest Park	Norcross	Union City

RESOLUTION NO. 2023 - 206

A RESOLUTION AUTHORIZING THE MAYOR EXECUTE THE CERTIFICATION REQUIRED TO SUBMIT THE REAPPLICATION FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT HELD BY THE CITY OF POWDER SPRINGS; PROVIDING FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

WHEREAS the State of Georgia oversees and implements a Municipal National Pollutant Discharge Elimination System ("NPDES") stormwater permit program focusing on nonpoint source pollution and storm water quality to address runoff; and

WHEREAS the NPDES permit system was originally established by the Clean Water Act of 1972 to control wastewater discharges known as point sources and then later expanded to address nonpoint source pollution through permits issued for municipal stormwater discharges; and

WHEREAS the municipal separate storm water system (MS4) stormwater discharge permit establishes guidelines to minimize pollutants in storm water runoff, and under the State's MS4 permit program, local government are required to establish a comprehensive stormwater management program and to develop a plan and program to control discharges and to eliminate non-stormwater from entering the system; and

WHEREAS the control of stormwater runoff is accomplished through the implementation of a city program under a NPDES permit that requires controls, best management practices, inspections, enforcement, monitoring, and public education; and

WHEREAS the NPDES permit must be renewed every five years and an application and certification submitted as part of the renewal process.

NOW THEREFORE, be it hereby resolved by the Mayor and Council of the City of Powder Springs that it accepts and authorizes the Mayor to execute documents necessary to effectuate the renewal of the City's NPDES permit for its MS4 program. This resolution shall be effective immediately upon adoption.

SO RESOLVED this 20th day of November, 2023.

Albert Thurman, Mayor

Henry Lust, Council Member

Doris Dawkins, Council Member

[additional signatures follow]

Dwayne Green Council Member

Patricia Wisdom, Council Member

~~Patricia Wisdom,~~ Council Member
Patrick Bordelon

ATTEST:
Kelly Axt, City Clerk

Appendix B

Ordinances & Legal Documents

BILL OF SALE

For valuable consideration, the receipt and sufficiency of which are hereby acknowledged THE CITY OF POWDER SPRINGS, GEORGIA ("**Seller**"), hereby sells, bargains, transfers, assigns, grants, delivers and conveys to COBB COUNTY, GEORGIA ("**Buyer**"), all of the following property interests, exclusive of Excluded Assets as defined and as more specifically set forth in the Sale and Purchase Agreement ("Agreement") between the parties, dated June 25, 2019 (collectively, the "**Property**"):

A. All water distribution lines, meters, valves, fire hydrants, and individual services, in place owned by Seller;

B. All sewage collection lines, manholes, and services, in place, owned by Seller;

C. All rights of Seller to provide water and sewage services from and after June 25, 2019 at 5:00 p.m.;

D. All customer accounts of Seller for supplying water and sewage services, from and after June 25, 2019 at 5:00 p.m.;

E. All Water and/or sewer easements in, over, through, and under Seller's rights-of-way and other property owned by Seller where Seller's water and/or sewage facilities are presently located or could be located;

F. All of Seller's easements (including prescriptive easements) in, over, under, and through private properties, granted to Seller exclusively for either or both water and sewer purposes, provided Seller has the legal right to grant such rights under such easements or pursuant to applicable law; where such easements have not been granted to Seller exclusively for either or both water and sewer purposes, the right to Buyer to use such easements for water and/or sewer purposes, provided Seller has the right to grant to Buyer such rights granted to Seller under such easements or pursuant to applicable law. Notwithstanding anything herein to the contrary, Seller does not warrant or represent that all such easements exist as formal, written easements;

G. All of Seller's right to use all other lands and properties not specifically described herein for water and/or sewage purposes being utilized for either or both such purposes by Seller;

H. All of Sellers right, title and interest in and to the trailer-mounted jet machine (Vin#1u9fs13152ao44052) and the residential water meters delivered to the Buyer;

I. All water and sewer deposits in the amount of $50 for residential accounts and $180 for commercial accounts, or actual amount held if less, for customer accounts which have been active for less than twenty-four (24) months or have

been cut off within the preceding twenty-four (24) months to County with a complete listing of each customer and their corresponding deposits per Article V of the Agreement.

All terms not defined herein shall have the same meaning as ascribed to them in the Agreement.

Notwithstanding anything herein to the contrary, the Seller hereby reserves the right to utilize its rights of way associated with the water and sewer facilities for such other purposes including, but not limited to, storm water transport, and for other franchise operations as the City may authorize from time to time.

TO HAVE AND TO HOLD the Property, together with, all and singular, the rights and appurtenances thereto belonging to Buyer, its successors and assigns.

Seller hereby covenants that it will, at any time and from time to time, following a written request therefor, execute and deliver to Buyer and its successors and assigns, any additional or confirmatory instruments and take such further acts as Buyer may reasonably request to evidence fully the conveyance contained herein.

EFFECTIVE, as of 5:00 p.m. on the 25th day of June, 2019

SELLER:
THE CITY OF POWDER SPRINGS, GEORGIA

BY: _____
Al Thurman, Mayor

ATTEST: _____
Kelly Axt, City Clerk

Pzm to Cobb Cty
7/31/19

CITY OF POWDER SPRINGS, GEORGIA
UNIFIED DEVELOPMENT CODE

Adopted

December 7, 2015

municode
POWERED BY CIVICPLUS

info@municode.com | 800.262.2633 | www.municode.com

P.O. Box 2235 Tallahassee, FL 32316

OFFICIALS

of the

CITY OF POWDER SPRINGS, GEORGIA

AT THE TIME OF THIS CODIFICATION

Albert Thurman
Mayor

Henry Lust
Mayor Pro Tem

Doris Dawkins
Dwayne Green
Patrick Bordelon
Patricia Wisdom
Council Members

PREFACE

This code constitutes a complete republication of the Unified Development Code of the City of Powder Springs, Georgia of a general and permanent nature.

ORDINANCE 2024 - 011
1st reading, Introduction & Public Hearing: May 20, 2024
2nd reading and Public Hearing: June 3, 2024

AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT CODE RELATING TO GENERAL PROVISIONS; USE DEFINITIONS; EROSION & SEDIMENT CONTROL; TREE PROTECTION, BUFFERS AND LANDSCAPING; SITE AND ARCHITECTURAL DESIGN REVIEW; LAND DEVELOPMENT; PARKING, ACCESS AND LOADING; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

WHEREAS, The Mayor and Council of the City of Powder Springs have heretofore adopted the Unified Development Code of Powder Springs, Georgia (the "UDC"); and

WHEREAS from time to time the Mayor and Council find it appropriate or necessary to amend the UDC; and

NOW THEREFORE, the Mayor and Council of the City of Powder Springs find that in the interest of the public health, safety and welfare, it does hereby ordain that the UDC shall

SECTION ONE

The Unified Development Code is amended as shown in the attached Exhibit "A"

SECTION TWO

If any section, subsection, provisions, or clause of any part of this Ordinance shall be declared invalid or unconstitutional, or, if the provisions of any part of this Ordinance as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the portions of this Ordinance not so held to be invalid, or the application of this Ordinance to other circumstances not so held to be invalid. It is hereby declared as the intent of the City Council that this Ordinance would have been adopted in its current form without the invalid or unconstitutional provision contained therein.

SECTION THREE

This ordinance shall become effective five (5) days after its adoption by the City Council.

SO ORDAINED, this 3rd day of June 2024.

[signature page follow]

ORDINANCE 2024 - 011
1st reading, Introduction & Public Hearing: May 20, 2024
2nd reading and Public Hearing: June 3, 2024

Albert Thurman, Mayor

Henry Lust, Council Member

Doris Dawkins, Council Member

Dwayne Green, Council Member

Dwight McMutry, Council Member

Patricia Wisdom, Council Member

Attest:
Kelly Axt, City Clerk

ORD 24-011.

Exhibit A.

Sec. 12-58. Landscape maintenance and landscape ~~surety.~~ guarantee.

(a) *Maintenance.* The owner, occupant, tenant, and respective agent of each, if any, shall be jointly and severally responsible for the maintenance and protection of all landscaping required pursuant to this article.

(b) ~~*Bond or surety*~~ *Financial Guarantee.* Prior to issuance of a certificate of occupancy, the developer or owner may be required to post a performance guarantee ~~bond~~, ~~cash escrow, or other financial instrument~~ guaranteeing all landscaping materials and work for a period of 2 years following approval or acceptance by the City of Powder Springs. The following types of guarantees may be considered and accepted, subject to the approval of the city attorney:

1. An escrow of funds with the city; or
2. An escrow with a bank or savings and loan association upon which the city can draw; or
3. An irrevocable letter of commitment or credit upon which the city can draw; or
4. A certificate of deposit with assignment letter.

(c) ~~*Surety*~~ *Financial Guarantee amount.* All required ~~bonds or~~ financial guarantees shall be in the amount of 10% of the estimated cost of replacing all of the landscaping required by these specifications, unless otherwise specified by the community development director.

(d) *Inspection and release.* At the end of the 2-year period, the city shall inspect the property and notify the owner or developer of any deficiencies to be corrected. If the site landscaping is determined to be in compliance with the approved plan and well maintained, the community development director shall release the ~~bond or~~ financial guarantee. ~~surety.~~

Exhibit B.

ARTICLE 9. - SOIL EROSION AND SEDIMENTATION CONTROL

Sec. 9-22. Permit application requirements.

No person shall conduct any land-disturbing activity within the jurisdictional boundaries of the City of Powder Springs without first obtaining a permit from the City of Powder Springs to perform such activity and providing a copy of Notice of Intent submitted to EPD, if applicable. The following permit applications procedures are hereby established and shall control processing and issuance of permits under this article:

(a) *Plan and data.* The application for a permit shall be submitted to the City of Powder Springs 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 9-23 of this article. Erosion, sedimentation and pollution control plans, together with supporting data, must demonstrate affirmatively that the land disturbing activity proposed will be carried out in such a manner that the provisions of this article will be met...

(b) *Fees.* 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 accordance with subsection (a) of O.C.G.A. § 12-7-8 half of such fees levied shall be submitted to the division and half shall be submitted to the City of Powder Springs; 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.

(c) ...

(e) ~~*Bond*~~ *Financial Guarantee* . The City of Powder Springs may require the permit applicant to post a ~~bond~~ financial guarantee ~~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 City of Powder Springs may claim the ~~bond~~ financial gaurantee 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.

The following types of guarantees may be considered and accepted, subject to the approval of the city attorney:

1. An escrow of funds with the city; or
2. An escrow with a bank or savings and loan association upon which the city can draw; or
3. An irrevocable letter of commitment or credit upon which the city can draw; or
4. A certificate of deposit with assignment letter.

Exhibit C.

ARTICLE 8. - LAND DEVELOPMENT REQUIREMENTS

Sec. 8-32. Clearing limits.

(a) Clearing and land disturbing activities are subject to the limits of section 12-13 of this development code. ~~The community development director shall not authorize a development plan that proposes the clearing of more than 8 acres of land without the specific authorization of the Mayor and City Council.~~ Clearing for other than installation of infrastructure, right-of-way, or parking areas (for commercial, industrial or institutional developments) on a subsequent phase may not begin until 50% of the structures in the previous phase have been issued building permits and 25% of the structures in the previous phase have been issued certificates of occupancy.

(b) No clearing or land disturbing activity shall occur beyond the limits of clearing shown on approved development plans.

(c) If the development on the site stalls for a period of 6 months or more, the site be replanted per a plan approved by the Community Development Director showing compliance with minimum tree canopy, street trees and buffer requirements.

ORD 24-011.

Exhibit D.

ARTICLE 6 - ACCESS, PARKING AND LOADING

Sec. 6-58. Parking lot surfacing.

(a) Parking areas shall be surfaced with concrete, asphaltic concrete, asphalt or other dust-free surface; provided, however, that porous pavement parking spaces and grass pavers may be substituted for standard dust free pavements as specified in section 6-87, "Use Division of Large Parking Lots."

(b) Off-street parking areas for single-family and two-family dwellings shall be improved with a concrete surface at least 4" thick. Additionally:

1. The installer must ensure that installation occurs during optimal weather conditions or make adjustment using additives to prevent shrinkage cracks, surface cracks or structural cracks.
2. The sub-base should be compacted to 95% or consist of crush-n-run material.
3. The concrete mixture should have a minimum strength of 3000 PSI.
4. Commercial grade fiber mesh is required in the concrete pour for residential driveways.
5. Cracks in control joints are acceptable and only one (1) additional crack is allowed per driveway. Cracks must be sealed. Where cracks exist, an engineer's certification of structural soundness must be provided.
6. No cracks are allowed in sections of concrete that are located within the right-of-way.

(c) Asphalt surfacing of residential driveways shall not be permitted except by special use.

(d) Aggregate (gravel) surface may be considered appropriate and approved by the community development director in rural or low-density residential areas by a special use approval by the Mayor and Council. Water quality effectiveness and character of the zoning district shall be considered in determining surfacing requirements. Any permitted aggregate surface shall be maintained with rock or stone not more than one inch in diameter with an average depth of 2" and a minimum depth of one inch. The rock or stone may not contain dirt, sticks, construction debris, or other foreign matter. Sand rock or stone powder, crush and run or other similar material is prohibited. Aggregate surface shall be contained to prevent migration of the gravel onto other areas.

(e) Off-street parking areas for uses other than single-family and two-family dwellings shall be improved with a permanent dust-free surface consisting of a minimum of a 6" graded aggregate base overlaid with a 2" Type B binder and a 1½" Type E asphaltic concrete wearing surface.

(f) In the LI and HI Industrial zoning districts, the above type of surface is required for customer, visitor, and employee automobile parking. In the LI and HI Industrial zoning districts the following surface is required in areas used for loading docks and parking of commercial trucks and other commercial equipment:

a. An 8" graded aggregate base, overlaid with a 2" Type B binder and a 1½" Type E asphaltic concrete wearing surface; or

b. A 10" graded aggregate base, overlaid with a 12" course of 3,000 P.S.I. concrete.

Exhibit E.

ARTICLE 5. - SITE AND ARCHITECTURAL DESIGN REVIEW

Sec. 5-88. ~~Front y~~Yard landscaping.

(a) Sodded front, side and rear yards ~~may be~~ are necessary for consistency in ~~some~~ city neighborhoods.

(b) Unless street trees already exist or a different street tree standard applies, front lawns should be supplemented with 2 street trees and 5 shrubs.

Exhibit F.

ARTICLE 1. - GENERAL PROVISIONS

Sec. 1-35. Open Space.

All single-family and multi-family developments with more than 20 units shall provide open space as specified in this section, except for Conservation Subdivisions which shall meet the open space requirements specified in Article 15, Division IX. The following standards shall apply to open space:

(a) At least 20% of the site shall be set aside as open space.
(b) Open spaces must be designed to be accessible to all residents of the development.
(c) ...
(e) Community recreational amenities such as playing fields, playgrounds, tennis courts, basketball courts, and swimming pools are required for all residential developments as indicated below. No more than 25% of the total area of recreational amenities may be contributed to open space. In addition to the requirements of Section 4-100, the following standards apply:

1. Required amenities for single-family detached and single-family attached developments.
    i. 1-19 units: no amenities are required.
    ii. 20-50 units: must include at least one amenity.
    iii. 51-100 units: must include at least two amenities.
    iv. 101+ units: must include at least three amenities.

2. Required amenities for multi-family developments.
    i. 1-19 units: no amenities are required.
    ii. 20-50 units: must include at least one amenity.
    iii. 51+ units: must include at least two amenities.

3. When a residential development has more than 50 dwelling units, an indoor community recreation facility or clubhouse must be constructed for use by residents of the development.
    i. When constructed as a separate structure, the facility or clubhouse must be at least 1,200 square feet in floor area.
    ii. When located within a multi-family residential building, the facility or clubhouse must be at least 800 square feet in floor area.

4. **Mail Kiosks.** All mail kiosks within residential developments shall be constructed with a durable, weather-resistant roof or covering to protect users and mail from inclement weather.
    i. Mail kiosks shall incorporate architectural features and materials that are substantially consistent with the design and appearance of the residential units within the development. This includes but is not limited to: Roof Design; Exterior Materials; Color Scheme; and Architectural Details.
    ii. Plans for mail kiosks shall be submitted for Design Review and approval by the Community Development Department.
    iii. Mail kiosks must be maintained in good condition, ensuring ongoing consistency with the aesthetic and structural quality of the development.
    iv. The kiosk must be lighted or well served by a nearby street lamp.

f. Open space shall comply with the regulations of Sec. 1-81, as applicable, or be permanently ...

ORDINANCE 2020 - 020
1st reading and Introduction: September 21, 2020
2nd reading: October 5, 2020

AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT CODE RELATING TO CONSTRUCTION RUNOFF, MODEL HOME PERMITS, ADMINISTRATIVE VARIANCES, PLANNED UNIT DEVELOPMENTS AND PLAT SIGNATURE BLOCKS; TO REPEAL CONFLICTING ORDINANCES; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES

WHEREAS, the Mayor and Council of the City of Powder Springs have heretofore adopted the Unified Development Code of Powder Springs, Georgia ("the UDC"); and

WHEREAS, the Mayor and Council find it in the interest of public health, safety and welfare to amend the UDC;

NOW THEREFORE, the Mayor and Council of the City of Powder Springs hereby ordain that the UDC and the Code of Ordinances shall be and is hereby amended as follows:

SECTION ONE

The UDC is amended as set forth in the attached Exhibits A, B, C, D and E.

SECTION TWO

All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed to the extent of such conflict.

SECTION THREE

If any section, subsection, provisions, or clause of any part of this Ordinance shall be declared invalid or unconstitutional, or, if the provisions of any part of this Ordinance as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the portions of this Ordinance not so held to be invalid, or the application of this Ordinance to other circumstances not so held to be invalid. It is hereby declared as the intent of the City Council that this Ordinance would have been adopted in its current form without the invalid or unconstitutional provision contained therein.

SECTION FOUR

This ordinance shall become effective five (5) days after its adoption by the City Council.

SO ORDAINED, this 5th day of October, 2020.

ORDINANCE 2020 - 020
1st reading and Introduction: September 21, 2020
2nd reading: October 5, 2020

[Signature Page Follows]

Albert Thurman, Mayor

Henry Lust, Council Member

Doris Dawkins, Council Member

Thelma C. Farmer, Council Member

Patrick Bordelon, Council Member

Patricia Wisdom, Council Member

ATTEST:

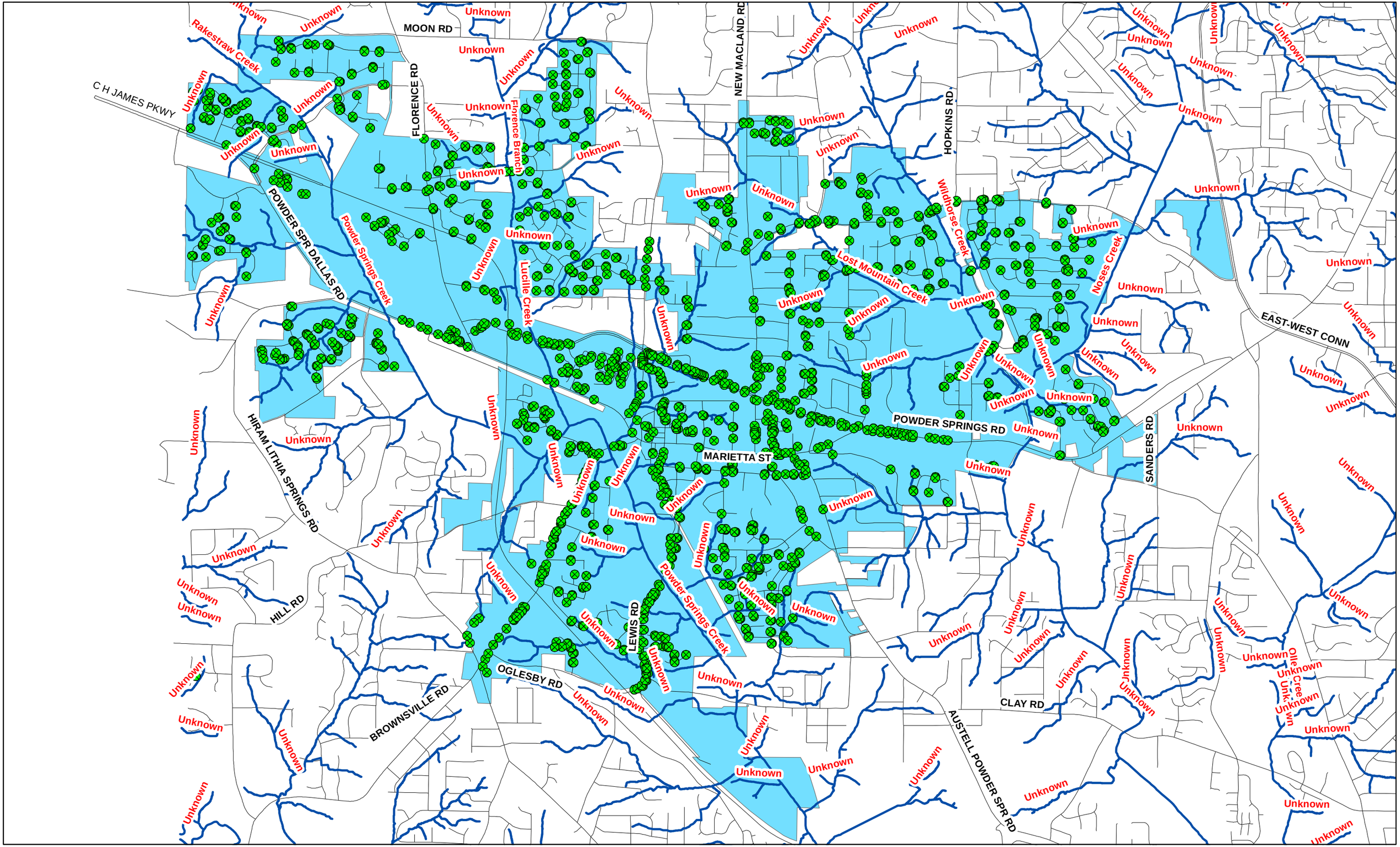
Kelly Axt, City Clerk

Appendix C

Maps & Inventories

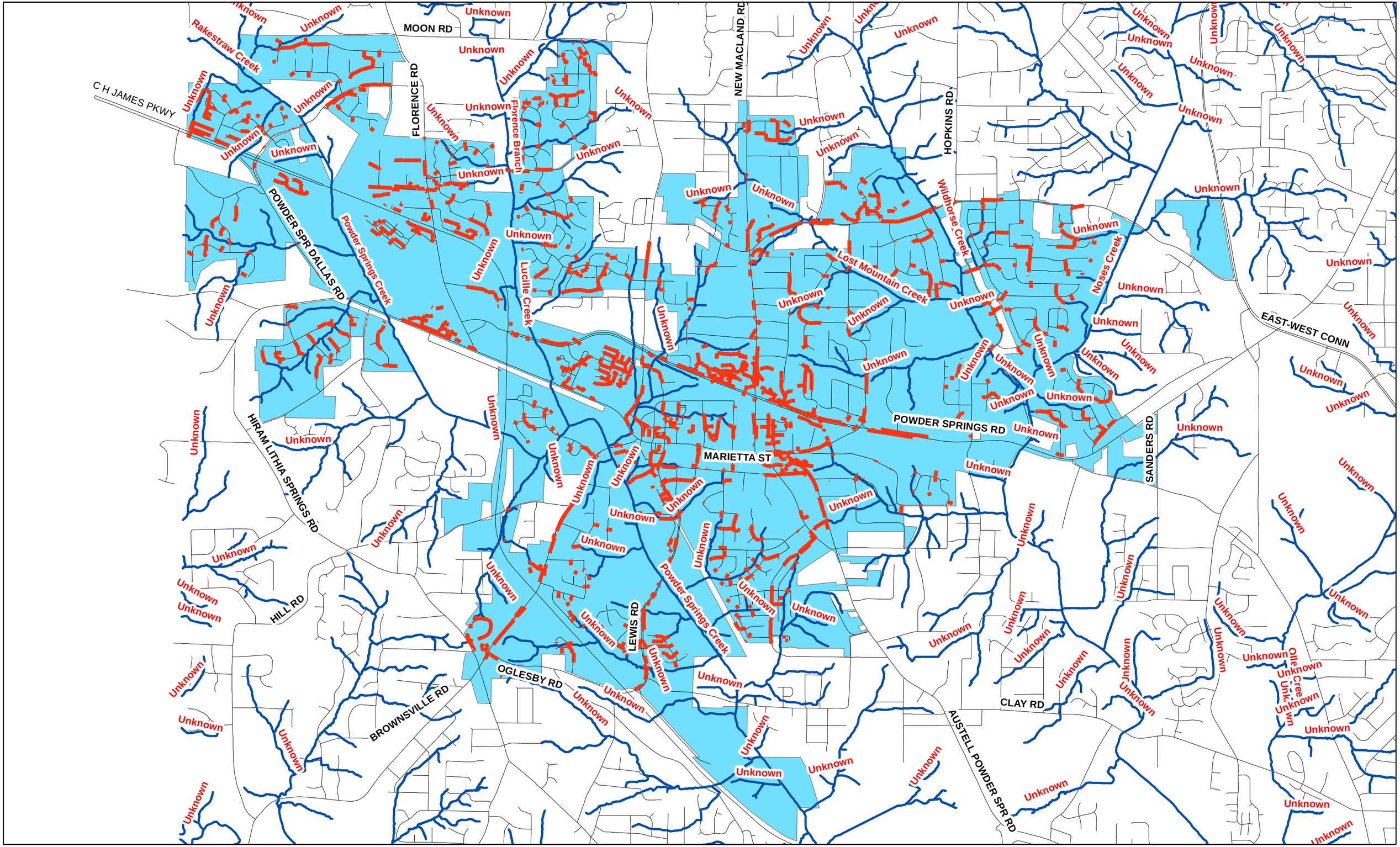
city of powder springs

MS4 Inventory - Catch Basins
As of 4/30/2024



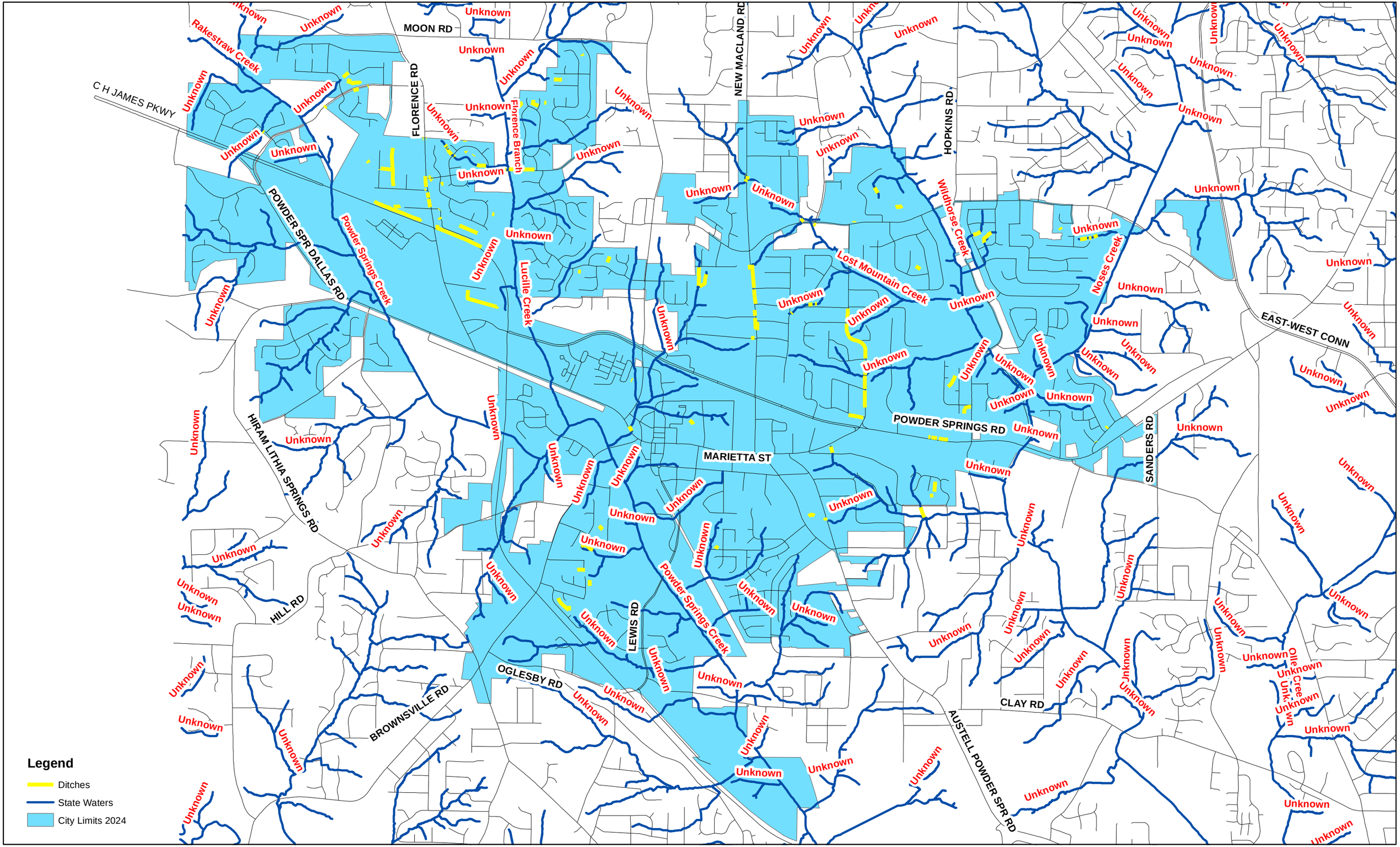
city of powder springs

MS4 Inventory - Pipes
As of 4/30/2024

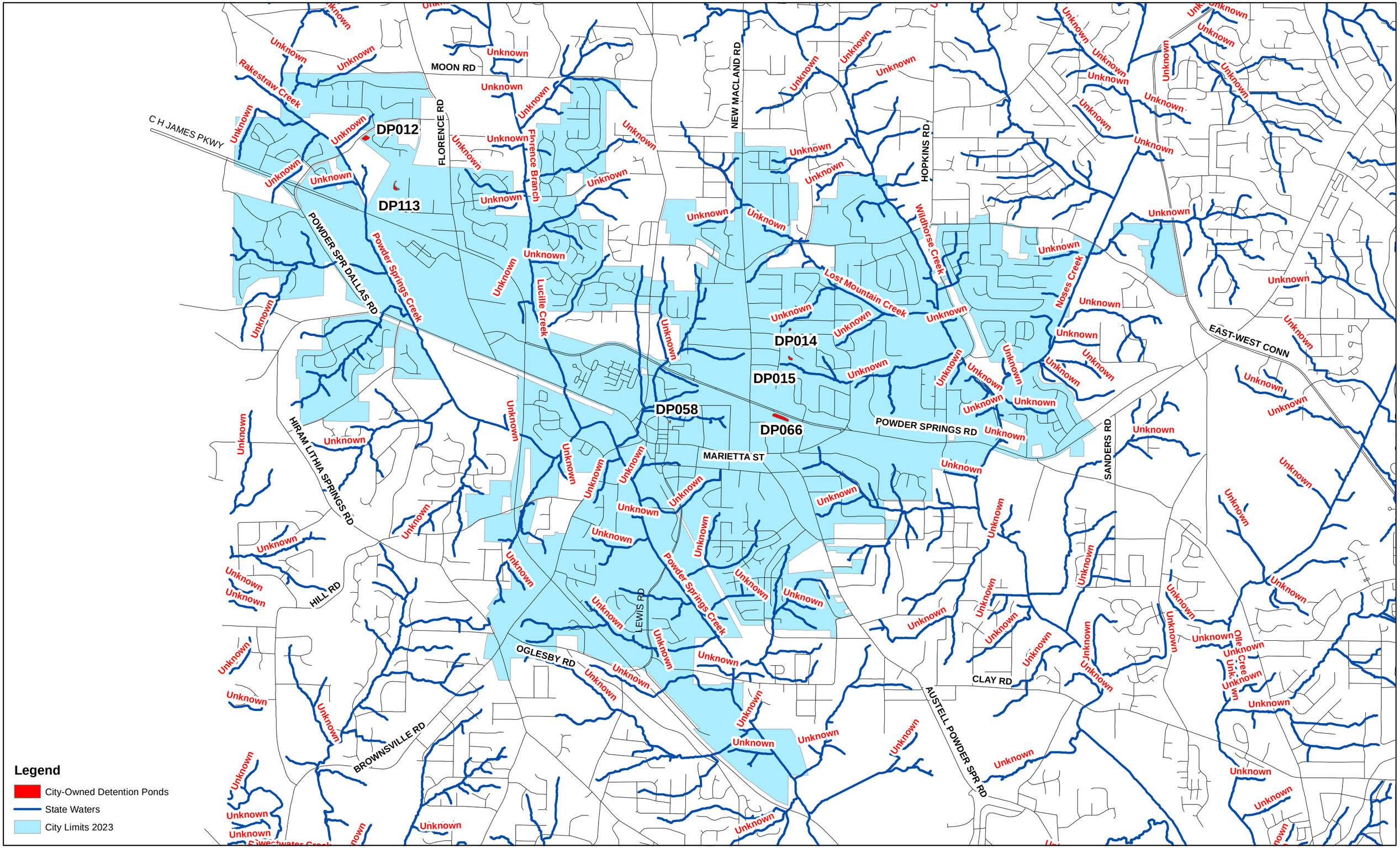


city of powder springs

MS4 Inventory -Ditches
As of 4/30/2024



MS4 Inventory - City Owned Detention Ponds
2023-2024



MS4 Catch Basins Inventory

As of 4/30/2024

OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
33	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667037	33.857212	single wing	2144682.752	1403474.066	S-15492	CB2041	LINDLEY CIR	<Null>	<Null>	924.4598
36	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.667197	33.856811	single wing	2144633.504	1403328.373	S-15510	CB2042	LINDLEY CIR	<Null>	1	930.6271
37	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667225	33.856873	double wing	2144624.971	1403350.914	S-15512	CB2043	LINDLEY CIR	3	1	929.8144
38	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667302	33.85694	single wing	2144601.657	1403375.262	S-15513	CB2044	LINDLEY CIR	1	1	929.7993
39	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667397	33.856979	single wing	2144573.062	1403389.769	S-15514	CB2045	LINDLEY CIR	1	1	930.9535
40	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667749	33.857004	single wing	2144466.162	1403399.283	S-15515	CB2046	LINDLEY CIR	1	1	934.0999
41	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.668487	33.857003	single wing	2144242.208	1403400.019	S-15516	CB2047	LINDLEY CIR	1	1	947.2104
61	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.683872	33.855818	double wing	2139569.338	1402991.991	S-15747	CB2068	ANDERSON ST	1	1	908.349
66	Yes	Catch Basin	Round	Concrete	yes	<Null>	5	-84.68256	33.862191	square	2139979.211	1405309.05	S-15966	CB2072	JACK VERNON CIR	<Null>	2	943.2576
67	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.682563	33.862265	square	2139978.462	1405335.81	S-15968	CB2073	JACK VERNON CIR	<Null>	1	945.0825
69	Yes	Catch Basin	Round	Concrete	yes	<Null>	5	-84.683149	33.862269	square	2139800.579	1405338.349	S-15971	CB2075	JACK VERNON CIR	<Null>	1	935.7986
70	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683149	33.862185	square	2139800.44	1405307.829	S-15972	CB2076	JACK VERNON CIR	1	1	935.4712
71	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683005	33.862265	square	2139844.352	1405336.714	S-15973	CB2077	JACK VERNON CIR	<Null>	1	935.6152
72	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683003	33.862191	square	2139844.988	1405309.538	S-15974	CB2078	JACK VERNON CIR	2	1	935.8082
82	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.684101	33.862295	single wing	2139511.87	1405348.98	S-16029	CB2087	PINEVIEW DR	<Null>	1	923.6264
83	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.684257	33.861854	single wing	2139463.438	1405189.048	S-16031	CB2085	PINEVIEW DR	1	1	920.6464
84	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.684261	33.861592	single wing	2139461.826	1405093.423	S-16032	CB2084	CEMETERY ST	<Null>	1	927.4503
94	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667104	33.854909	square	2144658.361	1402635.854	S-16178	CB2097	LINDLEY CIR	2	<Null>	928.6625
96	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.66711	33.854392	single wing	2144655.633	1402447.921	S-16182	CB2098	LINDLEY CIR	1	1	933.2127
101	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.667066	33.85534	single wing	2144670.533	1402792.615	S-16187	CB2099	LINDLEY CIR	2	1	934.2783
104	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667147	33.855765	single wing	2144646.644	1402947.733	S-16190	CB2107	LINDLEY CIR	1	1	943.1176
106	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667713	33.855766	single wing	2144474.861	1402948.748	S-16192	CB2109	LOUISE ST	1	1	952.5394
107	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.668518	33.855754	single wing	2144230.643	1402945.526	S-16193	CB2110	LOUISE ST	<Null>	1	969.5243
118	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.669166	33.859624	single wing	2144040.545	1404354.7	S-16394	CB2132	SHARON DR	1	1	971.0345
128	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.669113	33.85955	single wing	2144056.68	1404327.83	S-16486	CB2133	SHARON DR	<Null>	1	971.4295
132	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.690594	33.880232	double wing	2137573.874	1411885.971	S-16580	CB2136	LOST LAKES DR	1	1	964.3895
146	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.646984	33.859539	double wing	2150774.204	1404291.611	S-18072	CB3001	POWDER SPRINGS RD	1	1	934.9319
214	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.646953	33.859453	double wing	2150783.731	1404260.29	S-19536	CB3002	POWDER SPRINGS RD	1	1	935.0346
255	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.655643	33.859811	single wing	2148146.204	1404402.961	S-19840	CB3300	POWDER SPRINGS RD	<Null>	1	924.1776
257	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.649349	33.858576	single wing	2150054.597	1403944.422	S-19842	CB3302	POWDER SPRINGS RD	<Null>	1	926.9073
260	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650432	33.85879	single wing	2149726.443	1404024.162	S-19845	CB3305	POWDER SPRINGS RD	1	1	915.3817
262	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650951	33.858943	single wing	2149569.119	1404080.556	S-19847	CB3307	POWDER SPRINGS RD	1	1	912.0779
265	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.647154	33.858776	double wing	2150721.572	1404014.337	S-19850	CB3310	POWDER SPRINGS RD	<Null>	1	929.6041
268	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.642333	33.861187	single wing	2152189.055	1404884.748	S-19853	CB3313	POWDER SPRINGS RD	<Null>	1	951.9663
271	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.643125	33.86073	single wing	2151947.834	1404719.47	S-19856	CB3316	POWDER SPRINGS RD	1	1	948.5739
273	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.641604	33.8618	single wing	2152411.404	1405106.684	S-19858	CB3319	POWDER SPRINGS RD	<Null>	1	954.7356
274	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.642377	33.861365	single wing	2152176.108	1404949.667	S-19859	CB3320	POWDER SPRINGS RD	1	1	957.2123
275	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.642633	33.86123	single wing	2152098.076	1404900.985	S-19860	CB3321	POWDER SPRINGS RD	1	1	954.5712
277	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.659843	33.8593	single wing	2146870.295	1404223.007	S-19862	CB3500	SILVERLY WAY	<Null>	1	943.9479
278	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659754	33.85929	single wing	2146897.157	1404219.342	S-19863	CB3501	SILVERLY WAY	1	1	943.6165

MS4 Catch Basins Inventory

As of 4/30/2024

OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
279	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659519	33.859202	single wing	2146968.526	1404187.012	S-19864	CB3502	SILVERLY WAY	1	1	944.8195
280	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.659283	33.859107	single wing	2147040.086	1404152.222	S-19865	CB3504	SILVERLY WAY	<Null>	1	943.1136
281	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659327	33.859194	single wing	2147026.779	1404183.815	S-19866	CB3503	SILVERLY WAY	2	1	944.4598
283	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.658964	33.85917	single wing	2147136.82	1404174.634	S-19868	CB3505	SILVERLY WAY	2	1	941.3988
284	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.658931	33.858922	single wing	2147146.472	1404084.413	S-19869	CB3507	SILVERLY WAY	<Null>	1	938.7667
286	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.658713	33.859049	single wing	2147212.919	1404130.026	S-19871	CB3509	SPRINGFORD DR	2	1	941.0148
289	Yes	Catch Basin	Round	Concrete	yes	no	<Null>	-84.658292	33.859123	single wing	2147340.969	1404156.653	S-19874	CB3512	SILVERLY WAY	<Null>	1	943.0982
292	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.658064	33.858993	single wing	2147409.859	1404108.96	S-19877	CB3515	SILVERLY WAY	2	1	939.2369
294	Yes	Catch Basin	Round	Concrete	yes	no	<Null>	-84.657879	33.858509	double wing	2147465.076	1403932.354	S-19879	CB3522	SILVERLY WAY	<Null>	1	933.7905
295	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.657886	33.858588	double wing	2147463.004	1403961.332	S-19880	CB3521	SILVERLY WAY	2	1	933.7938
299	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.65814	33.858047	double wing	2147385.098	1403764.596	S-19884	CB3526	SILVERLY WAY	1	1	926.3143
300	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.658213	33.858094	double wing	2147363.173	1403782.03	S-19885	CB3525	SILVERLY WAY	1	1	927.2004
302	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.658281	33.858613	single wing	2147343.201	1403971.011	S-19887	CB3518	SILVERLY WAY	1	1	935.5293
303	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.658251	33.858514	single wing	2147352.309	1403934.8	S-19888	CB3519	SILVERLY WAY	1	1	935.2504
305	Yes	Catch Basin	Round	Concrete	yes	yes	<Null>	-84.658171	33.858332	single wing	2147376.29	1403868.541	S-19890	CB3524	SILVERLY WAY	2	1	933.2819
306	Yes	Catch Basin	Round	Concrete	yes	no	<Null>	-84.658396	33.857902	single wing	2147307.227	1403712.345	S-19891	CB3529	SILVERLY WAY	<Null>	1	925.941
307	Yes	Catch Basin	<Null>	Concrete	yes	yes	<Null>	-84.658418	33.857975	single wing	2147300.624	1403738.839	S-19892	CB3530	SILVERLY WAY	1	1	926.4702
309	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.659049	33.857949	single wing	2147108.874	1403730.289	S-19894	CB3534	SILVERLY WAY	<Null>	1	936.0214
310	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659024	33.858023	single wing	2147116.844	1403757.442	S-19895	CB3533	SILVERLY WAY	3	1	936.3002
313	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659352	33.858144	single wing	2147017.197	1403801.829	S-19898	CB3535	SILVERLY WAY	2	1	934.6271
314	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659429	33.858099	single wing	2146993.98	1403785.641	S-19899	CB3536	SILVERLY WAY	1	1	934.5778
315	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659421	33.858384	double wing	2146996.697	1403889.247	S-19900	CB3538	SILVERLY WAY	1	1	933.4919
316	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.659572	33.858353	double wing	2146950.829	1403878.213	S-19901	CB3539	SILVERLY WAY	1	1	937.7723
318	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.659652	33.858678	single wing	2146927.148	1403996.468	S-19903	CB3540	SILVERLY WAY	2	1	940.1508
320	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.659913	33.858893	single wing	2146848.427	1404075.136	S-19905	CB3544	TAPPERLY DR	<Null>	1	941.484
321	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.65983	33.858888	single wing	2146873.647	1404073.152	S-19906	CB3545	TAPPERLY DR	1	1	941.8016
322	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.689402	33.849436	double wing	2137878.788	1400678.35	S-19907	CB3600	SADDLERIDGE RD	<Null>	1	965.5718
325	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.688189	33.848888	single wing	2138245.884	1400476.969	S-19910	CB3604	SADDLERIDGE RD	1	1	961.3527
326	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.688205	33.848814	single wing	2138240.9	1400449.827	S-19911	CB3603	SADDLERIDGE RD	<Null>	1	955.6087
327	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.687276	33.848787	single wing	2138523.182	1400438.688	S-19912	CB3607	LEWIS RD	<Null>	1	956.4282
328	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687173	33.848862	single wing	2138554.433	1400465.812	S-19913	CB3605	LEWIS RD	3	1	954.5975
330	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.6864	33.848798	single wing	2138788.934	1400441.274	S-19915	CB3608	LEWIS RD	<Null>	1	938.1146
331	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.686298	33.848879	single wing	2138820.003	1400470.73	S-19916	CB3609	LEWIS RD	2	1	936.4677
332	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.68621	33.849167	double wing	2138847.433	1400575.537	S-19917	CB3610	LEWIS RD	1	1	933.8757
333	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.686116	33.849184	double wing	2138876.095	1400581.405	S-19918	CB3611	LEWIS RD	1	1	928
337	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.686805	33.849729	single wing	2138667.686	1400780.664	S-19922	CB3617	LEWIS RD	1	1	927.244
338	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.686721	33.849783	single wing	2138693.421	1400800.295	S-19923	CB3616	LEWIS RD	<Null>	1	925.1347
339	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687089	33.849901	single wing	2138581.892	1400843.704	S-19924	CB3622	LEWIS RD	2	1	939.5378
340	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687187	33.849929	single wing	2138552.16	1400854.291	S-19925	CB3623	LEWIS RD	1	1	940.2701
341	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.687406	33.849743	single wing	2138485.277	1400786.644	S-19926	CB3620	LEWIS RD	<Null>	1	950.6475

MS4 Catch Basins Inventory
As of 4/30/2024

OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
342	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.68744	33.849816	single wing	2138475.086	1400813.366	S-19927	CB3621	LEWIS RD	2	1	947.3378
343	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.687804	33.849715	single wing	2138364.558	1400777.081	S-19928	CB3618	SADDLERIDGE RD	<Null>	1	957.0674
344	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687774	33.849791	single wing	2138373.805	1400804.717	S-19929	CB3619	SADDLERIDGE RD	1	1	953.8809
345	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.68725	33.850307	single wing	2138533.618	1400991.835	S-19930	CB3626	LEWIS RD	<Null>	1	923.0803
346	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687163	33.850335	single wing	2138560.297	1401001.694	S-19931	CB3627	LEWIS RD	1	1	923.3362
349	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.68733	33.850496	double wing	2138509.918	1401060.593	S-19934	CB3628	WOODCREST DR	1	1	917.6042
350	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687241	33.850526	double wing	2138536.727	1401071.611	S-19935	CB3629	WOODCREST DR	1	1	914
353	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.68813	33.850847	double wing	2138267.417	1401189.499	S-19938	CB3632	WOODCREST DR	<Null>	1	928.9447
356	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.688642	33.850201	double wing	2138110.871	1400955.427	S-19941	CB3635	SADDLERIDGE RD	<Null>	1	942.678
359	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660462	33.858294	single wing	2146680.752	1403858.162	S-19944	CB3562	SILVERLY WAY	1	1	934.5352
361	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660594	33.858367	single wing	2146640.671	1403884.849	S-19946	CB3561	SILVERLY WAY	1	1	934.7715
362	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.660976	33.858259	single wing	2146524.444	1403845.886	S-19947	CB3558	SILVERLY WAY	<Null>	1	933.9249
363	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660877	33.858234	double wing	2146554.687	1403836.627	S-19948	CB3559	SILVERLY WAY	1	1	933.8954
364	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660846	33.858313	double wing	2146564.074	1403865.293	S-19949	CB3560	SILVERLY WAY	2	1	933.4559
368	Yes	Catch Basin	Round	Concrete	<Null>	yes	5	-84.661324	33.858692	double wing	2146419.764	1404004.177	S-19953	CB3554	SILVERLY WAY	2	1	934
369	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.66142	33.858699	double wing	2146390.397	1404006.932	S-19954	CB3553	SILVERLY WAY	<Null>	1	933.7599
370	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.661382	33.859078	single wing	2146402.827	1404144.708	S-19955	CB3551	SILVERLY WAY	<Null>	1	935.5031
371	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.66128	33.859083	single wing	2146433.747	1404146.294	S-19956	CB3552	SILVERLY WAY	2	1	936.0838
372	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.66065	33.859344	single wing	2146625.526	1404240.42	S-19957	CB3547	SILVERLY WAY	<Null>	1	939.5253
373	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660706	33.85928	single wing	2146608.22	1404217.242	S-19958	CB3548	SILVERLY WAY	1	1	939.7058
374	Yes	Catch Basin	<Null>	Concrete	yes	no	5	-84.661057	33.85934	single wing	2146501.935	1404239.386	S-19959	CB3549	SILVERLY WAY	<Null>	1	937.9637
375	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.66106	33.85926	single wing	2146500.807	1404210.257	S-19960	CB3550	SILVERLY WAY	2	1	937.2386
379	Yes	Catch Basin	<Null>	Concrete	yes	yes	4	-84.685975	33.848207	single wing	2138916.886	1400225.855	S-19964	CB3638	LEWIS RD	1	1	928.4722
380	Yes	Catch Basin	Round	<Null>	yes	yes	4	-84.685931	33.848279	single wing	2138930.516	1400251.84	S-19965	CB3639	LEWIS RD	1	1	925.8574
386	revisit	Catch Basin	<Null>	<Null>	<Null>	<Null>	3	-84.643246	33.860884	<Null>	2151911.449	1404775.932	S-19971	CB3644	POWDER SPRINGS RD	1	1	946
387	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.688221	33.847702	single wing	2138233.985	1400045.237	S-19972	CB3650	FALLS AV	<Null>	1	945.3704
388	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.688205	33.847619	single wing	2138238.846	1400015.202	S-19973	CB3651	FALLS AV	2	1	946.7998
389	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.688294	33.847518	single wing	2138211.589	1399978.396	S-19974	CB3652	FALLS AV	1	1	950.7773
390	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.688171	33.846926	single wing	2138247.873	1399762.945	S-19975	CB3653	FALLS AV	1	1	964
391	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.688247	33.846858	single wing	2138224.783	1399738.466	S-19976	CB3654	FALLS AV	<Null>	1	964
392	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.687471	33.847617	single wing	2138461.589	1400013.466	S-19977	CB3655	LEWIS RD	2	1	937.5135
393	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.687512	33.847525	single wing	2138448.915	1399979.785	S-19978	CB3656	LEWIS RD	<Null>	1	940
394	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.687148	33.84725	double wing	2138558.985	1399879.091	S-19980	CB3658	LEWIS RD	1	1	935.8536
395	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.687207	33.847185	double wing	2138541.103	1399855.827	S-19981	CB3659	LEWIS RD	<Null>	1	937.8318
400	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.698821	33.844207	single wing	2135009.281	1398789.965	S-10001	CB1	BROWNSVILLE ROAD	1	1	1012.998
401	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.698562	33.844623	single wing	2135088.581	1398941.22	S-10002	CB2	BROWNSVILLE ROAD	2	1	1010.343
402	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.698119	33.845223	single wing	2135224.363	1399158.725	S-10003	CB3	BROWNSVILLE ROAD	<Null>	1	1008.627
403	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.697628	33.845751	single wing	2135374.342	1399350.204	S-10004	CB4	BROWNSVILLE ROAD	1	1	1004.917
404	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.696987	33.846373	single wing	2135570.248	1399575.554	S-10005	CB5	BROWNSVILLE ROAD	1	1	997.6538
405	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.696344	33.846996	single wing	2135766.608	1399800.945	S-10006	CB6	BROWNSVILLE ROAD	1	1	991.4818

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406	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.696424	33.847053	single wing	2135742.402	1399821.95	S-10007	CB7	BROWNSVILLE ROAD	1	1	991.756
407	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.695599	33.847924	double wing	2135994.602	1400137.499	S-10008	CB8	BROWNSVILLE ROAD	<Null>	1	990.9104
408	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.695953	33.847557	double wing	2135886.42	1400004.693	S-10009	CB9	BROWNSVILLE ROAD	1	1	991.0309
409	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.696211	33.847282	double wing	2135807.607	1399904.888	S-10010	CB10	BROWNSVILLE ROAD	2	1	991.1021
410	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.695393	33.847891	single wing	2136056.987	1400125.105	S-10011	CB11	BROWNSVILLE ROAD	<Null>	1	991.1624
411	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.695676	33.847616	single wing	2135970.448	1400025.684	S-10012	CB12	BROWNSVILLE ROAD	1	1	990.8285
412	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.695891	33.84741	single wing	2135904.862	1399950.945	S-10013	CB13	BROWNSVILLE ROAD	1	1	990.6125
413	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.69611	33.847208	double wing	2135837.898	1399877.871	S-10014	CB14	BROWNSVILLE ROAD	1	1	990.6034
414	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.692342	33.853831	single wing	2136994.248	1402281.845	S-10015	CB15	WOODBRIDGE DRIVE	1	1	959.9567
415	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.692305	33.853904	single wing	2137005.563	1402308.606	S-10016	CB16	WOODBRIDGE DRIVE	1	1	959.4796
416	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.691386	33.852173	double wing	2137281.598	1401677.344	S-10017	CB17	WOODCREST LANE	<Null>	1	956.2258
417	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.689711	33.852941	single wing	2137791.331	1401954.083	S-10018	CB18	WOODBRIDGE COURT	<Null>	1	958.2784
418	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689762	33.852872	single wing	2137775.78	1401929.051	S-10019	CB19	WOODBRIDGE DRIVE	1	1	957.8036
419	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.689591	33.853792	double wing	2137829.446	1402263.665	S-10020	CB20	WOODBRIDGE COURT	<Null>	1	949.7128
420	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689501	33.85378	double wing	2137856.831	1402258.854	S-10021	CB21	WOODBRIDGE COURT	1	1	949.3904
421	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.688365	33.853409	double wing	2138201.079	1402122.18	S-10022	CB22	WOODCREST DRIVE	1	1	923.9999
422	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.688267	33.853408	double wing	2138230.658	1402121.606	S-10023	CB23	WOODCREST DRIVE	1	1	923.188
423	Yes	Catch Basin	<Null>	Concrete	yes	yes	4	-84.690216	33.854631	double wing	2137641.222	1402569.916	S-10024	CB24	WOODCREST TRAIL	1	1	950.9596
424	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.689613	33.85567	double wing	2137826.305	1402946.987	S-10025	CB25	WOODBRIDGE COURT	<Null>	1	933.4864
425	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.68945	33.856508	double wing	2137877.238	1403251.686	S-10026	CB26	CHRISTIAN DRIVE	1	1	919.0354
426	Yes	Catch Basin	<Null>	Concrete	yes	yes	4	-84.689432	33.856589	double wing	2137883.011	1403280.987	S-10027	CB27	CHRISTIAN DRIVE	1	1	919.0684
427	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.688202	33.856883	double wing	2138256.771	1403385.95	S-10028	CB28	WYLIE LANE	<Null>	1	930.1646
428	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.692505	33.849049	single wing	2136935.991	1400542.287	S-10029	CB29	SADDLERIDGE ROAD	<Null>	1	976.7298
429	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.692528	33.848974	single wing	2136928.87	1400514.814	S-10030	CB30	SADDLERIDGE ROAD	1	1	976.6567
430	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.691367	33.848771	double wing	2137280.973	1400439.111	S-10031	CB31	SADDLERIDGE ROAD	<Null>	1	969.934
431	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691391	33.848696	double wing	2137273.398	1400411.887	S-10032	CB32	SADDLERIDGE ROAD	1	1	970.2174
432	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.690446	33.84927	single wing	2137561.394	1400619.366	S-10033	CB33	FURLONG WAY	<Null>	1	964.6886
433	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.690423	33.84935	single wing	2137568.601	1400648.63	S-10034	CB34	FURLONG WAY	1	1	964.0985
434	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.690173	33.849346	single wing	2137644.389	1400646.584	S-10035	CB35	SADDLERIDGE ROAD	1	1	962.1495
435	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.690159	33.850132	double wing	2137650.275	1400932.765	S-10036	CB36	SADDLERIDGE ROAD	<Null>	1	950.7541
436	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.691164	33.850229	double wing	2137345.157	1400969.476	S-10037	CB37	WAGER COURT	<Null>	1	960.1436
437	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.691841	33.848257	double wing	2137136.141	1400253.087	S-10038	CB38	BRIDLE COURT	<Null>	1	968.434
438	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691475	33.846878	double wing	2137244.718	1399750.516	S-10039	CB39	STEEPLECHASE DRIVE	1	1	953.0813
439	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691402	33.846932	double wing	2137266.853	1399770.149	S-10040	CB40	STEEPLECHASE DRIVE	1	1	953.0751
440	Yes	Catch Basin	Rectangular	Metal	yes	yes	4	-84.690469	33.846589	double wing	2137549.649	1399643.758	S-10041	CB41	STEEPLECHASE DRIVE	1	1	944.5776
441	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.690365	33.846559	double wing	2137581.172	1399632.768	S-10042	CB42	STEEPLECHASE DRIVE	1	1	944.923
442	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.691487	33.851281	single wing	2137249.065	1401352.847	S-10043	CB43	SPRING GATE DRIVE	<Null>	1	979.4226
443	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691487	33.851199	single wing	2137248.904	1401322.961	S-10044	CB44	SPRING GATE DRIVE	1	1	979.3047
444	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649538	33.858702	double wing	2149997.492	1403990.784	S-10045	CB45	DEERCREEK DR	1	1	921.5479
445	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649641	33.858704	double wing	2149966.288	1403991.611	S-10046	CB46	DEERCREEK DR	1	1	920.9581

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446	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.64956	33.861083	double wing	2149994.842	1404857.189	S-10047	CB47	DEERCREEK DR	1	1	925.253
447	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649655	33.8611	double wing	2149966.081	1404863.532	S-10048	CB48	DEERCREEK DR	1	1	925.1074
448	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650464	33.861715	double wing	2149721.621	1405088.365	S-10049	CB49	DEERCREEK CT	1	1	910.0565
449	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650567	33.86171	double wing	2149690.339	1405086.839	S-10050	CB50	DEERCREEK CT	1	1	909.8455
450	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.650357	33.861934	single wing	2149754.477	1405167.958	S-10051	CB51	DEERCREEK DR	<Null>	1	913.0633
451	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650367	33.861848	single wing	2149751.253	1405136.655	S-10052	CB52	DEERCREEK DR	1	1	912.6467
452	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.651433	33.861835	double wing	2149427.655	1405133.472	S-10053	CB53	DEERCREEK DR	1	1	901.2768
453	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.689991	33.883133	single wing	2137762.437	1412940.617	S-10054	CB54	LOST LAKES WAY	<Null>	1	979.7544
454	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689897	33.883092	single wing	2137790.852	1412925.629	S-10055	CB55	LOST LAKES WAY	1	1	979.7031
455	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689783	33.885886	single wing	2137830.618	1413942.262	S-10056	CB56	LOST LAKES WAY	1	1	992.1594
456	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689879	33.885922	single wing	2137801.44	1413955.514	S-10057	CB57	LOST LAKES WAY	1	1	991.6201
457	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.690916	33.88687	single wing	2137488.64	1414301.91	S-10058	CB58	LOST LAKES DRIVE	<Null>	1	984.2257
458	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690826	33.886898	single wing	2137515.82	1414311.924	S-10059	CB59	LOST LAKES DRIVE	1	1	984.0761
459	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.690018	33.887395	single wing	2137762.076	1414491.587	S-10060	CB60	LOST LAKES WAY	<Null>	1	981.4584
460	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690097	33.887355	single wing	2137738.138	1414477.076	S-10061	CB61	LOST LAKES WAY	1	1	981.3414
461	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.692076	33.88733	single wing	2137137.502	1414471.207	S-10062	CB62	LOST LAKES DRIVE	<Null>	1	975.4035
462	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691881	33.885859	single wing	2137193.851	1413935.52	S-10063	CB63	STONEWATER DR	<Null>	1	986.9989
463	Yes	Catch Basin	<Null>	Concrete	yes	yes	2	-84.691878	33.88578	single wing	2137194.641	1413906.748	S-10064	CB64	STONEWATER DRIVE	1	1	986.7984
464	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691912	33.886519	single wing	2137185.75	1414175.654	S-10065	CB65	STONEWATER CT	<Null>	1	977.4517
465	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693007	33.885752	double wing	2136852.049	1413898.225	S-10066	CB66	STONEWATER DR	<Null>	1	975.0746
466	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691921	33.884957	single wing	2137180.151	1413607.282	S-10067	CB67	FOUNTAINWOOD DR	<Null>	1	986.4076
467	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.69192	33.885035	single wing	2137180.361	1413635.776	S-10068	CB68	FOUNTAINWOOD DR	1	1	986.4082
468	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693039	33.885096	single wing	2136841.109	1413659.652	S-10069	CB69	FOUNTAINWOOD DRIVE	<Null>	1	974.5436
469	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691852	33.884256	single wing	2137199.689	1413352.155	S-10070	CB70	MOUNTAIN OAKS CT	2	1	969.4685
470	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692869	33.884213	double wing	2136891.012	1413338.066	S-10071	CB71	COOLWOOD CV	2	1	959.1531
471	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.692675	33.883435	double wing	2136948.455	1413054.761	S-10072	CB72	LOST LAKES DRIVE	<Null>	1	963.4704
472	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692694	33.883516	double wing	2136942.827	1413084.199	S-10073	CB73	LOST LAKES DRIVE	1	1	963.8656
473	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649937	33.87362	double wing	2149901.988	1409419.608	S-10074	CB74	ROSE PETAL LN	<Null>	1	941.3388
474	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649944	33.873541	double wing	2149899.661	1409391.027	S-10075	CB75	ROSE PETAL LN	1	1	941.3908
475	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648392	33.87348	double wing	2150370.761	1409366.47	S-10076	CB76	ROSE PETAL LN	1	1	928.8632
476	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648377	33.874133	double wing	2150376.287	1409603.92	S-10077	CB77	RED ROSE DR	1	1	921.3085
477	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648477	33.874137	double wing	2150345.933	1409605.612	S-10078	CB78	RED ROSE DR	1	1	921.3759
478	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649402	33.875184	double wing	2150067.175	1409987.955	S-10079	CB79	ROSE GARDEN CT	1	1	934.8946
479	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649368	33.875259	double wing	2150077.347	1410015.255	S-10080	CB80	ROSE GARDEN CT	<Null>	1	935.0928
480	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672683	33.850733	single wing	2142957.083	1401124.691	S-10081	CB81	AKINS RIDGE LN	<Null>	1	950.6355
481	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.67225	33.85102	double wing	2143089.166	1401228.379	S-10082	CB82	AKINS RIDGE LN	2	1	947.4879
482	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672292	33.851095	single wing	2143076.572	1401255.801	S-10083	CB83	AKINS RIDGE LN	<Null>	1	947.9903
483	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.673757	33.848555	single wing	2142626.974	1400333.852	S-10084	CB84	AKINS RIDGE LN	<Null>	1	936.844
484	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.67366	33.848552	single wing	2142656.695	1400332.595	S-10085	CB85	AKINS RIDGE LN	1	1	936.5962
485	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.673506	33.846858	single wing	2142700.359	1399716.096	S-10086	CB86	AKINS RIDGE LN	<Null>	1	932.291

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486	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672992	33.849023	single wing	2142860.11	1400502.972	S-10087	CB87	AKINS RIDGE CT	<Null>	1	938.7861
487	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.672989	33.849105	single wing	2142861.185	1400532.812	S-10088	CB88	AKINS RIDGE CT	1	1	939.3253
488	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672489	33.847123	single wing	2143009.528	1399810.772	S-10089	CB89	AKINS RIDGE CT	<Null>	1	922.5626
489	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.656802	33.858011	single wing	2147791.145	1403749.637	S-10090	CB90	PRESTON PLACE LN	<Null>	1	939.7322
490	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656706	33.857997	single wing	2147820.318	1403744.384	S-10091	CB91	PRESTON PLACE LN	1	1	940.2447
491	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655825	33.857799	single wing	2148087.562	1403671.151	S-10092	CB92	PRESTON PLACE CT	1	1	924.5561
492	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655842	33.857717	single wing	2148082.292	1403641.36	S-10093	CB93	PRESTON PLACE CT	1	1	924.232
493	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.655376	33.857959	single wing	2148223.993	1403728.579	S-10094	CB94	PRESTON PLACE CT	<Null>	1	911.0451
494	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655276	33.857946	single wing	2148254.312	1403723.813	S-10095	CB95	PRESTON PLACE CT	1	1	911.0662
495	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655218	33.857645	single wing	2148271.552	1403614.28	S-10096	CB96	PRESTON PLACE COURT	2	1	912.1449
496	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.69412	33.880664	single wing	2136504.792	1412048.819	S-10097	CB97	3140 NECTAR DRIVE	<Null>	1	940.9714
497	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694215	33.880654	single wing	2136475.829	1412045.053	S-10098	CB98	NECTAR DR	1	1	940.7285
498	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.661043	33.874761	single wing	2146533.11	1409850.762	S-10099	CB99	BENGAL DR	<Null>	1	911.1867
499	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.660975	33.874691	single wing	2146553.696	1409825.091	S-10100	CB100	BENGAL DR	1	1	910.884
500	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.660535	33.874393	single wing	2146686.754	1409716.041	S-10101	CB101	LANCER DR	2	<Null>	908.2781
501	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.660621	33.874347	single wing	2146660.33	1409699.473	S-10102	CB102	LANCER DR	1	1	908.9381
502	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.66157	33.873946	single wing	2146371.699	1409555.087	S-10103	CB103	DELHI DR	1	1	921.7354
503	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.661639	33.873873	single wing	2146350.76	1409528.555	S-10104	CB104	DELHI DR	1	1	921.1521
504	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.660961	33.871554	single wing	2146552.283	1408683.712	S-10105	CB105	KIPLING DR	<Null>	1	916.4395
505	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.660974	33.871643	single wing	2146548.502	1408716.154	S-10106	CB106	KIPLING DR	2	1	916.6125
506	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.66082	33.871629	single wing	2146595.214	1408710.81	S-10107	CB107	DELHI DR	1	1	915.7663
507	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.659936	33.872472	single wing	2146865.021	1409016.125	S-10108	CB108	LANCER DR	<Null>	1	908.011
508	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.659834	33.872488	single wing	2146896.062	1409022.086	S-10109	CB109	LANCER DR	1	1	908.1979
509	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.659647	33.870942	single wing	2146950.054	1408459.143	S-10110	CB110	LANCER DR	1	1	902.2909
510	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.659543	33.870927	single wing	2146981.752	1408453.71	S-10111	CB111	LANCER DR	1	1	902.1581
511	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690513	33.888109	double wing	2137613.088	1414752.073	S-10112	CB112	LOST LAKES WAY	1	1	962.7997
512	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690611	33.888117	double wing	2137583.433	1414755.236	S-10113	CB113	LOST LAKES WAY	1	1	962.4485
513	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690802	33.884463	single wing	2137518.784	1413425.9	S-10114	CB114	LOST LAKES DRIVE	1	1	988.6733
514	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690897	33.884459	single wing	2137489.809	1413424.812	S-10115	CB115	LOST LAKES DRIVE	1	1	988.5365
515	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691976	33.883438	single wing	2137160.45	1413054.716	S-10116	CB116	LOST LAKES DRIVE	<Null>	1	973.8235
516	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691844	33.883746	single wing	2137201.208	1413166.623	S-10117	CB117	MOUNTAIN OAKS CT	1	1	972.1702
517	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.646885	33.873849	double wing	2150828.772	1409498.562	S-10118	CB118	ROSE PETAL LN	<Null>	1	921.6943
518	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.648688	33.876179	double wing	2150285.348	1410349.138	S-10119	CB119	RED ROSE DR	<Null>	1	930.8473
519	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648595	33.876169	double wing	2150313.568	1410345.339	S-10120	CB120	RED ROSE DR	1	1	930.8024
520	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.673243	33.845899	square	2142778.535	1399366.463	S-10121	CB121	BRITTANY DR	<Null>	1	918.6978
521	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673249	33.845814	double wing	2142776.527	1399335.725	S-10122	CB122	BRITTANY DR	1	1	918.4176
522	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672912	33.84553	double wing	2142878.299	1399231.744	S-10123	CB123	BRITTANY DR	<Null>	1	918.9825
523	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.690158	33.880733	single wing	2137707.215	1412067.555	S-10124	CB124	LOST LAKES DRIVE	<Null>	1	969.5522
524	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690241	33.880686	single wing	2137681.94	1412050.66	S-10125	CB125	LOST LAKES DRIVE	1	1	968.8979
525	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691142	33.881353	double wing	2137409.774	1412294.948	S-10126	CB126	LOST LAKES DRIVE	<Null>	1	966.6794

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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
526	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691228	33.881309	double wing	2137383.624	1412278.794	S-10127	CB127	LOST LAKES DRIVE	1	1	966.3845
527	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691953	33.882321	single wing	2137165.337	1412648.223	S-10128	CB128	LOST LAKES DRIVE	<Null>	1	968.5174
528	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.676976	33.847082	single wing	2141647.082	1399802.79	S-10130	CB130	STARBOARD DR	<Null>	1	925.3832
529	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677073	33.847079	single wing	2141617.773	1399801.664	S-10131	CB131	STARBOARD DR	1	1	925.8718
530	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677159	33.847285	single wing	2141591.968	1399876.877	S-10132	CB132	STARBOARD DR	1	1	924.4003
531	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.676469	33.846294	single wing	2141799.643	1399515.088	S-10133	CB133	PORT LN	<Null>	1	927.4806
532	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676517	33.846367	single wing	2141785.33	1399541.808	S-10134	CB134	PORT LN	2	1	927.2975
533	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676231	33.845852	single wing	2141871.074	1399353.814	S-10135	CB135	STARBOARD DR	1	1	926.1044
534	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676285	33.845783	single wing	2141854.548	1399328.794	S-10136	CB136	STARBOARD DR	1	1	925.8039
535	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.655686	33.863801	single wing	2148139.938	1405854.949	S-10137	CB137	HOPKINS CROSSING DR	<Null>	1	902.8614
536	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655723	33.863871	single wing	2148128.975	1405880.423	S-10138	CB138	HOPKINS CROSSING DR	1	1	903.3328
537	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655767	33.862911	single wing	2148113.866	1405531.317	S-10139	CB139	ACORN DRIVE	1	1	904.3696
538	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655689	33.862953	single wing	2148137.59	1405546.479	S-10140	CB140	ACORN DR	1	1	904.1436
539	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654976	33.862839	single wing	2148353.957	1405504.044	S-10141	CB141	ACORN DR	1	1	903.8909
540	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654918	33.862778	single wing	2148371.276	1405481.497	S-10142	CB142	ACORN DR	1	1	903.4965
541	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.689862	33.882572	single wing	2137800.34	1412736.366	S-10143	CB143	WOODPOND CV	<Null>	1	975.4797
542	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.675808	33.84724	single wing	2142002.024	1399858.564	S-10144	CB144	STARBOARD DR	<Null>	1	937.8746
543	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.675871	33.847318	single wing	2141983.153	1399887.053	S-10145	CB145	STARBOARD DR	1	1	937.9202
544	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.711265	33.883474	double wing	2131306.596	1413098.481	S-10146	CB146	YOSHINO TER	<Null>	1	939.3405
545	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711369	33.883483	double wing	2131275.148	1413101.723	S-10147	CB147	YOSHINO TER	2	1	939.1641
546	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.711192	33.883293	single wing	2131328.304	1413032.547	S-10148	CB148	YOSHINO TER	<Null>	1	940.2174
547	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711278	33.88325	single wing	2131302.083	1413016.948	S-10149	CB149	YOSHINO TER	1	1	940.4487
548	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710153	33.882728	single wing	2131642.51	1412825.126	S-10150	CB150	YOSHINO TER	1	1	958.8482
549	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.710161	33.882809	single wing	2131640.29	1412854.77	S-10151	CB151	YOSHINO TER	<Null>	1	958.6284
550	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.708659	33.881968	double wing	2132094.487	1412546.135	S-10152	CB152	LUSTERLEAF CT	<Null>	1	984.061
551	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.707576	33.865029	single wing	2132390.838	1406380.498	S-10153	CB153	LIBERTY DR	<Null>	1	948.6371
552	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707457	33.865104	single wing	2132426.972	1406407.653	S-10154	CB154	LIBERTY DR	1	1	946.6187
553	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.706597	33.865036	single wing	2132688.063	1406381.813	S-10155	CB155	LIBERTY DR	1	1	927.6018
554	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.707641	33.866269	single wing	2132373.461	1406831.943	S-10156	CB156	LIBERTY LN	<Null>	1	934.2442
555	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707709	33.866216	single wing	2132352.798	1406812.707	S-10157	CB157	LIBERTY LN	1	1	934.2216
556	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.708037	33.866598	single wing	2132253.997	1406952.504	S-10158	CB158	LIBERTY LN	3	1	933.7047
557	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.707946	33.866626	single wing	2132281.51	1406962.281	S-10159	CB159	LIBERTY LN	<Null>	1	933.7231
558	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.708155	33.86672	single wing	2132218.325	1406996.817	S-10160	CB160	OAK LN	<Null>	1	934.2124
559	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.708134	33.866644	single wing	2132224.452	1406969.05	S-10161	CB161	OAK LN	1	1	934.2109
560	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707996	33.867391	single wing	2132267.969	1407240.864	S-10162	CB162	LIBERTY LN	1	1	925.4727
561	Yes	Catch Basin	<Null>	Concrete	yes	no	5	-84.659259	33.855422	single wing	2147040.697	1402811.016	S-10163	CB163	SHARON WOODS DR	<Null>	1	914.6944
562	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.65917	33.85539	single wing	2147067.849	1402799.556	S-10164	CB164	SHARON WOODS DR	1	1	914.7007
563	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660288	33.857178	double wing	2146731.591	1403451.528	S-10165	CB165	SHARON WOODS DR	1	1	925.4523
564	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.660304	33.857098	double wing	2146726.594	1403422.451	S-10166	CB166	SHARON WOODS DR	1	1	925.2621
565	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.660852	33.85607	double wing	2146558.288	1403049.141	S-10167	CB167	SHARON SPGS	<Null>	1	920.7049

MS4 Catch Basins Inventory
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566	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.662031	33.857478	double wing	2146202.784	1403563.332	S-10168	CB168	SHARON RUN	1	1	922.4408
567	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.662033	33.857393	double wing	2146202.28	1403532.433	S-10169	CB169	SHARON RUN	1	1	922.1431
568	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.662177	33.856223	double wing	2146156.358	1403106.852	S-10170	CB170	SHARON WOODS DR	<Null>	1	913.2902
569	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.662152	33.856145	double wing	2146163.805	1403078.316	S-10171	CB171	SHARON WOODS DR	1	1	913.186
570	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.709798	33.884315	double wing	2131753.442	1413401.985	S-10172	CB172	GRANDIFLORA PL	<Null>	1	953.5236
571	Yes	Catch Basin	<Null>	Brick	yes	no	2	-84.691516	33.866591	single wing	2137268.934	1406923.941	S-10173	CB173	RICHARD D SAILORS PKY	<Null>	1	961.359
572	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.691652	33.858898	single wing	2137213.076	1404124.524	S-10174	CB174	TEAL CIRCLE	<Null>	1	919.1656
573	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691596	33.859006	single wing	2137230.421	1404163.912	S-10175	CB175	TEAL CIRCLE	1	1	918.7023
574	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691437	33.859324	double wing	2137279.324	1404279.284	S-10176	CB176	TEAL CIRCLE	1	1	916.2391
575	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691516	33.859369	double wing	2137255.283	1404295.806	S-10177	CB177	TEAL CIRCLE	1	1	916.0069
576	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.690597	33.859386	single wing	2137534.438	1404300.679	S-10178	CB178	SWEETWATER AVENUE	<Null>	1	915.3498
577	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.690573	33.8593	single wing	2137541.501	1404269.451	S-10179	CB179	TEAL CIRCLE	1	1	915.5827
578	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.690483	33.859271	single wing	2137568.835	1404258.448	S-10180	CB180	TEAL CIRCLE	1	1	915.3024
579	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689965	33.85903	single wing	2137725.751	1404170.088	S-10181	CB181	SWEETWATER AVENUE	2	1	911.22
580	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.690174	33.859318	single wing	2137662.688	1404275.105	S-10182	CB182	SWEETWATER AVENUE	<Null>	1	912.9039
581	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689658	33.858711	double wing	2137818.225	1404053.547	S-10183	CB183	SWEETWATER AVENUE	1	1	909.8148
582	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689531	33.858809	double wing	2137857.095	1404089.154	S-10184	CB184	SWEETWATER AVENUE	1	1	909.2694
583	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.693915	33.850396	double wing	2136510.527	1401034.586	S-10185	CB185	BROWNSVILLE ROAD	1	1	987.535
584	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.693853	33.850593	single wing	2136529.637	1401106.2	S-10186	CB186	BROWNSVILLE ROAD	2	1	987.571
585	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.693749	33.85035	double wing	2136560.781	1401017.422	S-10187	CB187	BROWNSVILLE ROAD	1	1	987.7426
586	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.693686	33.850596	single wing	2136580.412	1401106.77	S-10188	CB188	BROWNSVILLE ROAD	3	1	988.0131
592	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691252	33.871735	single wing	2137358.515	1408795.329	S-10194	CB194	SPLITWOOD WAY	1	1	946.6604
593	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691353	33.871748	single wing	2137327.927	1408800.232	S-10195	CB195	SPLITWOOD WAY	1	1	946.2118
594	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689487	33.870414	single wing	2137891.774	1408311.607	S-10196	CB196	HOLLOW STREAM TRAIL	2	1	946.8853
595	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.689531	33.870487	single wing	2137878.44	1408338.451	S-10197	CB197	HOLLOW STREAM TRL	<Null>	1	946.6424
596	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690132	33.872196	single wing	2137699.2	1408961.233	S-10198	CB198	COUNTRY WALK DR	1	1	960.7148
597	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690125	33.872279	single wing	2137701.562	1408991.386	S-10199	CB199	COUNTRY WALK DR	1	1	961.1915
598	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693756	33.875727	single wing	2136605.914	1410251.768	S-10200	CB200	WINDING LANE	<Null>	1	951.6785
599	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695139	33.876045	single wing	2136186.703	1410369.626	S-10201	CB201	RAMBLEWOOD CT	<Null>	1	934.0648
600	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695842	33.875659	single wing	2135972.753	1410230.201	S-10202	CB202	RAMBLEWOOD CT	<Null>	1	932.0207
601	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695865	33.874707	single wing	2135963.98	1409883.936	S-10203	CB203	SADDLERUN LANE	<Null>	1	928.552
602	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695372	33.87228	double wing	2136109.048	1409000.037	S-10204	CB204	BUCKHORN	<Null>	1	933.5046
603	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693438	33.871976	double wing	2136695.278	1408886.097	S-10205	CB205	LOOKOUT TRACE	<Null>	1	955.5487
604	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694312	33.871467	single wing	2136429.191	1408702.468	S-10206	CB206	HILLSIDE CT	1	1	929.8856
605	Yes	Catch Basin	<Null>	Concrete	yes	yes	2	-84.694401	33.871423	double wing	2136402.148	1408686.524	S-10207	CB207	HILLSIDE CT	1	1	929.0873
606	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693317	33.870456	single wing	2136729.42	1408332.899	S-10208	CB208	HICKORY DR	<Null>	1	938.6387
607	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693278	33.870377	single wing	2136741.107	1408304.164	S-10209	CB209	HICKORY CT	1	1	938.3544
608	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.694431	33.870403	single wing	2136390.998	1408315.418	S-10210	CB210	HICKORY CT	<Null>	1	927.269
609	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694342	33.878035	single wing	2136432.481	1411092.493	S-10211	CB211	COUNTRY WALK ESTATE	1	1	942.2225
610	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695643	33.877996	double wing	2136037.456	1411080.151	S-10212	CB212	COUNTRY WALK ESTATE	<Null>	1	940.7713

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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
611	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.69347	33.877349	double wing	2136695.848	1410841.348	S-10213	CB213	COUNTRY WALK DRIVE	<Null>	1	937.8759
612	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693529	33.877285	double wing	2136677.808	1410818.139	S-10214	CB214	COUNTRY WALK DRIVE	1	1	937.5974
613	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691457	33.876639	single wing	2137305.268	1410579.818	S-10215	CB215	QUAIL HUNT COURT	<Null>	1	966.8823
614	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691443	33.876718	single wing	2137309.627	1410608.721	S-10216	CB216	QUAIL HUNT CT	1	1	967.4212
615	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691638	33.875664	double wing	2137248.623	1410225.478	S-10217	CB217	DEER CHASE	1	1	964.353
616	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691727	33.875636	double wing	2137221.426	1410215.263	S-10218	CB218	DEER CHASE	1	1	963.6312
617	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692715	33.875857	single wing	2136922.17	1410297.227	S-10219	CB219	COUNTRY WALK DR	1	1	949.8959
618	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692814	33.875856	single wing	2136892.093	1410297.047	S-10220	CB220	COUNTRY WALK DR	1	1	949.743
619	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.694276	33.876365	single wing	2136449.177	1410484.484	S-10221	CB221	DEER CHASE	<Null>	1	938.8604
620	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691604	33.873636	single wing	2137255.083	1409487.429	S-10222	CB222	HUNTERS TR	<Null>	1	973.8089
621	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.692655	33.873628	single wing	2136936.056	1409486.037	S-10223	CB223	WOODCLIFF WAY	<Null>	1	958.1454
622	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693558	33.874154	single wing	2136662.927	1409678.846	S-10224	CB224	COUNTRY WALK DR	<Null>	1	949.4659
623	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693496	33.874095	single wing	2136681.833	1409657.298	S-10225	CB225	COUNTRY WALK DR	1	1	949.1386
624	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693791	33.873654	single wing	2136591.454	1409497.505	S-10226	CB226	COUNTRY WALK DR	1	1	942.4012
625	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.694165	33.849664	single wing	2136433.165	1400768.622	S-10227	CB227	BROWNSVILLE ROAD	<Null>	1	989.5743
626	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.694026	33.850073	single wing	2136475.984	1400917.293	S-10228	CB228	BROWNSVILLE ROAD	1	1	987.9427
627	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.693961	33.850265	double wing	2136496.282	1400986.921	S-10229	CB229	BROWNSVILLE ROAD	1	1	987.4035
628	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.693593	33.850939	single wing	2136609.157	1401231.484	S-10230	CB230	BROWNSVILLE ROAD	<Null>	1	990.2242
629	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691635	33.871956	double wing	2137242.788	1408876.205	S-10231	CB231	COUNTRY WALK DR	1	1	943.9793
630	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691603	33.872034	double wing	2137252.631	1408904.614	S-10232	CB232	COUNTRY WALK DR	1	1	944.2916
631	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.69044	33.871387	double wing	2137604.399	1408667.439	S-10233	CB233	SHALLOW SPRINGS CT	<Null>	1	959.9502
632	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694343	33.878122	single wing	2136432.318	1411124.204	S-10234	CB234	COUNTRY WALK ESTATE	1	1	942.4164
644	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674885	33.857387	single wing	2142300.614	1403549.15	S-10246	CB247	ATLANTA STREET	<Null>	1	990.2099
645	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674896	33.857307	single wing	2142296.977	1403520.074	S-10247	CB248	ATLANTA STREET	1	1	989.9291
646	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673885	33.857238	single wing	2142603.976	1403493.385	S-10248	CB249	ATLANTA STREET	1	1	986.9953
647	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673874	33.857316	single wing	2142607.374	1403521.796	S-10249	CB250	ATLANTA STREET	1	1	987.1346
648	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673108	33.857362	single wing	2142840.012	1403537.534	S-10250	CB251	ATLANTA STREET	1	1	981.7398
649	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672397	33.857303	single wing	2143055.772	1403514.887	S-10251	CB252	ATLANTA STREET	<Null>	1	976.6366
650	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.672401	33.85739	single wing	2143054.555	1403546.519	S-10252	CB253	ATLANTA STREET	2	1	976.6808
651	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.671348	33.857436	single wing	2143374.251	1403561.793	S-10253	CB254	ATLANTA STREET	2	1	962.5335
653	Yes	Catch Basin	<Null>	Concrete	yes	yes	5	-84.67135	33.857353	single wing	2143373.565	1403531.545	S-10255	CB256	ATLANTA STREET	1	1	962.9708
654	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677703	33.858057	single wing	2141446.146	1403797.383	S-10256	CB257	DILLARD ST	1	1	985.6679
655	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677617	33.858055	single wing	2141472.303	1403796.619	S-10257	CB258	DILLARD ST	1	1	985.9617
656	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.677723	33.857652	single wing	2141439.443	1403650.02	S-10258	CB259	DILLARD ST	<Null>	1	977.9366
657	Yes	Catch Basin	Round	Concrete	yes	<Null>	5	-84.677634	33.857642	single wing	2141466.347	1403646.228	S-10259	CB260	DILLARD ST	2	1	978.3973
658	Yes	Catch Basin	Round	Concrete	yes	<Null>	5	-84.677561	33.857572	single wing	2141488.584	1403620.533	S-10261	CB262	ATLANTA ST	<Null>	1	978.1965
659	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677648	33.8575	single wing	2141461.895	1403594.513	S-10262	CB263	DILLARD ST	1	1	977.3778
660	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.678274	33.857624	single wing	2141272.078	1403640.47	S-10263	CB264	ATLANTA ST	<Null>	1	973.7941
661	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.678286	33.857545	single wing	2141268.479	1403611.921	S-10264	CB265	ATLANTA ST	1	1	973.33
662	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.679892	33.857655	single wing	2140781.084	1403654.464	S-10265	CB266	ATLANTA ST	<Null>	1	963.7333

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663	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.679883	33.857734	single wing	2140783.86	1403683.233	S-10266	CB267	ATLANTA ST	1	1	963.7863
664	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.680639	33.857714	single wing	2140554.304	1403676.887	S-10267	CB268	ATLANTA ST	<Null>	1	958.4535
665	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.680644	33.857796	single wing	2140552.861	1403706.969	S-10268	CB269	ATLANTA ST	1	1	957.8683
666	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.680714	33.857915	double wing	2140531.976	1403750.333	S-10269	CB270	WALTON ST	1	1	955.7676
667	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.680804	33.857928	double wing	2140504.516	1403754.963	S-10270	CB271	WALTON ST	1	1	956.0434
668	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.68049	33.859241	single wing	2140602.489	1404232.466	S-10271	CB272	WALTON ST	1	1	972.4339
669	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.680578	33.85926	single wing	2140575.543	1404239.409	S-10272	CB273	WALTON ST	1	1	972.4391
670	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.682161	33.857804	single wing	2140092.506	1403711.896	S-10273	CB274	ATLANTA ST	<Null>	1	943.0268
671	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682155	33.85789	single wing	2140094.446	1403743.447	S-10274	CB275	ATLANTA STREET	1	1	943.3477
673	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.675803	33.86345	single wing	2142032.645	1405756.697	S-10276	CB277	NEW MACLAND RD	<Null>	1	1000.558
674	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.675743	33.86506	single wing	2142053.778	1406342.701	S-10277	CB278	NEW MACLAND RD	1	1	992.484
675	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.675666	33.865645	single wing	2142078.348	1406555.519	S-10278	CB279	NEW MACLAND RD	1	1	990.0795
680	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677373	33.853247	single wing	2141537.77	1402046.497	S-10283	CB284	NEW TOWNE DR	1	1	949.8955
681	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677466	33.853247	single wing	2141509.372	1402046.785	S-10284	CB285	NEW TOWNE DR	1	1	949.2696
682	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.678239	33.853392	single wing	2141275.23	1402100.639	S-10285	CB286	NEW TOWNE DR	<Null>	1	939.8695
683	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.678238	33.85347	single wing	2141275.608	1402129.054	S-10286	CB287	NEW TOWNE DR	2	1	940.1307
684	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.678562	33.853476	double wing	2141177.159	1402131.615	S-10287	CB288	NEW TOWNE DR	1	1	938.6197
685	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.678407	33.852131	single wing	2141221.947	1401641.999	S-10288	CB289	NEW TOWNE	1	1	940.668
686	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.6785	33.85213	single wing	2141193.599	1401641.803	S-10289	CB290	NEW TOWNE DR	1	1	940.0356
687	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.680065	33.852073	double wing	2140718.214	1401623.273	S-10290	CB291	GRADY GREER RD	<Null>	1	924.6178
688	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.678316	33.851911	single wing	2141248.94	1401561.999	S-10291	CB292	GRADY GRIER RD	<Null>	1	940.9038
689	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.678323	33.851539	single wing	2141246.2	1401426.373	S-10292	CB293	MORNINGSIDE WAY	1	1	936.9111
690	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.678326	33.851457	single wing	2141245.307	1401396.723	S-10293	CB294	MORNINGSIDE WAY	1	1	936.749
691	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.67932	33.851398	double wing	2140943.295	1401376.784	S-10294	CB295	MORNINGSIDE WAY	1	1	926.4029
692	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.678972	33.850595	double wing	2141047.518	1401084.045	S-10295	CB296	NEW TOWNE DRIVE	<Null>	1	921.6754
693	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.678006	33.850275	double wing	2141340.22	1400965.95	S-10296	CB297	MORNINGSIDE WAY	<Null>	1	922.09
694	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.676005	33.851358	single wing	2141949.658	1401357.08	S-10297	CB298	MORNINGSIDE CIR	<Null>	1	944.1483
695	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.676358	33.850693	single wing	2141841.401	1401115.796	S-10298	CB299	MORNINGSIDE DR	<Null>	1	931.9785
696	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676454	33.850674	single wing	2141812.225	1401108.792	S-10299	CB300	MORNINGSIDE DR	1	1	931.7918
697	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.675964	33.850223	single wing	2141960.191	1400944.093	S-10300	CB301	MISTY MORN WAY	<Null>	1	935.5148
698	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.675977	33.850118	single wing	2141956.067	1400905.942	S-10301	CB302	MORNINGSIDE DR	1	1	937.0009
699	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676055	33.850069	single wing	2141932.099	1400888.128	S-10302	CB303	MORNINGSIDE DR	1	1	937.0186
700	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.6768	33.84977	single wing	2141705.393	1400780.391	S-10303	CB304	MISTY MORN WAY	1	1	932.3766
701	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676743	33.849705	single wing	2141722.581	1400756.818	S-10304	CB305	MISTY MORN WAY	1	1	932.3352
702	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.677749	33.849413	single wing	2141416.609	1400652.026	S-10305	CB306	MISTY MORN WAY	<Null>	1	928.5226
703	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677769	33.849491	single wing	2141410.84	1400680.589	S-10306	CB307	MISTY MORN WAY	1	1	928.6305
704	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.678414	33.849509	double wing	2141215.031	1400688.125	S-10307	CB308	MISTY MORN WAY	<Null>	1	924.356
705	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.67795	33.848477	single wing	2141353.933	1400311.691	S-10308	CB309	MORNING DEW DR	<Null>	1	928.0583
706	Yes	Catch Basin	<Null>	Concrete	yes	no	5	-84.677089	33.847992	single wing	2141614.601	1400133.867	S-10309	CB310	MORNING STAR AVE	<Null>	1	921.9169
707	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.676585	33.848883	single wing	2141769.045	1400457.414	S-10310	CB311	MORNING DEW DR	<Null>	1	934.1171

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708	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.67657	33.848807	double wing	2141773.671	1400429.584	S-10311	CB312	MORNING DEW DR	1	1	934.0706
709	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.676049	33.848039	single wing	2141930.329	1400149.661	S-10312	CB313	MORNING DEW CT	<Null>	1	931.8998
710	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674968	33.848045	single wing	2142258.627	1400150.134	S-10313	CB314	MORNING DEW WAY	<Null>	1	942.0922
711	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.675375	33.850556	single wing	2142139.517	1401064.306	S-10314	CB315	MISTY MORN TRACE	<Null>	1	941.2868
712	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.67531	33.850621	single wing	2142159.228	1401087.901	S-10315	CB316	MISTY MORN TRACE	1	1	941.4461
713	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.675335	33.850724	single wing	2142151.906	1401125.324	S-10316	CB317	MISTY MORN WAY	1	1	939.2282
714	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.675423	33.850764	single wing	2142125.273	1401140.077	S-10317	CB318	MISTY MORN WAY	1	1	938.7551
715	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674907	33.851338	single wing	2142282.827	1401348.082	S-10318	CB319	MISTY MORN WAY	1	1	941.8061
716	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674655	33.851342	single wing	2142359.468	1401349.176	S-10319	CB320	MISTY MORN WAY	1	1	943.7218
717	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.673704	33.851684	single wing	2142648.828	1401472.356	S-10321	CB322	MISTY MORN WAY	<Null>	1	953.3452
718	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673656	33.851613	single wing	2142663.243	1401446.255	S-10322	CB323	MISTY MORN WAY	1	1	953.3063
719	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.675847	33.853738	single wing	2142001.868	1402223.052	S-10323	CB324	MISTYMORN LN	<Null>	1	963.7604
720	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.675947	33.853743	single wing	2141971.69	1402224.778	S-10324	CB325	MISTY MORN LN	1	1	963.8481
721	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.675851	33.853369	single wing	2141999.961	1402088.763	S-10325	CB326	MISTY MORN LN	<Null>	1	959.8002
722	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676066	33.853466	single wing	2141934.941	1402124.241	S-10326	CB327	MISTY MORN LN	2	1	959.4106
723	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676061	33.853381	single wing	2141936.335	1402093.428	S-10327	CB328	MISTY MORN PL	1	1	959.0672
724	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674923	33.85279	double wing	2142280.629	1401876.645	S-10328	CB329	MISTYMORN LN	<Null>	1	948.8174
726	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.720239	33.876443	single wing	2128569.45	1410554.378	S-10330	CB331	WOODBERRY LN	<Null>	1	959.2995
727	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.72014	33.876426	single wing	2128599.302	1410548.197	S-10331	CB332	WOODBERRY LN	1	1	959.1413
728	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.720116	33.875649	double wing	2128605.17	1410265.516	S-10332	CB333	WOODBERRY LN	1	1	953.5916
729	Yes	Catch Basin	Rectangular	Brick	yes	<Null>	4	-84.693323	33.851751	single wing	2136692.501	1401526.49	S-10333	CB334	BROWNSVILLE ROAD	<Null>	1	987.2082
730	Yes	Catch Basin	<Null>	Concrete	yes	yes	4	-84.69311	33.852276	single wing	2136758.189	1401717.349	S-10334	CB335	BROWNSVILLE ROAD	2	1	978.2778
731	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.693211	33.852304	single wing	2136727.612	1401727.739	S-10335	CB336	BROWNSVILLE ROAD	<Null>	1	977.9949
732	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.69291	33.852767	single wing	2136819.815	1401895.693	S-10336	CB337	BROWNSVILLE ROAD	2	1	973.0474
733	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.693008	33.852799	single wing	2136790.367	1401907.346	S-10337	CB338	BROWNSVILLE ROAD	2	1	972.8572
734	Yes	Catch Basin	Rectangular	Concrete	yes	no	4	-84.692869	33.853137	single wing	2136832.944	1402030.233	S-10338	CB339	BROWNSVILLE ROAD	<Null>	1	971.7011
735	Yes	Catch Basin	Rectangular	Brick	yes	<Null>	4	-84.692689	33.853307	single wing	2136888.145	1402091.783	S-10339	CB340	BROWNSVILLE ROAD	<Null>	1	969.6663
736	Yes	Catch Basin	Round	Brick	yes	yes	4	-84.692323	33.854047	single wing	2137000.4	1402360.616	S-10340	CB341	BROWNSVILLE ROAD	2	1	956.8994
737	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.691984	33.854505	single wing	2137104.164	1402526.765	S-10341	CB342	BROWNSVILLE ROAD	2	1	952.4442
738	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.691774	33.854743	single wing	2137168.575	1402612.874	S-10342	CB343	BROWNSVILLE ROAD	1	1	951.1253
739	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.691346	33.855204	double wing	2137299.235	1402779.854	S-10343	CB344	BROWNSVILLE ROAD	2	1	949.834
740	Yes	Catch Basin	<Null>	Brick	yes	yes	4	-84.691441	33.855245	single wing	2137270.603	1402795.034	S-10344	CB345	BROWNSVILLE ROAD	1	1	949.4382
741	Yes	Catch Basin	Rectangular	Brick	yes	<Null>	4	-84.690926	33.855869	single wing	2137427.879	1403021.393	S-10345	CB346	BROWNSVILLE ROAD	<Null>	1	948.8581
742	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.690753	33.856432	single wing	2137481.448	1403226.129	S-10346	CB347	BROWNSVILLE ROAD	1	1	943.8645
743	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.690652	33.856416	single wing	2137512.168	1403219.866	S-10347	CB348	BROWNSVILLE ROAD	1	1	943.6376
744	Yes	Catch Basin	Rectangular	Concrete	yes	no	4	-84.690509	33.856939	single wing	2137556.49	1403410.013	S-10348	CB349	BROWNSVILLE ROAD	1	1	936.0263
745	Yes	Catch Basin	Rectangular	Concrete	yes	no	4	-84.690408	33.857194	single wing	2137587.851	1403502.769	S-10349	CB350	BROWNSVILLE ROAD	1	1	931.4323
746	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.690202	33.857561	single wing	2137650.928	1403635.748	S-10350	CB351	BROWNSVILLE ROAD	1	1	924.2237
747	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689967	33.857891	single wing	2137722.746	1403755.723	S-10351	CB352	BROWNSVILLE ROAD	1	1	918.1147
748	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689642	33.858332	single wing	2137822.449	1403915.439	S-10352	CB353	BROWNSVILLE ROAD	1	1	911.0851

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749	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689431	33.858568	single wing	2137886.832	1404001.335	S-10353	CB354	BROWNSVILLE ROAD	1	1	907.8559
750	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.689076	33.858834	double wing	2137995.162	1404097.49	S-10354	CB355	BROWNSVILLE ROAD	<Null>	1	906.5574
751	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.687086	33.859391	double wing	2138600.379	1404296.909	S-10355	CB356	BROWNSVILLE ROAD	<Null>	1	909.0168
752	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.687273	33.859354	single wing	2138543.285	1404283.891	S-10356	CB357	BROWNSVILLE ROAD	1	1	909.0929
753	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.6873	33.859442	single wing	2138535.454	1404315.792	S-10357	CB358	BROWNSVILLE ROAD	1	1	909.194
754	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.687779	33.859348	single wing	2138389.71	1404282.488	S-10358	CB359	BROWNSVILLE ROAD	1	1	910.5224
765	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715441	33.869304	single wing	2130011.812	1407949.046	S-10369	CB371	BIRCHHAVEN TR	1	1	957.6685
766	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715345	33.869291	single wing	2130040.87	1407943.936	S-10370	CB372	BIRCHHAVEN TR	1	1	957.6977
767	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.715717	33.867887	single wing	2129925.076	1407433.688	S-10371	CB373	BIRCHHAVEN TR	<Null>	1	953.0779
768	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715644	33.867929	single wing	2129947.394	1407449.025	S-10372	CB374	BIRCHHAVEN TR	1	1	953.1332
769	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715734	33.868053	single wing	2129920.223	1407494.105	S-10373	CB375	BIRCHHAVEN TR	2	1	953.8422
770	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715806	33.868002	single wing	2129898.374	1407475.668	S-10374	CB376	BIRCHHAVEN TR	1	1	953.6974
771	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.715266	33.866838	single wing	2130060.186	1407051.273	S-10375	CB377	WALNUT MILL LN	<Null>	1	964.573
772	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715218	33.86677	single wing	2130074.385	1407026.363	S-10376	CB378	WALNUT MILL LN	1	1	964.7076
773	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715094	33.866718	single wing	2130112.011	1407007.533	S-10377	CB379	BIRCHHAVEN TR	1	1	964.1989
774	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.714857	33.866507	single wing	2130183.497	1406930.027	S-10378	CB380	BIRCHHAVEN TR	<Null>	1	961.6671
775	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.714883	33.866382	single wing	2130175.557	1406884.691	S-10379	CB381	BIRCHHAVEN TR	2	1	960.143
776	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.714789	33.865992	single wing	2130203.115	1406742.819	S-10380	CB382	BIRCHHAVEN TR	<Null>	1	955.4241
777	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.714692	33.865973	single wing	2130232.591	1406735.683	S-10381	CB383	BIRCHHAVEN TR	3	1	955.3217
778	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.714799	33.865821	single wing	2130199.821	1406680.632	S-10382	CB384	BIRCHHAVEN TR	<Null>	1	955.8718
779	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716003	33.865593	single wing	2129833.849	1406599.621	S-10383	CB385	BIRCHHAVEN TR	<Null>	1	956.9819
780	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716154	33.865514	single wing	2129787.875	1406571.052	S-10384	CB386	BIRCHHAVEN TR	1	1	955.9313
781	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716397	33.865591	single wing	2129714.4	1406599.458	S-10385	CB387	BIRCHHAVEN TR	<Null>	1	954.5393
782	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716406	33.865508	single wing	2129711.349	1406569.037	S-10386	CB388	BIRCHHAVEN TRACE	3	1	954.5682
783	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716825	33.865819	single wing	2129584.958	1406683.087	S-10387	CB389	BIRCHHAVEN TR	1	1	962.2185
784	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716744	33.865999	single wing	2129609.75	1406748.34	S-10388	CB390	BIRCHHAVEN TR	1	1	966.1419
785	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.717967	33.866191	single wing	2129238.909	1406820.131	S-10389	CB391	WALNUT MILL LN	<Null>	1	968.8732
786	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.717886	33.866087	single wing	2129263.176	1406782.131	S-10390	CB392	WALNUT MILL LN	1	1	968.5347
787	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.717909	33.865863	single wing	2129255.839	1406700.643	S-10391	CB393	WALNUT MILL LN	1	1	967.5029
788	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.717823	33.865558	single wing	2129281.471	1406589.688	S-10392	CB394	WALNUT MILL LN	1	1	965.7125
789	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.714124	33.86734	single wing	2130407.743	1407232.181	S-10393	CB395	WALNUT MILL LN	<Null>	1	955.3653
790	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.714079	33.867273	single wing	2130421.076	1407207.63	S-10394	CB396	WALNUT MILL LN	1	1	955.2114
791	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713948	33.867219	single wing	2130460.979	1407187.634	S-10395	CB397	BARTOWS BRIDGE	1	1	953.3125
792	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713689	33.866971	single wing	2130538.924	1407097.154	S-10396	CB398	BARTOWS BRIDGE	1	1	948.0668
793	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.713449	33.866537	single wing	2130611.064	1406938.979	S-10397	CB399	BARTOWS BRIDGE	<Null>	1	943.1592
794	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713386	33.86659	single wing	2130630.189	1406958.044	S-10398	CB400	BARTOWS BRIDGE	2	1	943.0077
795	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.713095	33.867704	single wing	2130720.7	1407363.088	S-10399	CB401	WALNUT MILL LN	<Null>	1	944.875
796	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713138	33.867773	single wing	2130707.886	1407388.001	S-10400	CB402	WALNUT MILL LN	1	1	944.9379
797	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.712422	33.868087	single wing	2130925.822	1407501.302	S-10401	CB403	WALNUT MILL LN	1	1	935.902
798	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.712118	33.868007	single wing	2131017.874	1407471.725	S-10402	CB404	WALNUT MILL LN	2	1	934.1247

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799	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.713216	33.864129	single wing	2130676.968	1406062.343	S-10403	CB405	REDWOOD FOREST LN	<Null>	1	966.9929
800	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713305	33.864256	single wing	2130650.307	1406108.49	S-10404	CB406	REDWOOD FOREST LN	1	1	965.9816
801	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713252	33.86507	single wing	2130667.974	1406404.607	S-10405	CB407	REDWOOD FOREST LN	1	1	959.1594
802	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713159	33.865067	single wing	2130696.222	1406403.585	S-10406	CB408	REDWOOD FOREST	1	1	958.8166
803	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.712816	33.865556	single wing	2130801.327	1406580.68	S-10407	CB409	REDWOOD FOREST LN	<Null>	1	954.5595
804	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.712878	33.86561	single wing	2130782.546	1406600.762	S-10408	CB410	REDWOOD FOREST LN	2	1	954.3386
805	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.712024	33.865502	single wing	2131041.413	1406559.826	S-10409	CB411	BARTOWS BRIDGE	1	1	951.6438
806	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711987	33.865571	single wing	2131052.843	1406584.924	S-10410	CB412	BARTOWS BRIDGE	1	1	951.7748
807	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711402	33.866111	single wing	2131231.53	1406780.502	S-10411	CB413	SILVER WOODS WALK	1	1	943.6554
808	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711439	33.866203	single wing	2131220.362	1406814.08	S-10412	CB414	SILVER WOODS WALK	1	1	942.4773
809	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.711401	33.866367	single wing	2131232.463	1406873.73	S-10413	CB415	LAUREL KNOLL CT	<Null>	1	940.9908
810	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711463	33.866313	single wing	2131213.379	1406854.254	S-10414	CB416	LAUREL KNOLL CT	2	1	941.1856
811	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.711591	33.866528	single wing	2131174.991	1406932.546	S-10415	CB417	LAUREL KNOLL CT	<Null>	1	939.1203
812	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711686	33.866498	single wing	2131146.171	1406921.864	S-10416	CB418	LAUREL KNOLL CT	2	1	938.727
813	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711928	33.866768	single wing	2131073.02	1407020.474	S-10417	CB419	LAUREL KNOLL CT	1	1	936.0795
814	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.710351	33.86711	single wing	2131552.541	1407142.211	S-10418	CB420	SILVER WOODS WALK	<Null>	1	946.41
815	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710445	33.867119	single wing	2131524.062	1407145.814	S-10419	CB421	SILVER WOODS WALK	1	1	945.6429
816	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.71055	33.867191	single wing	2131492.209	1407172.316	S-10420	CB422	WALNUT FOREST LN	1	1	943.0682
817	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710545	33.867268	single wing	2131493.886	1407200.17	S-10421	CB423	WALNUT FOREST LN	1	1	943.0564
818	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711131	33.867397	single wing	2131316.313	1407248.034	S-10422	CB424	WALNUT FOREST LN	1	1	936.9685
819	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710301	33.868008	single wing	2131569.445	1407469.148	S-10423	CB425	SILVER WOODS WALK	1	1	931.0507
820	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710386	33.868121	single wing	2131543.684	1407510.238	S-10424	CB426	SILVER WOODS WALK	1	1	929.6219
821	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710177	33.868393	single wing	2131607.806	1407608.943	S-10425	CB427	SILVER WOODS WALK	1	1	925.3808
822	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710244	33.868449	single wing	2131587.696	1407629.268	S-10426	CB428	SILVER WOODS WALK	1	1	925.1142
825	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.706501	33.874785	single wing	2132735.719	1409929.116	S-10429	CB431	CARRINGTON PARK DR	<Null>	1	947.6196
826	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.706801	33.874572	single wing	2132644.228	1409851.867	S-10430	CB432	CHILDRESS LN	1	1	945.061
827	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70701	33.874357	single wing	2132580.5	1409774.153	S-10431	CB433	CHILDRESS LN	1	1	939.9162
828	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707083	33.874405	single wing	2132558.522	1409791.686	S-10432	CB434	CHILDRESS LN	1	1	939.6828
831	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707702	33.875217	single wing	2132372.144	1410088.005	S-10435	CB437	CARRINGTON PARK DR	1	1	934.8738
832	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707774	33.875265	single wing	2132350.309	1410105.709	S-10436	CB438	CARRINGTON PARK DR	1	1	934.7277
833	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.708293	33.874971	single wing	2132192.391	1409999.428	S-10437	CB439	CARRINGTON PARK DR	<Null>	1	927.9646
834	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.708281	33.875048	single wing	2132195.944	1410027.607	S-10438	CB440	CARRINGTON PARK DR	1	1	928.0963
835	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.709007	33.875636	single wing	2131976.873	1410242.498	S-10439	CB441	CARRINGTON PARK DR	<Null>	1	929.3554
836	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.679248	33.875254	double wing	2141008.466	1410057.126	S-10440	CB442	MOORING DR	<Null>	1	997.3752
837	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.679195	33.875324	double wing	2141024.567	1410082.818	S-10441	CB443	MOORING DR	1	1	997.1777
838	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.678825	33.876553	single wing	2141139.127	1410529.442	S-10442	CB444	MOORING DR	1	1	972.4341
839	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.680006	33.876399	single wing	2140780.348	1410475.222	S-10443	CB445	MOORING DR	<Null>	1	981.7903
840	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.680256	33.876599	single wing	2140705.072	1410548.293	S-10444	CB446	MOORING DR	1	1	980.6402
841	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.705769	33.873561	single wing	2132955.627	1409482.482	S-10445	CB447	THORNBRIDGE DR	1	1	949.3749
842	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.706802	33.873934	single wing	2132642.799	1409619.926	S-10446	CB448	THORNBRIDGE DR	1	1	939.3731

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843	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.719737	33.882496	single wing	2128733.608	1412756.093	S-10447	CB449	SILVERBROOKE CROSSI	<Null>	1	946.9705
844	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719651	33.882443	single wing	2128759.692	1412736.957	S-10448	CB450	SILVERBROOKE CROSSI	1	1	946.2388
845	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719095	33.882589	double wing	2128928.673	1412789.174	S-10449	CB451	SILVERBROOKE CROSSI	1	1	936.4589
846	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719098	33.882675	double wing	2128927.827	1412820.137	S-10450	CB452	SILVERBROOKE CROSSI	1	1	936.6711
847	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.719795	33.88168	single wing	2128714.212	1412459.363	S-10451	CB453	SILVERCREST CT	<Null>	1	954.7328
848	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719764	33.881756	single wing	2128723.895	1412487.159	S-10452	CB454	SILVERCREST CT	1	1	954.6878
849	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719026	33.881695	single wing	2128947.785	1412463.555	S-10453	CB455	SILVERCREST CT	1	1	948.6403
850	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.718996	33.881618	single wing	2128956.748	1412435.632	S-10454	CB456	SILVERCREST CT	1	1	948.6861
851	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.720803	33.883095	single wing	2128411.119	1412976.021	S-10455	CB457	STERLINGBROOKE DRIV	<Null>	1	959.0344
852	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.720761	33.883024	single wing	2128423.927	1412950.069	S-10456	CB458	STERLINGBROOKE DRIV	1	1	958.9055
853	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.720238	33.883328	single wing	2128583.215	1413059.948	S-10457	CB459	STERLINGBROOKE DRIV	<Null>	1	950.9592
854	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.720183	33.883265	single wing	2128599.751	1413036.621	S-10458	CB460	STERLINGBROOKE DRIV	2	1	950.8398
855	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.7197	33.883592	single wing	2128746.921	1413154.809	S-10459	CB461	STERLINGBROOKE DRIV	<Null>	1	945.767
856	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719542	33.883615	single wing	2128794.843	1413163.105	S-10460	CB462	STERLINGBROOKE DRIV	1	1	944.3193
857	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719214	33.883804	double wing	2128894.949	1413231.152	S-10461	CB463	STERLINGBROOKE DRIV	1	1	939.8392
858	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.721894	33.883208	single wing	2128080.256	1413018.921	S-10462	CB464	SILVER MIST CIR	<Null>	1	954.746
859	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721885	33.88329	single wing	2128083.186	1413048.699	S-10463	CB465	SILVER MIST CIR	1	1	953.9621
860	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722529	33.883499	single wing	2127888.084	1413125.675	S-10464	CB466	SILVER MIST CIR	2	1	945.6489
861	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722567	33.883428	single wing	2127876.474	1413099.86	S-10465	CB467	SILVER MIST CIRCLE	1	1	945.9385
862	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.72251	33.88393	single wing	2127894.675	1413282.507	S-10466	CB468	SILVER MEADOWS DR	1	1	941.288
863	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722476	33.884003	single wing	2127905.379	1413309.218	S-10467	CB469	SILVER MEADOWS DR	2	1	941.051
864	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.722694	33.883958	single wing	2127839.044	1413293.172	S-10468	CB470	SILVER MIST CIRCLE	<Null>	1	940.7732
865	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722365	33.884338	single wing	2127939.619	1413430.763	S-10469	CB471	SILVER MIST CIRCLE	1	1	939.0711
866	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722373	33.884497	single wing	2127937.348	1413488.611	S-10470	CB472	SILVER MIST CIRCLE	1	1	938.8753
867	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.720971	33.883872	single wing	2128361.696	1413258.873	S-10471	CB473	SILVER MIST CIRCLE	<Null>	1	937.9195
868	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721066	33.883843	single wing	2128332.84	1413248.681	S-10472	CB474	SILVER MIST CIRCLE	1	1	937.8385
869	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721319	33.884062	double wing	2128256.449	1413328.636	S-10473	CB475	SILVER MIST CIRCLE	1	1	935.1666
870	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721252	33.884115	double wing	2128276.805	1413347.719	S-10474	CB476	SILVER MIST CIRCLE	1	1	934.9326
871	Yes	Catch Basin	Round	Brick	yes	no	2	-84.695003	33.878901	single wing	2136233.493	1411408.626	S-10475	CB477	SHIPP RD	<Null>	1	943.4345
872	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.695887	33.878896	single wing	2135965.021	1411408.04	S-10476	CB478	SHIPP RD	1	1	934.4793
873	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.69656	33.878892	single wing	2135760.832	1411407.876	S-10477	CB479	SHIPP RD	1	1	927.2308
874	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.694073	33.882333	single wing	2136522.157	1412655.91	S-10478	CB480	NECTAR DR	<Null>	1	949.5249
875	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694165	33.882341	single wing	2136494.257	1412659.105	S-10479	CB481	NECTAR DR	1	1	949.4394
876	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.69431	33.88408	single wing	2136453.432	1413292.069	S-10480	CB482	RED HAVEN CT	1	1	948.2725
877	revisit	Catch Basin	<Null>	Concrete	<Null>	<Null>	2	-84.695312	33.883295	double wing	2136147.858	1413007.883	S-10481	CB483	NECTAR DR	<Null>	1	940.3517
878	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.695382	33.883348	double wing	2136126.684	1413027.296	S-10482	CB484	NECTAR DR	1	1	940.304
879	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.695572	33.88059	double wing	2136063.868	1412023.872	S-10483	CB485	NECTAR DR	1	1	933.5467
880	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695479	33.880577	double wing	2136092.063	1412019.11	S-10484	CB486	NECTAR DR	<Null>	1	933.694
881	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.695594	33.879713	double wing	2136055.622	1411704.958	S-10485	CB487	CLINGSTONE PL	1	1	936.0078
882	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.6955	33.879727	double wing	2136084.18	1411709.756	S-10486	CB488	CLINGSTONE PL	<Null>	1	936.2151

MS4 Catch Basins Inventory
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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
883	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.717086	33.881941	double wing	2129537.017	1412550.005	S-10487	CB489	SILVERBROOKE DR	<Null>	1	935.7755
884	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.71713	33.882013	double wing	2129523.904	1412576.313	S-10488	CB490	SILVERBROOKE DR	1	1	935.745
885	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716168	33.882693	single wing	2129817.15	1412821.994	S-10489	CB491	SILVERBROOKE DR	<Null>	1	934.4004
886	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716075	33.882713	single wing	2129845.403	1412829.39	S-10490	CB492	SILVERBROOKE DR	1	1	934.6143
887	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716286	33.883199	single wing	2129782.396	1413006.51	S-10491	CB493	SILVERBROOKE DR	<Null>	1	931.3189
888	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.718375	33.882154	single wing	2129146.344	1412629.396	S-10492	CB494	SILVERCREST CT	<Null>	1	937.9096
889	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.718306	33.882096	single wing	2129166.917	1412608.356	S-10493	CB495	SILVERCREST CT	1	1	937.7419
890	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.718049	33.881981	double wing	2129244.771	1412566.138	S-10494	CB496	SILVERBROOKE CROSSI	1	1	935.0358
891	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.717981	33.88204	double wing	2129265.6	1412587.33	S-10495	CB497	SILVERBROOKE CROSSI	1	1	934.6267
892	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.671388	33.867244	double wing	2143379.695	1407130.751	S-10496	CB498	LINDLEY WAY	<Null>	1	994.6155
893	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.671393	33.867162	double wing	2143378.177	1407101.115	S-10497	CB499	LINDLEY DRIVE	1	1	994.673
894	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.671159	33.866496	double wing	2143447.864	1406858.169	S-10498	CB500	LINDLEY DRIVE	<Null>	1	985.1264
895	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.671204	33.866425	double wing	2143434.263	1406832.468	S-10499	CB501	LINDLEY DRIVE	1	1	985.0396
896	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.670221	33.8682	double wing	2143735.651	1407477.054	S-10500	CB503	LINDLEY DRIVE	<Null>	1	976.367
897	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.670224	33.868119	double wing	2143734.547	1407447.448	S-10501	CB504	LINDLEY DRIVE	2	1	976.2976
898	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.671116	33.868086	single wing	2143463.74	1407436.955	S-10502	CB505	LINDLEY DRIVE	1	1	986.6518
899	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.671608	33.868305	double wing	2143314.839	1407517.309	S-10503	CB506	LINDLEY KNOLL	1	1	984.2093
900	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.708428	33.886315	single wing	2132172.909	1414127.465	S-10504	CB507	SPRINGTIDE LN	2	1	960.7293
901	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.708428	33.886237	single wing	2132172.86	1414099.354	S-10505	CB508	SPRINGTIDE LN	<Null>	1	960.9475
902	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.710215	33.885843	single wing	2131629.804	1413958.689	S-10506	CB509	SPRINGTIDE LN	<Null>	1	947.5808
903	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.710248	33.885771	single wing	2131619.579	1413932.582	S-10507	CB510	SPRINGTIDE LN	2	1	947.1701
904	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711245	33.88526	single wing	2131316.233	1413748.231	S-10508	CB511	QUARTERS WAY	1	1	940.6556
905	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.71134	33.885247	single wing	2131287.345	1413743.576	S-10509	CB512	QUARTERS WAY	1	1	940.0623
906	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.715148	33.885914	single wing	2130132.876	1413992.653	S-10510	CB513	QUARTERS WAY	<Null>	1	944.6818
907	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.713916	33.886007	single wing	2130507.091	1414024.449	S-10511	CB514	QUARTERS WAY	<Null>	1	945.7136
908	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713923	33.885929	single wing	2130504.63	1413995.791	S-10512	CB515	QUARTERS WAY	1	1	945.3885
909	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707389	33.885064	double wing	2132485.881	1413670.891	S-10513	CB516	ELLIOT RD	1	1	970.4243
910	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707634	33.885069	single wing	2132411.757	1413672.859	S-10514	CB517	SPRING GREEN WAY	1	1	969.6703
911	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.715256	33.88192	single wing	2130092.471	1412539.377	S-10515	CB518	ELLIOTT ROAD	<Null>	1	931.0041
912	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.714554	33.882177	single wing	2130305.825	1412631.667	S-10516	CB519	ELLIOTT ROAD	<Null>	1	926.1931
913	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707872	33.887437	double wing	2132343.882	1414534.856	S-10517	CB520	PADDOCKS WAY	1	1	967.6
914	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707873	33.88736	double wing	2132343.416	1414506.879	S-10518	CB521	PADDOCKS WAY	1	1	967.2769
915	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.70917	33.887496	double wing	2131950.119	1414558.381	S-10519	CB522	PADDOCKS WAY	<Null>	1	968.3837
916	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.709177	33.887414	double wing	2131947.886	1414528.549	S-10520	CB523	PADDOCKS WAY	1	1	968.0529
917	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.712143	33.887859	single wing	2131048.544	1414695.27	S-10521	CB524	QUARTERS LN	<Null>	1	966.5852
918	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.71224	33.887874	single wing	2131019.067	1414701.089	S-10522	CB525	QUARTERS LANE	1	1	965.8521
919	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.712315	33.887927	single wing	2130996.462	1414720.378	S-10523	CB526	PADDOCKS WAY	1	1	964.3932
920	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.713381	33.887903	single wing	2130673.141	1414713.412	S-10524	CB527	PADDOCKS WAY	1	1	951.4746
921	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.71404	33.887906	single wing	2130472.932	1414715.547	S-10525	CB528	PADDOCKS WAY	1	1	947.5585
922	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.714047	33.887986	single wing	2130471.083	1414744.724	S-10526	CB529	PADDOCKS WAY	1	1	947.4318

MS4 Catch Basins Inventory
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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
923	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715447	33.887676	single wing	2130045.509	1414634.162	S-10527	CB530	PADDOCKS WAY	2	1	939.0847
924	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.715427	33.887596	single wing	2130051.505	1414605.025	S-10528	CB531	PADDOCKS WAY	<Null>	1	939.4151
925	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716311	33.887657	single wing	2129783.241	1414628.502	S-10529	CB532	PADDOCKS WAY	2	1	936.1956
926	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716309	33.887572	single wing	2129783.687	1414597.821	S-10530	CB533	PADDOCKS WAY	<Null>	1	936.1497
927	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716499	33.888175	single wing	2129727.455	1414817.33	S-10531	CB534	PADDOCKS COURT	1	1	932.4286
928	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716766	33.886677	single wing	2129643.507	1414272.709	S-10532	CB535	PADDOCKS CT	<Null>	1	931.8941
929	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.667002	33.872094	single wing	2144719.712	1408889.078	S-10533	CB536	DILMUS DRIVE	<Null>	1	926.2791
930	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.666999	33.872013	single wing	2144720.305	1408859.664	S-10534	CB537	DILMUS DRIVE	1	1	926.1054
931	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.669153	33.872581	single wing	2144067.531	1409069.46	S-10535	CB538	EVELYN DRIVE	<Null>	1	934.6031
932	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.66906	33.872583	single wing	2144095.859	1409070.25	S-10536	CB539	EVELYN DRIVE	2	1	933.6344
933	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.669633	33.872958	single wing	2143922.501	1409207.309	S-10537	CB540	EVELYN DRIVE	1	1	954.3796
934	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.669625	33.872882	single wing	2143925.029	1409179.648	S-10538	CB541	EVELYN DRIVE	<Null>	1	954.5443
935	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.669861	33.871565	single wing	2143850.974	1408700.91	S-10539	CB542	EVELYN WAY	<Null>	1	948.5422
936	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.669911	33.871496	single wing	2143835.726	1408675.843	S-10540	CB543	EVELYN WAY	1	1	947.8021
937	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.669899	33.871408	single wing	2143839.192	1408643.841	S-10541	CB544	EVELYN WAY	1	1	946.5681
938	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.669741	33.871463	single wing	2143887.227	1408663.437	S-10542	CB545	EVELYN DRIVE	1	1	945.5579
939	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.671486	33.869367	double wing	2143353.848	1407903.495	S-10543	CB546	EVELYN DRIVE	1	1	955.5664
940	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.671389	33.869381	double wing	2143383.133	1407908.575	S-10544	CB547	EVELYN DRIVE	1	1	955.8958
941	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.670467	33.869208	double wing	2143662.779	1407844.184	S-10545	CB548	EVELYN DRIVE	1	1	954.2691
942	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.67046	33.869284	double wing	2143665.039	1407871.731	S-10546	CB549	EVELYN DR	1	1	954.3005
943	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.667901	33.871799	single wing	2144446.176	1408783.098	S-10547	CB550	GLENBROOK DRIVE	1	1	919.0583
944	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.667896	33.871877	single wing	2144448.064	1408811.387	S-10548	CB551	GLENBROOK DRIVE	1	1	918.3127
945	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.685637	33.844891	single wing	2139013.363	1399018.449	S-10549	CB552	FALLS AVENUE	<Null>	1	938.898
946	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.685643	33.845079	single wing	2139011.905	1399087.141	S-10550	CB553	FALLS AVENUE	1	1	938.7793
947	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.689298	33.846812	single wing	2137905.518	1399723.286	S-10551	CB554	FALLS AVENUE	<Null>	1	949.6599
948	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689203	33.84681	single wing	2137934.228	1399722.252	S-10552	CB555	FALLS AVENUE	1	1	949.7949
949	Yes	Catch Basin	<Null>	Concrete	yes	yes	4	-84.689174	33.846362	double wing	2137942.427	1399559.439	S-10553	CB556	FALLS AVENUE	2	1	944.5585
950	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.689262	33.846334	double wing	2137915.643	1399549.127	S-10554	CB557	FALLS AVENUE	1	1	944.5627
951	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.687933	33.845254	single wing	2138317.119	1399154.354	S-10555	CB558	FALLS AVENUE	<Null>	1	948.5616
952	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687804	33.845282	single wing	2138356.355	1399164.105	S-10556	CB559	FALLS AVENUE	2	1	947.5285
953	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687671	33.845312	single wing	2138396.797	1399174.705	S-10557	CB560	CREEKSIDE LANE	1	1	948.1859
954	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.687587	33.845271	single wing	2138422.262	1399159.947	S-10558	CB561	CREEKSIDE LANE	1	1	947.9953
955	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.686934	33.84488	double wing	2138619.602	1399016.45	S-10559	CB562	FALLS AVENUE	1	1	941.0751
956	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.686963	33.844803	double wing	2138610.79	1398988.735	S-10560	CB563	FALLS AVENUE	1	1	940.9859
957	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.686549	33.846471	double wing	2138739.4	1399594.998	S-10561	CB564	CREEKSIDE LANE	1	1	946.3083
959	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.684328	33.845029	single wing	2139411.28	1399066.732	S-10563	CB566	BIRCH BROOK PATH	1	1	920.5154
960	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.684207	33.845103	single wing	2139448.094	1399093.6	S-10564	CB567	BIRCH BROOK PATH	2	1	917.8377
961	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.683549	33.845118	single wing	2139647.867	1399098.041	S-10565	CB568	BIRCH BROOK PATH	1	1	907.9726
962	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.683334	33.84518	single wing	2139713.163	1399120.357	S-10566	CB569	BIRCH BROOK PATH	1	1	907.2133
963	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.68329	33.845112	single wing	2139726.621	1399095.367	S-10567	CB570	BIRCH BROOK PATH	1	1	906.987

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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
964	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.683162	33.845035	double wing	2139765.093	1399067.124	S-10568	CB571	LILY BROOK COURT	1	1	906.2082
965	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.683077	33.845072	double wing	2139791.188	1399080.567	S-10569	CB572	LILY BROOK COURT	1	1	906.0772
966	Yes	Catch Basin	Rectangular	Concrete	yes	no	4	-84.684297	33.845901	single wing	2139422.201	1399384.151	S-10570	CB573	LILY BROOK COURT	<Null>	1	921.775
967	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.684211	33.845824	single wing	2139448.131	1399355.853	S-10571	CB574	LILY BROOK COURT	1	1	919.9143
968	Yes	Catch Basin	Rectangular	Concrete	yes	yes	4	-84.683749	33.84582	single wing	2139588.34	1399353.556	S-10572	CB575	LILY BROOK COURT	1	1	909.5719
969	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.683473	33.845653	double wing	2139671.999	1399292.59	S-10573	CB576	LILY BROOK COURT	2	1	907.1425
970	Yes	Catch Basin	Rectangular	Concrete	yes	yes	4	-84.683388	33.84568	double wing	2139697.74	1399302.314	S-10574	CB577	LILY BROOK COURT	1	1	907.2606
971	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.68265	33.844497	double wing	2139919.718	1398870.794	S-10575	CB578	LILY BROOK COURT	1	1	904.7294
972	Yes	Catch Basin	Rectangular	Concrete	yes	yes	4	-84.682582	33.844548	double wing	2139940.324	1398889.17	S-10576	CB579	LILY BROOK PATH	1	1	904.5112
973	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.682614	33.844062	double wing	2139929.742	1398712.401	S-10577	CB580	MISTY CREEK COURT	<Null>	1	905.6041
974	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.682584	33.843989	double wing	2139938.847	1398685.846	S-10578	CB581	MISTY CREEK COURT	1	1	905.6021
975	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.681622	33.844517	double wing	2140231.82	1398876.173	S-10579	CB582	MISTY CREEK COURT	<Null>	1	902.8084
976	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.670474	33.852932	other	2143631.627	1401921.602	S-10580	CB584	OLD AUSTELL RD	<Null>	1	973.1983
977	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.671064	33.85332	other	2143453.166	1402063.8	S-10581	CB585	OLD AUSTELL RD	<Null>	1	975.4005
978	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.671932	33.851808	double wing	2143186.879	1401514.819	S-10582	CB586	FRANK AIKEN RD	3	2	955.1889
979	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.671902	33.851732	single wing	2143195.967	1401487.245	S-10583	CB587	FRANK AIKEN RD	3	1	955.8141
980	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.673281	33.850833	double wing	2142775.706	1401161.898	S-10584	CB588	FRANK AIKEN RD	<Null>	1	961.8741
981	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.672588	33.851464	single wing	2142987.192	1401390.659	S-10585	CB589	FRANK AIKEN RD	1	1	958.39
982	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674233	33.849452	single wing	2142484.189	1400661.061	S-10586	CB590	FRANK AIKEN RD	<Null>	1	951.2617
983	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.674374	33.848615	single wing	2142439.76	1400356.519	S-10587	CB591	FRANK AIKEN RD	<Null>	1	948.4784
984	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674282	33.848606	single wing	2142467.677	1400353.315	S-10588	CB592	FRANK AIKEN RD	2	1	948.1966
985	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.67439	33.848097	single wing	2142434.128	1400168.251	S-10589	CB593	FRANK AIKEN RD	<Null>	1	947.4374
986	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.674294	33.848093	single wing	2142463.279	1400166.634	S-10590	CB594	FRANK AIKEN RD	2	1	947.4149
987	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674391	33.8478	single wing	2142433.156	1400059.875	S-10591	CB595	FRANK AIKEN RD	<Null>	1	947.1193
988	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674299	33.847798	single wing	2142461.079	1400059.001	S-10592	CB596	FRANK AIKEN	1	1	947.2083
989	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674303	33.846966	single wing	2142458.637	1399756.447	S-10593	CB597	FRANK AIKEN RD	1	1	945.0651
990	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.6744	33.846967	single wing	2142429.153	1399757.03	S-10594	CB598	FRANK AIKEN	2	1	944.93
991	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674305	33.846139	single wing	2142456.355	1399455.674	S-10595	CB599	FRANK AIKEN RD	<Null>	1	940.3643
992	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674407	33.846146	single wing	2142425.496	1399458.272	S-10596	CB600	FRANK AIKEN RD	2	1	940.601
993	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674251	33.845337	single wing	2142471.349	1399163.719	S-10597	CB601	FRANK AIKEN RD	<Null>	1	933.0923
994	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674344	33.845313	single wing	2142443.07	1399155.05	S-10598	CB602	FRANK AIKEN RD	1	1	934.2686
995	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.653086	33.875325	double wing	2148948.992	1410044.464	S-10599	CB603	CALEY MILL DR	<Null>	1	954.5078
996	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652987	33.875319	double wing	2148979.152	1410042.28	S-10600	CB604	CALEY MILL DR	1	1	954.2268
997	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.6539	33.874535	double wing	2148700.81	1409758.298	S-10601	CB605	CALEY MILL DR	<Null>	1	945.8179
998	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654003	33.874532	double wing	2148669.342	1409757.153	S-10602	CB606	CALEY MILL DR	1	1	945.4331
999	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.653446	33.87361	double wing	2148836.782	1409420.877	S-10603	CB607	CALEY MILL DR	1	1	940.8463
1000	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.653449	33.873526	double wing	2148835.848	1409390.512	S-10604	CB608	CALEY MILL DR	1	1	940.2419
1001	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652169	33.873518	double wing	2149224.389	1409385.725	S-10605	CB609	CALEY MILL CT	1	1	942.5521
1002	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652103	33.873456	double wing	2149244.336	1409363.07	S-10606	CB610	CALEY MILL CT	1	1	941.9737
1003	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652343	33.872301	single wing	2149169.34	1408943.09	S-10607	CB611	CALEY MILL DR	1	1	938.4751

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1004	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652239	33.872288	double wing	2149200.837	1408938.232	S-10608	CB612	CALEY MILL DR	2	1	938.5228
1005	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652272	33.871749	double wing	2149190.071	1408741.993	S-10609	CB613	CALEY MILL DR	1	1	934.3045
1006	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.64919	33.872641	double wing	2150127.009	1409062.289	S-10610	CB614	CALEY MILL LN	<Null>	1	944.7397
1007	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.64917	33.872558	single wing	2150132.841	1409032.177	S-10611	CB615	CALEY MILL LN	1	1	944.8983
1008	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649083	33.871868	single wing	2150158.151	1408780.801	S-10612	CB616	CALEY MILL DR	1	1	935.8472
1009	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.6489	33.871937	single wing	2150213.755	1408805.677	S-10613	CB617	CALEY MILL WAY	<Null>	1	935.8845
1010	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648914	33.87178	single wing	2150209.202	1408748.477	S-10614	CB618	CALEY MILL DR	2	1	933.2918
1011	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.647691	33.871683	double wing	2150580.446	1408711.55	S-10615	CB619	CALEY MILL DR	<Null>	1	910.2017
1012	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.6471	33.87262	double wing	2150761.294	1409051.704	S-10616	CB620	CALEY MILL LN	<Null>	1	918.2884
1013	Yes	Catch Basin	Rectangular	Brick	yes	<Null>	5	-84.685279	33.865754	single wing	2139160.335	1406609.654	S-10617	CB621	OLD LOST MOUNTAIN RI	<Null>	1	930.616
1014	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.685267	33.865574	single wing	2139163.82	1406544.119	S-10618	CB622	OLD LOST MOUNTAIN RI	<Null>	1	927.941
1015	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.685408	33.86563	single wing	2139121.108	1406564.66	S-10619	CB623	OLD LOST MOUNTAIN RI	2	1	929.3162
1016	Yes	Catch Basin	Round	Brick	yes	no	5	-84.685254	33.865407	single wing	2139167.52	1406483.444	S-10620	CB624	OLD LOST MOUNTAIN RI	<Null>	1	926.1461
1017	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.685392	33.8654	single wing	2139125.456	1406480.908	S-10621	CB625	OLD LOST MOUNTAIN RI	2	1	926.7162
1018	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.685245	33.865269	single wing	2139169.839	1406432.97	S-10622	CB626	OLD LOST MOUNTAIN RI	<Null>	1	925.8808
1019	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.685382	33.865265	single wing	2139128.347	1406432.003	S-10623	CB627	OLD LOST MOUNTAIN RI	2	1	926.1318
1020	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.685369	33.865124	single wing	2139132.132	1406380.59	S-10624	CB628	OLD LOST MOUNTAIN RI	1	1	926.5784
1021	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.685241	33.865131	single wing	2139171.008	1406382.807	S-10625	CB629	OLD LOST MOUNTAIN RO	1	1	926.2543
1022	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.68542	33.863679	single wing	2139113.851	1405854.69	S-10626	CB630	OLD LOST MOUNTAIN RI	<Null>	1	930.5531
1023	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.685324	33.863668	single wing	2139142.923	1405850.45	S-10627	CB631	OLD LOST MOUNTAIN RI	1	1	931.1225
1024	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.685578	33.863004	single wing	2139064.524	1405609.343	S-10628	CB632	OLD LOST MOUNTAIN RI	1	1	924.1288
1025	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.68593	33.862347	single wing	2138956.465	1405370.885	S-10629	CB634	OLD LOST MOUNTAIN RI	<Null>	1	913.9558
1026	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.686015	33.862225	single wing	2138930.669	1405326.68	S-10630	CB635	OLD LOST MOUNTAIN RI	1	1	913.5785
1027	Yes	Catch Basin	Round	Brick	yes	yes	2	-84.686101	33.862112	single wing	2138904.358	1405285.724	S-10631	CB636	OLD LOST MOUNTAIN RI	1	1	913.8449
1028	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.686503	33.86169	single wing	2138781.365	1405132.796	S-10632	CB637	OLD LOST MOUNTAIN RI	1	1	912.1824
1029	Yes	Catch Basin	Rectangular	Concrete	yes	yes	1	-84.702776	33.877825	single wing	2133872.096	1411029.309	S-10633	CB638	HOPELAND PARK DR	1	1	949.3708
1030	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70268	33.877821	single wing	2133901.168	1411027.578	S-10634	CB639	HOPELAND DR	1	1	949.214
1031	Yes	Catch Basin	Rectangular	Concrete	yes	yes	1	-84.701939	33.876642	single wing	2134124.073	1410597.585	S-10635	CB640	ST CLAIRE PL	1	1	952.8819
1032	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70164	33.87687	single wing	2134215.211	1410679.796	S-10636	CB641	HOPELAND DR	1	1	949.2122
1033	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701597	33.876939	single wing	2134228.333	1410704.988	S-10637	CB642	HOPELAND DR	1	1	949.2804
1034	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.698744	33.876553	single wing	2135093.64	1410559.999	S-10638	CB643	HOPELAND DR	<Null>	1	932.251
1035	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.698663	33.876597	single wing	2135118.125	1410575.795	S-10639	CB644	HOPELAND DR	1	1	932.2722
1036	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.698644	33.875847	double wing	2135122.538	1410302.862	S-10640	CB645	HOPELAND DR	<Null>	1	928.1155
1037	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.69855	33.875851	double wing	2135151.195	1410304.281	S-10641	CB646	HOPELAND DR	2	1	927.9492
1038	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.700225	33.875428	single wing	2134641.935	1410153.114	S-10642	CB647	ST CLAIRE PL	<Null>	1	942.3551
1039	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.700192	33.875504	single wing	2134652.1	1410180.428	S-10643	CB648	ST CLAIRE PL	1	1	942.4302
1040	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.699261	33.875165	single wing	2134933.857	1410055.734	S-10644	CB649	ST CLAIRE PL	1	1	936.239
1041	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.698725	33.874917	single wing	2135096.081	1409964.673	S-10645	CB650	ST CLAIRE PL	1	1	933.27
1042	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.698795	33.874855	single wing	2135074.98	1409942.136	S-10646	CB651	ST CLAIRE PL	1	1	933.5856
1043	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.703059	33.880839	double wing	2133792.153	1412126.424	S-10647	CB652	HOPELAND PARK DR	<Null>	1	959.252

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1044	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.702852	33.878964	single wing	2133851.417	1411443.844	S-10648	CB653	HOPELAND DR	<Null>	1	958.7242
1045	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.702895	33.878886	single wing	2133838.065	1411415.433	S-10649	CB654	HOPELAND DR	1	1	958.5474
1046	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701766	33.878063	single wing	2134179.233	1411114.403	S-10650	CB655	COUNTRY COVE WAY	1	1	941.495
1047	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.700499	33.877877	double wing	2134563.27	1411044.567	S-10651	CB656	COUNTRY COVE WAY	1	1	935.0313
1048	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.700539	33.877954	double wing	2134551.302	1411072.561	S-10652	CB657	COUNTRY COVE WAY	2	1	935.2756
1049	No	Catch Basin	<Null>	Concrete	<Null>	<Null>	2	-84.672266	33.862595	<Null>	2143104.869	1405440.382	S-10653	CB658	RICHARD SAILORS PKW	<Null>	1	992.3498
1050	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.673041	33.86242	single wing	2142869.394	1405378.096	S-10654	CB659	RICHARD SAILORS PKW	1	1	992.8172
1051	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.67303	33.862264	double wing	2142872.414	1405321.179	S-10655	CB660	RICHARD SAILORS PKW	<Null>	1	991.3721
1062	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.675575	33.863608	single wing	2142102.3	1405813.931	S-10666	CB671	NEW MACLAND RD	<Null>	1	999.1186
1063	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.675556	33.864281	single wing	2142109.342	1406058.692	S-10667	CB672	NEW MACLAND RD	1	1	995.4093
1065	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.675566	33.864975	single wing	2142107.313	1406311.591	S-10669	CB674	NEW MACLAND RD	2	1	993.1423
1066	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.675564	33.865251	single wing	2142108.673	1406411.903	S-10670	CB675	NEW MACLAND RD	1	1	991.9504
1067	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.675555	33.865557	single wing	2142111.772	1406523.032	S-10671	CB676	NEW MACLAND RD	1	1	990.7692
1068	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.675438	33.865713	single wing	2142147.765	1406579.784	S-10672	CB677	NEW MACLAND ROAD	<Null>	1	991.5344
1069	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.675528	33.865832	single wing	2142120.529	1406623.185	S-10673	CB678	NEW MACLAND RD	1	1	989.3338
1070	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.68354	33.858945	single wing	2139675.996	1404129.401	S-10674	CB679	LEWIS ROAD	1	1	946.8536
1071	No	Catch Basin	<Null>	Block	<Null>	<Null>	5	-84.683657	33.858607	<Null>	2139639.628	1404006.332	S-10675	CB680	LEWIS ROAD	1	1	937.6179
1072	No	Catch Basin	<Null>	Block	<Null>	<Null>	5	-84.683793	33.858337	<Null>	2139597.958	1403908.469	S-10676	CB681	LEWIS ROAD	1	1	928.9554
1073	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.684047	33.85775	single wing	2139519.756	1403695.33	S-10677	CB684	LEWIS ROAD @ ROUNDA	1	1	921.1542
1074	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.684462	33.858888	single wing	2139396.041	1404110.046	S-10678	CB685	HOTEL AVENUE	<Null>	1	934.4228
1075	No	Catch Basin	<Null>	Brick	<Null>	<Null>	5	-84.684468	33.858806	<Null>	2139393.955	1404080.084	S-10679	CB686	HOTEL AVENUE	1	1	934.6384
1076	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.684487	33.85763	double wing	2139386.042	1403652.169	S-10680	CB687	MURRAY AVENUE	2	1	914.4643
1077	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.684174	33.85716	single wing	2139480.223	1403480.736	S-10681	CB688	LEWIS ROAD	<Null>	1	916.5862
1078	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.683589	33.856661	single wing	2139656.821	1403298.173	S-10682	CB690	LEWIS ROAD	2	1	918.1952
1079	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683436	33.856427	double wing	2139702.975	1403213.052	S-10683	CB691	LEWIS ROAD	<Null>	1	917.6113
1080	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.683539	33.856377	double wing	2139671.445	1403194.93	S-10684	CB692	LEWIS ROAD	1	1	917.1123
1081	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.682478	33.854938	single wing	2139990.956	1402669.792	S-10685	CB693	LEWIS ROAD	<Null>	1	938.9794
1082	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.682401	33.854983	single wing	2140014.402	1402685.838	S-10686	CB694	LEWIS ROAD	1	1	939.2438
1083	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.682758	33.855507	single wing	2139907.132	1402876.932	S-10687	CB695	LEWIS ROAD	2	1	927.9707
1084	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682842	33.855468	single wing	2139881.417	1402863.039	S-10688	CB696	LEWIS ROAD	1	1	928.1418
1085	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.683203	33.856066	single wing	2139772.963	1403081.329	S-10689	CB697	LEWIS ROAD	2	1	919.1867
1086	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.683311	33.856025	single wing	2139740.065	1403066.323	S-10690	CB698	LEWIS ROAD	2	1	918.5076
1087	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.682125	33.854277	single wing	2140097.028	1402428.553	S-10691	CB699	LEWIS ROAD	<Null>	1	952.3988
1088	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.682219	33.854326	single wing	2140068.463	1402446.66	S-10692	CB700	LEWIS ROAD	1	1	950.5774
1089	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.682318	33.852821	single wing	2140035.703	1401898.912	S-10693	CB701	LEWIS ROAD	<Null>	1	949.5438
1090	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.682426	33.852832	single wing	2140002.963	1401903.271	S-10694	CB702	LEWIS ROAD	1	1	949.0341
1091	Yes	Catch Basin	Rectangular	Plastic	yes	no	5	-84.682478	33.852084	single wing	2139985.918	1401630.964	S-10695	CB703	LEWIS ROAD	<Null>	1	936.0973
1092	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.682594	33.852111	single wing	2139950.589	1401641.015	S-10696	CB704	LEWIS ROAD	2	1	935.2644
1093	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.682896	33.851957	single wing	2139858.742	1401585.468	S-10697	CB705	LEWIS EXTENSION	<Null>	1	928.578
1094	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.682957	33.85282	double wing	2139841.76	1401899.564	S-10698	CB706	LEWIS EXTENSION	<Null>	1	921.0064

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1095	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682864	33.852795	double wing	2139869.765	1401890.251	S-10699	CB707	LEWIS EXTENSION	1	1	920.9291
1096	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.683016	33.852363	single wing	2139823.072	1401733.298	S-10700	CB708	LEWIS EXTENSION	2	1	923.8259
1097	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.683387	33.855233	single wing	2139715.708	1402778.178	S-10701	CB709	LEWIS EXTENSION	<Null>	1	909.8158
1098	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.683471	33.855195	single wing	2139690.132	1402764.52	S-10702	CB710	LEWIS EXTENSION	1	1	909.7994
1099	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.683786	33.855856	double wing	2139595.689	1403005.655	S-10703	CB711	LEWIS EXTENSION	1	1	908.4164
1100	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.682818	33.851425	single wing	2139881.449	1401391.94	S-10704	CB712	LEWIS ROAD	<Null>	1	922.8605
1101	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682889	33.851454	single wing	2139859.911	1401402.581	S-10705	CB713	LEWIS ROAD	1	1	922.2448
1102	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683014	33.850852	single wing	2139820.866	1401183.46	S-10706	CB714	LEWIS ROAD	<Null>	1	915.3118
1103	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683195	33.850925	single wing	2139766.129	1401210.415	S-10707	CB715	LEWIS ROAD	2	1	915.2299
1104	Yes	Catch Basin	Rectangular	Plastic	yes	no	5	-84.683249	33.850469	single wing	2139748.703	1401044.557	S-10708	CB716	LEWIS ROAD	<Null>	1	913.4335
1105	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.683412	33.850536	single wing	2139699.527	1401069.251	S-10709	CB717	LEWIS ROAD	2	1	913.3667
1106	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.683988	33.849528	single wing	2139522.75	1400703.41	S-10710	CB718	LEWIS ROAD	<Null>	1	909.2046
1107	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.68387	33.849388	single wing	2139558.2	1400652.356	S-10711	CB719	LEWIS ROAD	<Null>	1	909.0534
1108	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.684236	33.848893	single wing	2139446.085	1400472.668	S-10712	CB721	LEWIS ROAD	<Null>	1	907.9131
1109	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.684529	33.848566	single wing	2139356.654	1400353.943	S-10713	CB722	LEWIS ROAD	<Null>	1	907.9264
1110	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.684365	33.848725	double wing	2139406.614	1400411.729	S-10714	CB723	LEWIS ROAD	2	1	907.7788
1111	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.684614	33.848635	single wing	2139330.922	1400379.208	S-10715	CB724	LEWIS ROAD	<Null>	1	907.1163
1112	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.684342	33.848939	single wing	2139414.17	1400489.56	S-10716	CB725	LEWIS ROAD	<Null>	1	906.669
1113	Yes	Catch Basin	<Null>	Concrete	yes	yes	4	-84.684461	33.848782	double wing	2139377.569	1400432.712	S-10717	CB726	LEWIS ROAD	3	1	906.5025
1114	Yes	Catch Basin	Rectangular	Concrete	yes	no	4	-84.684907	33.848277	single wing	2139241.5	1400249.603	S-10718	CB727	LEWIS ROAD	<Null>	1	909.2362
1115	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.685	33.848024	single wing	2139212.64	1400157.726	S-10719	CB728	LEWIS ROAD	<Null>	1	909.3577
1116	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.684746	33.848274	single wing	2139290.307	1400248.038	S-10720	CB729	LEWIS ROAD	2	1	908.3444
1117	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.685445	33.846297	single wing	2139074.526	1399529.765	S-10721	CB731	LEWIS ROAD	<Null>	1	932.5374
1118	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685239	33.846293	single wing	2139136.971	1399528.058	S-10722	CB732	LEWIS ROAD	1	1	932.7707
1119	Yes	Catch Basin	Rectangular	Plastic	yes	yes	4	-84.685441	33.847074	single wing	2139076.879	1399812.474	S-10723	CB733	LEWIS ROAD	1	1	921.7027
1120	Yes	Catch Basin	Rectangular	Plastic	yes	yes	4	-84.68524	33.847071	single wing	2139138.153	1399811.169	S-10724	CB734	LEWIS ROAD	2	1	921.4109
1121	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685233	33.847461	single wing	2139140.945	1399953.2	S-10725	CB735	LEWIS ROAD	1	1	915.7019
1122	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685307	33.847698	single wing	2139118.934	1400039.314	S-10726	CB736	LEWIS ROAD	1	1	914.2444
1123	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685161	33.847744	single wing	2139163.151	1400055.896	S-10727	CB737	LEWIS ROAD	2	1	912.3785
1124	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.685488	33.845553	single wing	2139059.812	1399259.378	S-10728	CB738	LEWIS ROAD	1	1	935.2903
1125	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685249	33.845408	single wing	2139132.213	1399206.004	S-10729	CB739	LEWIS ROAD	1	1	936.107
1126	Yes	Catch Basin	Round	Brick	yes	no	4	-84.685266	33.84439	single wing	2139125.355	1398835.748	S-10730	CB740	LEWIS ROAD	<Null>	1	933.3659
1127	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685154	33.844418	single wing	2139159.187	1398845.72	S-10731	CB741	LEWIS ROAD	1	1	932.4109
1128	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.68498	33.843874	single wing	2139211.241	1398647.504	S-10732	CB742	LEWIS ROAD	1	1	924.9841
1129	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685172	33.84383	single wing	2139152.604	1398631.601	S-10733	CB743	LEWIS ROAD	1	1	924.6765
1130	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.686051	33.842034	single wing	2138882.44	1397979.414	S-10734	CB744	OGLESBY ROAD	<Null>	1	954.0726
1131	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685801	33.842119	single wing	2138958.564	1398010.02	S-10735	CB745	OGLESBY ROAD	2	1	949.3191
1132	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.685334	33.842286	single wing	2139100.723	1398070.12	S-10736	CB746	OGLESBY ROAD	<Null>	1	942.9148
1133	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685422	33.842357	single wing	2139074.06	1398096.291	S-10737	CB747	OGLESBY ROAD	2	1	941.5707
1134	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.685016	33.842696	single wing	2139197.95	1398218.736	S-10738	CB748	OGLESBY ROAD	<Null>	1	934.2508

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1135	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685128	33.842733	single wing	2139164.143	1398232.69	S-10739	CB749	OGLESBY ROAD	1	1	932.7496
1136	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.6849	33.843181	single wing	2139234.153	1398395.073	S-10740	CB750	LEWIS ROAD	<Null>	1	926.2743
1137	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685021	33.843183	single wing	2139197.269	1398396.274	S-10741	CB751	LEWIS ROAD	2	1	924.8929
1138	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685052	33.843443	double wing	2139188.6	1398490.662	S-10742	CB752	LEWIS ROAD	1	1	923.1074
1139	Yes	Catch Basin	Rectangular	Brick	yes	yes	4	-84.685089	33.843563	single wing	2139177.488	1398534.446	S-10743	CB753	LEWIS ROAD	4	2	923.1465
1140	Yes	Catch Basin	Rectangular	Concrete	yes	no	4	-84.684966	33.843566	double wing	2139214.899	1398535.282	S-10744	CB754	LEWIS ROAD	2	2	924.1024
1141	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.676211	33.882383	single wing	2141943.213	1412646.974	S-10745	CB755	GROVELAND PARK DR	1	1	982.7338
1142	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.67621	33.8823	single wing	2141943.152	1412616.671	S-10746	CB756	GROVELAND PARK DR	1	1	982.5972
1143	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.674463	33.882512	single wing	2142473.692	1412691.011	S-10747	CB757	GROVELAND PARK DRIV	<Null>	1	992.3952
1144	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.673932	33.88251	single wing	2142634.86	1412689.668	S-10748	CB758	GROVELAND PARK DR	1	1	989.1106
1145	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.673939	33.882427	single wing	2142632.728	1412659.272	S-10749	CB759	GROVELAND PARK DR	1	1	989.1453
1146	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.673884	33.881682	double wing	2142647.947	1412388.097	S-10750	CB760	VINEGROVE ST	<Null>	1	983.1648
1147	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.673788	33.881683	double wing	2142677.263	1412388.595	S-10751	CB761	VINE GROVE ST	2	1	983.1471
1148	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.675778	33.881578	single wing	2142073.016	1412353.333	S-10752	CB762	LILY CREST WAY	<Null>	1	980.8151
1149	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.675	33.881564	single wing	2142309.114	1412346.835	S-10753	CB763	VINE RIDGE DRIVE	2	1	984.8289
1150	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.674999	33.881646	single wing	2142309.463	1412376.699	S-10754	CB764	LILY CREST WAY	<Null>	1	984.6701
1151	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.674799	33.881569	single wing	2142370.085	1412348.469	S-10755	CB765	VINE RIDGE DRIVE	1	1	986.5552
1152	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.674	33.881009	single wing	2142611.486	1412143.445	S-10756	CB766	VINE RIDGE DR	<Null>	1	987.1354
1153	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.673955	33.88109	single wing	2142625.315	1412172.814	S-10757	CB767	VINE RIDGE DR	2	1	986.887
1154	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.673105	33.880992	single wing	2142883.06	1412135.857	S-10758	CB768	VINE RIDGE DR	<Null>	1	981.482
1155	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.672756	33.881205	single wing	2142989.365	1412213.028	S-10759	CB769	VINE RIDGE	1	1	979.2345
1156	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.673289	33.88249	single wing	2142829.952	1412681.481	S-10760	CB770	GROVELAND PARK DR	<Null>	1	984.8511
1157	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.672895	33.882274	single wing	2142949.119	1412602.087	S-10761	CB771	GROVELAND PARK DRIV	1	1	981.5347
1158	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.666855	33.860801	single wing	2144744.218	1404779.647	S-10762	CB772	RICHARD SAILORS PKW	<Null>	1	985.1194
1159	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.667249	33.860619	single wing	2144624.462	1404713.836	S-10763	CB773	RICHARD SAILORS PKW	1	1	987.106
1160	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.668001	33.860755	single wing	2144396.454	1404764.535	S-10764	CB774	RICHARD SAILORS PKW	<Null>	1	988.142
1161	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.66798	33.860868	single wing	2144403.062	1404805.787	S-10765	CB775	RICHARD SAILORS PKW	1	1	989.0014
1162	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.6683	33.860999	single wing	2144305.936	1404853.796	S-10766	CB776	RICHARD SAILORS PKW	1	1	986.4655
1163	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.668339	33.860801	single wing	2144293.814	1404781.74	S-10767	CB777	RICHARD SAILORS PKW	<Null>	1	986.8449
1164	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.669266	33.861137	single wing	2144013.137	1404905.359	S-10768	CB778	RICHARD SAILORS PKW	2	1	975.8189
1165	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.669293	33.861024	single wing	2144004.591	1404864.481	S-10769	CB779	RICHARD SAILORS PKW	<Null>	1	976.8042
1166	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.669887	33.861136	single wing	2143824.523	1404906.028	S-10770	CB780	RICHARD SAILORS PKW	<Null>	1	973.1777
1167	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.669849	33.861247	single wing	2143836.316	1404946.369	S-10771	CB781	RICHARD SAILORS PKW	1	1	972.2567
1168	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.670006	33.861282	double wing	2143788.557	1404959.138	S-10772	CB782	RICHARD SAILORS PKW	1	1	972.181
1169	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.670423	33.861418	single wing	2143662.154	1405009.387	S-10773	CB783	RICHARD D SAILORS PK	1	1	972.704
1170	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.670284	33.861347	single wing	2143704.263	1404983.217	S-10774	CB784	RICHARD D SAILORS PK	1	<Null>	972.2233
1171	Yes	Catch Basin	<Null>	Brick	yes	yes	5	-84.670172	33.861198	single wing	2143738.172	1404928.951	S-10775	CB785	RICHARD SAILORS PKW	1	<Null>	972.7174
1172	Yes	Catch Basin	<Null>	Brick	yes	yes	5	-84.670043	33.86117	double wing	2143777.198	1404918.705	S-10776	CB786	RICHARD D SAILORS PK	1	1	972.6973
1173	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.670858	33.861497	single wing	2143530.37	1405038.93	S-10777	CB787	RICHARD SAILORS PKW	2	1	976.2828
1174	Yes	Catch Basin	<Null>	Other	yes	no	5	-84.670889	33.861418	single wing	2143520.789	1405010.187	S-10778	CB788	RICHARD SAILORS PKW	1	1	976.9702

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1175	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.671827	33.861673	single wing	2143236.555	1405104.169	S-10779	CB789	RICHARD SAILORS PKW	<Null>	1	983.3408
1176	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.671779	33.861782	single wing	2143251.231	1405143.893	S-10780	CB790	RICHARD SAILORS PKW	2	1	982.6219
1177	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.672754	33.861965	single wing	2142955.662	1405211.793	S-10781	CB791	RICHARD SAILORS PKW	<Null>	1	989.9167
1178	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.672702	33.862083	single wing	2142971.581	1405254.703	S-10782	CB792	RICHARD SAILORS PKW	2	1	988.9228
1179	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.672902	33.862168	single wing	2142911.234	1405285.871	S-10783	CB793	RICHARD SAILORS PKW	1	1	990.2347
1180	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.673198	33.862266	single wing	2142821.269	1405321.973	S-10784	CB794	RICHARD SAILORS PKW	1	1	992.2537
1181	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.673648	33.862402	single wing	2142685.09	1405372.184	S-10785	CB795	RICHARD SAILORS	2	1	995.3972
1182	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.673697	33.862291	single wing	2142669.867	1405332.143	S-10786	CB796	RICHARD SAILORS PKW	<Null>	1	996.1352
1183	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.674638	33.862552	single wing	2142384.908	1405428.32	S-10787	CB797	RICHARD SAILORS PKW	<Null>	1	1002.693
1186	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.676623	33.863171	single wing	2141783.352	1405656.711	S-10790	CB800	RICHARD D SAILORS PK	1	1	1001.397
1187	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.677525	33.863454	single wing	2141510.103	1405760.932	S-10791	CB801	RICHARD SAILORS PKW	<Null>	1	993.8523
1188	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.67747	33.86356	single wing	2141526.967	1405799.459	S-10792	CB802	RICHARD SAILORS PKW	1	1	992.8271
1189	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.678347	33.863711	single wing	2141260.917	1405855.843	S-10793	CB803	RICHARD SAILORS	<Null>	1	986.389
1191	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.679128	33.864076	single wing	2141024.51	1405989.703	S-10795	CB805	RICHARD SAILORS PKW	2	1	977.5991
1192	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.679253	33.864024	single wing	2140986.599	1405970.866	S-10796	CB806	RICHARD SAILORS PKW	<Null>	1	977.4572
1193	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.680115	33.864263	single wing	2140725.448	1406059.344	S-10797	CB807	RICHARD SAILORS PKW	<Null>	1	970.9931
1194	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.680071	33.864375	single wing	2140738.877	1406099.739	S-10798	CB808	RICHARD SAILORS PKW	1	1	970.143
1195	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.680302	33.86445	single wing	2140668.734	1406127.369	S-10799	CB809	RICHARD SAILORS PKW	1	1	968.1491
1196	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.68046	33.864501	single wing	2140621.054	1406146.418	S-10800	CB810	RICHARD SAILORS PKW	1	1	966.784
1197	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.680593	33.864545	single wing	2140580.713	1406162.701	S-10801	CB811	RICHARD SAILORS PKW	1	1	965.6669
1198	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.680803	33.86449	single wing	2140516.796	1406142.82	S-10802	CB812	RICHARD SAILORS PKW	<Null>	1	965.0844
1199	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.68075	33.864598	single wing	2140533.081	1406182.203	S-10803	CB813	RICHARD SAILORS PKW	2	1	964.1643
1201	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.681162	33.864737	single wing	2140408.248	1406233.112	S-10805	CB815	RICHARD SAILORS PKW	1	1	960.729
1202	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.681629	33.864805	single wing	2140266.708	1406258.543	S-10806	CB816	RICHARD SAILORS PKW	<Null>	1	957.7678
1203	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.681615	33.86489	single wing	2140271.066	1406289.522	S-10807	CB817	RICHARD SAILORS PKW	2	1	956.9729
1204	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.682365	33.865142	single wing	2140043.897	1406382.465	S-10808	CB818	RICHARD SAILORS PKW	2	<Null>	950.4639
1205	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.68241	33.865034	single wing	2140030.131	1406343.07	S-10809	CB819	RICHARD SAILORS PKW	<Null>	1	951.4237
1206	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.683254	33.865455	single wing	2139774.7	1406497.624	S-10810	CB820	RICHARD SAILORS PKW	1	1	942.4174
1207	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.683317	33.865352	single wing	2139755.4	1406460.181	S-10811	CB821	RICHARD SAILORS	<Null>	1	943.5795
1208	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.683549	33.865574	single wing	2139685.326	1406541.452	S-10812	CB822	RICHARD SAILORS PKW	1	1	939.4201
1209	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.683834	33.865568	single wing	2139598.74	1406539.749	S-10813	CB823	RICHARD SAILORS PKW	1	1	938.6503
1210	Yes	Catch Basin	Round	Metal	yes	no	5	-84.684908	33.866038	single wing	2139273.555	1406712.538	S-10814	CB824	RICHARD SAILORS PKW	<Null>	1	935.3304
1211	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.684758	33.865972	single wing	2139319.181	1406688.064	S-10815	CB825	RICHARD SAILORS PKW	1	1	934.8918
1212	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.684804	33.865898	single wing	2139304.971	1406661.208	S-10816	CB826	RICHARD SAILORS PKW	1	1	934.2152
1213	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.684661	33.865835	single wing	2139348.314	1406638.238	S-10817	CB827	RICHARD SAILORS PKW	2	1	934.0387
1214	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.684614	33.86591	single wing	2139362.524	1406665.285	S-10818	CB828	RICHARD SAILORS PKW	<Null>	1	934.5874
1215	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.684462	33.865858	single wing	2139408.778	1406646.062	S-10819	CB829	RICHARD SAILORS PKW	<Null>	1	934.6946
1216	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.684515	33.865772	single wing	2139392.298	1406614.986	S-10820	CB830	RICHARD SAILORS PKW	2	1	934.233
1217	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.691739	33.866665	single wing	2137201.099	1406951.122	S-10821	CB831	RICHARD D SAILORS PK	1	1	956.5431
1218	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.692433	33.866612	single wing	2136990.56	1406932.856	S-10822	CB832	RICHARD D SAILORS PK	3	<Null>	945.1279

MS4 Catch Basins Inventory
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1219	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.692445	33.866496	single wing	2136986.514	1406890.771	S-10823	CB833	RICHARD D SAILORS PKY	<Null>	1	947.4006
1220	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.692939	33.866539	single wing	2136836.846	1406907.218	S-10824	CB834	RICHARD D SAILORS PKY	<Null>	1	939.8742
1221	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.692885	33.86665	single wing	2136853.447	1406947.371	S-10825	CB835	RICHARD D SAILORS PKY	1	2	938.3172
1222	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.69342	33.866642	single wing	2136690.844	1406945.408	S-10826	CB836	RICHARD D SAILORS PKY	<Null>	1	934.0291
1223	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.69338	33.866752	single wing	2136703.342	1406985.387	S-10827	CB837	RICHARD D SAILORS PKY	2	1	932.8084
1224	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.693891	33.866666	single wing	2136547.878	1406954.915	S-10828	CB838	RICHARD D SAILORS PKY	<Null>	1	930.5045
1225	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.693907	33.86688	single wing	2136543.681	1407032.517	S-10829	CB839	RICHARD D SAILORS PKY	2	1	929.922
1226	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.695247	33.867199	single wing	2136137.364	1407150.728	S-10830	CB840	RICHARD D SAILORS PKY	<Null>	1	934.7834
1227	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.69516	33.866969	single wing	2136163.328	1407066.977	S-10831	CB841	RICHARD D SAILORS PKY	1	1	934.2639
1228	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.696541	33.867386	single wing	2135745.115	1407220.948	S-10832	CB842	RICHARD DVSAILORS PK	1	1	935.5664
1229	Yes	Catch Basin	<Null>	Brick	yes	<Null>	2	-84.696062	33.867427	double wing	2135890.322	1407235.084	S-10833	CB843	RICHARD D SAILORS PKY	<Null>	1	935.1436
1230	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.696427	33.867273	single wing	2135779.343	1407179.622	S-10834	CB844	RICHARD D SAILORS PA	1	1	935.1783
1231	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.696139	33.867202	other	2135866.788	1407153.454	S-10835	CB845	RICHARD D SAILORS PKY	2	1	935.4782
1232	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.696748	33.868041	single wing	2135683.442	1407459.571	S-10836	CB846	CH JAMES PKWY	<Null>	1	929.951
1233	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.653228	33.866409	single wing	2148890.687	1406800.5	S-10837	CB847	HOPKINS CT	1	1	903.1762
1234	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.653217	33.866332	single wing	2148893.777	1406772.539	S-10838	CB848	HOPKINS CT	1	1	902.9122
1235	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.65278	33.866914	single wing	2149027.374	1406983.415	S-10839	CB849	HOPKINS CT	<Null>	1	910.6609
1236	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652815	33.866845	single wing	2149016.837	1406958.323	S-10840	CB850	HOPKINS CT	1	1	910.058
1237	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652787	33.866702	single wing	2149024.898	1406906.34	S-10841	CB851	HOPKINS CT	1	1	908.9872
1238	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652709	33.866663	single wing	2149048.769	1406892.233	S-10842	CB852	HOPKINS CT	1	1	909.071
1239	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.653755	33.868985	single wing	2148735.097	1407738.66	S-10843	CB853	HOPKINS CT	<Null>	1	915.6426
1240	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654096	33.869097	single wing	2148631.743	1407779.685	S-10844	CB854	HOPKINS CT	1	1	914.3621
1241	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.651573	33.868471	double wing	2149396.498	1407548.297	S-10845	CB855	HOPKINS CT	<Null>	1	913.0264
1242	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65167	33.868473	double wing	2149367.072	1407549.069	S-10846	CB856	HOPKINS CT	1	1	913.136
1243	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.651751	33.868403	single wing	2149342.305	1407523.802	S-10847	CB857	STEPHANIE CT	1	1	913.1236
1244	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.651754	33.868323	single wing	2149341.336	1407494.749	S-10848	CB858	STEPHANIE CT	1	1	912.3135
1245	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.651764	33.867907	single wing	2149337.652	1407343.485	S-10849	CB859	HOPKINS COURT	2	1	910.0992
1246	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65126	33.867389	single wing	2149489.714	1407154.034	S-10850	CB860	TEN OAKS COURT	2	1	906.4862
1247	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.651303	33.867316	single wing	2149476.632	1407127.731	S-10851	CB861	TEN OAKS COURT	1	1	906.2649
1248	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.650649	33.867323	single wing	2149675.096	1407129.242	S-10852	CB862	TEN OAKS CIR	<Null>	1	909.461
1249	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650742	33.867342	single wing	2149646.814	1407136.244	S-10853	CB863	TEN OAKS CIR	1	1	909.1659
1250	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.650036	33.866865	single wing	2149860.235	1406961.866	S-10854	CB864	TEN OAKS CT	<Null>	1	908.7443
1251	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649634	33.869087	single wing	2149986.14	1407769.79	S-10855	CB865	TEN OAKS CIR	<Null>	1	910.7122
1252	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649632	33.869166	single wing	2149986.877	1407798.631	S-10856	CB866	TEN OAKS CIR	1	1	910.8268
1253	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649882	33.867893	single wing	2149908.884	1407335.654	S-10857	CB867	CHRYS ST	<Null>	1	911.5212
1254	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649787	33.867878	single wing	2149937.796	1407330.05	S-10858	CB868	CHRYS ST	1	1	911.5321
1255	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649242	33.867832	single wing	2150103.021	1407312.387	S-10859	CB869	TEN OAKS CIR	1	1	906.9183
1256	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.64919	33.867768	single wing	2150118.751	1407289.213	S-10860	CB870	TEN OAKS CIR	1	1	906.6249
1257	Yes	Catch Basin	<Null>	Brick	yes	no	5	-84.686221	33.860325	single wing	2138864.595	1404635.397	S-10861	CB871	POWDER SPRINGS DALL	<Null>	1	912.0442
1258	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.689483	33.86267	single wing	2137878.628	1405493.869	S-10862	CB872	POWDER SPRINGS DALL	1	1	927.1496

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1259	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.700308	33.8664	single wing	2134599.601	1406868.163	S-10863	CB875	POWDER SPRINGS DALL	<Null>	1	939.855
1260	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.700943	33.86674	single wing	2134407.539	1406992.58	S-10864	CB876	POWDER SPRINGS DALL	<Null>	1	942.8794
1261	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.700992	33.86687	single wing	2134392.902	1407039.959	S-10865	CB877	POWDER SPRINGS DALL	<Null>	1	942.9079
1262	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701078	33.86683	single wing	2134366.778	1407025.863	S-10866	CB878	POWDER SPRINGS DALL	2	1	942.0386
1263	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701209	33.866882	single wing	2134327.143	1407044.841	S-10867	CB879	POWDER SPRINGS DALL	1	1	941.8768
1264	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.701331	33.867424	double wing	2134290.969	1407242.399	S-10868	CB880	POWDER SPRINGS DALL	<Null>	1	943.1898
1265	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.701705	33.867605	single wing	2134177.991	1407308.816	S-10869	CB881	POWDER SPRINGS DALL	<Null>	1	942.7594
1266	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.701957	33.867292	single wing	2134100.824	1407195.063	S-10870	CB882	POWDER SPRINGS DALL	<Null>	1	940.3752
1267	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701758	33.867144	single wing	2134160.942	1407141.103	S-10871	CB883	POWDER SPRINGS DALL	1	1	940.3896
1268	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.70172	33.867006	single wing	2134172.174	1407090.706	S-10872	CB884	POWDER SPRINGS DALL	<Null>	<Null>	940.3151
1269	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.701852	33.866964	single wing	2134132.083	1407075.762	S-10873	CB885	POWDER SPRINGS DALL	1	1	940.0402
1270	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.702148	33.867075	single wing	2134042.426	1407116.446	S-10874	CB886	POWDER SPRINGS DALL	1	1	938.0217
1271	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70285	33.867315	single wing	2133829.915	1407204.956	S-10875	CB887	POWDER SPRINGS DALL	1	1	934.2158
1272	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70376	33.867627	single wing	2133554.205	1407319.892	S-10876	CB888	POWDER SPRINGS DALL	1	1	928.7359
1273	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.704315	33.867821	single wing	2133386.018	1407391.496	S-10877	CB889	POWDER SPRINGS DALL	1	1	925.6663
1274	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.705287	33.868129	single wing	2133091.474	1407505.091	S-10878	CB890	POWDER SPRINGS DALL	1	1	920.8386
1275	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.705905	33.868341	double wing	2132904.43	1407583.015	S-10879	CB891	POWDER SPRINGS DALL	1	1	919.1722
1276	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690273	33.863466	single wing	2137640.254	1405784.675	S-10880	CB892	POWDER SPRINGS DALL	1	1	938.7186
1277	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690441	33.863341	single wing	2137589.017	1405739.481	S-10881	CB893	POWDER SPRINGS DALL	2	1	936.1394
1278	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690849	33.863493	single wing	2137465.587	1405795.378	S-10882	CB894	POWDER SPRINGS DALL	1	1	937.092
1279	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690966	33.863585	double wing	2137430.104	1405829.008	S-10883	CB895	POWDER SPRINGS DALL	1	1	935.0753
1289	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.718581	33.879101	single wing	2129077.78	1411518.987	S-10893	CB905	POWDER SPRINGS DALL	<Null>	1	960.059
1290	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.692697	33.860103	single wing	2136898.313	1404564.689	S-10894	CB906	SWEETWATER AVENUE	<Null>	1	914.5085
1291	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692656	33.86019	single wing	2136910.893	1404596.402	S-10895	CB907	SWEETWATER AVENUE	1	1	914.411
1292	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693209	33.860402	single wing	2136743.264	1404674.538	S-10896	CB908	SWEETWATER AVENUE	<Null>	1	916.6367
1293	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693152	33.860495	single wing	2136760.913	1404707.986	S-10897	CB909	SWEETWATER AVENUE	1	1	916.6896
1294	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.693692	33.861332	single wing	2136598.377	1405013.698	S-10898	CB910	SWEETWATER AVENUE	<Null>	1	916.9955
1295	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693777	33.861394	single wing	2136572.877	1405036.239	S-10899	CB911	GLENDIANNE WAY	1	1	917.4316
1296	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693778	33.861475	single wing	2136572.71	1405065.715	S-10900	CB912	GLENDIANNE WAY	1	1	917.451
1297	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693785	33.861869	double wing	2136571.144	1405209.209	S-10901	CB913	SWEETWATER AVENUE	1	1	914.2815
1298	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693683	33.861919	double wing	2136602.424	1405227.17	S-10902	CB914	SWEETWATER AVENUE	1	1	914.0203
1300	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.694783	33.862144	single wing	2136268.823	1405310.652	S-10904	CB916	SWEETWATER AVENUE	<Null>	1	920.3946
1301	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694654	33.862215	single wing	2136308.184	1405336.507	S-10905	CB917	SWEETWATER AVENUE	1	1	919.8001
1302	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695546	33.861699	single wing	2136036.354	1405149.783	S-10906	CB918	LAGRONE STREET	<Null>	1	920.9127
1303	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.69545	33.861496	single wing	2136064.997	1405076.054	S-10907	CB919	LAGRONE STREET	1	1	920.1231
1304	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.695544	33.861238	single wing	2136036.079	1404982.361	S-10908	CB920	LAGRONE STREET	1	1	919.5121
1305	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695165	33.860708	single wing	2136150.191	1404788.849	S-10909	CB921	LAGRONE STREET	<Null>	1	916.5418
1306	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.695075	33.860754	single wing	2136177.625	1404805.333	S-10910	CB922	LAGRONE STREET	2	1	916.4232
1307	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694598	33.860712	single wing	2136322.289	1404789.443	S-10911	CB923	LAGRONE STREET	1	1	914.7202
1308	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.694597	33.860634	single wing	2136322.447	1404760.97	S-10912	CB924	LAGRONE STREET	1	1	914.5812

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1309	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.696042	33.860933	double wing	2135884.313	1404872.106	S-10913	CB925	JELLICO DRIVE	<Null>	1	916.6107
1310	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.696123	33.86097	double wing	2135859.734	1404885.697	S-10914	CB926	JELLICO DRIVE	1	1	916.4132
1312	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690895	33.864473	single wing	2137453.337	1406152.172	S-10916	CB928	SILVER SPRINGS WAY	1	1	936.9107
1313	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691008	33.864515	single wing	2137419.124	1406167.748	S-10917	CB929	SILVER SPRINGS WAY	1	1	936.6807
1314	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690673	33.865322	single wing	2137522.464	1406460.761	S-10918	CB930	SILVER SPRINGS WAY	2	1	940.7329
1315	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.690775	33.865467	single wing	2137491.599	1406513.783	S-10919	CB931	SILVER SPRINGS BLVD	<Null>	1	941.2945
1316	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690565	33.865542	single wing	2137555.63	1406540.598	S-10920	CB932	SILVER SPRINGS BOULE	1	1	941.8216
1317	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.69028	33.865438	single wing	2137641.861	1406502.501	S-10921	CB933	SILVER SPRINGS WAY	1	1	941.8899
1318	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.689701	33.865785	single wing	2137818.288	1406627.54	S-10922	CB934	FLOWERING BRANCH	<Null>	1	943.7041
1319	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689773	33.865651	double wing	2137796.073	1406578.982	S-10923	CB935	FLOWERING BRANCH	1	1	943.4299
1320	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.691688	33.864868	single wing	2137213.432	1406296.965	S-10924	CB936	SPRING BEAUTY COURT	1	1	927.3324
1321	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691767	33.864914	single wing	2137189.394	1406313.987	S-10925	CB937	SPRING BEAUTY COURT	1	1	927.0369
1322	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691762	33.864572	single wing	2137190.438	1406189.592	S-10926	CB938	FLORAL RIDGE LN	<Null>	1	927.2564
1323	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691718	33.86465	single wing	2137203.742	1406217.823	S-10927	CB939	FLORAL RIDGE LN	1	1	927.5151
1324	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.692219	33.86462	single wing	2137051.751	1406207.641	S-10928	CB940	SPRING BEAUTY CT	<Null>	1	923.5136
1325	revisit	Catch Basin	<Null>	Concrete	<Null>	<Null>	2	-84.692413	33.865604	double wing	2136994.533	1406565.877	S-10929	CB941	SPRING BEAUTY CT	<Null>	1	930.7462
1326	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689009	33.865168	double wing	2138027.272	1406402.161	S-10930	CB942	FLOWERING BRANCH	1	1	942.7685
1327	Yes	Catch Basin	Round	Concrete	yes	<Null>	2	-84.68883	33.865641	double wing	2138082.366	1406574.029	S-10931	CB943	FLOWERING BRANCH	<Null>	1	943.2222
1328	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.688218	33.864913	double wing	2138266.665	1406308.054	S-10932	CB944	FLOWERING BRANCH	1	1	942.8519
1329	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687982	33.86486	double wing	2138338.414	1406288.478	S-10933	CB945	LILAC SPRINGS DRIVE	1	1	942.6664
1330	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.688165	33.864447	single wing	2138282.02	1406138.367	S-10934	CB946	LILAC SPRINGS DR	1	1	942.684
1331	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.688372	33.864049	single wing	2138218.606	1405993.848	S-10935	CB947	LILAC SPRINGS DRIVE	2	1	941.859
1332	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.688991	33.864324	single wing	2138030.956	1406095.09	S-10936	CB948	LILAC SPRINGS DRIVE	<Null>	1	942.638
1333	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.68901	33.864249	single wing	2138025.21	1406067.61	S-10937	CB949	LILAC SPRINGS DRIVE	1	1	942.564
1334	Yes	Catch Basin	<Null>	Concrete	yes	no	2	-84.687175	33.864148	double wing	2138581.882	1406028.067	S-10938	CB950	FLOWERING SPRINGS	<Null>	1	943.0747
1335	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687269	33.864178	double wing	2138553.526	1406039.052	S-10939	CB951	FLOWERING SPRINGS	1	1	943.0225
1336	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687203	33.863791	single wing	2138572.734	1405898.398	S-10940	CB952	FLOWERING SPRINGS	2	2	942.088
1337	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.698615	33.879204	single wing	2135137.566	1411524.521	S-10941	CB953	COUNTRY COVE WAY	1	1	930.659
1338	Yes	Catch Basin	<Null>	Concrete	yes	yes	1	-84.698503	33.879125	single wing	2135171.38	1411495.716	S-10942	CB954	COUNTRY COVE WAY	1	1	930.1723
1339	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.698134	33.878948	single wing	2135283.199	1411430.539	S-10943	CB955	SHIPP RD	1	1	928.1209
1340	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.698378	33.88057	double wing	2135212.2	1412021.229	S-10944	CB956	COUNTRY COVE WAY	<Null>	1	932.8012
1341	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.699429	33.880468	single wing	2134892.999	1411985.773	S-10945	CB957	COUNTRY COVE WAY	<Null>	1	947.6911
1342	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.699492	33.880403	single wing	2134873.697	1411962.114	S-10946	CB958	COUNTRY COVE WAY	1	1	947.5042
1343	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.700493	33.880627	single wing	2134570.505	1412045.307	S-10947	CB959	COUNTRY COVE WAY	1	1	944.6003
1344	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70053	33.880711	single wing	2134559.347	1412075.931	S-10948	CB960	COUNTRY COVE WAY	1	1	944.5809
1345	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701634	33.88004	single wing	2134222.967	1411833.539	S-10949	CB961	COUNTRY COVE WAY	1	1	945.0026
1346	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701564	33.87998	single wing	2134244.268	1411811.647	S-10950	CB962	COUNTRY COVE WAY	1	1	944.8537
1347	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.70197	33.879394	single wing	2134119.933	1411599.056	S-10951	CB963	COUNTRY COVE WAY	<Null>	1	950.634
1348	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.701871	33.879404	single wing	2134149.991	1411602.543	S-10952	CB964	COUNTRY COVE WAY	1	1	950.0143
1349	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.722735	33.872807	double wing	2127804.71	1409235.56	S-10953	CB965	WEB FOREST LN	<Null>	1	964.287

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1350	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.723822	33.872887	single wing	2127474.718	1409266.213	S-10954	CB966	CREEK TRACE WEST	<Null>	1	968.0224
1351	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.723921	33.872889	single wing	2127444.806	1409267.196	S-10955	CB967	CREEK TRACE WEST	1	1	968.8261
1352	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.72302	33.873626	single wing	2127719.748	1409533.916	S-10956	CB968	CREEK TRACE WEST	<Null>	1	955.2003
1353	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.72297	33.873707	single wing	2127734.933	1409563.202	S-10957	CB969	CREEK TRACE WEST	1	1	954.8959
1354	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722763	33.874069	double wing	2127798.587	1409694.863	S-10958	CB970	PATHWAY CIR	1	1	950.6911
1355	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.72161	33.873249	single wing	2128146.981	1409394.392	S-10959	CB971	CREEK TRACE WEST	<Null>	1	950.4544
1356	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721452	33.873268	single wing	2128195.019	1409401.096	S-10960	CB972	CREEK TRACE WEST	1	1	950.0859
1357	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.719278	33.873166	double wing	2128854.558	1409360.545	S-10961	CB973	CREEK TRACE EAST	<Null>	1	938.2849
1358	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.719273	33.873085	double wing	2128856.044	1409331.003	S-10962	CB974	CREEK TRACE EAST	1	1	938.5261
1359	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.719258	33.871443	double wing	2128857.414	1408733.597	S-10963	CB975	CREEK TRACE EAST	<Null>	1	964.7345
1360	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.666308	33.861947	single wing	2144912.242	1405195.708	S-10964	CB976	FOREST HILL RD	1	1	961.4604
1361	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.666188	33.863053	single wing	2144950.697	1405598.175	S-10965	CB977	FOREST HILL ROAD	<Null>	1	949.2816
1362	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.66619	33.863268	single wing	2144950.485	1405676.404	S-10966	CB978	FOREST HILL ROAD	2	1	945.8657
1363	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.666186	33.86343	single wing	2144952.174	1405735.266	S-10967	CB979	FOREST HILL ROAD	2	1	943.7712
1364	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.666188	33.863703	single wing	2144951.796	1405834.456	S-10968	CB980	FOREST HILL ROAD	2	<Null>	939.5362
1365	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.666179	33.864325	square	2144955.762	1406061.035	S-10969	CB981	FOREST HILL ROAD	2	1	936.1485
1366	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649117	33.864811	double wing	2150135.945	1406212.918	S-10970	CB982	LOCKERBIE LN	<Null>	1	932.9839
1367	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.647661	33.86276	single wing	2150574.193	1405464.822	S-10971	CB983	BLUE HERON PSGE	<Null>	1	952.6993
1368	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.647678	33.862848	single wing	2150569.146	1405496.579	S-10972	CB984	BLUE HERON PSGE	1	1	952.4251
1369	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649237	33.862709	single wing	2150095.722	1405448.461	S-10973	CB985	BLUE HERON PSGE	<Null>	1	930.3583
1370	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649242	33.862799	single wing	2150094.466	1405480.968	S-10974	CB986	BLUE HERON PSGE	1	1	930.476
1371	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650183	33.863053	double wing	2149809.27	1405574.845	S-10975	CB987	BLUE HERON PSGE	1	1	915.9711
1372	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650289	33.863038	double wing	2149777.065	1405569.537	S-10976	CB988	BLUE HERON PSGE	1	1	915.8865
1373	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.721558	33.875631	single wing	2128167.382	1410260.976	S-10977	CB989	WARREN CREEK DR	<Null>	1	965.8496
1374	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721665	33.875601	single wing	2128134.819	1410250.337	S-10978	CB990	WARREN CREEK DR	1	1	965.5725
1375	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722269	33.875254	double wing	2127950.962	1410125.229	S-10979	CB991	ALLISON WOODS CT	1	1	961.8857
1376	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.721079	33.874931	single wing	2128311.33	1410005.685	S-10980	CB992	WARREN CREEK DR	<Null>	1	957.5491
1377	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.721138	33.874866	single wing	2128293.436	1409981.935	S-10981	CB993	WARREN CREEK DR	1	1	957.4095
1378	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.72147	33.87464	double wing	2128192.243	1409900.564	S-10982	CB994	OVERLOOK CIR	1	1	954.8155
1379	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.720623	33.874075	double wing	2128448.025	1409693.477	S-10983	CB995	WARREN CREEK DR	<Null>	1	940.8047
1380	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.720722	33.874075	double wing	2128418.134	1409693.738	S-10984	CB996	WARREN CREEK DR	1	1	940.8489
1388	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.644915	33.861184	double wing	2151405.162	1404887.376	S-10992	CB1004	LOCKERBIE LN	1	1	951.0045
1389	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.644995	33.861136	single wing	2151380.893	1404870.04	S-10993	CB1005	LOCKERBIE LN	1	1	951.2409
1390	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.645868	33.862493	double wing	2151118.159	1405364.838	S-10994	CB1006	LOCKERBIE LN	1	1	938.2936
1391	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.645768	33.862511	double wing	2151148.567	1405371.409	S-10995	CB1007	LOCKERBIE LN	1	1	938.1767
1392	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.646732	33.862721	double wing	2150856.122	1405449.222	S-10996	CB1008	SINGLETON CT	<Null>	1	952.4457
1393	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648029	33.863728	double wing	2150464.337	1405817.436	S-10997	CB1009	LOCKERBIE LN	1	1	935.6244
1394	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648024	33.863807	double wing	2150465.858	1405846.287	S-10998	CB1010	LOCKERBIE LN	1	1	935.3016
1395	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.677636	33.875268	single wing	2141497.802	1410059.979	S-10999	CB1011	NEW HORIZON ST	<Null>	1	989.7157
1396	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.677726	33.875269	single wing	2141470.412	1410060.33	S-11000	CB1012	NEW HORIZONS ST	1	1	989.3219

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1397	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.678103	33.876002	single wing	2141357.198	1410327.744	S-11001	CB1013	NEW HORIZON ST	<Null>	1	978.5741
1398	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.678049	33.876063	single wing	2141373.741	1410349.724	S-11002	CB1014	NEW HORIZON ST	1	1	978.8694
1399	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.67803	33.87628	single wing	2141379.855	1410428.608	S-11003	CB1015	NEW HORIZON ST	1	1	976.0065
1400	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.678116	33.876307	single wing	2141353.921	1410438.691	S-11004	CB1016	NEW HORIZON ST	1	1	975.7951
1401	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.677907	33.876936	single wing	2141418.555	1410667.253	S-11005	CB1017	NEW HORIZON STREET	<Null>	1	964.2202
1402	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.677996	33.876938	single wing	2141391.5	1410668.089	S-11006	CB1018	NEW HORIZON STREET	1	1	964.2008
1403	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.68389	33.871132	double wing	2139591.891	1408564.596	S-11007	CB1019	PEMBROOKE WAY	<Null>	1	965.2836
1404	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.683893	33.871051	double wing	2139590.977	1408534.97	S-11008	CB1020	PEMBROOKE WAY	1	1	965.1306
1405	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.683466	33.870435	single wing	2139719.297	1408310.003	S-11009	CB1021	SWEETBRIAR LN	<Null>	1	965.2186
1406	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.683563	33.870437	single wing	2139689.893	1408311.198	S-11010	CB1022	SWEETBRIAR LN	1	1	965.0148
1407	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.681585	33.869766	single wing	2140288.968	1408064.005	S-11011	CB1023	SWEETBRIAR LN	<Null>	1	964.1666
1408	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.681487	33.869764	single wing	2140318.714	1408063.07	S-11012	CB1024	SWEETBRIAR LN	1	1	964.3333
1409	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.681394	33.869228	single wing	2140346.064	1407867.953	S-11013	CB1025	WARWICK LN	<Null>	1	960.5459
1412	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687973	33.865077	double wing	2138341.333	1406367.544	S-11016	CB1028	LILAC SPRINGS DRIVE	2	1	943.5818
1413	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.687637	33.86503	double wing	2138443.369	1406349.701	S-11017	CB1029	FLOWERING BRANCH	<Null>	1	943.5825
1414	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687671	33.864952	double wing	2138432.833	1406321.418	S-11018	CB1030	FLOWERING BRANCH	2	1	943.6253
1415	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687055	33.864837	double wing	2138619.818	1406278.654	S-11019	CB1031	FLOWERING BRANCH	<Null>	1	943.6333
1416	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.68709	33.864764	double wing	2138608.991	1406251.992	S-11020	CB1032	FLOWERING BRANCH	2	1	943.4952
1417	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.687081	33.864565	double wing	2138611.251	1406179.849	S-11021	CB1033	FLOWERING SPRINGS	<Null>	1	942.7696
1418	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.686995	33.864535	double wing	2138637.395	1406168.827	S-11022	CB1034	FLOWERING SPRINGS	1	1	942.8113
1419	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.687406	33.866057	single wing	2138515.387	1406722.984	S-11023	CB1035	LILAC SPRINGS DRIVE	1	1	948.3536
1420	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.687625	33.865601	single wing	2138447.982	1406557.52	S-11024	CB1036	LILAC SPRINGS DRIVE	1	1	944.7461
1421	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687711	33.86563	single wing	2138421.903	1406568.365	S-11025	CB1037	LILAC SPRINGS DR	2	1	944.6795
1422	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.687967	33.865359	single wing	2138343.821	1406470.17	S-11026	CB1038	FLOWERING BRANCH	<Null>	1	944.28
1423	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.686371	33.865645	single wing	2138828.933	1406571.594	S-11027	CB1039	FLOWERING SPRINGS	<Null>	1	941.511
1424	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.686865	33.865021	double wing	2138677.587	1406345.287	S-11028	CB1040	FLOWERING SPRINGS	1	1	942.8705
1425	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.686779	33.864994	double wing	2138703.811	1406335.259	S-11029	CB1041	FLOWERING SPRINGS	1	1	942.9928
1426	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.660739	33.870546	double wing	2146618.089	1408316.67	S-11030	CB1042	DELHI DR	1	1	907.0964
1427	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.660845	33.870543	double wing	2146585.701	1408315.764	S-11031	CB1043	DELHI DR	1	1	907.6411
1428	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.660829	33.870421	double wing	2146590.523	1408271.365	S-11032	CB1044	DELHI DR	1	1	907.962
1429	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.66215	33.870421	double wing	2146189.311	1408273.122	S-11033	CB1045	LANCER DR	1	1	916.5159
1430	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.663508	33.870913	double wing	2145778.171	1408454.341	S-11034	CB1046	LANCER DR	<Null>	1	918.7871
1431	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.663548	33.870834	double wing	2145765.931	1408425.503	S-11035	CB1047	LANCER DR	1	1	918.3919
1432	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.664102	33.871151	double wing	2145598.151	1408541.591	S-11036	CB1048	LANCER DR	1	1	919.5726
1433	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.664146	33.871072	double wing	2145584.62	1408512.875	S-11037	CB1049	LANCER DR	1	1	919.8175
1434	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.665187	33.872078	single wing	2145270.639	1408880.614	S-11038	CB1050	LANCER DR	<Null>	1	935.2528
1435	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.665289	33.872081	single wing	2145239.56	1408881.827	S-11039	CB1051	LANCER DR	1	1	935.0547
1436	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.66366	33.873914	single wing	2145737.417	1409546.457	S-11040	CB1052	BENGAL DR	<Null>	1	940.2141
1437	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.663728	33.873989	single wing	2145716.649	1409573.824	S-11041	CB1053	BENGAL DR	1	<Null>	940.3288
1438	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.662502	33.872226	single wing	2146085.861	1408930.691	S-11042	CB1054	CALCUTTA CT	<Null>	1	940.6824

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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
1439	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.662398	33.872212	single wing	2146117.377	1408925.215	S-11043	CB1055	CALCUTTA CT	1	1	941.0495
1440	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.663486	33.871951	double wing	2145786.776	1408831.746	S-11044	CB1056	KIPLING DR	<Null>	1	943.9227
1441	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.663552	33.871881	single wing	2145766.446	1408806.542	S-11045	CB1057	KIPLING DR	1	1	943.8133
1442	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.652084	33.870963	single wing	2149245.779	1408455.77	S-11046	CB1058	PALOMINO DR	1	1	927.6085
1443	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65208	33.870886	single wing	2149246.957	1408427.783	S-11047	CB1059	PALOMINO DR	1	1	927.6847
1444	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649847	33.870021	single wing	2149923.074	1408110.002	S-11048	CB1060	MUSTANG DR	1	1	913.2694
1445	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654349	33.87016	single wing	2148556.956	1408166.895	S-11049	CB1061	MUSTANG DR	1	1	918.9496
1446	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654382	33.870087	single wing	2148546.865	1408140.442	S-11050	CB1062	MUSTANG DR	1	1	918.6439
1447	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655077	33.874543	double wing	2148343.455	1409762.703	S-11051	CB1063	PINTO DR	1	1	935.4432
1448	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65598	33.873618	double wing	2148067.673	1409427.499	S-11052	CB1064	PINTO DR	1	1	928.1313
1449	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655944	33.873542	double wing	2148078.678	1409399.918	S-11053	CB1065	PINTO DR	1	1	927.531
1450	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.656248	33.876232	double wing	2147990.913	1410379.044	S-11054	CB1066	MUSTANG DR	1	1	940.1049
1451	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656246	33.876153	double wing	2147991.496	1410350.201	S-11055	CB1067	MUSTANG DR	1	1	940.1421
1452	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656317	33.875114	single wing	2147968.016	1409972.386	S-11056	CB1068	APACHE CT	1	1	931.4893
1453	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.654708	33.871861	double wing	2148450.876	1408786.42	S-11057	CB1069	STALLION CT	<Null>	1	928.0092
1454	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.6508	33.87659	double wing	2149645.088	1410501.41	S-11058	CB1070	MACEDONIA RD	1	1	951.3621
1455	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.654788	33.876746	double wing	2148434.965	1410563.938	S-11059	CB1071	MACEDONIA RD	<Null>	1	955.995
1456	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.654793	33.876842	double wing	2148433.617	1410598.958	S-11060	CB1072	MACEDONIA RD	2	1	955.7936
1457	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.654949	33.876901	double wing	2148386.296	1410620.629	S-11061	CB1073	MACEDONIA DR	<Null>	1	956.3075
1458	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.655046	33.876898	double wing	2148356.844	1410619.816	S-11062	CB1074	MACEDONIA DR	<Null>	1	956.3169
1459	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.656101	33.876888	double wing	2148036.608	1410617.544	S-11063	CB1075	MACEDONIA RD	<Null>	1	949.4124
1460	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.656361	33.876721	double wing	2147957.433	1410557.124	S-11064	CB1076	MACEDONIA RD	1	1	951.224
1461	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.664394	33.876064	single wing	2145518.378	1410329.741	S-11065	CB1077	MACEDONIA RD	<Null>	1	954.9753
1462	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.66378	33.876052	single wing	2145704.626	1410324.424	S-11066	CB1078	MACEDONIA RD	1	1	947.3549
1463	Yes	Catch Basin	<Null>	Concrete	yes	no	3	-84.666641	33.878472	double wing	2144840.482	1411209.542	S-11067	CB1079	MACEDONIA RD	<Null>	1	946.7048
1464	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.666525	33.878295	double wing	2144875.486	1411144.769	S-11068	CB1080	MACEDONIA RD	2	1	944.6088
1465	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.669357	33.875177	single wing	2144010.32	1410014.534	S-11069	CB1081	MACEDONIA RD	1	1	945.177
1466	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.667195	33.87513	double wing	2144666.514	1409993.954	S-11070	CB1082	MACEDONIA RD	<Null>	1	964.3754
1467	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.667213	33.875228	double wing	2144661.241	1410029.654	S-11071	CB1083	MACEDONIA RD	1	1	964.2498
1468	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.66492	33.875232	double wing	2145357.251	1410027.815	S-11072	CB1084	MACEDONIA RD	<Null>	1	960.4282
1469	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.664914	33.87534	single wing	2145359.072	1410067.055	S-11073	CB1085	MACEDONIA RD	1	1	960.0797
1470	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.663437	33.875319	single wing	2145807.37	1410057.383	S-11074	CB1086	MACEDONIA RD	2	1	955.9391
1471	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.663447	33.875221	single wing	2145804.244	1410021.727	S-11075	CB1087	MACEDONIA RD	<Null>	1	955.4955
1472	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.661675	33.87566	single wing	2146342.768	1410178.782	S-11076	CB1088	MACEDONIA RD	<Null>	1	914.1445
1473	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.661725	33.875755	single wing	2146327.714	1410213.585	S-11077	CB1089	MACEDONIA RD	3	1	914.1899
1474	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.660814	33.875953	double wing	2146604.625	1410284.418	S-11078	CB1090	MACEDONIA RD	<Null>	1	910.7087
1475	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.660549	33.876045	single wing	2146685.388	1410317.233	S-11079	CB1091	MACEDONIA RD	1	1	911.0514
1476	Yes	Catch Basin	<Null>	Concrete	yes	yes	3	-84.66063	33.876153	double wing	2146660.798	1410356.84	S-11080	CB1092	MACEDONIA RD	1	1	910.541
1479	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.674535	33.874309	single wing	2142437.313	1409706.235	S-11083	CB1095	MACEDONIA RD	<Null>	1	971.7989
1480	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.673486	33.874732	single wing	2142756.207	1409858.525	S-11084	CB1096	MACEDONIA RD	2	1	961.9832

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1481	Yes	Catch Basin	Rectangular	Brick	yes	no	2	-84.673522	33.874843	single wing	2142745.612	1409899.278	S-11085	CB1097	MACEDONIA RD	<Null>	1	962.6075
1484	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.670715	33.875233	single wing	2143598.343	1410036.748	S-11088	CB1100	MACEDONIA RD	1	1	933.8237
1485	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.670712	33.875329	single wing	2143599.331	1410071.783	S-11089	CB1101	MACEDONIA RD	1	1	934.0223
1486	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.670415	33.87533	single wing	2143689.372	1410071.761	S-11090	CB1102	MACEDONIA RD	<Null>	1	935.2513
1487	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.670563	33.875444	single wing	2143644.928	1410113.39	S-11091	CB1103	OLD VILLA RICA	<Null>	1	935.373
1488	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.675638	33.859859	single wing	2142076.419	1404449.798	S-11092	CB1104	NEW MACLAND RD	<Null>	1	997.2154
1490	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.67562	33.860307	single wing	2142082.645	1404612.808	S-11094	CB1106	NEW MACLAND RD	2	1	995.6086
1491	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.675615	33.860492	single wing	2142084.592	1404680.33	S-11095	CB1107	NEW MACLAND RD	1	1	996.747
1492	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.675754	33.860822	single wing	2142042.909	1404800.561	S-11097	CB1109	NEW MACLAND RD	1	1	1000.707
1493	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.675767	33.862658	single wing	2142042.2	1405468.538	S-11098	CB1110	NEW MACLAND RD	1	1	1007.684
1494	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.675574	33.862604	single wing	2142100.655	1405448.812	S-11099	CB1111	NEW MACLAND RD	<Null>	1	1007.939
1495	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.675761	33.860446	single wing	2142040.018	1404663.808	S-11100	CB1112	NEW MACLAND RD	1	1	996.8492
1496	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.675767	33.860312	double wing	2142038.068	1404614.874	S-11102	CB1114	NEW MACLAND RD	2	1	996.0624
1497	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.675772	33.860194	double wing	2142036.399	1404571.842	S-11103	CB1115	NEW MACLAND RD	<Null>	1	995.7909
1498	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.678146	33.873633	single wing	2141340.079	1409465.893	S-11104	CB1116	MACEDONIA RD	3	1	994.7899
1499	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.67822	33.873557	single wing	2141317.381	1409438.148	S-11105	CB1117	MACEDONIA RD	1	1	995.3722
1500	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.676533	33.873265	single wing	2141828.741	1409329.549	S-11106	CB1118	NEW MACLAND ROAD	<Null>	1	991.6072
1501	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.666088	33.860489	single wing	2144976.506	1404665.002	S-11107	CB1119	POWDER SPRINGS RD	<Null>	1	976.5971
1502	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.665633	33.860434	single wing	2145114.757	1404644.167	S-11108	CB1120	POWDER SPRINGS RD	2	1	971.3818
1503	Yes	Catch Basin	Round	Brick	yes	no	5	-84.665578	33.860625	single wing	2145131.585	1404713.645	S-11109	CB1121	POWDER SPRINGS RD	<Null>	1	971.7607
1504	Yes	Catch Basin	Round	Brick	yes	no	5	-84.664947	33.860537	single wing	2145322.927	1404680.854	S-11110	CB1122	POWDER SPRINGS RD	<Null>	1	964.0911
1505	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.664975	33.860346	single wing	2145314.309	1404611.432	S-11111	CB1123	POWDER SPRINGS RD	1	1	963.8787
1506	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.664325	33.860261	single wing	2145511.353	1404579.422	S-11112	CB1124	POWDER SPRINGS RD	1	1	956.3969
1507	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.66431	33.860448	single wing	2145516.389	1404647.45	S-11113	CB1125	POWDER SPRINGS RD	1	1	956.5563
1508	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.663906	33.860391	single wing	2145638.73	1404626.154	S-11114	CB1126	POWDER SPRINGS RD	1	1	952.3615
1509	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.663644	33.860172	single wing	2145717.93	1404546.005	S-11115	CB1127	POWDER SPRINGS RD	2	1	949.0604
1510	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.66362	33.860359	single wing	2145725.647	1404614.195	S-11116	CB1128	POWDER SPRINGS RD	2	1	948.8957
1511	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.663278	33.860303	single wing	2145829.321	1404592.957	S-11117	CB1129	POWDER SPRINGS RD	1	1	945.6401
1512	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.663041	33.86027	single wing	2145901.046	1404580.946	S-11118	CB1130	POWDER SPRINGS RD	1	1	943.962
1513	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.663058	33.860093	single wing	2145895.592	1404516.365	S-11119	CB1131	POWDER SPRINGS RD	1	1	943.8647
1514	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.662743	33.860229	single wing	2145991.612	1404565.461	S-11120	CB1132	POWDER SPRINGS RD	1	1	942.366
1515	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.662418	33.860186	single wing	2146090.295	1404549.23	S-11121	CB1133	POWDER SPRINGS RD	2	1	941.357
1516	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.662446	33.860009	single wing	2146081.368	1404484.968	S-11122	CB1134	POWDER SPRINGS RD	1	1	941.4704
1517	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.662228	33.859976	single wing	2146147.533	1404472.74	S-11123	CB1135	POWDER SPRINGS ROAI	2	1	941.5929
1518	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.662194	33.860156	single wing	2146158.059	1404538.101	S-11124	CB1136	POWDER SPRINGS RD	3	1	941.9147
1519	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.660792	33.85997	square	2146583.495	1404468.271	S-11125	CB1137	POWDER SPRINGS RD	<Null>	<Null>	945.2852
1520	Yes	Catch Basin	Rectangular	Concrete	yes	no	5	-84.660281	33.859898	square	2146738.477	1404441.295	S-11126	CB1138	POWDER SPRINGS RD	<Null>	<Null>	946.127
1523	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.667591	33.867238	double wing	2144532.301	1407122.865	S-11129	CB1141	FOREST HILL ROAD	2	1	958.3504
1524	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.667765	33.867692	double wing	2144480.174	1407288.457	S-11130	CB1142	FOREST HILL ROAD	1	1	957.6716
1525	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.667673	33.86884	double wing	2144510.291	1407706.032	S-11131	CB1143	FOREST HILL ROAD	<Null>	1	964.5685

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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
1526	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.667636	33.871924	single wing	2144527.069	1408828.052	S-11132	CB1144	FOREST HILL ROAD	1	<Null>	919.5434
1527	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.667614	33.873977	single wing	2144537.399	1409575.118	S-11133	CB1145	FOREST HILL RD	<Null>	1	945.2379
1528	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.649934	33.870929	single wing	2149898.407	1408440.349	S-11134	CB1146	PALOMINO DR	<Null>	1	919.8986
1529	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649936	33.870851	single wing	2149897.631	1408411.996	S-11135	CB1147	PALOMINO DR	1	1	919.8756
1530	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.649837	33.869942	single wing	2149926.063	1408080.953	S-11136	CB1148	MUSTANG DR	1	1	913.3214
1531	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.648736	33.870149	single wing	2150260.537	1408154.765	S-11137	CB1149	MUSTANG DR	<Null>	1	909.9995
1532	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.648697	33.870077	single wing	2150272.303	1408128.785	S-11138	CB1150	MUSTANG DR	1	1	910.3409
1533	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.655169	33.874543	double wing	2148315.413	1409763.079	S-11139	CB1151	PINTO DR	1	1	935.0377
1534	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656221	33.875115	single wing	2147997.112	1409972.645	S-11140	CB1152	APACHE CT	<Null>	1	931.6362
1535	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656353	33.874633	double wing	2147956.41	1409797.608	S-11141	CB1153	APACHE CT	1	1	929.3485
1536	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.657123	33.874345	double wing	2147721.994	1409693.588	S-11142	CB1154	MUSTANG DR	1	1	925.417
1537	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65721	33.87431	double wing	2147695.547	1409681.269	S-11143	CB1155	MUSTANG DR	1	1	925.4331
1538	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656032	33.872493	double wing	2148050.026	1409018.419	S-11144	CB1156	PALOMINO DRIVE	1	1	914.6762
1539	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655999	33.872415	single wing	2148060.092	1408990.013	S-11145	CB1157	PALOMINO DRIVE	1	1	914.7828
1540	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656018	33.872285	double wing	2148053.831	1408942.7	S-11146	CB1158	MUSTANG DRIVE	2	1	913.8332
1541	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.656103	33.872249	double wing	2148028.176	1408929.506	S-11147	CB1159	MUSTANG DRIVE	1	1	913.5937
1542	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.653322	33.872216	double wing	2148872.145	1408913.648	S-11148	CB1160	PALOMINO DR	<Null>	1	929.6171
1543	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.653415	33.872217	double wing	2148843.776	1408913.972	S-11149	CB1161	PALOMINO DR	1	1	929.4004
1544	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.650777	33.876685	double wing	2149652.273	1410536.262	S-11150	CB1162	MACEDONIA RD	1	1	951.1915
1545	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.656197	33.876905	double wing	2148007.574	1410623.811	S-11151	CB1163	MACEDONIA RD	<Null>	1	949.2163
1546	Yes	Catch Basin	Rectangular	Brick	yes	yes	3	-84.656364	33.876819	double wing	2147956.915	1410592.894	S-11152	CB1164	MACEDONIA RD	2	1	951.002
1547	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.669708	33.878014	single wing	2143908.871	1411047.204	S-11153	CB1165	OLD VILLA RICA RD	<Null>	1	968.3142
1548	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.668535	33.878174	single wing	2144265.311	1411103.708	S-11154	CB1166	BAGLEY FOREST DR	<Null>	1	962.4949
1549	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.668536	33.878093	single wing	2144264.656	1411074.283	S-11155	CB1167	BAGLEY FOREST DR	2	1	962.1042
1550	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.668387	33.878	single wing	2144309.909	1411040.157	S-11156	CB1168	BAGLEY FOREST DR	1	1	961.0305
1551	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.668285	33.877996	single wing	2144340.636	1411038.645	S-11157	CB1169	BAGLEY FOREST DR	1	1	961.0749
1552	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.689276	33.871133	single wing	2137957.012	1408572.887	S-11158	CB1170	HOLLOW STREAM TR	<Null>	1	955.0719
1553	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.68918	33.871141	single wing	2137986.39	1408575.905	S-11159	CB1171	HOLLOW STREAM TRAIL	2	1	954.9386
1554	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690468	33.870422	single wing	2137594.114	1408316.013	S-11160	CB1172	HOLLOW STREAM TRAIL	2	1	940.7181
1555	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.690464	33.870503	single wing	2137595.488	1408345.816	S-11161	CB1173	HOLLOW STREAM TR	<Null>	1	941.551
1556	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.690929	33.870456	double wing	2137454.295	1408329.191	S-11162	CB1174	HOLLOW STREAM TR	1	1	938.6172
1557	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.689883	33.872352	single wing	2137775.26	1409017.653	S-11163	CB1175	TIMBER RIDGE	<Null>	1	964.6174
1558	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.689981	33.872361	single wing	2137745.486	1409021.011	S-11164	CB1176	TIMBER RIDGE	1	1	963.782
1559	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.691132	33.872955	single wing	2137397.193	1409239.063	S-11165	CB1177	BRADFORD LN	<Null>	1	959.7945
1560	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.691091	33.872879	single wing	2137409.336	1409211.365	S-11166	CB1178	BRADFORD LN	1	1	959.2168
1561	Yes	Catch Basin	Round	Concrete	yes	<Null>	2	-84.688514	33.872981	single wing	2138191.813	1409244.299	S-11167	CB1179	TIMBER RIDGE	<Null>	1	976.2544
1562	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.687544	33.872764	single wing	2138486.006	1409163.72	S-11168	CB1180	STONE PATH WAY	<Null>	1	978.5642
1563	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.687644	33.87276	single wing	2138455.546	1409162.483	S-11169	CB1181	STONE PATH WAY	1	1	977.9589
1564	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.686881	33.871589	single wing	2138684.902	1408735.371	S-11170	CB1182	STONE PATH WAY	<Null>	1	976.114
1565	Yes	Catch Basin	<Null>	Concrete	yes	yes	2	-84.686786	33.871558	single wing	2138713.674	1408723.862	S-11171	CB1183	STONE PATH WAY	1	1	975.9707

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1566	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.68635	33.871136	single wing	2138845.317	1408569.623	S-11172	CB1184	COUNTRY WALK DRIVE	1	1	965.8626
1567	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.688458	33.872139	single wing	2138207.418	1408937.712	S-11173	CB1185	COUNTRY WALK DR	1	1	964.7351
1568	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.688491	33.872061	single wing	2138197.163	1408909.443	S-11174	CB1186	COUNTRY WALK DR	1	1	964.9071
1569	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.688397	33.871562	single wing	2138224.867	1408727.965	S-11175	CB1187	BARNWOOD PLACE	<Null>	1	966.1572
1571	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.705515	33.87777	double wing	2133040.735	1411013.622	S-11177	CB1189	MCNEEL IND DR	1	1	957.8415
1572	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.705636	33.877774	double wing	2133004.199	1411015.148	S-11178	CB1190	MCNEEL IND DR	1	1	957.9595
1573	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.706815	33.877612	single wing	2132645.921	1410958.053	S-11179	CB1191	FAMBROUGH DRIVE	<Null>	2	950.4412
1574	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.706812	33.877704	single wing	2132646.99	1410991.702	S-11180	CB1192	FAMBROUGH DRIVE	2	1	950.3256
1575	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707825	33.879089	double wing	2132342.123	1411497.3	S-11181	CB1193	SPRING IND DR	1	1	933.0429
1576	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707825	33.879103	double wing	2132342.364	1411502.484	S-11182	CB1194	SPRING IND DR	1	1	933.115
1577	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707938	33.879103	double wing	2132308.067	1411502.353	S-11183	CB1195	SPRING IND DR	1	1	932.8094
1578	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.707936	33.879089	double wing	2132308.499	1411497.312	S-11184	CB1196	SPRING IND DR	1	1	932.8383
1579	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.700424	33.870783	double wing	2134572.826	1408463.236	S-11185	CB1197	FLORENCE CIR	<Null>	1	931.6201
1580	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70045	33.870682	double wing	2134564.707	1408426.274	S-11186	CB1198	FLORENCE CIR	1	1	931.5436
1581	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.698933	33.870496	single wing	2135024.72	1408356.214	S-11187	CB1199	FLORENCE CIR	1	1	928.8569
1582	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.69885	33.870435	double wing	2135049.855	1408334.029	S-11188	CB1200	FLORENCE CIR	1	1	927.4885
1585	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.72291	33.882677	single wing	2127770.827	1412827.101	S-11191	CB1203	SILVERCREST CT	<Null>	1	953.824
1586	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.72288	33.882757	single wing	2127780.247	1412856.261	S-11192	CB1204	SILVERCREST CT	2	1	953.5342
1587	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.722411	33.882521	single wing	2127922.208	1412769.843	S-11193	CB1205	SILVERCREST CT	<Null>	1	960.7024
1588	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.722384	33.882598	single wing	2127930.374	1412797.801	S-11194	CB1206	SILVERCREST CT	1	1	959.4158
1592	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.67106	33.861022	single wing	2143468.228	1404866.351	S-11198	CB1210	RICHARD SAILORS PARK	<Null>	1	971.8324
1593	Yes	Catch Basin	Rectangular	Concrete	yes	yes	1	-84.704056	33.881223	double wing	2133490.129	1412267.674	S-11199	CB1211	FAMBROUGH DR	<Null>	2	965.445
1594	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.703817	33.878543	single wing	2133557.594	1411292.024	S-11200	CB1212	FLORENCE ROAD	<Null>	1	959.3223
1595	Yes	Catch Basin	<Null>	Concrete	yes	no	5	-84.671865	33.85478	other	2143212.786	1402596.208	S-11201	CB1213	OLD AUSTELL RD	<Null>	1	978.3098
1596	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.671762	33.854515	other	2143243.599	1402499.38	S-11202	CB1214	OLD AUSTELL RD	1	1	977.7771
1597	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.671617	33.854198	other	2143286.853	1402383.911	S-11203	CB1215	OLD AUSTELL RD	1	1	976.665
1598	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.681483	33.860396	single wing	2140303.024	1404654.108	S-11204	CB1216	MARIETTA STREET	<Null>	1	962.7828
1599	Yes	Catch Basin	<Null>	Concrete	yes	yes	5	-84.68127	33.860385	double wing	2140367.52	1404649.912	S-11205	CB1217	MARIETTA STREET	1	1	965.7779
1600	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.681071	33.860359	single wing	2140427.928	1404639.985	S-11206	CB1218	MARIETTA STREET	1	1	967.3468
1601	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.681049	33.860516	single wing	2140434.985	1404696.985	S-11207	CB1219	MARIETTA STREET	1	1	964.2852
1602	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.679824	33.86035	single wing	2140806.569	1404634.868	S-11208	CB1220	MARIETTA STREET	<Null>	1	963.9562
1603	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.680121	33.861555	double wing	2140718.559	1405073.801	S-11209	CB1221	NORTH AVENUE	<Null>	<Null>	942
1604	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.680202	33.861566	double wing	2140693.947	1405077.784	S-11210	CB1222	NORTH AVENUE	<Null>	<Null>	944.0096
1605	Yes	Catch Basin	<Null>	Concrete	yes	yes	5	-84.678861	33.86111	single wing	2141100.36	1404910.043	S-11211	CB1223	NORTH AVENUE	1	1	960.3648
1606	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.679224	33.859757	double wing	2140987.509	1404418.103	S-11212	CB1224	MARIETTA STREET	2	1	980.3015
1607	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.701543	33.87456	single wing	2134240.143	1409839.365	S-11213	CB1225	HOPELAND INDUSTRIAL	<Null>	1	955.4873
1609	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.700022	33.874053	single wing	2134700.968	1409652.165	S-11215	CB1227	HOPELAND INDUSTRIAL	<Null>	1	941.5837
1613	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.666067	33.875698	single wing	2145009.986	1410199.28	S-11219	CB1231	MACEDONIA RD	<Null>	1	957.7639
1615	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.666164	33.876362	single wing	2144981.608	1410440.816	S-11221	CB1233	MACEDONIA RD	1	1	952.7218
1616	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.666693	33.877349	double wing	2144822.676	1410800.797	S-11222	CB1234	MACEDONIA RD	1	1	943.6405

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1617	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.666627	33.877404	double wing	2144842.873	1410820.611	S-11223	CB1235	MACEDONIA RD	1	1	943.1741
1618	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.660152	33.876192	single wing	2146805.91	1410370.412	S-11224	CB1236	MACEDONIA RD	<Null>	1	911.3149
1619	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.660212	33.876311	single wing	2146788.011	1410413.779	S-11225	CB1237	MACEDONIA RD	1	1	911.3188
1620	Yes	Catch Basin	<Null>	Concrete	yes	no	3	-84.658516	33.876681	double wing	2147303.321	1410545.861	S-11226	CB1238	MACEDONIA RD	<Null>	1	934.2847
1621	Yes	Catch Basin	Rectangular	Brick	yes	no	3	-84.65849	33.876816	double wing	2147311.657	1410594.88	S-11227	CB1239	MACEDONIA RD	<Null>	1	935.7389
1622	Yes	Catch Basin	<Null>	Concrete	yes	yes	5	-84.67834	33.856731	square	2141250.345	1403315.717	S-11228	CB1240	LAFAYETTE DR	1	2	964.658
1623	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.678596	33.85456	double wing	2141168.837	1402526.268	S-11229	CB1241	COMPTON CIR	1	1	946.9319
1624	No	Catch Basin	<Null>	Concrete	<Null>	<Null>	5	-84.684798	33.859998	<Null>	2139295.897	1404514.374	S-11230	CB1242	MARIETTA STREET	<Null>	1	931.8334
1625	No	Catch Basin	<Null>	Brick	<Null>	<Null>	5	-84.684877	33.860697	<Null>	2139273.152	1404768.727	S-11231	CB1243	JACKSON WAY	<Null>	1	923.6563
1626	No	Catch Basin	<Null>	Brick	<Null>	<Null>	5	-84.684913	33.860754	<Null>	2139262.318	1404789.753	S-11232	CB1244	JACKSON WAY	1	1	921.5902
1627	No	Catch Basin	<Null>	Brick	<Null>	<Null>	5	-84.68513	33.860811	<Null>	2139196.727	1404810.881	S-11233	CB1245	JACKSON WAY	1	1	918
1628	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.685823	33.861196	double wing	2138987.043	1404952.015	S-11234	CB1246	JACKSON WAY	1	1	910.5721
1629	Yes	Catch Basin	Round	Brick	yes	no	5	-84.669459	33.859496	single wing	2143951.592	1404308.687	S-11235	CB1247	MARIETTA STREET	1	1	968.1954
1630	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.670068	33.859292	single wing	2143766.303	1404235.23	S-11236	CB1248	MARIETTA STREET	1	1	962.6478
1633	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.672653	33.858892	single wing	2142980.712	1404093.63	S-11239	CB1251	POWDER SPRING RD	1	1	975.6511
1634	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.68232	33.860578	double wing	2140049.166	1404721.809	S-11240	CB1252	JACKSON WAY	1	1	953.3205
1635	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682448	33.860583	double wing	2140010.302	1404723.563	S-11241	CB1253	JACKSON WAY	2	1	953.4172
1636	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682498	33.860682	double wing	2139995.348	1404759.848	S-11242	CB1254	JACKSON WAY	1	1	953.2072
1637	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683335	33.861185	single wing	2139742.344	1404944.068	S-11243	CB1255	OAKVIEW DRIVE EXT	<Null>	1	940.9653
1638	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683427	33.861187	single wing	2139714.305	1404944.977	S-11244	CB1256	OAKVIEW DRIVE EXT	1	1	941.029
1639	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683457	33.861385	single wing	2139705.441	1405017.17	S-11245	CB1257	OAKVIEW DRIVE EXT	1	1	933.2257
1640	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683375	33.861415	single wing	2139730.455	1405027.945	S-11246	CB1258	OAKVIEW DRIVE EXT	1	1	932.9495
1641	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683476	33.862507	single wing	2139701.995	1405425.469	S-11247	CB1259	CORNER PINEVIEW DR/(	1	1	938.476
1642	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683561	33.862414	single wing	2139675.991	1405391.551	S-11248	CB1260	OAKVIEW DRIVE EXT	1	1	936.2058
1643	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683604	33.862097	single wing	2139662.279	1405276.267	S-11249	CB1261	OAKVIEW DRIVE EXT	1	1	930.1459
1644	Yes	Catch Basin	Round	Metal	yes	no	5	-84.683666	33.862251	single wing	2139643.56	1405332.554	S-11250	CB1262	OAKVIEW DRIVE EXT	<Null>	1	932.7399
1645	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683648	33.861892	single wing	2139648.426	1405201.653	S-11251	CB1263	OAKVIEW DRIVE EXT	2	1	926.747
1646	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683739	33.861894	single wing	2139620.942	1405202.759	S-11252	CB1264	OAKVIEW DRIVE EXT	<Null>	1	926.7976
1647	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683634	33.861799	double wing	2139652.533	1405168.002	S-11253	CB1265	OAKVIEW DRIVE EXT	1	1	926.48
1648	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683721	33.861779	single wing	2139626.224	1405160.646	S-11254	CB1266	OAKVIEW DRIVE EXT	1	1	926.3537
1649	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683596	33.8638	single wing	2139667.844	1405895.889	S-11255	CB1267	LYNN COURT	<Null>	1	936.1621
1650	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683613	33.863876	single wing	2139662.76	1405923.544	S-11256	CB1268	LYNN COURT	1	1	935.685
1651	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683706	33.86412	single wing	2139635.003	1406012.665	S-11257	CB1269	LYNN DRIVE	1	1	934.3386
1652	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683809	33.86413	single wing	2139603.853	1406016.445	S-11258	CB1270	LYNN DRIVE	1	1	933.7796
1653	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683822	33.864446	single wing	2139600.248	1406131.508	S-11259	CB1271	LYNN DRIVE	1	1	933.0621
1654	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.684026	33.864673	single wing	2139538.834	1406214.391	S-11260	CB1272	LYNN DRIVE	1	1	930.7937
1655	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.684498	33.864795	single wing	2139395.905	1406259.353	S-11261	CB1273	LYNN DRIVE	1	1	927.7468
1656	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.684797	33.864944	single wing	2139305.327	1406314.1	S-11262	CB1274	LYNN DRIVE	<Null>	1	926.4883
1657	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.684819	33.864868	single wing	2139298.513	1406286.645	S-11263	CB1275	LYNN DRIVE	1	1	926.4508
1658	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.682436	33.8609	double wing	2140014.758	1404838.995	S-11264	CB1276	GEORGE DAVID WAY	<Null>	1	942.036

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1659	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682434	33.860982	double wing	2140015.515	1404868.813	S-11265	CB1277	GEORGE DAVID WAY	1	1	941.9605
1660	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.68186	33.861397	double wing	2140190.457	1405018.952	S-11266	CB1278	JACK VERRON CIRCLE	<Null>	1	934.984
1661	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.681953	33.861403	double wing	2140162.263	1405021.411	S-11267	CB1279	JACK VERRON CIRCLE	2	<Null>	934.6888
1662	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682275	33.86227	square	2140065.889	1405337.118	S-11268	CB1280	JACK VERRON CIRCLE	2	1	943.2322
1663	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.682271	33.862192	square	2140066.92	1405308.759	S-11269	CB1281	JACK VERNON CIR	2	1	943.3907
1665	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674134	33.861271	double wing	2142535.398	1404961.329	S-11271	CB1283	SILVERCOMET WAY	<Null>	1	993.229
1666	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674185	33.860916	single wing	2142519.52	1404832.327	S-11272	CB1284	SILVERCOMET DRIVE	1	1	989.7588
1667	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674281	33.860633	double wing	2142489.614	1404729.458	S-11273	CB1285	SILVERCOMET DRIVE	<Null>	1	987.8587
1668	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674182	33.860634	double wing	2142519.884	1404729.635	S-11274	CB1286	SILVERCOMET DRIVE	2	1	988.248
1669	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674094	33.860473	single wing	2142546.336	1404671.015	S-11275	CB1287	SILVERCOMET WAY	<Null>	1	989.787
1670	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674096	33.860396	single wing	2142545.393	1404643.01	S-11276	CB1288	SILVERCOMET WAY	1	1	989.4773
1671	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674183	33.860264	double wing	2142518.664	1404595.012	S-11277	CB1289	SILVERCOMET DRIVE	2	1	986.2955
1672	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.674279	33.860261	double wing	2142489.759	1404594.05	S-11278	CB1290	SILVERCOMET DRIVE	<Null>	1	986.3729
1673	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674179	33.85969	double wing	2142518.894	1404386.357	S-11279	CB1291	SILVERCOMET DRIVE	1	1	985.2848
1674	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674274	33.859654	double wing	2142490.067	1404373.184	S-11280	CB1292	SILVERCOMET DRIVE	1	1	985.0622
1675	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674021	33.8594	single wing	2142566.372	1404280.484	S-11281	CB1293	SILVERCOMET DRIVE	1	1	984.653
1676	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674109	33.859365	single wing	2142539.607	1404267.949	S-11282	CB1294	SILVERCOMET DRIVE	1	1	985.0213
1677	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.672952	33.860649	single wing	2142893.135	1404733.531	S-11283	CB1295	SILVERCOMET WAY	<Null>	1	994.6334
1678	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.673108	33.860962	double wing	2142846.491	1404847.621	S-11284	CB1296	SILVERCOMET WAY	<Null>	1	991.9067
1679	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673047	33.861012	double wing	2142864.895	1404865.603	S-11285	CB1297	SILVERCOMET WAY	2	1	991.7706
1682	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.669895	33.85487	single wing	2143810.921	1402626.08	S-11288	CB1300	AUSTELL POWDER SPRI	<Null>	1	967.2784
1683	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.67205	33.85813	single wing	2143162.447	1403815.546	S-11289	CB1301	AUSTELL POWDER SPRI	1	1	960.5574
1684	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.671818	33.857978	single wing	2143232.726	1403759.766	S-11290	CB1302	AUSTELL POWDER SPRI	4	1	958.1466
1685	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.671928	33.858011	single wing	2143199.305	1403771.743	S-11291	CB1303	AUSTELL POWDER SPRI	<Null>	1	958.885
1686	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.671399	33.857654	double wing	2143359.213	1403641.303	S-11292	CB1304	AUSTELL POWDER SPRI	1	1	958.1474
1687	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.67463	33.861682	double wing	2142385.642	1405111.94	S-11293	CB1305	INTEGRITY WAY	<Null>	1	995.7542
1688	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.669075	33.85876	double wing	2144066.703	1404040.265	S-11294	CB1306	SHARRON DRIVE	1	1	941.7556
1689	No	Catch Basin	<Null>	Concrete	<Null>	<Null>	5	-84.664109	33.857713	single wing	2145572.492	1403651.875	S-11295	CB1307	SHARON DRIVE	<Null>	<Null>	942.4945
1690	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.674745	33.872891	double wing	2142370.936	1409190.794	S-11296	CB1308	DOGWOOD DRIVE	<Null>	1	975.216
1691	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.672612	33.872898	double wing	2143018.275	1409189.952	S-11297	CB1309	DOGWOOD DRIVE	<Null>	1	970.132
1692	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.672807	33.871725	single wing	2142957.151	1408763.449	S-11298	CB1310	MAPLE LANE	<Null>	1	986.1861
1693	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.672805	33.871642	single wing	2142957.548	1408733.163	S-11299	CB1311	DOGWOOD DRIVE	1	1	986.1415
1694	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.672822	33.870614	single wing	2142950.396	1408359.31	S-11300	CB1312	POPLAR TRAIL	1	1	982.573
1695	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.672825	33.870536	single wing	2142949.552	1408330.713	S-11301	CB1313	POPLAR TRAIL	1	1	982.3264
1696	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.672756	33.870259	double wing	2142970.037	1408230.047	S-11302	CB1314	POPLAR DRIVE	2	1	980.0364
1697	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.672661	33.870254	double wing	2142998.88	1408227.908	S-11303	CB1315	DOGWOOD DRIVE	1	1	980.2008
1698	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.676339	33.873843	single wing	2141888.796	1409539.292	S-11304	CB1320	NEW MACLAND ROAD	2	1	985.7243
1699	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692048	33.870326	single wing	2137114.241	1408283.56	S-11305	CB1321	SPLITWOOD WAY	1	1	933.1785
1700	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.711483	33.884071	single wing	2131241.631	1413316.103	S-11306	CB1323	ELLIOT DR	1	1	934.8091
1701	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.676705	33.882384	single wing	2141793.121	1412647.953	S-11307	CB1324	STEADING ROAD	1	1	979.8857

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1702	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.676696	33.882303	single wing	2141795.747	1412618.565	S-11308	CB1325	STEADING ROAD	1	1	979.9744
1703	Yes	Catch Basin	Round	Brick	yes	yes	1	-84.698091	33.878833	single wing	2135296.12	1411388.814	S-11309	CB1327	SHIPP RD	1	1	928.1865
1705	clear	Catch Basin	<Null>	Brick	yes	no	2	-84.67587	33.869724	single wing	2142023.597	1408040.084	S-11311	CB1329	NEW MACLAND ROAD	<Null>	1	996.9906
1706	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.675796	33.869166	single wing	2142045.107	1407836.679	S-11312	CB1330	NEW MACLAND ROAD	1	1	995.3361
1707	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65481	33.868018	single wing	2148413.341	1407388.029	S-11313	CB1331	HOPKINS RD	1	1	903.1637
1708	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.654875	33.867936	square	2148393.422	1407358.567	S-11314	CB1332	HOPKINS RD	1	1	902.0804
1709	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.655256	33.866503	single wing	2148275.331	1406837.45	S-11315	CB1333	HOPKINS RD	<Null>	1	900.5988
1710	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655522	33.866354	single wing	2148194.211	1406783.714	S-11316	CB1334	HOPKINS RD	1	1	899.5715
1711	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655461	33.866282	single wing	2148212.506	1406757.539	S-11317	CB1335	HOPKINS RD	1	1	899.7149
1712	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.655772	33.866102	single wing	2148117.978	1406692.169	S-11318	CB1336	HOPKINS RD	<Null>	1	899.4335
1713	Yes	Catch Basin	Round	Brick	yes	yes	3	-84.657314	33.871805	single wing	2147659.646	1408769.76	S-11319	CB1337	HOPKINS ROAD	1	1	905.3819
1714	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.657214	33.871834	square	2147690.044	1408780.157	S-11320	CB1338	HOPKINS ROAD	1	1	905.3038
1715	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.655879	33.86973	square	2148091.65	1408012.594	S-11321	CB1339	HOPKINS RD	<Null>	1	900.9444
1716	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655945	33.869678	single wing	2148071.736	1407993.911	S-11322	CB1340	HOPKINS RD	1	1	900.233
1717	Yes	Catch Basin	Round	Brick	yes	no	3	-84.655579	33.869423	single wing	2148182.396	1407900.683	S-11323	CB1341	HOPKINS RD	<Null>	1	901.6176
1718	Yes	Catch Basin	Round	Brick	yes	yes	3	-84.655744	33.869603	single wing	2148132.471	1407966.154	S-11324	CB1342	HOPKINS RD	1	1	901.0784
1719	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.655815	33.869553	single wing	2148110.901	1407948.176	S-11325	CB1343	HOPKINS RD	1	1	900.0957
1720	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.683769	33.86567	single wing	2139618.688	1406576.789	S-11326	CB1346	RICHARD SAILORS	1	1	937.825
1721	No	Catch Basin	<Null>	Concrete	<Null>	<Null>	5	-84.684422	33.86037	<Null>	2139410.795	1404649.141	S-11327	CB1347	PINEVIEW DR	1	<Null>	935.6211
1722	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.70167	33.878085	single wing	2134208.382	1411122.085	S-11328	CB1348	COUNTRY COVE WAY	1	1	941.2893
1723	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.681598	33.866985	double wing	2140279.96	1407051.903	S-11329	CB1349	PINETREE COURT	1	1	940.1335
1724	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.681504	33.866985	double wing	2140308.532	1407051.625	S-11330	CB1350	PINETREE COURT	1	1	940.4825
1725	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.6815	33.867964	double wing	2140311.758	1407408.003	S-11331	CB1351	PINETREE COURT	<Null>	1	944.3702
1726	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.681597	33.867962	double wing	2140282.323	1407407.43	S-11332	CB1352	PINETREE COURT	1	1	943.9977
1727	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.6552	33.868814	single wing	2148296.197	1407678.331	S-11333	CB1353	HOPKINS RD	1	1	902.4627
1728	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.655292	33.868786	square	2148268.142	1407668.307	S-11334	CB1354	HOPKINS RD	1	1	901.4648
1729	Yes	Catch Basin	Rectangular	Concrete	yes	no	2	-84.666175	33.86457	double wing	2144957.448	1406149.888	S-11335	CB1355	FOREST HILL ROAD	<Null>	1	935.1403
1730	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.692052	33.882285	single wing	2137135.215	1412635.358	S-11336	CB1357	LOST LAKES DRIVE	1	1	968.4076
1731	Yes	Catch Basin	Round	Concrete	yes	yes	2	-84.693692	33.873662	double wing	2136621.591	1409500.136	S-11337	CB1358	COUNTY WALK DRIVE	2	1	942.8752
1732	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677483	33.862154	double wing	2141520.484	1405287.926	S-11339	CB1367	DILLARD ST	1	1	968.3448
1733	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.677547	33.860716	single wing	2141498.28	1404764.629	S-11340	CB1368	DILLARD ST	2	1	970.9286
1734	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.677641	33.860722	square	2141469.934	1404767.131	S-11341	CB1369	DILLARD ST	1	1	969.9355
1735	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.677596	33.859903	single wing	2141482.007	1404468.901	S-11342	CB1370	DILLARD ST	1	1	982.9839
1736	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.674589	33.858751	single wing	2142392.819	1404045.136	S-11343	CB1371	MARIETTA STREET	<Null>	1	988.2989
1737	Yes	Catch Basin	Round	Brick	yes	no	5	-84.674783	33.858908	single wing	2142334.348	1404102.607	S-11344	CB1372	MARIETTA STREET	<Null>	1	991.6914
1738	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.673845	33.858722	single wing	2142618.62	1404033.378	S-11345	CB1373	MARIETTA STREET	1	1	978.9846
1739	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.673538	33.858722	single wing	2142711.864	1404032.896	S-11346	CB1374	MARIETTA STREET	1	1	976.8012
1740	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673701	33.85888	single wing	2142662.555	1404090.667	S-11347	CB1375	MARIETTA STREET	1	1	978.2238
1741	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674077	33.858978	double wing	2142548.561	1404126.983	S-11348	CB1376	MARIETTA STREET	1	1	982.9493
1742	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673955	33.858979	double wing	2142585.7	1404127.178	S-11349	CB1377	MARIETTA STREET	1	1	981.4717

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OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
1743	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.673115	33.858881	single wing	2142840.395	1404090.397	S-11350	CB1378	MARIETTA STREET	1	1	975.3586
1744	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.674292	33.857874	single wing	2142481.335	1403725.679	S-11351	CB1379	OLD AUSTELL ROAD	1	1	987.1271
1745	Yes	Catch Basin	Rectangular	Concrete	yes	yes	5	-84.674218	33.857915	single wing	2142503.884	1403740.522	S-11352	CB1380	OLD AUSTELL ROAD	1	1	986.3953
1747	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.658152	33.861577	single wing	2147387.65	1405049.332	S-11354	CB1382	MISTY BLEAU DRIVE	1	1	923.2098
1748	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.659573	33.863582	double wing	2146959.756	1405780.868	S-11355	CB1383	ASHLEY WOODS DR	<Null>	1	924.696
1749	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.65948	33.863577	double wing	2146988.091	1405778.929	S-11356	CB1384	ASHLEY WOODS DR	1	1	924.8878
1750	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.659033	33.864188	double wing	2147124.749	1406000.769	S-11357	CB1385	JOSH CT	<Null>	1	923.8345
1751	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.658197	33.864362	single wing	2147378.898	1406062.532	S-11358	CB1386	MISTY BLEAU DR	<Null>	1	915.2198
1752	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.658288	33.864369	single wing	2147351.182	1406065.262	S-11359	CB1387	MISTY BLEAU DR	2	1	915.2775
1753	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.658199	33.865026	single wing	2147379.373	1406304.308	S-11360	CB1388	MISTY BLEAU DR	1	1	912.1248
1754	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.695525	33.873309	double wing	2136064.479	1409374.527	S-11361	CB1389	HILLSIDE DR	<Null>	1	921.9705
1755	Yes	Catch Basin	Rectangular	Concrete	yes	yes	2	-84.686324	33.871218	single wing	2138853.213	1408599.38	S-11362	CB1390	COUNTRY WALK DR	2	1	965.8634
1756	Yes	Catch Basin	Rectangular	Concrete	yes	no	3	-84.662153	33.870505	double wing	2146188.762	1408303.913	S-11363	CB1391	LANCER DR	<Null>	1	916.6388
1757	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.671104	33.875135	double wing	2143480.107	1410001.835	S-11364	CB1393	MACEDONIA RD	<Null>	1	934.5825
1758	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.670996	33.875122	double wing	2143512.91	1409996.856	S-11365	CB1394	MACEDONIA RD	1	1	934.7358
1759	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.668967	33.875393	single wing	2144129.256	1410092.383	S-11366	CB1395	MACEDONIA RD	<Null>	1	954.3861
1760	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.669331	33.875418	single wing	2144018.585	1410102.092	S-11367	CB1396	MACEDONIA RD	1	1	950.5127
1761	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.669433	33.875401	single wing	2143987.563	1410096.016	S-11368	CB1397	MACEDONIA RD	1	1	949.4371
1762	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.666055	33.877253	single wing	2145016.261	1410765.045	S-11369	CB1398	BROWN PKWY	<Null>	1	951.3262
1763	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.723819	33.883951	single wing	2127497.712	1413292.177	S-11370	CB1399	SILVERCREST COURT	1	1	941.7276
1764	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.723724	33.883911	single wing	2127526.378	1413277.537	S-11371	CB1400	SILVERCREST COURT	<Null>	1	941.9229
1765	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.723794	33.884548	single wing	2127506.215	1413509.536	S-11372	CB1401	SILVERCREST COURT	<Null>	1	937.3278
1766	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.723393	33.884648	double wing	2127628.088	1413545.435	S-11373	CB1402	SILVERCREST COURT	1	2	935.2426
1776	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.716658	33.880885	single wing	2129664.859	1412165.013	S-11383	CB1412	BERNEY CIRCLE	1	1	956.3167
1777	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.717007	33.881064	single wing	2129559.193	1412230.737	S-11384	CB1413	BERNEY CIRCLE	1	1	949.2334
1778	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.716901	33.881146	single wing	2129591.612	1412260.195	S-11385	CB1414	BERNEY CIRCLE	1	<Null>	949.1762
1779	Yes	Catch Basin	Round	Concrete	yes	no	1	-84.715763	33.880967	single wing	2129936.745	1412193.366	S-11387	CB1416	BERNEY CIRCLE	1	1	948.371
1780	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715684	33.881008	single wing	2129960.803	1412208.17	S-11388	CB1417	BERNEY CIRCLE	<Null>	1	948.5629
1781	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715603	33.880564	single wing	2129984.401	1412046.645	S-11389	CB1418	BERNEY CIRCLE	2	1	945.2654
1782	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715515	33.880592	single wing	2130011.082	1412056.459	S-11390	CB1419	BERNEY CIRCLE	<Null>	1	945.4402
1783	Yes	Catch Basin	Round	Concrete	yes	yes	1	-84.715769	33.880446	single wing	2129933.899	1412003.671	S-11391	CB1420	BERNEY CIRCLE	1	1	944.8843
1784	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.669869	33.852498	square	2143814.442	1401762.646	S-11392	CB1421	OLD AUSTELL ROAD	1	<Null>	970.8127
1785	Yes	Catch Basin	Round	Concrete	yes	no	2	-84.67956	33.872083	single wing	2140908.026	1408903.872	S-11393	CB1422	COMMODORE ROAD	<Null>	1	976.5145
1786	Yes	Catch Basin	Round	Brick	yes	yes	2	-84.676327	33.879936	single wing	2141903.42	1411756.571	S-11394	CB1423	WESTON DRIVE	1	<Null>	965.8775
1787	Yes	Catch Basin	Rectangular	Brick	yes	yes	2	-84.676323	33.880032	single wing	2141904.777	1411791.644	S-11395	CB1424	WESTON DRIVE	<Null>	1	966.6408
1788	Yes	Catch Basin	Round	Concrete	yes	no	3	-84.657312	33.862311	single wing	2147643.943	1405315.13	S-11396	CB1425	ASHLEY WOODS DRIVE	<Null>	1	916.7498
1789	Yes	Catch Basin	Round	Concrete	yes	yes	3	-84.657319	33.862226	single wing	2147641.662	1405284.163	S-11397	CB1426	ASHLEY WOODS DRIVE	1	1	917.0715
1790	Yes	Catch Basin	Rectangular	Concrete	yes	yes	3	-84.657101	33.862219	square	2147707.759	1405281.281	S-11398	CB1427	HOPKINS ROAD	1	1	915.6193
1791	Yes	Catch Basin	Round	Concrete	yes	no	4	-84.691762	33.85986	double wing	2137181.71	1404474.817	S-11399	CB1451	SWEETWATER AVENUE	<Null>	1	916.1552
1792	Yes	Catch Basin	Round	Concrete	yes	yes	4	-84.691725	33.859952	double wing	2137192.893	1404508.494	S-11400	CB1452	SWEETWATER AVENUE	1	1	916.2244

MS4 Catch Basins Inventory

As of 4/30/2024

OBJECT ID	Accessibility	StructureType	StrShapeTop	StrMaterial	Outflow Possible	Inflow Via Network	Zone	X	Y	StrCBType	X_Ft	Y_Ft	Lowe_ID	Field_ID *	Street	InPipeCnt	OutPipeCnt	Elevation
1793	Yes	Catch Basin	Rectangular	Brick	yes	no	4	-84.696678	33.854817	double wing	2135679.726	1402647.47	S-11401	CB1449	HILL ROAD	<Null>	1	922.8698
1794	Yes	Catch Basin	Rectangular	Brick	yes	no	5	-84.664016	33.855195	double wing	2145596.124	1402735.524	S-11402	CB1431	PARKS DRIVE	<Null>	1	911.3357
1796	Yes	Catch Basin	Round	Concrete	yes	<Null>	4	-84.697039	33.846516	single wing	2135554.655	1399627.371	S-11404	CB1433	BROWNSVILLE ROAD	<Null>	1	997.0048
1799	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.684238	33.861992	double wing	2139469.499	1405238.945	S-11407	CB1438	PINEVIEW DRIVE	3	2	919.4081
1800	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683511	33.863016	double wing	2139692.013	1405610.672	S-11408	CB1440	LYNN DRIVE	1	1	922.6962
1801	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683624	33.862977	double wing	2139657.919	1405596.598	S-11409	CB1441	LYNN DRIVE	1	1	923.0865
1802	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683792	33.857169	single wing	2139596.062	1403483.402	S-11410	CB1442	LEWIS ROAD	1	1	919.8752
1803	Yes	Catch Basin	Round	Concrete	yes	yes	5	-84.683839	33.856913	single wing	2139581.542	1403390.328	S-11411	CB1443	LEWIS ROAD	1	1	918.7194
1804	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683881	33.85747	double wing	2139569.554	1403593.181	S-11412	CB1444	LEWIS ROAD	<Null>	1	919.7682
1805	Yes	Catch Basin	Round	Concrete	yes	no	5	-84.683725	33.857839	single wing	2139617.617	1403726.99	S-11413	CB1445	ATLANTA STREET	<Null>	1	924.8395
1806	Yes	Catch Basin	Round	Brick	yes	yes	5	-84.683743	33.858013	double wing	2139612.656	1403790.533	S-11414	CB1446	ATLANTA STREET	1	1	924.7063
1807	No	Catch Basin	<Null>	Concrete	<Null>	<Null>	5	-84.684055	33.858061	<Null>	2139518.025	1403808.29	S-11415	CB1447	ATLANTA STREET	<Null>	1	922.2643
1808	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.684103	33.857851	single wing	2139502.96	1403732.204	S-11416	CB1448	ATLANTA STREET	1	1	920.9585
1906	Yes	Catch Basin	Rectangular	Brick	yes	yes	5	-84.666477	33.85706	other	2144852.492	1403417.941	S-14298	CV111	PARKS DRIVE	2	1	918.11

MS4 Ditches Inventory
As of 4/30/2024

OBJECTID *	Ownership	Notes	Channel Material	Grading	X_Start	Y_Start	X_End	Y_End	Field_ID	USFID	DSFID	ELEV_US	ELEV_DS	Length
1	City	Flume	Concrete	<Null>	2143878.075	1402335.224	2143878.704	1402323.505	C-24190	FL4793	CI1128	954	952.5109	11.735656
23	City	<Null>	Grassy	<Null>	2146618.874	1404472.999	2146551.355	1404482.569	C-23023	PP4786	OT427	944	944.123	68.234554
24	City	<Null>	Earthen	<Null>	2146637.634	1404471.285	2146782.757	1404443.789	C-23024	PP4787	<Null>	944.0869	<Null>	147.719831
25	City	active construction	Earthen	<Null>	2146828.592	1404435.979	2146958.622	1404416.096	C-23025	<Null>	<Null>	<Null>	<Null>	131.540856
26	City	active construction	Earthen	<Null>	2146958.622	1404416.096	2147073.79	1404402.278	C-23026	<Null>	<Null>	<Null>	<Null>	116.005684
30	City	<Null>	Grassy	<Null>	2138780.945	1404796.306	2138853.302	1404672.898	C-23030	OF105	CV79	908.3663	904.7753	143.055987
37	City	<Null>	Earthen	Full Length	2133536.428	1412265.491	2133553.194	1412261.305	C-23037	HW178	<Null>	964.9285	<Null>	17.281027
38	City	<Null>	Rip Rap	Full Length	2133521.653	1411283.427	2133527.712	1410968.623	C-23038	<Null>	PP90	<Null>	950.3339	320.082234
39	City	<Null>	Earthen	Full Length	2133596.232	1411265.239	2133663.057	1411263.942	C-23039	PP110	CV243	956.918	952.1198	66.838237
40	City	<Null>	Earthen	<Null>	2140441.943	1404839.586	2140361.283	1404948.848	C-23040	HW115	<Null>	953.5716	<Null>	137.793274
43	City	<Null>	Earthen	<Null>	2144660.217	1410042.102	2144655.447	1410074.029	C-23043	PP81	DI1157	960.7618	958.5663	32.387212
44	City	<Null>	Earthen	Full Length	2145736.486	1410422.421	2145910.03	1410465.868	C-23044	HW80	OT391	936.2947	928.423	198.524134
45	City	not connected	Earthen	Full Length	2132683.367	1412033.539	2132367.259	1411499.143	C-23045	<Null>	<Null>	<Null>	<Null>	890.000164
48	City	<Null>	Earthen	<Null>	2143862.276	1402402.725	2143878.075	1402335.224	C-23048	HW128	FL4793	954.9324	954	69.565399
49	City	<Null>	Earthen	Full Length	2142051.067	1407061.605	2141950.552	1407070.908	C-23049	PP131	DI799	978.041	975.9564	100.944467
50	City	<Null>	Rip Rap	Full Length	2141841.81	1411109.482	2141852.829	1411159.197	C-23050	<Null>	CV131	<Null>	943.027	50.922338
51	City	Earthen	Earthen	Full Length	2141842.054	1411284.394	2141849.896	1411280.315	C-23051	PP4792	CV129	950	947.2271	8.839165
52	City	Unsafe, to close to the street	Grassy	Full Length	2141902.702	1411753.271	2141890.891	1411156.377	C-23052	<Null>	CV132	<Null>	952.1631	597.010997
57	City	<Null>	Earthen	Full Length	2136354.768	1411447.057	2135689.991	1411451.779	C-23057	HW211	CV58	946.3767	916.9797	664.920351
60	City	clogged at end	Grassy	Full Length	2142057.27	1407751.821	2142063.461	1407711.604	C-23060b	PP2152	PP2151	992.5731	992.6017	40.689858
62	City	<Null>	Earthen	Full Length	2142119.111	1407483.804	2142128.19	1407316.759	C-23062a	CV122	PP2146	987.914	979.8544	167.478309
64	City	<Null>	Earthen	Full Length	2144908.497	1405215.457	2144916.994	1405681.474	C-23064	PP59	HW303	960.3271	943.3485	466.094243
65	City	<Null>	Earthen	Full Length	2144910.746	1405729.9	2144920.022	1406086.689	C-23065	CV134	CV135	942.7426	929.0087	356.909206
66	City	<Null>	Earthen	Full Length	2144931.935	1406451.752	2144920.022	1406086.689	C-23066	CV10	CV135	947.584	929.0087	365.257244
67	City	<Null>	Earthen	Full Length	2142066.953	1408043.825	2142080.16	1407949.755	C-23067c	PP4791	CV125	996.211	993.7253	94.992553
68	City	overgrown at ends	Grassy	Full Length	2142030.19	1408446.854	2142021.652	1408516.435	C-23068b	PP2157	PP2158	992.5308	991.0108	70.103429
69	City	<Null>	Earthen	Full Length	2141945.733	1408833.32	2141940.556	1408870.423	C-23069	FP2	PP806	981.9177	979.9482	37.462815
70	City	<Null>	Earthen	Full Length	2142077.06	1407453.414	2142082.273	1407299.47	C-23070b	PP2149	DI792	987.2638	982.6617	154.03247
71	City	<Null>	Earthen	Full Length	2142055.068	1407596.374	2142061.103	1407594.411	C-23071	PP139	PP858	991.7713	989.3904	6.345769
75	City	<Null>	Concrete	Full Length	2145289.443	1410788.242	2145201.404	1410922.218	C-23075	OF314	<Null>	946.9893	<Null>	163.122736
77	City	there is rip rap for about first 15 feet, then earthen the rest of the way, running into storm water pond.	Earthen	Full Length	2131549.969	1413976.098	2131398.257	1413863.393	C-23077b	CI1322	PI1099	945.1677	941.881	188.994901
79	City	<Null>	Earthen	Full Length	2132034.34	1413628.782	2132060.078	1413630.455	C-23079	PP974	<Null>	960.835	<Null>	25.792077
83	City	<Null>	Rip Rap	Full Length	2133605.584	1410712.651	2133639.774	1410492.826	C-23083	PP2170	<Null>	955.9354	<Null>	222.48023
95	City	overgrown	Grassy	Full Length	2130956.934	1413118.48	2130909.302	1413083.797	C-23095	PP391	PP2177	930.257	923.3026	58.921314
102	City	<Null>	Concrete	Full Length	2141922.078	1409099.364	2141933.581	1408965.263	C-23102	HW2162	DI809	987.0945	980.0627	134.593284
106	City	Flume	Concrete	Full Length	2137624.858	1405675.759	2137610.39	1405697.42	C-23107	CI1120	HW256	932.4191	926.1782	26.048119
108	City	overgrown	Grassy	Full Length	2130960.857	1413099.835	2130912.392	1413079.024	C-23109	HW392	PP2175	930.2897	929.4204	52.744901

MS4 Ditches Inventory
As of 4/30/2024

OBJECTID *	Ownership	Notes	Channel Material	Grading	X_Start	Y_Start	X_End	Y_End	Field_ID	USFID	DSFID	ELEV_US	ELEV_DS	Length
110	City	Ditch starts as concrete, then mixed riprap/earthen (riprap dams oriented perpendicular to flow. Located at the back of the property, behind the Ford Center.	Rip Rap	Full Length	2141881.905	1402923.247	2141811.615	1402860.383	C-23111	CI1290	<Null>	984.5945	<Null>	94.300597
112	City	<Null>	Earthen	Full Length	2134661.491	1407949.449	2134596.662	1408030.512	C-23113	OS194	CV165	937.3072	930.0833	111.872823
120	City	<Null>	Concrete	Full Length	2141938.045	1408889.775	2141933.581	1408965.263	C-23121	PP202	DI809	981.3678	980.0627	75.620234
123	City	long neighborhood road ditch broken by multiple driveway pipes	Earthen	Full Length	2141904.777	1411791.644	2141904.765	1412188.139	C-23124	CB1424	<Null>	966.6408	<Null>	396.494614
124	City	<Null>	Earthen	Full Length	2141862.8	1412187.047	2141849.896	1411280.315	C-23125	<Null>	CV129	<Null>	947.2271	906.823924
125	City	<Null>	Earthen	Full Length	2141853.999	1410508.566	2141852.829	1411159.197	C-23126		CV131	<Null>	943.027	650.632623
126	City	<Null>	Earthen	Full Length	2141860.891	1412601.447	2141858.002	1412404.996	C-23127	DI848	DI848	977.9196	977.9196	196.472622
128	City	<Null>	Earthen	Full Length	2142090.477	1407838.894	2142116.774	1407530.93	C-23129b	PP2155	CV121	993.1325	989.0649	309.084649
130	City	<Null>	Earthen	Full Length	2142128.7	1406846.119	2142134.639	1407026.246	C-23131	PP603	<Null>	982.9859	<Null>	180.224806
180	City	<Null>	Concrete	Full Length	2136850.875	1405933.673	2136856.984	1405949.402	C-23182	CI1301	<Null>	912.7585	<Null>	16.873866
181	City	<Null>	Concrete	Full Length	2136665.662	1406011.175	2136666.924	1406021.242	C-23183	CI1300	<Null>	912.2833	<Null>	10.146005
182	City	<Null>	Earthen	Full Length	2137552.611	1406272.927	2137480.375	1406140.198	C-23184	HW300	HW534	936.4322	932.8351	151.112122
183	City	<Null>	Earthen	Full Length	2137862.693	1406262.99	2137569.429	1406306.526	C-23185	<Null>	HW1000	<Null>	934.5506	349.888737
189	City	<Null>	Rip Rap	Full Length	2137929.697	1404031.721	2137945.222	1404030.98	C-23191	PP9	CV26	906.5405	903.6025	15.542896
192	City	<Null>	Rip Rap	Full Length	2135134.061	1398935.415	2135146.388	1398923.301	C-23194	PP32	HW165	1004.873	1001.961	17.283445
194	City	<Null>	Earthen	Full Length	2138823.339	1403555.548	2138635.794	1403331.001	C-23196	CV99	<Null>	898.1698	<Null>	302.4744

MS4 Stormwater Pipes Inventory

As of 4/30/2024

OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1	City	2127839	1413293	2127905	1413309	Concrete	closed	18	C-20001	round	CB470_CB469	68	98	83	935.1065	932.8843	940.7732	941.051	68.247945
2	City	2128910	1412672	2128865	1412772	CMP	closed	24	C-20002	round	DI1190_JB42	66	110	88	933.0825	932.6442	938.5825	941.8109	110.201207
3	City	2128583	1413060	2128600	1413037	RCP	closed	18	C-20003	round	CB459_CB460	55	60	57.5	946.3759	945.8398	950.9592	950.8398	28.593575
4	City	2128256	1413329	2128277	1413348	RCP	closed	24	C-20004	round	CB475_CB476	60	60	60	930.1666	929.9326	935.1666	934.9326	27.902035
5	City	2128277	1413348	2128347	1413413	Metal	closed	30	C-20005	round	CB476_JB1150	60	106	83	929.9326	928.1265	934.9326	936.9598	96.032296
6	City	2130092	1412539	2130094	1412561	RCP	closed	18	C-20006	round	CB518_HW394	52	32	42	926.6708	926.4289	931.0041	929.0956	21.763423
7	City	2130306	1412632	2130314	1412654	RCP	closed	18	C-20007	round	CB519_HW393	70	70	70	920.3598	915.6182	926.1931	921.4515	23.45523
8	City	2129537	1412550	2129524	1412576	RCP	closed	18	C-20008	round	CB489_CB490	50	120	85	931.6088	925.745	935.7755	935.745	29.395014
9	City	2129817	1412822	2129845	1412829	RCP	closed	18	C-20009	round	CB491_CB492	80	90	85	927.7337	927.1143	934.4004	934.6143	29.204909
10	City	2129845	1412829	2129956	1412860	CMP	closed	24	C-20010	round	CB492_HW431	90	24	57	927.1143	925.9482	934.6143	927.9482	114.895119
11	City	2129245	1412566	2129266	1412587	RCP	closed	24	C-20011	round	CB496_CB497	86	96	91	927.8691	926.6267	935.0358	934.6267	29.714381
12	City	2128734	1412756	2128760	1412737	RCP	closed	18	C-20012	round	CB449_CB450	72	68	70	940.9705	940.5721	946.9705	946.2388	32.350622
13	City	2128760	1412737	2128865	1412772	CMP	closed	18	C-20013	round	CB450_JB42	68	110	89	940.5721	932.6442	946.2388	941.8109	110.907765
14	City	2128865	1412772	2128929	1412789	CMP	closed	24	C-20014	round	JB42_CB451	110	64	87	932.6442	931.1256	941.8109	936.4589	66.033397
15	City	2128929	1412789	2128928	1412820	RCP	closed	24	C-20015	round	CB451_CB452	64	80	72	931.1256	930.0044	936.4589	936.6711	30.974415
16	City	2128928	1412820	2128931	1412914	CMP	closed	30	C-20016	round	CB452_JB1148	80	74	77	930.0044	928.6065	936.6711	934.7732	94.185504
17	City	2128714	1412459	2128724	1412487	RCP	closed	18	C-20017	round	CB453_CB454	53	52	52.5	950.3161	950.3545	954.7328	954.6878	29.434202
18	City	2128724	1412487	2128948	1412464	Metal	closed	24	C-20018	round	CB454_CB455	52	60	56	950.3545	943.6403	954.6878	948.6403	225.130776
19	City	2128948	1412464	2128957	1412436	RCP	closed	18	C-20019	round	CB455_CB456	60	64	62	943.6403	943.3528	948.6403	948.6861	29.32608
20	City	2128957	1412436	2128978	1412421	RCP	closed	24	C-20020	round	CB456_JB403	68	90	79	943.0194	942.4359	948.6861	949.9359	25.558256
21	City	2127905	1413309	2127940	1413431	CMP	closed	36	C-20021	round	CB469_CB471	98	80	89	932.8843	932.4044	941.051	939.0711	126.275804
22	City	2127940	1413431	2127912	1413445	CMP	closed	36	C-20022	round	CB471_JB417	80	90	85	932.4044	931.7919	939.0711	939.2919	31.203315
23	City	2127912	1413445	2127937	1413489	CMP	closed	42	C-20023	round	JB417_CB472	90	96	93	931.7919	930.8753	939.2919	938.8753	50.193604
24	City	2127937	1413489	2127853	1413522	CMP	closed	42	C-20024	round	CB472_JB242	96	124	110	930.8753	930.0249	938.8753	940.3582	90.641709
25	City	2128080	1413019	2128083	1413049	RCP	closed	18	C-20025	round	CB464_CB465	68	72	70	949.0793	947.9621	954.746	953.9621	29.921967
26	City	2128083	1413049	2127888	1413126	RCP	closed	18	C-20026	round	CB465_CB466	72	128	100	947.9621	934.9822	953.9621	945.6489	209.738094
27	City	2127888	1413126	2127895	1413283	CMP	closed	36	C-20027	round	CB466_CB468	128	92	110	934.9822	933.6213	945.6489	941.288	156.970465
28	City	2127876	1413100	2127888	1413126	CMP	closed	30	C-20028	round	CB467_CB466	74	128	101	939.7718	934.9822	945.9385	945.6489	28.305458
30	City	2127895	1413283	2127905	1413309	CMP	closed	36	C-20030	round	CB468_CB469	92	92	92	933.6213	933.3843	941.288	941.051	28.775841
31	City	2128747	1413155	2128795	1413163	Concrete	closed	18	C-20031	round	CB461_CB462	72	70	71	939.767	938.486	945.767	944.3193	48.63491
32	City	2128795	1413163	2128895	1413231	CMP	closed	18	C-20032	round	CB462_CB463	70	52	61	938.486	935.5059	944.3193	939.8392	121.043774
33	City	2128895	1413231	2128990	1413206	CMP	closed	18	C-20033	round	CB463_JB1196	52	52	52	935.5059	924.3937	939.8392	928.727	98.596194
34	City	2128411	1412976	2128424	1412950	RCP	closed	18	C-20034	round	CB457_CB458	48	54	51	955.0344	954.4055	959.0344	958.9055	28.940539
35	City	2128424	1412950	2128600	1413037	CMP	closed	18	C-20035	round	CB458_CB460	54	60	57	954.4055	945.8398	958.9055	950.8398	195.972586
36	City	2128600	1413037	2128649	1412933	Metal	closed	18	C-20036	round	CB460_HW433	60	18	39	945.8398	943.4771	950.8398	944.9771	115.010669
37	City	2128362	1413259	2128333	1413249	Concrete	closed	18	C-20037	round	CB473_CB474	60	64	62	932.9195	932.5052	937.9195	937.8385	30.60292
38	City	2128333	1413249	2128256	1413329	Metal	closed	18	C-20038	round	CB474_CB475	64	60	62	932.5052	930.1666	937.8385	935.1666	110.581906
39	City	2136898	1404565	2136911	1404596	CMP	closed	18	C-20039	round	CB906_CB907	72	63	67.5	908.5085	909.161	914.5085	914.411	34.117204
41	City	2136743	1404675	2136761	1404708	CMP	closed	18	C-20041	round	CB908_CB909	47	52	49.5	912.72	912.3563	916.6367	916.6896	37.818922
42	City	2136598	1405014	2136573	1405036	CMP	closed	18	C-20042	round	CB910_CB911	46	60	53	913.1622	912.4316	916.9955	917.4316	34.034431
43	City	2136573	1405036	2136573	1405066	CMP	closed	18	C-20043	round	CB911_CB912	61	70	65.5	912.3483	911.6177	917.4316	917.451	29.476464
45	City	2136593	1405138	2136571	1405209	CMP	closed	24	C-20045	round	JB170_CB913	68	60	64	910.2709	909.2815	915.9376	914.2815	74.267965
46	City	2136571	1405209	2136602	1405227	CMP	closed	30	C-20046	round	CB913_CB914	63	69	66	909.0315	908.2703	914.2815	914.0203	36.069821

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
49	City	2136269	1405311	2136308	1405337	CMP	closed	18	C-20049	round	CB916_CB917	47	42	44.5	916.4779	916.3001	920.3946	919.8001	47.093281
51	City	2136036	1405150	2136065	1405076	CMP	closed	18	C-20051	round	CB918_CB919	47	47	47	916.996	916.2064	920.9127	920.1231	79.097186
52	City	2136065	1405076	2136036	1404982	CMP	closed	18	C-20052	round	CB919_CB920	50	52	51	915.9564	915.1788	920.1231	919.5121	98.05434
53	City	2136036	1404982	2136088	1404921	CMP	closed	18	C-20053	round	CB920_JB172	52	64	58	915.1788	914.1593	919.5121	919.4926	80.17903
55	City	2136150	1404789	2136178	1404805	CMP	closed	18	C-20055	round	CB921_CB922	46	52	49	912.7085	912.0899	916.5418	916.4232	32.005528
57	City	2136322	1404789	2136322	1404761	CMP	closed	24	C-20057	round	CB923_CB924	58	60	59	909.8869	909.5812	914.7202	914.5812	28.473479
59	City	2135884	1404872	2135860	1404886	CMP	closed	18	C-20059	round	CB925_CB926	43	46	44.5	913.0274	912.5799	916.6107	916.4132	28.086444
62	City	2142385	1405428	2142405	1405479	RCP	closed	18	C-20062	round	CB797_CB798	52	52	52	998.3593	997.2334	1002.693	1001.567	53.922521
65	City	2142670	1405332	2142685	1405372	RCP	closed	18	C-20065	round	CB796_CB795	52	57	54.5	991.8019	990.6472	996.1352	995.3972	42.836992
66	City	2142685	1405372	2142821	1405322	RCP	closed	18	C-20066	round	CB795_CB794	59	45	52	990.4805	988.5037	995.3972	992.2537	145.150009
67	City	2142821	1405322	2142911	1405286	RCP	closed	18	C-20067	round	CB794_CB793	46	44	45	988.4204	986.568	992.2537	990.2347	96.938437
68	City	2142911	1405286	2142972	1405255	RCP	closed	18	C-20068	round	CB793_CB792	44	74	59	986.568	982.7561	990.2347	988.9228	67.920681
69	City	2142956	1405212	2142972	1405255	RCP	closed	18	C-20069	round	CB791_CB792	57	74	65.5	985.1667	982.7561	989.9167	988.9228	45.767811
70	City	2142972	1405255	2143251	1405144	RCP	closed	18	C-20070	round	CB792_CB790	75	78	76.5	982.6728	976.1219	988.9228	982.6219	300.803849
71	City	2143237	1405104	2143251	1405144	RCP	closed	18	C-20071	round	CB789_CB790	82	78	80	976.5075	976.1219	983.3408	982.6219	42.348386
72	City	2143251	1405144	2143530	1405039	RCP	closed	18	C-20072	round	CB790_CB787	78	80	79	976.1219	969.6161	982.6219	976.2828	298.220981
73	City	2143521	1405010	2143530	1405039	RCP	closed	18	C-20073	round	CB788_CB787	65	81	73	971.5535	969.5328	976.9702	976.2828	30.297838
74	City	2143530	1405039	2143662	1405009	RCP	closed	18	C-20074	round	CB787_CB783	83	62	72.5	969.3661	967.5373	976.2828	972.704	135.065927
75	City	2143662	1405009	2143662	1405023	RCP	closed	18	C-20075	round	CB783_HW175	62	110	86	967.5373	962.7073	972.704	971.874	14.107467
76	City	2143825	1404906	2143777	1404919	RCP	closed	18	C-20076	round	CB780_CB786	96	93	94.5	965.1777	964.9473	973.1777	972.6973	48.993476
77	City	2143777	1404919	2143738	1404929	RCP	closed	18	C-20077	round	CB786_CB785	94	112	103	964.864	963.3841	972.6973	972.7174	40.348453
78	City	2143836	1404946	2143789	1404959	RCP	closed	24	C-20078	round	CB781_CB782	64	63	63.5	966.9234	966.931	972.2567	972.181	49.436291
79	City	2143789	1404959	2143704	1404983	RCP	closed	24	C-20079	round	CB782_CB784	64	64	64	966.8477	966.89	972.181	972.2233	87.665833
80	City	2144013	1404905	2143836	1404946	RCP	closed	24	C-20080	round	CB778_CB781	82	63	72.5	968.9856	967.0067	975.8189	972.2567	181.514534
81	City	2144005	1404864	2144013	1404905	RCP	closed	18	C-20081	round	CB779_CB778	87	81	84	969.5542	969.0689	976.8042	975.8189	41.762009
82	City	2144306	1404854	2144013	1404905	RCP	closed	18	C-20082	round	CB776_CB778	132	77	104.5	975.4655	969.4022	986.4655	975.8189	297.304547
83	City	2144301	1404818	2144306	1404854	RCP	closed	18	C-20083	round	JB157_CB776	137	130	133.5	975.9548	975.6322	987.3715	986.4655	36.53175
84	City	2144294	1404782	2144301	1404818	RCP	closed	18	C-20084	round	CB777_JB157	129	137	133	976.0949	975.9548	986.8449	987.3715	36.551219
85	City	2144396	1404765	2144403	1404806	RCP	closed	18	C-20085	round	CB774_CB775	127	144	135.5	977.5587	977.0014	988.142	989.0014	41.778103
86	City	2144403	1404806	2144301	1404818	RCP	closed	18	C-20086	round	CB775_JB157	144	137	140.5	977.0014	975.9548	989.0014	987.3715	103.153165
87	City	2144744	1404780	2144624	1404714	RCP	closed	18	C-20087	round	CB772_CB773	109	152	130.5	976.0361	974.4393	985.1194	987.106	136.647776
88	City	2144624	1404714	2144579	1404691	RCP	closed	18	C-20088	round	CB773_OF148	152	33	92.5	974.4393	974.5866	987.106	977.3366	51.113658
89	City	2135784	1407267	2135745	1407221	RCP	closed	18	C-20089	round	CI249_CB842	<Null>	120	<Null>	<Null>	925.5664	933.9221	935.5664	60.753855
90	City	2135745	1407221	2135779	1407180	Concrete	closed	18	C-20090	round	CB842_CB844	124	124	124	925.2331	924.845	935.5664	935.1783	53.659981
91	City	2135779	1407180	2135867	1407153	CMP	closed	18	C-20091	round	CB844_CB845	124	141	132.5	924.845	923.7282	935.1783	935.4782	91.276473
92	City	2135890	1407235	2135867	1407153	CMP	closed	18	C-20092	round	CB843_CB845	125	213	169	924.7269	917.7282	935.1436	935.4782	84.954833
93	City	2135867	1407153	2135858	1407109	CMP	closed	18	C-20093	round	CB845_PP379	213	213	213	917.7282	901.3939	935.4782	919.1439	45.19281
94	City	2136548	1406955	2136544	1407033	RCP	closed	18	C-20094	round	CB838_CB839	77	250	163.5	924.0878	909.0887	930.5045	929.922	77.7153
95	City	2136544	1407033	2136564	1407081	RCP	closed	24	C-20095	round	CB839_PP380	255	255	255	908.672	889.8132	929.922	911.0632	52.418754
96	City	2136137	1407151	2136163	1407067	Concrete	closed	18	C-20096	round	CB840_CB841	110	126	118	925.6167	923.7639	934.7834	934.2639	87.683386
97	City	2136163	1407067	2136151	1407017	CMP	closed	18	C-20097	round	CB841_HW382	130	130	130	923.4306	902.7539	934.2639	913.5872	51.104588
98	City	2135683	1407460	2135771	1407455	CMP	closed	18	C-20098	round	CB846_PP384	78	78	78	923.451	910.1746	929.951	916.6746	87.37774
99	City	2137269	1406924	2137201	1406951	RCP	closed	18	C-20099	round	CB173_CB831	143	110	126.5	949.4423	947.3764	961.359	956.5431	73.078171

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
100	City	2137201	1406951	2136991	1406933	RCP	closed	18	C-20100	round	CB831_CB832	116	128	122	946.8764	934.4612	956.5431	945.1279	211.32983
101	City	2136987	1406891	2136991	1406933	RCP	closed	18	C-20101	round	CB833_CB832	155	128	141.5	934.4839	934.4612	947.4006	945.1279	42.278924
102	City	2136837	1406907	2136853	1406947	Concrete	closed	18	C-20102	round	CB834_CB835	119	114	116.5	929.9575	928.8172	939.8742	938.3172	43.449603
103	City	2136853	1406947	2136703	1406985	RCP	closed	18	C-20103	round	CB835_CB837	142	83	112.5	926.4839	925.8917	938.3172	932.8084	154.844218
104	City	2136691	1406945	2136703	1406985	RCP	closed	18	C-20104	round	CB836_CB837	74	86	80	927.8624	925.6417	934.0291	932.8084	41.887237
105	City	2136703	1406985	2136544	1407033	RCP	closed	18	C-20105	round	CB837_CB839	86	130	108	925.6417	919.0887	932.8084	929.922	166.47188
106	City	2139274	1406713	2139319	1406688	CMP	closed	18	C-20106	round	CB824_CB825	56	59	57.5	930.6637	929.9751	935.3304	934.8918	51.77548
107	City	2139319	1406688	2139305	1406661	CMP/RCP	closed	18	C-20107	round	CB825_CB826	60	59	59.5	929.8918	929.2985	934.8918	934.2152	30.383595
108	City	2139305	1406661	2139348	1406638	RCP	closed	18	C-20108	round	CB826_CB827	59	63	61	929.2985	928.7887	934.2152	934.0387	49.05353
109	City	2139348	1406638	2139392	1406615	CMP/RCP	closed	18	C-20109	round	CB827_CB830	63	72	67.5	928.7887	928.233	934.0387	934.233	49.75168
110	City	2139392	1406615	2139412	1406575	RCP	closed	18	C-20110	round	CB830_OF142	72	72	72	928.233	924.1509	934.233	930.1509	44.874756
111	City	2139363	1406665	2139348	1406638	CMP/RCP	closed	18	C-20111	round	CB828_CB827	68	63	65.5	928.9207	928.7887	934.5874	934.0387	30.552791
112	City	2139409	1406646	2139392	1406615	CMP/RCP	closed	18	C-20112	round	CB829_CB830	69	72	70.5	928.9446	928.233	934.6946	934.233	35.175417
113	City	2139619	1406577	2139599	1406540	RCP	closed	24	C-20113	round	CB1346_CB823	146	143	144.5	925.6583	926.7336	937.825	938.6503	42.069853
114	City	2139599	1406540	2139556	1406579	RCP	closed	24	C-20114	round	CB823_CI244	149	145	147	926.2336	924.615	938.6503	936.6983	58.016748
115	City	2139685	1406541	2139619	1406577	RCP	closed	18	C-20115	round	CB822_CB1346	142	145	143.5	927.5868	925.7417	939.4201	937.825	75.427556
116	City	2139775	1406498	2139685	1406541	RCP	closed	18	C-20116	round	CB820_CB822	123	140	131.5	932.1674	927.7534	942.4174	939.4201	99.542125
117	City	2139755	1406460	2139775	1406498	RCP	closed	18	C-20117	round	CB821_CB820	125	123	124	933.1628	932.1674	943.5795	942.4174	42.124367
118	City	2140725	1406059	2140739	1406100	RCP	closed	12	C-20118	round	CB807_CB808	64	64	64	965.6598	964.8097	970.9931	970.143	42.568564
119	City	2140739	1406100	2140669	1406127	RCP	closed	12	C-20119	round	CB808_CB809	64	48	56	964.8097	964.1491	970.143	968.1491	75.38869
120	City	2140669	1406127	2140621	1406146	RCP	closed	12	C-20120	round	CB809_CB810	48	54	51	964.1491	962.284	968.1491	966.784	51.344358
121	City	2140621	1406146	2140581	1406163	RCP	closed	12	C-20121	round	CB810_CB811	54	52	53	962.284	961.3336	966.784	965.6669	43.503402
122	City	2140581	1406163	2140533	1406182	RCP	closed	18	C-20122	round	CB811_CB813	52	60	56	961.3336	959.1643	965.6669	964.1643	51.469536
123	City	2140517	1406143	2140533	1406182	RCP	closed	18	C-20123	round	CB812_CB813	57	60	58.5	960.3344	959.1643	965.0844	964.1643	42.617297
124	City	2140533	1406182	2140497	1406208	RCP	closed	18	C-20124	round	CB813_CB814	60	86	73	959.1643	956.0333	964.1643	963.2	44.056186
125	City	2140497	1406208	2140408	1406233	RCP	closed	18	C-20125	round	CB814_CB815	86	88	87	956.0333	953.3957	963.2	960.729	92.524862
126	City	2140408	1406233	2140271	1406290	RCP	closed	24	C-20126	round	CB815_CB817	88	50	69	953.3957	952.8062	960.729	956.9729	148.327431
127	City	2140271	1406290	2140044	1406382	RCP	closed	24	C-20127	round	CB817_CB818	50	60	55	952.8062	945.4639	956.9729	950.4639	245.446719
128	City	2140030	1406343	2140044	1406382	RCP	closed	18	C-20128	round	CB819_CB818	56	60	58	946.757	945.4639	951.4237	950.4639	41.730863
129	City	2140267	1406259	2140271	1406290	RCP	closed	18	C-20129	round	CB816_CB817	57	50	53.5	953.0178	952.8062	957.7678	956.9729	31.283963
130	City	2143781	1407436	2143735	1407447	CMP	closed	18	C-20130	round	DI109_CB504	64	70	67	970.7218	970.4643	976.0551	976.2976	48.292157
131	City	2143735	1407447	2143464	1407437	CMP	closed	24	C-20131	round	CB504_CB505	70	70	70	970.4643	980.8185	976.2976	986.6518	271.010402
132	City	2143736	1407477	2143735	1407447	CMP	closed	18	C-20132	round	CB503_CB504	62	70	66	971.2003	970.4643	976.367	976.2976	29.626817
133	City	2143464	1407437	2143315	1407517	CMP	closed	30	C-20133	round	CB505_CB506	<Null>	70	<Null>	<Null>	978.376	986.6518	984.2093	169.198796
135	City	2143448	1406858	2143434	1406832	CMP	closed	18	C-20135	round	CB500_CB501	54	62	58	980.6264	979.8729	985.1264	985.0396	29.077752
136	City	2143434	1406832	2143369	1406859	CMP	closed	24	C-20136	round	CB501_JB46	62	110	86	979.8729	978.9913	985.0396	988.158	70.395899
138	City	2143380	1407131	2143378	1407101	CMP	closed	18	C-20138	round	CB498_CB499	64	72	68	989.2822	988.673	994.6155	994.673	29.674949
140	City	2136233	1411409	2135965	1411408	Concrete	closed	18	C-20140	round	CB477_CB478	41	42	41.5	940.0178	930.9793	943.4345	934.4793	268.472543
141	City	2135965	1411408	2135761	1411408	RCP	closed	24	C-20141	round	CB478_CB479	45	48	46.5	930.7293	923.2308	934.4793	927.2308	204.188962
142	City	2144720	1408889	2144720	1408860	CMP	closed	24	C-20142	round	CB536_CB537	61	70	65.5	921.1958	920.2721	926.2791	926.1054	29.419957
143	City	2146533	1409851	2146554	1409825	CMP	closed	18	C-20143	round	CB99_CB100	42	49	45.5	907.6867	906.8007	911.1867	910.884	32.905533
144	City	2146554	1409825	2146607	1409850	CMP	closed	18	C-20144	round	CB100_JB1003	50	50	50	906.7173	904.7269	910.884	908.8936	58.692553
145	City	2146607	1409850	2146687	1409716	CMP	closed	18	C-20145	round	JB1003_CB101	<Null>	82	<Null>	<Null>	901.4448	908.8936	908.2781	156.372904

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
146	City	2146660	1409699	2146687	1409716	CMP	closed	24	C-20146	round	CB102_CB101	88	82	85	901.6048	901.4448	908.9381	908.2781	31.188808
148	City	2146865	1409016	2146896	1409022	CMP	closed	18	C-20148	round	CB108_CB109	46	60	53	904.1777	903.1979	908.011	908.1979	31.608184
152	City	2146305	1409592	2146344	1409523	<Null>	closed	24	C-20152	round	JB196_JB1024	<Null>	161	<Null>	<Null>	907.6442	924.0451	921.0609	79.107354
153	City	2146344	1409523	2146351	1409529	CMP	closed	24	C-20153	round	JB1024_CB104	<Null>	76	<Null>	<Null>	914.8188	921.0609	921.1521	8.72587
154	City	2146351	1409529	2146372	1409555	CMP	closed	24	C-20154	round	CB104_CB103	76	100	88	914.8188	913.4021	921.1521	921.7354	33.799279
155	City	2146372	1409555	2146531	1409623	CMP	closed	24	C-20155	round	CB103_OT225	<Null>	64	<Null>	<Null>	906.8536	921.7354	912.187	172.779126
156	City	2146777	1408459	2146780	1408309	CMP	closed	30	C-20156	round	OT226_JB1004	26	64	45	901.8928	899.0226	904.0595	904.3559	150.312249
157	City	2146865	1408460	2146950	1408459	CMP	closed	18	C-20157	round	HW219_CB110	24	55	39.5	900.7	897.7076	902.7	902.2909	85.406668
158	City	2146950	1408459	2146982	1408454	CMP	closed	18	C-20158	round	CB110_CB111	55	40	47.5	897.7076	898.8248	902.2909	902.1581	32.160019
159	City	2146982	1408454	2147159	1408392	CMP	closed	18	C-20159	round	CB111_OF1002	60	60	60	897.1581	893.2623	902.1581	898.2623	187.612258
160	City	2146780	1408309	2146796	1408189	RCP	closed	30	C-20160	round	JB1004_JB197	66	<Null>	<Null>	898.8559	<Null>	904.3559	899.5655	120.816722
161	City	2146796	1408189	2146817	1408058	<Null>	closed	30	C-20161	<Null>	JB197_OF1001	<Null>	<Null>	<Null>	<Null>	<Null>	899.5655	898.4986	133.147849
162	City	2146447	1408712	2146549	1408716	CMP	closed	24	C-20162	round	JB1027_CB106	<Null>	54	<Null>	<Null>	912.1125	922.3703	916.6125	101.619885
163	City	2146549	1408716	2146568	1408724	CMP	closed	24	C-20163	round	CB106_JB1026	54	54	54	912.1125	909.1592	916.6125	913.6592	20.526544
164	City	2146552	1408684	2146549	1408716	CMP	closed	18	C-20164	round	CB105_CB106	36	54	45	913.4395	912.1125	916.4395	916.6125	32.661434
165	City	2146568	1408724	2146595	1408711	CMP	closed	24	C-20165	round	JB1026_CB107	<Null>	58	<Null>	<Null>	910.933	913.6592	915.7663	30.545087
166	City	2132391	1406380	2132427	1406408	CMP	closed	18	C-20166	round	CB153_CB154	62	46	54	943.4704	942.7854	948.6371	946.6187	45.200128
167	City	2132427	1406408	2132688	1406382	CMP	closed	18	C-20167	round	CB154_CB155	46	109	77.5	942.7854	918.5185	946.6187	927.6018	262.366598
169	City	2132373	1406832	2132353	1406813	CMP	closed	18	C-20169	round	CB156_CB157	64	62	63	928.9109	929.0549	934.2442	934.2216	28.230805
170	City	2132353	1406813	2132254	1406953	CMP	closed	24	C-20170	round	CB157_CB158	65	78	71.5	928.8049	927.2047	934.2216	933.7047	171.186523
171	City	2132282	1406962	2132254	1406953	CMP	closed	18	C-20171	round	CB159_CB158	71	76	73.5	927.8064	927.3714	933.7231	933.7047	29.198568
172	City	2132224	1406969	2132254	1406953	CMP	closed	18	C-20172	round	CB161_CB158	66	79	72.5	928.7109	927.1214	934.2109	933.7047	33.862475
173	City	2132218	1406997	2132224	1406969	CMP	closed	18	C-20173	round	CB160_CB161	62	66	64	929.0457	928.7109	934.2124	934.2109	28.434946
174	City	2132254	1406953	2132268	1407241	CMP	closed	24	C-20174	round	CB158_CB162	79	53	66	927.1214	921.056	933.7047	925.4727	288.698288
178	City	2147041	1402811	2147068	1402800	CMP	closed	18	C-20178	round	CB163_CB164	<Null>	80	<Null>	<Null>	908.034	914.6944	914.7007	29.471532
182	City	2146732	1403452	2146727	1403422	CMP	closed	24	C-20182	round	CB165_CB166	75	90	82.5	919.2023	917.7621	925.4523	925.2621	29.5033
183	City	2146727	1403422	2146728	1403331	CMP	closed	24	C-20183	round	CB166_OF1035	90	24	57	917.7621	917.2731	925.2621	919.2731	91.897674
184	City	2146558	1403049	2146593	1402960	CMP	closed	18	C-20184	round	CB167_HW324	55	18	36.5	916.1216	913.6799	920.7049	915.1799	95.338592
185	City	2146206	1403588	2146203	1403563	CMP	closed	42	C-20185	round	HW190_CB168	45	97	71	915.5369	914.3575	919.2869	922.4408	25.268432
186	City	2146203	1403563	2146202	1403532	CMP	closed	42	C-20186	round	CB168_CB169	98	97	97.5	914.2741	914.0598	922.4408	922.1431	30.902997
187	City	2146202	1403532	2146196	1403511	CMP	closed	42	C-20187	round	CB169_OF1036	99	45	72	913.8931	916.2475	922.1431	919.9975	22.127175
188	City	2146156	1403107	2146164	1403078	CMP	closed	18	C-20188	round	CB170_CB171	65	75	70	907.8735	906.936	913.2902	913.186	29.491785
190	City	2142779	1399366	2142777	1399336	CMP	closed	18	C-20190	round	CB121_CB122	57	59	58	913.9478	913.5009	918.6978	918.4176	30.803637
191	City	2142878	1399232	2142774	1399232	CMP	closed	18	C-20191	round	CB123_HW2117	65	32	48.5	913.5658	912.9797	918.9825	915.6464	104.223904
192	City	2142777	1399336	2142779	1399299	CMP	closed	18	C-20192	round	CB122_HW2116	61	18	39.5	913.3343	914.2058	918.4176	915.7058	37.110354
193	City	2147791	1403750	2147820	1403744	CMP	closed	18	C-20193	round	CB90_CB91	47	58	52.5	935.8155	935.4114	939.7322	940.2447	29.642322
194	City	2147820	1403744	2148088	1403671	CMP/RCP	closed	18	C-20194	round	CB91_CB92	58	59	58.5	935.4114	919.6394	940.2447	924.5561	277.096347
195	City	2148088	1403671	2148082	1403641	CMP/RCP	closed	18	C-20195	round	CB92_CB93	59	69	64	919.6394	918.482	924.5561	924.232	30.25349
196	City	2148082	1403641	2148272	1403614	CMP/RCP	closed	18	C-20196	round	CB93_CB96	69	87	78	918.482	904.8949	924.232	912.1449	191.187655
197	City	2148224	1403729	2148254	1403724	CMP/RCP	closed	18	C-20197	round	CB94_CB95	56	67	61.5	906.3784	905.4829	911.0451	911.0662	30.691484
198	City	2148254	1403724	2148272	1403614	CMP/RCP	closed	18	C-20198	round	CB95_CB96	67	87	77	905.4829	904.8949	911.0662	912.1449	110.881386
200	City	2150285	1410349	2150314	1410345	RCP	closed	18	C-20200	round	CB119_CB120	55	60	57.5	926.264	925.8024	930.8473	930.8024	28.474635
201	City	2150314	1410345	2150325	1410397	RCP	closed	18	C-20201	round	CB120_JB1018	60	63	61.5	925.8024	926.3376	930.8024	931.5876	52.998717

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
202	City	2150325	1410397	2150419	1410438	RCP	closed	18	C-20202	round	JB1018_	63	63	63	926.3376	<Null>	931.5876	<Null>	101.996798
203	City	2150077	1410015	2150067	1409988	CMP	closed	18	C-20203	round	CB80_CB79	60	64	62	930.0928	929.5613	935.0928	934.8946	29.13369
204	City	2150067	1409988	2150000	1409878	CMP	closed	18	C-20204	round	CB79_HW67	64	18	41	929.5613	929.4358	934.8946	930.9358	129.407467
207	City	2150154	1409689	2150326	1409616	CMP	closed	42	C-20207	round	DI354_DI355	96	72	84	917.5753	915.3475	925.5753	921.3475	186.828428
208	City	2150326	1409616	2150346	1409606	CMP	closed	48	C-20208	round	DI355_CB78	72	86	79	915.3475	914.2092	921.3475	921.3759	22.690366
209	City	2150346	1409606	2150376	1409604	CMP	closed	48	C-20209	round	CB78_CB77	86	92	89	914.2092	913.6418	921.3759	921.3085	30.401059
210	City	2150376	1409604	2150422	1409578	CMP	closed	48	C-20210	round	CB77_JB115	92	84	88	913.6418	913.8146	921.3085	920.8146	52.887637
211	City	2150376	1409546	2150422	1409578	CMP	closed	18	C-20211	round	JB114_JB115	72	84	78	916.4506	913.8146	922.4506	920.8146	56.306416
213	City	2150371	1409366	2150376	1409546	CMP	closed	18	C-20213	round	CB76_JB114	58	72	65	924.0299	916.4506	928.8632	922.4506	179.829668
214	City	2149902	1409420	2149900	1409391	CMP	closed	18	C-20214	round	CB74_CB75	46	52	49	937.5055	937.0575	941.3388	941.3908	28.675534
215	City	2149900	1409391	2150077	1409381	CMP	closed	18	C-20215	round	CB75_JB113	52	52	52	937.0575	936.6463	941.3908	940.9796	177.630003
216	City	2150077	1409381	2150371	1409366	CMP	closed	18	C-20216	round	JB113_CB76	<Null>	58	<Null>	<Null>	924.0299	940.9796	928.8632	294.112394
217	City	2150829	1409499	2150955	1409484	CMP	closed	18	C-20217	round	CB118_OF1032	50	20	35	917.5276	910.7924	921.6943	912.459	127.447081
220	City	2143077	1401256	2143089	1401228	CMP	closed	18	C-20220	round	CB83_CB82	56	53	54.5	943.3236	943.0712	947.9903	947.4879	30.175825
221	City	2142957	1401125	2143035	1401090	CMP	closed	18	C-20221	round	CB81_OF234	62	25	43.5	945.4688	942.8463	950.6355	944.9296	85.060807
222	City	2143113	1401284	2143089	1401228	CMP	closed	42	C-20222	round	HW202_CB82	<Null>	71	<Null>	<Null>	941.5712	948.4984	947.4879	60.175962
223	City	2143089	1401228	2143071	1401196	CMP	closed	42	C-20223	round	CB82_OF1038	73	53	63	941.4046	942.5414	947.4879	946.9581	37.094829
224	City	2142860	1400503	2142861	1400533	CMP	closed	18	C-20224	round	CB87_CB88	108	106	107	929.7861	930.492	938.7861	939.3253	29.859525
225	City	2142861	1400533	2142895	1400557	CMP	closed	24	C-20225	round	CB88_PI1012	106	19	62.5	930.492	927.1875	939.3253	928.7708	41.659113
226	City	2142911	1400547	2142850	1400454	CMP	closed	48	C-20226	round	OS45_OF239	103	62	82.5	929.0057	928.3922	937.5891	933.5588	111.684095
227	City	2143010	1399811	2143022	1399795	CMP/RCP	closed	18	C-20227	round	CB89_OF240	47	26	36.5	918.6459	917.3277	922.5626	919.4944	20.068086
228	City	2142627	1400334	2142657	1400333	CMP	closed	18	C-20228	round	CB84_CB85	56	60	58	932.1773	931.5962	936.844	936.5962	29.747634
229	City	2142657	1400333	2142759	1400339	CMP	closed	18	C-20229	round	CB85_OF1034	61	22	41.5	931.5129	926.5956	936.5962	928.4289	102.350021
230	City	2142700	1399716	2142733	1399711	CMP	closed	18	C-20230	round	CB86_OF241	<Null>	81	<Null>	<Null>	913.3511	932.291	920.1011	33.189105
231	City	2131328	1413033	2131302	1413017	CMP	closed	18	C-20231	round	CB148_CB149	68	61	64.5	934.5507	935.3654	940.2174	940.4487	30.509966
232	City	2131302	1413017	2131275	1413102	CMP	closed	18	C-20232	round	CB149_CB147	63	70	66.5	935.1987	933.3308	940.4487	939.1641	88.951165
233	City	2131307	1413098	2131275	1413102	CMP	closed	18	C-20233	round	CB146_CB147	76	73	74.5	933.0072	933.0808	939.3405	939.1641	31.614454
234	City	2131275	1413102	2131205	1413118	CMP	closed	24	C-20234	round	CB147_PI198	74	74	74	932.9974	926.7018	939.1641	932.8685	71.432842
235	City	2131015	1413096	2130961	1413100	CMP	closed	24	C-20235	round	OS43_HW392	55	24	39.5	928.364	928.2897	932.9473	930.2897	54.176887
236	City	2131753	1413402	2131647	1413412	CMP	closed	18	C-20236	round	CB172_DI1044	89	63	76	946.1069	939.3075	953.5236	944.5575	106.648707
237	City	2131647	1413412	2131538	1413448	Metal	closed	18	C-20237	round	DI1044_JB2174	63	<Null>	<Null>	939.3075	<Null>	944.5575	946.3533	115.114256
238	City	2131508	1413463	2131242	1413316	CMP	closed	36	C-20238	round	JB110_CB1323	<Null>	75	<Null>	<Null>	928.5591	947.1851	934.8091	303.537211
239	City	2131415	1413407	2131380	1413389	CMP	closed	24	C-20239	round	CI1_CI2	54	43	48.5	935.8143	935.0168	940.3143	938.6001	39.619177
240	City	2131380	1413389	2131233	1413288	CMP	closed	24	C-20240	round	CI2_JB7	44	44	44	934.9334	932.0462	938.6001	935.7129	178.080363
241	City	2131233	1413288	2131124	1413176	CMP	closed	24	C-20241	round	JB7_PI197	<Null>	32	<Null>	<Null>	934.1618	935.7129	936.8285	156.872263
242	City	2131640	1412855	2131643	1412825	CMP	closed	18	C-20242	round	CB151_CB150	58	64	61	953.7951	953.5149	958.6284	958.8482	29.726966
243	City	2131643	1412825	2131627	1412699	CMP	closed	18	C-20243	round	CB150_PI1007	68	18	43	953.1815	956.0403	958.8482	957.5403	127.329216
244	City	2132094	1412546	2132189	1412477	CMP	closed	18	C-20244	round	CB152_PI193	74	18	46	977.8943	964.5347	984.061	966.0347	117.162054
246	City	2148114	1405531	2148138	1405546	CMP	closed	42	C-20246	round	CB139_CB140	73	70	71.5	898.2863	898.3103	904.3696	904.1436	28.155236
247	City	2148138	1405546	2148251	1405622	CMP	closed	42	C-20247	round	CB140_DI890	70	70	70	898.3103	898.1667	904.1436	904	136.797936
248	City	2148129	1405880	2148088	1405973	CMP	closed	24	C-20248	round	CB138_OF160	72	34	53	897.3328	897.4468	903.3328	900.2801	101.433523
249	City	2148140	1405855	2148129	1405880	CMP	closed	24	C-20249	round	CB137_CB138	65	72	68.5	897.4447	897.3328	902.8614	903.3328	27.73286
250	City	2148354	1405504	2148371	1405481	CMP	closed	42	C-20250	round	CB141_CB142	82	85	83.5	897.0576	896.4132	903.8909	903.4965	28.430695

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
251	City	2148371	1405481	2148452	1405400	CMP	closed	48	C-20251	round	CB142_PI920	85	85	85	896.4132	892.1797	903.4965	899.263	114.312874
252	City	2148651	1405508	2148693	1405528	<Null>	closed	46	C-20252	<Null>	OS37_OF1041	<Null>	<Null>	<Null>	<Null>	<Null>	900.0929	895.6657	46.506605
287	City	2142861	1405640	2142851	1405581	CMP	closed	24	C-20287	round	DI356_CI357	<Null>	60	<Null>	<Null>	992.0145	1001.143	997.0145	60.756219
288	City	2142885	1405591	2142851	1405581	CMP	closed	12	C-20288	round	JB78_CI357	<Null>	60	<Null>	<Null>	992.0145	997.1629	997.0145	35.317576
292	City	2142990	1405692	2142925	1405669	Metal	closed	18	C-20292	<Null>	DI370_DI371	<Null>	<Null>	<Null>	<Null>	<Null>	997.9672	997.7591	69.530603
293	City	2142925	1405669	2142861	1405640	Metal	closed	24	C-20293	<Null>	DI371_DI356	<Null>	<Null>	<Null>	<Null>	<Null>	997.7591	1001.143	69.513354
294	City	2142930	1405641	2142925	1405669	Metal	closed	18	C-20294	<Null>	DI372_DI371	<Null>	<Null>	<Null>	<Null>	<Null>	997.4521	997.7591	28.988994
295	City	2143037	1405679	2142990	1405692	Plastic	closed	12	C-20295	<Null>	_DI370	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	997.9672	48.028661
296	City	2143105	1405440	2142981	1405430	CMP	closed	18	C-20296	round	CB658_JB75	<Null>	110	<Null>	<Null>	987.404	992.3498	996.5707	124.143663
297	City	2142981	1405430	2142869	1405378	CMP	closed	18	C-20297	round	JB75_CB659	112	80	96	987.2374	986.1505	996.5707	992.8172	123.278674
298	City	2142869	1405378	2142814	1405371	CMP	closed	24	C-20298	round	CB659_JB76	82	106	94	985.9839	984.324	992.8172	993.1573	56.207901
299	City	2142872	1405321	2142814	1405371	CMP	closed	18	C-20299	round	CB660_JB76	40	107	73.5	988.0388	984.2406	991.3721	993.1573	77.009351
300	City	2142814	1405371	2142792	1405379	Metal	closed	30	C-20300	round	JB76_CB661	108	111	109.5	984.1573	984.329	993.1573	993.579	22.769034
303	City	2142717	1405390	2142669	1405249	Concrete	closed	36	C-20303	<Null>	JB82_HW605	<Null>	36	<Null>	<Null>	980.1859	996.3151	983.1859	148.839362
304	City	2137707	1412068	2137682	1412051	CMP	closed	18	C-20304	round	CB124_CB125	64	62	63	964.2189	963.7312	969.5522	968.8979	30.401646
306	City	2137410	1412295	2137384	1412279	CMP	closed	18	C-20306	round	CB126_CB127	126	125	125.5	956.1794	955.9678	966.6794	966.3845	30.737167
308	City	2137433	1412293	2137346	1412245	RCP	closed	30	C-20308	round	DI1034_HW455	165	30	97.5	954.5991	953.4639	968.3491	955.9639	99.99343
310	City	2137535	1413457	2137519	1413426	CMP	closed	18	C-20310	round	JB422_CB114	<Null>	85	<Null>	<Null>	981.59	987.5774	988.6733	34.806388
311	City	2137519	1413426	2137490	1413425	CMP	closed	18	C-20311	round	CB114_CB115	85	87	86	981.59	981.2865	988.6733	988.5365	28.995437
312	City	2137490	1413425	2137468	1413417	CMP	closed	18	C-20312	round	CB115_JB124	87	87	87	981.2865	982.1959	988.5365	989.4459	23.502446
321	City	2136948	1413055	2136943	1413084	CMP	closed	18	C-20321	round	CB72_CB73	81	90	85.5	956.7204	956.3656	963.4704	963.8656	29.97108
323	City	2137160	1413055	2137201	1413167	CMP	closed	18	C-20323	round	CB116_CB117	50	55	52.5	969.6568	967.5869	973.8235	972.1702	119.098524
324	City	2137201	1413167	2137200	1413352	CMP	closed	18	C-20324	round	CB117_CB70	55	40	47.5	967.5869	966.1352	972.1702	969.4685	185.538
325	City	2137762	1412941	2137791	1412926	CMP	closed	18	C-20325	round	CB54_CB55	54	55	54.5	975.2544	975.1198	979.7544	979.7031	32.125619
332	City	2137831	1413942	2137801	1413956	Metal	closed	18	C-20332	round	CB56_CB57	53	66	59.5	987.7427	986.1201	992.1594	991.6201	32.04645
333	City	2137801	1413956	2137802	1414135	CMP	closed	24	C-20333	round	CB57_JB118	79	65	72	985.0368	981.4985	991.6201	986.9152	179.93565
338	City	2137762	1414492	2137738	1414477	CMP	closed	18	C-20338	round	CB60_CB61	76	75	75.5	975.1251	975.0914	981.4584	981.3414	27.99282
341	City	2137640	1414752	2137613	1414752	CMP	closed	36	C-20341	round	HW210_CB112	50	69	59.5	955.3754	957.0497	959.5421	962.7997	26.934671
342	City	2137613	1414752	2137583	1414755	CMP	closed	36	C-20342	round	CB112_CB113	71	68	69.5	956.883	956.7818	962.7997	962.4485	29.823009
344	City	2137637	1414745	2137566	1414750	CMP	closed	36	C-20344	round	CV3_CV44	50	43	46.5	957.832	954.4167	961.9987	958	71.300963
345	City	2137489	1414302	2137516	1414312	Metal	closed	18	C-20345	round	CB58_CB59	65	71	68	978.809	978.1594	984.2257	984.0761	28.966149
355	City	2136841	1413660	2136890	1413702	CMP	closed	18	C-20355	round	CB69_JB122	77	77	77	968.1269	970.4294	974.5436	976.8461	64.442274
358	City	2137180	1413607	2137180	1413636	CMP	closed	18	C-20358	round	CB67_CB68	68	69	68.5	980.7409	980.6582	986.4076	986.4082	28.494811
360	City	2137194	1413936	2137195	1413907	CMP	closed	18	C-20360	round	CB63_CB64	74	75	74.5	980.8322	980.5484	986.9989	986.7984	28.782768
363	City	2137165	1412648	2137135	1412635	CMP	closed	18	C-20363	round	CB128_CB1357	60	61	60.5	963.5174	963.3243	968.5174	968.4076	32.754195
365	City	2151434	1404877	2151405	1404887	CMP	closed	18	C-20365	round	CI318_CB1004	24	24	24	947.3273	949.0045	949.3273	951.0045	30.961056
366	City	2151405	1404887	2151381	1404870	CMP	closed	18	C-20366	round	CB1004_CB100	52	58	55	946.6712	946.4076	951.0045	951.2409	29.824782
367	City	2151381	1404870	2151272	1404753	CMP	closed	18	C-20367	round	CB1005_PI1039	58	12	35	946.4076	947.1326	951.2409	948.1326	159.953338
368	City	2150574	1405465	2150569	1405497	CMP/RCP	closed	18	C-20368	round	CB983_CB984	54	60	57	948.1993	947.4251	952.6993	952.4251	32.155686
369	City	2150569	1405497	2150539	1405669	CMP	closed	18	C-20369	round	CB984_JB1111	60	60	60	947.4251	944.9555	952.4251	949.9555	174.672118
371	City	2150446	1405677	2150464	1405817	CMP	closed	24	C-20371	round	JB1112_CB1009	<Null>	112	<Null>	<Null>	926.2911	949.4212	935.6244	142.073253
372	City	2150464	1405817	2150466	1405846	CMP	closed	30	C-20372	round	CB1009_CB101	<Null>	98	<Null>	<Null>	927.1349	935.6244	935.3016	28.891057
373	City	2150466	1405846	2150484	1405998	CMP	closed	30	C-20373	round	CB1010_PI1075	<Null>	50	<Null>	<Null>	901.106	935.3016	905.2727	153.115519

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374	City	2150096	1405448	2150094	1405481	CMP	closed	18	C-20374	round	CB985_CB986	54	60	57	925.8583	925.476	930.3583	930.476	32.531077
375	City	2150094	1405481	2149916	1405485	CMP	closed	24	C-20375	round	CB986_JB1113	60	60	60	925.476	917.6101	930.476	922.6101	178.547732
376	City	2149916	1405485	2149809	1405575	CMP	closed	36	C-20376	round	JB1113_CB987	<Null>	126	<Null>	<Null>	905.4711	922.6101	915.9711	139.756129
377	City	2149809	1405575	2149777	1405570	CMP/RCP	closed	36	C-20377	round	CB987_CB988	126	128	127	905.4711	905.2198	915.9711	915.8865	32.639497
378	City	2149777	1405570	2149631	1405546	CMP	closed	36	C-20378	round	CB988_PI1055	128	35	81.5	905.2198	902.3436	915.8865	905.2603	148.347085
379	City	2150856	1405449	2150955	1405445	CMP	closed	18	C-20379	round	CB1008_DI1148	98	64	81	944.279	943.6155	952.4457	948.9489	98.641512
380	City	2150955	1405445	2150971	1405380	CMP	closed	18	C-20380	round	DI1148_DI1149	64	64	64	943.6155	939.7664	948.9489	945.0997	67.428462
381	City	2150971	1405380	2151118	1405365	CMP	closed	18	C-20381	round	DI1149_CB1006	<Null>	62	<Null>	<Null>	933.1269	945.0997	938.2936	148.275034
382	City	2151118	1405365	2151149	1405371	CMP	closed	24	C-20382	round	CB1006_CB100	62	74	68	933.1269	932.01	938.2936	938.1767	31.10999
383	City	2151149	1405371	2151271	1405400	CMP	closed	30	C-20383	round	CB1007_DI320	74	74	74	932.01	929.0634	938.1767	935.2301	125.546804
386	City	2150136	1406213	2150003	1406196	CMP	closed	18	C-20386	round	CB982_HW266	68	68	68	927.3172	904.0053	932.9839	909.672	133.842438
406	City	2150903	1404345	2150920	1404318	RCP	closed	24	C-20406	round	DI1143_CI85	52	54	53	931.9162	931.6985	936.2495	936.1985	31.881473
407	City	2150860	1404280	2150886	1404257	Concrete	closed	24	C-20408	round	DI1144_PP66	58	36	47	930.9171	930.9194	935.7504	933.9194	35.373896
408	City	2139592	1408565	2139591	1408535	CMP	closed	18	C-20409	round	CB1019_CB102	62	63	62.5	960.1169	959.8806	965.2836	965.1306	29.640022
410	City	2139719	1408310	2139690	1408311	CMP	closed	24	C-20411	round	CB1021_CB102	75	75	75	958.9686	958.7648	965.2186	965.0148	29.428094
413	City	2139600	1408654	2139576	1408448	CMP	closed	36	C-20414a	round	CV159_CV160	<Null>	60	<Null>	<Null>	954.5643	960.0319	959.5643	207.175188
414	City	2140289	1408064	2140319	1408063	CMP	closed	24	C-20415	round	CB1023_CB102	76	86	81	957.8333	957.1666	964.1666	964.3333	29.760696
417	City	2141419	1410667	2141391	1410668	CMP	closed	18	C-20418	round	CB1017_CB101	68	62	65	958.5535	959.0341	964.2202	964.2008	27.067976
419	City	2141357	1410328	2141374	1410350	CMP	closed	18	C-20420	round	CB1013_CB101	60	66	63	973.5741	973.3694	978.5741	978.8694	27.509958
421	City	2141380	1410429	2141354	1410439	CMP	closed	18	C-20422	round	CB1015_CB101	52	55	53.5	971.6732	971.2118	976.0065	975.7951	27.825153
423	City	2141498	1410060	2141470	1410060	CMP	closed	18	C-20424	round	CB1011_CB101	50	50	50	985.549	985.1552	989.7157	989.3219	27.392287
425	City	2141928	1399432	2141871	1399354	CMP	closed	24	C-20426	round	HW220_CB135	<Null>	82	<Null>	<Null>	919.2711	923.4581	926.1044	96.06597
426	City	2141871	1399354	2141855	1399329	CMP	closed	24	C-20427	round	CB135_CB136	85	86	85.5	919.0211	918.6372	926.1044	925.8039	29.985235
428	City	2141800	1399515	2141785	1399542	CMP	closed	18	C-20429	round	CB133_CB134	118	118	118	917.6473	917.4642	927.4806	927.2975	30.311979
429	City	2141760	1399537	2141785	1399542	<Null>	closed	6	C-20430	round	DI1023_CB134	<Null>	121	<Null>	<Null>	917.2142	926.4525	927.2975	25.885738
430	City	2141785	1399542	2141711	1399549	CMP	closed	18	C-20431	round	CB134_JB96	121	130	125.5	917.2142	916.7342	927.2975	927.5675	74.695837
431	City	2141711	1399549	2141646	1399520	CMP	closed	18	C-20432	round	JB96_JB130	130	130	130	916.7342	908.8297	927.5675	919.663	71.300618
432	City	2141646	1399520	2141581	1399574	<Null>	closed	18	C-20433	round	JB130_JB131	<Null>	<Null>	<Null>	<Null>	<Null>	919.663	920	84.172704
433	City	2141581	1399574	2141495	1399718	<Null>	closed	18	C-20434	round	JB131_OF246	<Null>	26	<Null>	<Null>	918.0575	920	920.2242	167.076742
434	City	2141855	1399329	2141843	1399307	CMP	closed	24	C-20435	round	CB136_PI1015	86	33	59.5	918.6372	919.4636	925.8039	922.2136	24.497929
435	City	2141647	1399803	2141618	1399802	<Null>	closed	18	C-20436	round	CB129_CB131	<Null>	130	<Null>	<Null>	915.0385	<Null>	925.8718	29.330933
436	City	2141618	1399802	2141592	1399877	CMP	closed	18	C-20437	round	CB131_CB132	130	113	121.5	915.0385	914.9836	925.8718	924.4003	79.516327
437	City	2141592	1399877	2141503	1399916	CMP	closed	18	C-20438	round	CB132_OF245	113	33	73	914.9836	913.965	924.4003	916.715	96.942559
438	City	2142002	1399859	2141983	1399887	CMP	closed	18	C-20439	round	CB144_CB145	78	81	79.5	931.3746	931.1702	937.8746	937.9202	34.172016
439	City	2141983	1399887	2141959	1400016	CMP	closed	18	C-20440	round	CB145_OF1033	82	82	82	931.0869	923.1669	937.9202	930.0002	131.474367
440	City	2150075	1403982	2149997	1403991	CMP	closed	24	C-20441	round	DI185_CB45	<Null>	74	<Null>	<Null>	915.3812	924.7258	921.5479	77.858619
441	City	2149997	1403991	2149966	1403992	CMP	closed	24	C-20442	round	CB45_CB46	76	68	72	915.2146	915.2914	921.5479	920.9581	31.214965
442	City	2149966	1403992	2149878	1404044	CMP	closed	24	C-20443	round	CB46_OF1009	80	40	60	914.2914	912.8184	920.9581	916.1517	102.70691
443	City	2150138	1404704	2150102	1404735	<Null>	closed	24	C-20444	round	YI1019_JB1006	<Null>	<Null>	<Null>	<Null>	<Null>	932	932	46.963868
445	City	2150017	1404726	2149995	1404857	CMP	closed	24	C-20446	round	JB1007_CB47	92	90	91	922.9558	917.753	930.6225	925.253	133.194987
446	City	2149995	1404857	2149966	1404864	CMP	closed	24	C-20447	round	CB47_CB48	90	90	90	917.753	917.6074	925.253	925.1074	29.452274
447	City	2149966	1404864	2149950	1404894	CMP	closed	24	C-20448	round	CB48_JB1008	90	48	69	917.6074	922.4594	925.1074	926.4594	34.507014
448	City	2149950	1404894	2149840	1404924	CMP	closed	24	C-20449	round	JB1008_JB1009	<Null>	90	<Null>	<Null>	907.8609	926.4594	915.3609	114.382809

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449	City	2149840	1404924	2149769	1404966	CMP	closed	24	C-20450	round	JB1009_DI1055	<Null>	54	<Null>	<Null>	907.2162	915.3609	911.7162	82.721137
450	City	2149769	1404966	2149722	1405088	CMP	closed	24	C-20451	round	DI1055_CB49	54	86	70	907.2162	902.8898	911.7162	910.0565	131.287689
451	City	2149722	1405088	2149690	1405087	CMP	closed	30	C-20452	round	CB49_CB50	86	92	89	902.8898	902.1788	910.0565	909.8455	31.319284
452	City	2149690	1405087	2149639	1405116	CMP	closed	30	C-20453	round	CB50_JB1010	92	92	92	902.1788	900.6057	909.8455	908.2724	58.635313
453	City	2149639	1405116	2149428	1405133	CMP	closed	30	C-20454	round	JB1010_CB53	<Null>	80	<Null>	<Null>	894.6101	908.2724	901.2768	212.433812
454	City	2149428	1405133	2149351	1405113	CMP	closed	30	C-20455	round	CB53_OF1012	80	80	80	894.6101	887.4664	901.2768	894.1331	78.938843
455	City	2149754	1405168	2149751	1405137	CMP	closed	18	C-20456	round	CB51_CB52	76	84	80	906.73	905.6467	913.0633	912.6467	31.468681
456	City	2149751	1405137	2149639	1405116	CMP	closed	24	C-20457	round	CB52_JB1010	84	84	84	905.6467	901.2724	912.6467	908.2724	113.828378
457	City	2136505	1412049	2136476	1412045	CMP	closed	18	C-20458	round	CB97_CB98	65	74	69.5	935.5547	934.5618	940.9714	940.7285	29.206695
460	City	2136109	1412011	2136037	1411996	CMP	closed	54	C-20461	round	CV48_CV49	57	46	51.5	926.2406	925.7639	930.9906	929.5972	73.322155
461	City	2136092	1412019	2136064	1412024	CMP	closed	18	C-20462	round	CB486_CB485	88	85	86.5	926.3607	926.4634	933.694	933.5467	28.594485
462	City	2136064	1412024	2136044	1411999	CMP	closed	18	C-20463	round	CB485_PI902	88	88	88	926.2134	924.6013	933.5467	931.9346	31.823113
463	City	2136084	1411710	2136056	1411705	CMP	closed	24	C-20464	round	CB488_CB487	107	113	110	927.2984	926.5911	936.2151	936.0078	28.958244
464	City	2136056	1411705	2136045	1411812	CMP	closed	24	C-20465	round	CB487_PI863	122	24	73	925.8411	928.5585	936.0078	930.5585	108.093635
465	City	2136536	1412561	2136454	1412599	CMP	closed	48	C-20466	round	HW872_DI105	61	69	65	944.1989	941.8167	949.2822	947.5667	90.466873
466	City	2136522	1412656	2136494	1412659	CMP	closed	24	C-20467	round	CB480_CB481	61	68	64.5	944.4416	943.7727	949.5249	949.4394	28.082246
469	City	2136093	1412738	2136005	1412739	Metal	closed	48	C-20470	round	CV46_CV47	<Null>	48	<Null>	<Null>	932.192	936.0648	936.192	87.582143
470	City	2136148	1413008	2136127	1413027	CMP	closed	18	C-20471	round	CB483_CB484	<Null>	91	<Null>	<Null>	932.7207	940.3517	940.304	28.726241
476	City	2136532	1413118	2136470	1413100	CMP	closed	48	C-20477	round	DI374_HW214	73	48	60.5	942.8876	945.7894	948.9709	949.7894	63.852652
477	City	2136543	1413306	2136453	1413292	CMP	closed	18	C-20478	round	DI107_CB482	<Null>	45	<Null>	<Null>	944.5225	949.1103	948.2725	90.676985
480	City	2148881	1406817	2148891	1406801	RCP	closed	18	C-20481	round	OT622_CB847	<Null>	48	<Null>	<Null>	899.1762	905.6606	903.1762	18.57545
481	City	2148891	1406801	2148894	1406773	RCP	closed	18	C-20482	round	CB847_CB848	48	141	94.5	899.1762	891.1622	903.1762	902.9122	28.131112
482	City	2148894	1406773	2148941	1406671	RCP	closed	18	C-20483	round	CB848_JB250	<Null>	48	<Null>	<Null>	897.7714	902.9122	901.7714	112.224096
483	City	2149027	1406983	2149017	1406958	RCP	closed	18	C-20484	round	CB849_CB850	57	141	99	905.9109	898.308	910.6609	910.058	27.214794
484	City	2149017	1406958	2149025	1406906	CMP/RCP	closed	18	C-20485	round	CB850_CB851	<Null>	62	<Null>	<Null>	903.8205	910.058	908.9872	52.604135
485	City	2149025	1406906	2149049	1406892	CMP	closed	24	C-20486	round	CB851_CB852	57	71	64	904.2372	903.1543	908.9872	909.071	27.727798
486	City	2149049	1406892	2149224	1406811	CMP	closed	24	C-20487	round	CB852_PI921	71	71	71	903.1543	898.2858	909.071	904.2025	192.551825
487	City	2148735	1407739	2148632	1407780	CMP	closed	18	C-20488	round	CB853_CB854	64	74	69	910.3093	908.1954	915.6426	914.3621	111.198653
488	City	2148632	1407780	2148559	1407762	CMP	closed	18	C-20489	round	CB854_PI923	75	75	75	908.1121	901.7883	914.3621	908.0383	75.122786
489	City	2149675	1407129	2149647	1407136	CMP	closed	18	C-20490	round	CB862_CB863	<Null>	82	<Null>	<Null>	902.3326	909.461	909.1659	29.135644
490	City	2149647	1407136	2149490	1407154	CMP	closed	18	C-20491	round	CB863_CB860	<Null>	50	<Null>	<Null>	902.3195	909.1659	906.4862	158.104139
491	City	2149490	1407154	2149477	1407128	CMP	closed	30	C-20492	round	CB860_CB861	71	82	76.5	900.5695	899.4316	906.4862	906.2649	29.376717
492	City	2149477	1407128	2149433	1407039	RCP	closed	36	C-20493	round	CB861_JB1198	82	82	82	899.4316	904.3086	906.2649	911.1419	98.874815
493	City	2149322	1407358	2149338	1407343	CMP	closed	12	C-20494	round	PP251_CB859	13	36	24.5	910.6327	907.0992	911.716	910.0992	20.957793
495	City	2149396	1407548	2149367	1407549	CMP	closed	18	C-20496	round	CB855_CB856	46	60	53	909.1931	908.136	913.0264	913.136	29.436247
496	City	2149367	1407549	2149342	1407524	CMP	closed	24	C-20497	round	CB856_CB857	60	64	62	908.136	907.7903	913.136	913.1236	35.381162
497	City	2149342	1407524	2149341	1407495	CMP	closed	24	C-20498	round	CB857_CB858	64	64	64	907.7903	906.9802	913.1236	912.3135	29.069241
499	City	2149860	1406962	2149864	1406777	CMP	closed	18	C-20500	round	CB864_OF164	71	32	51.5	902.8276	899.3333	908.7443	902	184.658982
500	City	2149909	1407336	2149938	1407330	CMP	closed	18	C-20501	round	CB867_CB868	<Null>	67	<Null>	<Null>	905.9488	911.5212	911.5321	29.449795
501	City	2149938	1407330	2149979	1407299	CMP	closed	18	C-20502	round	CB868_JB313	67	67	67	905.9488	904.8501	911.5321	910.4334	51.75255
502	City	2149979	1407299	2150103	1407312	CMP	closed	18	C-20503	round	JB313_CB869	<Null>	52	<Null>	<Null>	902.585	910.4334	906.9183	124.297988
503	City	2150103	1407312	2150119	1407289	CMP	closed	24	C-20504	round	CB869_CB870	52	51	51.5	902.585	902.3749	906.9183	906.6249	28.008454
504	City	2150119	1407289	2150200	1407193	CMP	closed	24	C-20505	round	CB870_OF165	54	32	43	902.1249	903.7517	906.6249	906.4184	125.297169

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
505	City	2149986	1407770	2149987	1407799	CMP	closed	24	C-20506	round	CB865_CB866	<Null>	32	<Null>	<Null>	908.1601	910.7122	910.8268	28.850242
506	City	2149987	1407799	2149974	1407804	CMP	closed	24	C-20507	round	CB866_JB162	<Null>	32	<Null>	<Null>	912.5231	910.8268	915.1898	13.76718
507	City	2132379	1414546	2132344	1414535	RCP	closed	24	C-20508	round	YI115_CB520	54	57	55.5	962.0961	962.85	966.5961	967.6	36.71056
508	City	2132344	1414535	2132343	1414507	CMP	closed	24	C-20509	round	CB520_CB521	69	76	72.5	961.85	960.9436	967.6	967.2769	27.980857
509	City	2132343	1414507	2132335	1414365	CMP	closed	24	C-20510	round	CB521_PI908	78	32	55	960.7769	961.8422	967.2769	964.5089	142.373649
510	City	2131950	1414558	2131948	1414529	CMP	closed	24	C-20511	round	CB522_CB523	91	95	93	960.8004	960.1362	968.3837	968.0529	29.91574
511	City	2131948	1414529	2131937	1414373	CMP	closed	24	C-20512	round	CB523_JB1028	96	96	96	960.0529	957.5935	968.0529	965.5935	156.336445
512	City	2131937	1414373	2132177	1414341	Metal	closed	24	C-20513	round	JB1028_PI907	<Null>	<Null>	<Null>	<Null>	<Null>	965.5935	958.4739	241.749113
513	City	2131049	1414695	2131019	1414701	CMP	closed	18	C-20514	round	CB524_CB525	54	56	55	962.0852	961.1854	966.5852	965.8521	30.045823
514	City	2131019	1414701	2130996	1414720	Metal	closed	18	C-20515	round	CB525_CB526	57	53	55	961.1021	959.9765	965.8521	964.3932	29.716141
515	City	2130996	1414720	2130673	1414713	CMP	closed	18	C-20516	round	CB526_CB527	55	124	89.5	959.8099	941.1413	964.3932	951.4746	323.395906
516	City	2130673	1414713	2130473	1414716	CMP	closed	24	C-20517	round	CB527_CB528	131	139	135	940.5579	935.9752	951.4746	947.5585	200.220295
517	City	2130473	1414716	2130471	1414745	CMP	closed	36	C-20518	round	CB528_CB529	144	151	147.5	935.5585	934.8485	947.5585	947.4318	29.236295
518	City	2130471	1414745	2130428	1414752	CMP	closed	36	C-20519	round	CB529_JB49	151	151	151	934.8485	934.1356	947.4318	946.7189	43.390991
519	City	2130429	1414904	2130428	1414752	CMP	closed	60	C-20520	round	PI1111_JB49	<Null>	154	<Null>	<Null>	933.8856	938	946.7189	152.344355
520	City	2130428	1414752	2130306	1414740	CMP	closed	42	C-20521	round	JB49_JB3	158	153	155.5	933.5522	931.7231	946.7189	944.4731	122.6012
521	City	2130306	1414740	2130046	1414634	CMP	closed	42	C-20522	round	JB3_CB530	155	84	119.5	931.5565	932.0847	944.4731	939.0847	281.454482
522	City	2130052	1414605	2130046	1414634	CMP	closed	36	C-20523	round	CB531_CB530	79	84	81.5	932.8318	932.0847	939.4151	939.0847	29.747508
523	City	2130046	1414634	2129783	1414629	CMP	closed	36	C-20524	round	CB530_CB532	85	64	74.5	932.0014	930.8623	939.0847	936.1956	262.329252
524	City	2129784	1414598	2129783	1414629	CMP	closed	42	C-20525	round	CB533_CB532	55	64	59.5	931.5663	930.8623	936.1497	936.1956	30.68362
525	City	2129783	1414629	2129705	1414587	CMP	closed	42	C-20526	round	CB532_JB51	67	84	75.5	930.6123	929.0385	936.1956	936.0385	88.359941
526	City	2129644	1414273	2129560	1414279	CMP	closed	24	C-20527	round	CB535_HW437	48	44	46	927.8941	926.0818	931.8941	929.7485	83.766274
527	City	2129793	1414744	2129727	1414817	CMP	closed	24	C-20528	round	DI116_CB534	59	60	59.5	927.8065	927.4286	932.7231	932.4286	98.419187
528	City	2129727	1414817	2129645	1414831	CMP	closed	24	C-20529	round	CB534_HW438	62	41	51.5	927.2619	926.6335	932.4286	930.0502	83.841759
529	City	2129705	1414587	2129661	1414573	CMP	closed	42	C-20530	round	JB51_PI1026	<Null>	58	<Null>	<Null>	926.5712	936.0385	931.4045	46.60336
530	City	2129549	1414606	2129533	1414628	CMP	closed	30	C-20531	round	OS185_OF103	<Null>	54	<Null>	<Null>	923.4981	928.0672	927.9981	27.245539
531	City	2134563	1411045	2134551	1411073	CMP	closed	30	C-20532	round	CB656_CB657	56	64	60	930.3646	929.9423	935.0313	935.2756	30.44495
532	City	2134551	1411073	2134643	1411093	CMP	closed	42	C-20533	round	CB657_OF282	65	65	65	929.8589	925.9397	935.2756	931.3564	93.827819
533	City	2134435	1411012	2134563	1411045	CMP	closed	30	C-20534	round	JB84_CB656	48	55	51.5	932.5496	930.448	936.5496	935.0313	132.395479
537	City	2134179	1411114	2134208	1411122	CMP	closed	36	C-20538	round	CB655_CB1348	60	65	62.5	936.495	935.8726	941.495	941.2893	30.144422
540	City	2134120	1411599	2134150	1411603	CMP	closed	18	C-20541	round	CB963_CB964	66	72	69	945.134	944.0143	950.634	950.0143	30.259581
543	City	2134223	1411834	2134244	1411812	CMP	closed	30	C-20544	round	CB961_CB962	60	62	61	940.0026	939.687	945.0026	944.8537	30.544567
544	City	2134244	1411812	2134260	1411800	CMP	closed	36	C-20545	round	CB962_PI1002	62	36	49	939.687	938.7744	944.8537	941.7744	19.278808
546	City	2134559	1412076	2134571	1412045	CMP	closed	24	C-20547	round	CB960_CB959	73	76	74.5	938.4976	938.267	944.5809	944.6003	32.593406
548	City	2134893	1411986	2134874	1411962	CMP	closed	18	C-20549	round	CB957_CB958	50	53	51.5	943.5244	943.0875	947.6911	947.5042	30.533771
552	City	2135129	1411573	2135138	1411525	CMP	closed	42	C-20553	round	JB35_CB953	<Null>	72	<Null>	<Null>	924.659	930.3118	930.659	49.211748
553	City	2135138	1411525	2135171	1411496	CMP	closed	42	C-20554	round	CB953_CB954	73	80	76.5	924.5757	923.5056	930.659	930.1723	44.419725
555	City	2135283	1411431	2135296	1411389	RCP	closed	42	C-20556	round	CB955_CB1327	67	75	71	922.5376	921.9365	928.1209	928.1865	43.679886
557	City	2133851	1411444	2133838	1411415	CMP	closed	18	C-20558	round	CB653_CB654	45	41	43	954.9742	955.1307	958.7242	958.5474	31.392083
560	City	2133872	1411029	2133901	1411028	CMP	closed	30	C-20561	round	CB638_CB639	56	61	58.5	944.7041	944.1307	949.3708	949.214	29.123626
563	City	2134031	1410614	2134124	1410598	CMP	closed	18	C-20564	round	HW162_CB640	33	73	53	949.8603	946.7986	952.6103	952.8819	94.664632
564	City	2134124	1410598	2134215	1410680	CMP	closed	24	C-20565	round	CB640_CB641	73	60	66.5	946.7986	944.2122	952.8819	949.2122	122.738961
565	City	2134215	1410680	2134228	1410705	CMP	closed	30	C-20566	round	CB641_CB642	64	63	63.5	943.8789	944.0304	949.2122	949.2804	28.404394

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
566	City	2134228	1410705	2134261	1410840	CMP	closed	30	C-20567	round	CB642_HW181	69	69	69	943.5304	939.3232	949.2804	945.0732	139.125602
567	City	2135094	1410560	2135118	1410576	CMP	closed	18	C-20568	round	CB643_CB644	85	85	85	925.1677	925.1889	932.251	932.2722	29.138203
568	City	2135118	1410576	2135152	1410507	CMP	closed	18	C-20569	round	CB644_JB31	88	70	79	924.9389	924.2465	932.2722	930.0798	76.591373
569	City	2135152	1410507	2135151	1410304	CMP	closed	24	C-20570	round	JB31_CB646	73	68	70.5	923.9965	922.2825	930.0798	927.9492	202.741423
570	City	2135123	1410303	2135151	1410304	CMP	closed	18	C-20571	round	CB645_CB646	67	67	67	922.5322	922.3659	928.1155	927.9492	28.691876
572	City	2134642	1410153	2134652	1410180	CMP	closed	18	C-20573	round	CB647_CB648	59	63	61	937.4384	937.1802	942.3551	942.4302	29.144085
573	City	2134652	1410180	2134934	1410056	CMP	closed	30	C-20574	round	CB648_CB649	65	82	73.5	937.0135	929.4057	942.4302	936.239	308.116187
574	City	2134934	1410056	2135096	1409965	CMP	closed	36	C-20575	round	CB649_CB650	82	67	74.5	929.4057	927.6867	936.239	933.27	186.034219
575	City	2135096	1409965	2135075	1409942	CMP	closed	36	C-20576	round	CB650_CB651	67	74	70.5	927.6867	927.4189	933.27	933.5856	30.873454
576	City	2135075	1409942	2135127	1409852	CMP	closed	36	C-20577	round	CB651_JB28	74	94	84	927.4189	926.5286	933.5856	934.3619	104.420965
577	City	2137818	1406628	2137796	1406579	RCP	closed	18	C-20578	round	CB934_CB935	36	49	42.5	940.7041	939.3466	943.7041	943.4299	53.398281
578	City	2137796	1406579	2137722	1406612	RCP	closed	18	C-20579	round	CB935_JB156	53	64	58.5	939.0132	938.0696	943.4299	943.4029	81.444918
579	City	2137722	1406612	2137642	1406503	RCP	closed	18	C-20580	round	JB156_CB933	64	61	62.5	938.0696	936.8066	943.4029	941.8899	135.828365
580	City	2137642	1406503	2137556	1406541	Concrete	closed	18	C-20581	round	CB933_CB932	62	73	67.5	936.7232	935.7383	941.8899	941.8216	94.271902
581	City	2137492	1406514	2137537	1406493	Concrete	closed	18	C-20582	round	CB931_JB174	67	65	66	935.7112	935.2451	941.2945	940.6618	50.078285
582	City	2137537	1406493	2137522	1406461	RCP	closed	24	C-20583	round	JB174_CB930	71	137	104	934.7451	929.3162	940.6618	940.7329	35.332205
587	City	2137213	1406297	2137189	1406314	RCP	closed	42	C-20588	round	CB936_CB937	106	103	104.5	918.4991	918.4536	927.3324	927.0369	29.454586
588	City	2137189	1406314	2137134	1406286	RCP	closed	42	C-20589	round	CB937_JB150	103	95	99	918.4536	917.6023	927.0369	925.519	62.390576
589	City	2137052	1406208	2137134	1406286	CMP	closed	18	C-20590	round	CB940_JB150	48	95	71.5	919.5136	917.6023	923.5136	925.519	113.367272
590	City	2137190	1406190	2137204	1406218	RCP	closed	18	C-20591	round	CB938_CB939	59	64	61.5	922.3397	922.1818	927.2564	927.5151	31.208574
591	City	2137204	1406218	2137134	1406286	Concrete	closed	24	C-20592	round	CB939_JB150	66	95	80.5	922.0151	917.6023	927.5151	925.519	97.897445
592	City	2137702	1406373	2137522	1406461	Concrete	closed	18	C-20593	round	DI289_CB930	56	137	96.5	936.1165	929.3162	940.7832	940.7329	200.220894
593	City	2137556	1406541	2137537	1406493	Concrete	closed	24	C-20594	round	CB932_JB174	75	67	71	935.5716	935.0785	941.8216	940.6618	51.154282
602	City	2138182	1406188	2138282	1406138	RCP	closed	18	C-20603	round	DI299_CB946	82	78	80	937.395	936.184	944.2283	942.684	111.326047
603	City	2138282	1406138	2138219	1405994	RCP	closed	24	C-20604	round	CB946_CB947	81	72	76.5	935.934	935.859	942.684	941.859	157.819788
604	City	2138031	1406095	2138025	1406068	RCP	closed	18	C-20605	round	CB948_CB949	39	44	41.5	939.388	938.8973	942.638	942.564	28.074255
605	City	2138025	1406068	2138219	1405994	RCP	closed	18	C-20606	round	CB949_CB947	47	74	60.5	938.6473	935.6923	942.564	941.859	206.985073
614	City	2138456	1405870	2138573	1405898	CMP	closed	36	C-20615	round	JB154_CB952	140	125	132.5	932.5063	931.6713	944.173	942.088	120.429744
615	City	2138554	1406039	2138573	1405898	RCP	closed	18	C-20616	round	CB951_CB952	61	80	70.5	937.9392	935.4213	943.0225	942.088	141.959354
616	City	2138573	1405898	2138733	1405930	CMP	closed	42	C-20617	round	CB952_PI879	126	126	126	931.588	923.5	942.088	934	163.809408
617	City	2138582	1406028	2138554	1406039	RCP	closed	18	C-20618	round	CB950_CB951	54	59	56.5	938.5747	938.1058	943.0747	943.0225	30.40942
631	City	2138611	1406180	2138637	1406169	RCP	closed	18	C-20632	round	CB1033_CB103	44	50	47	939.1029	938.6446	942.7696	942.8113	28.372365
632	City	2138637	1406169	2138661	1406226	Concrete	closed	18	C-20633	round	CB1034_JB195	54	60	57	938.3113	938.5488	942.8113	943.5488	61.757046
633	City	2138341	1406368	2138433	1406321	RCP	closed	36	C-20634	round	CB1028_CB103	121	130	125.5	933.4985	932.792	943.5818	943.6253	102.468602
634	City	2138443	1406350	2138433	1406321	RCP	closed	18	C-20635	round	CB1029_CB103	55	64	59.5	938.9992	938.292	943.5825	943.6253	30.181805
635	City	2138433	1406321	2138609	1406252	RCP	closed	36	C-20636	round	CB1030_CB103	134	150	142	932.4586	930.9952	943.6253	943.4952	189.345335
636	City	2138620	1406279	2138609	1406252	RCP	closed	18	C-20637	round	CB1031_CB103	56	60	58	938.9666	938.4952	943.6333	943.4952	28.776535
637	City	2138609	1406252	2138661	1406226	RCP	closed	36	C-20638	round	CB1032_JB195	153	129	141	930.7452	932.7988	943.4952	943.5488	57.69922
639	City	2138829	1406572	2138695	1406400	RCP	closed	18	C-20640	round	CB1039_JB194	43	100	71.5	937.9277	935.2756	941.511	943.6089	218.001385
640	City	2138695	1406400	2138678	1406345	RCP	closed	24	C-20641	round	JB194_CB1040	101	100	100.5	935.1922	934.5372	943.6089	942.8705	57.030134
641	City	2138678	1406345	2138704	1406335	RCP	closed	24	C-20642	round	CB1040_CB104	102	105	103.5	934.3705	934.2428	942.8705	942.9928	28.075929
642	City	2138704	1406335	2138661	1406226	RCP	closed	24	C-20643	round	CB1041_JB195	107	129	118	934.0761	932.7988	942.9928	943.5488	117.438657
643	City	2138635	1406639	2138612	1406572	CMP	closed	12	C-20644	round	DI339_DI340	43	56	49.5	941.1897	940.2074	944.773	944.8741	70.699771

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
648	City	2138583	1406445	2138695	1406400	RCP	closed	12	C-20649	round	DI344_JB194	67	87	77	940.9695	936.3589	946.5529	943.6089	121.175478
652	City	2138430	1406753	2138515	1406723	RCP	closed	18	C-20653	round	JB193_CB1035	<Null>	96	<Null>	<Null>	940.3536	949.5413	948.3536	90.486451
653	City	2138422	1406568	2138377	1406458	RCP	closed	24	C-20654	round	CB1037_JB155	78	84	81	938.1795	937.2857	944.6795	944.2857	119.594777
658	City	2138344	1406470	2138377	1406458	RCP	closed	18	C-20659	round	CB1038_JB155	50	64	57	940.1133	938.9524	944.28	944.2857	35.543153
659	City	2138377	1406458	2138341	1406368	RCP	closed	24	C-20660	round	JB155_CB1028	84	120	102	937.2857	933.5818	944.2857	943.5818	96.787165
660	City	2138338	1406288	2138341	1406368	RCP	closed	24	C-20661	round	CB945_CB1028	105	120	112.5	933.9164	933.5818	942.6664	943.5818	79.119346
661	City	2138267	1406308	2138338	1406288	RCP	closed	24	C-20662	round	CB944_CB945	97	101	99	934.7686	934.2497	942.8519	942.6664	74.37112
662	City	2138027	1406402	2138267	1406308	RCP	closed	24	C-20663	round	CB942_CB944	69	95	82	937.0185	934.9352	942.7685	942.8519	257.225662
663	City	2138082	1406574	2138027	1406402	RCP	closed	18	C-20664	round	CB943_CB942	30	65	47.5	940.7222	937.3518	943.2222	942.7685	180.482676
664	City	2138515	1406723	2138448	1406558	RCP	closed	18	C-20665	round	CB1035_CB1036	97	70	83.5	940.2703	938.9128	948.3536	944.7461	178.66688
665	City	2138448	1406558	2138422	1406568	RCP	closed	18	C-20666	round	CB1036_CB1037	72	74	73	938.7461	938.5128	944.7461	944.6795	28.244146
666	City	2139160	1406610	2139121	1406565	RCP	closed	18	C-20667	round	CB621_CB623	52	59	55.5	926.2827	924.3995	930.616	929.3162	59.692883
667	City	2139164	1406544	2139121	1406565	RCP	closed	18	C-20668	round	CB622_CB623	43	59	51	924.3577	924.3995	927.941	929.3162	47.394748
668	City	2139121	1406565	2139125	1406481	RCP	closed	18	C-20669	round	CB623_CB625	59	65	62	924.3995	921.2995	929.3162	926.7162	83.864594
669	City	2139168	1406483	2139125	1406481	RCP	closed	18	C-20670	round	CB624_CB625	50	63	56.5	921.9794	921.4662	926.1461	926.7162	42.140582
670	City	2139125	1406481	2139128	1406432	RCP	closed	18	C-20671	round	CB625_CB627	66	54	60	921.2162	921.6318	926.7162	926.1318	48.990466
671	City	2139170	1406433	2139128	1406432	RCP	closed	18	C-20672	round	CB626_CB627	53	54	53.5	921.4641	921.6318	925.8808	926.1318	41.503307
672	City	2139128	1406432	2139132	1406381	RCP	closed	18	C-20673	round	CB627_CB628	54	82	68	921.6318	919.7451	926.1318	926.5784	51.552099
673	City	2139132	1406381	2139171	1406383	RCP	closed	18	C-20674	round	CB628_CB629	82	85	83.5	919.7451	919.171	926.5784	926.2543	38.939062
674	City	2139171	1406383	2139351	1406355	RCP	closed	24	C-20675	round	CB629_OF169	86	86	86	919.0876	910.6846	926.2543	917.8513	181.873113
675	City	2139114	1405855	2139143	1405850	RCP	closed	18	C-20676	round	CB630_CB631	49	63	56	926.4698	925.8725	930.5531	931.1225	29.379657
676	City	2139143	1405850	2139114	1405614	RCP	closed	18	C-20677	round	CB631_YI831	63	68	65.5	925.8725	917.8308	931.1225	923.4975	238.726306
677	City	2139114	1405614	2139065	1405609	RCP	closed	18	C-20678	round	YI831_CB632	<Null>	117	<Null>	<Null>	914.3788	923.4975	924.1288	49.246028
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681	City	2138984	1405423	2139016	1405376	RCP	closed	60	C-20682	round	CI1310_OF104	115	23	69	905.4009	909.2032	914.9842	911.1199	57.193852
682	City	2138956	1405371	2138931	1405327	RCP	closed	18	C-20683	round	CB634_CB635	53	56	54.5	909.5391	908.9118	913.9558	913.5785	51.181278
683	City	2138931	1405327	2138904	1405286	RCP	closed	18	C-20684	round	CB635_CB636	56	66	61	908.9118	908.3449	913.5785	913.8449	48.679403
684	City	2138904	1405286	2138781	1405133	RCP	closed	18	C-20685	round	CB636_CB637	66	64	65	908.3449	906.8491	913.8449	912.1824	196.250274
685	City	2138781	1405133	2138694	1405046	RCP	closed	18	C-20686	round	CB637_DI828	65	58	61.5	906.7657	903.8385	912.1824	908.6718	123.164151
686	City	2138682	1405057	2138694	1405046	RCP	closed	18	C-20687	round	PP827_DI828	22	58	40	904.803	903.8385	906.6363	908.6718	15.928095
687	City	2138694	1405046	2138707	1404952	RCP	closed	24	C-20688	round	DI828_DI829	58	38	48	903.8385	903.8205	908.6718	906.9872	94.553561
688	City	2138686	1404980	2138707	1404952	CMP	closed	18	C-20689	round	CI830_DI829	23	38	30.5	905.3736	903.8205	907.2903	906.9872	34.838513
689	City	2138707	1404952	2138781	1404796	RCP	closed	24	C-20690	round	DI829_OF105	40	24	32	903.6539	906.3663	906.9872	908.3663	172.841083
726	City	2142033	1405757	2142040	1405856	RCP	closed	18	C-20727	round	CB277_JB15	56	46	51	995.8913	994.291	1000.558	998.1243	99.399849
727	City	2142040	1405856	2142033	1405958	RCP	closed	18	C-20728	round	JB15_CI21	<Null>	49	<Null>	<Null>	992.1898	998.1243	996.2731	102.242114
728	City	2142033	1405958	2142035	1406057	RCP	closed	18	C-20729	round	CI21_CI39	50	50	50	992.1064	990.3554	996.2731	994.5221	99.17978
729	City	2142035	1406057	2142044	1406196	RCP	closed	24	C-20730	round	CI39_CI45	50	77	63.5	990.3554	987.5166	994.5221	993.9333	138.989424
731	City	2141807	1405706	2141802	1405695	CMP	closed	30	C-20732	round	CB799_JB159	106	109	107.5	991.5643	991.1464	1000.398	1000.23	12.26587
732	City	2141783	1405657	2141734	1405560	RCP	closed	36	C-20733	round	CB800_PP260	275	275	275	978.48	952.6489	1001.397	975.5656	108.26594
733	City	2141527	1405799	2141276	1405895	RCP	closed	18	C-20734	round	CB802_JB160	142	104	123	980.9938	976.2785	992.8271	984.9452	268.786723
734	City	2141279	1405907	2141276	1405895	RCP	closed	18	C-20735	round	CB804_JB160	104	104	104	976.421	976.2785	985.0877	984.9452	11.784467
735	City	2141261	1405856	2141276	1405895	RCP	closed	18	C-20736	round	CB803_JB160	160	104	132	973.0557	976.2785	986.389	984.9452	42.328643

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
736	City	2141276	1405895	2141025	1405990	RCP	closed	18	C-20737	round	JB160_CB805	104	104	104	976.2785	968.9324	984.9452	977.5991	268.482984
737	City	2141045	1406014	2141025	1405990	CMP/RCP	closed	30	C-20738	round	DI28_CB805	201	130	165.5	957.6344	966.7658	974.3844	977.5991	31.828242
738	City	2141025	1405990	2140983	1405962	RCP	closed	30	C-20739	round	CB805_JB1092	<Null>	104	<Null>	<Null>	968.5309	977.5991	977.1976	50.12326
739	City	2140987	1405971	2140983	1405962	RCP	closed	24	C-20740	round	CB806_JB1092	76	56	66	971.1239	972.5309	977.4572	977.1976	9.862853
740	City	2140983	1405962	2140924	1405916	RCP	closed	36	C-20741	round	JB1092_PP261	203	203	203	960.2809	953.0135	977.1976	969.9302	74.791256
741	City	2141510	1405761	2141527	1405799	RCP	closed	18	C-20742	round	CB801_CB802	144	142	143	981.8523	980.9938	993.8523	992.8271	42.056269
742	City	2134281	1411344	2134287	1411309	Concrete	closed	48	C-20743	round	DI375_CI68	18	23	20.5	951.5194	949.0355	953.0194	950.9522	35.180303
743	City	2134287	1411309	2134289	1411298	RCP	closed	18	C-20744	round	CI68_PP27	23	18	20.5	949.0355	947.8029	950.9522	949.3029	11.283096
744	City	2146595	1408711	2146648	1408526	CMP	closed	24	C-20745	round	CB107_JB1025	58	58	58	910.933	901.1642	915.7663	905.9976	192.097196
745	City	2146648	1408526	2146618	1408317	CMP	closed	30	C-20746	round	JB1025_CB1042	<Null>	48	<Null>	<Null>	903.0964	905.9976	907.0964	211.634789
746	City	2145787	1408832	2145766	1408807	CMP	closed	18	C-20747	round	CB1056_CB105	56	69	62.5	939.256	938.0633	943.9227	943.8133	32.381351
747	City	2145766	1408807	2145667	1408668	CMP	closed	18	C-20748	round	CB1057_PP1	70	70	70	937.98	925.8839	943.8133	931.7172	170.967432
748	City	2145667	1408668	2145661	1408688	<Null>	closed	24	C-20749	round	PP1_OT118	<Null>	<Null>	<Null>	<Null>	<Null>	931.7172	933.0926	21.293907
749	City	2145661	1408688	2145598	1408542	CMP	closed	24	C-20750	round	OT118_CB1048	<Null>	54	<Null>	<Null>	915.0726	933.0926	919.5726	159.365455
750	City	2145737	1409546	2145717	1409574	CMP	closed	24	C-20751	round	CB1052_CB105	60	83	71.5	935.2141	933.4121	940.2141	940.3288	34.354746
751	City	2146189	1408273	2146187	1408120	CMP	closed	18	C-20752	round	CB1045_OF104	64	8	36	911.1826	911.3466	916.5159	912.0133	152.927913
752	City	2146086	1408931	2146117	1408925	CMP	closed	24	C-20753	round	CB1054_CB105	48	70	59	936.6824	935.2162	940.6824	941.0495	31.988218
753	City	2146117	1408925	2146254	1408901	CMP	closed	24	C-20754	round	CB1055_PP73	70	24	47	935.2162	929.7155	941.0495	931.7155	138.553928
754	City	2146370	1408822	2146447	1408712	<Null>	closed	<Null>	C-20755	<Null>	OT117_JB1027	<Null>	<Null>	<Null>	<Null>	<Null>	922.4026	922.3703	134.099287
755	City	2146618	1408317	2146586	1408316	CMP/RCP	closed	32	C-20756	round	CB1042_CB104	48	58	53	903.0964	902.8078	907.0964	907.6411	32.400723
756	City	2146586	1408316	2146591	1408271	CMP	closed	36	C-20757	round	CB1043_CB104	58	80	69	902.8078	901.2953	907.6411	907.962	44.660288
757	City	2146591	1408271	2146589	1408097	CMP	closed	36	C-20758	round	CB1044_OF104	80	36	58	901.2953	902.2667	907.962	905.2667	174.382765
758	City	2145598	1408542	2145585	1408513	CMP	closed	30	C-20759	round	CB1048_CB104	54	24	39	915.0726	917.8175	919.5726	919.8175	31.744433
759	City	2145585	1408513	2145523	1408378	CMP	closed	30	C-20760	round	CB1049_OF104	<Null>	30	<Null>	<Null>	909.2908	919.8175	911.7908	148.03432
760	City	2145271	1408881	2145240	1408882	CMP/RCP	closed	18	C-20761	round	CB1050_CB105	40	44	42	931.9195	931.388	935.2528	935.0547	31.102666
761	City	2145240	1408882	2145142	1408886	CMP	closed	18	C-20762	round	CB1051_DI1058	44	44	44	931.388	926.3333	935.0547	930	97.504953
764	City	2145778	1408454	2145766	1408426	CMP	closed	18	C-20765	round	CB1046_CB104	68	8	38	913.1204	917.7252	918.7871	918.3919	31.327871
765	City	2145766	1408426	2145709	1408316	CMP	closed	18	C-20766	round	CB1047_OF104	<Null>	24	<Null>	<Null>	910.4483	918.3919	912.4483	123.782096
781	City	2129078	1411519	2129076	1411594	RCP	closed	18	C-20782	round	CB905_CI3	58	40	49	955.2257	952.9045	960.059	956.2378	74.933946
782	City	2129076	1411594	2129089	1411669	RCP	closed	18	C-20783	round	CI3_PP401	40	7	23.5	952.9045	951.3062	956.2378	951.8895	75.941433
804	City	2138865	1404635	2138877	1404653	RCP	closed	18	C-20805	round	CB871_OF106	35	<Null>	<Null>	909.1275	<Null>	912.0442	905.4649	21.636915
805	City	2137763	1405550	2137880	1405499	Metal	closed	18	C-20806	round	CI251_JB163	<Null>	<Null>	<Null>	<Null>	<Null>	926.7833	927.1902	128.581472
807	City	2137880	1405499	2137879	1405494	RCP	closed	18	C-20808	round	JB163_CB872	<Null>	64	<Null>	<Null>	921.8163	927.1902	927.1496	5.205945
808	City	2137879	1405494	2137862	1405465	RCP	closed	18	C-20809	round	CB872_HW299	64	57	60.5	921.8163	920.2826	927.1496	925.0326	33.03103
809	City	2134600	1406868	2134686	1406846	RCP	closed	18	C-20810	round	CB875_CI254	32	28	30	937.1883	935.2652	939.855	937.5985	89.610363
810	City	2134676	1406875	2134686	1406846	RCP	closed	18	C-20811	round	DI253_CI254	41	28	34.5	935.6936	935.2652	939.1103	937.5985	30.503214
811	City	2134408	1406993	2134367	1407026	RCP	closed	18	C-20812	round	CB876_CB878	50	52	51	938.7127	937.7053	942.8794	942.0386	52.623199
812	City	2134393	1407040	2134367	1407026	RCP	closed	18	C-20813	round	CB877_CB878	48	52	50	938.9079	937.7053	942.9079	942.0386	29.684209
813	City	2134367	1407026	2134327	1407045	RCP	closed	18	C-20814	round	CB878_CB879	52	64	58	937.7053	936.5435	942.0386	941.8768	43.944331
814	City	2134291	1407242	2134216	1407090	Concrete	closed	18	C-20815	round	CB880_	43	<Null>	<Null>	939.6065	<Null>	943.1898	<Null>	169.847543
815	City	2134178	1407309	2134197	1407093	Concrete	closed	18	C-20816	round	CB881_	46	<Null>	<Null>	938.9261	<Null>	942.7594	<Null>	216.212842
816	City	2134101	1407195	2134161	1407141	RCP	closed	18	C-20817	round	CB882_CB883	44	68	56	936.7085	934.7229	940.3752	940.3896	80.78267
817	City	2134163	1407096	2134056	1407139	CMP	closed	24	C-20818	round	OS205_JB164	90	102	96	932.522	931.2343	940.022	939.7343	114.599556

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
818	City	2134056	1407139	2134046	1407123	CMP	closed	18	C-20819	round	JB164_JB165	102	64	83	931.2343	932.6362	939.7343	937.9695	18.968008
819	City	2134046	1407123	2134042	1407116	Metal	closed	18	C-20820	round	JB165_CB886	<Null>	80	<Null>	<Null>	931.355	937.9695	938.0217	7.971158
820	City	2134042	1407116	2133830	1407205	Metal	closed	24	C-20821	round	CB886_CB887	80	84	82	931.355	927.2158	938.0217	934.2158	230.206361
821	City	2133830	1407205	2133565	1407309	CMP	closed	24	C-20822	round	CB887_JB418	84	84	84	927.2158	921.6423	934.2158	928.6423	285.231255
822	City	2133565	1407309	2133554	1407320	CMP	closed	24	C-20823	round	JB418_CB888	<Null>	68	<Null>	<Null>	923.0692	928.6423	928.7359	14.660752
823	City	2133554	1407320	2133386	1407391	CMP	closed	24	C-20824	round	CB888_CB889	68	70	69	923.0692	919.833	928.7359	925.6663	182.794911
824	City	2133386	1407391	2133309	1407423	CMP	closed	24	C-20825	round	CB889_DI18	70	70	70	919.833	918.6904	925.6663	924.5237	83.086701
825	City	2133309	1407423	2133091	1407505	CMP	closed	24	C-20826	round	DI18_CB890	70	74	72	918.6904	914.6719	924.5237	920.8386	232.643049
826	City	2133091	1407505	2132904	1407583	CMP	closed	36	C-20827	round	CB890_CB891	74	58	66	914.6719	914.3389	920.8386	919.1722	202.626589
827	City	2132904	1407583	2132890	1407622	CMP	closed	30	C-20828	round	CB891_HW405	58	58	58	914.3389	908.39	919.1722	913.2233	41.255157
828	City	2134327	1407045	2134228	1407081	Concrete	closed	18	C-20829	round	CB879_	64	<Null>	<Null>	936.5435	<Null>	941.8768	<Null>	105.625136
843	City	2141008	1410057	2141025	1410083	CMP	closed	18	C-20844	round	CB442_CB443	76	76	76	991.0419	990.8444	997.3752	997.1777	30.320214
848	City	2141076	1410448	2141139	1410529	CMP	closed	24	C-20849	round	DI96_CB444	68	84	76	970.0497	965.4341	975.7164	972.4341	102.846681
850	City	2140780	1410475	2140705	1410548	CMP	closed	18	C-20851	round	CB445_CB446	80	78	79	975.1236	974.1402	981.7903	980.6402	104.908859
854	City	2128569	1410554	2128599	1410548	CMP	closed	18	C-20855	round	CB331_CB332	62	66	64	954.1328	953.6413	959.2995	959.1413	30.485181
855	City	2128599	1410548	2128601	1410529	CMP	closed	24	C-20856	round	CB332_JB1034	66	28	47	953.6413	956.6339	959.1413	958.9672	19.486752
856	City	2128601	1410529	2128605	1410266	CMP	closed	24	C-20857	round	JB1034_CB333	<Null>	68	<Null>	<Null>	947.9249	958.9672	953.5916	263.331381
859	City	2137561	1400619	2137569	1400649	CMP	closed	24	C-20860	round	CB33_CB34	68	64	66	959.0219	958.7652	964.6886	964.0985	30.138439
860	City	2137569	1400649	2137644	1400647	Metal	closed	24	C-20861	round	CB34_CB35	67	67	67	958.5152	956.5662	964.0985	962.1495	75.815525
863	City	2136936	1400542	2136929	1400515	CMP	closed	30	C-20864	round	CB29_CB30	61	67	64	971.6465	971.0734	976.7298	976.6567	28.380933
866	City	2137281	1400439	2137273	1400412	CMP	closed	30	C-20867	round	CB31_CB32	67	71	69	964.3507	964.3007	969.934	970.2174	28.257957
870	City	2137216	1399977	2137278	1399881	CMP	closed	48	C-20871	round	DI182_JB104	<Null>	74	<Null>	<Null>	948.6736	958.0784	954.8403	114.343038
872	City	2137239	1399750	2137245	1399751	CMP	closed	48	C-20873	round	HW166_CB39	<Null>	78	<Null>	<Null>	946.5813	952	953.0813	5.424582
873	City	2137245	1399751	2137267	1399770	CMP	closed	48	C-20874	round	CB39_CB40	78	75	76.5	946.5813	946.8251	953.0813	953.0751	29.587362
875	City	2137541	1399649	2137550	1399644	CMP	closed	36	C-20876	round	HW167_CB41	40	85	62.5	941.9735	937.4943	945.3068	944.5776	9.907064
876	City	2137550	1399644	2137581	1399633	CMP	closed	36	C-20877	round	CB41_CB42	85	97	91	937.4943	936.8397	944.5776	944.923	33.383776
877	City	2137581	1399633	2137604	1399625	CMP	closed	36	C-20878	round	CB42_HW365	97	44	70.5	936.8397	936.3333	944.923	940	24.641481
878	City	2137523	1399631	2137590	1399621	CMP	closed	48	C-20879b	round	CV236_CV31	50	48	49	935.8428	938.6577	940.0095	942.6577	67.290451
879	City	2142233	1401599	2142226	1401541	<Null>	closed	<Null>	C-20880	<Null>	PP92_CV78	<Null>	<Null>	<Null>	<Null>	<Null>	942.0062	937.5292	58.132059
880	City	2142002	1402223	2141972	1402225	CMP	closed	18	C-20881	round	CB324_CB325	57	61	59	959.0104	958.7648	963.7604	963.8481	30.227391
881	City	2141972	1402225	2141935	1402124	CMP	closed	18	C-20882	round	CB325_CB327	61	81	71	958.7648	952.6606	963.8481	959.4106	107.042737
882	City	2141935	1402124	2141936	1402093	CMP	closed	18	C-20883	round	CB327_CB328	82	86	84	952.5773	951.9005	959.4106	959.0672	30.844448
883	City	2141936	1402093	2142024	1401872	CMP	closed	24	C-20884	round	CB328_JB89	86	86	86	951.9005	956.8078	959.0672	963.9745	238.459244
884	City	2142000	1402089	2141935	1402124	CMP	closed	18	C-20885	round	CB326_CB327	67	78	72.5	954.2169	952.9106	959.8002	959.4106	74.069359
885	City	2142213	1401897	2142231	1401824	CMP	closed	36	C-20886	round	CV74_CV76	48	48	48	941.7764	942.3954	945.7764	946.3954	75.233207
886	City	2142281	1401877	2142280	1401847	CMP	closed	18	C-20887	round	CB329_CB330	69	65	67	943.0674	943.0999	948.8174	948.5166	29.476648
887	City	2142024	1401872	2142167	1401816	<Null>	closed	<Null>	C-20888	<Null>	JB89_OF119	<Null>	32	<Null>	<Null>	947.5575	963.9745	950.2242	153.520931
888	City	2142649	1401472	2142663	1401446	CMP	closed	18	C-20889	round	CB322_CB323	49	69	59	949.2619	947.5563	953.3452	953.3063	29.817012
889	City	2142663	1401446	2142359	1401349	CMP	closed	18	C-20890	round	CB323_CB320	69	56	62.5	947.5563	939.0551	953.3063	943.7218	318.910037
890	City	2142359	1401349	2142283	1401348	CMP	closed	24	C-20891	round	CB320_CB319	58	60	59	938.8885	936.8061	943.7218	941.8061	76.649056
891	City	2142283	1401348	2142240	1401418	CMP	closed	30	C-20892	round	CB319_OF122	60	32	46	936.8061	940.5043	941.8061	943.171	82.370321
892	City	2142140	1401064	2142159	1401088	CMP	closed	18	C-20893	round	CB315_CB316	54	64	59	936.7868	936.1128	941.2868	941.4461	30.744649
893	City	2142159	1401088	2142152	1401125	CMP/RCP	closed	24	C-20894	round	CB316_CB317	64	62	63	936.1128	934.0615	941.4461	939.2282	38.132748

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894	City	2142152	1401125	2142125	1401140	CMP	closed	24	C-20895	round	CB317_CB318	62	65	63.5	934.0615	933.3384	939.2282	938.7551	30.44595
895	City	2142125	1401140	2142044	1401205	CMP	closed	24	C-20896	round	CB318_OF217	69	69	69	933.0051	927.5942	938.7551	933.3442	104.197669
896	City	2142259	1400150	2142176	1400067	CMP	closed	18	C-20897	round	CB314_OF232	50	31	40.5	937.9255	937.4145	942.0922	939.9978	117.09076
897	City	2141769	1400457	2141774	1400430	CMP	closed	24	C-20898	round	CB311_CB312	58	58	58	929.2838	929.2373	934.1171	934.0706	28.211848
898	City	2141774	1400430	2141792	1400334	CMP/RCP	closed	24	C-20899	round	CB312_OF231	61	22	41.5	928.9873	928.1505	934.0706	929.9838	96.986636
899	City	2141930	1400150	2141849	1400103	CMP	closed	18	C-20900	round	CB313_OF230	68	23	45.5	926.2331	928.9833	931.8998	930.9	93.449069
900	City	2141615	1400134	2141530	1400087	<Null>	closed	30	C-20901	round	CB310_OF229	<Null>	71	<Null>	<Null>	913.9302	921.9169	919.8469	96.263934
901	City	2141354	1400312	2141316	1400229	CMP	closed	18	C-20902	round	CB309_OF22	46	20	33	924.225	924.4672	928.0583	926.1339	90.948646
902	City	2141417	1400652	2141411	1400681	CMP	closed	18	C-20903	round	CB306_CB307	55	52	53.5	923.9393	924.2972	928.5226	928.6305	29.139712
903	City	2141411	1400681	2141389	1400819	CMP	closed	18	C-20904	round	CB307_OF224	55	32	43.5	924.0472	915.2609	928.6305	917.9276	140.134216
904	City	2141215	1400688	2141151	1400733	CMP	closed	18	C-20905	round	CB308_JB93	56	32	44	919.6893	921.3905	924.356	924.0572	78.274105
906	City	2141960	1400944	2141956	1400906	CMP	closed	18	C-20907	round	CB301_CB302	58	80	69	930.6815	930.3342	935.5148	937.0009	38.373418
907	City	2141956	1400906	2141932	1400888	CMP	closed	18	C-20908	round	CB302_CB303	83	85	84	930.0842	929.9353	937.0009	937.0186	29.863149
908	City	2141932	1400888	2141893	1400891	CMP	closed	18	C-20909	round	CB303_JB91	85	70	77.5	929.9353	929.2347	937.0186	935.068	39.229682
909	City	2141893	1400891	2141723	1400757	CMP	closed	18	C-20910	round	JB91_CB305	71	60	65.5	929.1513	927.3352	935.068	932.3352	216.624839
910	City	2141723	1400757	2141705	1400780	CMP	closed	24	C-20911	round	CB305_CB304	62	65	63.5	927.1685	926.9599	932.3352	932.3766	29.173921
911	City	2141705	1400780	2141635	1400880	CMP	closed	24	C-20912	round	CB304_OF222	66	66	66	926.8766	917.8946	932.3766	923.3946	122.080364
912	City	2141841	1401116	2141812	1401109	CMP	closed	18	C-20913	round	CB299_CB300	56	60	58	927.3118	926.7918	931.9785	931.7918	30.004698
913	City	2141812	1401109	2141778	1401051	CMP	closed	18	C-20914	round	CB300_OF219	60	60	60	926.7918	922.7802	931.7918	927.7802	67.135176
914	City	2141893	1401111	2141794	1401035	<Null>	closed	60	C-20915	round	CV77_CV14	<Null>	<Null>	<Null>	<Null>	<Null>	922	925.3128	124.838976
915	City	2141950	1401357	2142012	1401310	CMP	closed	18	C-20916	round	CB298_JB90	69	69	69	938.3983	932.5333	944.1483	938.2833	78.044755
917	City	2141249	1401562	2141246	1401426	CMP	closed	18	C-20918	round	CB292_CB293	63	57	60	935.6538	932.1611	940.9038	936.9111	135.653712
918	City	2141246	1401426	2141245	1401397	CMP	closed	18	C-20919	round	CB293_CB294	59	57	58	931.9944	931.999	936.9111	936.749	29.663321
919	City	2141245	1401397	2140943	1401377	CMP	closed	18	C-20920	round	CB294_CB295	62	74	68	931.5823	920.2362	936.749	926.4029	302.669336
920	City	2140943	1401377	2140861	1401329	CMP	closed	18	C-20921	round	CB295_OF226	76	26	51	920.0696	918.0345	926.4029	920.2012	95.573449
921	City	2141048	1401084	2140969	1401034	CMP	closed	18	C-20922	round	CB296_OF227	65	32	48.5	916.2587	914.6719	921.6754	917.3386	92.682806
922	City	2141340	1400966	2141281	1400849	CMP	closed	18	C-20923	round	CB297_OF223	78	78	78	915.59	907.5	922.09	914	130.967525
923	City	2140718	1401623	2140718	1401577	CMP	closed	18	C-20924	round	CB291_OF1127	49	25	37	920.5345	925.2645	924.6178	927.3478	46.260739
924	City	2141311	1401630	2141222	1401642	CMP	closed	18	C-20925	round	HW79_CB289	<Null>	57	<Null>	<Null>	935.918	947.0614	940.668	89.782708
925	City	2141222	1401642	2141194	1401642	CMP	closed	24	C-20926	round	CB289_CB290	59	48	53.5	935.7513	936.0356	940.668	940.0356	28.348717
926	City	2141194	1401642	2141099	1401633	CMP	closed	24	C-20927	round	CB290_HW12	52	24	38	935.7023	932.2275	940.0356	934.2275	95.014757
928	City	2141595	1402099	2141538	1402046	CMP	closed	24	C-20929	round	JB88_CB284	<Null>	79	<Null>	<Null>	943.3122	949.0115	949.8955	77.599761
929	City	2141538	1402046	2141509	1402047	CMP	closed	30	C-20930	round	CB284_CB285	81	75	78	943.1455	943.0196	949.8955	949.2696	28.39937
930	City	2141509	1402047	2141482	1402132	CMP	closed	30	C-20931	round	CB285_JB87	78	62	70	942.7696	939.4755	949.2696	944.6422	89.640989
931	City	2141487	1402241	2141482	1402132	<Null>	closed	30	C-20932	round	HW73_JB87	<Null>	62	<Null>	<Null>	939.4755	944.112	944.6422	109.24366
932	City	2141482	1402132	2141276	1402129	CMP	closed	36	C-20933	round	JB87_CB287	62	60	61	939.4755	935.1307	944.6422	940.1307	206.312607
933	City	2141276	1402129	2141177	1402132	CMP	closed	36	C-20934	round	CB287_CB288	60	69	64.5	935.1307	932.8697	940.1307	938.6197	98.482583
934	City	2141275	1402101	2141276	1402129	CMP	closed	18	C-20935	round	CB286_CB287	45	60	52.5	936.1195	935.1307	939.8695	940.1307	28.417487
935	City	2141177	1402132	2141089	1402152	CMP	closed	42	C-20936	round	CB288_PP11	71	42	56.5	932.703	933.1083	938.6197	936.6083	90.185398
936	City	2148949	1410044	2148979	1410042	CMP	closed	18	C-20937	round	CB603_CB604	44	48	46	950.8411	950.2268	954.5078	954.2268	30.239021
937	City	2148979	1410042	2149056	1410028	CMP	closed	18	C-20938	round	CB604_OF91	48	30	39	950.2268	949.4477	954.2268	951.9477	78.212226
938	City	2148701	1409758	2148669	1409757	CMP	closed	24	C-20939	round	CB605_CB606	60	64	62	940.8179	940.0998	945.8179	945.4331	31.488937
939	City	2148669	1409757	2148587	1409754	CMP	closed	24	C-20940	round	CB606_HW94	64	24	44	940.0998	936.9302	945.4331	938.9302	82.304387

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940	City	2148834	1409499	2148837	1409421	HDPE	closed	8	C-20941	round	_CB607	<Null>	50	<Null>	<Null>	936.6796	<Null>	940.8463	78.194518
941	City	2148837	1409421	2148836	1409391	CMP	closed	18	C-20942	round	CB607_CB608	50	52	51	936.6796	935.9086	940.8463	940.2419	30.379459
942	City	2148836	1409391	2149224	1409386	CMP	closed	18	C-20943	round	CB608_CB609	52	124	88	935.9086	932.2188	940.2419	942.5521	388.570702
943	City	2149224	1409386	2149244	1409363	CMP	closed	30	C-20944	round	CB609_CB610	124	124	124	932.2188	931.6404	942.5521	941.9737	30.184939
944	City	2149109	1408950	2149169	1408943	CMP	closed	18	C-20945	round	YI961_CB611	32	76	54	933.5867	932.1418	936.2534	938.4751	61.20505
945	City	2149169	1408943	2149201	1408938	CMP	closed	18	C-20946	round	CB611_CB612	76	108	92	932.1418	929.5228	938.4751	938.5228	31.869413
946	City	2149201	1408938	2149190	1408742	CMP	closed	30	C-20947	round	CB612_CB613	108	74	91	929.5228	928.1378	938.5228	934.3045	196.53421
947	City	2149190	1408742	2149187	1408729	CMP	closed	36	C-20948	round	CB613_PI929	74	74	74	928.1378	929.9925	934.3045	936.1592	13.316698
948	City	2149244	1409363	2149201	1408938	CMP	closed	30	C-20950	round	CB610_CB612	126	108	117	931.4737	929.5228	941.9737	938.5228	427.05917
949	City	2150127	1409062	2150133	1409032	CMP	closed	18	C-20951	round	CB614_CB615	50	74	62	940.573	938.7316	944.7397	944.8983	30.671706
950	City	2150133	1409032	2150158	1408781	CMP	closed	24	C-20952	round	CB615_CB616	<Null>	80	<Null>	<Null>	929.1805	944.8983	935.8472	252.647102
951	City	2150158	1408781	2150209	1408748	CMP	closed	30	C-20953	round	CB616_CB618	80	102	91	929.1805	924.7918	935.8472	933.2918	60.423818
952	City	2150214	1408806	2150209	1408748	CMP	closed	18	C-20954	round	CB617_CB618	<Null>	102	<Null>	<Null>	924.7918	935.8845	933.2918	57.38092
953	City	2150209	1408748	2150205	1408606	CMP	closed	30	C-20955	round	CB618_OS95	102	42	72	924.7918	922.6664	933.2918	926.1664	142.590119
954	City	2150580	1408712	2150583	1408653	CMP	closed	18	C-20956	round	CB619_HW2168	57	57	57	905.4517	905.6224	910.2017	910.3724	58.127518
955	City	2150761	1409052	2150813	1408995	CMP	closed	18	C-20957	round	CB620_OF1057	<Null>	27	<Null>	<Null>	908.953	918.2884	911.203	76.748922
957	City	2131569	1407469	2131544	1407510	RCP	closed	18	C-20959	round	CB425_CB426	83	84	83.5	924.134	922.6219	931.0507	929.6219	48.497774
958	City	2131544	1407510	2131608	1407609	RCP	closed	18	C-20960	round	CB426_CB427	86	51	68.5	922.4552	921.1308	929.6219	925.3808	117.704158
959	City	2131608	1407609	2131588	1407629	RCP	closed	18	C-20961	round	CB427_CB428	53	53	53	920.9641	920.6975	925.3808	925.1142	28.592238
961	City	2131553	1407142	2131524	1407146	RCP	closed	18	C-20963	round	CB420_CB421	100	99	99.5	938.0767	937.3929	946.41	945.6429	28.705958
962	City	2131524	1407146	2131492	1407172	RCP	closed	18	C-20964	round	CB421_CB422	99	100	99.5	937.3929	934.7349	945.6429	943.0682	41.436243
963	City	2131492	1407172	2131494	1407200	RCP	closed	18	C-20965	round	CB422_CB423	101	103	102	934.6515	934.4731	943.0682	943.0564	27.904702
964	City	2131494	1407200	2131316	1407248	RCP	closed	18	C-20966	round	CB423_CB424	104	102	103	934.3897	928.4685	943.0564	936.9685	183.910414
967	City	2131232	1406781	2131220	1406814	RCP	closed	18	C-20969	round	CB413_CB414	85	105	95	936.5721	933.7273	943.6554	942.4773	35.38653
968	City	2131220	1406814	2131213	1406854	RCP	closed	18	C-20970	round	CB414_CB416	106	92	99	933.644	933.5189	942.4773	941.1856	40.776223
969	City	2131232	1406874	2131213	1406854	RCP	closed	18	C-20971	round	CB415_CB416	72	91	81.5	934.9908	933.6023	940.9908	941.1856	27.26742
970	City	2131213	1406854	2131146	1406922	RCP	closed	24	C-20972	round	CB416_CB418	97	94	95.5	933.1023	930.8937	941.1856	938.727	95.331126
971	City	2131175	1406933	2131146	1406922	RCP	closed	18	C-20973	round	CB417_CB418	90	88	89	931.6203	931.3937	939.1203	938.727	30.73579
972	City	2131146	1406922	2131073	1407020	RCP	closed	30	C-20974	round	CB418_CB419	96	73	84.5	930.727	929.9962	938.727	936.0795	122.780386
975	City	2131041	1406560	2131053	1406585	Metal	closed	30	C-20977	round	CB411_CB412	84	93	88.5	944.6438	944.0248	951.6438	951.7748	27.578235
976	City	2131053	1406585	2131016	1406622	CMP	closed	30	C-20978	round	CB412_JB1033	94	93	93.5	943.9415	946.5529	951.7748	954.3029	52.298502
978	City	2130696	1406404	2130783	1406601	RCP	closed	24	C-20980	round	CB408_CB410	97	82	89.5	950.7333	947.5053	958.8166	954.3386	215.245227
979	City	2130801	1406581	2130783	1406601	RCP	closed	18	C-20981	round	CB409_CB410	77	86	81.5	948.1428	947.1719	954.5595	954.3386	27.495536
981	City	2130677	1406062	2130650	1406108	RCP	closed	18	C-20983	round	CB405_CB406	<Null>	90	<Null>	<Null>	958.4816	966.9929	965.9816	53.294899
982	City	2130650	1406108	2130668	1406405	RCP	closed	18	C-20984	round	CB406_CB407	91	83	87	958.3983	952.2427	965.9816	959.1594	296.643765
983	City	2130668	1406405	2130696	1406404	RCP	closed	18	C-20985	round	CB407_CB408	85	93	89	952.0761	951.0666	959.1594	958.8166	28.266456
984	City	2130721	1407363	2130708	1407388	RCP	closed	18	C-20986	round	CB401_CB402	95	104	99.5	936.9583	936.2712	944.875	944.9379	28.015269
985	City	2130708	1407388	2130926	1407501	RCP	closed	18	C-20987	round	CB402_CB403	104	112	108	936.2712	926.5687	944.9379	935.902	245.628113
986	City	2130926	1407501	2131018	1407472	RCP	closed	18	C-20988	round	CB403_CB404	112	110	111	926.5687	924.958	935.902	934.1247	96.686962
991	City	2130408	1407232	2130421	1407208	RCP	closed	18	C-20993	round	CB395_CB396	59	63	61	950.4486	949.9614	955.3653	955.2114	27.937614
992	City	2130421	1407208	2130461	1407188	RCP	closed	18	C-20994	round	CB396_CB397	63	62	62.5	949.9614	948.1458	955.2114	953.3125	44.63296
993	City	2130461	1407188	2130539	1407097	RCP	closed	18	C-20995	round	CB397_CB398	63	71	67	948.0625	942.1501	953.3125	948.0668	119.423762
994	City	2130539	1407097	2130630	1406958	RCP	closed	24	C-20996	round	CB398_CB400	75	60	67.5	941.8168	938.0077	948.0668	943.0077	166.375852

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
995	City	2130611	1406939	2130630	1406958	RCP	closed	18	C-20997	round	CB399_CB400	55	51	53	938.5759	938.7577	943.1592	943.0077	27.004359
996	City	2130630	1406958	2130655	1406982	RCP	closed	24	C-20998	round	CB400_OF326	201	24	112.5	926.2577	929.7044	943.0077	931.7044	35.00811
998	City	2130012	1407949	2130041	1407944	CMP	closed	18	C-21000	round	CB371_CB372	79	86	82.5	951.0852	950.531	957.6685	957.6977	29.503884
1001	City	2129925	1407434	2129947	1407449	RCP	closed	18	C-21003	round	CB373_CB374	56	58	57	948.4112	948.2999	953.0779	953.1332	27.079663
1002	City	2129947	1407449	2129920	1407494	RCP	closed	18	C-21004	round	CB374_CB375	60	58	59	948.1332	949.0089	953.1332	953.8422	52.635155
1003	City	2129898	1407476	2129920	1407494	RCP	closed	42	C-21005	round	CB376_CB375	88	88	88	946.3641	946.5089	953.6974	953.8422	28.5885
1004	City	2129881	1407465	2129898	1407476	RCP	closed	36	C-21006	round	CV245_CB376	55	88	71.5	947.6375	946.3641	952.2208	953.6974	19.847501
1005	City	2129920	1407494	2129932	1407511	RCP	closed	48	C-21007	round	CB375_CV246	89	56	72.5	946.4255	948.1365	953.8422	952.8032	20.257248
1006	City	2130060	1407051	2130074	1407026	RCP	closed	18	C-21008	round	CB377_CB378	61	69	65	959.4897	958.9576	964.573	964.7076	28.672736
1007	City	2130074	1407026	2130112	1407008	RCP	closed	18	C-21009	round	CB378_CB379	71	75	73	958.7909	957.9489	964.7076	964.1989	42.074677
1008	City	2130112	1407008	2130176	1406885	RCP	closed	24	C-21010	round	CB379_CB381	81	98	89.5	957.4489	951.9763	964.1989	960.143	138.304934
1009	City	2130183	1406930	2130176	1406885	RCP	closed	18	C-21011	round	CB380_CB381	81	98	89.5	954.9171	951.9763	961.6671	960.143	46.025901
1010	City	2130176	1406885	2130233	1406736	RCP	closed	24	C-21012	round	CB381_CB383	98	72	85	951.9763	949.3217	960.143	955.3217	159.550286
1011	City	2130203	1406743	2130233	1406736	RCP	closed	18	C-21013	round	CB382_CB383	66	72	69	949.9241	949.3217	955.4241	955.3217	30.327521
1012	City	2130200	1406681	2130233	1406736	RCP	closed	18	C-21014	round	CB384_CB383	61	72	66.5	950.7885	949.3217	955.8718	955.3217	64.066011
1014	City	2129239	1406820	2129263	1406782	RCP	closed	18	C-21016	round	CB391_CB392	55	54	54.5	964.2899	964.0347	968.8732	968.5347	45.087494
1015	City	2129263	1406782	2129256	1406701	RCP	closed	18	C-21017	round	CB392_CB393	54	74	64	964.0347	961.3362	968.5347	967.5029	81.817686
1016	City	2129256	1406701	2129281	1406590	RCP	closed	18	C-21018	round	CB393_CB394	74	68	71	961.3362	960.0458	967.5029	965.7125	113.877049
1019	City	2129610	1406748	2129585	1406683	RCP	closed	18	C-21021	round	CB390_CB389	154	118	136	953.3086	952.3852	966.1419	962.2185	69.804113
1020	City	2129585	1406683	2129711	1406569	RCP	closed	18	C-21022	round	CB389_CB388	118	62	90	952.3852	949.4015	962.2185	954.5682	170.241354
1021	City	2129714	1406599	2129711	1406569	RCP	closed	18	C-21023	round	CB387_CB388	56	62	59	949.8726	949.4015	954.5393	954.5682	30.573796
1022	City	2129834	1406600	2129788	1406571	RCP	closed	18	C-21024	round	CB385_CB386	66	62	64	951.4819	950.7646	956.9819	955.9313	54.127674
1023	City	2129788	1406571	2129711	1406569	RCP	closed	18	C-21025	round	CB386_CB388	64	62	63	950.598	949.4015	955.9313	954.5682	76.552292
1024	City	2129711	1406569	2129703	1406448	CMP	closed	24	C-21026	round	CB388_HW410	88	45	66.5	947.2349	944.6426	954.5682	948.3926	121.27243
1025	City	2144537	1409575	2144527	1408828	RCP	closed	18	C-21027	round	CB1145_CB1144	29	47	38	942.8212	915.6267	945.2379	919.5434	747.137502
1026	City	2144479	1407853	2144478	1407813	RCP	closed	18	C-21028	round	CV12_CV13	10	18	14	968.8167	966.625	969.65	968.125	40.034445
1027	City	2144480	1407751	2144521	1407751	Concrete	closed	18	C-21029	round	PP430_JB363	18	18	18	963.0824	961.4997	964.5824	962.9997	40.797448
1028	City	2144510	1407706	2144521	1407751	CMP	closed	18	C-21030	round	CB1143_JB363	36	87	61.5	961.5685	955.7497	964.5685	962.9997	45.837404
1029	City	2144456	1407462	2144452	1407422	RCP	closed	12	C-21031	round	CV11_CV68	10	12	11	964.3505	964.3032	965.1838	965.3032	39.624613
1030	City	2144441	1407304	2144480	1407288	RCP	closed	18	C-21032	round	PP409_CB1142	20	14	17	956.0676	956.5049	957.7343	957.6716	41.990069
1031	City	2144480	1407288	2144532	1407123	RCP	closed	18	C-21033	round	CB1142_CB1141	14	14	14	956.5049	957.1837	957.6716	958.3504	173.603045
1032	City	2144502	1407108	2144532	1407123	RCP	closed	18	C-21034	round	PP428_CB1141	18	16	17	957.2428	957.0171	958.7428	958.3504	34.042676
1033	City	2144532	1407123	2144549	1407141	RCP	closed	24	C-21035	round	CB1141_HW82	16	24	20	957.0171	950.447	958.3504	952.447	24.920217
1035	City	2144934	1406528	2144932	1406452	Metal	closed	18	C-21037	round	CV65_CV10	18	18	18	949.7081	946.084	951.2081	947.584	76.448777
1036	City	2144952	1405735	2144952	1405803	RCP	closed	30	C-21038	round	CB979_JB180	76	76	76	937.4379	935.3691	943.7712	941.7024	67.371923
1037	City	2144951	1405598	2144950	1405676	RCP	closed	18	C-21039	round	CB977_CB978	60	74	67	944.2816	939.699	949.2816	945.8657	78.229133
1038	City	2144917	1405681	2144950	1405676	RCP	closed	30	C-21040	round	HW303_CB978	34	74	54	943.3485	939.699	946.1818	945.8657	33.872315
1039	City	2144950	1405676	2144952	1405735	RCP	closed	30	C-21041	round	CB978_CB979	74	76	75	939.699	937.4379	945.8657	943.7712	58.886313
1040	City	2144966	1405735	2144952	1405735	RCP	closed	18	C-21042	round	YI314_CB979	18	76	47	940.9554	937.4379	942.4554	943.7712	13.942195
1041	City	2144952	1405803	2144952	1405834	RCP	closed	30	C-21043	round	JB180_CB980	<Null>	76	<Null>	<Null>	933.2029	941.7024	939.5362	31.819993
1042	City	2144967	1405838	2144952	1405834	CMP	closed	18	C-21044	round	YI315_CB980	16	16	16	938.2027	938.2029	939.536	939.5362	16.027859
1043	City	2144956	1406061	2144952	1405834	RCP	closed	30	C-21045	round	CB981_CB981	64	64	64	930.8152	930.8152	936.1485	936.1485	226.613648
1044	City	2144957	1406150	2144956	1406061	RCP	closed	30	C-21046	round	CB1355_CB981	50	64	57	930.9736	930.8152	935.1403	936.1485	88.898251

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1045	City	2144948	1405247	2144911	1405249	RCP	closed	18	C-21047	round	HW302_HW60	32	32	32	957.3137	957.2336	959.9803	959.9003	36.913918
1046	City	2144886	1405053	2144912	1405196	RCP	closed	18	C-21048	round	YI594_CB976	<Null>	12	<Null>	<Null>	960.4604	966.025	961.4604	145.325114
1047	City	2144912	1405196	2144908	1405215	RCP	closed	24	C-21049	round	CB976_PP59	12	24	18	960.4604	958.3271	961.4604	960.3271	20.100875
1048	City	2143925	1409180	2143923	1409207	CMP	closed	18	C-21050	round	CB541_CB540	68	67	67.5	948.8776	948.7963	954.5443	954.3796	27.775976
1049	City	2143923	1409207	2143985	1409210	CMP	closed	18	C-21051	round	CB540_JB54	70	70	70	948.5463	941.8145	954.3796	947.6478	62.811088
1050	City	2144068	1409069	2144096	1409070	CMP	closed	18	C-21052	round	CB538_CB539	73	87	80	928.5198	926.3844	934.6031	933.6344	28.339041
1051	City	2143985	1409210	2144096	1409070	CMP	closed	18	C-21053	round	JB54_CB539	<Null>	88	<Null>	<Null>	926.3011	947.6478	933.6344	178.270626
1053	City	2143851	1408701	2143836	1408676	CMP	closed	18	C-21055	round	CB542_CB543	85	78	81.5	941.4589	941.3021	948.5422	947.8021	29.340245
1054	City	2143836	1408676	2143839	1408644	CMP	closed	24	C-21056	round	CB543_CB544	80	77	78.5	941.1354	940.1514	947.8021	946.5681	32.189038
1055	City	2143839	1408644	2143887	1408663	CMP	closed	30	C-21057	round	CB544_CB545	77	69	73	940.1514	939.8079	946.5681	945.5579	51.87828
1062	City	2143306	1407856	2143354	1407903	CMP	closed	36	C-21064	round	JB56_CB546	54	80	67	950.726	948.8997	955.226	955.5664	67.64247
1063	City	2143354	1407903	2143383	1407909	CMP	closed	48	C-21065	round	CB546_CB547	80	96	88	948.8997	947.8958	955.5664	955.8958	29.722395
1067	City	2143745	1407841	2143663	1407844	CMP	closed	18	C-21069	round	HW124_CB548	24	54	39	952.9171	949.7691	954.9171	954.2691	82.711059
1068	City	2143663	1407844	2143665	1407872	CMP	closed	18	C-21070	round	CB548_CB549	<Null>	80	<Null>	<Null>	947.6338	954.2691	954.3005	27.639753
1069	City	2143665	1407872	2143668	1407922	CMP	closed	18	C-21071	round	CB549_OF320	80	18	49	947.6338	944.0545	954.3005	945.5545	50.666155
1070	City	2143987	1407827	2143960	1407863	RCP	closed	18	C-21072	round	CV1_CV2	16	18	17	956.1251	955.6044	957.4584	957.1044	45.089505
1071	City	2144440	1408767	2144446	1408783	CMP	closed	18	C-21073	round	HW125_CB550	34	48	41	916.3453	915.0583	919.1786	919.0583	16.758135
1072	City	2144446	1408783	2144448	1408811	CMP	closed	18	C-21074	round	CB550_CB551	50	41	45.5	914.8916	914.896	919.0583	918.3127	28.351926
1073	City	2144448	1408811	2144449	1408840	CMP	closed	18	C-21075	round	CB551_OF338	45	38	41.5	914.5627	914.6917	918.3127	917.8584	28.594479
1075	City	2136693	1401526	2136758	1401717	RCP	closed	18	C-21077	round	CB334_CB335	48	48	48	983.2082	974.2778	987.2082	978.2778	201.846795
1076	City	2136728	1401728	2136758	1401717	RCP	closed	18	C-21078	round	CB336_CB335	48	48	48	973.9949	974.2778	977.9949	978.2778	32.293994
1077	City	2136827	1401886	2136820	1401896	Metal	closed	12	C-21079	round	YI81_CB337	<Null>	4	<Null>	<Null>	972.7141	972	973.0474	11.41203
1078	City	2136820	1401896	2136790	1401907	RCP	closed	18	C-21080	round	CB337_CB338	5	60	32.5	972.6307	967.8572	973.0474	972.8572	31.669676
1080	City	2136758	1401717	2136820	1401896	RCP	closed	18	C-21082	round	CB335_CB337	48	4	26	974.2778	972.7141	978.2778	973.0474	188.690909
1081	City	2136841	1401915	2136827	1401886	CMP	closed	12	C-21083	round	YI80_YI81	24	24	24	970.2287	970	972.2287	972	31.756355
1082	City	2136833	1402030	2136790	1401907	RCP	closed	18	C-21084	round	CB339_CB338	3	5	4	971.4511	972.4405	971.7011	972.8572	130.053799
1083	City	2136888	1402092	2137000	1402361	RCP	closed	18	C-21085	round	CB340_CB341	48	48	48	965.6663	952.8994	969.6663	956.8994	291.328445
1084	City	2136994	1402282	2137006	1402309	CMP	closed	24	C-21086	round	CB15_CB16	60	60	60	954.9567	954.4796	959.9567	959.4796	29.054851
1085	City	2137006	1402309	2137000	1402361	RCP	closed	18	C-21087	round	CB16_CB341	60	48	54	954.4796	952.8994	959.4796	956.8994	52.265348
1086	City	2137000	1402361	2137104	1402527	RCP	closed	18	C-21088	round	CB341_CB342	48	48	48	952.8994	948.4442	956.8994	952.4442	195.889071
1088	City	2137112	1402516	2137104	1402527	CMP	closed	12	C-21090	round	YI83_CB342	<Null>	48	<Null>	<Null>	948.4442	953.6132	952.4442	13.106126
1089	City	2137104	1402527	2137169	1402613	Concrete	closed	18	C-21091	round	CB342_CB343	48	48	48	948.4442	947.1253	952.4442	951.1253	107.533664
1090	City	2137169	1402613	2137299	1402780	Concrete	closed	18	C-21092	round	CB343_CB344	48	48	48	947.1253	945.834	951.1253	949.834	212.024312
1092	City	2137309	1402780	2137299	1402780	CMP	closed	12	C-21094	round	YI85_CB344	<Null>	48	<Null>	<Null>	945.834	952.8593	949.834	9.860256
1093	City	2137299	1402780	2137271	1402795	RCP	closed	18	C-21095	round	CB344_CB345	48	48	48	945.834	945.4382	949.834	949.4382	32.40705
1094	City	2137271	1402795	2137239	1402782	RCP	closed	24	C-21096	round	CB345_PP332	48	24	36	945.4382	944.2625	949.4382	946.2625	34.649973
1095	City	2137428	1403021	2137481	1403226	RCP	closed	18	C-21097	round	CB346_CB347	36	48	42	945.8581	939.8645	948.8581	943.8645	211.627982
1096	City	2137481	1403226	2137512	1403220	Concrete	closed	18	C-21098	round	CB347_CB348	48	24	36	939.8645	941.6376	943.8645	943.6376	31.351969
1097	City	2137512	1403220	2137556	1403410	RCP	closed	18	C-21099	round	CB348_CB349	24	24	24	941.6376	934.0263	943.6376	936.0263	195.244138
1098	City	2137556	1403410	2137588	1403503	Concrete	closed	18	C-21100	round	CB349_CB350	60	60	60	931.0263	926.4323	936.0263	931.4323	97.914282
1099	City	2137588	1403503	2137651	1403636	RCP	closed	18	C-21101	round	CB350_CB351	60	48	54	926.4323	920.2237	931.4323	924.2237	147.180625
1100	City	2137651	1403636	2137723	1403756	RCP	closed	18	C-21102	round	CB351_CB352	48	36	42	920.2237	915.1147	924.2237	918.1147	139.827744
1101	City	2137723	1403756	2137814	1403867	RCP	closed	18	C-21103	round	CB352_JB32	36	36	36	915.1147	909	918.1147	912	144.221639

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1102	City	2137814	1403867	2137822	1403915	RCP	closed	18	C-21104	round	JB32_CB353	<Null>	36	<Null>	<Null>	908.0851	912	911.0851	49.056478
1103	City	2137822	1403915	2137887	1404001	RCP	closed	18	C-21105	round	CB353_CB354	48	48	48	907.0851	903.8559	911.0851	907.8559	107.346771
1104	City	2137887	1404001	2137930	1404032	RCP	closed	18	C-21106	round	CB354_PP9	48	18	33	903.8559	905.0405	907.8559	906.5405	52.542641
1105	City	2137945	1404031	2137972	1404052	RCP	closed	18	C-21107	round	CV26_CV27	24	12	18	903.6025	903.404	905.6025	904.404	34.379267
1106	City	2137995	1404097	2138007	1404081	RCP	closed	18	C-21108	round	CB355_PP10	48	24	36	902.5574	901.6143	906.5574	903.6143	20.56886
1107	City	2138600	1404297	2138543	1404284	RCP	closed	18	C-21109	round	CB356_CB357	51	60	55.5	904.7668	904.0929	909.0168	909.0929	58.559362
1108	City	2138543	1404284	2138535	1404316	RCP	closed	18	C-21110	round	CB357_CB358	60	67	63.5	904.0929	903.6107	909.0929	909.194	32.848215
1109	City	2138535	1404316	2138390	1404282	RCP	closed	18	C-21111	round	CB358_CB359	69	80	74.5	903.444	903.8557	909.194	910.5224	149.500878
1111	City	2137542	1404269	2137569	1404258	CMP	closed	18	C-21113	round	CB179_CB180	60	72	66	910.5827	909.3024	915.5827	915.3024	29.465378
1113	City	2137663	1404275	2137668	1404219	CMP	closed	18	C-21115	round	CB182_JB132	48	60	54	908.9039	907.6865	912.9039	912.6865	56.331201
1115	City	2137668	1404219	2137726	1404170	CMP	closed	24	C-21117	round	JB132_CB181	60	48	54	907.6865	907.22	912.6865	911.22	75.680623
1117	City	2137726	1404170	2137781	1404087	CMP	closed	24	C-21119	round	CB181_JB133	48	60	54	907.22	906.166	911.22	911.166	99.821711
1118	City	2137781	1404087	2137818	1404054	CMP	closed	24	C-21120	round	JB133_CB183	60	48	54	906.166	905.8148	911.166	909.8148	49.893018
1119	City	2137818	1404054	2137857	1404089	CMP	closed	24	C-21121	round	CB183_CB184	60	48	54	904.8148	905.2694	909.8148	909.2694	52.713855
1120	City	2137857	1404089	2137874	1404097	CMP	closed	24	C-21122	round	CB184_HW314	48	24	36	905.2694	907.3955	909.2694	909.3955	18.236646
1121	City	2137213	1404125	2137230	1404164	CMP	closed	18	C-21123	round	CB174_CB175	72	60	66	913.1656	913.7023	919.1656	918.7023	43.038017
1123	City	2137279	1404279	2137255	1404296	CMP	closed	18	C-21125	round	CB176_CB177	48	48	48	912.2391	912.0069	916.2391	916.0069	29.170921
1125	City	2132650	1413661	2132486	1413671	CMP	closed	24	C-21127	round	HW114_CB516	30	56	43	970.0118	965.7576	972.5118	970.4243	164.84964
1126	City	2132486	1413671	2132412	1413673	CMP	closed	24	C-21128	round	CB516_CB517	58	56	57	965.591	965.0036	970.4243	969.6703	74.149984
1127	City	2132412	1413673	2132259	1413675	CMP	closed	24	C-21129	round	CB517_JB407	58	56	57	964.837	961.046	969.6703	965.7127	152.979668
1128	City	2132181	1414240	2132173	1414127	CMP	closed	30	C-21130	round	DI110_CB507	<Null>	136	<Null>	<Null>	949.396	956	960.7293	113.265972
1129	City	2132173	1414099	2132173	1414127	CMP	closed	18	C-21131	round	CB508_CB507	90	72	81	953.4475	954.7293	960.9475	960.7293	28.111207
1130	City	2132173	1414127	2131887	1414056	CMP	closed	36	C-21132	round	CB507_JB47	161	72	116.5	947.3126	944.0553	960.7293	950.0553	294.503165
1131	City	2131887	1414056	2131620	1413933	CMP	closed	36	C-21133	round	JB47_CB510	76	67	71.5	943.722	941.5868	950.0553	947.1701	294.704315
1132	City	2131630	1413959	2131620	1413933	CMP	closed	30	C-21134	round	CB509_CB510	66	67	66.5	942.0808	941.5868	947.5808	947.1701	28.038172
1133	City	2131620	1413933	2131573	1413829	CMP	closed	48	C-21135	round	CB510_HW110	68	48	58	941.5034	935.0982	947.1701	939.0982	113.039239
1134	City	2131335	1413787	2131280	1413742	CMP	closed	36	C-21136	round	OS200_OF7	<Null>	51	<Null>	<Null>	932.3656	935.5859	936.6156	70.709777
1135	City	2131316	1413748	2131287	1413744	CMP	closed	36	C-21137	round	CB511_CB512	58	69	63.5	935.8223	934.3123	940.6556	940.0623	29.260689
1136	City	2131287	1413744	2131281	1413740	CMP	closed	36	C-21138	round	CB512_OF6	69	51	60	934.3123	932.7727	940.0623	937.0227	6.866026
1137	City	2130507	1414024	2130505	1413996	CMP	closed	30	C-21139	round	CB514_CB515	45	55	50	941.9636	940.8052	945.7136	945.3885	28.763223
1138	City	2130505	1413996	2130491	1413868	CMP	closed	30	C-21140	round	CB515_HW113	55	55	55	940.8052	933.2322	945.3885	937.8156	128.970331
1139	City	2130133	1413993	2130019	1413915	CMP	closed	24	C-21141	round	CB513_HW112	190	190	190	928.8485	907.0529	944.6818	922.8862	137.655998
1153	City	2137249	1401353	2137249	1401323	CMP	closed	18	C-21155	round	CB43_CB44	55	69	62	974.8393	973.5547	979.4226	979.3047	29.886201
1157	City	2136433	1400769	2136476	1400917	RCP	closed	18	C-21159	round	CB227_CB228	48	48	48	985.5743	983.9427	989.5743	987.9427	154.714271
1158	City	2136476	1400917	2136496	1400987	RCP	closed	18	C-21160	round	CB228_CB229	48	48	48	983.9427	983.4035	987.9427	987.4035	72.526509
1159	City	2136496	1400987	2136511	1401035	RCP	closed	18	C-21161	round	CB229_CB185	48	58	53	983.4035	982.7017	987.4035	987.535	49.748036
1160	City	2136511	1401035	2136530	1401106	RCP	closed	18	C-21162	round	CB185_CB186	60	78	69	982.535	981.071	987.535	987.571	74.119879
1161	City	2136530	1401106	2136516	1401092	CMP	closed	30	C-21163	round	CB186_JB2004	141	116	128.5	975.821	975.1292	987.571	984.7959	20.026203
1163	City	2136572	1401004	2136561	1401017	RCP	closed	18	C-21165	round	YI833_CB187	<Null>	43	<Null>	<Null>	984.1593	986.6663	987.7426	17.264951
1164	City	2136561	1401017	2136580	1401107	RCP	closed	18	C-21166	round	CB187_CB188	48	62	55	983.7426	982.8464	987.7426	988.0131	91.479147
1165	City	2136580	1401107	2136543	1401122	RCP	closed	24	C-21167	round	CB188_JB134	62	62	62	982.8464	982.1011	988.0131	987.2678	40.562092
1166	City	2136543	1401122	2136530	1401106	CMP	closed	24	C-21168	round	JB134_CB186	<Null>	141	<Null>	<Null>	975.821	987.2678	987.571	20.13306
1167	City	2136609	1401231	2136580	1401107	RCP	closed	18	C-21169	round	CB230_CB188	44	62	53	986.5575	982.8464	990.2242	988.0131	127.983809

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1170	City	2135049	1398970	2135089	1398941	RCP	closed	18	C-21172	round	DI174_CB2	<Null>	46	<Null>	<Null>	1006.51	1011.508	1010.343	48.68299
1171	City	2135089	1398941	2135134	1398935	RCP	closed	18	C-21173	round	CB2_PP32	57	18	37.5	1005.593	1003.373	1010.343	1004.873	45.848926
1172	City	2134967	1398816	2135009	1398790	RCP	closed	18	C-21174	round	CI173_CB1	23	55	39	1010.555	1008.415	1012.471	1012.998	49.366189
1173	City	2135009	1398790	2135089	1398941	RCP	closed	18	C-21175	round	CB1_CB2	57	47	52	1008.248	1006.427	1012.998	1010.343	170.782476
1174	City	2135146	1398923	2135158	1398911	RCP	closed	18	C-21176	round	HW165_JB101	23	23	23	1001.961	1001.643	1003.878	1003.56	17.233852
1177	City	2135224	1399159	2135374	1399350	RCP	closed	18	C-21179	round	CB3_CB4	45	34	39.5	1004.877	1002.084	1008.627	1004.917	243.223965
1178	City	2135374	1399350	2135570	1399576	RCP	closed	18	C-21180	round	CB4_CB5	38	37	37.5	1001.75	994.5705	1004.917	997.6538	298.59973
1179	City	2135570	1399576	2135767	1399801	RCP	closed	18	C-21181	round	CB5_CB6	39	40	39.5	994.4038	988.1485	997.6538	991.4818	298.928784
1180	City	2135767	1399801	2135742	1399822	RCP	closed	18	C-21182	round	CB6_CB7	42	47	44.5	987.9818	987.8393	991.4818	991.756	32.048944
1181	City	2135742	1399822	2135738	1399843	RCP	closed	18	C-21183	round	CB7_PP336	49	18	33.5	987.6727	991.1489	991.756	992.6489	21.325435
1182	City	2136057	1400125	2135970	1400026	RCP	closed	18	C-21184	round	CB11_CB12	37	40	38.5	988.0791	987.4952	991.1624	990.8285	131.808661
1183	City	2135970	1400026	2135905	1399951	RCP	closed	18	C-21185	round	CB12_CB13	41	37	39	987.4118	987.5292	990.8285	990.6125	99.435488
1184	City	2135905	1399951	2135838	1399878	RCP	closed	18	C-21186	round	CB13_CB14	38	41	39.5	987.4458	987.1867	990.6125	990.6034	99.116098
1185	City	2135838	1399878	2135808	1399905	RCP	closed	24	C-21187	round	CB14_CB10	47	75	61	986.6867	984.8521	990.6034	991.1021	40.588918
1186	City	2135808	1399905	2135793	1399917	RCP	closed	24	C-21188	round	CB10_PP335	79	25	52	984.5188	983.758	991.1021	985.8413	19.226972
1187	City	2135886	1400005	2135808	1399905	RCP	closed	18	C-21189	round	CB9_CB10	68	75	71.5	985.3642	984.8521	991.0309	991.1021	127.171287
1188	City	2135995	1400137	2135886	1400005	RCP	closed	18	C-21190	round	CB8_CB9	45	67	56	987.1604	985.4476	990.9104	991.0309	171.291294
1216	City	2137791	1401954	2137776	1401929	CMP	closed	18	C-21218	round	CB18_CB19	72	72	72	952.2784	951.8036	958.2784	957.8036	29.468929
1217	City	2137829	1402264	2137857	1402259	CMP	closed	18	C-21219	round	CB20_CB21	72	72	72	943.7128	943.3904	949.7128	949.3904	27.804181
1219	City	2138164	1402125	2138201	1402122	RCP	closed	24	C-21221	round	HW1004_CB22	36	96	66	921.5687	915.9999	924.5687	923.9999	37.003683
1220	City	2138201	1402122	2138231	1402122	Concrete	closed	24	C-21222	round	CB22_CB23	96	84	90	915.9999	916.188	923.9999	923.188	29.584574
1222	City	2131977	1410242	2131984	1410288	CMP	closed	18	C-21224	round	CB441_HW399	67	26	46.5	923.7721	923.9631	929.3554	926.1298	46.396182
1223	City	2132192	1409999	2132196	1410028	CMP	closed	18	C-21225	round	CB439_CB440	38	45	41.5	924.7979	924.3463	927.9646	928.0963	28.402164
1225	City	2132736	1409929	2132644	1409852	CMP	closed	18	C-21227	round	CB431_CB432	91	84	87.5	940.0363	938.061	947.6196	945.061	119.741525
1226	City	2132644	1409852	2132580	1409774	CMP	closed	24	C-21228	round	CB432_CB433	86	93	89.5	937.8943	932.1662	945.061	939.9162	100.50256
1227	City	2132580	1409774	2132559	1409792	CMP	closed	24	C-21229	round	CB433_CB434	93	101	97	932.1662	931.2661	939.9162	939.6828	28.114783
1231	City	2132365	1409841	2132342	1409834	CMP	closed	30	C-21233	round	CI93_CI94	33	33	33	928.8258	928.4233	931.5758	931.1733	24.410728
1239	City	2132372	1410088	2132350	1410106	CMP	closed	24	C-21241	round	CB437_CB438	65	70	67.5	929.4571	928.8944	934.8738	934.7277	28.110442
1241	City	2132933	1409417	2132956	1409482	CMP	closed	18	C-21243	round	CI97_CB447	26	96	61	943.8913	941.3749	946.058	949.3749	68.890995
1245	City	2132643	1409620	2132623	1409605	CMP	closed	30	C-21247	round	CB448_CI101	65	28	46.5	933.9564	936.3025	939.3731	938.6358	24.999535
1246	City	2132623	1409605	2132570	1409538	CMP	closed	30	C-21248	round	CI101_HW396	28	33	30.5	936.3025	936.7031	938.6358	939.4531	85.28721
1247	City	2145747	1404637	2145726	1404614	CMP	closed	18	C-21249	round	PP424_CB1128	<Null>	50	<Null>	<Null>	944.729	948.5496	948.8957	31.393181
1248	City	2145726	1404614	2145718	1404546	CMP	closed	18	C-21250	round	CB1128_CB112	51	51	51	944.6457	944.8104	948.8957	949.0604	68.625445
1249	City	2145323	1404681	2145516	1404647	CMP	closed	18	C-21251	round	CB1122_CB112	86	79	82.5	956.9244	949.973	964.0911	956.5563	196.324569
1250	City	2145516	1404647	2145639	1404626	CMP	closed	18	C-21252	round	CB1125_CB112	80	74	77	949.8896	946.1948	956.5563	952.3615	124.180619
1251	City	2145639	1404626	2145726	1404614	CMP	closed	18	C-21253	round	CB1126_CB112	74	51	62.5	946.1948	944.6457	952.3615	948.8957	87.736011
1252	City	2145132	1404714	2145115	1404644	CMP	closed	18	C-21254	round	CB1121_CB112	58	61	59.5	966.9274	966.2985	971.7607	971.3818	71.486775
1253	City	2144977	1404665	2145115	1404644	CMP	closed	18	C-21255	round	CB1119_CB112	34	61	47.5	973.7638	966.2985	976.5971	971.3818	139.812172
1254	City	2145115	1404644	2145314	1404611	CMP	closed	18	C-21256	round	CB1120_CB112	61	58	59.5	966.2985	959.0454	971.3818	963.8787	202.219262
1255	City	2145314	1404611	2145511	1404579	CMP	closed	18	C-21257	round	CB1123_CB112	60	59	59.5	958.8787	951.4802	963.8787	956.3969	199.626961
1256	City	2145511	1404579	2145718	1404546	CMP	closed	18	C-21258	round	CB1124_CB112	59	60	59.5	951.4802	944.0604	956.3969	949.0604	209.262457
1257	City	2145718	1404546	2145896	1404516	CMP/RCP	closed	24	C-21259	round	CB1127_CB113	66	65	65.5	943.5604	938.448	949.0604	943.8647	180.117503
1258	City	2145780	1404651	2145779	1404603	RCP	closed	18	C-21260	round	PP423_JB1117	24	24	24	945.9853	945.0623	947.9853	947.0623	47.662727

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1259	City	2145779	1404603	2145829	1404593	RCP	closed	18	C-21261	round	JB1117_CB1129	<Null>	53	<Null>	<Null>	941.2234	947.0623	945.6401	51.117913
1260	City	2145829	1404593	2145901	1404581	RCP	closed	18	C-21262	round	CB1129_CB113(	54	51	52.5	941.1401	939.712	945.6401	943.962	72.723613
1261	City	2145901	1404581	2145992	1404565	RCP	closed	18	C-21263	round	CB1130_CB113	51	49	50	939.712	938.2827	943.962	942.366	91.880404
1262	City	2145992	1404565	2146090	1404549	RCP	closed	18	C-21264	round	CB1132_CB113	49	53	51	938.2827	936.9403	942.366	941.357	100.008764
1263	City	2146090	1404549	2146158	1404538	CMP/RCP	closed	18	C-21265	round	CB1133_CB113	53	66	59.5	936.9403	936.4147	941.357	941.9147	68.671746
1264	City	2146158	1404538	2146148	1404473	Metal	closed	30	C-21266	round	CB1136_CB113	66	97	81.5	936.4147	933.5096	941.9147	941.5929	66.203222
1265	City	2146081	1404485	2146148	1404473	RCP	closed	24	C-21267	round	CB1134_CB113	54	64	59	936.9704	936.2596	941.4704	941.5929	67.285663
1266	City	2145896	1404516	2146081	1404485	RCP	closed	24	C-21268	round	CB1131_CB113	67	53	60	938.2814	937.0537	943.8647	941.4704	188.410358
1267	City	2146092	1404561	2146090	1404549	RCP	closed	18	C-21269	round	DI425_CB1133	45	53	49	938.2796	936.9403	942.0296	941.357	11.420548
1268	City	2146168	1404563	2146158	1404538	RCP	closed	18	C-21270	round	PP426_CB1136	<Null>	61	<Null>	<Null>	936.8314	942	941.9147	26.940315
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1270	City	2128167	1410261	2128135	1410250	CMP	closed	18	C-21272	round	CB989_CB990	70	82	76	960.0163	958.7392	965.8496	965.5725	34.256888
1271	City	2128135	1410250	2127951	1410125	CMP	closed	18	C-21273	round	CB990_CB991	82	70	76	958.7392	956.0524	965.5725	961.8857	222.385931
1274	City	2128311	1410006	2128293	1409982	CMP	closed	18	C-21276	round	CB992_CB993	62	74	68	952.3824	951.2428	957.5491	957.4095	29.736429
1277	City	2128448	1409693	2128418	1409694	CMP	closed	18	C-21279	round	CB995_CB996	68	82	75	935.138	934.0156	940.8047	940.8489	29.891829
1279	City	2128393	1409592	2128468	1409578	CMP	closed	72	C-21281a	round	CV50_CV51	86	75	80.5	927.3514	934.1646	934.5181	940.4146	76.195878
1280	City	2127475	1409266	2127445	1409267	Metal	closed	18	C-21282	round	CB966_CB967	56	54	55	963.3557	964.3261	968.0224	968.8261	29.928159
1286	City	2127720	1409534	2127735	1409563	CMP	closed	18	C-21288	round	CB968_CB969	72	70	71	949.2003	949.0626	955.2003	954.8959	32.988435
1287	City	2127735	1409563	2127805	1409564	CMP	closed	24	C-21289	round	CB969_JB179	70	76	73	949.0626	947.7799	954.8959	954.1132	69.807417
1288	City	2127805	1409564	2127799	1409695	CMP	closed	30	C-21290	round	JB179_CB970	76	92	84	947.7799	943.0244	954.1132	950.6911	130.644619
1290	City	2128147	1409394	2128195	1409401	CMP	closed	18	C-21292	round	CB971_CB972	76	90	83	944.1211	942.5859	950.4544	950.0859	48.503461
1292	City	2128855	1409361	2128856	1409331	CMP	closed	18	C-21294	round	CB973_CB974	58	80	69	933.4516	931.8594	938.2849	938.5261	29.57928
1293	City	2128856	1409331	2128884	1409311	CMP	closed	24	C-21295	round	CB974_HW422	80	44	62	931.8594	934.7953	938.5261	938.462	34.136386
1294	City	2128919	1409310	2128959	1409362	CMP	closed	48	C-21296a	round	CV55_CV56	86	86	86	931.7825	930.7215	938.9492	937.8882	65.920492
1296	City	2142429	1399636	2142425	1399458	RCP	closed	24	C-21298	round	JB1079_CB600	64	61	62.5	937.6804	935.5177	943.0137	940.601	177.773777
1297	City	2142471	1399164	2142443	1399155	RCP	closed	18	C-21299	round	CB601_CB602	53	74	63.5	928.6756	928.1019	933.0923	934.2686	29.577728
1298	City	2142456	1399456	2142425	1399458	RCP	closed	18	C-21300	round	CB599_CB600	53	60	56.5	935.9476	935.601	940.3643	940.601	30.968339
1299	City	2142425	1399458	2142430	1399266	RCP	closed	24	C-21301	round	CB600_JB1080	61	62	61.5	935.5177	932.4147	940.601	937.5814	192.587209
1300	City	2142443	1399155	2142430	1399266	RCP	closed	24	C-21302	round	CB602_JB1080	74	62	68	928.1019	932.4147	934.2686	937.5814	111.416812
1301	City	2142433	1400060	2142461	1400059	CMP/RCP	closed	18	C-21303	round	CB595_CB596	28	48	38	944.786	943.2083	947.1193	947.2083	27.93652
1302	City	2142461	1400059	2142459	1399756	RCP	closed	18	C-21304	round	CB596_CB597	49	52	50.5	943.125	940.7318	947.2083	945.0651	302.564039
1303	City	2142459	1399756	2142429	1399757	RCP	closed	18	C-21305	round	CB597_CB598	52	67	59.5	940.7318	939.3467	945.0651	944.93	29.489628
1304	City	2142429	1399757	2142429	1399636	RCP	closed	18	C-21306	round	CB598_JB1079	67	64	65.5	939.3467	937.6804	944.93	943.0137	121.014551
1305	City	2142484	1400661	2142481	1400588	CMP/RCP	closed	18	C-21307	round	CB590_JB1078	60	54	57	946.2617	945.376	951.2617	949.876	73.295129
1306	City	2142481	1400588	2142468	1400353	RCP	closed	18	C-21308	round	JB1078_CB592	54	51	52.5	945.376	943.9466	949.876	948.1966	234.906096
1307	City	2142440	1400357	2142468	1400353	CMP/RCP	closed	18	C-21309	round	CB591_CB592	37	51	44	945.3951	943.9466	948.4784	948.1966	28.100894
1308	City	2142468	1400353	2142463	1400167	RCP	closed	18	C-21310	round	CB592_CB594	51	49	50	943.9466	943.3316	948.1966	947.4149	186.732863
1309	City	2142434	1400168	2142463	1400167	CMP/RCP	closed	18	C-21311	round	CB593_CB594	37	49	43	944.3541	943.3316	947.4374	947.4149	29.19599
1310	City	2142776	1401162	2142847	1401257	RCP	closed	18	C-21312	round	CB588_JB1074	55	60	57.5	957.2908	957.0361	961.8741	962.0361	119.186002
1311	City	2142847	1401257	2142898	1401320	RCP	closed	18	C-21313	round	JB1074_JB1075	61	60	60.5	956.9528	956.6653	962.0361	961.6653	81.102313
1312	City	2142898	1401320	2142940	1401360	RCP	closed	18	C-21314	round	JB1075_JB1076	63	62	62.5	956.4153	955.2636	961.6653	960.4303	58.034713
1313	City	2142940	1401360	2142987	1401391	RCP	closed	18	C-21315	round	JB1076_CB589	65	55	60	955.0136	953.8067	960.4303	958.39	55.920739
1314	City	2142987	1401391	2143142	1401453	RCP	closed	18	C-21316	round	CB589_JB1077	56	45	50.5	953.7233	952.0159	958.39	955.7659	167.033604

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1315	City	2143909	1411047	2143944	1411044	CMP	closed	18	C-21317	round	CB1165_DI496	68	39	53.5	962.6475	961.6365	968.3142	964.8865	34.962855
1316	City	2143944	1411044	2144265	1411074	CMP	closed	18	C-21318	round	DI496_CB1167	41	45	43	961.4698	958.3542	964.8865	962.1042	322.406306
1317	City	2144265	1411104	2144265	1411074	CMP	closed	18	C-21319	round	CB1166_CB116	41	45	43	959.0782	958.3542	962.4949	962.1042	29.432103
1318	City	2144265	1411074	2144310	1411040	CMP	closed	24	C-21320	round	CB1167_CB116	48	41	44.5	958.1042	957.6138	962.1042	961.0305	56.678495
1319	City	2144310	1411040	2144341	1411039	CMP	closed	24	C-21321	round	CB1168_CB116	42	43	42.5	957.5305	957.4916	961.0305	961.0749	30.764142
1320	City	2144341	1411039	2144373	1410938	CMP	closed	30	C-21322	round	CB1169_JB216	45	139	92	957.3249	956.8225	961.0749	968.4058	105.809857
1322	City	2141943	1412647	2141943	1412617	CMP	closed	30	C-21324	round	CB755_CB756	55	55	55	978.1505	978.0139	982.7338	982.5972	30.302822
1323	City	2142073	1412353	2142309	1412347	RCP	closed	24	C-21325	round	CB762_CB763	53	112	82.5	976.3984	975.4956	980.8151	984.8289	236.187357
1324	City	2142309	1412377	2142309	1412347	CMP	closed	18	C-21326	round	CB764_CB763	74	90	82	978.5034	977.3289	984.6701	984.8289	29.865826
1325	City	2142309	1412347	2142370	1412348	CMP	closed	36	C-21327	round	CB763_CB765	121	141	131	974.7456	974.8052	984.8289	986.5552	60.992894
1328	City	2142611	1412143	2142625	1412173	CMP	closed	18	C-21330	round	CB766_CB767	84	97	90.5	980.1354	978.8037	987.1354	986.887	32.462018
1329	City	2142625	1412173	2142690	1412185	CMP	closed	42	C-21331	round	CB767_JB66	180	180	180	971.887	969.2983	986.887	984.2983	65.429562
1330	City	2142474	1412691	2142635	1412690	CMP	closed	18	C-21332	round	CB757_CB758	60	79	69.5	987.3952	982.5273	992.3952	989.1106	161.173579
1331	City	2142635	1412690	2142633	1412659	CMP	closed	18	C-21333	round	CB758_CB759	80	90	85	982.4439	981.6453	989.1106	989.1453	30.470607
1332	City	2142633	1412659	2142685	1412640	CMP	closed	24	C-21334	round	CB759_JB65	93	87	90	981.3953	980.6007	989.1453	987.8507	56.021769
1333	City	2142685	1412640	2142677	1412389	CMP	closed	24	C-21335	round	JB65_CB761	91	73	82	980.2674	977.0638	987.8507	983.1471	251.971004
1334	City	2142648	1412388	2142677	1412389	CMP	closed	18	C-21336	round	CB760_CB761	64	73	68.5	977.8315	977.0638	983.1648	983.1471	29.320444
1335	City	2142677	1412389	2142690	1412185	CMP	closed	30	C-21337	round	CB761_JB66	75	75	75	976.8971	978.0483	983.1471	984.2983	203.926089
1336	City	2142690	1412185	2142892	1412169	CMP	closed	42	C-21338	round	JB66_JB68	<Null>	173	<Null>	<Null>	967.8719	984.2983	982.2886	202.701844
1337	City	2142883	1412136	2142892	1412169	CMP	closed	18	C-21339	round	CB768_JB68	113	131	122	972.0653	971.3719	981.482	982.2886	34.006688
1338	City	2142892	1412169	2142989	1412213	CMP	closed	42	C-21340	round	JB68_CB769	173	147	160	967.8719	966.9845	982.2886	979.2345	107.283018
1339	City	2142830	1412681	2142949	1412602	CMP	closed	18	C-21341	round	CB770_CB771	120	110	115	974.8511	972.368	984.8511	981.5347	143.192718
1340	City	2143453	1402064	2143467	1402051	CMP	closed	18	C-21342	round	CB585_CI62	28	34	31	973.0672	971.9373	975.4005	974.7706	18.924925
1341	City	2143467	1402051	2143604	1401891	CMP	closed	18	C-21343	round	CI62_CI63	35	35	35	971.8539	968.9868	974.7706	971.9035	210.478597
1342	City	2143632	1401922	2143604	1401891	CMP	closed	18	C-21344	round	CB584_CI63	28	34	31	970.865	969.0702	973.1983	971.9035	40.738556
1343	City	2143604	1401891	2143570	1401851	CMP	closed	18	C-21345	round	CI63_CI65	40	52	46	968.5702	965.3611	971.9035	969.6944	52.757795
1344	City	2143570	1401851	2143466	1401767	CMP	closed	18	C-21346	round	CI65_CI66	54	37	45.5	965.1944	958.7879	969.6944	961.8712	133.860437
1345	City	2143485	1401950	2143570	1401851	CMP	closed	12	C-21347	round	CI54_CI65	30	53	41.5	966.3095	965.2777	968.8095	969.6944	130.322351
1346	City	2143466	1401767	2143399	1401701	CMP	closed	18	C-21348	round	CI66_CI67	37	40	38.5	958.7879	956.0409	961.8712	959.3742	94.056413
1347	City	2143399	1401701	2143384	1401695	CMP/RCP	closed	18	C-21349	round	CI67_JB1071	41	47	44	955.9575	955.6802	959.3742	959.5969	15.812479
1349	City	2143384	1401695	2143304	1401627	RCP	closed	18	C-21351	round	JB1071_JB1072	48	37	42.5	955.5969	954.2627	959.5969	957.346	105.667945
1351	City	2143304	1401627	2143240	1401571	RCP	closed	18	C-21353	round	JB1072_JB1073	38	37	37.5	954.1793	953.0921	957.346	956.1754	85.309766
1352	City	2143240	1401571	2143187	1401515	RCP	closed	18	C-21354	round	JB1073_CB586	37	35	36	953.0921	952.2722	956.1754	955.1889	76.777692
1353	City	2143181	1401517	2143187	1401515	RCP	closed	18	C-21355	round	YI1032_CB586	<Null>	35	<Null>	<Null>	952.2722	956.2511	955.1889	6.272089
1354	City	2143183	1401520	2143187	1401515	RCP	closed	18	C-21356	round	OT445_CB586	23	35	29	952.8229	952.2722	954.7396	955.1889	6.556184
1355	City	2143187	1401515	2143196	1401487	RCP	closed	24	C-21357	round	CB586_CB587	37	61	49	952.1056	950.7308	955.1889	955.8141	29.19464
1356	City	2143187	1401515	2143196	1401487	RCP	closed	24	C-21358	round	CB586_CB587	37	61	49	952.1056	950.7308	955.1889	955.8141	29.113678
1357	City	2143471	1401723	2143299	1401565	RCP	closed	18	C-21359	round	YI1033_YI1034	48	48	48	957.1848	951.9078	961.1848	955.9078	233.489726
1358	City	2143299	1401565	2143196	1401487	RCP	closed	18	C-21360	round	YI1034_CB587	<Null>	69	<Null>	<Null>	950.0641	955.9078	955.8141	129.185978
1359	City	2148611	1408251	2148557	1408167	CMP	closed	24	C-21361	round	HW379_CB1061	32	62	47	920.0674	913.7829	922.7341	918.9496	99.781817
1360	City	2148557	1408167	2148547	1408140	CMP	closed	24	C-21362	round	CB1061_CB106	62	58	60	913.7829	913.8106	918.9496	918.6439	28.312452
1361	City	2148547	1408140	2148451	1408003	CMP	closed	24	C-21363	round	CB1062_PI540	61	61	61	913.5606	908.1226	918.6439	913.2059	167.650864
1362	City	2150261	1408155	2150272	1408129	CMP	closed	24	C-21364	round	CB1149_CB115	58	67	62.5	905.1662	904.7576	909.9995	910.3409	28.520116

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1364	City	2149898	1408440	2149898	1408412	CMP	closed	18	C-21366	round	CB1146_CB114	45	47	46	916.1486	915.9589	919.8986	919.8756	28.363586
1365	City	2149898	1408412	2149894	1408165	CMP	closed	18	C-21367	round	CB1147_DI377	<Null>	81	<Null>	<Null>	904.1127	919.8756	910.8627	246.964543
1366	City	2149894	1408165	2149923	1408110	CMP	closed	36	C-21368	round	DI377_CB1060	81	118	99.5	904.1127	903.4361	910.8627	913.2694	62.426863
1367	City	2149923	1408110	2149926	1408081	CMP	closed	36	C-21369	round	CB1060_CB114	118	64	91	903.4361	907.9881	913.2694	913.3214	29.202509
1368	City	2149246	1408456	2149247	1408428	CMP	closed	24	C-21370	round	CB1058_CB105	63	64	63.5	922.3585	922.3514	927.6085	927.6847	28.011935
1369	City	2149247	1408428	2149250	1408285	CMP	closed	24	C-21371	round	CB1059_JB374	64	64	64	922.3514	921.7645	927.6847	927.0978	142.442138
1370	City	2148055	1409452	2148068	1409427	CMP	closed	42	C-21372	round	HW380_CB1064	62	82	72	922.4728	921.298	927.6395	928.1313	27.558537
1371	City	2148068	1409427	2148079	1409400	CMP	closed	42	C-21373	round	CB1064_CB106	82	80	81	921.298	920.8643	928.1313	927.531	29.695426
1372	City	2148079	1409400	2148089	1409373	CMP	closed	42	C-21374	round	CB1065_PI898	80	80	80	920.8643	916.4698	927.531	923.1365	28.624972
1374	City	2148367	1409764	2148343	1409763	CMP	closed	36	C-21376	round	DI379_CB1063	<Null>	48	<Null>	<Null>	931.4432	934.2662	935.4432	23.894075
1375	City	2148343	1409763	2148315	1409763	CMP	closed	36	C-21377	round	CB1063_CB115	48	44	46	931.4432	931.371	935.4432	935.0377	28.044459
1376	City	2148315	1409763	2148294	1409761	CMP	closed	36	C-21378	round	CB1151_HW77	44	34	39	931.371	932.1294	935.0377	934.9627	21.653299
1377	City	2147998	1410060	2147997	1409973	CMP	closed	42	C-21379	round	PP382_CB1152	<Null>	96	<Null>	<Null>	<Null>	<Null>	<Null>	87.550092
1378	City	2147997	1409973	2147968	1409972	CMP	closed	42	C-21380	round	CB1152_CB106	96	96	96	923.6362	923.4893	931.6362	931.4893	29.097222
1379	City	2147968	1409972	2147956	1409798	CMP	closed	42	C-21381	round	CB1068_CB115	96	92	94	923.4893	921.6818	931.4893	929.3485	175.16311
1380	City	2147956	1409798	2147941	1409791	CMP	closed	42	C-21382	round	CB1153_HW78	92	42	67	921.6818	923.5349	929.3485	927.0349	16.849453
1381	City	2147753	1409705	2147722	1409694	Concrete	closed	42	C-21383	round	HW221_CB1154	58	68	63	915.9165	919.7503	920.7498	925.417	32.899889
1382	City	2147722	1409694	2147696	1409681	RCP	closed	42	C-21384	round	CB1154_CB115	68	94	81	919.7503	917.5998	925.417	925.4331	29.17526
1383	City	2147696	1409681	2147670	1409668	RCP	closed	42	C-21385	round	CB1155_PI235	94	94	94	917.5998	908.1667	925.4331	916	28.239599
1384	City	2147957	1410557	2148025	1410469	CMP	closed	30	C-21386	round	CB1076_DI381	110	110	110	942.0573	931.8183	951.224	940.985	110.692766
1386	City	2148027	1410431	2147991	1410379	CMP	closed	36	C-21388	round	JB199_CB1066	<Null>	60	<Null>	<Null>	935.1049	941.7443	940.1049	63.474448
1387	City	2147991	1410379	2147991	1410350	CMP	closed	36	C-21389	round	CB1066_CB106	60	54	57	935.1049	935.6421	940.1049	940.1421	28.84901
1388	City	2147991	1410350	2147992	1410328	CMP	closed	36	C-21390	round	CB1067_HW452	54	38	46	935.6421	934.8643	940.1421	938.0309	22.589613
1389	City	2148872	1408914	2148844	1408914	CMP	closed	18	C-21391	round	CB1160_CB116	50	54	52	925.4504	924.9004	929.6171	929.4004	28.370886
1390	City	2148844	1408914	2148775	1408917	CMP	closed	18	C-21392	round	CB1161_HW85	54	18	36	924.9004	926.3987	929.4004	927.8987	69.003159
1391	City	2148451	1408786	2148313	1408922	CMP	closed	18	C-21393	round	CB1069_HW84	56	18	37	923.3425	915.0156	928.0092	916.5156	192.876605
1392	City	2148309	1408926	2148214	1408938	CMP	closed	30	C-21394	round	PP383_DI453	12	12	12	915.69	914.9565	916.69	915.9565	96.059159
1394	City	2148050	1409018	2148060	1408990	RCP	closed	36	C-21396	round	CB1156_CB115	72	76	74	908.6762	908.4495	914.6762	914.7828	30.136854
1395	City	2148060	1408990	2148054	1408943	RCP	closed	36	C-21397	round	CB1157_CB115	76	74	75	908.4495	907.6665	914.7828	913.8332	47.72534
1396	City	2148054	1408943	2148028	1408930	RCP	closed	42	C-21398	round	CB1158_CB115	74	78	76	907.6665	907.0937	913.8332	913.5937	28.849137
1397	City	2148028	1408930	2148003	1408914	RCP	closed	42	C-21399	round	CB1159_PI539	78	78	78	907.0937	901.5	913.5937	908	29.584212
1398	City	2148123	1408896	2148054	1408943	RCP	closed	30	C-21400	round	JB200_CB1158	<Null>	74	<Null>	<Null>	907.6665	916.4277	913.8332	83.538675
1399	City	2138882	1397979	2138959	1398010	RCP	closed	18	C-21401	round	CB744_CB745	80	62	71	947.4059	944.1524	954.0726	949.3191	82.046111
1400	City	2138959	1398010	2139074	1398096	HDPE	closed	18	C-21402	round	CB745_CB747	65	70	67.5	943.9024	935.7374	949.3191	941.5707	144.159893
1401	City	2139101	1398070	2139074	1398096	RCP	closed	18	C-21403	round	CB746_CB747	81	71	76	936.1648	935.654	942.9148	941.5707	37.361048
1402	City	2139198	1398219	2139164	1398233	RCP	closed	18	C-21404	round	CB748_CB749	65	60	62.5	928.8341	927.7496	934.2508	932.7496	36.573621
1403	City	2139164	1398233	2139197	1398396	HDPE	closed	18	C-21405	round	CB749_CB751	62	55	58.5	927.5829	920.3096	932.7496	924.8929	166.904374
1404	City	2139234	1398395	2139197	1398396	RCP	closed	18	C-21406	round	CB750_CB751	62	55	58.5	921.1076	920.3096	926.2743	924.8929	36.903336
1405	City	2139074	1398096	2139056	1398114	HDPE	closed	18	C-21407	round	CB747_PP371	72	12	42	935.5707	933.1851	941.5707	934.1851	25.157398
1406	City	2139197	1398396	2139189	1398491	HDPE	closed	18	C-21408	round	CB751_CB752	56	59	57.5	920.2262	918.1907	924.8929	923.1074	94.785193
1407	City	2139189	1398491	2139177	1398534	HDPE	closed	18	C-21409	round	CB752_CB753	60	70	65	918.1074	917.3132	923.1074	923.1465	45.172139
1408	City	2139138	1398533	2139177	1398534	RCP	closed	18	C-21410b	rectangular	CV238_CB753	<Null>	204	<Null>	<Null>	906.1465	908.2557	923.1465	39.643972
1409	City	2139177	1398534	2139215	1398535	Concrete	closed	18	C-21411b	rectangular	CB753_CB754	204	204	204	906.1465	907.1024	923.1465	924.1024	37.511748

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1410	City	2139215	1398535	2139284	1398532	Concrete	closed	48	C-21412b	rectangular	CB754_CV237	214	48	131	906.2691	902	924.1024	906	69.637632
1411	City	2139153	1398632	2139177	1398534	Plastic	closed	18	C-21413	round	CB743_CB753	81	70	75.5	917.9265	917.3132	924.6765	923.1465	100.291137
1412	City	2139125	1398836	2139159	1398846	RCP	closed	18	C-21414	round	CB740_CB741	62	62	62	928.1992	927.2442	933.3659	932.4109	35.271318
1413	City	2139159	1398846	2139211	1398648	Plastic	closed	18	C-21415	round	CB741_CB742	62	53	57.5	927.2442	920.5674	932.4109	924.9841	204.937126
1414	City	2139211	1398648	2139153	1398632	RCP	closed	18	C-21416	round	CB742_CB743	54	80	67	920.4841	918.0098	924.9841	924.6765	60.755256
1415	City	2139040	1399283	2139060	1399259	Concrete	closed	18	C-21417	round	PP482_CB738	36	89	62.5	928.4551	927.8736	931.4551	935.2903	30.344521
1416	City	2139060	1399259	2139132	1399206	Concrete	closed	36	C-21418	round	CB738_CB739	89	104	96.5	927.8736	927.4403	935.2903	936.107	89.948284
1419	City	2139075	1399530	2139137	1399528	RCP	closed	18	C-21421	round	CB731_CB732	60	78	69	927.5374	926.2707	932.5374	932.7707	62.468412
1420	City	2139137	1399528	2139138	1399811	Plastic	closed	18	C-21422	round	CB732_CB734	81	80	80.5	926.0207	914.7442	932.7707	921.4109	283.11345
1421	City	2139414	1400490	2139378	1400433	HDPE	closed	18	C-21423	round	CB725_CB726	71	82	76.5	900.7523	899.6692	906.669	906.5025	67.611572
1422	City	2139407	1400412	2139378	1400433	HDPE	closed	18	C-21424	round	CB723_CB726	91	82	86.5	900.1955	899.6692	907.7788	906.5025	35.831643
1423	City	2139331	1400379	2139378	1400433	HDPE	closed	18	C-21425	round	CB724_CB726	82	82	82	900.283	899.6692	907.1163	906.5025	70.98304
1424	City	2139357	1400354	2139407	1400412	HDPE	closed	18	C-21426	round	CB722_CB723	82	85	83.5	901.0931	900.6955	907.9264	907.7788	76.388746
1425	City	2139446	1400473	2139407	1400412	RCP	closed	18	C-21427	round	CB721_CB723	76	90	83	901.5798	900.2788	907.9131	907.7788	72.604971
1426	City	2139378	1400433	2139358	1400458	HDPE	closed	18	C-21428	round	CB726_PP374	85	18	51.5	899.4192	900.5	906.5025	902	31.551701
1427	City	2139241	1400250	2139290	1400248	RCP	closed	18	C-21429	round	CB727_CB729	57	55	56	904.4862	903.7611	909.2362	908.3444	48.832072
1428	City	2139213	1400158	2139290	1400248	HDPE	closed	18	C-21430	round	CB728_CB729	55	55	55	904.7744	903.7611	909.3577	908.3444	119.115168
1429	City	2139290	1400248	2139300	1400242	HDPE	closed	18	C-21431	round	CB729_PP373	56	18	37	903.6777	906.0799	908.3444	907.5799	11.256893
1430	City	2139056	1399812	2139077	1399812	Plastic	closed	18	C-21432	round	DI481_CB733	45	70	57.5	917.3509	915.8694	921.1009	921.7027	20.995063
1431	City	2139077	1399812	2139138	1399811	RCP	closed	18	C-21433	round	CB733_CB734	70	80	75	915.8694	914.7442	921.7027	921.4109	61.288053
1432	City	2139138	1399811	2139141	1399953	HDPE	closed	18	C-21434	round	CB734_CB735	81	50	65.5	914.6609	911.5352	921.4109	915.7019	142.058651
1433	City	2139141	1399953	2139163	1400056	HDPE	closed	18	C-21435	round	CB735_CB737	52	59	55.5	911.3686	907.4618	915.7019	912.3785	105.069369
1434	City	2139119	1400039	2139163	1400056	RCP	closed	36	C-21436	round	CB736_CB737	73	59	66	908.1611	907.4618	914.2444	912.3785	47.224088
1435	City	2139163	1400056	2139186	1400063	RCP	closed	36	C-21437	round	CB737_CV240	60	36	48	907.3785	906.1185	912.3785	909.1185	23.615549
1436	City	2139068	1400019	2139119	1400039	RCP	closed	36	C-21438	round	CV239_CB736	41	70	55.5	909.9686	908.4111	913.3853	914.2444	54.46022
1437	City	2139558	1400652	2139580	1400653	HDPE	closed	18	C-21439	round	CB719_OF335	52	10	31	904.7201	901.1667	909.0534	902	21.56232
1438	City	2139523	1400703	2139504	1400739	HDPE	closed	18	C-21440	round	CB718_OF334	70	20	45	903.3713	895.5465	909.2046	897.2132	40.532569
1439	City	2139881	1401392	2139860	1401403	RCP	closed	18	C-21441	round	CB712_CB713	80	79	79.5	916.1938	915.6615	922.8605	922.2448	24.023283
1440	City	2139860	1401403	2139766	1401210	CMP	closed	18	C-21442	round	CB713_CB715	80	69	74.5	915.5781	909.4799	922.2448	915.2299	213.829073
1441	City	2139821	1401183	2139766	1401210	RCP	closed	18	C-21443	round	CB714_CB715	54	70	62	910.8118	909.3966	915.3118	915.2299	61.014109
1442	City	2139766	1401210	2139700	1401069	RCP	closed	18	C-21444	round	CB715_CB717	71	82	76.5	909.3132	906.5334	915.2299	913.3667	156.086876
1443	City	2139749	1401045	2139700	1401069	RCP	closed	18	C-21445	round	CB716_CB717	44	82	63	909.7668	906.5334	913.4335	913.3667	55.027932
1444	City	2139700	1401069	2139668	1401089	Plastic	closed	18	C-21446	round	CB717_OF333	83	18	50.5	906.45	900.0038	913.3667	901.5038	37.341271
1445	City	2139118	1402533	2139116	1402551	<Null>	closed	18	C-21447	round	CI29_CI40	<Null>	<Null>	<Null>	<Null>	<Null>	903.1862	902.7103	17.516054
1446	City	2139116	1402551	2139002	1402547	<Null>	closed	18	C-21448	round	CI40_CI41	<Null>	<Null>	<Null>	<Null>	<Null>	902.7103	900.2421	114.406245
1448	City	2139604	1402508	2139605	1402526	CMP	closed	18	C-21450	round	CI31_CI30	30	28	29	906.7574	907.0034	909.2574	909.3367	18.44281
1449	City	2139605	1402526	2139490	1402533	CMP	closed	18	C-21451	round	CI30_CI38	28	28	28	907.0034	905.9142	909.3367	908.2475	115.889465
1450	City	2139488	1402514	2139490	1402533	CMP/RCP	closed	18	C-21452	round	CI28_CI38	32	40	36	905.4896	904.9142	908.1563	908.2475	18.843606
1451	City	2139490	1402533	2139452	1402535	RCP	closed	18	C-21453	round	CI38_JB1061	42	42	42	904.7475	904.8654	908.2475	908.3654	37.661036
1452	City	2139466	1402509	2139452	1402535	CMP	closed	36	C-21454	round	CV69_JB1061	38	38	38	905.3689	905.1987	908.5356	908.3654	29.674487
1453	City	2139452	1402535	2139448	1402568	<Null>	closed	36	C-21455	round	JB1061_CV70	<Null>	<Null>	<Null>	<Null>	<Null>	908.3654	906	33.491155
1454	City	2139842	1401900	2139870	1401890	RCP	closed	18	C-21456	round	CB706_CB707	61	65	63	915.9231	915.5124	921.0064	920.9291	29.513087
1455	City	2139870	1401890	2139823	1401733	RCP	closed	18	C-21457	round	CB707_CB708	67	134	100.5	915.3458	912.6592	920.9291	923.8259	163.751413

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1456	City	2139843	1401734	2139823	1401733	RCP	closed	18	C-21458	round	OT559_CB708	<Null>	98	<Null>	<Null>	915.6592	918.6369	923.8259	20.248738
1457	City	2139823	1401733	2139755	1401731	HDPE	closed	18	C-21459	round	CB708_OF1102	138	138	138	912.3259	903.2486	923.8259	914.7486	67.812577
1458	City	2140036	1401899	2140003	1401903	RCP	closed	18	C-21460	round	CB701_CB702	56	53	54.5	944.8771	944.6174	949.5438	949.0341	33.028984
1459	City	2140003	1401903	2139951	1401641	HDPE	closed	18	C-21461	round	CB702_CB704	57	53	55	944.2841	930.8477	949.0341	935.2644	267.434582
1460	City	2139986	1401631	2139951	1401641	RCP	closed	18	C-21462	round	CB703_CB704	45	53	49	932.3473	930.8477	936.0973	935.2644	36.730877
1461	City	2139951	1401641	2139913	1401657	HDPE	closed	18	C-21463	round	CB704_PP106	55	55	55	930.6811	914.0146	935.2644	918.5979	40.365746
1462	City	2139859	1401585	2139820	1401543	CMP	closed	18	C-21464	round	CB705_OF1104	64	64	64	923.2447	904.1174	928.578	909.4507	57.475575
1463	City	2140097	1402429	2140068	1402447	RCP	closed	18	C-21465	round	CB699_CB700	68	55	61.5	946.7321	945.9941	952.3988	950.5774	33.8206
1464	City	2140068	1402447	2140009	1402448	HDPE	closed	18	C-21466	round	CB700_OF1100	58	18	38	945.7441	918.2438	950.5774	919.7438	59.960244
1465	City	2139991	1402670	2140014	1402686	RCP	closed	18	C-21467	round	CB693_CB694	61	71	66	933.8961	933.3271	938.9794	939.2438	28.410867
1466	City	2140014	1402686	2140036	1402701	RCP	closed	18	C-21468	round	CB694_JB1060	73	87	80	933.1605	932.4884	939.2438	939.7384	26.137915
1467	City	2140036	1402701	2139907	1402877	RCP	closed	18	C-21469	round	JB1060_CB695	89	57	73	932.3217	923.2207	939.7384	927.9707	218.360147
1468	City	2139907	1402877	2139881	1402863	RCP	closed	18	C-21470	round	CB695_CB696	59	62	60.5	923.054	922.9751	927.9707	928.1418	29.227882
1469	City	2139881	1402863	2139773	1403081	CMP/RCP	closed	18	C-21471	round	CB696_CB697	62	104	83	922.9751	910.52	928.1418	919.1867	243.747259
1470	City	2139920	1402936	2139907	1402877	Plastic	closed	18	C-21472	round	CI677_CB695	81	58	69.5	924.5238	923.1374	931.2738	927.9707	60.775658
1471	City	2139716	1402778	2139690	1402765	CMP	closed	18	C-21473	round	CB709_CB710	34	42	38	906.9825	906.2994	909.8158	909.7994	28.994465
1472	City	2139690	1402765	2139658	1402772	CMP	closed	18	C-21474	round	CB710_OF1099	44	44	44	906.1327	902.5779	909.7994	906.2446	32.548213
1473	City	2139818	1403105	2139773	1403081	RCP	closed	18	C-21475	round	DI1187_CB697	<Null>	141	<Null>	<Null>	907.4367	916.3387	919.1867	50.737944
1474	City	2139773	1403081	2139740	1403066	CMP	closed	18	C-21476	round	CB697_CB698	144	140	142	907.1867	906.8409	919.1867	918.5076	36.158951
1475	City	2139740	1403066	2139596	1403006	Concrete	closed	36	C-21477	round	CB698_CB711	141	54	97.5	906.7576	903.9164	918.5076	908.4164	156.604805
1476	City	2139703	1403213	2139671	1403195	RCP	closed	18	C-21478	round	CB691_CB692	63	61	62	912.3613	912.029	917.6113	917.1123	36.36696
1477	City	2139671	1403195	2139740	1403066	CMP	closed	18	C-21479	round	CB692_CB698	85	138	111.5	910.029	907.0076	917.1123	918.5076	145.768527
1478	City	2139610	1403387	2139657	1403298	RCP	closed	18	C-21480	round	JB378_CB690	59	80	69.5	913.6166	911.5285	918.5333	918.1952	100.108193
1479	City	2139688	1403340	2139657	1403298	RCP	closed	30	C-21481	round	DI689_CB690	72	83	77.5	912.8912	911.2785	918.8912	918.1952	51.772949
1480	City	2139657	1403298	2139631	1403211	RCP	closed	30	C-21482	round	CB690_PP99	84	21	52.5	911.1952	912.9575	918.1952	914.7075	90.648035
1481	City	2139596	1403006	2139569	1402992	CMP	closed	36	C-21483	round	CB711_CB2068	56	58	57	903.7497	903.5157	908.4164	908.349	29.682998
1482	City	2139569	1402992	2139555	1402982	CMP	closed	36	C-21484	round	CB2068_OF1056	60	36	48	903.349	904.9654	908.349	907.9654	17.399828
1483	City	2139379	1403257	2139394	1403184	CMP	closed	18	C-21485	round	CI32_OF1103	52	<Null>	<Null>	902.5342	<Null>	906.8675	906	74.445702
1484	City	2139480	1403481	2139415	1403545	HDPE	closed	24	C-21486	round	CB688_JB62	78	85	81.5	910.0862	909.1633	916.5862	916.2466	91.298052
1485	City	2139415	1403545	2139351	1403648	Concrete	closed	24	C-21487	round	JB62_JB61	89	102	95.5	908.8299	907.1277	916.2466	915.6277	121.622831
1486	City	2139351	1403648	2139262	1403597	CMP	closed	48	C-21488	round	JB61_JB229	144	102	123	903.6277	902.0081	915.6277	910.5081	102.811914
1488	City	2139386	1403652	2139351	1403648	Concrete	closed	48	C-21490	round	CB687_JB61	92	140	116	906.7976	903.961	914.4643	915.6277	35.06176
1489	City	2139386	1403799	2139383	1403778	Concrete	closed	18	C-21491	round	YI459_CI458	<Null>	<Null>	<Null>	<Null>	<Null>	917.3707	916.0462	21.178556
1490	City	2139609	1403803	2139549	1403801	RCP	closed	48	C-21492	round	JB58_JB59	123	123	123	914.2514	912.6222	924.5014	922.8722	60.243485
1491	City	2139549	1403801	2139523	1403788	Concrete	closed	48	C-21493	round	JB59_JB382	<Null>	<Null>	<Null>	<Null>	<Null>	922.8722	923.092	29.216284
1492	City	2139523	1403788	2139383	1403778	Concrete	closed	48	C-21494	round	JB382_CI458	<Null>	<Null>	<Null>	<Null>	<Null>	923.092	916.0462	140.072156
1493	City	2139598	1403908	2139549	1403801	<Null>	closed	18	C-21495	round	CB681_JB59	<Null>	<Null>	<Null>	<Null>	<Null>	928.9554	922.8722	118.239664
1494	City	2139319	1403814	2139346	1403799	Concrete	closed	18	C-21496	round	JB60_CI470	<Null>	<Null>	<Null>	<Null>	<Null>	920.4534	917.9033	30.56869
1495	City	2139346	1403799	2139383	1403778	Concrete	closed	18	C-21497	round	CI470_CI458	<Null>	<Null>	<Null>	<Null>	<Null>	917.9033	916.0462	42.727151
1496	City	2139574	1404319	2139560	1404224	<Null>	closed	18	C-21498	round	DI1084_DI1085	<Null>	<Null>	<Null>	<Null>	<Null>	946.8773	946.1218	96.475897
1497	City	2139560	1404224	2139520	1404138	<Null>	closed	18	C-21499	round	DI1085_DI1086	<Null>	44	<Null>	<Null>	936.5847	946.1218	940.2514	94.588268
1498	City	2139520	1404138	2139466	1404139	HDPE	closed	18	C-21500	round	DI1086_DI1087	44	32	38	936.5847	934.231	940.2514	936.8977	54.552624
1499	City	2139466	1404139	2139434	1404136	CMP/HDPE	closed	18	C-21501	round	DI1087_DI1088	35	35	35	933.981	933.3593	936.8977	936.276	31.485942

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1500	City	2139434	1404136	2139342	1404130	HDPE/RCP	closed	24	C-21502	round	DI1088_CI460	35	51	43	933.3593	928.582	936.276	932.832	92.453132
1501	City	2139342	1404130	2139339	1404082	RCP	closed	18	C-21503	round	CI460_CI467	53	53	53	928.4153	927.846	932.832	932.2627	48.046892
1502	City	2139339	1404082	2139333	1403984	Concrete	closed	18	C-21504	round	CI467_CI468	<Null>	<Null>	<Null>	<Null>	<Null>	932.2627	928.6559	98.216801
1503	City	2139333	1403984	2139332	1403966	Concrete	closed	18	C-21505	round	CI468_DI469	<Null>	<Null>	<Null>	<Null>	<Null>	928.6559	927.6878	18.849556
1504	City	2139332	1403966	2139319	1403814	Concrete	closed	18	C-21506	round	DI469_JB60	<Null>	<Null>	<Null>	<Null>	<Null>	927.6878	920.4534	151.669289
1505	City	2139396	1404110	2139394	1404080	RCP	closed	18	C-21507	round	CB685_CB686	53	53	53	930.0061	930.2217	934.4228	934.6384	30.034734
1506	City	2139394	1404080	2139339	1404082	Concrete	closed	18	C-21508	round	CB686_CI467	<Null>	<Null>	<Null>	<Null>	<Null>	934.6384	932.2627	54.907621
1507	City	2139724	1404151	2139676	1404129	RCP	closed	18	C-21509	round	DI1090_CB679	48	58	53	945.8091	942.0203	949.8091	946.8536	52.283624
1508	City	2139676	1404129	2139640	1404006	RCP	closed	18	C-21510	round	CB679_CB680	61	61	61	941.7703	932.5346	946.8536	937.6179	128.330074
1509	City	2139640	1404006	2139598	1403908	<Null>	closed	18	C-21511	round	CB680_CB681	<Null>	<Null>	<Null>	<Null>	<Null>	937.6179	928.9554	106.365269
1510	City	2139466	1404139	2139434	1404136	CMP/HDPE	closed	18	C-21512	round	DI1087_DI1088	35	35	35	933.981	933.3593	936.8977	936.276	31.485942
1511	City	2139434	1404136	2139342	1404130	HDPE/RCP	closed	24	C-21513	round	DI1088_CI460	35	51	43	933.3593	928.582	936.276	932.832	92.403642
1512	City	2140093	1403712	2140094	1403743	RCP	closed	18	C-21514	round	CB274_CB275	53	89	71	938.6101	935.931	943.0268	943.3477	31.610702
1513	City	2140094	1403743	2140096	1403749	RCP	closed	18	C-21515	round	CB275_JB8	91	33	62	935.7644	936.4482	943.3477	939.1982	5.354809
1514	City	2140517	1404312	2140589	1404295	<Null>	closed	18	C-21516	round	DI1080_DI1081	35	130	82.5	971.4967	963.6733	974.4134	974.5066	73.534056
1515	City	2140637	1404283	2140589	1404295	<Null>	closed	18	C-21517	round	DI1082_DI1081	44	44	44	971.0361	970.8399	974.7028	974.5066	50.086669
1516	City	2140589	1404295	2140576	1404239	RCP	closed	18	C-21518	round	DI1081_CB273	<Null>	50	<Null>	<Null>	968.2724	974.5066	972.4391	56.884252
1517	City	2140576	1404239	2140557	1404123	RCP	closed	18	C-21519	round	CB273_HW18	57	33	45	967.6891	962.54	972.4391	965.29	118.04266
1518	City	2140622	1404251	2140602	1404232	RCP	closed	18	C-21520	round	JB6_CB272	44	40	42	971.1101	969.1006	974.7768	972.4339	27.007519
1519	City	2140602	1404232	2140570	1404025	CMP/RCP	closed	18	C-21521	round	CB272_DI15	42	35	38.5	968.9339	960.3822	972.4339	963.2989	209.570371
1520	City	2140607	1404106	2140570	1404025	PVC	closed	12	C-21522	round	DI1083_DI15	38	33	35.5	965.9091	960.5489	969.0758	963.2989	89.05081
1521	City	2140622	1404255	2140622	1404251	RCP	closed	24	C-21523	round	DI7_JB6	25	40	32.5	972.2526	971.4435	974.3359	974.7768	3.454583
1522	City	2140570	1404025	2140542	1403824	CMP	closed	24	C-21524	round	DI15_JB1053	48	39	43.5	959.2989	953.3109	963.2989	956.5609	203.455099
1523	City	2140542	1403824	2140548	1403819	RCP	closed	24	C-21525	round	JB1053_HW19	40	35	37.5	953.2276	951.6627	956.5609	954.5793	7.645014
1524	City	2140607	1404106	2140570	1404025	PVC	closed	12	C-21526	round	DI1083_DI15	38	33	35.5	965.9091	960.5489	969.0758	963.2989	89.05081
1527	City	2140532	1403750	2140505	1403755	RCP	closed	18	C-21529	round	CB270_CB271	47	74	60.5	951.8509	949.8767	955.7676	956.0434	27.847554
1528	City	2140539	1403742	2140532	1403750	CMP	closed	30	C-21530	round	PP17_CB270	30	47	38.5	953.0765	951.8509	955.5765	955.7676	11.248816
1529	City	2140554	1403677	2140553	1403707	RCP	closed	18	C-21531	round	CB268_CB269	41	40	40.5	955.0368	954.535	958.4535	957.8683	30.11689
1530	City	2140553	1403707	2140553	1403723	RCP	closed	18	C-21532	round	CB269_HW16	42	40	41	954.3683	952.0134	957.8683	955.3467	15.826718
1532	City	2140781	1403654	2140784	1403683	CMP/RCP	closed	18	C-21534	round	CB266_CB267	34	31	32.5	960.9	961.203	963.7333	963.7863	28.902616
1533	City	2140784	1403683	2140774	1403691	RCP	closed	18	C-21535	round	CB267_HW15	33	38	35.5	961.0363	961.7523	963.7863	964.919	12.522579
1534	City	2141272	1403640	2141268	1403612	RCP	closed	18	C-21536	round	CB264_CB265	33	47	40	971.0441	969.4133	973.7941	973.33	28.774796
1535	City	2141268	1403612	2141212	1403621	RCP	closed	18	C-21537	round	CB265_CI27	49	39	44	969.2467	968.783	973.33	972.033	57.536586
1536	City	2141275	1403654	2141216	1403651	PVC	closed	12	C-21538	round	YI1026_JB1051	<Null>	38	<Null>	<Null>	970.1628	974.1614	973.3295	58.919373
1537	City	2141216	1403651	2141212	1403621	CMP/RCP	closed	18	C-21539	round	JB1051_CI27	42	40	41	969.8295	968.6997	973.3295	972.033	29.930474
1538	City	2141212	1403621	2141209	1403609	RCP	closed	18	C-21540	round	CI27_PP14	47	21	34	968.1163	968.8832	972.033	970.6332	12.379583
1539	City	2141446	1403797	2141472	1403797	RCP	closed	18	C-21541	round	CB257_CB258	40	48	44	982.3346	981.9617	985.6679	985.9617	26.168258
1540	City	2141472	1403797	2141466	1403646	RCP	closed	18	C-21542	round	CB258_CB260	50	35	42.5	981.795	975.4806	985.9617	978.3973	150.508669
1541	City	2141439	1403650	2141466	1403646	RCP	closed	18	C-21543	round	CB259_CB260	28	28	28	975.6033	976.064	977.9366	978.3973	27.169736
1542	City	2141466	1403646	2141481	1403622	RCP	closed	18	C-21544	round	CB260_JB1050	35	36	35.5	975.4806	974.9312	978.3973	977.9312	28.269813
1543	City	2141489	1403621	2141481	1403622	RCP	closed	18	C-21545	round	CB262_JB1050	35	35	35	975.2798	975.0145	978.1965	977.9312	7.337723
1544	City	2141481	1403622	2141462	1403595	RCP	closed	18	C-21546	round	JB1050_CB263	38	40	39	974.7645	974.0445	977.9312	977.3778	34.029379
1545	City	2141462	1403595	2141455	1403587	RCP	closed	18	C-21547	round	CB263_HW13	43	30	36.5	973.7945	974.5079	977.3778	977.0079	10.355306

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1546	City	2142301	1403549	2142297	1403520	RCP	closed	18	C-21548	round	CB247_CB248	35	35	35	987.2932	987.0124	990.2099	989.9291	29.302619
1547	City	2142297	1403520	2142604	1403493	RCP	closed	18	C-21549	round	CB248_CB249	38	44	41	986.7624	983.3286	989.9291	986.9953	308.156646
1548	City	2142604	1403493	2142607	1403522	RCP	closed	18	C-21550	round	CB249_CB250	45	42	43.5	983.2453	983.6346	986.9953	987.1346	28.613548
1549	City	2142607	1403522	2142681	1403533	RCP	closed	18	C-21551	round	CB250_JB1	43	30	36.5	983.5513	983.2333	987.1346	985.7333	74.224807
1550	City	2142681	1403533	2142840	1403538	RCP	closed	18	C-21552	round	JB1_CB251	48	44	46	981.7333	978.0731	985.7333	981.7398	159.348959
1551	City	2142840	1403538	2143055	1403547	RCP	closed	18	C-21553	round	CB251_CB253	48	55	51.5	977.7398	972.0975	981.7398	976.6808	214.730936
1552	City	2143056	1403515	2143055	1403547	RCP	closed	18	C-21554	round	CB252_CB253	28	64	46	974.3033	971.3475	976.6366	976.6808	31.655552
1553	City	2143055	1403547	2143172	1403557	RCP	closed	18	C-21555	round	CB253_JB2	65	34	49.5	971.2641	969.9422	976.6808	972.7755	117.699087
1556	City	2143172	1403557	2143374	1403562	Metal	closed	18	C-21558	round	JB2_CB254	56	60	58	968.1088	957.5335	972.7755	962.5335	202.502679
1558	City	2143374	1403532	2143374	1403562	RCP	closed	18	C-21560	round	CB256_CB254	<Null>	65	<Null>	<Null>	957.1168	962.9708	962.5335	30.255749
1559	City	2143374	1403562	2143413	1403579	RCP	closed	18	C-21561	round	CB254_DI3	72	72	72	956.5335	953.6588	962.5335	959.6588	42.653662
1560	City	2139422	1399384	2139448	1399356	CMP	closed	18	C-21562	round	CB573_CB574	79	76	77.5	915.1917	913.581	921.775	919.9143	38.381458
1561	City	2139448	1399356	2139588	1399354	CMP	closed	18	C-21563	round	CB574_CB575	76	81	78.5	913.581	902.8219	919.9143	909.5719	140.227527
1567	City	2139672	1399293	2139698	1399302	RCP	closed	24	C-21569	round	CB576_CB577	63	70	66.5	901.8925	901.4273	907.1425	907.2606	27.516254
1569	City	2139163	1399075	2139448	1399094	CMP	closed	36	C-21571	round	JB100_CB567	<Null>	140	<Null>	<Null>	906.171	936	917.8377	285.535807
1570	City	2139411	1399067	2139448	1399094	CMP	closed	18	C-21572	round	CB566_CB567	83	120	101.5	913.5987	907.8377	920.5154	917.8377	45.575826
1571	City	2139448	1399094	2139648	1399098	CMP	closed	42	C-21573	round	CB567_CB568	144	71	107.5	905.8377	902.0559	917.8377	907.9726	199.822249
1572	City	2139648	1399098	2139713	1399120	RCP	closed	42	C-21574	round	CB568_CB569	77	73	75	901.5559	901.13	907.9726	907.2133	69.004231
1573	City	2139713	1399120	2139727	1399095	RCP	closed	42	C-21575	round	CB569_CB570	73	79	76	901.13	900.4037	907.2133	906.987	28.383204
1574	City	2139727	1399095	2139765	1399067	RCP	closed	42	C-21576	round	CB570_CB571	81	72	76.5	900.237	900.2082	906.987	906.2082	47.725964
1575	City	2139765	1399067	2139791	1399081	RCP	closed	42	C-21577	round	CB571_CB572	73	72	72.5	900.1249	900.0772	906.2082	906.0772	29.35384
1577	City	2139013	1399018	2139012	1399087	RCP	closed	18	C-21579	round	CB552_CB553	56	61	58.5	934.2313	933.696	938.898	938.7793	68.707591
1579	City	2139408	1399055	2139411	1399067	CMP	closed	12	C-21581	round	DI484_CB566	<Null>	82	<Null>	<Null>	913.6821	921.0771	920.5154	11.872734
1581	City	2138740	1399610	2138739	1399595	CMP	closed	18	C-21583	round	JB98_CB564	69	70	69.5	940.8	940.475	946.55	946.3083	15.090563
1582	City	2138739	1399595	2138738	1399538	CMP	closed	18	C-21584	round	CB564_DI486	70	99	84.5	940.475	939.785	946.3083	948.035	56.623813
1586	City	2137906	1399723	2137934	1399722	CMP	closed	18	C-21588	round	CB554_CB555	65	75	70	944.2432	943.5449	949.6599	949.7949	28.728535
1587	City	2137934	1399722	2137942	1399559	CMP	closed	18	C-21589	round	CB555_CB556	76	73	74.5	943.4616	938.4752	949.7949	944.5585	163.019315
1589	City	2137942	1399559	2137916	1399549	CMP	closed	30	C-21591	round	CB556_CB557	93	96	94.5	936.8085	936.5627	944.5585	944.5627	28.700581
1590	City	2137916	1399549	2137930	1399506	CMP	closed	30	C-21592	round	CB557_JB97	98	113	105.5	936.396	936.3415	944.5627	945.7582	45.762827
1592	City	2138317	1399154	2138356	1399164	CMP	closed	18	C-21594	round	CB558_CB559	60	63	61.5	943.5616	942.2785	948.5616	947.5285	40.429644
1593	City	2138356	1399164	2138397	1399175	CMP	closed	18	C-21595	round	CB559_CB560	65	76	70.5	942.1118	941.8526	947.5285	948.1859	41.807942
1594	City	2138397	1399175	2138422	1399160	CMP	closed	24	C-21596	round	CB560_CB561	77	82	79.5	941.7692	941.162	948.1859	947.9953	29.432448
1598	City	2138620	1399016	2138611	1398989	CMP	closed	36	C-21600	round	CB562_CB563	67	75	71	935.4918	934.7359	941.0751	940.9859	29.082013
1601	City	2139920	1398871	2139940	1398889	RCP	closed	24	C-21603	round	CB578_CB579	59	56	57.5	899.8127	899.8445	904.7294	904.5112	27.609415
1603	City	2139930	1398712	2139939	1398686	CMP	closed	24	C-21605	round	CB580_CB581	47	59	53	901.6874	900.6854	905.6041	905.6021	28.072619
1605	City	2140232	1398876	2140231	1398892	CMP	closed	24	C-21607	round	CB582_HW378	51	25	38	898.5584	901.575	902.8084	903.6583	16.130966
1611	City	2135897	1398607	2135902	1398643	Metal	closed	18	C-21613	round	CV71_CV72	<Null>	35	<Null>	<Null>	986.6318	990	989.5485	35.795701
1650	City	2142044	1406196	2142054	1406343	RCP	closed	24	C-21652	round	CI45_CB278	77	123	100	987.5166	982.234	993.9333	992.484	147.35397
1656	City	2137957	1408573	2137986	1408576	CMP	closed	24	C-21658	round	CB1170_CB117	114	136	125	945.5719	943.6053	955.0719	954.9386	29.532511
1657	City	2137986	1408576	2138021	1408353	CMP	closed	42	C-21659	round	CB1171_JB140	136	136	136	943.6053	940.3256	954.9386	951.6589	225.092781
1659	City	2138021	1408353	2137892	1408312	HDPE	closed	42	C-21661	round	JB140_CB196	<Null>	135	<Null>	<Null>	935.6353	951.6589	946.8853	135.520786
1660	City	2137878	1408338	2137892	1408312	CMP	closed	18	C-21662	round	CB197_CB196	108	114	111	937.6424	937.3853	946.6424	946.8853	29.973332
1661	City	2137892	1408312	2137744	1408288	CMP	closed	42	C-21663	round	CB196_JB218	137	137	137	935.4686	932.6461	946.8853	944.0628	149.330857

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1662	City	2137744	1408288	2137594	1408316	CMP	closed	42	C-21664	round	JB218_CB1172	140	105	122.5	932.3961	931.9681	944.0628	940.7181	152.930783
1663	City	2137595	1408346	2137594	1408316	CMP	closed	18	C-21665	round	CB1173_CB117	104	104	104	932.8843	932.0514	941.551	940.7181	29.834746
1664	City	2137594	1408316	2137454	1408329	CMP	closed	42	C-21666	round	CB1172_CB117	122	105	113.5	930.5514	929.8672	940.7181	938.6172	140.43857
1667	City	2136729	1408333	2136741	1408304	CMP	closed	18	C-21669	round	CB208_CB209	62	66	64	933.472	932.8544	938.6387	938.3544	31.020594
1671	City	2138486	1409164	2138456	1409162	CMP	closed	18	C-21673	round	CB1180_CB118	83	83	83	971.6475	971.0422	978.5642	977.9589	30.485343
1675	City	2138685	1408735	2138714	1408724	CMP	closed	18	C-21677	round	CB1182_CB118	74	83	78.5	969.9473	969.054	976.114	975.9707	30.988457
1677	City	2137397	1409239	2137409	1409211	CMP	closed	24	C-21679	round	CB1177_CB117	79	79	79	953.2112	952.6335	959.7945	959.2168	30.242984
1679	City	2136429	1408702	2136402	1408687	CMP	closed	24	C-21681	round	CB206_CB207	90	45	67.5	922.3856	925.3373	929.8856	929.0873	31.393099
1687	City	2136663	1409679	2136682	1409657	CMP	closed	18	C-21689	round	CB224_CB225	80	92	86	942.7992	941.4719	949.4659	949.1386	28.665999
1689	City	2136622	1409500	2136591	1409498	CMP	closed	36	C-21691	round	CB1358_CB226	85	82	83.5	935.7919	935.5679	942.8752	942.4012	30.25137
1698	City	2137253	1408905	2137243	1408876	CMP	closed	42	C-21700	round	CB232_CB231	93	93	93	936.5416	936.2293	944.2916	943.9793	30.065864
1701	City	2137775	1409018	2137745	1409021	CMP	closed	18	C-21703	round	CB1175_CB117	72	62	67	958.6174	958.6153	964.6174	963.782	29.962974
1703	City	2137702	1408991	2137699	1408961	CMP	closed	18	C-21705	round	CB199_CB198	57	59	58	956.4415	955.7982	961.1915	960.7148	30.245541
1707	City	2137359	1408795	2137328	1408800	CMP	closed	24	C-21709	round	CB194_CB195	80	77	78.5	939.9937	939.7951	946.6604	946.2118	30.97831
1712	City	2138207	1408938	2138197	1408909	CMP	closed	36	C-21714	round	CB1185_CB118	102	110	106	956.2351	955.7404	964.7351	964.9071	30.071544
1717	City	2136449	1410484	2136432	1410435	CMP	closed	18	C-21719	round	CB221_OF86	63	10	36.5	933.6104	928.8367	938.8604	929.67	52.451981
1720	City	2137259	1410255	2137249	1410225	CMP	closed	18	C-21722	round	JB146_CB217	62	60	61	960.5916	959.353	965.7583	964.353	31.199284
1721	City	2137249	1410225	2137221	1410215	CMP	closed	24	C-21723	round	CB217_CB218	63	50	56.5	959.103	959.4645	964.353	963.6312	29.052262
1727	City	2136922	1410297	2136892	1410297	CMP	closed	36	C-21729	round	CB219_CB220	70	94	82	944.0626	941.9097	949.8959	949.743	30.077577
1729	City	2136696	1410841	2136678	1410818	CMP	closed	24	C-21731	round	CB213_CB214	55	60	57.5	933.2926	932.5974	937.8759	937.5974	29.395515
1732	City	2137305	1410580	2137310	1410609	CMP	closed	18	C-21734	round	CB215_CB216	<Null>	68	<Null>	<Null>	961.7545	966.8823	967.4212	29.229996
1736	City	2136432	1411124	2136432	1411092	RCP	closed	18	C-21738	round	CB234_CB211	53	6	29.5	937.9997	941.7225	942.4164	942.2225	31.711314
1741	City	2136187	1410370	2136124	1410473	CMP	closed	18	C-21743	round	CB201_PP441	100	18	59	925.7315	920.5	934.0648	922	120.855977
1745	City	2140146	1402606	2140016	1402474	<Null>	closed	18	C-21747	round	CV84_CV83	<Null>	20	<Null>	<Null>	928.731	918.4698	930.3977	185.658217
1746	City	2139958	1402585	2139770	1402947	<Null>	closed	48	C-21748	round	HW556_JB1145	60	<Null>	<Null>	909.5811	<Null>	914.5811	909.509	407.414615
1747	City	2139958	1402585	2139763	1402932	<Null>	closed	18	C-21749	round	HW556_JB1146	60	60	60	909.5811	904.4711	914.5811	909.4711	398.168849
1748	City	2139763	1402932	2139614	1402868	CMP	closed	48	C-21750	round	JB1146_OF1101	<Null>	60	<Null>	<Null>	903.4755	909.4711	908.4755	162.395001
1749	City	2139770	1402947	2139614	1402868	CMP	closed	48	C-21751	round	JB1145_OF1101	<Null>	60	<Null>	<Null>	903.4755	909.509	908.4755	175.281617
1750	City	2139978	1402434	2139945	1402403	<Null>	closed	36	C-21752	round	OT557_PP105	43	42	42.5	913.8539	917.4368	917.4372	920.9368	44.926599
1751	City	2139945	1402403	2139929	1402394	CMP	closed	36	C-21753	round	PP105_OT558	42	42	42	917.4368	916.3141	920.9368	919.8141	18.176029
1752	City	2139929	1402394	2139558	1402405	CMP	closed	36	C-21754	round	OT558_	42	<Null>	<Null>	916.3141	<Null>	919.8141	<Null>	370.633764
1753	City	2139671	1403029	2139602	1402996	CMP	closed	36	C-21755	round	OT555_JB1144	34	56	45	905.1667	904.1146	908	908.7813	76.533004
1754	City	2139602	1402996	2139557	1402971	CMP	closed	36	C-21756	round	JB1144_OF1098	59	24	41.5	903.8646	904.9096	908.7813	906.9096	51.548662
1755	City	2139992	1403743	2139991	1403723	RCP	closed	18	C-21757	round	CI551_CI552	49	55	52	935.8967	935.4628	939.98	940.0461	19.648205
1756	City	2139991	1403723	2139837	1403737	RCP	closed	18	C-21758	round	CI552_CI544	59	54	56.5	935.1294	930.3868	940.0461	934.8868	154.764887
1757	City	2139837	1403737	2139636	1403749	RCP	closed	18	C-21759	round	CI544_JB379	55	67	61	930.3035	919.7984	934.8868	925.3817	201.705087
1759	City	2138853	1404673	2138830	1404622	<Null>	closed	108	C-21761	rectangular	CV79_CV80	<Null>	<Null>	<Null>	<Null>	<Null>	904.7753	912.6875	56.442546
1760	City	2138803	1404596	2138789	1404584	Concrete	closed	<Null>	C-21762	rectangular	CV81_CV82	<Null>	<Null>	<Null>	<Null>	<Null>	903.0111	910.5625	18.121965
1777	City	2129782	1413007	2129811	1413100	CMP	closed	18	C-21779	round	CB493_JB244	74	74	74	925.1522	923.2165	931.3189	929.3832	98.151705
1778	City	2129811	1413100	2129822	1413120	Metal	closed	18	C-21780	round	JB244_HW430	<Null>	18	<Null>	<Null>	920.9203	929.3832	922.4203	22.812998
1779	City	2129399	1412414	2129381	1412391	RCP	closed	18	C-21781	round	DI1191_JB1149	<Null>	73	<Null>	<Null>	937.4906	940.8168	943.5739	28.750967
1780	City	2129381	1412391	2129330	1412442	CMP	closed	18	C-21782	round	JB1149_HW427	73	73	73	937.4906	930.59	943.5739	936.6733	72.172981
1781	City	2129524	1412576	2129479	1412659	Metal	closed	24	C-21783	round	CB490_JB45	120	38	79	925.745	925.3827	935.745	928.5494	93.581417

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1782	City	2129479	1412659	2129475	1412680	CMP	closed	24	C-21784	round	JB45_HW429	38	50	44	925.3827	921.837	928.5494	926.0037	21.848029
1784	City	2128990	1413206	2129013	1413196	Metal	closed	18	C-21786	round	JB1196_OF190	<Null>	<Null>	<Null>	<Null>	<Null>	928.727	923.4784	24.593334
1785	City	2129146	1412629	2129167	1412608	RCP	closed	18	C-21787	round	CB494_CB495	78	90	84	931.4096	930.2419	937.9096	937.7419	29.426761
1786	City	2129167	1412608	2129245	1412566	CMP	closed	18	C-21788	round	CB495_CB496	90	86	88	930.2419	927.8691	937.7419	935.0358	88.563881
1787	City	2129266	1412587	2129272	1412608	CMP	closed	30	C-21789	round	CB497_HW428	96	50	73	926.6267	926.3921	934.6267	930.5588	21.427561
1788	City	2129285	1412490	2129303	1412590	CMP	closed	42	C-21790	round	CV86_CV85	77	83	80	925.0049	917.0833	931.4216	924	101.802579
1793	City	2128931	1412914	2128938	1412938	CMP	closed	30	C-21795	round	JB1148_OF218	74	74	74	928.6065	922.6205	934.7732	928.7872	24.430457
1794	City	2127853	1413522	2127869	1413576	CMP	closed	42	C-21796	round	JB242_JB243	124	124	124	930.0249	923.6667	940.3582	934	56.611075
1795	City	2127869	1413576	2127893	1413604	Metal	closed	42	C-21797	round	JB243_HW434	<Null>	42	<Null>	<Null>	928.5	934	932	36.428201
1796	City	2127922	1412770	2127930	1412798	CMP	closed	24	C-21798	round	CB1205_CB120	48	48	48	956.7024	955.4158	960.7024	959.4158	29.126112
1797	City	2127930	1412798	2127780	1412856	CMP	closed	24	C-21799	round	CB1206_CB120	48	84	66	955.4158	946.5342	959.4158	953.5342	161.107634
1798	City	2127771	1412827	2127780	1412856	CMP	closed	18	C-21800	round	CB1203_CB120	38	84	61	950.6573	946.5342	953.824	953.5342	30.643502
1803	City	2133041	1411014	2133004	1411015	Metal	closed	30	C-21805	round	CB1189_CB119	58	78	68	953.0082	951.4595	957.8415	957.9595	36.567881
1805	City	2132646	1410958	2132647	1410992	CMP	closed	10	C-21807b	round	CB1191_CB119	60	60	60	945.4412	945.3256	950.4412	950.3256	33.768484
1807	City	2139262	1403597	2139100	1403512	CMP	closed	48	C-21809	round	JB229_JB1141	104	104	104	901.8414	895.2885	910.5081	903.9552	183.266967
1808	City	2139100	1403512	2138930	1403467	CMP	closed	48	C-21810	round	JB1141_JB1142	<Null>	70	<Null>	<Null>	895.4241	903.9552	901.2574	175.94218
1809	City	2138930	1403467	2138819	1403358	CMP	closed	48	C-21811	round	JB1142_DI1002	72	72	72	895.2574	893.869	901.2574	899.869	155.525712
1810	City	2138819	1403358	2138722	1403321	CMP	closed	48	C-21812	round	DI1002_OF1090	72	59	65.5	893.869	895.0833	899.869	900	103.546843
1814	City	2142463	1400167	2142471	1400167	RCP	closed	18	C-21816	round	CB594_HW30	49	18	33.5	943.3316	944.668	947.4149	946.168	7.514768
1815	City	2142538	1400163	2142729	1400170	CMP	closed	36	C-21818	round	HW448_OF1091	51	36	43.5	932.48	929.7799	936.73	932.7799	191.69841
1816	City	2142443	1400589	2142481	1400588	RCP	closed	18	C-21819	round	OT449_JB1078	22	54	38	949.1694	945.376	951.0027	949.876	38.824974
1817	City	2134240	1409839	2134251	1409866	CMP	closed	18	C-21820	round	CB1225_CB122	90	104	97	947.9873	946.8766	955.4873	955.5433	28.531189
1820	City	2134701	1409652	2134714	1409679	CMP	closed	18	C-21823	round	CB1227_CB122	61	64	62.5	936.5004	936.1221	941.5837	941.4554	29.868512
1830	City	2133728	1410436	2133716	1410466	CMP	closed	18	C-21833	round	CB1229_CB123	45	56	50.5	959.6473	959.0667	963.3973	963.7334	32.116756
1831	City	2133716	1410466	2133698	1410462	CMP	closed	18	C-21834	round	CB1230_DI646	56	42	49	959.0667	958.8475	963.7334	962.3475	18.782875
1832	City	2133698	1410462	2133660	1410681	RCP	closed	18	C-21835	round	DI646_CI647	45	43	44	958.5975	953.8622	962.3475	957.4455	222.227896
1833	City	2133490	1412268	2133475	1412270	RCP	closed	24	C-21836	round	CB1211_HW110	53	24	38.5	961.0283	961.3511	965.445	963.3511	15.394786
1834	City	2133526	1412266	2133536	1412265	RCP	closed	24	C-21837	round	CI611_HW178	<Null>	24	<Null>	<Null>	962.9285	964.8787	964.9285	10.280266
1839	City	2133507	1411701	2133499	1411642	Metal	closed	15	C-21842	round	OT1114_DI612	18	35	26.5	960.0948	959.1109	961.5948	962.0276	60.067867
1840	City	2133499	1411642	2133508	1411478	CMP	closed	12	C-21843	round	DI612_DI618	35	25	30	959.1109	959.2951	962.0276	961.3784	164.329437
1841	City	2133508	1411478	2133522	1411283	CMP	closed	12	C-21844	round	DI618_	25	25	25	959.2951	<Null>	961.3784	<Null>	194.811009
1842	City	2133558	1411292	2133596	1411265	CMP	closed	18	C-21845	round	CB1212_PP110	25	18	21.5	957.239	955.418	959.3223	956.918	47.013958
1843	City	2133544	1411518	2133560	1411513	Concrete	closed	24	C-21846	rectangular	CI619_HW111	<Null>	24	<Null>	<Null>	959.0264	961.11	961.0264	16.462553
1844	City	2148941	1406671	2149022	1406606	<Null>	closed	18	C-21847	round	JB250_	<Null>	<Null>	<Null>	<Null>	<Null>	901.7714	<Null>	103.316029
1845	City	2133566	1410870	2133555	1410893	CMP	closed	18	C-21848	round	HW2171_DI508	25	85	55	950.5942	946.1123	952.6776	953.1956	25.750631
1846	City	2133555	1410893	2133550	1410902	Concrete	closed	18	C-21849	round	DI508_CB1188	<Null>	41	<Null>	<Null>	950.5212	953.1956	953.9379	9.542191
1847	City	2133550	1410902	2133552	1410939	Concrete	closed	18	C-21850	round	CB1188_DI1176	45	41	43	950.1879	950.0813	953.9379	953.498	37.871761
1848	City	2133552	1410939	2133617	1410954	RCP	closed	18	C-21851a	round	DI1176_CB1381	45	55	50	949.748	949.1346	953.498	953.7179	67.324414
1849	City	2133537	1410959	2133552	1410939	CMP	closed	18	C-21852	round	DI22_DI1176	43	44	43.5	949.7896	949.8313	953.3729	953.498	24.460704
1852	City	2133528	1410969	2133537	1410959	CMP	closed	18	C-21855	round	PP90_DI22	44	41	42.5	950.3339	949.9562	954.0006	953.3729	13.4093
1853	City	2132346	1411490	2132350	1411496	HDPE	closed	12	C-21856	round	JB2173_PP91	<Null>	12	<Null>	<Null>	929.0739	932.465	930.0739	8.228619
1854	City	2132352	1411483	2132346	1411490	Plastic	closed	12	C-21857	round	_JB2173	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	932.465	9.301426
1855	City	2132350	1411507	2132342	1411502	CMP	closed	36	C-21859	round	HW515_CB1194	73	75	74	926.1192	926.865	932.2025	933.115	8.875469

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1856	City	2132342	1411502	2132308	1411502	CMP	closed	36	C-21860	round	CB1194_CB119	77	77	77	926.6983	926.3927	933.115	932.8094	34.297097
1857	City	2132308	1411502	2132296	1411504	CMP	closed	36	C-21861	round	CB1195_JB222	85	104	94.5	925.7261	923.5202	932.8094	932.1869	12.186735
1858	City	2132350	1411500	2132342	1411497	CMP	closed	24	C-21862	round	HW516_CB1193	73	78	75.5	926.509	926.5429	932.5923	933.0429	8.474076
1859	City	2132342	1411497	2132308	1411497	CMP	closed	24	C-21863	round	CB1193_CB119	80	85	82.5	926.3762	925.755	933.0429	932.8383	33.623951
1860	City	2132308	1411497	2132296	1411504	CMP	closed	24	C-21864	round	CB1196_JB222	87	87	87	925.5883	924.9369	932.8383	932.1869	14.323512
1861	City	2143131	1402088	2143174	1402044	CMP	closed	30	C-21865	round	CV93_CV94	36	36	36	963	961.8474	966	964.8474	61.538536
1862	City	2140303	1404654	2140368	1404650	CMP	closed	18	C-21866	round	CB1216_CB121	108	140	124	953.7828	954.1112	962.7828	965.7779	64.632294
1863	City	2140368	1404650	2140428	1404640	CMP	closed	18	C-21867	round	CB1217_CB121	145	168	156.5	953.6946	953.3468	965.7779	967.3468	61.218864
1864	City	2140428	1404640	2140435	1404697	CMP	closed	18	C-21868	round	CB1218_CB121	170	140	155	953.1801	952.6185	967.3468	964.2852	57.434722
1865	City	2140435	1404697	2140442	1404840	CMP	closed	18	C-21869	round	CB1219_HW115	144	18	81	952.2852	952.0716	964.2852	953.5716	142.770416
1866	City	2140335	1404974	2140331	1405019	<Null>	closed	24	C-21870	round	PP115_OF110	<Null>	<Null>	<Null>	<Null>	<Null>	932	932.8669	45.742311
1867	City	2140698	1404709	2140756	1404713	CMP	closed	18	C-21871	round	OT623_JB251	18	18	18	962.1066	965.7566	963.6066	967.2566	57.904178
1868	City	2140756	1404713	2140748	1404771	<Null>	closed	18	C-21872	round	JB251_JB252	<Null>	96	<Null>	<Null>	952.8615	967.2566	960.8615	58.686646
1869	City	2140807	1404635	2140748	1404771	CMP	closed	18	C-21873	round	CB1220_JB252	68	68	68	958.2895	955.1948	963.9562	960.8615	148.005951
1872	City	2140745	1404926	2140744	1404984	CMP	closed	30	C-21876	round	DI625_HW2071	116	116	116	938.9702	937.8597	948.6369	947.5264	58.63423
1873	City	2140754	1405066	2140666	1405083	<Null>	closed	54	C-21878	round	CV95_CV18	<Null>	72	<Null>	<Null>	928.7289	934	934.7289	89.481543
1874	City	2141091	1404555	2141068	1404564	CMP	closed	24	C-21881	round	DI626_JB253	34	34	34	965.0499	965.4712	967.8832	968.3045	24.49515
1875	City	2141016	1404563	2141068	1404564	CMP	closed	18	C-21882	round	DI627_JB253	79	79	79	963.4741	961.7212	970.0574	968.3045	52.751155
1876	City	2140902	1404556	2140965	1404563	PVC	closed	12	C-21883	round	DI38_DI37	<Null>	65	<Null>	<Null>	967.5935	977.8777	973.0102	63.527606
1877	City	2140965	1404563	2141016	1404563	PVC	closed	12	C-21884	round	DI37_DI627	68	68	68	967.3435	964.3907	973.0102	970.0574	50.750278
1878	City	2141068	1404564	2141071	1404672	CMP	closed	36	C-21885	round	JB253_DI36	<Null>	66	<Null>	<Null>	959.7957	968.3045	965.2957	107.39915
1879	City	2141055	1404673	2141071	1404672	CMP	closed	12	C-21886	round	YI1051_DI36	27	62	44.5	960.3527	960.129	962.6027	965.2957	16.218338
1880	City	2141071	1404672	2141100	1404910	CMP	closed	36	C-21887	round	DI36_CB1223	68	107	87.5	959.629	951.4481	965.2957	960.3648	239.996703
1881	City	2141100	1404910	2141121	1404943	CMP	closed	42	C-21888	round	CB1223_PI632	130	130	130	949.5315	939.1167	960.3648	949.95	38.690252
1882	City	2141152	1404969	2141167	1405034	<Null>	closed	32	C-21889	round	PP116_OF1122	<Null>	<Null>	<Null>	<Null>	<Null>	949.1289	945.8457	66.393737
1883	City	2140864	1404647	2140902	1404443	<Null>	closed	8	C-21890	round	YI634_YI1053	<Null>	<Null>	<Null>	<Null>	<Null>	965.1187	977.8306	207.859403
1884	City	2140903	1404466	2140938	1404438	<Null>	closed	15	C-21891	round	_YI1054	<Null>	45	<Null>	<Null>	973.3196	<Null>	977.0696	45.237753
1885	City	2140938	1404438	2140972	1404434	PVC	closed	12	C-21892	round	YI1054_YI1055	45	50	47.5	973.3196	972.6791	977.0696	976.8458	33.662349
1886	City	2140972	1404434	2140988	1404418	PVC	closed	15	C-21893	round	YI1055_CB1224	52	118	85	972.5125	970.4682	976.8458	980.3015	22.640806
1887	City	2140998	1404410	2140988	1404418	<Null>	closed	15	C-21894	round	YI1056_CB1224	<Null>	118	<Null>	<Null>	970.4682	980.6452	980.3015	12.96699
1888	City	2140988	1404418	2141035	1404418	CMP	closed	18	C-21895	round	CB1224_YI1057	118	84	101	970.4682	970.0108	980.3015	977.0108	47.185402
1889	City	2141035	1404418	2141068	1404564	CMP	closed	18	C-21896	round	YI1057_JB253	89	89	89	969.5941	960.8878	977.0108	968.3045	150.525501
1890	City	2143213	1402596	2143244	1402499	CMP	closed	12	C-21897	round	CB1213_CB121	20	21	20.5	976.6431	976.0271	978.3098	977.7771	101.612386
1891	City	2143244	1402499	2143287	1402384	CMP	closed	12	C-21898	round	CB1214_CB121	21	29	25	976.0271	974.2483	977.7771	976.665	123.304491
1892	City	2143287	1402384	2143435	1402452	CMP	closed	12	C-21899	round	CB1215_PP113	31	12	21.5	974.0817	966.8162	976.665	967.8162	163.497903
1902	City	2143165	1405022	2143206	1405008	RCP	closed	30	C-21909	round	JB2135_JB1154	97	78	87.5	965.8665	966.6273	973.9498	973.1273	43.370774
1903	City	2143192	1404977	2143206	1405008	RCP	closed	24	C-21910	round	DI608_JB1154	85	77	81	966.3327	966.7106	973.416	973.1273	33.630809
1904	City	2143206	1405008	2143432	1404924	RCP	closed	30	C-21911	round	JB1154_JB1155	78	78	78	966.6273	966.3351	973.1273	972.8351	241.414363
1905	City	2143432	1404924	2143515	1404850	<Null>	closed	30	C-21912	round	JB1155_YI1052	<Null>	113	<Null>	<Null>	961.0302	972.8351	970.4468	110.582056
1906	City	2143468	1404866	2143515	1404850	CMP	closed	18	C-21913	round	CB1210_YI1052	73	73	73	965.7491	964.3635	971.8324	970.4468	49.428418
1907	City	2143515	1404850	2143749	1404768	<Null>	closed	30	C-21914	round	YI1052_JB1156	113	<Null>	<Null>	961.0302	<Null>	970.4468	963.8389	247.946636
1908	City	2143749	1404768	2143790	1404757	CMP	closed	24	C-21915	round	JB1156_OF1124	<Null>	55	<Null>	<Null>	958.3949	963.8389	962.9782	42.451036
1909	City	2143682	1405015	2143783	1404860	<Null>	closed	60	C-21916	rectangular	CV15_CV90	111	<Null>	<Null>	954.75	<Null>	964	970.2109	185.516764

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1910	City	2143861	1404708	2143843	1404631	<Null>	closed	60	C-21917	<Null>	CV89_CV91	<Null>	<Null>	<Null>	<Null>	<Null>	954	964.1093	78.813064
1911	City	2143912	1404509	2143956	1404397	<Null>	closed	54	C-21918	round	CV16_CV17	<Null>	<Null>	<Null>	<Null>	<Null>	952.137	945.7848	120.597864
1912	City	2143890	1404317	2143949	1404371	CMP	closed	18	C-21919	round	JB1158_OF1136	144	144	144	947.0266	931.7123	959.0266	943.7123	79.678813
1913	City	2143958	1404383	2144026	1404244	<Null>	closed	54	C-21920	round	CV92_CV143	<Null>	54	<Null>	<Null>	939.5511	945.4521	944.0511	153.85507
1914	City	2137543	1406921	2137325	1407083	Concrete	closed	24	C-21921	round	PP607_PP381	<Null>	<Null>	<Null>	<Null>	<Null>	938.4689	928.2429	271.128522
1915	City	2142233	1401895	2142233	1401824	CMP	closed	36	C-21922	round	CV73_CV75	52	48	50	944.9263	939.1637	949.2596	943.1637	70.423444
1916	City	2142101	1405449	2142042	1405469	RCP	closed	18	C-21924	round	CB1111_CB111(	124	150	137	997.606	995.1836	1007.939	1007.684	61.693557
1917	City	2142042	1405469	2141999	1405457	Concrete	closed	24	C-21925	round	CB1110_PP259	214	214	214	989.8503	974.1342	1007.684	991.9675	44.447586
1918	City	2142087	1404804	2142085	1404680	RCP	closed	18	C-21926	round	DI416_CB1107	45	50	47.5	996.194	992.5803	999.944	996.747	123.660289
1919	City	2142081	1404573	2142083	1404613	RCP	closed	18	C-21927	round	CB1105_CB110(	40	42	41	992.3952	992.1086	995.7285	995.6086	39.816601
1920	City	2142076	1404450	2142081	1404573	RCP	closed	18	C-21928	round	CB1104_CB110!	55	40	47.5	992.6321	992.3952	997.2154	995.7285	123.312608
1921	City	2142083	1404613	2142038	1404615	RCP	closed	18	C-21929	round	CB1106_CB111	43	57	50	992.0253	991.3124	995.6086	996.0624	44.624874
1922	City	2142036	1404572	2142038	1404615	RCP	closed	18	C-21930	round	CB1115_CB111	35	57	46	992.8742	991.3124	995.7909	996.0624	43.064419
1923	City	2142038	1404615	2142040	1404664	RCP	closed	24	C-21931	round	CB1114_CB111	67	76	71.5	990.4791	990.5159	996.0624	996.8492	48.9728
1924	City	2142040	1404664	2142043	1404801	RCP	closed	24	C-21932	round	CB1112_CB110!	76	130	103	990.5159	989.8736	996.8492	1000.707	136.783564
1925	City	2142043	1404801	2142040	1405140	RCP	closed	24	C-21933	round	CB1109_JB311	132	<Null>	<Null>	989.7069	<Null>	1000.707	1011.008	339.3236
1926	City	2142040	1405140	2142002	1405154	Concrete	closed	24	C-21934	round	JB311_PP258	<Null>	<Null>	<Null>	<Null>	<Null>	1011.008	993.0589	40.842314
1927	City	2142085	1404680	2142083	1404613	RCP	closed	18	C-21935	round	CB1107_CB110(	52	43	47.5	992.4137	992.0253	996.747	995.6086	67.550245
1929	City	2142109	1406412	2142112	1406523	RCP	closed	24	C-21937	round	CB675_CB676	60	50	55	986.9504	986.6025	991.9504	990.7692	111.172575
1930	City	2142107	1406312	2142109	1406412	RCP	closed	24	C-21938	round	CB674_CB675	68	60	64	987.4756	986.9504	993.1423	991.9504	100.321025
1931	City	2142112	1406523	2142118	1406571	RCP	closed	24	C-21939	round	CB676_CI587	50	42	46	986.6025	986.0815	990.7692	989.5815	48.191194
1932	City	2142118	1406571	2142121	1406623	RCP	closed	24	C-21940	round	CI587_CB678	42	46	44	986.0815	985.5005	989.5815	989.3338	52.42032
1933	City	2142148	1406580	2142118	1406571	RCP	closed	18	C-21941	round	CB677_CI587	38	42	40	988.3677	986.0815	991.5344	989.5815	31.161848
1934	City	2142121	1406623	2142126	1406785	RCP	closed	24	C-21942	round	CB678_YI588	46	32	39	985.5005	980.9163	989.3338	983.583	161.478208
1936	City	2142129	1406846	2142126	1406785	RCP	closed	18	C-21944	round	PP603_YI588	17	32	24.5	981.5692	980.9163	982.9859	983.583	61.606048
1937	City	2142126	1406785	2142075	1406788	RCP	closed	24	C-21945	round	YI588_HW251	32	40	36	980.9163	979.8806	983.583	983.2139	51.483401
1938	City	2142102	1405814	2142109	1406059	RCP	closed	18	C-21946	round	CB671_CB672	90	62	76	991.6186	990.2426	999.1186	995.4093	244.862274
1939	City	2142109	1406059	2142107	1406312	RCP	closed	18	C-21947	round	CB672_CB674	62	68	65	990.2426	987.4756	995.4093	993.1423	252.906911
1940	City	2141829	1409330	2141872	1409331	RCP	closed	18	C-21948	round	CB1118_DI422	53	54	53.5	987.1905	984.9957	991.6072	989.4957	43.066557
1942	City	2141892	1409372	2141889	1409539	RCP	closed	18	C-21950	round	JB213_CB1320	<Null>	51	<Null>	<Null>	981.4743	988.7509	985.7243	167.552097
1943	City	2141313	1409496	2141340	1409466	Metal	closed	18	C-21951	round	_CB1116	<Null>	40	<Null>	<Null>	991.4566	<Null>	994.7899	40.440314
1944	City	2141340	1409466	2141317	1409438	Concrete	closed	18	C-21952	round	CB1116_CB111	48	59	53.5	990.7899	990.4555	994.7899	995.3722	35.846769
1945	City	2141317	1409438	2141323	1409423	CMP	closed	18	C-21953	round	CB1117_PP237	61	61	61	990.2889	986.4653	995.3722	991.5486	16.463273
1946	City	2141421	1409441	2141401	1409434	CMP	closed	10	C-21954	round	YI417_CI418	15	24	19.5	992.727	992.8622	993.977	994.8622	20.60361
1947	City	2141401	1409434	2141409	1409424	CMP	closed	18	C-21955	round	CI418_JB211	24	24	24	992.8622	994	994.8622	996	12.48165
1948	City	2141409	1409424	2141340	1409466	CMP	closed	18	C-21956	round	JB211_CB1116	<Null>	45	<Null>	<Null>	991.0399	996	994.7899	80.073321
1958	City	2142437	1409706	2142756	1409859	RCP	closed	18	C-21966	round	CB1095_CB109(	<Null>	55	<Null>	<Null>	957.3999	971.7989	961.9832	353.391374
1959	City	2142746	1409899	2142756	1409859	RCP	closed	18	C-21967	round	CB1097_CB109(	37	55	46	959.5242	957.3999	962.6075	961.9832	42.107555
1960	City	2142756	1409859	2143224	1410013	RCP	closed	18	C-21968	round	CB1096_CB109!	55	55	55	957.3999	932.8569	961.9832	937.4402	493.089189
1964	City	2143689	1410072	2143676	1410082	RCP	closed	24	C-21972	round	CB1102_JB1122	36	36	36	932.2513	932.8275	935.2513	935.8275	17.066949
1965	City	2143676	1410082	2143599	1410072	CMP	closed	24	C-21973	round	JB1122_CB1101	<Null>	50	<Null>	<Null>	929.8556	935.8275	934.0223	77.496854
1966	City	2143680	1410105	2143676	1410082	RCP	closed	12	C-21974	round	OT414_JB1122	26	26	26	933.9118	933.6608	936.0785	935.8275	23.348865
1967	City	2143645	1410113	2143626	1410093	Concrete	closed	24	C-21975	round	CB1103_JB2141	46	<Null>	<Null>	931.5397	<Null>	935.373	937.0654	28.07925

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
1968	City	2143599	1410072	2143517	1410082	Metal	closed	24	C-21976	round	CB1101_	53	<Null>	<Null>	929.6056	<Null>	934.0223	<Null>	83.461481
1969	City	2143508	1410074	2143531	1410032	RCP	closed	54	C-21977	rectangular	CV8_CV9	<Null>	83	<Null>	<Null>	927.4761	935.0946	934.3928	48.185789
1970	City	2144027	1410049	2144014	1410048	RCP	closed	12	C-21978	round	DI1156_JB1123	20	62	41	943.4672	939.4093	945.1339	944.576	12.457795
1971	City	2144014	1410048	2144010	1410015	RCP	closed	18	C-21979	round	JB1123_CB1081	<Null>	40	<Null>	<Null>	941.8437	944.576	945.177	33.438123
1972	City	2144396	1410232	2144322	1410294	Plastic	closed	12	C-21980	round	_	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	157.105973
1973	City	2144419	1410212	2144453	1410169	CMP	closed	24	C-21981	round	DI400_DI1160	<Null>	76	<Null>	<Null>	956.4377	962	962.7711	54.557671
1974	City	2144453	1410169	2144526	1410110	CMP	closed	24	C-21982	round	DI1160_DI1159	76	74	75	956.4377	954.7047	962.7711	960.8714	93.986067
1975	City	2144526	1410110	2144601	1410101	CMP	closed	24	C-21983	round	DI1159_JB1124	74	52	63	954.7047	956.335	960.8714	960.6683	75.688022
1976	City	2144601	1410101	2144655	1410074	CMP	closed	24	C-21984	round	JB1124_DI1157	<Null>	64	<Null>	<Null>	953.233	960.6683	958.5663	60.716786
1977	City	2144655	1410074	2144762	1410084	CMP	closed	30	C-21985	round	DI1157_DI1158	64	62	63	953.233	952.6068	958.5663	957.7735	107.306163
1978	City	2144762	1410084	2144758	1410126	CMP	closed	30	C-21986	round	DI1158_DI1162	<Null>	52	<Null>	<Null>	951.9373	957.7735	956.2706	41.739911
1979	City	2144758	1410126	2144754	1410259	CMP	closed	30	C-21987	round	DI1162_CI95	52	12	32	951.9373	956.3298	956.2706	957.3298	133.25131
1980	City	2144754	1410259	2144754	1410262	RCP	closed	18	C-21988	round	CI95_JB1125	12	54	33	956.3298	953.6628	957.3298	958.1628	3.312223
1981	City	2144754	1410262	2144785	1410305	CMP	closed	30	C-21989	round	JB1125_DI1163	<Null>	102	<Null>	<Null>	948.42	958.1628	956.92	52.350255
1982	City	2144785	1410305	2144807	1410405	CMP	closed	30	C-21990	round	DI1163_JB1126	102	94	98	948.42	947.1334	956.92	954.9667	102.066703
1983	City	2144807	1410405	2144885	1410430	CMP	closed	30	C-21991	round	JB1126_DI1164	94	58	76	947.1334	947.0139	954.9667	951.8472	82.020382
1984	City	2144667	1409994	2144661	1410030	RCP	closed	24	C-21992	round	CB1082_CB1083	<Null>	43	<Null>	<Null>	960.6665	964.3754	964.2498	36.087371
1985	City	2144661	1410030	2144660	1410042	RCP	closed	24	C-21993	round	CB1083_PP81	<Null>	24	<Null>	<Null>	958.7618	964.2498	960.7618	12.49048
1986	City	2145357	1410028	2145359	1410067	RCP	closed	18	C-21994	round	CB1084_CB1085	36	41	38.5	957.4282	956.663	960.4282	960.0797	39.281991
1987	City	2145359	1410067	2145807	1410057	RCP	closed	18	C-21995	round	CB1085_CB1086	45	35	40	956.3297	953.0224	960.0797	955.9391	448.40231
1988	City	2145804	1410022	2145807	1410057	RCP	closed	18	C-21996	round	CB1087_CB1086	35	30	32.5	952.5788	953.4391	955.4955	955.9391	35.792862
1989	City	2145807	1410057	2146173	1410154	RCP	closed	18	C-21997	round	CB1086_JB1129	36	36	36	952.9391	918.7496	955.9391	921.7496	378.192716
1990	City	2146150	1410164	2146173	1410154	RCP	closed	24	C-21998	round	OT406_JB1129	18	18	18	916.2961	920.2496	917.7961	921.7496	24.297221
1991	City	2146173	1410154	2146328	1410214	RCP	closed	24	C-21999	round	JB1129_CB1089	<Null>	84	<Null>	<Null>	907.1899	921.7496	914.1899	165.731062
1992	City	2146319	1410229	2146328	1410214	RCP	closed	18	C-22000	round	CI91_CB1089	<Null>	74	<Null>	<Null>	908.0232	913.2021	914.1899	17.698694
1993	City	2146343	1410179	2146328	1410214	RCP	closed	18	C-22001	round	CB1088_CB1089	47	75	61	910.2278	907.9399	914.1445	914.1899	37.919263
1994	City	2146328	1410214	2146656	1410366	RCP	closed	24	C-22002	round	CB1089_JB1127	86	90	88	907.0232	902.7399	914.1899	910.2399	361.904741
1995	City	2146605	1410284	2146685	1410317	CMP	closed	18	C-22003	round	CB1090_CB1091	43	53	48	907.1254	906.6347	910.7087	911.0514	87.175082
1996	City	2146685	1410317	2146661	1410357	RCP	closed	18	C-22004	round	CB1091_CB1092	55	51	53	906.4681	906.291	911.0514	910.541	46.619365
1997	City	2146661	1410357	2146656	1410366	CMP/RCP	closed	18	C-22005	round	CB1092_JB1127	61	64	62.5	905.4577	904.9066	910.541	910.2399	9.856732
1998	City	2149639	1410484	2149645	1410501	CMP/RCP	closed	18	C-22006	round	YI1046_CB1070	18	50	34	949.3357	947.1954	950.8357	951.3621	18.026401
1999	City	2149645	1410501	2149652	1410536	RCP	closed	18	C-22007	round	CB1070_CB1162	<Null>	30	<Null>	<Null>	948.6915	951.3621	951.1915	35.584885
2000	City	2149652	1410536	2149646	1410541	RCP	closed	18	C-22008	round	CB1162_	<Null>	54	<Null>	<Null>	<Null>	951.1915	<Null>	8.036324
2001	City	2148435	1410564	2148434	1410599	CMP	closed	12	C-22009	round	CB1071_CB1072	<Null>	58	<Null>	<Null>	950.9603	955.995	955.7936	35.045868
2002	City	2148533	1410613	2148434	1410599	Plastic	closed	18	C-22010	round	YI1047_CB1072	20	50	35	953.9515	951.6269	955.6182	955.7936	99.888051
2003	City	2148434	1410599	2148413	1410608	CMP	closed	12	C-22011	round	CB1072_YI1048	<Null>	30	<Null>	<Null>	952.4062	955.7936	954.9062	22.640092
2004	City	2148386	1410621	2148389	1410600	CMP	closed	18	C-22012	round	CB1073_JB2166	46	46	46	952.4742	951.4174	956.3075	955.2507	20.515491
2005	City	2148413	1410608	2148389	1410600	Metal	closed	12	C-22013	round	YI1048_JB2166	30	<Null>	<Null>	952.4062	<Null>	954.9062	955.2507	24.81789
2006	City	2148357	1410620	2148361	1410601	CMP	closed	18	C-22014	round	CB1074_JB2167	42	42	42	952.8169	951.4351	956.3169	954.9351	19.636235
2007	City	2148361	1410601	2148198	1410602	Metal	closed	30	C-22015b	round	JB2167_JB2168	<Null>	<Null>	<Null>	<Null>	<Null>	954.9351	948.8613	162.923107
2008	City	2147961	1410607	2147957	1410593	CMP	closed	18	C-22016	round	YI1050_CB1164	<Null>	76	<Null>	<Null>	944.6687	949.5515	951.002	14.723766
2009	City	2148008	1410624	2148013	1410603	Metal	closed	18	C-22017	round	CB1163_JB2164	46	<Null>	<Null>	945.383	<Null>	949.2163	949.6622	21.751219
2010	City	2148037	1410618	2148039	1410603	CMP	closed	18	C-22018	round	CB1075_JB2165	50	50	50	945.2457	945.8026	949.4124	949.9692	15.113133

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2011	City	2148053	1410612	2148039	1410603	CMP	closed	18	C-22019	round	YI1049_JB2165	25	25	25	945.2255	947.8859	947.3088	949.9692	17.213719
2012	City	2148195	1410616	2148198	1410602	Other	closed	18	C-22020	round	OT388_JB2168	18	18	18	948.693	947.3613	950.193	948.8613	14.873013
2013	City	2147957	1410593	2147957	1410557	RCP	closed	30	C-22021	round	CB1164_CB1076	104	105	104.5	942.3353	942.474	951.002	951.224	35.773693
2014	City	2145518	1410330	2145705	1410324	CMP	closed	18	C-22022	round	CB1077_CB1078	41	100	70.5	951.5586	939.0216	954.9753	947.3549	186.323864
2015	City	2145705	1410324	2145705	1410348	CMP	closed	24	C-22023	round	CB1078_HW391	100	37	68.5	939.0216	940.6284	947.3549	943.7117	23.277796
2016	City	2145710	1410392	2145736	1410422	CMP	closed	24	C-22024	round	PP79_HW80	70	24	47	932.1667	934.2947	938	936.2947	40.477223
2017	City	2145910	1410466	2146049	1410559	RCP	closed	18	C-22025	round	OT391_DI1165	<Null>	47	<Null>	<Null>	914.486	928.423	918.4027	167.814601
2018	City	2146049	1410559	2146093	1410585	CMP	closed	24	C-22026	round	DI1165_	47	47	47	914.486	<Null>	918.4027	<Null>	50.509717
2019	City	2144840	1411210	2144875	1411145	RCP	closed	18	C-22027	round	CB1079_CB1080	<Null>	74	<Null>	<Null>	938.4421	946.7048	944.6088	73.626466
2020	City	2144836	1411103	2144875	1411145	HDPE	closed	6	C-22028	round	CI92_CB1080	<Null>	74	<Null>	<Null>	938.4421	944.8098	944.6088	57.755333
2021	City	2144875	1411145	2144981	1411037	RCP	closed	8	C-22029	round	CB1080_PI1041	74	18	46	938.4421	935.5772	944.6088	937.0772	151.221864
2022	City	2144844	1411075	2144907	1411119	HDPE	closed	6	C-22030	round	CI90_	<Null>	64	<Null>	<Null>	<Null>	944.8355	<Null>	76.769455
2023	City	2144885	1410430	2144935	1410493	RCP	closed	30	C-22031	round	DI1164_DI1168	58	56	57	947.0139	946.1877	951.8472	950.8544	79.90011
2024	City	2146806	1410370	2146788	1410414	RCP	closed	18	C-22032	round	CB1236_CB1237	52	51	51.5	906.9816	907.0688	911.3149	911.3188	46.915576
2025	City	2145010	1410199	2145010	1410329	RCP	closed	18	C-22033	round	CB1231_CB1232	<Null>	46	<Null>	<Null>	951.6708	957.7639	955.5041	129.263279
2026	City	2145231	1410322	2145010	1410329	RCP	closed	18	C-22034	round	DI1167_CB1232	50	46	48	953.5004	951.6708	957.6671	955.5041	221.048823
2027	City	2145350	1410137	2145231	1410322	RCP	closed	18	C-22035	round	DI654_DI1167	46	50	48	955.5906	953.5004	959.424	957.6671	220.393642
2028	City	2145010	1410329	2144992	1410437	RCP	closed	18	C-22036	round	CB1232_YI1045	46	40	43	951.6708	948.5864	955.5041	951.9197	110.245073
2029	City	2144982	1410441	2144950	1410445	RCP	closed	24	C-22038	round	CB1233_JB1130	<Null>	40	<Null>	<Null>	948.7783	952.7218	952.1116	31.754931
2030	City	2144950	1410445	2144935	1410493	RCP	closed	24	C-22039	round	JB1130_DI1168	<Null>	56	<Null>	<Null>	946.1877	952.1116	950.8544	49.736404
2031	City	2144935	1410493	2144936	1410589	RCP	closed	30	C-22040	round	DI1168_PI1042	56	56	56	946.1877	942.1968	950.8544	946.8635	96.527063
2032	City	2144920	1410665	2144909	1410692	Concrete	closed	30	C-22041	round	PP120_HW121	<Null>	30	<Null>	<Null>	939.8715	944	942.3715	29.500949
2033	City	2144794	1410772	2144823	1410801	CMP	closed	42	C-22042	round	OT659_CB1234	32	49	40.5	940.1595	939.5572	942.8262	943.6405	40.8672
2034	City	2144823	1410801	2144843	1410821	CMP	closed	42	C-22043	round	CB1234_CB1235	<Null>	46	<Null>	<Null>	939.3408	943.6405	943.1741	28.293166
2035	City	2144843	1410821	2144865	1410845	CMP	closed	30	C-22044	round	CB1235_PI1043	<Null>	46	<Null>	<Null>	933.6054	943.1741	937.4387	32.878468
2036	City	2134573	1408463	2134565	1408426	CMP	closed	18	C-22045	round	CB1197_CB1198	63	70	66.5	926.3701	925.7103	931.6201	931.5436	37.843086
2044	City	2140628	1408937	2140619	1408901	Concrete	closed	30	C-22053	round	CV255_CV256	<Null>	144	<Null>	<Null>	956.1515	974.1251	968.1515	37.48546
2045	City	2141056	1409041	2141049	1408978	CMP	closed	18	C-22054	round	CI526_CI524	<Null>	<Null>	<Null>	<Null>	<Null>	980.2718	979.4582	63.515769
2046	City	2141075	1408974	2141049	1408978	CMP	closed	18	C-22055	round	CI525_CI524	<Null>	<Null>	<Null>	<Null>	<Null>	980.0665	979.4582	26.713059
2048	City	2141025	1408939	2140906	1408941	CMP	closed	24	C-22057	round	JB224_DI523	<Null>	<Null>	<Null>	<Null>	<Null>	978.515	976.2211	119.474233
2049	City	2140906	1408941	2140896	1408931	Metal	closed	24	C-22058	round	DI523_CI522	<Null>	34	<Null>	<Null>	973.1395	976.2211	975.9728	14.038441
2050	City	2140896	1408931	2140880	1408904	CMP	closed	24	C-22059	round	CI522_CI520	<Null>	66	<Null>	<Null>	970.3515	975.9728	975.8515	31.345739
2051	City	2140908	1408904	2140880	1408904	CMP	closed	18	C-22060	round	CB1422_CI520	32	32	32	973.8478	973.1848	976.5145	975.8515	27.713719
2054	City	2140730	1402814	2140700	1402824	RCP	closed	12	C-22063	round	CI105_CI106	65	71	68	938.8529	938.0289	944.2696	943.9456	31.356092
2055	City	2140700	1402824	2140694	1402833	CMP	closed	18	C-22064	round	CI106_JB2122	73	73	73	937.8623	936.8016	943.9456	942.8849	11.33125
2056	City	2141153	1402587	2141170	1402556	<Null>	closed	<Null>	C-22065	<Null>	JB2125_CI107	<Null>	<Null>	<Null>	<Null>	<Null>	949.2549	947.0814	35.190911
2057	City	2141170	1402556	2141169	1402526	RCP	closed	18	C-22066	round	CI107_CB1241	<Null>	55	<Null>	<Null>	942.3486	947.0814	946.9319	29.818782
2058	City	2141169	1402526	2141171	1402420	RCP	closed	18	C-22067	round	CB1241_HW212	58	58	58	942.0986	938.8213	946.9319	943.6546	106.036883
2059	City	2141575	1402515	2141561	1402485	<Null>	closed	<Null>	C-22068	<Null>	JB2126_CI109	<Null>	<Null>	<Null>	<Null>	<Null>	960.088	958.0226	32.702403
2060	City	2141561	1402485	2141487	1402241	<Null>	closed	12	C-22069	round	CI109_HW73	<Null>	32	<Null>	<Null>	941.4453	958.0226	944.112	254.702185
2062	City	2141255	1403394	2141262	1403384	CMP	closed	18	C-22071	round	HW663_JB1136	24	24	24	962.21	965.7376	964.21	967.7376	12.012548
2063	City	2141262	1403384	2141250	1403316	Metal	closed	24	C-22072	round	JB1136_CB1240	<Null>	56	<Null>	<Null>	959.9913	967.7376	964.658	68.985225
2064	City	2141250	1403316	2141217	1403316	Metal	closed	18	C-22073a	round	CB1240_CI104	<Null>	62	<Null>	<Null>	959.0037	964.658	964.1704	33.518242

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2065	City	2141217	1403316	2141198	1403314	<Null>	closed	12	C-22074	round	CI104_HW2070	<Null>	31	<Null>	<Null>	957.6373	964.1704	960.2206	18.867001
2067	City	2139720	1403370	2139688	1403340	RCP	closed	30	C-22076	round	DI686_DI689	58	72	65	916.03	912.8912	920.8633	918.8912	44.511967
2068	City	2139975	1403428	2139975	1403406	RCP	closed	18	C-22077	round	JB260_CI683	<Null>	40	<Null>	<Null>	927.5386	931.7874	930.8719	21.641839
2069	City	2139975	1403406	2139869	1403402	RCP	closed	24	C-22078	round	CI683_CI684	45	58	51.5	927.1219	919.6522	930.8719	924.4855	106.409107
2070	City	2139869	1403402	2139797	1403382	RCP	closed	24	C-22079	round	CI684_CI685	59	51	55	919.5688	918.1703	924.4855	922.4203	74.729325
2071	City	2139797	1403382	2139720	1403370	RCP	closed	24	C-22080	round	CI685_DI686	52	57	54.5	918.087	916.1133	922.4203	920.8633	77.634395
2072	City	2140006	1403459	2140008	1403428	RCP	closed	18	C-22081	round	CI682_JB259	25	25	25	933.5349	932.2849	935.6182	934.3682	31.791014
2073	City	2140008	1403428	2139975	1403428	Concrete	closed	18	C-22082	round	JB259_JB260	37	<Null>	<Null>	931.2849	<Null>	934.3682	931.7874	33.253301
2074	City	2140162	1403398	2140056	1403407	RCP	closed	18	C-22083	round	CI675_CI676	68	33	50.5	939.1024	933.7563	944.7691	936.5063	106.503686
2075	City	2140056	1403407	2140006	1403400	Concrete	closed	18	C-22084	round	CI676_DI680	35	34	34.5	933.5896	930.3353	936.5063	933.1686	50.562248
2076	City	2140006	1403400	2139975	1403402	RCP	closed	18	C-22085	round	DI680_JB375	36	36	36	930.1686	927.9239	933.1686	930.9239	31.087613
2077	City	2140005	1403349	2140005	1403377	RCP	closed	18	C-22086	round	CI678_CI679	25	30	27.5	930.9658	930.6878	933.0491	933.1878	27.527178
2078	City	2140005	1403377	2140006	1403400	RCP	closed	18	C-22087	round	CI679_DI680	33	33	33	930.4378	930.4186	933.1878	933.1686	23.173807
2079	City	2140491	1403462	2140467	1403387	RCP	closed	18	C-22088	round	CI671_CI672	57	49	53	951.8642	948.5931	956.6142	952.6764	78.519057
2080	City	2140467	1403387	2140416	1403372	RCP	closed	18	C-22089	round	CI672_CI673	49	60	54.5	948.5931	947.3485	952.6764	952.3485	54.117267
2081	City	2140416	1403372	2140269	1403387	RCP	closed	18	C-22090	round	CI673_CI674	63	82	72.5	947.0985	943.4962	952.3485	950.3295	147.67576
2082	City	2140269	1403387	2140162	1403398	RCP	closed	18	C-22091	round	CI674_CI675	84	65	74.5	943.3295	939.3524	950.3295	944.7691	107.209752
2083	City	2138552	1404127	2138512	1404118	CMP	closed	18	C-22092	round	DI717_DI718	30	24	27	897.8831	897.429	900.3831	899.429	40.623399
2084	City	2138512	1404118	2138472	1404109	CMP	closed	18	C-22093	round	DI718_DI719	24	33	28.5	897.429	896.7908	899.429	899.5408	41.525428
2085	City	2138472	1404109	2138413	1404096	CMP	closed	18	C-22094	round	DI719_DI720	33	50	41.5	896.7908	896.4286	899.5408	900.5953	60.281583
2086	City	2138413	1404096	2138390	1404076	CMP	closed	18	C-22095	round	DI720_DI721	53	56	54.5	896.1786	896.2659	900.5953	900.9326	30.4845
2087	City	2138741	1404094	2138704	1404164	CMP	closed	42	C-22096	round	DI714_PP125	<Null>	142	<Null>	<Null>	888.8404	901.509	900.6737	79.393475
2088	City	2138696	1404170	2138639	1404148	<Null>	closed	18	C-22097	round	HW715_DI716	30	28	29	899.5815	899.5776	902.0815	901.9109	60.958912
2089	City	2138639	1404148	2138552	1404127	CMP	closed	18	C-22098	round	DI716_DI717	28	28	28	899.5776	898.0497	901.9109	900.3831	89.81459
2090	City	2138847	1403586	2138823	1403556	CMP	closed	24	C-22099	round	CV98_CV99	24	24	24	896.3427	896.1698	898.3427	898.1698	38.533137
2091	City	2138586	1403669	2138532	1403598	CMP	closed	12	C-22100	round	PP722_OF255	22	12	17	897.597	896.0636	899.4303	897.0636	88.635075
2092	City	2138549	1403781	2138464	1403711	CMP	closed	18	C-22101	round	DI723_OF322	33	30	31.5	897.4257	891.5	900.1757	894	110.139052
2093	City	2138743	1403935	2138772	1403903	Plastic	closed	8	C-22102	round	DI724_DI725	<Null>	30	<Null>	<Null>	898.2528	900.925	900.7528	43.143746
2095	City	2142773	1404970	2142874	1404933	CMP	closed	18	C-22104	round	DI1215_PI1065	78	78	78	985.9045	979.5	992.4045	986	108.223576
2096	City	2142893	1404734	2142867	1404766	CMP	closed	18	C-22105	round	CB1295_DI1233	52	70	61	990.3001	986.9432	994.6334	992.7766	41.750957
2097	City	2142830	1404767	2142867	1404766	CMP	closed	18	C-22106	round	DI1232_DI1233	64	71	67.5	987.3815	986.8599	992.7148	992.7766	37.313499
2098	City	2142867	1404766	2142865	1404866	CMP	closed	18	C-22107	round	DI1233_CB1297	72	50	61	986.7766	987.6039	992.7766	991.7706	99.200321
2099	City	2142846	1404848	2142865	1404866	CMP	closed	18	C-22108	round	CB1296_CB129	53	51	52	987.49	987.5206	991.9067	991.7706	25.730343
2100	City	2142865	1404866	2142890	1404898	CMP	closed	18	C-22109	round	CB1297_PI1064	51	51	51	987.5206	981.75	991.7706	986	40.970011
2102	City	2142975	1404871	2142975	1404887	CMP	closed	18	C-22111	round	DI1235_PI865	60	60	60	986.4954	981	991.4954	986	16.206925
2107	City	2142443	1404513	2142518	1404515	CMP/RCP	closed	42	C-22116	round	DI1221_JB1171	80	80	80	979.4321	979.4278	986.0988	986.0945	75.07869
2108	City	2142546	1404671	2142545	1404643	CMP	closed	18	C-22117	round	CB1287_CB128	70	72	71	983.9537	983.4773	989.787	989.4773	28.021062
2109	City	2142545	1404643	2142518	1404630	CMP/RCP	closed	18	C-22118	round	CB1288_JB1172	74	70	72	983.3106	981.3319	989.4773	987.1652	30.274704
2110	City	2142490	1404594	2142519	1404595	CMP	closed	18	C-22119	round	CB1290_CB128	57	60	58.5	981.6229	981.2955	986.3729	986.2955	28.921128
2111	City	2142518	1404630	2142519	1404595	CMP	closed	30	C-22120	round	JB1172_CB1289	79	70	74.5	980.5819	980.4622	987.1652	986.2955	35.168772
2112	City	2142519	1404595	2142528	1404559	CMP	closed	30	C-22121	round	CB1289_DI1227	73	73	73	980.2122	979.4337	986.2955	985.517	37.375354
2113	City	2142528	1404559	2142518	1404515	CMP/RCP	closed	30	C-22122	round	DI1227_JB1171	73	82	77.5	979.4337	979.2612	985.517	986.0945	45.29478
2114	City	2142518	1404515	2142519	1404386	CMP/RCP	closed	42	C-22123	round	JB1171_CB1291	83	80	81.5	979.1778	978.6181	986.0945	985.2848	128.350759

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2115	City	2142519	1404386	2142490	1404373	RCP	closed	42	C-22124	round	CB1291_CB129	85	83	84	978.2015	978.1455	985.2848	985.0622	31.69421
2116	City	2142490	1404373	2142487	1404335	CMP/RCP	closed	48	C-22125	round	CB1292_DI1231	88	80	84	977.7289	979.3756	985.0622	986.0423	38.637034
2119	City	2142487	1404335	2142501	1404312	CMP	closed	48	C-22128	round	DI1231_PI869	84	84	84	979.0423	972.1996	986.0423	979.1996	26.9813
2120	City	2142566	1404280	2142540	1404268	CMP	closed	18	C-22129	round	CB1293_CB129	72	97	84.5	978.653	976.938	984.653	985.0213	29.554957
2121	City	2142540	1404268	2142523	1404262	CMP	closed	18	C-22130	round	CB1294_PI1066	98	98	98	976.8546	969.8333	985.0213	978	17.822394
2123	City	2142576	1404363	2142526	1404351	CMP	closed	18	C-22132	round	DI1229_DI1230	59	61	60	980.5941	979.4213	985.5108	984.5046	52.105895
2124	City	2142526	1404351	2142566	1404280	CMP	closed	18	C-22133	round	DI1230_CB1293	62	71	66.5	979.3379	978.7363	984.5046	984.653	81.782874
2127	City	2142386	1405112	2142412	1405075	CMP	closed	18	C-22136	round	CB1305_DI1213	76	61	68.5	989.4209	987.8622	995.7542	992.9455	45.503575
2129	City	2142343	1404923	2142401	1404924	CMP	closed	18	C-22138	round	CB1282_JB1170	72	70	71	991.7799	989.4025	997.7799	995.2358	58.224379
2131	City	2142189	1404767	2142338	1404764	<Null>	closed	18	C-22140a	round	JB2057_JB2056	<Null>	79	<Null>	<Null>	987.1107	1002	993.694	149.324269
2132	City	2142535	1404961	2142520	1404832	CMP	closed	18	C-22141	round	CB1283_CB128	84	64	74	986.229	984.4255	993.229	989.7588	129.975514
2133	City	2142520	1404832	2142517	1404768	CMP	closed	18	C-22142	round	CB1284_DI1224	64	66	65	984.4255	982.272	989.7588	987.772	64.141307
2134	City	2142616	1404768	2142517	1404768	CMP	closed	18	C-22143	round	DI1223_DI1224	80	65	72.5	983.606	982.3553	990.2726	987.772	98.870234
2135	City	2142490	1404729	2142520	1404730	CMP	closed	18	C-22144	round	CB1285_CB128	59	76	67.5	982.942	981.9147	987.8587	988.248	30.270471
2136	City	2142517	1404768	2142520	1404730	CMP	closed	18	C-22145	round	DI1224_CB1286	67	76	71.5	982.1887	981.9147	987.772	988.248	38.741977
2138	City	2142520	1404730	2142518	1404630	CMP	closed	30	C-22147	round	CB1286_JB1172	77	78	77.5	981.8313	980.6652	988.248	987.1652	99.47942
2139	City	2140079	1404713	2140049	1404722	CMP	closed	18	C-22148	round	PP124_CB1252	59	59	59	945.0833	948.4038	950	953.3205	31.373625
2140	City	2140049	1404722	2140010	1404724	CMP	closed	18	C-22149	round	CB1252_CB125	87	96	91.5	946.0705	945.4172	953.3205	953.4172	38.903653
2141	City	2139995	1404714	2140010	1404724	RCP	closed	18	C-22150	round	HW712_CB1253	24	24	24	948.7379	951.4172	950.7379	953.4172	17.790785
2142	City	2140010	1404724	2139995	1404760	RCP	closed	24	C-22151	round	CB1253_CB125	97	108	102.5	945.3339	944.2072	953.4172	953.2072	39.245724
2143	City	2139995	1404760	2139995	1404774	RCP	closed	24	C-22152	round	CB1254_JB1176	130	<Null>	<Null>	942.3739	<Null>	953.2072	952.9717	14.291966
2145	City	2139873	1404776	2139859	1404875	CMP	closed	24	C-22154	round	JB1177_JB1179	175	175	175	940.0406	929.5256	954.6239	944.1089	99.35576
2146	City	2138987	1404952	2138924	1404990	RCP	closed	36	C-22155	round	CB1246_HW213	60	60	60	905.5721	899	910.5721	904	73.370071
2147	City	2138934	1405040	2138929	1404999	<Null>	closed	60	C-22156	rectangular	CV96_CV97	<Null>	85	<Null>	<Null>	903.2623	910.5018	910.3456	41.783747
2148	City	2138925	1405046	2138922	1405004	<Null>	closed	60	C-22157	rectangular	HW2128_HW21	89	85	87	903.1031	903.3827	910.5198	910.466	42.044502
2149	City	2138940	1405036	2138936	1404995	<Null>	closed	60	C-22158	rectangular	HW2129_HW21	90	85	87.5	902.9565	903.6832	910.4565	910.7665	40.918833
2150	City	2139144	1404531	2139141	1404588	<Null>	closed	8	C-22159	round	DI1265_DI1266	<Null>	<Null>	<Null>	<Null>	<Null>	927.5703	928.0579	57.36017
2151	City	2139141	1404588	2139197	1404811	<Null>	closed	18	C-22160	round	DI1266_CB1245	<Null>	<Null>	<Null>	<Null>	<Null>	928.0579	918	233.136361
2152	City	2139296	1404514	2139307	1404730	<Null>	closed	18	C-22161	round	CB1242_HW127	<Null>	18	<Null>	<Null>	924.5	931.8334	926	215.512962
2153	City	2139304	1404754	2139298	1404775	<Null>	closed	12	C-22162	round	DI1264_JB269	<Null>	<Null>	<Null>	<Null>	<Null>	924.7651	923.3987	22.189987
2154	City	2139298	1404775	2139262	1404790	<Null>	closed	18	C-22163	round	JB269_CB1244	<Null>	<Null>	<Null>	<Null>	<Null>	923.3987	921.5902	38.370459
2155	City	2139262	1404790	2139185	1404835	<Null>	closed	18	C-22164	round	CB1244_CI1139	<Null>	<Null>	<Null>	<Null>	<Null>	921.5902	914.7918	89.574811
2156	City	2139185	1404835	2139075	1404896	<Null>	closed	18	C-22165	round	CI1139_DI1267	<Null>	<Null>	<Null>	<Null>	<Null>	914.7918	913.694	125.836074
2157	City	2139110	1404834	2139075	1404896	<Null>	closed	18	C-22166	round	JB1184_DI1267	<Null>	<Null>	<Null>	<Null>	<Null>	911.2524	913.694	70.867682
2158	City	2139273	1404769	2139185	1404835	<Null>	closed	18	C-22167	round	CB1243_CI1139	<Null>	<Null>	<Null>	<Null>	<Null>	923.6563	914.7918	110.33716
2159	City	2139197	1404811	2139110	1404834	<Null>	closed	18	C-22168	round	CB1245_JB1184	<Null>	<Null>	<Null>	<Null>	<Null>	918	911.2524	89.849254
2160	City	2139075	1404896	2138987	1404952	RCP	closed	36	C-22169	round	DI1267_CB1246	<Null>	59	<Null>	<Null>	905.6554	913.694	910.5721	104.277165
2161	City	2139822	1404330	2139815	1404361	Concrete	closed	18	C-22170	round	DI1261_DI1260	61	57	59	953.2021	953.5673	958.2855	958.3173	31.766045
2162	City	2139823	1404361	2139823	1404375	Metal	closed	18	C-22171	round	DI1259_	63	63	63	952.6188	<Null>	957.8688	<Null>	13.951049
2163	City	2139823	1404361	2139815	1404361	Concrete	closed	18	C-22172	round	DI1259_DI1260	63	57	60	952.6188	953.5673	957.8688	958.3173	8.298827
2164	City	2139815	1404361	2139808	1404486	CMP	closed	18	C-22173	round	DI1260_JB278	57	80	68.5	953.5673	948.9646	958.3173	955.6313	124.482549
2165	City	2139813	1404505	2139808	1404486	CMP	closed	18	C-22174	round	DI1258_JB278	<Null>	75	<Null>	<Null>	949.3813	958.0653	955.6313	20.035869
2166	City	2139808	1404486	2139659	1404486	RCP	closed	18	C-22175	round	JB278_DI734	81	91	86	948.8813	942.8492	955.6313	950.4325	148.557693

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2167	City	2139700	1404601	2139659	1404486	RCP	closed	18	C-22176	round	CI1130_DI734	50	92	71	946.5161	942.7658	950.6828	950.4325	122.064847
2168	City	2139688	1404645	2139700	1404601	RCP	closed	18	C-22177	round	CI1129_CI1130	<Null>	50	<Null>	<Null>	946.5161	950	950.6828	44.70487
2169	City	2139570	1404591	2139469	1404598	<Null>	closed	36	C-22178	round	CI1131_CI1134	<Null>	<Null>	<Null>	<Null>	<Null>	945.546	936.4322	101.582019
2170	City	2139469	1404598	2139459	1404598	<Null>	closed	36	C-22179	round	CI1134_JB1183	<Null>	<Null>	<Null>	<Null>	<Null>	936.4322	938.7786	10.258049
2171	City	2139659	1404486	2139629	1404522	RCP	closed	18	C-22180	round	DI734_JB288	92	92	92	942.7658	941.4498	950.4325	949.1165	47.038175
2172	City	2139629	1404522	2139571	1404535	<Null>	closed	72	C-22181	round	JB288_CI1132	<Null>	<Null>	<Null>	<Null>	<Null>	949.1165	945.732	59.527817
2173	City	2139571	1404535	2139465	1404541	<Null>	closed	72	C-22182	round	CI1132_CI1133	<Null>	<Null>	<Null>	<Null>	<Null>	945.732	940.3544	105.453094
2174	City	2139465	1404541	2139459	1404598	<Null>	closed	24	C-22183	round	CI1133_JB1183	<Null>	<Null>	<Null>	<Null>	<Null>	940.3544	938.7786	57.995133
2175	City	2139459	1404598	2139450	1404640	<Null>	closed	24	C-22184	round	JB1183_DI1262	<Null>	<Null>	<Null>	<Null>	<Null>	938.7786	935.4525	43.206402
2176	City	2139576	1404760	2139576	1404736	RCP	closed	18	C-22185	round	CI1135_CI1136	57	57	57	939.1897	938.8013	943.9397	943.5513	24.185588
2177	City	2139576	1404736	2139492	1404739	RCP	closed	18	C-22186	round	CI1136_CI2069	75	84	79.5	937.3013	931.055	943.5513	938.055	83.434825
2178	City	2139469	1404782	2139466	1404740	RCP	closed	18	C-22187	round	CI1137_CI1138	44	44	44	932.5643	932.5447	936.231	936.2114	41.794747
2179	City	2139466	1404740	2139450	1404640	RCP	closed	18	C-22188	round	CI1138_DI1262	84	84	84	929.2114	928.4525	936.2114	935.4525	101.214844
2180	City	2139450	1404640	2139411	1404649	<Null>	closed	18	C-22189	round	DI1262_CB1347	<Null>	<Null>	<Null>	<Null>	<Null>	935.4525	935.6211	39.713901
2181	City	2139698	1404929	2139766	1404926	RCP	closed	24	C-22190	round	DI728_JB273	61	61	61	932.8147	936.1149	937.898	941.1982	68.152811
2182	City	2139859	1404875	2139852	1404952	CMP	closed	30	C-22191	round	JB1179_JB1180	<Null>	78	<Null>	<Null>	930.9217	944.1089	937.4217	78.067465
2183	City	2140015	1404839	2140016	1404869	CMP	closed	18	C-22192	round	CB1276_CB127	58	65	61.5	937.2027	936.5438	942.036	941.9605	29.827459
2184	City	2140016	1404869	2139859	1404875	CMP	closed	24	C-22193	round	CB1277_JB1179	66	66	66	936.4605	938.6089	941.9605	944.1089	156.787225
2188	City	2140190	1405019	2140162	1405021	CMP	closed	18	C-22197	round	CB1278_CB127	100	104	102	926.6507	926.0221	934.984	934.6888	28.301198
2189	City	2140066	1405337	2140067	1405309	Metal	closed	18	C-22198	round	CB1280_CB128	68	62	65	937.5655	938.224	943.2322	943.3907	28.377924
2190	City	2140075	1405413	2140072	1405384	<Null>	closed	<Null>	C-22199	<Null>	DI1296_	<Null>	<Null>	<Null>	<Null>	<Null>	950.465	<Null>	29.293612
2191	City	2140067	1405309	2140073	1405177	Metal	closed	18	C-22200	round	CB1281_PI904	62	<Null>	<Null>	938.224	<Null>	943.3907	932.9574	132.052738
2192	City	2145211	1403880	2145190	1403838	RCP	closed	24	C-22201	round	OT818_JB2035	45	45	45	930.7028	931.3616	934.4528	935.1116	47.095735
2193	City	2145176	1403862	2145171	1403838	CMP	closed	18	C-22202	round	CI1291_JB2036	25	25	25	933.3052	932.6772	935.3885	934.7606	24.085095
2194	City	2146347	1402720	2146352	1402676	RCP	closed	30	C-22203	round	CV105_CV106	60	60	60	898.7055	901.4047	903.7055	906.4047	44.359746
2195	City	2145871	1402733	2145861	1402694	RCP	closed	18	C-22205	round	CV104_JB289	25	56	40.5	909.6629	907.3997	911.7462	912.0664	40.529635
2196	City	2145861	1402694	2145838	1402500	CMP	closed	18	C-22206	round	JB289_OF1162	108	108	108	903.0664	893	912.0664	902	194.95204
2197	City	2137114	1408284	2137042	1408246	CMP	closed	48	C-22207	round	CB1321_HW227	104	56	80	924.5118	922.0713	933.1785	926.738	81.585814
2200	City	2132192	1414336	2132181	1414240	Metal	closed	30	C-22210	round	PP159_DI110	<Null>	<Null>	<Null>	<Null>	<Null>	958	956	96.486109
2201	City	2143564	1403367	2143413	1403579	<Null>	closed	18	C-22211	round	_DI3	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	959.6588	261.208211
2202	City	2143413	1403579	2143359	1403641	RCP	closed	18	C-22212	round	DI3_CB1304	<Null>	45	<Null>	<Null>	954.3974	959.6588	958.1474	82.464397
2203	City	2143359	1403641	2143303	1403697	RCP	closed	18	C-22213	round	CB1304_CI783	48	35	41.5	954.1474	953.3377	958.1474	956.2544	79.739672
2204	City	2142334	1404103	2142514	1404102	RCP	closed	18	C-22214	round	CB1372_JB1163	92	92	92	984.0247	977.0969	991.6914	984.7636	179.834095
2205	City	2142832	1404127	2142840	1404090	RCP	closed	15	C-22215	round	OT933_CB1378	12	8	10	978.1516	974.6919	979.1516	975.3586	37.342856
2207	City	2149926	1408081	2150034	1408017	CMP	closed	36	C-22217	round	CB1148_JB1700	<Null>	81	<Null>	<Null>	900.5907	913.3214	907.3407	125.006801
2209	City	2143611	1403225	2143615	1403221	RCP	closed	12	C-22219	round	CI1126_DI1212	21	23	22	974.9875	974.7923	976.7375	976.709	6.292437
2210	City	2143657	1403136	2143639	1403183	<Null>	closed	15	C-22220b	round	JB2052_DI2053	<Null>	<Null>	<Null>	<Null>	<Null>	980	979.7242	50.64124
2211	City	2143641	1403128	2143657	1403136	RCP	closed	18	C-22221	round	CI1127_JB2052	24	24	24	976.9246	978	978.9246	980	17.203446
2212	City	2143615	1403221	2143639	1403183	RCP	closed	12	C-22222	round	DI1212_DI2053	25	<Null>	<Null>	974.6257	<Null>	976.709	979.7242	44.690042
2213	City	2143078	1403930	2143106	1403915	RCP	closed	12	C-22223	round	CB1298_DI765	45	25	35	963.0719	963.001	966.8219	965.0844	32.076855
2223	City	2142393	1404045	2142478	1404044	RCP	closed	18	C-22233	round	CB1371_JB392	38	38	38	985.1322	980.5656	988.2989	983.7323	85.176492
2224	City	2142526	1404043	2142619	1404033	Metal	closed	18	C-22234	round	CI931_CB1373	30	45	37.5	979.066	975.2346	981.566	978.9846	93.274629
2225	City	2142712	1404033	2142710	1404016	RCP	closed	24	C-22235	round	CB1374_JB318	85	80	82.5	969.7179	968.7461	976.8012	975.4128	17.37941

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
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2227	City	2142549	1404127	2142586	1404127	RCP	closed	30	C-22237	round	CB1376_CB137	92	75	83.5	975.2826	975.2217	982.9493	981.4717	37.139545
2228	City	2142586	1404127	2142725	1404117	RCP	closed	30	C-22238	round	CB1377_JB1166	77	72	74.5	975.055	974.4309	981.4717	980.4309	139.616534
2229	City	2142725	1404117	2142724	1404089	RCP	closed	30	C-22239	round	JB1166_JB1165	74	35	54.5	974.2642	974.255	980.4309	977.1717	27.421204
2234	City	2142989	1403921	2143100	1403860	RCP	closed	15	C-22244	round	JB286_CI779	98	43	70.5	962.4928	959.3897	970.6595	962.973	127.229818
2235	City	2143100	1403860	2143162	1403816	RCP	closed	15	C-22245	round	CI779_CB1301	45	22	33.5	959.223	958.7241	962.973	960.5574	76.272452
2236	City	2143162	1403816	2143233	1403760	RCP	closed	18	C-22246	round	CB1301_CB130	23	62	42.5	958.6407	952.9799	960.5574	958.1466	89.724927
2237	City	2143199	1403772	2143233	1403760	Concrete	closed	15	C-22247	round	CB1303_CB130	45	36	40.5	955.135	955.1466	958.885	958.1466	35.502155
2242	City	2143303	1403697	2143297	1403704	RCP	closed	18	C-22252	round	CI783_DI782	39	48	43.5	953.0044	952.8878	956.2544	956.8878	8.238797
2243	City	2143297	1403704	2143267	1403729	RCP	closed	18	C-22253	round	DI782_CI781	50	45	47.5	952.7211	952.5936	956.8878	956.3436	39.283618
2244	City	2143267	1403729	2143233	1403760	RCP	closed	18	C-22254	round	CI781_CB1302	48	142	95	952.3436	946.3133	956.3436	958.1466	46.151939
2245	City	2143233	1403760	2143311	1403773	Concrete	closed	18	C-22255	round	CB1302_DI767	142	142	142	946.3133	947.3564	958.1466	959.1897	79.612687
2246	City	2142840	1404090	2142724	1404089	RCP	closed	18	C-22256	round	CB1378_JB1165	20	48	34	973.6919	973.1717	975.3586	977.1717	116.732109
2247	City	2142651	1404104	2142663	1404091	RCP	closed	24	C-22257	round	OT932_CB1375	21	35	28	975.6063	975.3071	977.3563	978.2238	18.054694
2248	City	2142663	1404091	2142724	1404089	RCP	closed	18	C-22258	round	CB1375_JB1165	38	49	43.5	975.0571	973.0884	978.2238	977.1717	61.12425
2249	City	2142724	1404089	2142712	1404033	RCP	closed	24	C-22259	round	JB1165_CB1374	50	85	67.5	973.005	969.7179	977.1717	976.8012	57.754138
2252	City	2142514	1404102	2142532	1404084	<Null>	closed	18	C-22262	round	JB1163_	<Null>	36	<Null>	<Null>	<Null>	984.7636	<Null>	25.398729
2255	City	2142477	1403723	2142481	1403726	RCP	closed	18	C-22265	round	DI950_CB1379	<Null>	58	<Null>	<Null>	982.2938	986	987.1271	5.483022
2256	City	2142481	1403726	2142504	1403741	Clay	closed	18	C-22266	round	CB1379_CB138	59	59	59	982.2104	981.4786	987.1271	986.3953	26.995544
2262	City	2143713	1402934	2143737	1402838	CMP/RCP	closed	18	C-22272	round	DI1243_DI1244	32	32	32	976.4645	974.0525	979.1312	976.7192	99.458817
2263	City	2143737	1402838	2143777	1402703	RCP	closed	18	C-22273a	round	DI1244_DI1245	32	32	32	974.0525	967.7034	976.7192	970.3701	139.928088
2264	City	2143811	1402626	2143801	1402616	RCP	closed	18	C-22274	round	CB1300_JB1174	47	61	54	963.3617	961.3105	967.2784	966.3938	14.118742
2265	City	2143801	1402616	2143833	1402523	RCP	closed	18	C-22275	round	JB1174_DI1246	65	31	48	960.9771	958.1641	966.3938	960.7474	98.407497
2266	City	2143833	1402523	2143860	1402413	RCP	closed	18	C-22276	round	DI1246_DI1247	31	31	31	958.1641	951.5352	960.7474	954.1185	112.803037
2267	City	2143860	1402413	2143862	1402403	RCP	closed	18	C-22277	round	DI1247_HW128	<Null>	18	<Null>	<Null>	953.4324	954.1185	954.9324	10.594804
2268	City	2143879	1402324	2143950	1402336	<Null>	closed	36	C-22278	round	CI1128_OF1138	<Null>	24	<Null>	<Null>	941.1571	952.5109	943.1571	72.608529
2269	City	2143939	1402103	2143879	1402324	CMP	closed	18	C-22279	round	DI1248_CI1128	32	34	33	952.7684	949.6776	955.4351	952.5109	228.597905
2272	City	2143588	1402138	2143879	1402324	<Null>	closed	18	C-22282	round	JB1175_CI1128	<Null>	<Null>	<Null>	<Null>	<Null>	962	952.5109	345.13519
2274	City	2143952	1404309	2143902	1404291	CMP	closed	18	C-22284	round	CB1247_JB1157	47	89	68	964.2787	959.083	968.1954	966.4997	52.558994
2275	City	2143902	1404291	2143890	1404317	CMP	closed	24	C-22285	round	JB1157_JB1158	90	61	75.5	958.9997	953.9433	966.4997	959.0266	28.681695
2276	City	2143766	1404235	2143810	1404265	CMP	closed	24	C-22286	round	CB1248_JB1159	81	69	75	955.8978	955.5051	962.6478	961.2551	52.708729
2277	City	2143801	1404277	2143810	1404265	RCP	closed	18	C-22287	round	DI1199_JB1159	21	69	45	957.1559	955.5051	958.9059	961.2551	15.724646
2278	City	2143810	1404265	2143890	1404317	CMP	closed	24	C-22288	round	JB1159_JB1158	69	60	64.5	955.5051	954.0266	961.2551	959.0266	95.933505
2279	City	2143187	1404102	2143280	1404113	CMP	closed	18	C-22289	round	CI119_CI117	32	43	37.5	972.4559	970.2706	975.1226	973.8539	93.864994
2280	City	2143258	1404139	2143280	1404113	CMP	closed	18	C-22290	round	CI118_CI117	44	32	38	973.8479	971.1872	977.5146	973.8539	33.76059
2281	City	2143280	1404113	2143425	1404137	CMP	closed	18	C-22291	round	CI117_CI116	43	54	48.5	970.2706	966.6583	973.8539	971.1583	146.535965
2282	City	2143425	1404137	2143466	1404151	CMP	closed	18	C-22292	round	CI116_JB266	54	54	54	966.6583	965.641	971.1583	970.141	43.545845
2283	City	2143442	1404170	2143466	1404151	CMP	closed	18	C-22293	round	CI115_JB266	83	83	83	967.2608	963.2243	974.1775	970.141	31.173607
2284	City	2143466	1404151	2143521	1404159	RCP	closed	18	C-22294	round	JB266_CI114	<Null>	30	<Null>	<Null>	964.9328	970.141	967.4328	55.633235
2286	City	2143675	1404206	2143729	1404229	CMP/RCP	closed	18	C-22296	round	JB1160_CI113	37	31	34	960.0939	958.7004	963.1772	961.2837	58.623535
2287	City	2143521	1404159	2143616	1404189	RCP	closed	18	C-22297	round	CI114_JB1161	32	30	31	964.7661	962.2562	967.4328	964.7562	99.089071
2288	City	2143616	1404189	2143675	1404206	CMP	closed	18	C-22298	round	JB1161_JB1160	30	36	33	962.2562	960.1772	964.7562	963.1772	61.520149
2289	City	2143729	1404229	2143766	1404235	CMP	closed	24	C-22299	round	CI113_CB1248	31	80	55.5	958.7004	955.9811	961.2837	962.6478	37.788771

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2292	City	2143067	1404128	2143048	1404127	CMP	closed	18	C-22302	round	PP123_DI1200	48	31	39.5	973.2211	973.062	977.2211	975.6453	18.637169
2293	City	2143048	1404127	2143018	1404124	CMP/RCP	closed	18	C-22303	round	DI1200_DI700	31	38	34.5	973.062	971.9068	975.6453	975.0735	30.358678
2294	City	2143018	1404124	2142981	1404094	RCP	closed	18	C-22304	round	DI700_CB1251	40	48	44	971.7402	971.6511	975.0735	975.6511	48.094048
2295	City	2142981	1404094	2142890	1404098	RCP	closed	18	C-22305	round	CB1251_CI121	53	45	49	971.2344	971.5385	975.6511	975.2885	90.492102
2296	City	2142890	1404098	2142890	1404036	RCP	closed	18	C-22306	round	CI121_CI945	52	56	54	970.9552	969.8676	975.2885	974.5343	62.460268
2297	City	2142890	1404036	2142929	1403954	RCP	closed	18	C-22307	round	CI945_DI937	62	54	58	969.3676	965.6053	974.5343	970.1053	90.981055
2298	City	2142135	1407086	2142126	1407062	RCP	closed	18	C-22308	round	DI795_DI796	<Null>	68	<Null>	<Null>	977.605	984.0482	983.2717	25.120709
2299	City	2142134	1407048	2142126	1407062	RCP	closed	18	C-22309	round	DI794_DI796	<Null>	68	<Null>	<Null>	977.605	984.6355	983.2717	16.689407
2300	City	2142126	1407062	2142083	1407058	RCP	closed	24	C-22310	round	DI796_DI798	68	42	55	977.605	978.1437	983.2717	981.6437	43.681159
2301	City	2142085	1407023	2142083	1407058	RCP	closed	18	C-22311	round	PP797_DI798	14	42	28	981.1696	978.1437	982.3363	981.6437	34.755902
2302	City	2142083	1407058	2142051	1407062	RCP	closed	24	C-22312	round	DI798_PP131	42	24	33	978.1437	976.041	981.6437	978.041	31.837407
2303	City	2141951	1407071	2141944	1407037	RCP	closed	30	C-22313a	round	DI799_DI800	38	54	46	972.7897	970.313	975.9564	974.813	34.723469
2304	City	2142127	1407270	2142074	1407264	RCP	closed	24	C-22314	round	PP793_JB293	32	64	48	978.7762	976.5751	981.4429	981.9084	53.392064
2305	City	2142082	1407299	2142074	1407264	RCP	closed	18	C-22315	round	DI792_JB293	26	64	45	980.4951	976.5751	982.6617	981.9084	36.157224
2307	City	2141944	1408667	2141953	1408663	RCP	closed	18	C-22317	round	HW1095_CI807	35	45	40	984.6906	982.8403	987.6072	986.5903	9.815644
2308	City	2141953	1408663	2141946	1408784	RCP	closed	18	C-22318	round	CI807_CI808	46	45	45.5	982.757	979.1029	986.5903	982.8529	121.57682
2309	City	2141946	1408784	2141946	1408833	RCP	closed	18	C-22319	round	CI808_FP2	45	18	31.5	979.1029	980.4177	982.8529	981.9177	48.897947
2317	City	2141934	1408965	2141973	1409040	RCP	closed	24	C-22327	round	DI809_JB296	<Null>	64	<Null>	<Null>	977.0999	980.0627	982.4332	84.392298
2318	City	2141973	1409040	2141988	1409050	RCP	closed	36	C-22328	round	JB296_CI810	<Null>	90	<Null>	<Null>	974.1751	982.4332	981.6751	18.347249
2319	City	2141878	1409889	2141878	1409886	CMP	closed	18	C-22329	round	PP804_DI803	18	18	18	980.4091	980.7208	981.9091	982.2208	2.277048
2320	City	2141884	1409770	2141890	1409797	RCP	closed	18	C-22330	round	JB294_DI802	<Null>	38	<Null>	<Null>	979.0397	982.9461	982.2064	28.048884
2321	City	2141890	1409797	2141878	1409886	RCP	closed	18	C-22331	round	DI802_DI803	<Null>	37	<Null>	<Null>	979.1375	982.2064	982.2208	90.099775
2322	City	2141878	1409886	2141930	1409886	RCP	closed	30	C-22332	round	DI803_JB295	37	64	50.5	979.1375	977.4147	982.2208	982.748	52.458962
2325	City	2141889	1409539	2141884	1409770	RCP	closed	18	C-22335	round	CB1320_JB294	51	33	42	981.4743	980.1961	985.7243	982.9461	230.374271
2326	City	2141834	1411090	2141842	1411109	Metal	closed	54	C-22336	round	_	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	21.077904
2327	City	2141827	1411299	2141842	1411284	Metal	closed	54	C-22337	round	_PP4792	<Null>	54	<Null>	<Null>	945.5	<Null>	950	20.837649
2328	City	2141850	1411280	2141887	1411247	CMP	closed	36	C-22338b	round	CV129_CV130	38	30	34	947.2271	950.0897	950.3937	952.5897	50.008252
2329	City	2141793	1412657	2141793	1412648	CMP	closed	15	C-22339	round	YI840_CB1324	13	38	25.5	974.8724	976.719	975.9557	979.8857	9.012608
2330	City	2141793	1412648	2141796	1412619	CMP	closed	15	C-22340	round	CB1324_CB132	38	50	44	976.719	975.8077	979.8857	979.9744	29.504827
2331	City	2141796	1412619	2141794	1412499	CMP	closed	12	C-22341	round	CB1325_PP135	50	12	31	975.8077	971.4193	979.9744	972.4193	119.65822
2332	City	2141923	1412406	2141858	1412405	Concrete	closed	24	C-22342	round	DI554_DI848	42	24	33	977.1782	975.9196	980.6782	977.9196	65.187957
2334	City	2141541	1405291	2141520	1405288	RCP	closed	24	C-22344	round	DI1294_CB1367	<Null>	55	<Null>	<Null>	963.7615	971.669	968.3448	20.835767
2335	City	2141520	1405288	2141487	1405295	RCP	closed	24	C-22345	round	CB1367_HW212	58	58	58	963.5115	959.6929	968.3448	964.5262	34.160785
2337	City	2141482	1404469	2141495	1404554	CMP/RCP	closed	18	C-22347	round	CB1370_JB1194	62	65	63.5	977.8172	971.1221	982.9839	976.5388	86.270913
2338	City	2141483	1404442	2141482	1404469	<Null>	closed	15	C-22348	round	_CB1370	<Null>	62	<Null>	<Null>	977.8172	<Null>	982.9839	26.955143
2339	City	2141563	1404758	2141509	1404764	CMP	closed	24	C-22349	round	OT894_DI1295	24	43	33.5	968.7986	966.2882	970.7986	969.8715	54.400625
2340	City	2141509	1404764	2141498	1404765	CMP	closed	24	C-22350	round	DI1295_CB1368	43	59	51	966.2882	966.0119	969.8715	970.9286	10.258401
2341	City	2141498	1404765	2141470	1404767	CMP	closed	30	C-22351	round	CB1368_CB136	84	33	58.5	963.9286	967.1855	970.9286	969.9355	28.456275
2342	City	2141470	1404767	2141364	1404821	<Null>	closed	30	C-22352	round	CB1369_OF115	<Null>	84	<Null>	<Null>	951.97	969.9355	958.97	118.986605
2343	City	2141495	1404554	2141498	1404765	RCP	closed	18	C-22353	round	JB1194_CB1368	65	55	60	971.1221	966.3453	976.5388	970.9286	210.536383
2344	City	2144065	1404083	2144067	1404040	CMP	closed	24	C-22354	round	CV144_CB1306	<Null>	109	<Null>	<Null>	932.6723	935.4718	941.7556	43.245474
2345	City	2144067	1404040	2144071	1404012	CMP	closed	48	C-22355	round	CB1306_CV147	111	55	83	932.5056	929.1129	941.7556	933.6962	28.697988
2346	City	2145889	1401627	2145925	1401628	CMP/RCP	closed	24	C-22356	round	DI1257_CV107	39	18	28.5	916.75	918.4847	920	919.9847	35.235732

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2347	City	2144649	1402639	2144687	1402627	Concrete	closed	36	C-22357	round	CV112_CV108	45	37	41	918.4882	923.2472	922.2382	926.3305	39.72918
2348	City	2144654	1403499	2144688	1403467	RCP	closed	48	C-22358	round	CV109_CV110	75	75	75	911.5051	913.6832	917.7551	919.9332	46.564671
2349	City	2144625	1403351	2144670	1403359	RCP	closed	24	C-22359	round	CB2043_JB1187	75	75	75	923.5644	921.8554	929.8144	928.1054	45.283943
2351	City	2144852	1403418	2144841	1403390	RCP	closed	18	C-22361	round	CV111_OF1147	57	18	37.5	913.36	918.4352	918.11	919.9352	30.504104
2352	City	2139782	1404901	2139761	1404915	CMP	closed	12	C-22362	round	DI726_JB272	60	94	77	940.1134	938.3086	945.1134	946.1419	25.021816
2353	City	2139761	1404915	2139766	1404926	RCP	closed	18	C-22363	round	JB272_JB273	96	96	96	938.1419	933.1982	946.1419	941.1982	11.830068
2354	City	2139766	1404926	2139771	1404946	Concrete	closed	24	C-22364	round	JB273_PI727	108	<Null>	<Null>	932.1982	<Null>	941.1982	933.3354	20.771694
2355	City	2139742	1404944	2139714	1404945	RCP	closed	18	C-22365	round	CB1255_CB1256	73	73	73	934.882	934.9457	940.9653	941.029	28.05372
2356	City	2139714	1404945	2139705	1405017	RCP	closed	18	C-22366	round	CB1256_CB1257	76	65	70.5	934.6957	927.809	941.029	933.2257	72.734924
2357	City	2139705	1405017	2139730	1405028	RCP	closed	18	C-22367	round	CB1257_CB1258	68	65	66.5	927.559	927.5328	933.2257	932.9495	27.236039
2358	City	2139730	1405028	2139749	1405086	RCP	closed	18	C-22368	round	CB1258_OF350	69	69	69	927.1995	921.7632	932.9495	927.5132	61.154167
2359	City	2139780	1405019	2139793	1405089	Concrete	closed	18	C-22369	round	OS126_OF298	86	<Null>	<Null>	921.75	<Null>	928.9167	923.0013	70.935051
2360	City	2139699	1405124	2139618	1405141	<Null>	closed	18	C-22370	round	CV100_CV101	<Null>	64	<Null>	<Null>	912.6667	920	918	81.946762
2361	City	2139702	1405452	2139702	1405425	RCP	closed	18	C-22371	round	DI729_CB1259	54	74	64	932.4483	932.3093	936.9483	938.476	26.53139
2362	City	2139702	1405425	2139676	1405392	RCP	closed	18	C-22372	round	CB1259_CB1260	76	75	75.5	932.1427	929.9558	938.476	936.2058	42.739254
2363	City	2139676	1405392	2139671	1405327	RCP	closed	18	C-22373	round	CB1260_JB387	77	77	77	929.7891	926.1357	936.2058	932.5524	64.396379
2364	City	2139644	1405333	2139671	1405327	RCP	closed	18	C-22374	round	CB1262_JB387	58	63	60.5	927.9066	927.3024	932.7399	932.5524	28.405954
2365	City	2139648	1405202	2139653	1405168	RCP	closed	18	C-22375	round	CB1263_CB1265	70	70	70	920.9137	920.6467	926.747	926.48	33.900869
2366	City	2139621	1405203	2139648	1405202	RCP	closed	18	C-22376	round	CB1264_CB1263	63	63	63	921.5476	921.497	926.7976	926.747	27.506112
2367	City	2139653	1405168	2139626	1405161	RCP	closed	18	C-22377	round	CB1265_CB1266	71	92	81.5	920.5633	918.687	926.48	926.3537	27.318011
2368	City	2139626	1405161	2139620	1405160	RCP	closed	24	C-22378	round	CB1266_OF351	95	95	95	918.437	911.8892	926.3537	919.8059	6.030552
2369	City	2139305	1406314	2139299	1406287	RCP	closed	18	C-22379	round	CB1274_CB1275	70	75	72.5	920.655	920.2008	926.4883	926.4508	28.28793
2370	City	2139299	1406287	2139294	1406278	RCP	closed	24	C-22380	round	CB1275_OF257	76	18	47	920.1175	919.7121	926.4508	921.2121	9.567737
2371	City	2139668	1405896	2139663	1405924	RCP	closed	18	C-22381	round	CB1267_CB1268	57	58	57.5	931.4121	930.8517	936.1621	935.685	28.118552
2372	City	2139663	1405924	2139636	1405952	RCP	closed	18	C-22382	round	CB1268_JB274	60	60	60	930.685	929.643	935.685	934.643	38.528897
2373	City	2139636	1405952	2139635	1406013	RCP	closed	18	C-22383	round	JB274_CB1269	60	73	66.5	929.643	928.2553	934.643	934.3386	61.001988
2374	City	2139635	1406013	2139604	1406016	RCP	closed	18	C-22384	round	CB1269_CB1270	74	68	71	928.1719	928.1129	934.3386	933.7796	31.37873
2375	City	2139604	1406016	2139600	1406132	RCP	closed	18	C-22385	round	CB1270_CB1271	72	78	75	927.7796	926.5621	933.7796	933.0621	115.119221
2376	City	2139600	1406132	2139539	1406214	RCP	closed	18	C-22386	round	CB1271_CB1272	80	59	69.5	926.3954	925.877	933.0621	930.7937	103.156518
2377	City	2139539	1406214	2139396	1406259	RCP	closed	18	C-22387	round	CB1272_CB1273	64	62	63	925.4604	922.5801	930.7937	927.7468	149.834399
2378	City	2139396	1406259	2139379	1406250	RCP	closed	18	C-22388	round	CB1273_OF1143	100	100	100	919.4135	912.5701	927.7468	920.9034	19.131585
2382	City	2142957	1408763	2142958	1408733	CMP	closed	18	C-22392	round	CB1310_CB1311	49	49	49	982.1028	982.0582	986.1861	986.1415	30.288302
2385	City	2142950	1408359	2142950	1408331	CMP	closed	24	C-22395	round	CB1312_CB1313	60	54	57	977.573	977.8264	982.573	982.3264	28.609512
2388	City	2142970	1408230	2142999	1408228	CMP	closed	36	C-22398	round	CB1314_CB1315	96	102	99	972.0364	971.7008	980.0364	980.2008	28.922004
2390	City	2142946	1407690	2142956	1407689	CMP	closed	48	C-22400	round	PP824_CI1148	42	94	68	965.2244	963.4509	968.7244	971.2842	9.934438
2391	City	2142956	1407689	2142992	1407689	CMP	closed	48	C-22401	round	CI1148_CI1149	<Null>	31	<Null>	<Null>	967.6679	971.2842	970.2512	35.815898
2392	City	2142992	1407689	2143006	1407692	CMP	closed	48	C-22402	round	CI1149_HW249	<Null>	48	<Null>	<Null>	959.2748	970.2512	963.2748	14.992216
2400	City	2133663	1411264	2133678	1411223	RCP	closed	18	C-22410	round	CV243_CV244	22	18	20	952.1198	954.5	953.9531	956	43.39007
2412	City	2136819	1411444	2136722	1411438	CMP	closed	18	C-22422	round	HW836_JB297	32	43	37.5	954.8209	955.8484	957.4875	959.4317	97.319387
2413	City	2136722	1411438	2136561	1411439	CMP	closed	18	C-22423	round	JB297_JB298	43	41	42	955.8484	951.9022	959.4317	955.3189	160.880817
2414	City	2136561	1411439	2136457	1411449	CMP	closed	18	C-22424	round	JB298_DI837	44	41	42.5	951.6522	947.1533	955.3189	950.5699	103.821583
2415	City	2136457	1411449	2136355	1411447	CMP	closed	24	C-22425	round	DI837_HW211	<Null>	24	<Null>	<Null>	944.3767	950.5699	946.3767	102.741601
2418	City	2135690	1411452	2135700	1411387	RCP	closed	48	C-22428	rectangular	CV58_CV59	85	85	85	916.9797	915.9594	924.063	923.0427	65.441289

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2420	City	2135607	1402604	2135631	1402704	Concrete	closed	42	C-22430b	round	CV87_CV88	57	57	57	912.3224	911.8258	917.0724	916.5758	103.872891
2421	City	2129354	1412046	2129316	1412083	Concrete	closed	36	C-22431	round	PP839_PP425	<Null>	<Null>	<Null>	<Null>	<Null>	942.4518	939.4782	52.627949
2423	City	2131674	1413527	2131508	1413463	CMP	closed	36	C-22433	round	PP816_JB110	39	39	39	948.9361	943.9351	952.1861	947.1851	178.496926
2424	City	2131242	1413316	2130957	1413118	CMP	closed	36	C-22434	round	CB1323_PP391	78	36	57	928.3091	927.257	934.8091	930.257	346.564913
2429	City	2130690	1408767	2130727	1408791	RCP	closed	36	C-22439	rectangular	CV145_CV146	<Null>	41	<Null>	<Null>	928.9105	932.8131	932.3271	43.814817
2430	City	2131174	1408283	2131199	1408317	CMP	closed	18	C-22440	round	CV117_CV118	28	28	28	920.4627	917.5823	922.796	919.9156	42.291709
2431	City	2131563	1408104	2131575	1408141	RCP	closed	72	C-22441	round	CV116_CV115	<Null>	75	<Null>	<Null>	910.863	918.6583	917.113	39.066771
2432	City	2130151	1409536	2130190	1409561	Concrete	closed	96	C-22442b	rectangular	CV119_CV120	<Null>	<Null>	<Null>	<Null>	<Null>	919.9741	921.2247	47.094467
2435	City	2140328	1407525	2140268	1407499	CMP	closed	48	C-22445a	round	CV140_CV139	68	67	67.5	938.9072	938.6576	944.5739	944.2409	65.099363
2436	City	2140319	1407055	2140309	1407052	CMP	closed	36	C-22446	round	HW1161_CB135	58	50	54	934.2776	936.3158	939.111	940.4825	11.350809
2438	City	2137610	1405697	2137589	1405739	CMP	closed	24	C-22448	round	HW256_CB893	45	112	78.5	926.1782	926.8061	929.9282	936.1394	47.180175
2439	City	2137640	1405785	2137589	1405739	Metal	closed	18	C-22449	round	CB892_CB893	109	114	111.5	929.6353	926.6394	938.7186	936.1394	68.320475
2440	City	2137589	1405739	2137466	1405795	Metal	closed	24	C-22450	round	CB893_CB894	114	140	127	926.6394	925.4253	936.1394	937.092	135.497137
2441	City	2137466	1405795	2137430	1405829	CMP	closed	24	C-22451	round	CB894_CB895	140	124	132	925.4253	924.742	937.092	935.0753	48.887637
2442	City	2137430	1405829	2137418	1405844	CMP	closed	24	C-22452	round	CB895_PI909	124	124	124	924.742	920.3773	935.0753	930.7106	19.501937
2443	City	2137349	1405798	2137332	1405764	CMP	closed	24	C-22453	round	OS160_JB151	<Null>	72	<Null>	<Null>	919.0781	925.8623	925.0781	37.889082
2444	City	2137332	1405764	2137326	1405757	CMP	closed	24	C-22454	round	JB151_DI243	75	46	60.5	918.8281	917.9575	925.0781	921.7908	9.45495
2445	City	2137326	1405757	2137294	1405762	CMP	closed	30	C-22455	round	DI243_CI855	48	63	55.5	917.7908	915.2029	921.7908	920.4529	32.634906
2446	City	2137294	1405762	2137213	1405799	CMP	closed	30	C-22456	round	CI855_CI856	63	63	63	915.2029	914.0443	920.4529	919.2943	88.983987
2447	City	2137213	1405799	2137017	1405894	CMP	closed	30	C-22457	round	CI856_HW297	64	37	50.5	913.961	912.7111	919.2943	915.7944	217.643666
2448	City	2142045	1408324	2142039	1408364	RCP	closed	18	C-22458	round	CV128_CV127	20	18	19	995.2854	994.2933	996.9521	995.7933	40.152098
2449	City	2142024	1408040	2142045	1407837	RCP	closed	18	C-22459	round	CB1329_CB133(	<Null>	28	<Null>	<Null>	993.0028	996.9906	995.3361	204.539258
2450	City	2142045	1407837	2142053	1407790	RCP	closed	18	C-22460	round	CB1330_PP136	29	18	23.5	992.9194	991.6565	995.3361	993.1565	47.328094
2451	City	2142080	1407950	2142083	1407915	RCP	closed	18	C-22461	round	CV125_CV126	18	18	18	993.7253	993.2542	995.2253	994.7542	35.030931
2452	City	2142069	1407639	2142073	1407584	RCP	closed	18	C-22462	round	CV123_CV124	18	18	18	989.248	987.6516	990.748	989.1516	55.66596
2453	City	2142061	1407594	2142074	1407582	Concrete	closed	18	C-22463	round	PP858_PP247	18	61	39.5	989.3904	984.317	990.8904	989.4003	17.559734
2454	City	2142209	1407520	2142198	1407487	CMP	closed	18	C-22464	round	CI1309_CI1308	<Null>	23	<Null>	<Null>	985.8095	987.0393	987.7262	34.752508
2456	City	2142117	1407531	2142119	1407484	RCP	closed	18	C-22466	round	CV121_CV122	<Null>	18	<Null>	<Null>	986.414	989.0649	987.914	47.184126
2465	City	2144873	1404977	2144886	1405053	RCP	closed	18	C-22475	round	JB71_YI594	<Null>	32	<Null>	<Null>	963.3583	970.6242	966.025	76.601156
2466	City	2144894	1404839	2144871	1404945	RCP	closed	18	C-22476	round	YI595_JB70	30	30	30	971.4695	970.5954	973.9695	973.0954	108.593203
2467	City	2144871	1404945	2144873	1404977	Concrete	closed	18	C-22477	round	JB70_JB71	<Null>	<Null>	<Null>	<Null>	<Null>	973.0954	970.6242	32.050697
2469	City	2148251	1405622	2148354	1405504	CMP	closed	42	C-22479	round	DI890_CB141	<Null>	82	<Null>	<Null>	897.0576	904	903.8909	156.532796
2470	City	2149433	1407039	2149339	1406846	<Null>	closed	<Null>	C-22480	<Null>	JB1198_PI922	<Null>	<Null>	<Null>	<Null>	<Null>	911.1419	902.275	214.24553
2472	City	2148505	1407846	2148458	1407841	Metal	closed	30	C-22482	round	OS164_HW447	<Null>	30	<Null>	<Null>	901.4037	906.0769	903.9037	46.565807
2473	City	2148458	1407841	2148278	1407727	CMP	closed	18	C-22483	round	HW447_DI878	<Null>	43	<Null>	<Null>	898.6688	903.9037	902.2521	213.509209
2474	City	2148414	1407999	2148359	1408054	CMP	closed	24	C-22484	round	OS98_HW446	<Null>	41	<Null>	<Null>	903.7599	915.6212	907.1766	78.092673
2475	City	2141853	1411159	2141891	1411156	CMP	closed	48	C-22485b	round	CV131_CV132	63	18	40.5	943.027	950.6631	948.277	952.1631	38.208939
2476	City	2142055	1407596	2141943	1407598	RCP	closed	18	C-22486	round	PP139_PP1145	21	21	21	990.0213	993.5482	991.7713	995.2982	111.923337
2479	City	2140312	1407408	2140282	1407407	CMP	closed	18	C-22489	round	CB1351_CB135	49	64	56.5	940.2869	938.6644	944.3702	943.9977	29.44056
2480	City	2140282	1407407	2140253	1407403	CMP	closed	18	C-22490	round	CB1352_PP250	64	35	49.5	938.6644	938.1198	943.9977	941.0365	29.13492
2487	City	2148240	1407820	2148278	1407727	CMP/RCP	closed	15	C-22497	round	YI877_DI878	<Null>	43	<Null>	<Null>	898.6688	902.5674	902.2521	101.092474
2488	City	2148278	1407727	2148296	1407678	CMP/RCP	closed	18	C-22498	round	DI878_CB1353	45	71	58	898.5021	896.546	902.2521	902.4627	51.494297
2489	City	2148296	1407678	2148268	1407668	CMP	closed	18	C-22499	round	CB1353_CB135	71	35	53	896.546	898.5481	902.4627	901.4648	29.792041

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2490	City	2148268	1407668	2148147	1407648	<Null>	closed	18	C-22500	round	CB1354_OF117	<Null>	18	<Null>	<Null>	896.9395	901.4648	898.4395	122.758991
2495	City	2146960	1405781	2146988	1405779	CMP	closed	36	C-22505	round	CB1383_CB138	62	76	69	919.5293	918.5545	924.696	924.8878	28.401509
2496	City	2146988	1405779	2147087	1405779	CMP	closed	36	C-22506	round	CB1384_OF156	76	36	56	918.5545	915.012	924.8878	918.012	98.681499
2497	City	2147125	1406001	2147226	1405972	CMP	closed	18	C-22507	round	CB1385_OF157	<Null>	76	<Null>	<Null>	907.6667	923.8345	914	105.010842
2498	City	2147270	1406059	2147351	1406065	CMP	closed	36	C-22508	round	HW958_CB1387	35	80	57.5	913.7051	908.6108	916.6218	915.2775	81.255094
2499	City	2147351	1406065	2147348	1406211	CMP	closed	48	C-22509	round	CB1387_JB325	91	91	91	907.6942	906.2288	915.2775	913.8121	146.079485
2500	City	2147379	1406063	2147351	1406065	CMP	closed	24	C-22510	round	CB1386_CB138	78	87	82.5	908.7198	908.0275	915.2198	915.2775	27.850276
2501	City	2147348	1406211	2147379	1406304	CMP	closed	48	C-22511	round	JB325_CB1388	<Null>	84	<Null>	<Null>	905.1248	913.8121	912.1248	98.193395
2502	City	2147379	1406304	2147395	1406353	CMP	closed	48	C-22512	round	CB1388_PI959	84	46	65	905.1248	908.0169	912.1248	911.8502	51.629165
2503	City	2147433	1406493	2147434	1406510	CMP	closed	48	C-22513	round	OS36_HW362	48	52	50	899.4781	897.6667	903.4781	902	16.659814
2504	City	2146896	1409022	2147226	1409046	CMP	closed	18	C-22514	round	CB109_OF1003	62	62	62	903.0312	894.8333	908.1979	900	331.25998
2505	City	2148275	1406837	2148194	1406784	RCP	closed	18	C-22515	round	CB1333_CB133	54	59	56.5	896.0988	894.6548	900.5988	899.5715	97.303703
2506	City	2148194	1406784	2148213	1406758	RCP	closed	18	C-22516	round	CB1334_CB133	61	64	62.5	894.4882	894.3816	899.5715	899.7149	31.934696
2507	City	2148213	1406758	2148187	1406718	RCP	closed	18	C-22517	round	CB1335_OF133	64	<Null>	<Null>	894.3816	<Null>	899.7149	893.0037	47.381676
2508	City	2148147	1406749	2148170	1406721	Concrete	closed	96	C-22518	rectangular	CV113_CV114	<Null>	96	<Null>	<Null>	882	890	890	36.795508
2509	City	2148118	1406692	2148138	1406695	RCP	closed	18	C-22519	round	CB1336_JB1191	64	64	64	894.1002	894.5695	899.4335	899.9028	20.541368
2510	City	2148138	1406695	2148157	1406707	<Null>	closed	18	C-22520	round	JB1191_	<Null>	<Null>	<Null>	<Null>	<Null>	899.9028	<Null>	22.077803
2511	City	2148495	1407189	2148413	1407388	CMP/RCP	closed	18	C-22521	round	DI850_CB1331	31	33	32	906.1849	900.4137	908.7682	903.1637	214.571183
2512	City	2148413	1407388	2148393	1407359	RCP	closed	18	C-22522	round	CB1331_CB133	35	18	26.5	900.247	900.5804	903.1637	902.0804	35.56355
2513	City	2148393	1407359	2148336	1407394	RCP	closed	18	C-22523	round	CB1332_DI849	<Null>	18	<Null>	<Null>	898.4959	902.0804	899.9959	67.592121
2514	City	2148182	1407901	2148132	1407966	CMP/RCP	closed	12	C-22524	round	CB1341_CB134	24	37	30.5	899.6176	897.9951	901.6176	901.0784	82.334482
2515	City	2148132	1407966	2148111	1407948	RCP	closed	18	C-22525	round	CB1342_CB134	37	29	33	897.9951	897.679	901.0784	900.0957	28.079885
2516	City	2148111	1407948	2148072	1407949	CMP/RCP	closed	18	C-22526	round	CB1343_JB1192	29	39	34	897.679	895.7932	900.0957	899.0432	39.278723
2517	City	2148092	1408013	2148072	1407994	CMP/RCP	closed	18	C-22527	round	CB1339_CB134	<Null>	32	<Null>	<Null>	897.5663	900.9444	900.233	27.306102
2518	City	2148072	1407994	2148072	1407949	CMP/RCP	closed	18	C-22528	round	CB1340_JB1192	32	39	35.5	897.5663	895.7932	900.233	899.0432	45.184098
2519	City	2148072	1407949	2147991	1407884	CMP	closed	24	C-22529	round	JB1192_OF1170	41	41	41	895.6265	895.2755	899.0432	898.6921	103.846719
2520	City	2148072	1407949	2147991	1407884	CMP	closed	24	C-22530	round	JB1192_OF1170	41	41	41	895.6265	895.2755	899.0432	898.6921	103.846719
2521	City	2147690	1408780	2147660	1408770	CMP	closed	36	C-22531	round	CB1338_CB133	<Null>	57	<Null>	<Null>	900.6319	905.3038	905.3819	32.127188
2522	City	2147936	1408866	2147907	1408848	CMP	closed	48	C-22532	round	OS96_PP97	76	48	62	901.6667	908.0844	908	912.0844	33.734619
2523	City	2147660	1408770	2147474	1408705	CMP	closed	36	C-22533	round	CB1337_OF312	57	36	46.5	900.6319	896.9093	905.3819	899.9093	196.700306
2524	City	2146656	1410366	2146680	1410386	CMP/RCP	closed	24	C-22534	round	JB1127_OF1161	93	51	72	902.4899	901.6665	910.2399	905.9165	30.923436
2525	City	2146788	1410414	2146731	1410401	CMP	closed	18	C-22535	round	CB1237_HW216	56	56	56	906.6521	898.9663	911.3188	903.633	58.393785
2530	City	2137546	1411921	2137574	1411886	RCP	closed	18	C-22540	round	JB306_CB2136	<Null>	49	<Null>	<Null>	960.3062	964.7094	964.3895	44.54506
2533	City	2134686	1406846	2134771	1406806	RCP	closed	18	C-22543	round	CI254_JB434	28	28	28	935.2652	935.2799	937.5985	937.6132	93.513032
2534	City	2134771	1406806	2134824	1406823	CMP	closed	18	C-22544	round	JB434_PP395	<Null>	24	<Null>	<Null>	934.7563	937.6132	936.7563	55.634133
2536	City	2135127	1409852	2135127	1409748	CMP	closed	36	C-22546	round	JB28_PI871	96	54	75	926.3619	925.9456	934.3619	930.4456	103.303986
2538	City	2147312	1410595	2147258	1410542	CMP	closed	18	C-22548	round	CB1239_JB1131	30	30	30	933.2389	930.1389	935.7389	932.6389	75.197737
2539	City	2147303	1410546	2147258	1410542	<Null>	closed	18	C-22549	round	CB1238_JB1131	<Null>	51	<Null>	<Null>	928.3889	934.2847	932.6389	45.08493
2540	City	2147258	1410542	2147228	1410525	<Null>	closed	<Null>	C-22550	<Null>	JB1131_	<Null>	<Null>	<Null>	<Null>	<Null>	932.6389	<Null>	35.030792
2546	City	2138573	1405898	2138582	1405879	Metal	closed	24	C-22556	round	CB952_JB328	126	<Null>	<Null>	931.588	<Null>	942.088	943.6371	21.741457
2550	City	2140215	1405035	2140155	1405033	<Null>	closed	<Null>	C-22560a	<Null>	CV142_CV19	<Null>	<Null>	<Null>	<Null>	<Null>	926	932.4224	60.167942
2553	City	2144010	1410015	2143598	1410037	RCP	closed	18	C-22563	round	CB1081_CB110	56	43	49.5	940.5103	930.2404	945.177	933.8237	412.575337
2554	City	2143598	1410037	2143596	1410009	CMP	closed	18	C-22564	round	CB1100_HW214	45	27	36	930.0737	930.2839	933.8237	932.5339	27.507733

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2556	City	2143480	1410002	2143513	1409997	RCP	closed	18	C-22566	round	CB1393_CB1394	75	78	76.5	928.3325	928.2358	934.5825	934.7358	33.178799
2557	City	2143513	1409997	2143541	1410005	RCP	closed	18	C-22567	round	CB1394_HW214	80	40	60	928.0691	922.6667	934.7358	926	29.433325
2558	City	2144129	1410092	2144019	1410102	CMP	closed	24	C-22568	round	CB1395_CB1396	<Null>	80	<Null>	<Null>	943.846	954.3861	950.5127	111.096097
2559	City	2144019	1410102	2143988	1410096	CMP	closed	24	C-22569	round	CB1396_CB1397	120	116	118	940.5127	939.7704	950.5127	949.4371	31.611304
2560	City	2143988	1410096	2143820	1410109	CMP	closed	24	C-22570	round	CB1397_PI912	<Null>	116	<Null>	<Null>	929.2177	949.4371	938.8844	167.606714
2561	City	2144691	1410290	2144754	1410262	Plastic	closed	8	C-22571	round	_JB1125	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	958.1628	69.212036
2562	City	2145210	1410385	2145317	1410427	CMP	closed	24	C-22572	round	DI1508_DI1504	65	95	80	951.3691	949.8829	956.7858	957.7996	115.035254
2563	City	2145317	1410427	2145303	1410545	CMP	closed	24	C-22573	round	DI1504_DI1505	97	85	91	949.7162	948.2196	957.7996	955.3029	119.079225
2564	City	2145303	1410545	2145302	1410612	CMP	closed	30	C-22574	round	DI1505_DI1507	88	101	94.5	947.9696	946.7287	955.3029	955.1454	66.37837
2565	City	2145302	1410612	2145289	1410742	CMP	closed	30	C-22575	round	DI1507_DI1510	101	120	110.5	946.7287	944.6631	955.1454	954.6631	130.994724
2566	City	2145289	1410742	2145295	1410782	CMP	closed	30	C-22576	round	DI1510_JB2206	124	124	124	944.3298	934.4913	954.6631	944.8246	40.043669
2567	City	2145295	1410782	2145289	1410788	CMP	closed	36	C-22577	round	JB2206_OF314	<Null>	45	<Null>	<Null>	943.2393	944.8246	946.9893	8.596384
2568	City	2145016	1410765	2145138	1410703	CMP	closed	18	C-22578	round	CB1398_DI1399	40	80	60	947.9929	948.213	951.3262	954.8797	136.614575
2569	City	2145138	1410703	2145289	1410742	CMP	closed	18	C-22579	round	DI1399_DI1510	83	118	100.5	947.963	944.8298	954.8797	954.6631	155.871484
2576	City	2127498	1413292	2127526	1413278	RCP	closed	30	C-22586	round	CB1399_CB1399	62	62	62	936.5609	936.5609	941.7276	941.7276	32.188015
2577	City	2127406	1413295	2127498	1413292	CMP	closed	24	C-22587	round	DI1105_DI1105	50	62	56	938.7796	937.7796	942.9463	942.9463	91.889481
2578	City	2127526	1413278	2127622	1413272	CMP	closed	30	C-22588	round	CB1400_JB401	70	70	70	936.0896	938.6721	941.9229	944.5054	95.749902
2579	City	2127622	1413272	2127645	1413327	Metal	closed	30	C-22589	round	JB401_DI1014	<Null>	<Null>	<Null>	<Null>	<Null>	944.5054	938	59.139095
2580	City	2127645	1413327	2127690	1413435	Metal	closed	30	C-22590	round	DI1014_DI1012	<Null>	<Null>	<Null>	<Null>	<Null>	938	936	116.749494
2581	City	2127690	1413435	2127749	1413530	CMP	closed	30	C-22591	round	DI1012_DI1011	<Null>	60	<Null>	<Null>	931.0734	936	936.0734	112.56582
2582	City	2127749	1413530	2127769	1413589	CMP	closed	30	C-22592	round	DI1011_HW182	60	60	60	931.0734	925	936.0734	930	62.360684
2583	City	2127506	1413510	2127628	1413545	Metal	closed	18	C-22593	round	CB1401_CB1402	48	42	45	933.3278	931.7426	937.3278	935.2426	127.050013
2584	City	2127628	1413545	2127570	1413564	HDPE	closed	12	C-22594	round	CB1402_DI1110	42	42	42	931.7426	932.8397	935.2426	936.3397	60.784123
2585	City	2127628	1413545	2127739	1413532	CMP	closed	24	C-22595	round	CB1402_JB400	42	64	53	931.7426	930.4247	935.2426	935.758	111.991
2586	City	2127739	1413532	2127756	1413592	CMP	closed	24	C-22596	round	JB400_HW183	64	64	64	930.4247	924.6667	935.758	930	61.471904
2587	City	2127828	1412977	2127876	1413100	CMP	closed	30	C-22597	round	DI103_CB467	<Null>	74	<Null>	<Null>	939.7718	949.8602	945.9385	132.041622
2588	City	2128978	1412421	2129006	1412355	RCP	closed	24	C-22600	round	JB403_JB402	90	90	90	942.4359	942.1139	949.9359	949.6139	71.693913
2590	City	2131538	1413448	2131415	1413407	CMP	closed	18	C-22602	round	JB2174_CI1	<Null>	54	<Null>	<Null>	935.8143	946.3533	940.3143	129.740257
2591	City	2131342	1413775	2131316	1413748	CMP	closed	36	C-22603	round	OS186_CB511	<Null>	57	<Null>	<Null>	935.9056	942.0024	940.6556	37.560325
2592	City	2133490	1412268	2133526	1412266	RCP	closed	24	C-22604	round	CB1211_CI611	53	59	56	961.0283	959.962	965.445	964.8787	36.07428
2593	City	2132030	1413666	2132259	1413675	Metal	closed	24	C-22605	round	JB415_JB407	<Null>	<Null>	<Null>	<Null>	<Null>	962.1205	965.7127	229.324145
2594	City	2131860	1413634	2132030	1413666	Metal	closed	24	C-22606	round	JB416_JB415	<Null>	<Null>	<Null>	<Null>	<Null>	958.7641	962.1205	172.852096
2595	City	2131860	1413634	2131852	1413660	CMP	closed	24	C-22607	round	JB416_PP201	<Null>	24	<Null>	<Null>	953.0191	958.7641	955.0191	27.426874
2596	City	2132030	1413666	2132034	1413629	RCP	closed	24	C-22608	round	JB415_PP974	<Null>	24	<Null>	<Null>	958.835	962.1205	960.835	37.155232
2597	City	2132647	1410992	2132040	1411032	CMP	closed	18	C-22609	round	CB1192_HW217	63	63	63	945.0756	915.2488	950.3256	920.4988	608.551725
2599	City	2132048	1411641	2132296	1411504	Concrete	closed	36	C-22611	round	PI1113_JB222	<Null>	107	<Null>	<Null>	923.2702	925.3369	932.1869	283.304392
2601	City	2130596	1406914	2130660	1406975	Concrete	closed	48	C-22613a	round	CV154_CV150	<Null>	<Null>	<Null>	<Null>	<Null>	940.5633	932.0497	88.196109
2610	City	2133909	1409088	2133925	1409089	RCP	closed	18	C-22622	round	CI1051_PP192	22	22	22	952.0215	951.3702	953.8548	953.2035	15.722084
2612	City	2134597	1408031	2134611	1408050	CMP	closed	30	C-22624	round	CV165_CV166	47	49	48	930.0833	929.9167	934	934	23.905338
2619	City	2141919	1409130	2141922	1409099	RCP	closed	18	C-22631	round	_HW2162	<Null>	18	<Null>	<Null>	985.5945	<Null>	987.0945	31.019764
2634	City	2134829	1407537	2134848	1407536	Metal	closed	8	C-22646	round	CV261_CV262	8	<Null>	<Null>	939.2655	<Null>	939.9322	939.7576	18.66741
2637	City	2131987	1411851	2132246	1411846	Metal	closed	12	C-22649	round	PP449_DI19	<Null>	<Null>	<Null>	<Null>	<Null>	928.522	935.9752	259.164957
2639	City	2135478	1407719	2135523	1407706	Concrete	closed	30	C-22651	round	DI1059_JB410	<Null>	<Null>	<Null>	<Null>	<Null>	924.0361	924.196	47.305811

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2640	City	2135520	1407685	2135523	1407706	Concrete	closed	18	C-22652	round	HW1060_JB410	<Null>	<Null>	<Null>	<Null>	<Null>	922	924.196	21.872649
2641	City	2135523	1407706	2135576	1407689	Concrete	closed	30	C-22653	round	JB410_JB409	<Null>	<Null>	<Null>	<Null>	<Null>	924.196	925.5408	55.91749
2642	City	2134132	1407076	2134042	1407116	RCP	closed	18	C-22654	round	CB885_CB885	74	74	74	933.8735	933.8735	940.0402	940.0402	98.455871
2643	City	2134161	1407141	2134175	1407099	Concrete	closed	18	C-22655	round	CB883_	68	<Null>	<Null>	934.7229	<Null>	940.3896	<Null>	44.642803
2645	City	2129396	1412060	2129368	1412054	RCP	closed	24	C-22657	round	JB406_HW188	<Null>	24	<Null>	<Null>	940.3498	944.4725	942.3498	27.746544
2650	City	2129559	1412231	2129592	1412260	RCP	closed	18	C-22662	round	CB1413_CB1414	60	52	56	944.2334	944.8429	949.2334	949.1762	43.804066
2651	City	2129664	1412193	2129559	1412231	Concrete	closed	18	C-22663	round	DI1022_DI1022	52	60	56	949.6713	949.0046	954.0046	954.0046	111.093181
2652	City	2129665	1412165	2129664	1412193	Concrete	closed	18	C-22664	round	CB1412_CB1412	56	52	54	951.65	951.9833	956.3167	956.3167	28.428601
2653	City	2129961	1412208	2129937	1412193	RCP	closed	18	C-22665	round	CB1417_CB1416	60	60	60	943.5629	943.371	948.5629	948.371	28.248008
2654	City	2129937	1412193	2129984	1412047	RCP	closed	18	C-22666	round	CB1416_CB1418	60	64	62	943.371	939.9321	948.371	945.2654	154.266343
2655	City	2130011	1412056	2129984	1412047	RCP	closed	18	C-22667	round	CB1419_CB1418	64	54	59	940.1069	940.7654	945.4402	945.2654	28.42872
2658	City	2129934	1412004	2129926	1411980	RCP	closed	30	C-22670	round	CB1420_DI1116	72	72	72	938.8843	938.1461	944.8843	944.1461	24.419004
2659	City	2129926	1411980	2130000	1411933	RCP	closed	42	C-22671	round	DI1116_DI1117	72	72	72	938.1461	932	944.1461	938	87.61931
2662	City	2137680	1405870	2137640	1405785	CMP	closed	18	C-22674	round	DI1121_CB892	45	106	75.5	931.924	929.8853	935.674	938.7186	93.768172
2668	City	2143880	1401719	2143814	1401763	Metal	closed	18	C-22680	round	WP209_CB1421	15	23	19	969.3399	968.896	970.5899	970.8127	78.376543
2670	City	2135847	1411378	2135787	1411389	RCP	closed	18	C-22682	round	DI1306_PP372	27	24	25.5	925.0782	923.0355	927.3282	925.0355	61.670407
2671	City	2135761	1411408	2135697	1411407	RCP	closed	30	C-22683	round	CB479_PP210	50	50	50	923.0641	921.7611	927.2308	925.9278	63.875411
2675	City	2137370	1411389	2137394	1411373	Metal	closed	36	C-22687	round	CV171_CV172	<Null>	<Null>	<Null>	<Null>	<Null>	946.3461	941.6234	28.600855
2677	City	2137995	1412721	2137979	1412712	CMP	closed	36	C-22689	round	OS190_OF340	<Null>	36	<Null>	<Null>	973.4138	979.6617	976.4138	18.132596
2678	City	2140532	1408068	2140524	1407948	Metal	closed	60	C-22690	round	OS161_HW248	<Null>	60	<Null>	<Null>	945.1836	950.1821	950.1836	119.979523
2679	City	2141293	1410672	2141342	1410731	CMP	closed	30	C-22691	round	OS236_PP408	70	32	51	954.1667	961.606	960	964.2726	76.218799
2680	City	2141365	1409456	2141340	1409466	Concrete	closed	24	C-22692	round	DI1509_CB1116	<Null>	48	<Null>	<Null>	990.7899	995.2438	994.7899	26.533058
2682	City	2141941	1408870	2141938	1408890	RCP	closed	18	C-22694	round	PP806_PP202	18	18	18	979.9482	979.8678	981.4482	981.3678	19.513831
2683	City	2143222	1410956	2143195	1410946	Concrete	closed	18	C-22695	round	HW243_CI1141	<Null>	<Null>	<Null>	<Null>	<Null>	973.6526	972.8865	28.746828
2685	City	2141905	1411792	2141903	1411757	RCP	closed	18	C-22697	round	CB1424_CB1423	54	54	54	962.1408	961.3775	966.6408	965.8775	35.099017
2689	City	2142134	1407390	2142128	1407383	CMP	closed	18	C-22701	round	CV173_CV174	23	23	23	980.729	981.8192	982.6457	983.7359	9.245816
2691	City	2140370	1407618	2140371	1407597	CMP	closed	48	C-22703	round	CV176_CV175	<Null>	58	<Null>	<Null>	942.4394	947.3062	947.2727	20.435434
2694	City	2142880	1406607	2142908	1406605	RCP	closed	18	C-22706	round	CI1307_CI1306	32	34	33	980.8447	980.4388	983.5114	983.2721	27.562697
2695	City	2142908	1406605	2142911	1406608	RCP	closed	18	C-22707	round	CI1306_PP130	34	18	26	980.4388	980.2733	983.2721	981.7733	4.335871
2697	City	2141975	1408567	2141953	1408663	RCP	closed	18	C-22709	round	PP1024_CI807	24	35	29.5	986.8284	983.6736	988.8284	986.5903	98.586097
2698	City	2141329	1408526	2141314	1408510	RCP	closed	12	C-22710	round	DI1307_DI1308	44	42	43	985.0633	984.9321	988.73	988.4321	22.206759
2699	City	2141314	1408510	2141317	1408409	Metal	closed	18	C-22711	round	DI1308_DI1309	42	60	51	984.9321	984.061	988.4321	989.061	100.669853
2700	City	2141317	1408409	2141228	1408404	CMP	closed	18	C-22712	round	DI1309_DI1310	60	82	71	984.061	981.1076	989.061	987.9409	88.459953
2701	City	2141228	1408404	2141142	1408367	CMP	closed	24	C-22713	round	DI1310_DI1311	82	42	62	981.1076	977.8206	987.9409	981.3206	93.437617
2702	City	2141142	1408367	2140858	1408433	CMP	closed	24	C-22714	round	DI1311_HW255	42	42	42	977.8206	974.3901	981.3206	977.8901	291.293667
2703	City	2141387	1408189	2141367	1408059	CMP	closed	24	C-22715	round	CI1305_WP256	<Null>	30	<Null>	<Null>	972.2025	988.65	974.7025	131.026943
2704	City	2140320	1407063	2140272	1407066	CMP	closed	36	C-22716	round	CV137_CV138	46	34	40	936.1467	936.2435	939.98	939.0768	48.125676
2705	City	2140309	1407052	2140280	1407052	CMP	closed	36	C-22717	round	CB1350_CB1349	50	48	49	936.3158	936.1335	940.4825	940.1335	28.573476
2706	City	2140280	1407052	2140271	1407055	CMP	closed	36	C-22718	round	CB1349_OF347	48	36	42	936.1335	935.9466	940.1335	938.9466	10.063821
2707	City	2142527	1405465	2142467	1405312	Concrete	closed	36	C-22719	round	CB670_PI562	190	<Null>	<Null>	982.3741	<Null>	998.2074	982.4818	164.586408
2708	City	2141802	1405695	2141783	1405657	CMP	closed	36	C-22720	round	JB159_CB800	274	275	274.5	977.3964	978.48	1000.23	1001.397	42.640147
2722	City	2139716	1406730	2139714	1406701	RCP	closed	36	C-22734	round	CV201_CV200	66	73	69.5	924.9355	925.6937	930.4355	931.777	29.141894
2737	City	2144475	1405604	2144508	1405603	RCP	closed	18	C-22749	round	PP1055_PP268	16	16	16	962.8859	961.2642	964.2192	962.5975	32.842658

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2738	City	2144023	1405258	2144030	1405221	RCP	closed	18	C-22750	round	PP1056_PP269	16	16	16	977.8701	975.8344	979.2034	977.1677	38.278125
2739	City	2144068	1405266	2144061	1405222	RCP	closed	18	C-22751	round	PP1057_PP270	10	6	8	977.5164	976.8059	978.3497	977.3059	45.215029
2740	City	2144080	1405985	2144079	1406023	RCP	closed	18	C-22752	round	PP1058_PP271	12	18	15	971.2864	968.71	972.2864	970.21	38.334264
2741	City	2144480	1405854	2144517	1405836	RCP	closed	18	C-22753	round	PP1189_PP272	16	18	17	962.3458	959.7832	963.6791	961.2832	40.911132
2742	City	2144911	1405698	2144911	1405730	RCP	closed	18	C-22754b	round	CV133_CV134	18	18	18	942.8754	941.2426	944.3754	942.7426	32.612406
2743	City	2144512	1406485	2144484	1406481	RCP	closed	18	C-22755	round	CV202_CV203	<Null>	18	<Null>	<Null>	957.8298	965.3271	959.3298	28.700205
2744	City	2144373	1406471	2144395	1406447	RCP	closed	30	C-22756	round	CV204_CV205	26	24	25	952.9902	954.4633	955.1569	956.4633	32.825898
2745	City	2144153	1406529	2144144	1406500	RCP	closed	18	C-22757	round	CV206_CV207	14	18	16	960.6132	958.6335	961.7799	960.1335	30.255408
2746	City	2144181	1406945	2144169	1406916	RCP	closed	18	C-22758	round	CV208_CV209	10	10	10	970.1434	969.2382	970.9767	970.0715	31.69793
2747	City	2143967	1406926	2144071	1406876	RCP	closed	18	C-22759	round	PP1060_PP273	18	18	18	971.7834	967.8074	973.2834	969.3074	114.699761
2749	City	2144672	1407009	2144695	1407039	RCP	closed	18	C-22761	round	CV210_CV211	12	12	12	959.5807	959	960.5807	960	37.831934
2754	City	2138853	1408599	2138845	1408570	Metal	closed	48	C-22766b	round	CB1390_CB118	98	102	100	957.6967	957.3626	965.8634	965.8626	30.786612
2757	City	2145564	1407815	2145600	1407851	RCP	closed	48	C-22769	round	CV214_CV215	64	48	56	909.7806	913.1835	915.114	917.1835	51.457564
2758	City	2145647	1407816	2145643	1407863	CMP	closed	24	C-22770	round	DI1348_OF319	<Null>	46	<Null>	<Null>	904.1667	916	908	46.862972
2759	City	2145749	1407820	2145712	1407871	CMP	closed	12	C-22771	round	DI1350_PP279	28	28	28	913.8604	907.5699	916.1937	909.9033	62.597977
2760	City	2145749	1407820	2145747	1407865	Metal	closed	12	C-22772	round	DI1350_PP278	28	<Null>	<Null>	913.8604	<Null>	916.1937	914.1353	44.799683
2761	City	2145204	1408262	2145228	1408314	RCP	closed	24	C-22773	round	DI1351_PP280	<Null>	24	<Null>	<Null>	914.3515	923.2003	916.3515	56.939668
2762	City	2145240	1407864	2145234	1407667	CMP	closed	24	C-22774	round	DI1352_HW281	<Null>	28	<Null>	<Null>	925.5936	943.0479	927.9269	197.584253
2767	City	2144489	1408846	2144595	1408801	Concrete	closed	48	C-22779	round	CV216_CV217	50	<Null>	<Null>	914.36	<Null>	918.5267	916.7702	115.551534
2768	City	2144493	1408755	2144596	1408787	RCP	closed	24	C-22780	round	CV218_CV219	33	33	33	916.9653	910.4608	919.7153	913.2108	107.255417
2771	City	2147644	1405315	2147642	1405284	CMP	closed	18	C-22783	round	CB1425_CB142	<Null>	54	<Null>	<Null>	912.5715	916.7498	917.0715	31.050709
2772	City	2147642	1405284	2147641	1405264	CMP	closed	18	C-22784	round	CB1426_HW290	<Null>	18	<Null>	<Null>	916.782	917.0715	918.282	20.477225
2773	City	2147664	1405254	2147674	1405257	RCP	closed	24	C-22785	round	HW1207_CI1208	35	50	42.5	911.673	911.4997	914.5897	915.6664	10.589575
2774	City	2147674	1405257	2147708	1405281	RCP	closed	24	C-22786	round	CI1208_CB1427	<Null>	55	<Null>	<Null>	911.036	915.6664	915.6193	41.54728
2775	City	2147708	1405281	2147720	1405291	RCP	closed	24	C-22787	round	CB1427_PP291	60	24	42	910.6193	912.5024	915.6193	914.5024	15.590782
2776	City	2145630	1407567	2145636	1407607	CMP	closed	24	C-22788	round	PP1078_DI1349	24	42	33	936.6264	928.5745	938.6264	932.0745	40.67688
2777	City	2145656	1407567	2145636	1407607	CMP	closed	24	C-22789	round	PP1079_DI1349	24	24	24	936.3121	930.0745	938.3121	932.0745	44.361853
2778	City	2145571	1406531	2145572	1406494	RCP	closed	18	C-22790	round	CV220_CV221	18	18	18	930.1068	928.6986	931.6068	930.1986	36.957586
2779	City	2145580	1406280	2145630	1406270	RCP	closed	36	C-22791	round	CV223_CV222	<Null>	43	<Null>	<Null>	917.1766	920.0298	920.7599	50.649484
2780	City	2145572	1406470	2145577	1406302	CMP	closed	18	C-22792	round	PP1080_PP293	18	23	20.5	927.6149	921.3833	929.1149	923.3	168.027889
2782	City	2137480	1406140	2137453	1406152	Concrete	closed	18	C-22794	round	HW534_CB928	58	66	62	932.8351	931.4107	937.6684	936.9107	29.571091
2783	City	2137453	1406152	2137419	1406168	CMP	closed	24	C-22795	round	CB928_CB929	68	74	71	931.244	930.514	936.9107	936.6807	37.591675
2784	City	2137569	1406307	2137553	1406273	Concrete	closed	18	C-22796	round	HW1000_HW30	35	18	26.5	934.5506	934.9322	937.4673	936.4322	37.57306
2799	City	2137182	1404475	2137193	1404508	CMP	closed	18	C-22811	round	CB1451_CB145	60	72	66	911.1552	910.2244	916.1552	916.2244	35.485211
2801	City	2136595	1401115	2136580	1401107	RCP	closed	18	C-22813	round	PP834_CB188	28	61	44.5	983.066	982.9298	985.3993	988.0131	16.63764
2808	City	2139717	1403389	2139722	1403382	RCP	closed	18	C-22820	round	CI688_JB365	22	33	27.5	918.4491	918.0121	920.2824	920.7621	7.930741
2809	City	2139722	1403382	2139720	1403370	RCP	closed	18	C-22821	round	JB365_DI686	35	34	34.5	917.8454	918.03	920.7621	920.8633	12.069414
2814	City	2145596	1402736	2145636	1402747	RCP	closed	18	C-22826	round	CB1431_PP323	36	18	27	908.3357	910.0139	911.3357	911.5139	41.817197
2817	City	2146708	1402721	2146725	1402682	CMP	closed	24	C-22829	round	DI1384_PP325	<Null>	24	<Null>	<Null>	905.6537	906.1097	907.6537	42.286619
2819	City	2138390	1404076	2138335	1404036	CMP	closed	18	C-22831	round	DI721_OF321	59	59	59	896.0159	890.5917	900.9326	895.5084	68.600514
2823	City	2138772	1403903	2138994	1403935	Metal	closed	8	C-22835	round	DI725_PP330	<Null>	30	<Null>	<Null>	897.5	900.7528	900	224.527797
2824	City	2138285	1403923	2138295	1403930	Metal	closed	18	C-22836	round	CV228_CV229	48	41	44.5	897.4197	898.2294	901.4197	901.6461	12.278846
2825	City	2138148	1403817	2138142	1403832	CMP	closed	24	C-22837	round	CV230_CV231	22	22	22	898.1667	896.8481	900	898.6815	15.654802

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2826	City	2138061	1403840	2138086	1403849	Metal	closed	18	C-22838	round	PP1106_JB367	30	28	29	894.8492	899.6811	897.3492	902.0144	26.228518
2827	City	2138086	1403849	2138128	1403869	CMP	closed	42	C-22839	round	JB367_PP331	68	43	55.5	896.3477	896.2489	902.0144	899.8322	47.231499
2834	City	2137867	1403217	2137877	1403252	CMP	closed	36	C-22846	round	HW1003_CB26	60	72	66	909	913.0354	914	919.0354	35.84447
2835	City	2137877	1403252	2137883	1403281	CMP	closed	36	C-22847	round	CB26_CB27	84	72	78	912.0354	913.0684	919.0354	919.0684	29.864407
2836	City	2137883	1403281	2137877	1403295	CMP	closed	36	C-22848	round	CB27_HW342	60	36	48	914.0684	913.6986	919.0684	916.6986	15.139527
2844	City	2137599	1402562	2137641	1402570	CMP	closed	12	C-22856	round	DI177_CB24	24	48	36	948.0223	946.9596	950.0223	950.9596	42.638546
2846	City	2131903	1411793	2131862	1411790	Metal	closed	42	C-22858	round	OS204_PP351	<Null>	<Null>	<Null>	<Null>	<Null>	923.8997	921.4922	41.538301
2853	City	2146106	1403231	2146148	1403048	Metal	closed	48	C-22865a	round	CV37_CV36	<Null>	<Null>	<Null>	<Null>	<Null>	912.5079	908	187.428399
2854	City	2142708	1399380	2142676	1399341	Metal	closed	54	C-22866a	round	CV38_CV39	<Null>	<Null>	<Null>	<Null>	<Null>	914	923.0759	50.690023
2866	City	2139334	1398183	2139381	1398294	RCP	closed	24	C-22878	round	PP1126_OF328	28	28	28	924.111	918.844	926.4443	921.1773	121.202201
2867	City	2139469	1405239	2139438	1405247	RCP	closed	30	C-22879	round	CB1438_CV242	78	48	63	912.9081	914.7918	919.4081	918.7918	32.850612
2868	City	2139469	1405239	2139438	1405247	RCP	closed	30	C-22880	round	CB1438_CV242	78	48	63	912.9081	914.7918	919.4081	918.7918	32.851325
2869	City	2146148	1404473	2146146	1404443	CMP	closed	30	C-22881	round	CB1135_JB370	97	97	97	933.5096	929.8788	941.5929	937.9622	29.992226
2874	City	2136853	1406947	2136991	1406933	Concrete	closed	18	C-22886	round	CB835_CB832	142	130	136	926.4839	934.2946	938.3172	945.1279	137.879072
2876	City	2129152	1410994	2129086	1411034	RCP	closed	18	C-22888	round	CV247_CV248	22	18	20	960.7976	961.5493	962.6309	963.0493	77.299441
2881	City	2135903	1411933	2135864	1411923	Metal	closed	24	C-22893	round	CV251_CV252	<Null>	<Null>	<Null>	<Null>	<Null>	928.859	925.8715	40.828745
2886	City	2147843	1408831	2147690	1408780	CMP	closed	36	C-22898	round	HW1272_CB133	49	48	48.5	905.7702	901.3038	909.8535	905.3038	161.429601
2887	City	2144493	1408734	2144609	1408777	CMP	closed	24	C-22899	round	CV253_CV254	<Null>	22	<Null>	<Null>	910.9526	922.4257	912.7859	123.127971
2893	City	2149254	1408521	2149246	1408456	CMP	closed	24	C-22905	round	DI1279_CB1058	<Null>	63	<Null>	<Null>	922.3585	931.4104	927.6085	65.613637
2898	City	2140043	1403427	2140008	1403428	Concrete	closed	24	C-22910	round	_JB259	<Null>	29	<Null>	<Null>	931.9515	<Null>	934.3682	35.504734
2899	City	2139975	1403402	2139975	1403406	Concrete	closed	18	C-22911	round	JB375_CI683	<Null>	45	<Null>	<Null>	927.1219	930.9239	930.8719	4.385456
2902	City	2139383	1403778	2139380	1403713	Concrete	closed	48	C-22914	round	CI458_JB376	<Null>	<Null>	<Null>	<Null>	<Null>	916.0462	914.739	65.474004
2904	City	2139582	1403390	2139610	1403387	RCP	closed	18	C-22916	round	CB1443_JB378	50	52	51	914.5527	914.2	918.7194	918.5333	28.794791
2905	City	2139603	1403465	2139582	1403390	RCP	closed	18	C-22917	round	JB377_CB1443	52	49	50.5	915.2154	914.6361	919.5487	918.7194	78.030866
2906	City	2139596	1403483	2139603	1403465	RCP	closed	18	C-22918	round	CB1442_JB377	51	52	51.5	915.6252	915.2154	919.8752	919.5487	19.083447
2907	City	2139570	1403593	2139596	1403483	RCP	closed	18	C-22919	round	CB1444_CB1442	49	51	50	915.6849	915.6252	919.7682	919.8752	112.934003
2908	City	2139618	1403727	2139636	1403749	RCP	closed	18	C-22920	round	CB1445_JB379	47	68	57.5	920.9228	919.715	924.8395	925.3817	28.820492
2909	City	2139838	1403756	2139837	1403737	RCP	closed	18	C-22921	round	CI545_CI544	41	54	47.5	931.5714	930.3868	934.9881	934.8868	18.655906
2910	City	2139636	1403749	2139638	1403768	RCP	closed	18	C-22922	round	JB379_JB380	68	68	68	919.715	919.8733	925.3817	925.54	19.008857
2911	City	2139638	1403768	2139641	1403782	Concrete	closed	18	C-22923	round	JB380_JB381	75	84	79.5	919.29	919.0464	925.54	926.0464	14.017561
2912	City	2139641	1403782	2139613	1403791	RCP	closed	18	C-22924	round	JB381_CB1446	84	91	87.5	919.0464	917.123	926.0464	924.7063	29.091131
2913	City	2139635	1403804	2139609	1403803	RCP	closed	48	C-22925	round	HW456_JB58	63	84	73.5	918.3292	917.5014	923.5792	924.5014	25.650407
2914	City	2139518	1403808	2139523	1403788	Concrete	closed	18	C-22926	round	CB1447_JB382	<Null>	<Null>	<Null>	<Null>	<Null>	922.2643	923.092	21.022395
2915	City	2139503	1403732	2139523	1403788	RCP	closed	18	C-22927	round	CB1448_JB382	74	74	74	914.7918	916.9253	920.9585	923.092	59.041955
2916	City	2139498	1403714	2139503	1403732	RCP	closed	18	C-22928	round	JB384_CB1448	50	70	60	914.8404	915.1252	919.0071	920.9585	18.749875
2917	City	2139520	1403695	2139498	1403714	RCP	closed	18	C-22929	round	CB684_JB384	74	49	61.5	914.9875	914.9238	921.1542	919.0071	28.709812
2918	City	2139489	1403710	2139498	1403714	RCP	closed	18	C-22930	round	YI457_JB384	23	43	33	915.5145	915.4238	917.4312	919.0071	9.99333
2919	City	2139529	1403688	2139520	1403695	RCP	closed	18	C-22931	round	JB383_CB684	<Null>	71	<Null>	<Null>	915.2375	920.5469	921.1542	11.564099
2920	City	2139547	1403676	2139529	1403688	Concrete	closed	18	C-22932	round	JB385_JB383	<Null>	<Null>	<Null>	<Null>	<Null>	919.3856	920.5469	21.681765
2923	City	2134622	1407250	2134630	1407225	CMP	closed	12	C-22935	round	OS453_CI1077	32	24	28	940.5713	942.381	943.238	944.381	26.490355
2924	City	2134630	1407225	2134639	1407205	CMP	closed	12	C-22936	round	CI1077_CI1078	24	26	25	942.381	942.0363	944.381	944.203	22.124972
2925	City	2134639	1407205	2134668	1407163	CMP	closed	12	C-22937	round	CI1078_HW196	29	32	30.5	941.7863	939.1503	944.203	941.817	50.854846
2926	City	2139671	1405327	2139662	1405276	Concrete	closed	18	C-22938	round	JB387_CB1261	<Null>	61	<Null>	<Null>	925.0626	932.5524	930.1459	51.868432

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
2939	City	2142619	1404033	2142890	1404036	Metal	closed	18	C-22951	round	CB1373_CI945	45	62	53.5	975.2346	969.3676	978.9846	974.5343	271.019785
2945	City	2143617	1403364	2143587	1403422	RCP	closed	18	C-22957	round	PP1292_JB393	26	26	26	969.7451	968.8034	971.9117	970.9701	64.618648
2946	City	2143720	1403057	2143669	1403234	RCP	closed	12	C-22958	round	DI1293_PP459	24	12	18	978.7379	978.6178	980.7379	979.6178	184.102214
2953	City	2139658	1405597	2139649	1405593	Concrete	closed	24	C-22965	round	CB1441_OF352	<Null>	68	<Null>	<Null>	915.7138	923.0865	921.3805	9.706698
2954	City	2139692	1405611	2139658	1405597	RCP	closed	24	C-22966	round	CB1440_CB144	68	81	74.5	917.0295	916.3365	922.6962	923.0865	36.884489
2955	City	2148013	1410603	2147957	1410593	CMP	closed	30	C-22015e	round	JB2164_CB1164	<Null>	90	<Null>	<Null>	943.502	949.6622	951.002	57.145979
2956	City	2148039	1410603	2148013	1410603	Metal	closed	30	C-22015d	round	JB2165_JB2164	<Null>	<Null>	<Null>	<Null>	<Null>	949.9692	949.6622	25.857784
2957	City	2148198	1410602	2148039	1410603	Metal	closed	30	C-22015c	round	JB2168_JB2165	<Null>	<Null>	<Null>	<Null>	<Null>	948.8613	949.9692	158.552615
2958	City	2148389	1410600	2148361	1410601	Metal	closed	30	C-22015a	round	JB2166_JB2167	<Null>	<Null>	<Null>	<Null>	<Null>	955.2507	954.9351	28.807973
2959	City	2137523	1399631	2137590	1399621	CMP	closed	48	C-20879a	round	CV236_CV31	50	48	49	935.8428	938.6577	940.0095	942.6577	67.28657
2961	City	2128393	1409592	2128468	1409578	CMP	closed	72	C-21281b	round	CV50_CV51	86	75	80.5	927.3514	934.1646	934.5181	940.4146	76.157076
2962	City	2128919	1409310	2128959	1409362	CMP	closed	48	C-21296b	round	CV55_CV56	86	86	86	931.7825	930.7215	938.9492	937.8882	65.957147
2963	City	2139215	1398535	2139284	1398532	Concrete	closed	48	C-21412a	rectangular	CB754_CV237	214	48	131	906.2691	902	924.1024	906	69.627905
2964	City	2139177	1398534	2139215	1398535	Concrete	closed	18	C-21411a	rectangular	CB753_CB754	204	204	204	906.1465	907.1024	923.1465	924.1024	37.672009
2965	City	2139138	1398533	2139177	1398534	RCP	closed	18	C-21410a	rectangular	CV238_CB753	<Null>	204	<Null>	<Null>	906.1465	908.2557	923.1465	39.593606
2966	City	2132646	1410958	2132647	1410992	CMP	closed	10	C-21807a	round	CB1191_CB119	60	60	60	945.4412	945.3256	950.4412	950.3256	33.813252
2967	City	2133552	1410939	2133617	1410954	RCP	closed	18	C-21851b	round	DI1176_CB1381	45	55	50	949.748	949.1346	953.498	953.7179	67.260667
2968	City	2141951	1407071	2141944	1407037	RCP	closed	30	C-22313b	round	DI799_DI800	38	54	46	972.7897	970.313	975.9564	974.813	34.719736
2969	City	2141850	1411280	2141887	1411247	CMP	closed	36	C-22338a	round	CV129_CV130	38	30	34	947.2271	950.0897	950.3937	952.5897	50.028778
2971	City	2135607	1402604	2135631	1402704	Concrete	closed	42	C-22430a	round	CV87_CV88	57	57	57	912.3224	911.8258	917.0724	916.5758	103.891251
2972	City	2140328	1407525	2140268	1407499	CMP	closed	48	C-22445c	round	CV140_CV139	68	67	67.5	938.9072	938.6576	944.5739	944.2409	65.142959
2973	City	2140328	1407525	2140268	1407499	CMP	closed	48	C-22445b	round	CV140_CV139	68	67	67.5	938.9072	938.6576	944.5739	944.2409	65.017716
2974	City	2141853	1411159	2141891	1411156	CMP	closed	48	C-22485a	round	CV131_CV132	63	18	40.5	943.027	950.6631	948.277	952.1631	38.19967
2976	City	2130596	1406914	2130660	1406975	Concrete	closed	48	C-22613b	round	CV154_CV150	<Null>	<Null>	<Null>	<Null>	<Null>	940.5633	932.0497	88.156738
2980	City	2144911	1405698	2144911	1405730	RCP	closed	18	C-22754a	round	CV133_CV134	18	18	18	942.8754	941.2426	944.3754	942.7426	32.407614
2981	City	2146106	1403231	2146148	1403048	Metal	closed	48	C-22865b	round	CV37_CV36	<Null>	<Null>	<Null>	<Null>	<Null>	912.5079	908	187.648645
2982	City	2142708	1399380	2142676	1399341	Metal	closed	54	C-22866c	round	CV38_CV39	<Null>	<Null>	<Null>	<Null>	<Null>	914	923.0759	50.85765
2983	City	2142708	1399380	2142676	1399341	Metal	closed	60	C-22866b	round	CV38_CV39	<Null>	<Null>	<Null>	<Null>	<Null>	914	923.0759	50.079266
2984	City	2143608	1403248	2143564	1403367	<Null>	closed	15	C-22220d	round	JB2054_	<Null>	<Null>	<Null>	<Null>	<Null>	976.8018	<Null>	126.756035
2985	City	2143639	1403183	2143608	1403248	<Null>	closed	15	C-22220c	round	DI2053_JB2054	<Null>	<Null>	<Null>	<Null>	<Null>	979.7242	976.8018	71.778321
2986	City	2143669	1403087	2143657	1403136	<Null>	closed	15	C-22220a	round	DI1211_JB2052	<Null>	<Null>	<Null>	<Null>	<Null>	980.1641	980	50.600075
2987	City	2130151	1409536	2130190	1409561	Concrete	closed	96	C-22442a	rectangular	CV119_CV120	<Null>	<Null>	<Null>	<Null>	<Null>	919.9741	921.2247	47.118325
2988	City	2140215	1405035	2140155	1405033	<Null>	closed	<Null>	C-22560b	<Null>	CV142_CV19	<Null>	<Null>	<Null>	<Null>	<Null>	926	932.4224	60.142675
2992	City	2143777	1402703	2143801	1402616	RCP	closed	18	C-22273b	round	DI1245_JB1174	35	65	50	967.4534	960.9771	970.3701	966.3938	91.076846
2993	City	2139600	1408654	2139576	1408448	CMP	closed	36	C-20414b	round	CV159_CV160	<Null>	60	<Null>	<Null>	954.5643	960.0319	959.5643	207.204101
2994	City	2148497	1403581	2148525	1403565	CMP	closed	36	C-20199b	round	HW2202_HW22	<Null>	35	<Null>	<Null>	887.2968	894.824	890.2134	31.851129
2995	City	2141250	1403316	2141217	1403316	Metal	closed	18	C-22073b	round	CB1240_CI104	<Null>	62	<Null>	<Null>	959.0037	964.658	964.1704	33.514514
3017	City	2139372	1403235	2139410	1403164	CMP	closed	18	C-24021	round	DI2064_DI2066	41	41	41	902.1514	902.0198	905.5681	905.4365	80.424315
3018	City	2139364	1403249	2139372	1403235	CMP	closed	18	C-24022	round	DI2063_DI2064	45	40	42.5	902.0217	902.2347	905.7717	905.5681	15.699962
3019	City	2139379	1403257	2139364	1403249	CMP	closed	18	C-24023	round	CI32_DI2063	52	41	46.5	902.5342	902.355	906.8675	905.7717	17.218849
3020	City	2139289	1403211	2139364	1403249	CMP	closed	18	C-24024	round	DI2065_DI2063	34	43	38.5	902.9082	902.1884	905.7415	905.7717	83.771632
3021	City	2139258	1403482	2139233	1403486	CMP	closed	18	C-24025	round	DI2062_DI2061	74	61	67.5	899.6438	899.8151	905.8105	904.8984	24.77975
3022	City	2139233	1403486	2139097	1403495	CMP	closed	18	C-24026	round	DI2061_DI2060	63	82	72.5	899.6484	897.5067	904.8984	904.34	136.460342

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
3023	City	2139097	1403495	2139100	1403512	CMP	closed	18	C-24027	round	DI2060_JB1141	84	84	84	897.34	896.9552	904.34	903.9552	16.757337
3024	City	2139137	1403327	2139104	1403385	RCP	closed	18	C-24028	round	YI92_YI93	30	43	36.5	900.9089	899.2108	903.4089	902.7941	66.605536
3025	City	2139104	1403385	2139065	1403467	CMP	closed	18	C-24029	round	YI93_YI95	44	40	42	899.1274	897.9473	902.7941	901.2806	91.076864
3026	City	2139065	1403467	2139097	1403495	CMP	closed	18	C-24030	round	YI95_DI2060	41	80	60.5	897.864	897.6733	901.2806	904.34	42.905122
3027	City	2138885	1403502	2138930	1403467	RCP	closed	18	C-24031	round	DI1251_JB1142	56	70	63	895.5693	895.4241	900.236	901.2574	56.406812
3028	City	2143928	1403392	2143925	1403395	RCP	closed	18	C-24032	round	DI2050_JB2049	17	32	24.5	959.9131	959.4659	961.3298	962.1326	4.467527
3029	City	2144858	1403421	2144852	1403418	RCP	closed	18	C-24033	round	DI2040_CV111	<Null>	52	<Null>	<Null>	913.7767	918.8265	918.11	6.61564
3030	City	2144787	1403486	2144852	1403418	RCP	closed	18	C-24034	round	DI2039_CV111	<Null>	53	<Null>	<Null>	913.6933	920.7278	918.11	94.031703
3032	City	2143664	1403061	2143669	1403087	CMP	closed	12	C-24036	round	CI2051_DI1211	20	29	24.5	978.1319	977.7474	979.7986	980.1641	25.920181
3033	City	2144028	1403397	2144242	1403400	RCP	closed	18	C-24039	round	CB2048_CB204	42	40	41	953.7435	943.8771	957.2435	947.2104	214.395348
3034	City	2144242	1403400	2144466	1403399	RCP	closed	18	C-24040	round	CB2047_CB204	41	45	43	943.7937	930.3499	947.2104	934.0999	223.955487
3035	City	2144466	1403399	2144573	1403390	RCP	closed	18	C-24041	round	CB2046_CB204	46	45	45.5	930.2665	927.2035	934.0999	930.9535	107.322858
3036	City	2144573	1403390	2144602	1403375	RCP	closed	18	C-24042	round	CB2045_CB204	48	41	44.5	926.9535	926.3826	930.9535	929.7993	32.063999
3037	City	2144602	1403375	2144625	1403351	RCP	closed	18	C-24043	round	CB2044_CB204	44	65	54.5	926.1326	924.3977	929.7993	929.8144	33.710277
3038	City	2144620	1403348	2144625	1403351	RCP	closed	18	C-24044	round	DI1268_CB2043	<Null>	56	<Null>	<Null>	925.1477	929.88	929.8144	5.80906
3039	City	2144634	1403328	2144625	1403351	RCP	closed	18	C-24045	round	CB2042_CB204	50	56	53	926.4604	925.1477	930.6271	929.8144	24.101752
3040	City	2139845	1405310	2139922	1405309	RCP	closed	24	C-24046	round	CB2078_JB2074	68	88	78	930.1415	929.4873	935.8082	936.8206	76.831791
3041	City	2139922	1405309	2139921	1405235	RCP	closed	36	C-24047	round	JB2074_JB2079	98	91	94.5	928.6539	929.1678	936.8206	936.7511	74.464496
3042	City	2139979	1405309	2140067	1405309	RCP	closed	18	C-24048	round	CB2072_CB128	63	63	63	938.0076	938.1407	943.2576	943.3907	87.709296
3043	City	2139800	1405308	2139845	1405310	RCP	closed	24	C-24049	round	CB2076_CB207	52	67	59.5	931.1379	930.2249	935.4712	935.8082	44.581236
3044	City	2139844	1405337	2139845	1405310	RCP	closed	18	C-24050	round	CB2077_CB207	58	65	61.5	930.7819	930.3915	935.6152	935.8082	27.182915
3045	City	2139801	1405338	2139800	1405308	RCP	closed	18	C-24051	round	CB2075_CB207	50	50	50	931.632	931.3045	935.7986	935.4712	30.51994
3046	City	2139978	1405336	2140066	1405337	RCP	closed	18	C-24052	round	CB2073_CB128	59	68	63.5	940.1658	937.5655	945.0825	943.2322	87.436771
3050	City	2139492	1404739	2139466	1404740	RCP	closed	18	C-24058	round	CI2069_CI1138	84	81	82.5	931.055	929.4614	938.055	936.2114	26.303852
3051	City	2139704	1405616	2139692	1405611	RCP	closed	18	C-24059	round	PP2088_CB144	18	66	42	921.6556	917.1962	923.1556	922.6962	13.132294
3052	City	2139476	1405234	2139469	1405239	RCP	closed	36	C-24060	round	PP2086_CB143	48	78	63	915.8058	912.9081	919.8058	919.4081	8.605326
3055	City	2139417	1406441	2139385	1406376	RCP	closed	<Null>	C-24065	<Null>	HW2205_HW20	<Null>	<Null>	<Null>	<Null>	<Null>	945.0173	916	72.657898
3056	City	2139358	1406309	2139336	1406271	RCP	closed	18	C-24066	round	HW2090_HW20	<Null>	18	<Null>	<Null>	914.5	916	916	44.003024
3057	City	2139512	1405349	2139469	1405239	RCP	closed	18	C-24067	round	CB2087_CB143	83	78	80.5	916.7097	912.9081	923.6264	919.4081	117.910762
3058	City	2139463	1405189	2139469	1405239	RCP	closed	18	C-24068	round	CB2085_CB143	77	78	77.5	914.2297	912.9081	920.6464	919.4081	50.263691
3059	City	2139462	1405093	2139463	1405189	RCP	closed	18	C-24069	round	CB2084_CB208	65	76	70.5	922.0336	914.3131	927.4503	920.6464	95.638715
3060	City	2139662	1405276	2139648	1405202	RCP	closed	18	C-24070	round	CB1261_CB126	63	63	63	924.8959	921.497	930.1459	926.747	75.888793
3062	City	2139613	1403791	2139609	1403803	RCP	closed	18	C-24072	round	CB1446_JB58	95	95	95	916.7896	916.5847	924.7063	924.5014	13.053433
3063	City	2144231	1402946	2144475	1402949	RCP	closed	18	C-24073	round	CB2110_CB210	45	44	44.5	965.7743	948.8727	969.5243	952.5394	244.23927
3064	City	2144475	1402949	2144647	1402948	RCP	closed	18	C-24074	round	CB2109_CB210	45	35	40	948.7894	940.2009	952.5394	943.1176	171.785464
3065	City	2144647	1402948	2144681	1402947	RCP	closed	18	C-24075	round	CB2107_JB2106	39	35	37	939.8676	939.1296	943.1176	942.0463	34.192805
3066	City	2144649	1402991	2144681	1402947	RCP	closed	18	C-24076	round	DI2108_JB2106	23	36	29.5	940.2074	939.0463	942.1241	942.0463	53.903607
3067	City	2144662	1402794	2144671	1402793	RCP	closed	18	C-24077	round	DI2105_CB2099	27	43	35	930.4765	930.6949	932.7265	934.2783	8.479329
3068	City	2144681	1402947	2144671	1402793	RCP	closed	18	C-24078	round	JB2106_CB2099	37	37	37	938.963	931.1949	942.0463	934.2783	154.882812
3069	City	2144671	1402793	2144658	1402636	RCP	closed	18	C-24079	round	CB2099_CB209	43	51	47	930.6949	924.4125	934.2783	928.6625	157.233009
3070	City	2144656	1402448	2144658	1402636	RCP	closed	18	C-24080	round	CB2098_CB209	39	51	45	929.9627	924.4125	933.2127	928.6625	187.95315
3072	City	2144656	1402381	2144656	1402448	RCP	closed	18	C-24082	round	CB2101_CB209	39	37	38	934.2271	930.1294	937.4771	933.2127	66.531409
3074	City	2144666	1402319	2144667	1402332	RCP	closed	18	C-24084	round	DI2103_CB2102	21	39	30	936.3954	934.9886	938.1454	938.2386	12.633065

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OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
3076	City	2143196	1401487	2143206	1401480	RCP	closed	36	C-24086	round	CB587_JB2111	72	72	72	949.8141	950.9738	955.8141	956.9738	12.731305
3077	City	2143142	1401453	2143146	1401447	RCP	closed	18	C-24087	round	JB1077_OF1065	49	18	33.5	951.6826	953.1021	955.7659	954.6021	7.044494
3078	City	2140750	1402818	2140730	1402814	RCP	closed	18	C-24088	round	JB2121_CI105	<Null>	64	<Null>	<Null>	938.9363	946.0148	944.2696	20.578244
3079	City	2142421	1399762	2142429	1399757	RCP	closed	18	C-24089	round	YI255_CB598	35	67	51	940.131	939.3467	943.0477	944.93	9.33198
3080	City	2144041	1404355	2143952	1404309	RCP	closed	18	C-24090	round	CB2132_CB124	63	47	55	965.7845	964.2787	971.0345	968.1954	100.16159
3081	City	2142421	1399636	2142429	1399636	RCP	closed	18	C-24091	round	YI2114_JB1079	38	38	38	937.8685	939.847	941.0352	943.0137	8.09283
3082	City	2138390	1404282	2138385	1404316	Unknown	closed	18	C-24093	round	CB359_HW2127	155	155	155	897.6057	888.0309	910.5224	900.9476	34.263614
3083	City	2144057	1404328	2144041	1404355	RCP	closed	18	C-24094	round	CB2133_CB213	61	63	62	966.3462	965.7845	971.4295	971.0345	31.342094
3085	City	2143122	1405038	2143165	1405022	RCP	closed	30	C-24096	round	DI607_JB2135	97	95	96	967.2392	966.0331	975.3225	973.9498	46.108431
3086	City	2142969	1405094	2143122	1405038	RCP	closed	30	C-24097	round	DI2136_DI607	114	96	105	964.5	967.3225	974	975.3225	162.544365
3087	City	2142745	1405190	2142969	1405094	RCP	closed	30	C-24098	round	DI2137_DI2136	<Null>	110	<Null>	<Null>	964.8333	978	974	244.034329
3089	City	2141868	1409884	2141878	1409886	CMP	closed	18	C-24100	round	PP2139_DI803	<Null>	18	<Null>	<Null>	980.7208	982.5298	982.2208	10.43296
3090	City	2143698	1402958	2143713	1402934	CMP	closed	18	C-24101	round	CI2097_DI1243	16	28	22	978.874	976.7979	980.2073	979.1312	28.4916
3099	City	2143757	1410118	2143703	1410104	RCP	closed	24	C-24110	round	OS2143_HW214	<Null>	45	<Null>	<Null>	933.3265	936.6576	937.0765	55.503657
3100	City	2142074	1406500	2142078	1406556	RCP	closed	18	C-24111	round	JB2140_CB279	<Null>	49	<Null>	<Null>	985.9962	990.4753	990.0795	55.838167
3101	City	2150771	1404302	2150774	1404292	RCP	closed	18	C-24112	round	DI3000_CB3001	<Null>	44	<Null>	<Null>	931.2652	934.442	934.9319	10.858839
3102	City	2143518	1404992	2143521	1405010	<Null>	closed	<Null>	C-24115	<Null>	_CB788	<Null>	65	<Null>	<Null>	971.5535	<Null>	976.9702	18.131988
3105	City	2130909	1413084	2130890	1413063	<Null>	closed	<Null>	C-24118	<Null>	PP2177_PP2176	34	34	34	923.3026	922.9696	926.1359	925.8029	28.014301
3106	City	2143206	1401480	2143152	1401446	RCP	closed	36	C-24119	round	JB2111_OF1066	<Null>	36	<Null>	<Null>	950.6651	956.9738	953.6651	64.495712
3113	City	2144524	1404077	2144567	1404073	PVC	closed	12	C-24128	round	PP4014_PP4015	12	12	12	951.0532	951.7363	952.0532	952.7363	43.592243
3120	City	2140959	1407155	2140952	1407107	CMP	closed	30	C-24137	round	PP4032_PP4033	30	30	30	959.1683	956.0526	961.6683	958.5526	47.731408
3121	City	2139410	1403164	2139433	1403094	CMP	closed	18	C-24138	round	DI2066_OF2067	41	<Null>	<Null>	902.0198	<Null>	905.4365	904	73.683843
3123	City	2144799	1404013	2144894	1403989	RCP	closed	18	C-24143	round	PP2038_	12	<Null>	<Null>	952.1671	<Null>	953.1671	<Null>	98.05454
3125	City	2139979	1405309	2139922	1405309	RCP	closed	18	C-24146	round	CB2072_JB2074	63	98	80.5	938.0076	928.6539	943.2576	936.8206	57.391933
3126	City	2139944	1405294	2139922	1405309	PVC	closed	<Null>	C-24147	<Null>	_JB2074	<Null>	98	<Null>	<Null>	928.6539	<Null>	936.8206	26.633278
3127	City	2140087	1405342	2140066	1405337	PVC	closed	6	C-24148	round	_CB1280	<Null>	65	<Null>	<Null>	937.8155	<Null>	943.2322	22.018785
3129	City	2139549	1405180	2139490	1405218	<Null>	closed	<Null>	C-24150	<Null>	_	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	69.2898
3131	City	2150920	1404318	2150860	1404280	RCP	closed	24	C-24153	round	CI85_DI1144	58	58	58	931.3652	930.9171	936.1985	935.7504	71.24848
3132	City	2141248	1402555	2141170	1402556	<Null>	closed	<Null>	C-24155	<Null>	CI108_CI107	<Null>	<Null>	<Null>	<Null>	<Null>	948.7472	947.0814	78.12725
3133	City	2140152	1405001	2140162	1405021	CMP	closed	18	C-24156	round	JB2058_CB1279	<Null>	104	<Null>	<Null>	926.0221	935.5176	934.6888	22.942899
3135	City	2142671	1405217	2142745	1405190	<Null>	closed	<Null>	C-24158	<Null>	OS108_DI2137	<Null>	<Null>	<Null>	<Null>	<Null>	980.355	978	78.37536
3136	City	2139659	1404486	2139571	1404491	RCP	closed	18	C-24159	round	DI734_DI1501	92	74	83	942.7658	939.8513	950.4325	946.018	87.610272
3137	City	2139571	1404491	2139465	1404496	<Null>	closed	<Null>	C-24160	round	DI1501_DI1502	<Null>	<Null>	<Null>	<Null>	<Null>	946.018	941.192	106.461779
3138	City	2146216	1403584	2146203	1403505	CMP	closed	42	C-24161	round	CV35_CV34	<Null>	45	<Null>	<Null>	916.2816	919.4128	920.0316	80.239754
3139	City	2146189	1408304	2146189	1408273	CMP	closed	18	C-24162	round	CB1391_CB104	56	64	60	911.9721	911.1826	916.6388	916.5159	30.795841
3147	City	2138939	1403459	2138930	1403467	CMP	closed	18	C-24170	round	DI997_JB1142	62	71	66.5	895.5797	895.3407	900.7464	901.2574	12.224488
3148	City	2140898	1401668	2140856	1401567	<Null>	closed	<Null>	C-24171	<Null>	OS500_OF1135	<Null>	<Null>	<Null>	<Null>	<Null>	925.7775	927.15	109.45351
3149	City	2137859	1414834	2137852	1414792	RCP	closed	24	C-24172	round	_OF342	<Null>	34	<Null>	<Null>	959.0418	<Null>	961.8751	42.862958
3150	City	2144920	1406087	2144972	1406099	Concrete	closed	96	C-23142	rectangular	CV135_CV136	64	64	64	929.0087	927.796	934.342	933.1293	53.116056
3151	City	2150774	1404292	2150784	1404260	RCP	closed	18	C-24174	round	CB3001_CB300	44	48	46	931.2652	931.0346	934.9319	935.0346	32.737972
3152	City	2150784	1404260	2150860	1404280	RCP	closed	18	C-24175	round	CB3002_DI1144	48	54	51	931.0346	931.2504	935.0346	935.7504	78.734345
3153	City	2142420	1399760	2142421	1399762	<Null>	closed	<Null>	C-24176	<Null>	JB2113_YI255	<Null>	35	<Null>	<Null>	940.131	946.3078	943.0477	3.382912
3154	City	2146638	1404471	2146619	1404473	<Null>	closed	<Null>	C-24177	<Null>	PP4787_PP4786	<Null>	<Null>	<Null>	<Null>	<Null>	944.0869	944	18.838558

MS4 Stormwater Pipes Inventory

As of 4/30/2024

OBJECTID	Ownership	X_Start	Y_Start	X_End	Y_End	Material	Conv_Type	Width_Dia	Field_ID	XS_Shape	LineName	Depth_US	Depth_DS	Depth_Avg	Invert_US	Invert_DS	Elev_US	Elev_DS	Shape_Length
3163	City	2144992	1410437	2144982	1410441	RCP	closed	24	C-24188	round	YI1045_CB1233	40	50	45	948.5864	948.5551	951.9197	952.7218	11.209425
3164	City	2139712	1403044	2139671	1403029	<Null>	closed	72	C-23173	round	_OT555	<Null>	34	<Null>	<Null>	905.1667	<Null>	908	43.566592
3166	City	2145230	1410503	2145303	1410545	<Null>	closed	<Null>	C-24198	<Null>	OT2230_DI1505	<Null>	83	<Null>	<Null>	948.3862	955.3553	955.3029	83.827092
3172	City	2151948	1404719	2151896	1404665	RCP	closed	18	C-24205	round	CB3316_HW331	56	28	42	943.9072	941.7131	948.5739	944.0464	75.617381
3174	City	2150842	1404078	2150878	1404119	RCP	closed	18	C-24207	round	JB3311_HW3312	<Null>	28	<Null>	<Null>	925.2268	930.4046	927.5601	53.933934
3175	City	2150722	1404014	2150842	1404078	RCP	closed	18	C-24208	round	CB3310_JB3311	35	35	35	926.6874	927.4879	929.6041	930.4046	136.385311
3176	City	2150055	1403944	2150053	1403931	RCP	closed	18	C-24209	round	CB3302_JB3303	47	47	47	922.9906	922.7051	926.9073	926.6218	13.440619
3177	City	2150053	1403931	2149941	1403951	<Null>	closed	<Null>	C-24210	<Null>	JB3303_JB3304	<Null>	<Null>	<Null>	<Null>	<Null>	926.6218	922.4322	113.714064
3178	City	2149941	1403951	2149752	1404016	<Null>	closed	<Null>	C-24211	<Null>	JB3304_JB3306	<Null>	<Null>	<Null>	<Null>	<Null>	922.4322	916.3004	199.519655
3179	City	2149752	1404016	2149726	1404024	RCP	closed	30	C-24212	round	JB3306_CB3305	<Null>	75	<Null>	<Null>	909.1317	916.3004	915.3817	26.875811
3180	City	2149726	1404024	2149569	1404081	RCP	closed	36	C-24213	round	CB3305_CB330	77	77	77	908.965	905.6612	915.3817	912.0779	167.126108
3181	City	2149569	1404081	2149391	1404145	RCP	closed	36	C-24214	round	CB3307_CB330	93	93	93	904.3279	902.3036	912.0779	910.0536	189.677085
3182	City	2149391	1404145	2149253	1404234	RCP	closed	36	C-24215	round	CB3308_HW330	67	36	51.5	904.4703	899.7734	910.0536	902.7734	163.672361
3183	City	2151911	1404776	2151900	1404786	<Null>	closed	<Null>	C-24216	<Null>	CB3644_HW332	<Null>	<Null>	<Null>	<Null>	<Null>	946	947.7963	15.233092
3184	City	2148146	1404403	2148232	1404409	RCP	closed	18	C-24217	round	CB3300_JB3301	62	62	62	919.0109	915.3463	924.1776	920.5129	86.100853
3185	City	2147363	1403782	2147385	1403765	RCP	closed	36	C-24218	round	CB3525_CB352	<Null>	155	<Null>	<Null>	913.3976	927.2004	926.3143	28.011737
3186	City	2147307	1403712	2147301	1403739	RCP	closed	18	C-24219	round	CB3529_CB353	129	129	129	915.191	915.7202	925.941	926.4702	27.304945
3187	City	2147376	1403869	2147363	1403782	RCP	closed	36	C-24220	round	CB3524_CB352	155	155	155	920.3652	914.2838	933.2819	927.2004	87.499211
3189	City	2147555	1403580	2147588	1403545	<Null>	closed	<Null>	C-24222	<Null>	OS3528_HW356	<Null>	<Null>	<Null>	<Null>	<Null>	922	922	47.560529
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3191	City	2147117	1403757	2147017	1403802	<Null>	closed	<Null>	C-24224	<Null>	CB3533_CB353	158	158	158	923.1335	921.4604	936.3002	934.6271	109.086173
3192	City	2147109	1403730	2147117	1403757	RCP	closed	18	C-24225	round	CB3534_CB353	116	116	116	926.3547	926.6335	936.0214	936.3002	28.298712
3193	City	2147017	1403802	2146994	1403786	<Null>	closed	<Null>	C-24226	<Null>	CB3535_CB353	<Null>	106	<Null>	<Null>	925.7445	934.6271	934.5778	28.30311
3194	City	2146997	1403889	2147017	1403802	<Null>	closed	<Null>	C-24227	<Null>	CB3538_CB353	<Null>	129	<Null>	<Null>	923.8771	933.4919	934.6271	89.788844
3195	City	2146951	1403878	2146997	1403889	RCP	closed	18	C-24228	round	CB3539_CB353	91	91	91	930.189	925.9086	937.7723	933.4919	47.176469
3196	City	2147090	1403909	2147132	1403850	CMP	closed	18	C-24229	round	JB3537_JB3532	35	35	35	930.7294	932.4813	933.6461	935.398	72.344935
3197	City	2147132	1403850	2147117	1403757	RCP	closed	18	C-24230	round	JB3532_CB3533	78	78	78	928.898	929.8002	935.398	936.3002	93.89847
3198	City	2147241	1403838	2147132	1403850	CMP	closed	18	C-24231	round	JB3531_JB3532	73	75	74	923.2305	929.148	929.3138	935.398	109.238674
3199	City	2147401	1403868	2147376	1403869	RCP	closed	18	C-24232	round	CI3523_CB3524	109	127	118	923.7065	922.6986	932.7899	933.2819	24.487862
3200	City	2147465	1403932	2147463	1403961	RCP	closed	18	C-24233	round	CB3522_CB352	56	63	59.5	929.1238	928.5438	933.7905	933.7938	29.052259
3201	City	2147514	1403977	2147463	1403961	RCP	closed	18	C-24234	round	JB3520_CB3521	51	51	51	928.8646	929.5438	933.1146	933.7938	52.839423
3202	City	2147352	1403935	2147376	1403869	RCP	closed	36	C-24235	round	CB3519_CB352	159	159	159	922.0004	920.0319	935.2504	933.2819	70.465553
3203	City	2147343	1403971	2147352	1403935	RCP	closed	36	C-24236	round	CB3518_CB351	162	162	162	922.0293	921.7504	935.5293	935.2504	37.339389
3204	City	2147381	1403982	2147343	1403971	RCP	closed	36	C-24237	round	CI3517_CB3518	155	155	155	922.7439	922.6126	935.6606	935.5293	39.402555
3205	City	2147403	1403982	2147381	1403982	RCP	closed	36	C-24238	round	CI3516_CI3517	151	151	151	922.9296	923.0773	935.5129	935.6606	21.894326
3206	City	2147463	1403961	2147403	1403982	RCP	closed	18	C-24239	round	CB3521_CI3516	65	65	65	928.3771	930.0962	933.7938	935.5129	63.415759
3207	City	2147504	1404106	2147410	1404109	RCP	closed	18	C-24240	round	JB3514_CB3515	53	96	74.5	938.1041	931.2369	942.5208	939.2369	94.588483
3208	City	2147341	1404157	2147367	1404111	RCP	closed	18	C-24241	round	CB3512_JB3513	62	96	79	937.9315	930.1757	943.0982	938.1757	52.75255
3209	City	2147367	1404111	2147410	1404109	RCP	closed	36	C-24242	round	JB3513_CB3515	205	189	197	921.0923	923.4869	938.1757	939.2369	43.270807
3210	City	2147410	1404109	2147403	1403982	RCP	closed	36	C-24243	round	CB3515_CI3516	190	149	169.5	923.4036	923.0962	939.2369	935.5129	127.458098
3212	City	2147213	1404130	2147286	1404120	RCP	closed	30	C-24245	round	CB3509_JB3511	150	150	150	928.5148	925.5	941.0148	938	73.948854
3213	City	2147137	1404175	2147213	1404130	RCP	closed	18	C-24246	round	CB3505_CB350	127	148	137.5	930.8155	928.6815	941.3988	941.0148	88.2095
3214	City	2147174	1404082	2147213	1404130	RCP	closed	18	C-24247	round	CI3508_CB3509	71	71	71	928.7235	935.0981	934.6402	941.0148	62.206732

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3215	City	2147146	1404084	2147174	1404082	RCP	closed	18	C-24248	round	CB3507_CI3508	70	70	70	932.9333	928.8069	938.7667	934.6402	27.360702
3216	City	2147286	1404120	2147367	1404111	RCP	closed	36	C-24249	round	JB3511_JB3513	<Null>	202	<Null>	<Null>	921.3423	938	938.1757	80.991322
3217	City	2146994	1403786	2146917	1403780	CMP	closed	42	C-24250	round	CB3536_JB3541	<Null>	129	<Null>	<Null>	927.2152	934.5778	937.9652	77.566603
3219	City	2146641	1403885	2146681	1403858	RCP	closed	42	C-24252	round	CB3561_CB3562	100	100	100	926.4382	926.2018	934.7715	934.5352	48.152912
3221	City	2146475	1403899	2146564	1403865	RCP	closed	36	C-24254	round	JB3557_CB3560	94	80	87	926.6925	926.7892	934.5258	933.4559	95.489007
3222	City	2146524	1403846	2146555	1403837	RCP	closed	18	C-24255	round	CB3558_CB3559	68	68	68	928.2582	928.2287	933.9249	933.8954	31.628284
3223	City	2146564	1403865	2146641	1403885	RCP	closed	36	C-24256	round	CB3560_CB3561	81	81	81	926.7059	928.0215	933.4559	934.7715	79.053756
3224	City	2146555	1403837	2146564	1403865	RCP	closed	18	C-24257	round	CB3559_CB3560	68	68	68	928.2287	927.7892	933.8954	933.4559	30.164113
3225	City	2146390	1404007	2146420	1404004	RCP	closed	12	C-24258	round	CB3553_CB3554	64	64	64	928.4266	928.6667	933.7599	934	29.49633
3226	City	2146549	1404001	2146475	1403899	RCP	closed	24	C-24259	round	JB3556_JB3557	84	89	86.5	923.6441	927.1091	930.6441	934.5258	126.343089
3227	City	2146575	1404067	2146549	1404001	RCP	closed	18	C-24260	round	JB3555_JB3556	<Null>	82	<Null>	<Null>	923.8108	937.0893	930.6441	70.89356
3228	City	2146420	1404004	2146475	1403899	RCP	closed	24	C-24261	round	CB3554_JB3557	<Null>	89	<Null>	<Null>	927.1091	934	934.5258	118.94799
3229	City	2146403	1404145	2146434	1404146	RCP	closed	18	C-24262	round	CB3551_CB3552	65	65	65	930.0864	930.6671	935.5031	936.0838	30.960877
3230	City	2146434	1404146	2146420	1404004	RCP	closed	24	C-24263	round	CB3552_CB3554	83	70	76.5	929.1671	928.1667	936.0838	934	142.803076
3231	City	2146502	1404239	2146501	1404210	RCP	closed	18	C-24264	round	CB3549_CB3550	<Null>	70	<Null>	<Null>	931.4053	937.9637	937.2386	29.151037
3232	City	2146608	1404217	2146501	1404210	RCP	closed	18	C-24265	round	CB3548_CB3550	68	70	69	934.0391	931.4053	939.7058	937.2386	107.640388
3233	City	2146626	1404240	2146608	1404217	RCP	closed	18	C-24266	round	CB3547_CB3548	63	63	63	934.2753	934.4558	939.5253	939.7058	28.925271
3234	City	2146501	1404210	2146434	1404146	RCP	closed	18	C-24267	round	CB3550_CB3552	70	78	74	931.4053	929.5838	937.2386	936.0838	92.672685
3235	City	2146911	1403976	2146927	1403996	RCP	closed	18	C-24268	round	CI3543_CB3540	74	74	74	933.8597	933.9841	940.0264	940.1508	26.038757
3236	City	2146848	1404075	2146874	1404073	RCP	closed	18	C-24269	round	CB3544_CB3545	66	66	66	935.984	936.3016	941.484	941.8016	25.298332
3237	City	2146874	1404073	2146927	1403996	RCP	closed	18	C-24270	round	CB3545_CB3540	77	77	77	935.3849	933.7341	941.8016	940.1508	93.502295
3238	City	2146927	1403996	2146951	1403878	RCP	closed	18	C-24271	round	CB3540_CB3539	110	<Null>	<Null>	930.9841	<Null>	940.1508	937.7723	120.603207
3239	City	2147146	1404260	2147137	1404175	RCP	closed	18	C-24272	round	CB3506_CB3505	91	91	91	936.3909	933.8155	943.9742	941.3988	86.134897
3240	City	2147027	1404184	2147137	1404175	RCP	closed	24	C-24273	round	CB3503_CB3505	73	73	73	938.3765	935.3155	944.4598	941.3988	110.423431
3241	City	2147040	1404152	2147027	1404184	RCP	closed	18	C-24274	round	CB3504_CB3503	64	64	64	937.7803	939.1265	943.1136	944.4598	34.281531
3242	City	2146969	1404187	2147027	1404184	RCP	closed	18	C-24275	round	CB3502_CB3503	63	72	67.5	939.5695	938.4598	944.8195	944.4598	58.340817
3243	City	2146870	1404223	2146897	1404219	RCP	closed	18	C-24276	round	CB3500_CB3501	68	72	70	938.2813	937.6165	943.9479	943.6165	27.110978
3244	City	2146897	1404219	2146969	1404187	RCP	closed	18	C-24277	round	CB3501_CB3502	74	74	74	937.4498	938.6528	943.6165	944.8195	78.350046
3246	City	2138917	1400226	2138931	1400252	RCP	closed	42	C-24279	round	CB3638_CB3639	160	160	160	915.1389	912.5241	928.4722	925.8574	29.342285
3247	City	2138789	1400441	2138820	1400471	RCP	closed	18	C-24280	round	CB3608_CB3609	62	62	62	932.9479	931.301	938.1146	936.4677	42.812949
3250	City	2138876	1400581	2138883	1400596	RCP	closed	24	C-24283	round	CB3611_JB3612	113	78	95.5	918.5833	920.0205	928	926.5205	15.945339
3251	City	2138847	1400576	2138876	1400581	RCP	closed	24	C-24284	round	CB3610_CB3611	103	103	103	925.2924	919.4167	933.8757	928	29.257259
3252	City	2138931	1400252	2139046	1400391	RCP	closed	42	C-24285	round	CB3639_HW3640	205	57	131	908.7741	912.423	925.8574	917.173	180.900169
3253	City	2138241	1400450	2138246	1400477	RCP	closed	18	C-24286	round	CB3603_CB3604	76	76	76	949.2754	955.0194	955.6087	961.3527	27.595149
3254	City	2138246	1400477	2138554	1400466	RCP	closed	18	C-24287	round	CB3604_CB3605	93	84	88.5	953.6027	947.5975	961.3527	954.5975	308.751539
3255	City	2138523	1400439	2138554	1400466	RCP	closed	18	C-24288	round	CB3607_CB3605	92	92	92	948.7615	946.9308	956.4282	954.5975	41.38098
3256	City	2138556	1400577	2138554	1400466	CMP	closed	18	C-24289	round	JB3606_CB3605	56	56	56	954.8717	949.9308	959.5384	954.5975	111.354033
3257	City	2138554	1400466	2138820	1400471	RCP	closed	24	C-24290	round	CB3605_CB3609	100	78	89	946.2642	929.9677	954.5975	936.4677	265.6152
3258	City	2138365	1400777	2138374	1400805	RCP	closed	18	C-24291	round	CB3618_CB3619	62	62	62	951.9008	948.7142	957.0674	953.8809	29.14261
3259	City	2138374	1400805	2138475	1400813	RCP	closed	18	C-24292	round	CB3619_CB3621	75	75	75	947.6309	941.0878	953.8809	947.3378	101.65021
3260	City	2138475	1400813	2138552	1400854	RCP	closed	24	C-24293	round	CB3621_CB3623	70	70	70	941.5045	934.4368	947.3378	940.2701	87.265334
3261	City	2138668	1400781	2138582	1400844	RCP	closed	24	C-24294	round	CB3617_CB3622	55	55	55	922.6606	934.9545	927.244	939.5378	106.464554
3262	City	2138485	1400787	2138475	1400813	RCP	closed	18	C-24295	round	CB3620_CB3621	55	55	55	946.0642	942.7545	950.6475	947.3378	28.59936

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3263	City	2138623	1400934	2138706	1400984	CMP	closed	36	C-24296	round	JB3624_JB3615	136	136	136	922.3915	913.5004	933.7249	924.8337	96.994229
3264	City	2138582	1400844	2138623	1400934	RCP	closed	24	C-24297	round	CB3622_JB3624	75	75	75	933.2878	927.4749	939.5378	933.7249	98.879317
3265	City	2138510	1401061	2138537	1401072	RCP	closed	24	C-24298	round	CB3628_CB362	73	73	73	911.5209	907.9167	917.6042	914	28.984634
3266	City	2138534	1400992	2138560	1401002	RCP	closed	18	C-24299	round	CB3626_CB362	64	64	64	917.747	918.0029	923.0803	923.3362	28.443264
3267	City	2138560	1401002	2138623	1400934	RCP	closed	24	C-24300	round	CB3627_JB3624	74	120	97	917.1695	923.7249	923.3362	933.7249	92.633594
3268	City	2138537	1401072	2138667	1401113	CMP	closed	24	C-24301	round	CB3629_JB3630	79	79	79	907.4167	896.2252	914	902.8085	136.502207
3270	City	2138267	1401189	2138175	1401190	CMP	closed	18	C-24303	round	CB3632_JB3633	60	60	60	923.9447	918.538	928.9447	923.538	92.375339
3271	City	2138075	1401068	2138066	1401097	CMP	closed	24	C-24304	round	JB3636_HW363	114	114	114	924.3954	920.0626	933.8954	929.5626	30.055542
3272	City	2138111	1400955	2138075	1401068	CMP	closed	18	C-24305	round	CB3635_JB3636	111	111	111	933.428	924.6454	942.678	933.8954	118.464882
3273	City	2137879	1400678	2137775	1400733	CMP	closed	18	C-24306	round	CB3600_JB3601	67	67	67	959.9885	944.3325	965.5718	949.9158	117.175131
3274	City	2138478	1401055	2138510	1401061	CMP	closed	24	C-24307	round	JB3625_CB3628	<Null>	70	<Null>	<Null>	911.7709	924.2629	917.6042	31.93504
3275	City	2138706	1400984	2138978	1400639	CMP	closed	36	C-24308	round	JB3615_JB3613	68	178	123	919.1671	898.3445	924.8337	913.1779	439.320975
3276	City	2138820	1400471	2138847	1400576	RCP	closed	24	C-24309	round	CB3609_CB361	102	102	102	927.9677	925.3757	936.4677	933.8757	108.337079
3277	City	2138812	1400193	2138917	1400226	CMP	closed	36	C-24310	round	YI3640_CB3638	<Null>	112	<Null>	<Null>	919.1389	923.387	928.4722	110.312697
3278	City	2138693	1400800	2138668	1400781	RCP	closed	18	C-24311	round	CB3616_CB361	44	44	44	921.468	923.5773	925.1347	927.244	32.367679
3279	City	2138552	1400854	2138582	1400844	RCP	closed	24	C-24312	round	CB3623_CB362	63	72	67.5	935.0201	933.5378	940.2701	939.5378	31.560443
3280	City	2137775	1400733	2137781	1400816	CMP	closed	24	C-24313	round	JB3601_HW360	60	24	42	944.9158	947.8337	949.9158	949.8337	82.426927
3281	City	2146305	1404220	2146277	1404169	RCP	closed	18	C-24314	round	YI3563_	63	<Null>	<Null>	927.5421	<Null>	932.7921	<Null>	58.612209
3282	City	2138449	1399980	2138462	1400013	RCP	closed	36	C-24315	round	CB3656_CB365	<Null>	93	<Null>	<Null>	929.7635	940	937.5135	35.986225
3283	City	2138483	1400028	2138622	1400120	CMP	closed	42	C-24316	round	JB3661_	<Null>	<Null>	<Null>	<Null>	<Null>	935.7104	<Null>	166.602602
3284	City	2138541	1399856	2138559	1399879	RCP	closed	30	C-24317	round	CB3659_CB365	<Null>	72	<Null>	<Null>	929.8536	937.8318	935.8536	29.342154
3285	City	2138212	1399978	2138239	1400015	RCP	closed	24	C-24318	round	CB3652_CB365	<Null>	134	<Null>	<Null>	935.6331	950.7773	946.7998	45.7997
3286	City	2138239	1400015	2138234	1400045	RCP	closed	36	C-24319	round	CB3651_CB365	<Null>	<Null>	<Null>	<Null>	<Null>	946.7998	946.7998	30.425575
3287	City	2138225	1399738	2138248	1399763	RCP	closed	18	C-24321	round	CB3654_CB365	<Null>	93	<Null>	<Null>	956.25	964	964	33.651025
3288	City	2138248	1399763	2138212	1399978	RCP	closed	24	C-24322	round	CB3653_CB365	<Null>	94	<Null>	<Null>	942.944	964	950.7773	218.485377
3289	City	2138234	1400045	2138483	1400028	RCP	closed	36	C-24323	round	CB3650_CB365	<Null>	<Null>	<Null>	<Null>	<Null>	945.3704	937.5135	249.854889
3293	City	2138462	1400013	2138483	1400028	RCP	closed	42	C-24329	round	CB3655_	<Null>	107	<Null>	<Null>	926.7938	937.5135	935.7104	25.991261
3294	City	2138559	1399879	2138483	1400028	CMP	closed	36	C-24330	round	CB3658_	<Null>	79	<Null>	<Null>	929.1271	935.8536	935.7104	166.939248
3295	City	2142338	1404764	2142399	1404744	CMP	closed	24	C-22140b	round	JB2056_DI1216	75	79	77	987.444	982.1683	993.694	988.7516	63.82955
3296	City	2138857	1408624	2138853	1408599	Metal	closed	48	C-22766a	round	CV212_CB1390	64	98	81	958.1408	957.6967	963.4741	965.8634	24.661819
3297	City	2138845	1408570	2138839	1408559	Metal	closed	48	C-22766	round	CB1184_CV213	102	59	80.5	957.3626	957.6227	965.8626	962.5394	12.510433

City Owned Ponds

Updated as of 4/30/2024

- **3550 Lindley Knoll**
- **3996 Lindley Drive**
- **5337 Yoshino Terrace**
- **Corner of Oakview Drive Ext and Jackson Way Ext**
- **Linear Park – at Richard D. Sailors Pkwy**
- **3006 Spring Industrial Drive**

City-Owned Underground Detention

- No Structures (0)

Municipal Inventory – 2024

4181 Atlanta Street – Ford Center Complex
1114 Richard D Sailors Pkwy – Police Department
3006 Spring Industrial Drive – Public Works
4426 Marietta Street – City Administrative Offices (Temporary)

Industrial Facilities

FACILITY SITE NAME	FACILITY ADDRESS	COUNTY	PERMIT #	NOI TYPE	
SHADY VENT ALUMINUM PRODUCTS, INC.	4370 DUGGER DRIVEPOWDER SPRINGS, GA	Cobb	3533	No Exposure Exclusion	Removed
Powder Springs Machine Company	4018 Lindley RdPowder Springs, Georgia,	Cobb	13124	No Exposure Exclusion	
Vintage Specialty Metal Products	4031 Fambrough Dr, Powder Springs,	Cobb	13259	No Exposure Exclusion	

Highly Visible Pollutant Source Inventory

Dec 2024

Contact	Email	Phone	Business Name	Property Location
STEVE STEVENS	asphaltatlanta@comcast.net	(404)862-9206	ASPHALT ATLANTA, LLC	5017 FRANK AIKEN RD SW
ELIZABET URIOSTEGUI RIOS	Uelizabeth13@gmail.com	(678)266-0311	YOYO'S HAND CAR WASH, LLC	3930 AUSTELL POWDER SPRINGS RD
JACOB YARWAYE	yarwaye66@gmail.com	(770)485-3328	YARWAYE USED CAR LLC	3855 POWDER SPRINGS RD #1156
JOEL SOTO DIAZ	sotojoelws487@gmail.com	(770)912-0342	WS HAND CAR WASH	3265 FLORENCE RD
ROBERT L WILSON	ps@wilsonac.com	(770)943-1613	WILSON AIR CONDITIONING	4011 LAWLER DRIVE
STEVEN WATSON COOPER JR	WildHorseHandCarWash@gmail.com	(404)573-1790	WILD HORSE HAND CAR WASH	4148 MARIETTA STREET
CARRIE RHODES	whorse1@bellsouth.net	(770)943-5493	WILDHORSE TACK & FEED	4070 MACEDONIA RD
KEVIN D RACKLEY & LEE NOLES	brackley@vintageconstructors.com	(770)421-6195	VINTAGE CONSTRCTS & BLDRS,INC.	4031 FAMBROUGH DR BLDG 300
KEVIN RACKLEY & ORVEL BAILEY	brackley@vintageconstructors.com	(770)421-6195	VINTAGE SPECIALTY METAL PRDTS	4031 FAMBROUGH DR BLDG 200
JENNIFER L. KAZEMIAN	unitedgraniteinc@yahoo.com	(770)439-9988	UNITED GRANITE, LLC	4640 POWDER SPRINGS DALLAS RD
ANKUR PATEL, OWNER	uniquetexaco@gmail.com	(678)567-9860	TEXACO FOOD MART	3265 FLORENCE RD
MICHELLE CHEREST	charestmichelle@BFUSA.com	(216)362-3338	TIRES PLUS #8179	1066 RICHARD D SAILORS PKWY
TIMOTHY R. LEDFORD SR.	timlsautorepair@gmail.com	(678)567-2255	TIM LEDFORD AUTO REPAIR LLC	4078 AUSTELL POWDER SPRINGS RD
ROBERT TAYLOR	accounting@thewindscreenfactory.com	(888)619-2228	THE WINDSCREEN FACTORY, LLC	4420 MACEDONIA RD
BARUCH SCHIFF	THD@businesslicenses.com	(770)433-8211	THE HOME DEPOT #6940	1062 RICHARD D SAILORS PKWY
CHIJIOKE & KATE URUM	urumc@bellsouth.net	(770)222-6343	STARS CAR WASH	3915 AUSTELL POWDER SPRINGS RD
KEVIN RACKLEY	brackley@vintageconstruction.com	(770)421-6195	S S VINTAGE MOTORSPORTS	4031 FAMBROUGH DR BLDG 300
KIMBERLY A HICKS	PsSpaWags@gmail.com	(678)800-2040	SPA WAGS LLC	3911 DILLARD STREET
KUMAR BAHADUS KC	KUMARKC002@YAHOO.COM	(770)439-8447	SKI 2 FOOD MART	4321 BROWNSVILLE RD SW
DAVID KNOTT	david@signatureSignService.com	(678)427-0350	SIGNATURE SIGN SERVICE, INC	3410 FLORENCE CIR
SHANNON MESARCH, CPA	smesarch@olysteel.com	(440)658-2634	SHAW STAINLESS & ALLOY	3275 FLORENCE RD,BLDGS 100-300
DAVID & REBECCA KNOTT	david@signaturesignservice.com	(404)790-8392	SERRMI PRODUCTS PARTS, LLC	3410 FLORENCE CIRCLE, STE 600
RANDY HATFIELD	randy.hatfield@sbcsolutionsgroup.com	(770)439-0112	SBC RECYCLING	3003 SPRING INDUSTRIAL DRA,B&C
MICHAEL SANDERS	accounting@sanderselectric.com	(770)439-1896	SANDERS ELECTRIC, INC.	3180 FLORENCE RD
LINDA MCTYRE	saigeenterprises@att.net	(678)567-0109	SAIGE ENTERPRISES INC	4818 HILL RD
CHRIS SANTAFEMIA	Chris@allaroundindustrysupply.com	(770)990-5853	ALL AROUND INDUSTRY SUPPLY	3192 FLORENCE RD, STE 102
RACHEL ROGERS	accounting@rproenterprises.com	(404)428-5467	SERVPRO OF MARIETTA WEST	4031 FAMBROUGH DR BLDG 100
GITA & SHAHROKH VAHDAT	mikev@ambiancegroupLLC.com	(770)545-5243	ROYAL WASH LLC	3459 POWDER SPRINGS RD SW
ERICK MAZARIEGOS	info.royalgranitecreations@gmail.com	(678)653-7101	ROYAL GRANITE CREATIONS, LLC	4640POWDERSPRINGS DALLAS RD110
RACHAEL S LARA	rigosautobody@gmail.com	(678)699-5561	RIGO'S AUTO BODY SHOP, LLC	3180 FLORENCE RD, STE 301
MARIA & SAUL RODRIGUEZ	saul@ridpropertyservices.com	(678)665-8811	RID PROPERTY SERVICES, INC.	4060 AUSTELL POWDER SPRINGS RD
JANAKKUMAR PATEL	RiaanLLC4@gmail.com	(770)439-0549	SONOCO FOOD MART	4551 BROWNSVILLE RD
SCOTT GORDON	rgaservices@att.net	(770)222-6544	RGA SERVICES, INC	3410 FLORENCE CIRCLE, STE 500
GODWIN & IKEDINACHI OKORO	gonetgreat@gmail.com	(678)384-0085	REVELATION MTS.& REPAIRS, INC.	3260 NEW MACLAND RD
DERRICK RAINEY	RaineyBros@bellsouth.net	(770)943-9191	RAINEY BROS CEILING/INSULATION	3889 BROWNSVILLE RD
CHIJIOKE J URUM	urumc@bellsouth.net	(770)222-6343	POWDER SPRINGS BLT	3915 AUSTELL POWDER SPRINGS RD
JAMES DUNN OR B HENDERSON	jdunn@primecontractorsinc.net	(770)949-1930	PRIME CONTRACTORS INC.	3406 FLORENCE CIR
MALIKA KESHWANI	powderspringsunoco@gmail.com	(404)672-4140	FAST TRACK SONOCO	4150 MARIETTA ST
MAYANK PANDYA	tofarids@gmail.com	(404)980-9187	POWDER SPRINGS MINI MART LLC	4148 MARIETTA ST
NOORALLAH PANJWANI	powderspringshell@gmail.com	(678)504-5966	POWDERSPRING SHELL INC	1390 RICHARD D SAILORS PKWY
JENNIFER JAMISON APLPD HOLDC0	podstax@pods.com	(727)538-6300	PODS ENTERPRISES LLC	3407 FLORENCE CIR

Highly Visible Pollutant Source Inventory

Dec 2024

Contact	Email	Phone	Business Name	Property Location
MIKE CROKE	mcroke@Piercealuminum.com	(508)541-7007	D/B/A PIERCE ALUMINUM CO INC	3412 FLORENCE CIR
ADELINE PARK	apark@petvetcarecenters.com	(770)943-1811	POWDER SPRINGS ANIMAL CLINIC	4082 MACEDONIA RD
THOMAS PHILLIPS	invoices@perimeterconstructiongroup.com	(678)653-8155	PERIMETER CONSTRUCTION GRP LLC	4071 FAMBROUGH DR SW, BLDG 100
KEITH A NEWBY	NSXVIPER1@yahoo.com	(678)401-6268	PARADISE FALLS CAR WASH, LLC	1122 RICHARD D SAILORS PKWY
CHRISTIE MEADORS	busiesslicense@oreillyauto.com	(678)504-2800	O'REILLY AUTO PARTS #6457	4440 BROWNSVILLE RD
RIJWAN JIWANI	Rijwan.jiwani@yahoo.com	(678)398-7469	CHEVRON	3290 NEW MACLAND RD
JEAN S JULME & NIXSON LAFLEUR	newvizionglobal@yahoo.com	(678)426-8383	NG TIRES & AUTOMOTIVE SVCS,INC	3943 OLD AUSTELL RD
JESICA AGAN,OFFICE MANAGER	jesica.agan@acdv.com	(770)439-1140	AMERCIAN CUSTOMDESIGN VEHICLES	5050 MCNEEL INDUSTRIAL WAY
IVESTER INVESTMENTS	katie@midsouthfloorsga.com	(770)439-8336	MID SOUTH FLOOR SYSTEMS INC	4041 LAWLER DR
SUSMITA PAHARI	pahariman@yahoo.com	(770)439-1723	VALERO FOOD MART	3550 POWDER SPRINGS RD
AIMS COMPANIES	accounting.corp@aimscompanies.com	(602)601-7000	SOUTHERN HYDRO VAC	4028 LINDLEY RD
MICHAEL HOFFMAN	majorservicecenter@gmail.com	(770)943-2050	MAJOR SERVICE CENTER	5016 FRANK AIKEN RD
DONALD T HERRIN JR	madcustoms@gmail.com	(404)216-7799	MAD CUSTOMS	3180 FLORENCE RD, STE 304
KIRK MCCANNON	macstireservicei@bellsouth.net	(770)943-2431	MAC'S TIRE SERVICE, INC.	4163 AUSTELL POWDER SPRINGS RD
ISAI URIOSTEGUI	Limitlessautostyling@gmail.com	(404)447-5304	LIMITLESS AUTO STYLING LLC	4000 FAMBROUGH DRIVE, STE 6
STEVE TALLEY	mike@labeltapeprint.com	(770)439-4242	LABEL TAPE PRINT, INC.	3150 B FLORENCE RD, STE 1
JOHN HICKS	preferredtravelandtours@gmail.com	(404)309-2000	J & L STRAW	4340 BROWNSVILLE RD
JUNG JOO H0NG	jjcountrystore@gmail.com	(770)439-0960	J J'S COUNTRY STORE	3001 COUNTRY WALK DR
JEFFREY LUCA	amy@lucaelectric.com	(770)439-0000	JIM LUCA ELECTRICAL CONT INC	4575 BROWNSVILLE RD
JOSH DEAVERS	josh@customsandcolor.com	(678)964-0888	CUSTOMS AND COLOR	5018 FRANK AIKEN RD, BLDG 200
JAMES MCTYRE	linda6186@att.net	(678)778-5894	JAMES AUTO REPAIRS, INC.	4018 LINDLEY RD
JOSHUA DAVID JACKSON	jacksonglass2010@yahoo.com	(770)222-2160	JACKSON GLASS LLC	4000 FAMBROUGH DRIVE, SUITE 2
ROBERT O. & RALPH D ALLEN, III	LEALLEN@ALLENANDBRIGHTPC.COM	(770)941-2350	INTEGRATED EQUIPMENT,INC	3190 FLORENCE RD
RODERICK K. DUET	ips@ips-online.biz	(678)384-0216	INDUSTRIAL PROCESS WELDING,LLC	4020 LAWLER DR
DAWN FREY DUET	IPS@IPS-Online.biz	(678)384-0216	INDUSTRIAL PROCESSING SYSTEMS,	4020 LAWLER DR
NICK GREEN, TAX ANALYST	hsm.tax@hussman.com	(314)298-6420	HUSSMANN SERVICES CORPORATION	3004 SPRING INDUSTRIAL DR
WILLIAM HOPKINS	hopp843@bellsouth.net	(770)863-9547	HOPPS TRUST PLUMBING	5694 WALNUT MILL LN
CEASHIA HOLLIE	ceashia86@gmail.com	(470)620-2919	HOLLIE TIRES & AUTO REPAIR LLC	3855 POWDER SPRINGS RD #1157
ROBERT O. ALLEN	stginter@allenandbrightpc.com	(770)420-9949	HATCHERY PLANNING, INC.	3190 FLORENCE RD
TIMOTHY BARNETT	vharman@harcros.com	(913)621-7858	HARCROS CHEMICALS INC	4030 FAMBROUGH DR
ROBERT GREGORY	Sales@gqpInc.com	(770)439-0611	GREGORY'S QUALITY PRINTING	3864 SINIARD ST
EDUARDO LORA ANN FERNANDEZ	gogreenrecycling07@gmail.com	(404)696-9466	GO GREEN RECYCLING, LLC	5592 POWDER SPRINGS DALLAS RD
R.L. SCARBOROUGH	randy@georgiawindowcompany.com	(770)943-4113	GEORGIA WINDOW COMPANY	4025 FAMBROUGH DR
SCOTT E FARLEY	scott@gafirestop.com	(770)439-9900	GEORGIA FIRESTOP, INC.	3402 FLORENCE CIR
NICK GALINAC & VITA GALINAC	vita.galinac@gtiprecision.com	(770)943-0555	GAGING TECHNOLOGY, INC.	3003 SPRING INDUSTRIAL DR
LARRY KELLY / L.A. KEREKES	LKEREKES@FASTENERSIND.COM	(800)437-1689	BUCKEYE FASTENERS CO	4000 FAMBROUGH DR, SUITE 10
BOBBY PRESLEY	BobPresley@comcast.net	(770)675-7291	FAITH AUTO SOLUTIONS INC	5018 FRANK AIKEN RD
DAVID COTNEY	david@electricwiringinc.com	(678)773-1832	ELECTRIC WIRING INC	3180 FLORENCE RD, STE 204
JESSE BRANTLEY & JAMES EMMINO	BTECX@yahoo.com	(678)895-7785	EBTEC AUTOMOTIVE	5012 FRANK AIKEN RD SW
PAARTH SHAH	321hahsp@gmail.com	(678)324-1393	DPS INTERNATIONAL LLC	3855 POWDER SPRINGS RD #1165
JULEIAN M SIMS	dice.custom@yahoo.com	(404)861-5771	DICE CUSTOM WOOD DESIGNS LLC	4000 FAMBROUGH DRIVE, STE 1

Highly Visible Pollutant Source Inventory

Dec 2024

Contact	Email	Phone	Business Name	Property Location
DAVID & CHRISTINE BETHUNE	customs29@aol.com	(770)943-5553	DAVID BETHUNE'S CSTM/RESTORAT	4005 LINDLEY ROAD
GARY BATES, CEO	us@creation.info	(770)439-9130	CREATION MINISTRIES INT US INC	3150 B FLORENCE RD
ERNEST COOKS	cooksautomotive21@gmail.com	(678)464-0571	COOKS AUTOMOTIVE REPAIR, LLC	4018 LINDLEY RD, BLDG 300-A
JOE TREPKE	marlene@compassbuilding.com	(800)243-8438	COMPASS BUILDING SYSTEMS, INC	4547 SILVER SPRINGS BLVD BLDG
JOHN (JUAN) CASTRO	certifiedtransmissions@gmail.com	(770)970-0188	CERTIFIED TRANSMISSIONS, INC	3235 POWDER SPRINGS RD
JASON CHATHAM	chatham02@bellsouth.net	(770)231-1356	CECS, INC.	5014 FRANK AIKEN RD, STE 100
ZACH GALL,SENIOR TAX ANALYST	TAXESFAX@carterlumber.com	(330)673-6100	CARTER LUMBER OF THE SOUTH,INC	3365 FLORENCE RD
KENNETH A SARGENT	csr@candyapplecustom.com	(770)943-5024	CANDY APPLE CUSTOM, INC.	3225 POWDER SPRINGS RD
MATTHEW R. CALDWELL	matt@caldwellinsulation.com	(770)439-3727	CALDWELL INSULATION, INC.	3402 FLORENCE CIR
RUSSELL CHAMBERLAIN	caautorepair@yahoo.com	(678)247-8202	C&A AUTO REPAIR, LLC	4174 OLD AUSTELL RD SW
CASEY COLE, LOCATION MANAGER	casey.cole@bsabuildingsupply.com	(770)439-0101	BUILDING SUPPLY ASSN-USLBM,LLC	3194 FLORENCE RD
TODD MC GOURK	bandrdisposeall@gmail.com	(678)616-6846	B&R DISPOSE ALL LLC	4000 FAMBROUGH DR, STE 8
GAVIN MONN, CEO	s.skelton@boge.com	(770)874-1570	BOGE AMERICA, INC.	3414 FLORENCE CIR SUITE 100
CHARLES HARDING	CHARLES.HARDING@BLADESLAWNMOWER.COM	(678)653-7210	BLADES LAWNMOWER SHOPLLC/UHAUL	4180 OLD AUSTELL RD
CHARLES HARDING	charlesharding013@gmail.com	(678)653-7210	BLADES LAWNMOWER SHOP LLC	4180 OLD AUSTELL RD
JEFF BINKLEY	jeff@binkleyelectric.com	(770)528-1994	BINKLEY ELECTRICAL SVCS INC	3408 FLORENCE CIR, STE 100
WILLIAM AFANGHA ENO	enoalbert59@yahoo.com	(770)222-0910	BILL'S PAYLESS TIRES	3316 NEW MACLAND RD
Z L BUTLER & D LEITZSEY	zack@bigriverbooks.com	(678)264-0304	BIG RIVER BOOKS LLC	5001 MCNEEL INDUSTRIAL WAY
STEPHANIE FORBES	stephanie.forbes@autozone.com	(901)495-8813	AUTOZONE STORES INC #3441	1060 RICHARD D SAILORS PKWY
WAYNE BLACKSTONE	AnimalCarepowdersprings@gmail.com	(770)439-1996	ANIMAL CARE CLINIC	4327 BROWNSVILLE RD SW
JUAN OLVERA	maria@americanflooringservices.com	(770)445-5955	AMERICAN FLOORING SERVICES,INC	3403 FLORENCE CIR
JIM BRESSNER	sales@americancorvette.com	(770)943-2530	AMERICAN CORVETTE	5023 FRANK AIKEN RD
KENT AMBURN	Amburnsgrading@aol.com	(770)231-2323	AMBURN'S GRADING LLC	5592 PS DALLAS RD, STE D
CHRISTINE ANDERSON	BLT@RYAN.COM	(630)515-0477	ADVANCE AUTO STORE #5655	1068 RICHARD D SAILORS PKWY
SAMUEL R. ROBERTS	r.richardson@3d-machine.com	(770)222-4918	3D-MACHINE, INC	4073 FAMBROUGH DR BLDG 100
S ROBERTS / G RICHARDSON	g.richardson@3d-machine.com	(770)439-9497	3D-CYLINDERS INC	4073 FAMBROUGH DR BLDG 300

Appendix D

Inspection Checklists & Procedures

STORM SEWER SYSTEM INVENTORY / INSPECTION CHECKLIST

Date: _____ Time: _____ Rain Fall last 72 hrs: __Yes/No__

Inspector Name(s):_ _____ Structure ID:_____

Subdivision: _____ Street: _____

Land Use in drainage area: RES COM IND Photo Taken: _on GPS____

Structure Type: ***Inlets***

Double Wing Catch Basin — Single Wing Catch Basin

Curb Inlet — Junction Box

Drop Inlet Raised Lid — Drop Inlet Grated

Headwall In — Yard Inlet — Other Inlet:_____

Outlets

Pipe — Flared Pipe — Pipe with wings

Headwall Out — Weir — Outlet Structure

Open Drainage Channel/Ditch — Pond Outlet Control Structure — Other Outlet:_____

Ponds

Retention Pond — Detention Pond

Other Pond:_____ — Water Quality Pond

Inlet/Outlet Material: Block Brick Concrete Metal Other:_____

Lid Type: Plastic Metal Locking Other:_____

Curb Marker: Yes No

Junction Box Diameter: 4 FT Other:_____

Junction Box Material: Block Brick Concrete Metal Other:_____

Pipe-In Diameter:_____ **Pipe-Out Diameter:**_____

Pipe/Ditch Material: Metal Plastic Concrete Clay Earthen

Condition of Pipe: Very Poor Poor Fair Good Excellent

Is it Dry? Yes/No **Is there any indication of an illicit discharge?** Yes/No

Next Steps: No action Work Order IDDE Screening Structural Repair Letter to Owner

Notes:_Goes To _____

_____

_____

GPS MARKED:_____

Appendix C
Operation and Maintenance Inspection Report for Ponds

Project Location:

_____ Date: _____

_____ Contact Name: _____

_____ Phone Number: _____

Inspection Items	Assessment[1] A / U / N/A	Comments
1. Wet Ponds (Permanent Pool) [M] (*Complete Section for Non-Engineered Residential Ponds*)		
a. Undesirable Vegetative Growth		
b. Floating or Floatable Debris		
c. Visible Pollution		
d. High Water Marks on Bank		
e. Shoreline Problems		
f. Sediment Accumulation *(≤20% sediment)*		
g. Other (Specify)		
2. Dry Ponds [M]		
a. Adequate Vegetation and Ground Cover *(≤18-inches; no woody veg. w/o special provisions; & minimal undesirable species)*		
b. Low Flow Channels Clear of Obstruction *(Remove all debris)*		
c. Standing Water or Wet Spots *(No standing water allowed)*		
d. Sediment and/or Trash Accumulation *(≤20% sediment; remove all debris)*		
e. Other (Specify)		
3. Embankment [A] (*Complete Section for Non-Engineered Residential Ponds*)		
a. Adequate Vegetation and Ground Cover *(≤18-inches; no woody veg. w/o special provisions; & minimal undesirable species)*		
b. Embankment Erosion		
c. Embankment Failures *(e.g., cracking, bulging or sliding of dam, leaks on downstream face, visual settlement, horizontal misalignment of top of dam)*		
d. Animal Burrows		
e. Other (Specify)		
4. Emergency Spillway [A] (*Complete Section for Non-Engineered Residential Ponds*)		
a. Clear of Debris *(Remove all debris)*		
b. Adequate Vegetation and Ground Cover *(≤18-inches; no woody veg. w/o special provisions; & minimal undesirable species)*		
c. Riprap Intact		
d. Emergency Spillway Erosion		
e. Other (Specify)		

Inspection Items	Assessment[1] A / U / N/A	Comments
5. Control Structure [A]		
a. Low Flow Orifice, Unrestricted *(Remove all debris; free from sediment)*		
b. Trash Rack (Weir/Low Flow), Debris *(Remove all debris)*		
c. Excessive Sediment Accumulation Inside Riser		
d. Control Structure Condition		
e. Pipe Condition		
f. Control Valve		
g. Outfall Pipe Flowing		
h. Other (Specify)		
6. Sediment Forebays [M]		
a. Sediment Accumulation *(≤50% Design Depth)*		
b. Other (Specify)		
7. Condition of Contributing Sources [A,S] (*Complete Section for Non-Engineered Residential Ponds*)		
a. Riprap Failures		
b. Slope Erosion		
c. Storm Drain Pipes		
d. Endwalls / Headwalls		
e. Other (Specify)		
8. Access [M]		
a. Encroachments on Ponds or Easement Area		
b. Maintenance Access		
c. Any Public Hazards (Specify)		
d. Condition of Fence		
e. Other (Specify)		

Note: If maintenance was conducted during inspection, note what was addressed in the "Comments" column.
* Designates basic minimum maintenance requirements for stormwater facilities; parentheses and italics.
[1] Assessment: "A" = Acceptable; "U" = Unacceptable; "N/A" = Not Applicable to this site
[A] Recommended Inspection Frequency: Annual
[M] Recommended Inspection Frequency: Monthly
[S] Recommended Inspection Frequency: After Major Storm

Summary:

1. Inspector Remarks & Recommended Action, if any

2. Overall Condition of Facility (check one): _____ Acceptable _____Unacceptable

3. Dates Any Maintenance Must Be Completed By:

Administrator/Property Owner (Print name and sign)

Photo Examples for "Stormwater Management Pond" Inspection Form:



1. *Acceptable Example* (Wet Ponds)



1A (undesirable trees) & 1B (debris)



1B (debris/trash) & 1E (erosion)



1A (undesirable-cattails)



1A (overgrowth)



1E (lack of vegetation / erosion)



1E (sed't stains/erosion)



2. *Acceptable Example* (Dry Ponds)



2D (trash)



2D (debris)



2C (standing water)





3/4. *Acceptable Examples* (Embankment / Emergency Spillway)




3A/4B (lack of vegetation – but overall good embankment/spillway)



3B (erosion)





5. *Acceptable Examples* (*Riser & Principal Spillway*)



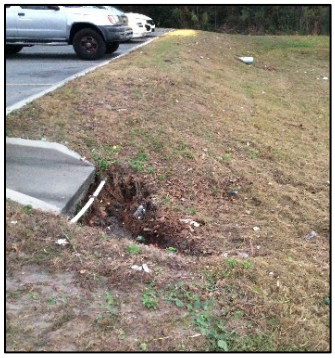
5A (low-flow orifice blockage)



5B (weir, debris)



5C (sediment in riser)



7B (erosion)



7B/C (slope & pipe erosion)



7C (pipe corrosion)



7E (vegetation blocking flow)

Stormwater Water Quality Vault Inspection Checklist

Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet Structure and Pretreatment					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Inlet structure is in good condition. No signs of cracks or leaks.					
Diversion structure (high flow bypass structure or other) is free of trash, debris, or sediment. Comment on overall condition of diversion structure and list type.					
Inlet pipe fits tightly to the underground detention.					
Inlet has protection to prevent clogging with leaves or other debris and has fine mesh for mosquito control.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Structure seems to be working properly. No signs of settling, leaking, or cracking. Comment on overall condition of structure.					
Emergency Overflow and Outlet Structure					
Area is free of trash, debris, and sediment.					
Overflow valve appears to be in good condition and show no signs of leaking.					
Results					
Overall condition of Underground Detention:					
Additional Comments					

Notes: *If a specific maintenance item was not checked, please explain why in the appropriate comment box.

Water Quality Assessment Checklist for City/County-Owned Flood Control Structures

Dry Detention Basins / Stormwater Ponds / Water Quality Vaults

Project Name and Address: _____ Inspector: _____

_____ Date of Inspection: _____

BMP Type: _____

Inspection Items	Yes	No	N/A	Comments and Potential Retrofits
Is there evidence of erosion or sediment along the banks or at the outfall?				
Has the contributing drainage area been fully stabilized?				
Does the site have proper maintenance and inspection access?				
Is the slope of the embankments consistent with GSMM Recommendations? (i.e. 3 to 1 horizontal to vertical)				
Is the BMP installed to the proper depth as recommended by the GSMM (i.e. less than 10 feet for dry detention and less than 8 feet for the permanent pool on a stormwater pond?)				
Is suitable fill material used for the embankment/berm?				
Is the embankment properly compacted?				
Is there a forebay or another pretreatment feature?				
Are inlets, flow paths, and underdrains (if called for) properly installed and at the correct elevations?				
Has the outfall been constructed with adequate erosion protection?				
Is an emergency spillway provided?				
If so, has the outflow structure been properly installed and at the correct elevations?				
Does the vegetation meet City/County requirements, and is it in good health?				
Is the BMP fully functional?				

MUNICIPAL INSPECTION PROGRAM

SECTION A. FACILITY DESCRIPTION

Facility Name: _____ Phone #: _____

Address: _____

Description of Facility: _____

Manager: Pam Conner Title: City Manager

Inspector: _____ Phone #: 770-943-1666

Inspection Date: _____ Time: _____ Quarter #: _____

SECTION B: SITE SCREENING CHECKLIST

	Violation	Yes	No	Description
1	Spills or stains present			
2	Grease			
3	Suspicious Discharge			
4	Open, Unmarked and/or leaking containers of hazardous materials			
5	Litter			
6	Sewage Discharge			
7	Illegal Dumping			
8	Stormwater Structure Requires Maintenance			
9	Failure To Show GA EPD Permit and/or SWPPP			
10	Other			

Additional Notes: _____

City of Powder Springs Community Development Department
4488 Pineview Drive, Powder Springs, GA 30127

Tina Garver, Director

Inspection Compliance Form

Section A: Facility Description

Inspection Number: _____ Date: 12/27/23 Time: _____ Weather condition: Dry

Facility: _____

Address: _____

Description of Facility: _____

Facility Contact: _____ Title: Mayor Phone: _____

Inspector: _____ Title: Community Developmer Phone: 770-943-1666

Type of Inspection: ☐ Initial ☐ Routine ☐ Follow up ☐ Annual

Section B: Site Observations

	Violation	Present	Description
1	Use, storage, or cleaning of industrial machinery or equipment in areas where residuals remain and are exposed to stormwater.	Y ☐ N ☐	
2	Stains, materials, residuals, and/or mud observed on the ground, in stormwater inlets, and/or parking/loading areas from previous spills or leaks.	Y ☐ N ☐	
3	Suspicious discharge observed flowing from outfall during dry weather.	Y ☐ N ☐	
4	Uncontained and/or ineffective storage of litter, debris, waste, metal, plastic, and glass containers, broken glass, etc.	Y ☐ N ☐	
5	Inappropriate management of materials, products and/or soil where exposure to stormwater could result in the discharge of pollutants	Y ☐ N ☐	
6	Potentially hazardous materials, such as used oil, stored in open and/or leaking containers.	Y ☐ N ☐	
7	Inappropriate disposal of wastewater (including septic tank failures) and/or grease.	Y ☐ N ☐	
8	Failure to provide notification to appropriate agencies of a release of hazardous materials.	Y ☐ N ☐	
9	Stormwater structure (for example: pond, oil grit separator, swales, trenches, etc.) requires maintenance.	Y ☐ N ☐	
10	Incomplete records of industrial stormwater permit, land disturbance permit, stormwater pollution prevention plan, and/or management of used oil, solvents, and/or other hazardous materials.	Y ☐ N ☐	
11	Other	Y ☐ N ☐	

Section C: Recommended Actions

Section D: Notice of Right to Appeal

Section E: Referenced Ordinance(s) and Potential Penalties

Section F:Educational Materials Distributed

Section G: Recommendations

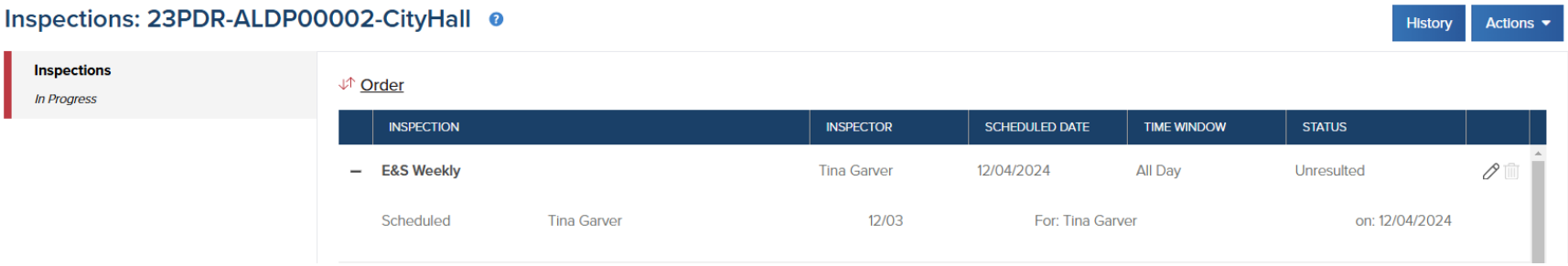
Compliance Status:

☐ **In compliance** ☐ **Out of Compliance** ☐ **Follow Up Required**

Inspector: **Date:**

Pictures attached ☐

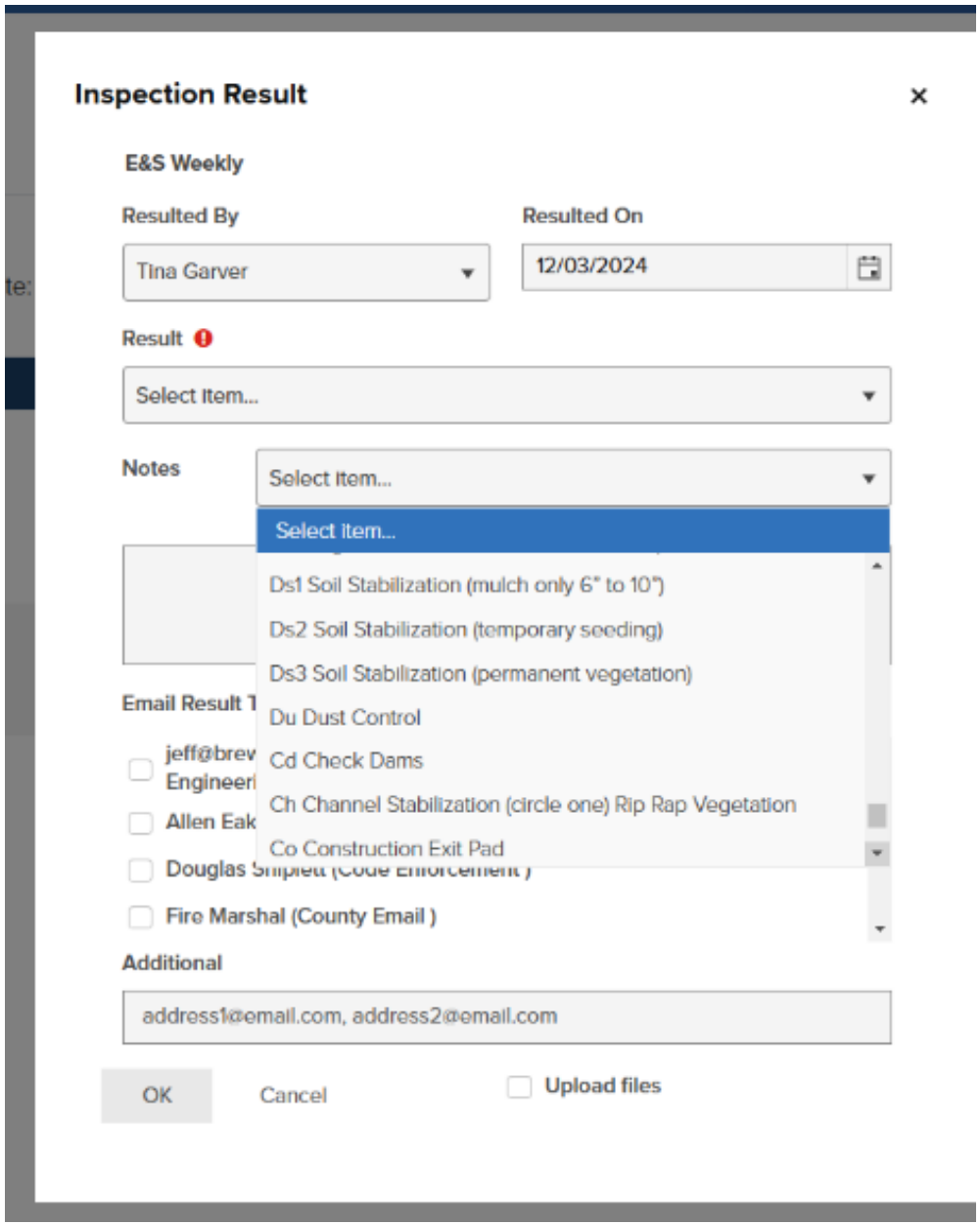
All Erosion and Sediment Control Inspections are completed in Community Core Software.



All BMPs that are inspected as part of Erosion and Sediment Control Inspections are shown on the dropdown menu below. The inspector is able to select the option and add notes if a violation is found.

Under the notes section, if a violation is noted it is listed in the notes section. Any citations or Stop Work orders issued are also noted in this notes section.

If the inspection resulted with either passed, failed or partial failed.


Inspection Result
E&S Weekly
Resulted By
Tina Garver
Resulted On
12/03/2024
Result
Select Item...
Notes
Select Item...
Select Item...
Ds1 Soil Stabilization (mulch only 6" to 10")
Ds2 Soil Stabilization (temporary seeding)
Ds3 Soil Stabilization (permanent vegetation)
Du Dust Control
Cd Check Dams
Ch Channel Stabilization (circle one) Rip Rap Vegetation
Co Construction Exit Pad
Email Result T
jeff@brev
Engineeri
Allen Eak
Douglas Shiplett (Code Enforcement)
Fire Marshal (County Email)
Additional
address1@email.com, address2@email.com
OK
Cancel
Upload files

E&S Inspections and Enforcement

Inspection Results 2024														
Jurisdiction	Permit #	Job Name	Permit Type	Inspection Step	Inspection Name	Inspection	Inspection Trade	Property Address	Subdivision	Inspection Date	Result	Inspector Name	Result Notes	Remote

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, email 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 Part IV page 19 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 Part IV page 19 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." in accordance with Part IV.A.5 page 25 of the permit.*
		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."*

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 practices to provide cover for building materials and building products on site.*

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

29 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).

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

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

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

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

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

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

36 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.*

37 Graphic scale and North arrow.

38 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

39 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.

40 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.*

41 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.

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

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

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

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

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

47 Soil series for the project site and their delineation.

48 The limits of disturbance for each phase of construction.

49 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 justification 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, permittees 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 feasible, a written justification explaining this decision must be included in the Plan.

50 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.

51 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.

52 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.

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) **Permit IV.D.1 pg 26**
		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) The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.
		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.) **Permit IV.D.3 pg 27**
		4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls. May be shown on ES&PC Plan sheets and/or ES&PC notes. **Permit II.B.1.c pg 12**
		5 Provide the name, address, **email address**, and phone number of primary permittee. May be shown on cover sheet, ES&PC Plan or under ES&PC notes. **Permit II.B.1.b pg 12**
		6 Note total and disturbed acreage of the project or phase under construction. Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.c pg 27**
		7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees. GPS location of the construction exit must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI. **Permit II.B.1.a pg 12**
		8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions. The initial Plan date should be shown on all pages. With each resubmittal, the revision date and entity requesting revisions should be shown on cover sheet and each sheet that has been revised.
		9 Description of the nature of construction activity. Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.a pg 27**
		10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary. Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan Reviewers if a site visit is needed, or if the site needs to be located on another map. **Permit IV.D.2.e pg 27**
		11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected. The name of the initial receiving water(s) or if unnamed, the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s)

supports warm water fisheries or is a trout stream. Describe any neighboring area which could be affected by the post-developed runoff from the site. **Permit IV.D.2.f pg 27**

12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 19** of the permit.
The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

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 **Part IV page 19** of the permit.*
The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the Georgia Water Quality Control Act and the document "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, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of Best Management Practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

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." *
The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required. **Permit IV.A.5 pg 25**

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."
See **Part IV.(i) - (iv) on pages 19-24** of the permit and show under ES&PC notes.

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

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."*
See **Part IV.C. on page 26** of the permit. This can be clarified in a narrative and shown under ES&PC notes. Revisions or amendments should be submitted to the Local Issuing Authority for review.

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."*
The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit. **Permit IV.D.3.c.(1) pg 30**

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."
Must be shown on ES&PC Plan or under ES&PC notes.

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."
Must be shown on ES&PC Plan or under ES&PC notes.

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."
Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.3.a.(1) pg 28**

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.*
If any storm water associated with construction activities discharges into an Impaired Stream Segment that has been listed for the criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff), the ES&PC Plan must include at least four (4) of the BMPs listed in **Part III.C.2.a. - v.** of the permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's most current and subsequent "305(b)/303(d) List Documents **(Approved)**' can be viewed on the GAEPD website (www.gaepd.org/Documents/305b.html) **Permit III.C.2.a. - v. pg 15-17**

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.*
List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org. The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan. **Permit III.C.1 pg 15**

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.*
When the project allows the concrete washdown of tools, concrete mixer chutes, hoppers and rear of the vehicles on the project site delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow the concrete washdown on the project site, note that on the Plan. **Permit IV.D.3.c.(6) pg 31**

25 Provide BMPs for the remediation of all petroleum spills and leaks.
The Plan must provide BMPs and guidance for the prevention of spills and leaks of petroleum products from any areas where such products are stored or used as well as guidance for the proper remediation of any spills and leaks that do occur. This information can be in the form of a separate Spill Prevention/Spill Response document so long as that information accompanies the Plan. **Permit IV.D.3.c.(5) pg 31**

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.*
The Plan must contain a 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. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.
Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed. **Permit IV.D.3.b pg 29**

27 Description of practices to provide cover for building materials and building products on site.*

The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials in order to minimize exposure to precipitation and to stormwater. **Permit IV.D.3.c.(2) pg 30**

28 Description of the practices that will be used to reduce the pollutants in storm water discharges.*
The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges. **Permit IV pg 24**

29 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).
Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes. **Permit IV.D.2.b pg 27**

30 Provide complete requirements of Inspections and record keeping by the primary permittee.*
The Plan must include all of the Inspections and record keeping requirements of the primary permittee as stated in **Part IV.D.4.a. on pages 31-33** of the permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

31 Provide complete requirements of Sampling Frequency and Reporting of sampling results.*
See **Part IV.D.6.d pages 35-37** *Sampling Frequency* and **Part IV.E page 37** *Reporting* in the permit. Complete Sampling Frequency and Reporting requirements are to be shown on the Plan under ES&PC notes.

32 Provide complete details for Retention of Records as per Part IV.F. of the permit.*
See **Part IV.F page 38** *Retention of Records* in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.

33 Description of analytical methods to be used to collect and analyze the samples from each location.*
This narrative must is to be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location. **Permit IV.D.6.a. - c. pg 33-35**

34 Appendix B rationale for NTU values at all outfall sampling points where applicable.*
When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries). **Permit IV.D.6.a.(3) pg 33**

35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.*
The Plan shall include a USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the locations of the site or the common development. The map must include (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during the mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map. **Permit IV.D.6.a.(1) pg 33**

36 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 sediment storage requirements and 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.*

The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required 67 cy per acre sediment storage, construction exit, tree-save fence if applicable and any other BMPs necessary to prevent sediment from leaving the site such as silt fence, inlet protection on existing storm drain structures, diversions, check dams, temporary ground cover, etc. Limits of disturbance for the initial phase are to be only the areas needed to install initial BMPs. The intermediate phase should show rough grading and utility construction. BMPs should include initial inlet protection, additional silt fence as needed, any revised sediment storage needed as drainage basins are altered, outlet protection, retrofit if applicable, matting with temporary or permanent vegetation as needed, temporary down drains, filter rings, etc. Final phase of Plan should show finished grade, curbing and paving if applicable, building construction if applicable, etc. BMPs should include permanent vegetation, appropriate inlet protection, etc.
For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and the final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. **Permit IV.D.3 pg 27**

☐ ☐ 37 Graphic scale and North arrow.

The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.

☐ ☐ 38 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

The initial, intermediate, and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

☐ ☐ 39 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.

Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov **Permit IV.D.3.a (4) pg 29**

☐ ☐ 40 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.*

Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.

☐ ☐ 41 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.

The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authorities are allowed to require more stringent buffers of State waters. The minimum undisturbed buffers required by the State and all other buffers of State waters required by the issuing authority must be delineated. Any undisturbed buffer area that is impacted by the project site must be noted on the Plan. **Permit IV.D.2.e pg 27**

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

ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE MUST BE DELINEATED ON ALL PHASES OF THE PLAN. When a project is located in a jurisdiction with a certified Local Issuing Authority and the LIA must make a determination of State waters that are not delineated on the Plan, the Plan review could be delayed for beyond the full forty-five day review time allowed to the LIA, or the full thirty-five day review time allowed to the District if the District is reviewing the Plan. For all projects in a jurisdiction where there is no certified Local Issuing Authority regulating that project, EPD is responsible for State waters determinations and there are no time limits for reviewing the Plan.
ALL WETLANDS LOCATED WITHIN THE PROJECT SITE ONLY MUST BE DELINEATED.
If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.

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

All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and fnal phases, the new basins and their acreage must be delineated throughout each phase of the Plan. **Permit IV.D.2.e pg 27**

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

Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through, and from, the project site, with each one delineated, labeled and showing its total acreage.

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

The Plan must provide both pre- and post-construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not a required element of the Plan, only the pre and post-construction estimates of the run-off coefficient or peak discharge flow for the site. **Permit IV.D.2.d pg 27**

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

The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart on the storm-drain profile sheet, ES&PC intermediate phase sheet, or on the ES&PC detail sheet that shows outlet protection.

The dimensions of the apron must include length (La), width at the headwall (W1), down-stream width (W2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-34.1 and 6-34.2 in the Manual. These should be shown in a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection.

Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

47 Soil series for the project site and their delineation.

Soil series delineations are required for the Plan review and can be found on the NRCS web site. The highest level of soil survey required for the project site, such as a level three or level four survey for projects that will be using septic systems, must be delineated on the Plan. The soil series delineation should be shown on the existing site Plan or the initial phase Plan. A chart listing the soils located on the project should be shown on the sheet with their delineation.

48 The limits of disturbance for each phase of construction.

The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

49 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 justification 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 must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees 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 feasible, a written justification explaining this decision must be included in the Plan.

For each common drainage location, a temporary (or Permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3's must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included on the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. **Permit IV.D.3.a.(3) pg 28**

☐ ☐ 50 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.
BMPs for all phases of the Plan must be consistent with and no less stringent than the Manual and shown using uniform coding symbols from the Manual. The uniform coding symbols legend from the Manual must be included and may be shown on detail sheet or any of the ES&PC Plan sheets.

☐ ☐ 51 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.
The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. All BMPs and details shown must, at a minimum, meet the guidelines given in the Manual. Note that a worksheet is provided in the Manual for most structural BMPs that must be included on the ES&PC Plan or detail sheet.

☐ ☐ 52 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 year that seeding will take place and for the appropriate geographic region of Georgia.
Must be shown on ES&PC Plan, on the ES&PC detail sheet or under ES&PC notes.

*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.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE 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 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
		4 Provide the name, address, email address, and phone number of primary permittee.
		5 Note total and disturbed acreage of the project or phase under construction.
		6 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.
		7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
		8 Description of the nature of construction activity.
		9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
		10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
		11 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 21 of the permit.
		12 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 Part IV page 20 of the permit.*
		13 Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on Part IV.D.6.c.(3) page 37 of the permit as applicable.*
		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, perimeter control BMPs, and sediment basins within 7 days after installation." in accordance with Part IV.A.5 page 26 of the permit *
		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."*

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 practices to provide cover for building materials and building products on site.*

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

29 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).

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

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

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

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

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

35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable.*

36 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.*

37 Graphic scale and North arrow.

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

Existing Contours	USGS 1": 2000' Topographical Sheets
Proposed Contours	1" : 400' Centerline Profile

39 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.

40 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.*

41 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.

42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.

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

44 Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.

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

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

47 Soil series for the project site and their delineation.

48 The limits of disturbance for each phase of construction.

49 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 justification 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 must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees 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 feasible, a written justification explaining this decision must be included in the Plan.

50 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.

51 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.

52 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 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, 2019

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE 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) **Permit IV.D.1 pg 28**
		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) The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.
		3 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls. May be shown on ES&PC Plan sheets and/or ES&PC notes. **Permit II.B.1.c pg 13**
		4 Provide the name, address, **email address**, and phone number of primary permittee. May be shown on cover sheet, ES&PC Plan or under ES&PC notes. **Permit II.B.1.b pg 13**
		5 Note total and disturbed acreage of the project or phase under construction. Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.c pg 28**
		6 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees. GPS locations of the beginning and end of the infrastructure project must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI. **Permit II.B.1.a pg 13**
		7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions. The initial Plan date should be shown on all pages. With each resubmittal, the revision date, and the entity requesting revisions should be shown on cover sheet and each sheet that has been revised.
		8 Description of the nature of construction activity. Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.a pg 28**
		9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary. Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan Reviewers if a site visit is needed, or if the site needs to be located on another map. **Permit IV.D.2.e pg 28**
		10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected. The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream. Describe any neighboring area which could be affected by the **Permit IV.D.2.f pg 28**
		11 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 21** of the permit. The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."
		12 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 Part IV page 20 of the permit.*
The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the Georgia Water Quality Control Act and the document "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, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of Best Management Practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100002."

13 Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on Part IV.D.6.c.(3) page 37 of the permit as applicable.*
The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent steams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GAR 100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

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, perimeter control BMPs, and sediment basins within 7 days after installation." *
The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, or an alternative professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within (7) days after installation. Alternatively, for linear infrastructure projects, the primary permittee must retain the design professional who prepared the Plan, or alternative design professional approved by EPD in writing to inspect (a) the installation of sediment storage requirements and perimeter control BMPs for the "initial segment" of the linear infrastructure project and (b) all sediment basins within the entire linear infrastructure project within (7) days after the installation. For the purposes of the specific requirements in Part IV.A.5., the disturbed acreage of the "initial segment" of a linear infrastructure project must be equal to or greater than 10% of the total estimated disturbed acreage for the linear infrastructure project but not less than one(1) acre. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within (7) days and the permittee must correct all deficiencies within (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required. Part IV.A.5 pg 26

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."
See Part IV.(i) - (iv) on pages 21-25 of the permit and show under ES&PC notes.

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

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."*
See Part IV.C. on page 27 of the permit. This can be clarified in a narrative and shown under ES&PC notes. Revisions or amendments should be submitted to the Local Issuing Authority for review.

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."*

The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit. **Permit IV.D.3.c.(1) pg 31**

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."
Must be shown on ES&PC Plan or under ES&PC notes.

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."
Must be shown on ES&PC Plan or under ES&PC notes.

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."
Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.3.a.(1) pg 29**

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.*
If any storm water associated with construction activities discharges into an Impaired Stream Segment that has been listed for the criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff), the ES&PC Plan must include at least four (4) of the BMPs listed in **Part III.C.2.a. - v.** of the permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's most current and subsequent "305(b)/303(d) List Documents **(Approved)**' can be viewed on the GAEPD website (www.gaepd.org/Documents/305b.html) **Permit III.C.2.a. - v. pg 17-19**

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.*
List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org. The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan. **Permit III.C.1 pg 16**

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.*
When the project allows the concrete washdown of tools, concrete mixer chutes, hoppers and rear of the vehicles on the project site, delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow the concrete washdown on the project site, note that on the Plan. **Permit IV.D.3.c.(6) pg 32**

25 Provide BMPs for the remediation of all petroleum spills and leaks.
The Plan must provide BMPs and guidance for the prevention of spills and leaks of petroleum products from any areas where such products are stored or used as well as guidance for the proper remediation of any spills and leaks that do occur. This information can be in the form of a separate Spill Prevention/Spill Response document so long as that information accompanies the Plan. **Permit IV.D.3.c.(5) pg 32**

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.*
The Plan must contain a 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. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.

Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed. **Permit IV.D.3.b pg 30**

27 Description of practices to provide cover for building materials and building products on site.*
The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials in order to minimize exposure to precipitation and to stormwater. **Permit IV.D.3.c.(2) pg 31**

28 Description of the practices that will be used to reduce the pollutants in storm water discharges.*
The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges. **Permit IV pg 25**

29 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).
Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes. **Permit IV.D.2.b pg 28**

30 Provide complete requirements of Inspections and record keeping by the primary permittee.*
The Plan must include all of the Inspections and record keeping requirements of the primary permittee as stated in **Part IV.D.4.a on pages 32-34** of the permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

31 Provide complete requirements of Sampling Frequency and Reporting of sampling results.*
See **Part IV.D.6.d pages 38-39** *Sampling Frequency* and **Part IV.E page 40** *Reporting* in the permit. Complete Sampling Frequency and Reporting requirements are to be shown on the Plan under ES&PC notes.

32 Provide complete details for Retention of Records as per Part IV.F. of the permit.*
See **Part IV.F pages 40-41** *Retention of Records* in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.

33 Description of analytical methods to be used to collect and analyze the samples from each location.*
This narrative must be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location. **Permit IV.D.6.a. - c. pg 34-38**

34 Appendix B rationale for NTU values at all outfall sampling points where applicable.*
When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries). **Permit IV.D.6.a.(3) pg 34**

35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.*
The Plan shall include a USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the locations of the site or the common development. The map must include (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during the mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map. **Permit IV.D.6.a.(1) pg 34**

36 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 sediment storage requirements and 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.*

The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required 67 cy per acre sediment storage, construction exit, tree-save fence if applicable and any other BMPs necessary to prevent sediment from leaving the site such as silt fence, inlet protection on existing storm drain structures, diversions, check dams, temporary ground cover, etc. Limits of disturbance for the initial phase are to be only the areas needed to install initial BMPs. The intermediate phase should show rough grading and utility construction. BMPs should include initial inlet protection, additional silt fence as needed, any revised sediment storage needed as drainage basins are altered, outlet protection, retrofit if applicable, matting with temporary or permanent vegetation as needed, temporary down drains, filter rings, etc. Final phase of Plan should show finished grade, curbing and paving if applicable, building construction if applicable, etc. BMPs should include permanent vegetation, appropriate inlet protection, etc.
For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and the final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. **Permit IV.D.3 pg 28**

☐ ☐ 37 Graphic scale and North arrow.

The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.

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

Existing Contours	USGS 1": 2000' Topographical Sheets
Proposed Contours	1" : 400' Centerline Profile

The initial, intermediate, and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

☐ ☐ 39 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.

Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov **Permit IV.D.3.a.(4) pg 49**

☐ ☐ 40 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.*

Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.

☐ ☐ 41 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.

The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authorities are allowed to require more stringent buffers of State waters. The minimum undisturbed buffers required by the State and all other buffers of State waters required by the issuing authority must be delineated. Any undisturbed buffer area that is impacted by the project site must be noted on the Plan. **Permit IV.D.2.e pg 28**

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

ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE MUST BE DELINEATED ON ALL PHASES OF THE PLAN. When a project is located in a jurisdiction with a certified Local Issuing Authority and the LIA must make a determination of State waters that are not delineated on the Plan, the Plan review could be delayed for beyond the full forty-five day review time allowed to the LIA, or the full thirty-five day review time allowed to the District if the District is reviewing the Plan. For all projects in a jurisdiction where there is no certified Local Issuing Authority regulating that project, EPD is responsible for State waters determinations and there is no time limits for reviewing the Plan.
ALL WETLANDS LOCATED WITHIN THE PROJECT SITE ONLY MUST BE DELINEATED.
If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.

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

All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and final phases, the new basins and their acreage must be delineated throughout each phase of the Plan. **Permit IV.D.2.e pg 28**

☐ ☐ 44 Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.

Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through and from the project site, with each one delineated, labeled and showing its total acreage.

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

The Plan must provide both pre- and post-construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not a required element of the Plan, only the pre and post-construction estimates of the run-off coefficient or peak discharge flow for the site. **Permit IV.D.2.d pg 28**

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

The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow, including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart shown on storm-drain profile sheet, ES&PC intermediate phase sheet or on the ES&PC detail sheet that shows outlet protection.

The dimensions of the apron must include length (La), width at the headwall (W1), down-stream width (W2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-34.1 and 6-34.2 in the Manual. These should be shown in a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection.

Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

47 Soil series for the project site and their delineation.

Soil series delineations are required for the Plan review and can be found on the NRCS web site. The highest level of soil survey required for the project site, such as a level three or level four survey for projects that will be using septic systems, must be delineated on the Plan. The soil series delineation should be shown on the existing site Plan or the initial phase Plan. A chart listing the soils located on the project should be shown on the sheet with their delineation.

48 The limits of disturbance for each phase of construction.

The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

49 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 justification 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 must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees 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 feasible, a written justification explaining this decision must be included in the Plan.

For each common drainage location, a temporary (or permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3's must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included on the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. **Permit IV.D.3.a.(3) pg 29**

50 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.
BMPs for all phases of the Plan must be consistent with and no less stringent than the Manual and shown using uniform coding symbols from the Manual. The uniform coding symbols legend from the Manual must be included and may be shown on detail sheet or any of the ES&PC Plan sheets.

51 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.
The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. All BMPs and details shown must, at a minimum, meet the guidelines given in the Manual. Note that a worksheet is provided in the Manual for most structural BMPs that must be included on the ES&PC Plan or detail sheet.

52 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 year that seeding will take place and for the appropriate geographic region of Georgia.
Must be shown on ES&PC Plan, on the ES&PC detail sheet or under ES&PC notes.

*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.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENT CONSTRUCTION PROJECTS (Primary and Tertiary Permittees)
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 Limit 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, email address, and phone number of the primary permittee or tertiary 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 Part IV page 23 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 Part IV pg 22 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." in accordance with Part IV.A.5 page 27 of the permit *
		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."

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 Indication that the applicable portion of the primary permittees ES&PC Plan is to be provided to each secondary permittee prior to the secondary conducting any construction activity and that each secondary shall sign the Plan or portion of the Plan applicable to their site. List the names and addresses of all secondary permittees.*

23 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.*

24 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 23 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.*

25 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.

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

27 Description of practices to provide cover for building materials and building products on site.*

28 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.

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

30 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).

31 Provide complete requirements of inspections and record keeping by the primary permittee or tertiary permittee.

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

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

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

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

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

37 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.

38 Plan addresses BMPs for all phases of common development including individual building lots and out-parcels, etc. regardless of who owns or operates the individual sites. Include a typical and any situational lots applicable.

39 Graphic scale and North arrow.

40 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

41 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.

42 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.

43 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.

44 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.

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

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

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

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

49 Soil series for the project site and their delineation.

50 The limits of disturbance for each phase of construction.

51 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 justification 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 must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees 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 feasible, a written justification explaining this decision must be included in the Plan.

52 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.

53 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.

54 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 year that seeding will take place and for the appropriate geographic region of Georgia.

*This requirement of the Common Development permit is not applicable to Tertiary Permittees with a Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre. If applicable, the * checklist item would be N/A.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENT CONSTRUCTION PROJECTS (Primary and Tertiary Permittees)
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) **Permit IV.D.1 pg 29**
		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) The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.
		3 Limit 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.) **Permit IV.D.3 pg 30**
		4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls. May be shown on ES&PC Plan sheets and/or ES&PC notes. **Permit II.B.1.c pg 12, II.B.2.e pg 14, II.B.3.d pg 15**
		5 Provide the name, address, **email address**, and phone number of the primary permittee or tertiary permittee. May be shown on cover sheet, ES&PC Plan or under ES&PC notes. **Permit II.B.1.b pg 12, II.B.2.c pg 14, II.B.3.b pg 15**
		6 Note total and disturbed acreage of the project or phase under construction. Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.c pg 30**
		7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees. GPS location of the construction exit must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI. **Permit II.B.1.a pg 12, II.B.3.a pg 15**
		8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions. The initial Plan date should be shown on all pages. With each resubmittal the revision date and entity requesting revisions should be shown on cover sheet and each sheet that has been revised.
		9 Description of the nature of construction activity. Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.a pg 29**
		10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary. Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan reviewers if a site visit is needed, or if the site needs to be located on another map. **Permit IV.D.2.e pg 30**
		11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected. The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream. Describe any neighboring area which could be affected by the post-developed runoff from the site. **Permit IV.D.2.f pg 30**
		12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 23** of the permit.

The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

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 **Part IV page 22** of the permit.
The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the **Georgia** Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100003."

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." *
The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required. **Permit IV.A.5 pg 27**

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."
See **Part IV.(i) - (iv) on pages 23-26** of the permit and show under ES&PC notes.

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

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."
See **Part IV.C on page 29** of the permit. This can be clarified in a narrative and shown under ES&PC notes.
Revisions or amendments should be submitted to the Local Issuing Authority for review.

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."
The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit. **Permit IV.D.3.c.(1) pg 33**

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."
Must be shown on ES&PC Plan or under ES&PC notes.

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."
Must be shown on ES&PC Plan or under ES&PC notes.

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."
Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.3.a.(1) pg 31**

22 Indication that the applicable portion of the primary permittees ES&PC Plan is to be provided to each secondary permittee prior to the secondary conducting any construction activity and that each secondary shall sign the Plan or portion of the Plan applicable to their site. List the names and addresses of all secondary permittees.*

The Plan must contain a list of and contact information for all secondary permittees and a statement that the primary permittee shall provide a copy of the Plan (and any subsequent revisions to the Plan) to each secondary permittee. The Plan must include a section for each secondary to sign indicating that they have made a written acknowledgement of receipt of the Plan and a copy of the acknowledgement must be kept in the primary's records. **Permit IV.D.2.g pg 30**

23 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.*

If any storm water associated with construction activities discharges into an Impaired Stream Segment that has been listed for the criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff), the ES&PC Plan must include at least four (4) of the BMPs listed in **Part III.C.2.a. - v.** of the permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's most current and subsequent "305(b)/303(d) List Documents **(Approved)**' can be veiwed on the GAEPD website (www.gaepd.org/Documents/305b.html) **Part III.C.2.a. - v. pg 19-21**

24 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 23 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.*

List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org. The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan. **Permit III.C.1 pg 19**

25 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.

When the project allows the concrete washdown of tools, concrete mixer chutes, hoppers and rear of the vehicles on the project site delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow the concrete washdown on the project site, note that on the Plan. **Permit IV.D.3.c.(6) pg 34**

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

The Plan must provide BMPs and guidance for the prevention of spills and leaks of petroleum products from any areas where such products are stored or used as well as guidance for the proper remediation of any spills and leaks that do occur. This information can be in the form of a separate Spill Prevention/Spill Response document so long as that information accompanies the Plan. **Permit IV.D.3.c.(5) pg 34**

27 Description of practices to provide cover for building materials and building products on site.*

The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials in order to minimize exposure to precipitation and to stormwater. **Permit IV.D.3.c.(2) pg 33**

28 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.

The Plan must contain a 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. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.

Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed. **Permit IV.D.3.b pg 32**

29 Description of the practices that will be used to reduce the pollutants in storm water discharges.
The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges. **Permit IV pg 26**

30 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).
Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes. **Permit IV.D.2.b pg 30**

31 Provide complete requirements of Inspections and record keeping by the primary permittee or tertiary permittee.
The Plan must include all of the Inspections and record keeping requirements of the primary permittee or tertiary permittee as stated in **Part IV.D.4.a. - c. on pages 34-40** of the permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

32 Provide complete requirements of Sampling Frequency and Reporting of sampling results.*
See **Part IV.D.6.d pages 43-44** *Sampling Frequency* and **Part IV.E pages 44-45** *Reporting* in the permit. Complete Sampling Frequency and Reporting requirements are to be shown on the Plan under ES&PC notes.

33 Provide complete details for Retention of Records as per Part IV.F. of the permit.
See **Part IV.F page 45** *Retention of Records* in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.

34 Description of analytical methods to be used to collect and analyze the samples from each location.*
This narrative must is to be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location. **Permit IV.D.6.a. - c. pg 40-42**

35 Appendix B rationale for NTU values at all outfall sampling points where applicable.*
When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries). **Permit IV.D.6.a.(3) pg 40**

36 Delineate all sampling locations if applicable, perennial and intermittent streams and other water bodies into which storm water is discharged. *
The Plan shall include a USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the locations of the site or the common development. The map must include (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during the mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map. **Permit IV.D.6.a.(1) pg 40**

37 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.
The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required 67 cy per acre sediment storage, construction exit, tree-save fence if applicable and any other BMPs necessary to prevent sediment from leaving the site such as silt fence, inlet protection on existing storm drain structures, diversions, check dams, temporary ground cover, etc. Limits of disturbance for the initial phase are to be only the areas needed to install initial BMPs. The intermediate phase should show rough grading and utility construction. BMPs should include initial inlet protection, additional silt fence as needed, any revised sediment storage needed as drainage basins are altered, outlet protection, retrofit if applicable, matting with temporary or permanent vegetation as needed,

temporary down drains, filter rings, etc. Final phase of Plan should show finished grade, curbing and paving if applicable, building construction if applicable, etc. BMPs should include permanent vegetation, appropriate inlet protection, etc. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and the final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. **Permit IV.D.3 pg 30**

☐ ☐ 38 Plan addresses BMPs for all phases of common development including individual building lots and out-parcels, etc regardless of who owns or operates the individual sites. Include a typical and any situational lots applicable.
The Erosion, Sedimentation & Pollution Control plans for a common development is designed for the life of the project and must include practices to be implemented by all secondary permittees involved, whether the primary permittee relinquishes ownership of the land rights or not. This includes providing an ES&PC Plan for typical and situational lots for each secondary permittee (builder) who purchases a lot from the primary permittee (developer). Situational lots may include, but are not limited to, lots adjacent to State waters buffers (in which a double row of Type S sediment barriers must be shown adjacent to wetlands, lots with an extreme grade, etc.

☐ ☐ 39 Graphic scale and North arrow.
The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.

☐ ☐ 40 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

The initial, intermediate and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

☐ ☐ 41 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.
Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov **Permit IV.D.3.a.(4) pg 32**

☐ ☐ 42 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.
Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.

☐ ☐ 43 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.
The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authorities are allowed to require more stringent buffers of State waters. The minimum undisturbed buffers required by the State and all other buffers of State waters required by the issuing authority must be delineated. Any undisturbed buffer area that is impacted by the project site must be noted on the Plan. **Permit IV.D.2.e pg 30**

☐ ☐ 44 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE MUST BE DELINEATED ON ALL PHASES OF THE PLAN. When a project is located in a jurisdiction with a certified Local Issuing Authority and the LIA must make a determination of State waters that are not delineated on the Plan, the Plan review could be delayed for beyond the full forty-five day review time allowed to the LIA, or the full thirty-five day review time allowed to the District if the District is reviewing the Plan. For all projects in a jurisdiction where there is no certified Local Issuing Authority regulating that project, EPD is responsible for State waters determinations and there is no time limits for reviewing the Plan.
ALL WETLANDS LOCATED WITHIN THE PROJECT SITE ONLY MUST BE DELINEATED.
If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.

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

All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and final phases, the new basins and their acreage must be delineated throughout each phase of the Plan. **Permit IV.D.2.e pg 30**

46 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.*
Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through and from the project site, with each one delineated, labeled and showing its total acreage.

47 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. *
The Plan must provide both pre- and post-construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not a required element of the Plan, only the pre and post-construction estimates of the run-off coefficient or peak discharge flow for the site. **Permit IV.D.2.d pg 30**

48 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart shown on storm-drain profile sheet, ES&PC intermediate phase sheet or on the ES&PC detail sheet that shows outlet protection.
The dimensions of the apron must include length (La), width at the headwall (W1), down-stream width (W2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-34.1 and 6-34.2 in the Manual. These should be shown in a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection.
Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

49 Soil series for the project site and their delineation.
Soil series delineations are required for the Plan review and can be found on the NRCS web site. The highest level of soil survey required for the project site, such as a level three or level four survey for projects that will be using septic systems, must be delineated on the Plan. The soil series delineation should be shown on the existing site Plan or the initial phase Plan. A chart listing the soils located on the project should be shown on the sheet with their delineation.

50 The limits of disturbance for each phase of construction.
The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

51 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 justification 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 must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees 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 feasible, a written justification explaining this decision must be included in the Plan.
For each common drainage location, a temporary (or Permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual

must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3's must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included on the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. **Permit IV.D.3.a.(3) pg 31**

☐ ☐ 52 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.
BMPs for all phases of the Plan must be consistent with and no less stringent than the Manual and shown using uniform coding symbols from the Manual. The uniform coding symbols legend from the Manual must be included and may be shown on detail sheet or any of the ES&PC Plan sheets.

☐ ☐ 53 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.
The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. All BMPs and details shown must, at a minimum, meet the guidelines given in the Manual. Note that a worksheet is provided in the Manual for most structural BMPs that must be included on the ES&PC Plan or detail sheet.

☐ ☐ 54 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 year that seeding will take place and for the appropriate geographic region of Georgia.
Must be shown on ES&PC Plan, on the ES&PC detail sheet or under ES&PC notes.

*This requirement of the Common Development permit is not applicable to Tertiary Permittees with a Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre. If applicable, the * checklist item would be N/A.

Effective January 1, 2019

This file includes all three checklists with perspective guidance documents, as well as Appendix 1.

To access the desired checklist and guidance document, go to the bottom of this page and click on the appropriate tab.

Use the arrows on the botttom left hand corner of this page to advance the tabs for the 2019 checklists.

Summary of changes to checklist items:

Provide name and email of the person filling out the checklist
References to material found in NPDES permits have been added in the Guidance pages

	Checklist Item	
GAR100001	#5	Provide the email address of the primary permittee
	#13	Guidance page: "State Soil and Water Conservation Commission" has been changed to "Georgia Soil and Water Conservation Commission".
	#22	BMPs for discharge into Impaired Streams have changed; refer to Section III.C.2.a.-v.
	#22	Guidance page: "305(b)/303(d) List Documents (Final)" has been changed to "305(b)/303(d) List Documents (Approved)"
	#27	New item added to checklist: "Description of practices to provide cover for building materials and building products on site."
	#30	New wording in permit to be included on Plan (Inspections and record keeping); refer to Section IV.D.4.a. on pages 31-33
	#31	New wording in permit to be included on Plan (Reporting); refer to Section IV.E on page 37
GAR100002	#4	Provide the email address of the primary permittee
	#12	Guidance page: "State Soil and Water Conservation Commission" has been changed to "Georgia Soil and Water Conservation Commission".
	#22	BMPs for discharge into Impaired Streams have changed; refer to Section III.C.2.a.-v.

	#22	Guidance page: "305(b)/303(d) List Documents (Final)" has been changed to "305(b)/303(d) List Documents (Approved)"
	#27	New item added to checklist: "Description of practices to provide cover for building materials and building products on site."
	#30	New wording in permit to be included on Plan (Inspections and record keeping); refer to Section IV.D.4.a. on pages 32-34
	#31	New wording in permit to be included on Plan (Reporting); refer to Section IV.E on page 40
GAR100003	#5	Provide the email address of the primary permittee
	#13	Guidance page: "State Soil and Water Conservation Commission" has been changed to "Georgia Soil and Water Conservation Commission".
	#23	BMPs for discharge into Impaired Streams have changed; refer to Section III.C.2.a.-v.
	#23	Guidance page: "305(b)/303(d) List Documents (Final)" has been changed to "305(b)/303(d) List Documents (Approved)"
	#27	New item added to checklist: "Description of practices to provide cover for building materials and building products on site."
	#31	New wording in permit to be included on Plan (Inspections and record keeping); refer to Section IV.D.4.a. - c. on pages 34-40
	#32	New wording in permit to be included on Plan (Reporting); refer to Section IV.E on pages 44-45
Appendix 1	d.	Revised
	e.	Revised
	i.	Revised
	m.	Removed (which caused lettering sequence to change)
	new n. / old o.	Revised
	new u.	New
	new v.	New

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 5O ACRES OR MORE AT ANY ONE TIME.

The four items chosen must be appropriate for the site conditions.

Plan Page #	Included Y/N		
		a.	During construction activities, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width.
		b.	Increase all temporary sediment basins and retrofitted storm water management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
		c.	Use baffles in all temporary sediment basins and retrofitted storm water management basins to at least double the conventional flow path length to the outlet structure.
		d.	A large sign (minimum 4 feet x 8 feet) must be posted on site by the actual start date of construction. The sign must be visible from a public roadway. The sign must identify the following: (1) construction site, (2) the permittee(s), (3) the contact person(s) and telephone number(s), and (4) the permittee-hosted website where the Plan can be viewed must be provided on the submitted NOI. The sign must remain on site and the Plan must be available on the provided website until a NOT has been submitted.
		e.	Use flocculants or coagulants and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Section III. D.1. of the NPDES Permit.
		f.	Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Section IV.D.6.d. of the NPDES Permits.
		g.	Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6 (a)(1).
		h.	Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
		i.	Limit the amount of disturbed area at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less. All calculations must be included on the Plan.
		j.	Use “Dirt II” techniques available on the EPD website to model and manage construction storm water runoff (including sheet flow). All calculations must be included on the Plan. (https://epd.georgia.gov/erosion-and-sedimentation)
		k.	Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
		l.	Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
		m.	Use appropriate erosion control slope stabilization instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
		n.	Use flocculants or coagulants under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
		o.	Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever storm water (including sheet flow) may be discharged.
		p.	Conduct soil tests to identify and to implement site-specific fertilizer needs.

q. Certified personnel for primary permittees shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Section IV.D.4.a.(3)(a) – (c); secondary permittees, Section IV.D.4.b.(3)(a) – (c); and tertiary permittees Section IV.D.4.c.(3)(a) – (c) *

r. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.

s. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). (If using this item please refer to the Alternative BMP guidance document found at www.gaswcc.georgia.gov)

t. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any state mandated buffer areas from such calculations). All calculations must be included in the Plan.

u. Conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Section IV.A.5 of the permit.
The Plan must include a statement that the primary permittee must retain the design professional who prepared the Plan to conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase.

v. Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.

Effective January 1, 2019

* This requirement is different for infrastructure projects:
Certified personnel for primary permittees shall conduct inspections at least once every fourteen (14) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Section IV.D.4.a.(3)(a) – (c) of this permit.

PLAN REVIEW # _____

EROSION SEDIMENT & POLLUTION CONTROL PLAN REVIEW

_____ SOIL AND WATER CONSERVATION DISTRICT

DATE ON PLANS	LIA	DATE RECEIVED

TOTAL PROJECT ACRES	TOTAL DISTURBED ACRES

NAME OF PROJECT	ADDRESS (INCLUDING COUNTY)

SPECIFIC INFORMATION ON PROJECT (GPS Location)

DESIGN PROFESSIONAL	LEVEL II CERTIFICATION/EXPIRATION DATE	SOIL SERIES

APPLICANT	ADDRESS	PHONE NUMBER

REPORT OF TECHNICAL REVIEW

_____ The Erosion Sediment and Pollution Control Plan for the above named project or activity meets the requirements of the Erosion and Sediment Control Ordinance or Rules and Regulations Governing Land-Disturbing Activities in **The (City/County) of (LIA)** under the provisions of the Erosion and Sedimentation Act of 1975, as amended.

_____ The Erosion Sediment and Pollution Control Plan for the above named project or activity does not meet the requirements in **The (City/County) of (LIA)** through failure to include the following:

> Any questions, comments, or concerns regarding this plan review should be addressed to:

Technical review by: _____
Level II Certification #/Expiration Date: _____
Organization: _____
Date: _____

The technical review as accomplished and reported above was done at the request of and is concurred in by the _____ Soil and Water Conservation District.

_____ _____
DISTRICT SUPERVISOR DATE

SOIL EROSION CONTROL AFFIDAVIT

City of Powder Springs Community Development Department
PO Box 46, 4488 Pineview Drive
Powder Springs, GA 30127 (770) 943-1666, Fax (770) 222-6935

This affidavit must be submitted at time of Land Disturbing Permit application.

Construction Site Name:_____
Construction Site Address:_____
Property Owner:_____ Phone_____
Address (Owner): _____
_____

Authorized Representative / Applicant:_____
Phone: _____
24 Hour Contact Person: _____Phone:_____

My signature hereto signifies that I am the person responsible for compliance with the Soil Erosion and Sedimentation Control requirements of the City's Unified Development Code. I hereby acknowledge that Best Management Practices (BMP's), per the Manual for Erosion and Sediment Control in Georgia, must be used to control soil erosion on my job site which includes (but, not limited to) at a minimum the following:

1. Proper installation and regular maintenance of silt barriers (i.e. silt fences, hay bales, etc.) in those areas where water exits the job site:
2. Proper installation and regular maintenance of a gravel construction entrance with geotextile under-liner to keep soil and mud from being tracked from vehicles onto the roadways:
3. Removal of mud from the roadway or adjacent property immediately following any such occurrence:
4. Maintenance and removal of sediment from detention ponds, sediment basins, sediment traps, etc.,
5. Conduct no land disturbing activities within 25 feet of the banks of streams, lakes wetland, etc. (i.e. "State waters") (within 50 feet of any trout stream):
6. Cut-fill operations must be kept to a minimum:
7. Land disturbing activities must be limited to and contained within the site of the approved plans.
8. Disturbed soil shall be stabilized as quickly as practicable (within 14 days):
9. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development (Blankets or Matting are required on all slopes of 3 feet horizontal to 1 foot vertical (3:1) or steeper):
10. Cuts and fills may not endanger adjoining property"
11. Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners:
12. Mud or silt (sediment) may not enter a stream, river, lake or other state water.

SOIL EROSION CONTROL AFFIDAVIT (continued)

Construction Site Name:_____

Note:

1) Best Management Practices (BMP's): A collection of structural measures and vegetative practices which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control for all rainfall events up to and including a 25 year, 24-hour rainfall event.
2) State Waters: Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

Any person who violates any provisions of this Section, or any permit condition or limitation established pursuant to this Section, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the Director issued as provided in this Section shall be liable for a civil penalty not to exceed $2,500.00 per day. For the purpose of enforcing the provisions of this Section, 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 Section under county ordinances approved under this Section 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.

NOTE: The State of Georgia EPD NPDES PERMIT for storm water discharges form construction site activities requires a permit be applied for and issued for all tracts or with land disturbance activities greater than or equal to 1 acre. The Law requires inspections and monitoring by the primary, secondary, or tertierry permitees.

I hereby further acknowledge that The City of Powder Springs inspection staff may refuse to make development inspections, may issue stop work orders, and may issue summons to Municipal Court for failure to comply with erosion control requirements.

Signature:_____ Date Signed:_____

Pesticides, Fertilizers, and Herbicides Application Protocol

1.0 Powder Springs NPDES Stormwater Permit

The purpose of this standard operating procedure (SOP) is to define an application protocol for the routine and non-routine application of pesticides, fertilizers, and herbicides (including pre-emergents) as required per the City of Powder Springs MS4 Permit.

2.0 Scope

The scope of this application protocol is to focus on preventing pesticides, fertilizers, and herbicides from entering the storm drain system and discharging to receiving waters. This protocol is applicable to 1) the outdoor use of pesticides, herbicides, and fertilizers; 2) the use of pesticides and fertilizers where the materials may come into contact with precipitation; 3) the use of pesticides, herbicides, and fertilizers where these materials may come into contact with runoff (natural or induces); and 4) the use of pesticides, herbicides, or fertilizers anywhere where they may be directly or indirectly discharged to a storm drainage system.

This protocol is applicable to any staff member and/or contracted services that apply pesticides, fertilizers, or herbicides. Such staff commonly include, park, public works, purchasing, building/grounds maintenance, hazardous materials, and pesticide application staff.

This protocol is not applicable to the indoor use of pesticides, herbicides or fertilizers, but is applicable to the consequential outdoor handling, mixing, transport, or disposal of materials related to indoor use. This protocol does not apply when another NPDES permit and/or abatement orders are in effect at the selected site.

Furthermore, this protocol is not intended to replace federal or state requirements or provide complete directions for applying, handling, transporting, mixing, or storing pesticides, fertilizers, or herbicides. Consult federal and state requirements for this additional information. Use information for each pesticide, fertilizer, or herbicide can be found on the manufacturer's label. Additional safety information can be found in chemical-specific material safety data sheets (MSDSs).

3.0 Definitions

Application – means the use of the product as a fumigant, direct surface spray, treatment, drench, injection, incorporation, side-dressing, pre-emergent, furrowed spread, or broadcast agent.

Direct On-site Supervision –A QAL or QDL is physically present and available, on-site (within the location as specified in the Monthly Summary Pesticide Use Report Form located on the California Department of Pesticide Regulation website: http://www.cdpr.ca.gov/docs/enforce/preffrm/enf060.pdf to directly manage and control the application (of any pesticide, herbicide, or fertilizer) by supervising others. The QAL manages and controls the application of pesticides, herbicides, and fertilizers through available verbal communication to include direct interaction, telephones, cellular phones, and radios.

Feasible – means capable of being accomplished in a successful manner, within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Forecasted Storm Event – A weather event predicted to commence within the next 24-hour time window, where at least 0.25 inches of rain or more is forecasted to fall.

Herbicide – A common pesticide focused on killing weeds and other plants that grow where they are not wanted.

Integrated Pest Management (IPM) – means a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health, and environmental risks.

Manufacturer's Label – The main source of information on how to use the product correctly, safely, and legally. The main sections of a label are: common name and brand name, active ingredient, EPA registration number, signal words, first aid, directions for use, and storage/disposal.

Material Safety Data Sheets (MSDSs) – An information sheet provided by a chemical manufacturer describing chemical qualities, hazards, safety precautions, and emergency procedures to be followed in case of a spill, fire, or other emergency.

Non-Routine Application – A non-scheduled application to include a "one-time" or an "emergency" use of pesticides, herbicides, and fertilizers.

Notice of Intent (N01) for Pesticide Usage– An oral or written notification submitted prior to the use of a restricted use pesticide, pursuant to a permit.

Pesticide – Defined by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as "...any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, or any other forms of life declared to be pests, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

Qualified Applicator License Holder (QAL) –Any person who has successfully passed the Georgia State Pesticide Laws and Regulations exam, and qualified in one or more pest control categories and may therefore apply restricted materials (herbicides and insecticides) and supervise the pesticide application/operations made by a licensed pest control business. Continuing education units are required each year to maintain the license.

Qualified Distributor License Holder (QDL) – Any person who has successfully passed the Georgia State Pesticide Laws and Regulations exam, and qualified in one or more pest control categories and may therefore distribute restricted materials and supervise the pesticide application/operations made by a licensed pest control business. Continuing education units are required each year to maintain the license.

Routine Application – A scheduled (weekly, quarterly, annually, etc.) use of a pesticide, herbicide, or fertilizer to attain a specific goal.

Signal Word – Defines approximately how hazardous a pesticide could be to people by using descriptors such as DANGER, WARNING, CAUTION, or DANGER-POISON.

Storm Event – A weather event that produces more than 0.25 inch of precipitation.

Use - means any pesticide related activity including:

- Pre-application to include arranging for application, mixing, loading, and making necessary preparations for application;
- Application of the pesticide; and
- Post-application activities – control of the treated area, management of the treated area, transportation, storage, disposal of excess pesticides, equipment wash, containers, and cleaning of equipment.

Note: Use does not include emergency responders, commercial transportation, manufacturing, formulating, or packaging.

4.0 Responsibilities

The City of Powder Springs shall:

A. Designate a QAL or QDL holder, to provide advice and assistance in all matters related to pesticide usage, disposal of products, and safety.
B. Provide pesticide applicators (including contracted businesses) with appropriate record keeping forms to document pesticide use http://www.cdpr.ca.gov/docs/enforce/preffrm/enf060.pdf (Attachment A).
C. Annually verify that the purchasing, storing, mixing, loading, and safety tasks for pesticide, fertilizer, and herbicide use are in accordance with this protocol, applicable laws, and regulations including the current and valid QAUQDL certifications.
D. Verify that no banned or unregistered pesticide is stored or applied.
E. Request landscapers to implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs.
F. Coordinate annual refresher training courses for all pesticide handlers to meet the continuing education requirements.

Pesticide applicators shall:

A. Be certified as or under the direct on-site supervision of, a QAL holder and be properly trained to start work with pesticides, fertilizers, and/or herbicides,
B. Follow manufacturer's label instructions and this SOP. When such instruction is in conflict with this SOP, the label instructions will be followed.
C. Ensure that no banned or unregistered pesticide is stored or applied.
D. Follow the policies and procedures established in this application protocol.
E. Report any unsafe work practices to their respective supervisors.

4.1 Integrated Pest Management Program (IPM)

The City of Powder Springs and Pesticide applicators shall adhere to the following guidelines of the IPM program.

A. Pesticides are used only if monitoring indicates they are needed according to established guidelines.
B. Treatment is made with the goal of removing only the target organism.
C. Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.
D. Its use of pesticides, including Organophosphates and Pyrethroids do not threaten water quality.
E. Partner with other agencies and organizations to encourage the use of IPM.
F. Adopt and verifiably implement policies, procedures, and/or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the Permittee's overall operations and on municipal property.

G. Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
    - Quantify pesticide use by its staff and hired contractors.
    - Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - Demonstrate reductions in pesticide use.

5.0 Environmental Conditions

Environmental conditions (weather and site conditions) required for application of pesticides, fertilizers, and herbicides are dependent upon label and City of Powder Springs Stormwater Permit requirements. Site conditions are determined by visually (V) observing the area for situations or by collecting information from recognized weather forecasting (F) organizations. For example, storm events can be tracked by using any Internet web link that forecasts rainfall (e.g. www.weather.com).

The following table is provided as a guide to applicators where weather or site conditions may impact the application of the pesticide, fertilizer, or herbicide. Weather/Site conditions must be verified for all listed conditions. Forecasting may be used for other weather/site conditions, but is necessary to establish a 24-hour timeframe prior to actual rainfall. A "Yes" indicates the weather/site conditions where application of pesticides, fertilizers, and herbicides may occur. A "No" indicates weather/site conditions where application of pesticides, fertilizers, and herbicides may not occur.

Weather/Site	Form of Determining Weather/Site Conditions	Routine Application	Non-routine Application
Wind-free (sufficient to avoid spray drift from point of application)	V	Yes	Yes
Storm events (see definition)	V	No	No
Within one day of a forecasted storm event (see definition) > 0.25 inches	V, F	No (except for application of pre-emergents)	No
After a storm event where water is leaching or running	V	No	No
Water is running off-site	V	No	No
Rising groundwater	V	No	No
Ground is saturated	V	No	No

6.0 Pollution Prevention and Spill Control

Irrigation canals, open trenches, surface waters, wetlands, designated 303(d) water bodies, and groundwater sources should be noted and application shall be made to prevent contamination of these areas.

In the event that pesticides, fertilizers, and/or herbicides not intended for water application are inadvertently sprayed or spilled into the water sources listed above, the following steps are to be taken:

1. Stop all pesticide applications and assess the situation.
2. Prevent further contamination of water sources by using control measures such as storm drain inlet protection, absorbent materials, sandbags, or trenching.
3. Mark the area where the spill or overspray occurred.
4. Contact the environmental coordinator in your jurisdiction.
5. Report the spill to the appropriate department for clean-up.
6. Contact governmental agency of reportable quantities.

7.0 Aquatic Pesticide Application

For control of pests and weeds in open water, storm drainage system, and flood control channel areas, only those materials specifically designed and registered for direct water application may be used. Directions on the labels must be followed as well as evaluating the application for the potential to harm the environment. Currently, the following is required prior to applying an aquatic pesticide.

1. Coverage is obtained and compliance is achieved under Water Quality Order No. 2004-009-DWQ — Aquatic Pesticide NPDES Permit. For copy of the permit visit the State Water Resources Control Board web site at: http://www.waterboards.ca.gov/water_issues/programs/npdes/aquatic.shtml.
2. Directions on the label are followed.
3. The application site is evaluated prior to application for the potential of the pesticide to harm the environment.

8.0 Training and Documentation

8.1 QAL and QDL Requirements

The City of Powder Springs will only use staff (including contracted businesses) under the direct on-site supervision of a QAL holder. The QAL must possess a valid and current certification. The applicator is responsible for following any federal and state requirements as well as all label requirements and reviewing the MSDS prior to use.

8.2 Training

Each person who applies pesticides, fertilizers, or herbicides must be trained for the following:

- Appropriate application of the pesticide, fertilizer, or herbicide.
- Application laws and regulations
- Affects application may have on stormwater quality management
- The type of chemical and the immediate and long term hazards resulting from exposure
- The MSDS information
- Safety procedures
- Emergency spill information
- Use of protective equipment
- Cleanup procedures
- Disposal procedures

9.0 Storage Facilities

The City of Powder Springs will adopt a purchase, storage, and disposal policy such that all pesticides, fertilizers, and herbicides are under the control of a QAL holder. Pesticide storage facilities shall meet regulatory requirements to prevent releases into the surrounding environment, water bodies, or be exposed to stormwater and protect the safety of personnel working within such facilities. These pesticides storage facilities shall be locked/secured when not in use. All doors/entrances to the facilities shall be posted with appropriate warning signs. All signs shall be legible at a minimum distance of 25 feet from any direction.

Pesticide containers should not be stored on the floor or bare ground. No floor drains, which empty into storm drains, are permitted within the storage facility. All pesticides in a storage facility shall either be in the original container, or the service container. Secondary containment is recommended, but not mandatory. All containers will have a copy of the product label attached.

Open bags of pesticides must be enclosed in a secondary container (a closed heavy plastic bag, or can with a tight lid), to prevent exposure or spillage. If the original pesticide containers are metal and are in a state of rust or deterioration, properly labeled plastic or metal secondary containers shall be provided to prevent accidental leakage.

10.0 Decontamination/Disposal

The City of Powder Springs will adopt a decontamination and disposal procedure that is managed by a QAL and meets the state's minimum requirements. Liquids produced during the decontamination process shall be handled according to federal and state requirements and managed to reduce exposure to stormwater and from entering the storm drain system or surface waters.

10.1 Cleanup

Containers used to apply pesticides, fertilizers, or herbicides of 28 gallons or less must be triple rinsed after each use. Containers sent back to the manufacturer will follow manufacturer's recommendations or State and Federal guidelines for transporting. The triple-rinse procedures will consist of the following:

1. Use 1/4 the container volume for containers less than 5 gallons and 1/5 the container volume for container volume for containers greater than 5 gallons.
2. Place rinse medium in the container, securely close, agitate.
3. Drain rinse solution into tank mix. Allow draining 30 seconds.
4. Repeat steps b. and c. a minimum of two times; or
5. Invert emptied container over a nozzle located in the opening of the mix tank that is capable of rinsing all inner surfaces of the container.

10.2 Disposal

Pesticide, fertilizer, and herbicide waste includes leftover chemicals and chemical container rinsates. All pesticide waste shall be treated as hazardous waste. Minimization of pesticide waste is a high priority for the pesticide user. If waste is stored before removal, it should be stored in an area that is not exposed to stormwater, stormwater runoff, or surface water.

10.3 Storage

Storage of pesticides, fertilizers, and herbicides should be in accordance with requirements as specified in the manufacturer's instructions or Georgia Department of Agriculture Regulations (see References) if the instructions from the manufacturer are not provided.

11.0 References

11.1 Regulations

A. City of Powder Springs NPDES Permit GAS000129

B. 40 CFR Regulations of Pesticides sections 165.1-180 (wwvv.usepasiov) http://rules.sos.state.ga.us/cgi-bin/page.cgi?g=GEORGIA DEPARTMENT_OF A GRICULTURE%2FPESTICIDE USE AND APPLICATIO¯N%2Findex.html&d=1 _ _ _

11.2 Web Sites

A . Georgia Department of Agriculture - http://www.georgia.gov/00/article/0,2086,38902732_0_41469527,00.htrn1

B . UGA College of Agriculture and Environmental Sciences - http://www.ent.uga.edu/pesticide.htm

C. Weather tracking – www.weather.com

D . US Environmental Protection Agency – www.usepa.gov

Cobb County Fire & Emergency Services

OPERATIONAL GUIDELINES FOR INCIDENTS OTHER THAN STRUCTURE FIRES

Section 6-21

Effective Date: Adopted 11/02/09	
Rescinds: 1997 OGM Section 14	
Related Guidance:	
Issued By: Chief Sam D. Heaton	**Page 1 of 12**

6-21.1 PURPOSE

To establish guidelines for Cobb County Fire & Emergency Services personnel regarding the strategies and tactics to be employed by the initial responding company on emergency scenes. These basic tactics are to be based on current industry best practices, in order to maximize safety for responders and citizens while attempting to preserve property.

While not every situation can be anticipated, sound tactical procedures of a broad, general nature should be adhered to. These should be pursuant to existing best industry practices, the latest in training and technology, and the professional judgment of those performing certain tasks, as well as those in a position of Command.

6-21.2 SCOPE

All employees of Cobb Fire and Emergency Services.

6-21.3 VEHICLE FIRES

A. General Information and Definitions

1. Sealed Fuel Systems- These systems have the ability to "BLEVE" (Boiling Liquid Expanding Vapor Explosion).

2. Plastic Fuel Tanks- Can melt when the fire is burning below the tanks.

3. Auxiliary Fuel Systems- Increased storage capacity (some increased as much as 100 gallons).

4. Shock Absorbing Bumpers- These cylinder shocks are closed containers. Fire can cause overpressure, where the bumper may be launched and/or become projectiles.

5. Drive Shafts- These are essentially hollow tubes. In fire conditions, they have the ability to explode, throwing shards of metal, such as shrapnel in a hand grenade.

6. Macpherson-Type and other gas-filled Struts- These devices replace conventional shock absorbers. They are closed containers under pressure, can BLEVE, releasing hot oil from the front fender area, and and/or become projectiles.

7. Heat from Exhaust Systems- Catalytic converters with operating temperatures between 1,300° F and 1,600°F can possibly ignite flammable liquids and combustible materials.

8. Tire Explosions- Under certain conditions, violent explosions of tire and rim components of Terex machine (split-ring rim) tires can occur. The safe distance in a fire involving these tires is 1,500 feet to both sides, and 50 feet from the front and rear.

9. Batteries- Overheating of vehicle and marine batteries can produce flying fragments and sulfuric acid. Consider the ever-increasing presence of hybrid vehicles.

10. Unsuspected Contents-
    a. Propane cylinders BLEVE.
    b. CO2 extinguishers have the potential to explode, propelling shrapnel similar to a hand grenade.
    c. Hazardous materials.

11. Backdraft Hazards- Under certain conditions, sealed areas such as the trunk and passenger compartment can backdraft when opened.

B. Safety Guidelines to be Followed

1. Generally, the danger zone is defined as a 100 foot radius around a vehicle fire. However, this may increase based on the materials involved.

2. Persons should not be permitted inside the danger zone without full protective clothing. If there is any fire involvement, the Officer in Charge is to order the use of SCBAs.

3. At a minimum, the use of a 1 ¾" line is required for extinguishment.

4. The fuel tank is to be cooled from as far a distance as possible. A straight stream can be bounced off the surface of the road to spray the tank. To maximize

firefighter safety, the flow pattern is to be widened as the stream is moved closer to the fire.

5. Personnel are to stay clear from unsafe areas, such as the front and rear of the vehicle. If the vehicle is resting on its side with the underside exposed to fire, the vehicle should not to be approached until the underside is cooled.

6. When hoods are raised, face shields are to be down to protect eyes from sulfuric acid in the event of a battery explosion.

7. Firefighters should anticipate:
   a. Extra fuel tanks.
   b. Exploding fuel tanks.
   c. LPG, CNG, or other alternate fuel systems.
   d. Airborne bumpers.
   e. Exploding drive shafts.
   f. Exploding tires.
   g. Exploding batteries.
   h. Hazardous contents.

8. The gasoline filler cap should not be removed from a vehicle. This may permit heated gasoline vapors to escape, increasing danger to responding personnel and exacerbating the incident.

6-21.4 NATURAL GAS INCIDENTS

A. Gas Leaks With No Fires:

1. The most immediate concern is to prevent ignition.

2. The primary objective is to shut off the flow of gas.

3. In all incidents involving a reported gas leak with no fire, CCFES should take actions deemed necessary to provide for life safety and property preservation.

4. DO NOT rely on gas odor. Use combustible gas indicators to check all suspected areas.

5. Evacuate civilians in the area of the escaping gas. Secure the scene and cordon off the area.

6. Attempt to locate the source of the gas and any shutoff valves or devices available.

7. In gas leak situations within a building where the source of the leak is unknown or uncontrolled, the gas supply must be cut off at the meter. The meter shall be

locked in the off position until repairs are completed. This can be accomplished with the assistance of the gas supplier at the scene.

8. If there are any indications of gas accumulating inside a structure, the supplying gas company shall be notified. All occupants shall be evacuated, and ignition sources controlled. Electrical power should be shut off from the outside breaker, and ventilation performed utilizing blowers from the outside to pressurize, if necessary.

9. If gas company personnel must excavate to shut off a gas leak, CCFES may provide standby protection with a charged 1¾" line, and a firefighter in full protective equipment. A continuous water supply must be established for this operation.

B. Gas Leaks With A Fire:

1. The most immediate concern is to prevent fire extension and to prevent premature extinguishment of gas fire.

2. The primary objective is to shut off the flow of gas.

3. Protect exposures, but do not extinguish the fire.

4. Shut the gas feed off if possible. Call appropriate gas company for assistance.

5. Notify the appropriate gas company any time there has been a natural gas leak involving fire.

C. Safety of Personnel:

1. All personnel working in the vicinity of a known or suspected gas leak should wear full protective clothing.

2. Personnel working in a suspected ignitable atmosphere (i.e., attempting to shut off a gas line) shall use SCBA and be covered by a charged protective hose line.

3. The number of exposed personnel should be kept to an absolute minimum at all times.

4. A safety perimeter should be established and maintained around any suspected gas leak. Fire Line Tape (or Crime Scene Tape obtained from CCPD, CCSO, or Fire Investigators) should be used to identify the safety perimeter when necessary.

5. Consider the use of law enforcement and/or the 911 Center (i.e. reverse 911 or door-to-door evacuations) to assist in the event that there may be a need for a large-scale evacuation.

6-21.5 LIQUEFIED PETROLEUM GAS INCIDENTS

A. Gas Leaks With No Fire:

1. The most immediate concern is to prevent ignition.

2. The primary objective is to shut off the flow of gas.

3. Until it can be determined that the area is safe from danger, evacuate all civilians and keep the number of Fire Department and other emergency personnel to a minimum number necessary to stabilize the situation.

4. DO NOT rely on gas odor. Use combustible gas indicators to check all suspected areas. Chief's Cars, Squads, and Haz Mat Units have combustible gas indicators.

5. SHUT OFF THE GAS. Close valves at the container or remotely by using valve wheels or wrenches, by crushing or crimping copper tubing, or driving wooden plugs into holes.

6. If valves cannot be located or used;
   a. Evacuate the area of the cloud and its probable path.
   b. Shut off ALL ignition sources in the path of the vapor cloud.
   c. If possible, use water fog to push vapor into a safer area. Water fog can also dissipate the gas. A continuous water supply must be established for this operation.

7. If a gas concentration is encountered inside, adjacent to or underneath any building;
   a. Secure all possible sources of ignition in the affected area. Cut electricity from outside the affected area to avoid arcing.
   b. DO NOT USE BLOWERS TO VENTILATE. Blowers placed in the vapor area can contribute to an ignition. Open doors and allow time to ventilate the structure.
   c. AN EXPLOSION IS HIGHLY LIKELY – **DO NOT ENTER.** THE ONLY EXCEPTION IS FOR A KNOWN VIABLE RESCUE.

B. Gas Leaks with a Fire:

1. The most immediate concern is to protect exposed tanks and prevent fire extension.

2. The primary objective is to shut off the flow of gas.

3. DO NOT EXTINGUISH the LPG fire.

4. Apply HEAVY STREAMS to exposed tanks:
   a. Cool flame impinged area.
   b. Cool vapor area in the tank.
   c. Consider the use of an unmanned hose stream.

5. NEVER undertake this operation without FIRST establishing a permanent water supply.

6. Protect exposures.

7. Work from the sides of the tank; NEVER from the ends.

8. WITHDRAW:
   a. If heavy and continuous streams cannot be supplied.
   b. If a bubble forms on the tank.
   c. If noise level from leak suddenly increases and torch flame suddenly grows.
   d. If relief valves are blocked, rupture should be expected.

C. No Gas Leak with a Fire:

This situation arises when LPG tanks are exposed to hostile fire from another source. Firefighters often face this problem at commercial building fires, or in rural areas at residential fires.

1. The most immediate concern is to prevent Boiling Liquid Expanding Vapor Explosion (BLEVE) or Ignition.

2. The primary objective is to remove the danger of impinging flame or high heat.

3. Apply HEAVY STREAMS to exposed tanks quickly;
   a. To flame impinged area.
   b. To vapor area of the tank.
   c. NEVER undertake this operation without FIRST establishing a permanent water supply.
   d. Consider the use of an unmanned hose stream.

4. Work from the sides of the tank, NEVER from the ends.

5. WITHDRAW:
   a. If heavy and continuous streams cannot be supplied.
   b. If a bubble forms on the tank.
   c. If noise level from leak suddenly increases and torch flame suddenly grows.

6. If relief valves are blocked, rupture should be expected.

D. Safety of Personnel

1. All personnel working in the vicinity of a known or suspected gas leak should wear full protective clothing.

2. Personnel working in a suspected ignitable atmosphere (i.e., attempting to shut off a gas line) should use SCBA and should be covered by a charged protective hose line.

3. The number of exposed personnel should be kept to an absolute minimum at all times.

4. A safety perimeter shall be established and maintained around any suspected gas leak. Fire Line Tape (or Crime Scene Tape obtained from CCPD, CCSO, or Fire Investigators) should be used to identify the safety perimeter when necessary.

6-21.6 HAZARDOUS MATERIALS INCIDENTS (Guidelines for First-In Officers)

A. Obtain all available information from E911 dispatcher and record the information.

B. The first-in officer must consciously avoid committing the crew or apparatus to a dangerous position. When approaching, slow down or stop in order to make a visual assessment of the scene and any apparent activity.

C. When selecting an initial size-up position, take into account the effects of wind, topography and the location of the situation or incident. Establish a command post; this will set the framework for a safe mitigation procedure.

D. Advise other units to stage. Include pertinent information about wind; spill flow, exposure hazards, etc., in order that an officer selecting a staging area can choose a safe location. Do not crowd the forward position with additional vehicles.

E. A hazardous materials incident requires more caution and deliberation in size-up than most fire situations. Exercise size-up tactics which do not expose you or your crew to risk. Avoid premature commitment of personnel to potentially hazardous locations.

F. If the incident has not been previously recognized as a hazardous materials incident, advise radio upon confirmation: "This is a confirmed hazardous materials incident. Notify all responding units and dispatch the Hazardous Materials Team." Request a Battalion Chief's Car.

G. Identify a hazardous area taking into account: visual observations of the material involved, the time of day, wind and weather conditions, location of the incident, and most importantly, risk to unprotected personnel.

H. Take action to evacuate and/or rescue persons in critical danger only if these persons are still "savable" and if you can and do provide for the safety of the rescuers.

I. Any action taken to evacuate people must provide for the safety of:
   1. Firefighters
   2. Civilians
   3. Environment

J. Consider the option of sheltering in place, when appropriate.

K. Life hazard in a contaminated or threatening hazardous materials incident is the only reason for action prior to the arrival of the Hazardous Material Team. If you must act, PROVIDE FOR SAFETY FIRST, then act aggressively.

6-21.7 SEARCHES

A. Contact the official agency that may already be on the scene (i.e. law enforcement). Establish command or use the command post that is already established.

B. Contact the individual(s) who have called in the missing person report.

   1. Obtain the name and physical description.

   2. How long has the person been missing?

   3. Identify potential life threatening hazards (lakes, swimming pools, wells, etc.).

   4. Are they mentally competent?

   5. Medical information?

   6. Are they taking medications? If so, do the medications affect actions or behavior?

   7. Medication schedule?

   8. Places they might be likely to go.

C. If search is necessary:

   1. Establish Command Post.

   2. If additional manpower is needed, establish and identify staging area.

D. Begin the search:

1. Inside the residence.

2. Near the residence and immediate area.

3. Do not commit crew to a search far from the residence/area.
   a. When beginning a search, children are often found inside or close to the residence.

6-21.8 AIRCRAFT CRASHES

A. Identify Aircraft:

1. Type of Aircraft
   a. Military (advise Radio to contact Dobbins ARB)
   b. Commercial
   c. Private

2. Note identification numbers, if possible

B. Control Hazards:

1. Fuel – Be aware of fuel volume and/or fuel spills

2. Exposures

3. Military – Treat all as if they are armed until advised by military personnel

C. Extricate

1. It is advisable to wear respiratory protection (SCBA) during any aircraft extrication operation. Many parts of an aircraft are made from special alloy metals that when cut or burning emit microscopic fibers which are harmful when inhaled.

D. Secure the area at a minimum of 200 ft. around the entire crash site. Treat the area as a crime scene/accident scene- preserve evidence and chain of custody whenever possible!

6-21.9 TRAIN DERAILMENTS

A. Freight

1. Establish Command.

2. Contact the appropriate railroad company and advise them to stop all traffic.

3. Approach as a hazardous materials incident until identification can be made. Information on hazardous materials being carried will be contained in the waybill. If papers cannot be located, inquire with the railroad company where they might be located.

4. Secure the scene as quickly as possible.

5. Request Law Enforcement to block streets.

6. Keep personnel at a safe distance from the train until all hazards can be identified.

7. Check for problems from a distance – leaks, smoke, fire, etc.

8. Be prepared to evacuate civilians and /or emergency personnel.

9. Set up staging area – be specific.

10. If the incident has not been previously recognized as a hazardous materials incident, advise radio upon confirmation: "This is a confirmed hazardous materials incident. Notify all responding units and dispatch the Hazardous Materials Team." Request a Battalion Chief's Car.

11. Safety of Personnel:
    Remember that the diesel engines are there to generate electricity for the electric motors at the drive wheels. Use extreme caution if water must be applied to burning fuel. The electric motors store and discharge a tremendous amount of electrical energy. This can **KILL** firefighters if a hose stream comes in contact with an electric motor. Additionally, be aware that the locomotive's diesel fuel tank may have a capacity of up to 5000 gallons.

6-21.10 BOMB THREATS

A. Public Schools:
In the event of a request for assistance from the Cobb County Police Department or the Cobb County School System regarding a bomb threat in a public school building, the following applies:

1. The responding companies, unless otherwise directed, will follow the normal flow of traffic and will not use red lights or siren, or any other warning device.

2. The first Company Officer on the scene will report directly to the Principal of the school, or the Director of School Safety, and will go into a support role regarding the search and removal of any device.

3. If a device is located, additional units will be dispatched from the Cobb County Police Department Bomb Squad. All Fire units will be required to lend any assistance possible in controlling the situation and shall stay on the scene until relieved by orders of the Chief Officer at the scene, the principal, or school security.

B. Other than a Public School:

1. When a bomb threat has been received by the Communications Center, the following procedures will apply:
   a. One apparatus will be dispatched to the scene. It will respond without red lights and siren.
   b. Radio silence need not be maintained.
   c. The fire department will stand by in case the bomb explodes. The crew should not participate in the search. The logical persons to conduct a search are those who work in the building. They will be more likely to notice an object which is out of place or does not belong.

2. If a suspicious object is found:
   a. Call for the CCPD Bomb Squad.
   b. Do not allow anyone to attempt to move anything that may be a bomb. Wait for the bomb disposal technician.
   c. Call for additional CCFES equipment if needed. This equipment will respond without red lights and siren unless upgraded.
   d. A Fire Investigator will not be called unless the CCPD Bomb Squad makes this request. The CCPD will call a Fire Investigator if one is needed.

6-21.11 WOODS FIRES

A. Facts to Remember:

1. Wind is the most important factor in fighting woods fires.

2. Be aware of the wind speed, direction, and any wind changes in the forecast for the day.

3. Be aware of spot fires outside your firebreaks that might trap you. More breaks usually will be needed on a high wind day, in addition to more mop-ups when fire is controlled.

4. Always stay alert and ready and take no fire for granted on a windy day. Keep safety in mind at all times.

5. Lower humidity = increased number of fires and more erratic fire behavior.

6. Cutting Fire Breaks:

a. Attack the area of the fire that threatens structures or other personal property other than the woods first.
b. Work your way toward the head of the fire or the area farthest from the direction of the wind. Cut the firebreak and maintain as "clean" a break as possible.
c. The assistance of Georgia Forestry Commission fire tractors can be requested by a Battalion Chief through the 911 Dispatch Center.

CITY OF POWDER SPRINGS
SANITARY SEWER DETECTION LOG

DATE	REPORTED BY	SITE DATA/ADDRESS	DATE REPORTED TO COUNTY

Appendix E

Illicit Discharge Detection and Elimination (IDDE) Plan
Section 3.3.2 of the Permit

Updated 11/24

City of Powder Springs Illicit Discharge Detection & Elimination (IDDE) Plan



city of powder springs

NPDES Phase I Large Municipal Separate Storm Sewer System (MS4) Permit #GAS000129

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City of Powder Springs, Georgia

Illicit Discharge Detection & Elimination (IDDE) Plan

The City of Powder Springs has established adequate legal authority through its Stormwater Management Ordinance to prohibit illicit discharges and illegal connections and conduct an illicit discharge detection and elimination program. The ordinance prohibits illicit discharges to the public MS4, grants the City the authority to enter private property to investigate suspected illicit discharges, and also provides the City the mans to enforce violations of this ordinance.

1. Introduction

Illicit discharges are unpermitted non-stormwater flows to the stormwater drainage system that contain pollutants or pathogens. Illicit discharges can be direct discharges, dumping into the stormwater system, or can occur through upstream activities that eventually flow to storm drain or drainage channel. Illegal connections are physical connections such as pipes that allow illicit discharges to the stormwater system on an ongoing basis.

Screening of stormwater outfalls during dry weather is an important tool for investigating potential non-stormwater entries to the storm drainage system. Subsequent identification and elimination of illicit discharges and illegal connections can result in substantial improvements to local water quality.

An outfall is the most downstream point where a municipal separate storm sewer system discharges to the receiving waters of the State. Dry weather screening of stormwater outfalls is an important tool used to evaluate non-stormwater flows within the MS4. Effectively evaluating and interpreting dry weather screening results and data is critical in identifying, tracing, and addressing potential illicit discharges or illegal connections.

2. Program Description

Dry weather screening (DWS) is performed on prioritized stormwater outfalls which are selected based on the potential for illicit discharges and their location within the MS4. The City will perform DWS of 100% of its MS4 outfalls within the 5-year permit cycle and will screen no less than 5% of MS4 outfalls in any given year.

Screening of stormwater outfalls for illicit discharges is performed during periods of dry weather, which is defined as rainfall of less than **0.1 inch per day for at least 72 hours.** This criterion avoids the screening of flows that may have resulted from wet weather (stormwater) events.

Each outfall is to be inspected for flow. When a dry weather flow is observed at an outfall, the following are to be performed on the flow:

1. Field observations and measurements – Site descriptions and qualitative observations of physical conditions of the outfall and flow, as well as measurement of several in-situ water quality parameters.
2. Water Quality Sampling – Collection of water quality samples for field analysis or laboratory analysis when indicated by the field observations and measurements.

In dry weather outfall screening, the field team is looking for indicators that point to or confirm an illicit discharge or illegal connection. Section 3.3.1 provides guidance on potential sources of pollution based upon the findings of the screening. The discovery of an illicit discharge will warrant a more detailed pollutant source identification investigation.

3. DWS Program Procedures

3.1 Field Sampling, Screening, and Analysis Equipment

Table 1 below lists the recommended equipment list and supplies for DWS of MS4 outfalls. Before undertaking field work, the field team should ensure that all of the necessary equipment is present and in order. Any meters/probes should be calibrated in accordance with manufacturer's specifications. In addition, field test kits should be inspected to ensure that they have sufficient reagents and test strips as well as to confirm the expiration dates prior to beginning field work activities associated with dry weather screening.

TABLE 1: LIST OF EQUIPMENT & SUPPLIES FOR OUTFALL DWS

Field Equipment /Supplies	Function/Use
Field maps (with outfall locations, drainage areas, and street information)	Locating outfalls for DWS
Field DWS Procedures	For reference during the field activities
Field screening equipment	Measuring field temperature, pH and specific
Field test kits	Measuring fluoride, surfactants and fecal coliform
Sample bottles with labels	For collection of grab samples
Sealed, sterile sample bottles with labels	For collection of bacteria grab samples
Grab water sampler (dipper on long pole)	For outfalls/flows that are difficult to reach
Clear tape and applicator	To apply over label
Coolers with ice packs	For transport of grab samples and to keep samples preserved after collection and during transport to lab.
Clipboard or notebook with data collection forms	To document field data and activities
Cell phone with camera	Field communication and photo documentation
Handheld GPS receiver (if applicable)	Determining outfall locations
Field sampling gear (disposable gloves, etc)	To ensure proper sample collection protocols are Followed.

3.2 Weather Considerations

Prior to any screening field work, check local rain gages to ensure that the conditions are appropriate for dry weather outfall screening. **Dry weather conditions are defined as rainfall of less than 0.1 inch per day for at least 72 hours.**

3.3 Field Screening Procedures

Field screening will be conducted at all MS4 Outfalls within the MS4 Inventory over the five-year period of this permit, with a minimum of 5% of outfalls screened each reporting period. Physically inaccessible outfalls will be screened by identifying the nearest upstream field screening point where the inspection can occur. The results of the observations will be recorded on the Outfall Inspection Checklist form included in Attachment B of this Plan or within a GIS database that includes the same information as shown on the form.

3.3.1 Field Observations and Measurements

When an outfall is screening, the coordinates should be logged using the GPS receiver (if applicable). Basic descriptive information is recorded at the top part of the Dry Weather Outfall Screening Form:

- Outfall Location
- Outfall ID Number
- Outfall Type, Material, and Size
- Receiving Stream and/or watershed name
- Date and Time of Screening
- Weather Observations
- Staff Undertaking Screening

Digital photographs should be taken of the outfall and photo numbers recorded on the screening form.

Physical observations of the site are recorded on the screening form under *Field Observations and Measurements.* 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, then 'Yes' should be checked and the following physical indicators recorded. Each of these observations associated with flowing outfalls may predict the presence of an illicit discharge or illegal connection:

- Odor: Description of any odors that emanate from the outfall and an associated severity score. Since noses have different sensitivities, the entire field team should reach consensus about whether an odor is present and how severe it is. A severity score of one means that it is faint, or the team cannot agree on its presence or origin. A score of two indicates a moderate odor within the pipe. A score of three is assigned if the odor is so strong that the field team smells it a considerable distance away from the outfall.
- Color: The visual assessment of the discharge color. The intensity of color is ranked from one (slightly tinted) to three (clearly visible in the flow). The best way to measure color is to collect the discharge in a clear sample bottle and hold it up to the light. Field teams should also look for downstream plumes of color that appear to be associated with the outfall.
- Turbidity: The visual estimate of the turbidity of the discharge, which is a measure of the cloudiness or opaqueness of the water. Turbidity is ranked from one (slight cloudiness) to three (opaque). Like the color observation, turbidity is best observed using a clear sample bottle. The field team should also look for turbidity in the plunge pool below the outfall, and note any downstream turbidity plumes that appear to be associated with the outfall.
- Floatables: The presence of any floatable materials in the discharge or the plunge pool below. Sewage, oil sheen or film, and suds are all examples of floatable indicators. [Note that for dry weather screening, trash and debris are not considered indicators of an illicit discharge or illegal connection.]

The results of the observations will be recorded on the field screening form by City staff. City staff will also map the location of the outfalls screened, systematically updating the City's inventory of outfalls through the screening effort.

TABLE 2: FIELD OBSERVATIONS AND POTENTIAL SOURCES

Parameter	Observations	Potential Source(s)
Odor	Sewage	Sanitary sewer; septic tank discharges
	Sulfur (rotten eggs)	Industrial discharge (sulfides and/or organics); sanitary sewer, septic tank discharges
	Oil/gasoline	Facilities associated with vehicle maintenance and operations; petroleum product manufacturing or storage; industrial discharge
	Rancid/sour	Food preparation facilities (restaurants, hotels, etc.)
Color	Orange/rust	Construction site or unstabilized soil (eroded soil and clay)
	White/milky	Sanitary sewer; septic tank discharges; residential or commercial washwater; concrete or stone operations, fertilizer
	Grey	Residential or commercial washwater; dairies

	Red	Meat packers
	Yellow	Industrial discharge
	Green	Industrial discharge; facilities associated with vehicle maintenance and operation (antifreeze)
	Brown/black	Industrial discharge
Turbidity	Cloudy	Sanitary sewer; septic tank discharges; residential or commercial washwater; concrete or stone operations; fertilizer; industrial discharge
	Opaque	Food preparation facilities (restaurants, hotels, etc.); industrial discharge
	Silty/muddy	Construction site or unstabilized soil (eroded soil and clay)
Floatables	Sewage	Sanitary sewer; septic tank discharges
	Petroleum (oil sheen)	Facilities associated with vehicle maintenance and operation; petroleum product manufacturing or storage; industrial discharge
	Suds	Sanitary sewer; septic tank discharges; residential or commercial washwater

Upon completing the physical observations, City staff will measure the temperature, pH, and specific conductivity of the dry weather flow (either in-situ or using a sample bottle) and record the readings on the screening form.

3.3.2 Water Quality Sampling

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.

If dry weather flow is observed, City staff will perform field sampling of the discharge as noted below.

- Measure the discharge in-stream using field probe, for the following parameters: pH, temperature, and conductivity.
- Collect a grab sample and perform analysis on the discharge using field equipment for total fluoride and surfactants.
- Laboratory analysis may be performed in-lieu of field sampling for one or more of the water quality parameters. Grab samples should be collected and analyzed using EPA approved field collection methods and laboratory analysis protocols.
- Collect grab samples for *E. coli* if conductivity is measured above 300 mho/cm. Samples should be taken when there is visual evidence including milky white or gray color and floatables, a sewage odor, or other applicable evidence of potential sanitary sewer discharge. *E. coli* grab samples will be cooled with ice and taken to an accredited laboratory for *E. coli* analysis within six hours of sample event. *E. Coli* samples will be dechlorinated with sodium thiosulfate. *E. coli* samples will only be performed once at applicable outfalls during sampling event due to cost considerations.

3.3.3 Field Sampling and Analysis

Field test kits with appropriate reagents, test strips/discs, and sampling equipment should be used. The test kits must have the ability to detect fluoride within the range 0 to 2.00 g/L and surfactants within the range 0 to 3.0 mg/L.

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.

3.3.4 Grab Samples

Grab samples and subsequent laboratory analysis may be performed in lieu of field sampling for one or more of the water quality parameters. Grab samples should be analyzed using EPA approved field collection methods and laboratory analysis protocols.

3.3.4.1 *Grab Sample Collection*

A manual grab sample for a dry weather flow is accomplished by inserting the sample container (either plastic or glass depending on the parameter) under or down current of a discharge with the container opening facing upstream. In many cases, the sample container itself can be used to collect the sample. Less accessible outfalls will require the use of poles and buckets to collect the grab sample. A pre-measured cut-off milk jug can be used to capture shallow flows from the outfall. To ensure that the manual grab samples are representative, the following procedures should be followed:

- Do not open sample bottle until sample is to be actually collected.
- Use gloves at all times when handling sampling bottles.
- Take the grab from the horizontal and vertical center of the outfall.
- Make sure not to disturb any sediments or benthic growth in the outfall.
- Transfer samples into proper container (e.g., from bucket to sample container). Fecal coliform grab samples must be collected directly into the sterile sample containers.

All of the equipment and containers that come into contact with the sample should be cleaned in order to avoid contamination, and be non-reactive to prevent leaching of pollutants. All of the equipment and containers that come into contact with the sample should be cleaned in order to avoid contamination, and be non-reactive to prevent leaching of pollutants.

3.3.4.2 *Grab Sample Handling*

The grab sample bottle type, preservation requirements, and holding time requirement for those parameters being tested are listed in Table 3. Proper preservation and maintenance of the holding times for each parameter is essential for the integrity of the sampling results. Note that fecal coliform samples have a short holding time of six hours and must be returned to the lab for analysis within this time or the results may be unrepresentative of the flow.

TABLE 3: SAMPLE HANDLING REQUIREMENTS

Parameter	Container Type[1]	Sample Volume (g)	Sample Preservation	Maximum Holding Time
Fluoride	P,G	500 ml	Cool 4° C	28 Days
Surfactants (detergents)	P	500 ml	Cool 4° C	48 Hours
Fecal Coliform[2]	PP, G	100 ml	Cool 4° C	6 Hours
[1] Polyethylene (P), Polypropylene (PP), Glass (G)- EPA approved sample containers (40 CFR 136)				
[2] In chlorinated waters, dechlorinate the sample with sodium thiosulfate by adding 1ml of 10% $Na_2S_2O_3$ to the 100ml sample.				

3.3.4.3 *Grab Sample Identification and Labeling*

A sample numbering system should be used to ensure that each sample is uniquely identified in the field and tracked on field data collection forms. The sample numbering should be as follows:

(###)-(MMDDYY)-(HH:MM) where:

- ### = A unique number for each sample location
- MMDDYY = Month, day, year
- HH:MM = Time in military units

All of the samples collected at the site should be placed in the appropriate sample containers for preservation and shipment to the designated laboratory. Each sample should be identified with a separate identification label. A waterproof, gummed label should be attached to each sampling container. Information to be recorded on the label should include:

- Site name
- Sample number
- Analysis to be performed
- Date and time of collection
- Preservation used and any other field preparation of the sample
- Initials of field crew collecting the sample

3.3.4.4 *Grab Sample Documentation*

A chain-of-custody (COC) form should accompany all samples. See Appendix C for a sample COC form. The COC form shall include all of the information provided on the sample label discussed in the preceding section.

The purpose of the COC form is to provide a mechanism for tracking each sample submitted for laboratory analysis. The information on the COC form must be identical to the information of the sample label. A COC form should be prepared by the sample collector for each set of samples submitted for laboratory analysis. The form should be placed in a re-sealable plastic bag (to keep the form dry) and sealed inside each sample cooler. When transferring possession of the samples, the individual relinquishing and receiving samples should sign, date, and note the time on the COC form. This record documents the transfer of custody from the sampler to another person, to/from a secure storage area, and to the laboratory. Copies of the COC forms should be kept for future reference.

3.3.4.5 *Analytical Laboratory Coordination and Sample Delivery*

The samples should be packed in coolers with ice (or ice packs) to ensure they maintain the required temperature of less than or equal to 4°C during transport to the designated laboratory. Contact the laboratory prior to sampling to assure that the samples will be analyzed within their holding time. Samples may be placed in individual one-gallon resealable bags as a precaution to avoid spilling the sample. All glass bottles should be individually bagged and bubble-wrapped to prevent breakage on the way to the lab. Samples may be placed in a large trash bag inside a cooler (to ensure against the sample leaking) with ice completely covering the samples.

3.4 Quality Assurance/Quality Control

This section describes the elements of the field quality assurance/quality control (QA/QC) program. The overall QA/QC objective for the monitoring program is to ensure that the data collected are of good quality.

3.4.1 Field QA/QC

Field quality control procedures include calibration procedures, field blanks and field duplicates. The field equipment should be calibrated appropriately prior to leaving for the sampling site to ensure proper performance of the equipment. This includes the any meters or probes used during field work. The pH meter should be calibrated using two buffers that bracket the expected pH range (typically 4 and 7). The conductivity meter is calibrated by rotating the probe below the surface in a

standard Potassium Chloride solution of 4.49 ms/cm in a circular motion.

The readings must be within 10 percent to be acceptable. The thermometers used should be accurate to + 5°C.

Quality control blanks should be used in the field to determine potential sample contamination during sample collection, handling, shipment, storage, or laboratory handling and analysis. Reagent grade water should be used for the quality control blanks. Field duplicates should be collected on approximately 10 percent of the samples to assess the representativeness of sampling procedures in addition to the normal uncertainty associated with the analysis.

3.4.2 Laboratory QA/QC

The laboratories should follow Georgia EPD- approved methods and routinely perform quality control checks during laboratory analysis, including calibration standards, blanks, laboratory control samples, laboratory control duplicate samples, matrix spikes, and matrix spike duplicates. Spikes and duplicates should be performed on a minimum of 10 percent of the samples and should meet data quality objectives established by the client.

4. Evaluating DWS Results

4.1 Background

DWS of stormwater outfalls is an important tool used to evaluate non-stormwater flows in the storm drainage system. Effectively evaluating and interpreting dry weather screening results and data is the first step in identifying and tracing a potential illicit discharge or illegal connection.

4.2 Field Observations

Field observations of dry weather flow include odor, color, turbidity and floatables. These parameters are qualitative indicators detected by visual inspection and smell and require no measurement equipment. They are important in evaluating a dry weather flow for a potential illicit discharge and may confirm the most severe or obvious discharges. Table 4 lists the field observation parameters, along with potential sources for a number of observed conditions that the sampling team could encounter in the field.

4.3 Field Measurements and Water Quality Sampling Results

Field measurements and water quality sampling provide additional information which may detect, characterize or confirm an illicit discharge or illegal connection. Temperature, pH and conductivity measurements are completed in-situ using probes or other equipment that is calibrated prior to field work. Water quality sampling for the presence of fluoride, surfactants and E. coli is performed either in-field using test kit equipment or by collecting grab samples for laboratory analysis.

Table 4 lists the various parameters included in the dry weather screening protocol along with benchmarks and guidance on evaluating results. Figure 1 provides a flow chart which can be used to identify illicit discharges based upon findings.

4.4 Ranking the Potential for an Illicit Discharge

Based upon the screening results, all outfalls should be ranked for their potential for an illicit discharge:

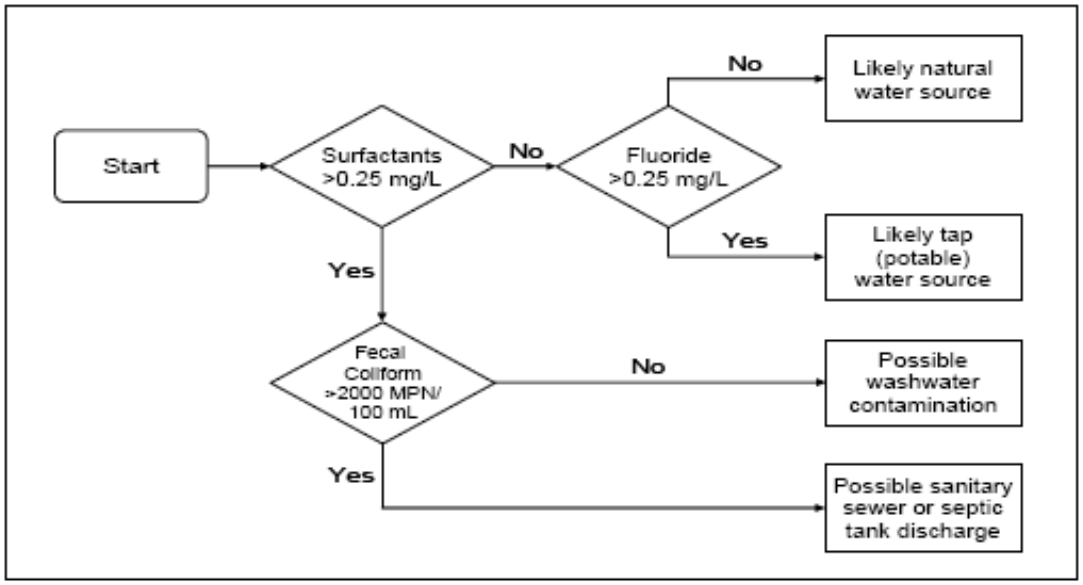
- Those outfalls without flow or that appear to be from an uncontaminated source would be ranked “Unlikely or No Flow.”
- Any flow that shows two or more suspect field observation or chemical indicator that falls outside of the range of normal stormwater or groundwater should be marked as “Possible” for an illicit discharge.

- The presence of one or more field observations with a rank of two or three, or chemical indicators far outside of the range of normal stormwater or groundwater should be ranked "Suspect."
- Any flow that is clearly an illicit discharge should be listing as "Obvious or Confirmed."

TABLE 4: INTERPRETATION OF FIELD MEASUREMENTS & WATER QUALITY SAMPLING PARAMETERS

Parameter	Benchmarks	Evaluation
Temperature	Temperature should be near or below conditions for groundwater or stormwater runoff.	Higher than ambient temperature may indicate stream condensate or industrial process water.
pH	The normal pH range for stormwater runoff is between 6 and 8, with 7 being neutral.	pH is a relatively good indicator of liquid wastes from industries, which can have very high or very low pH values (ranging from 3 to 12). The pH of residential and commercial washwater tends to be in the range of 8 or 9.
Conductivity	Stormwater should have a low conductivity (under 300 µmho/cm)	Conductivity greater than 300 µmho/cm indicates a high dissolved solids content in the flow which may be from an illicit discharge or illegal connection.
Fluoride	There should be no traces of fluoride in the stormwater.	Presence of fluoride indicates the presence of potable (treated) water. Fluoride can often be used to separate treated potable water from untreated water sources, such as stormwater, groundwater or non-potable industrial waters.
Surfactants (detergents)	There should be no traces of surfactants (detergents) in the stormwater.	This parameter is associated with cleaning/washing operations and may indicate residential or commercial wastewater.
E. coli	*E. coli* is an indicator of bacteria from warm-blooded animals.	Its presence in high numbers often indicates contamination with sanitary waste, although high levels of pet waste may also produce similar results.

Figure 1: Flowchart to Identify Illicit Discharges Using DWS Results



5. Source Tracing

All outfalls with dry weather flow require immediate follow-up actions and activities to determine the specific source(s) of dry weather flow and potential illicit discharge. There are a variety of methods for illicit discharge source identification, including those listed below. City staff will utilize the Source Tracing form in Attachment C of this document to record the results of any source tracing activities. Depending on the type of illicit discharge detected and access to the storm sewer system, City staff may employ one or more of the following methods.

5.1 Source Tracing Methods

All outfalls ranked as possible, suspect, or obvious illicit discharges require follow-up actions and activities to determine the specific source(s) of contamination. There are a variety of methods for illicit discharge source identification, including:

- Visual Inspections – City staff may walk the stormwater system upstream from the MS4 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.
- Upstream Sampling – The City 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, any pipes/connections to the system between the last detectable sample and the clean sample is likely to lead to an illicit discharge.
- Storm Sewer System Mapping Analysis – Evaluation of the drainage area, land uses and properties above the outfall including the route of the City's storm drainage system and the locations of storm drains such that the City staff can trace the illicit discharge upstream through the City's storm sewer system. This enables local staff to predict the likely locations of illicit discharges and illegal connections. Geographic Information Systems (GIS) are a useful tool for identifying illicit discharges through mapping analysis.
- Drainage Area Investigation – A windshield survey or more detailed property inspections in the drainage area that has the illicit discharge. These inspections are often performed following a mapping analysis.
- Piping Schematic Review – Examination of building plans and plumbing details for potential sites where improper connections to the storm drainage system may have occurred.
- Dye Testing – Addition of colored dye to the drain water in suspect piping and subsequent surveillance to determine if dyed water appears in the storm drain system, thus indicating an illegal connection.
- Smoke Testing – When a sanitary sewer illicit connection to the storm sewer system is suspected, and dye testing does not give a definitive result or is not the preferred method, Public Works may elect to perform smoke testing. Smoke testing involves equipment that forces smoke into the storm sewer lines. If the smoke is seen rising from either a sanitary sewer manhole or a sanitary sewer vent in a building, then a cross connection has been found.
- Line Televising – Public Works staff may also decide to video the lines to investigate possible cross-connections with the sanitary sewer. Evidence of potential illicit connections includes: small gauge pipes tied into the storm sewer system, cracked or caved pipes, discoloration of the water, foam and floatables. Line televising does not always provide definitive proof of an illicit connection, and may need to be coupled with one of the other methods listed above.

The appropriate method for any given outfall or area will be heavily dependent on the watershed and land use conditions, drainage system characteristics, available resources, and the nature of discharge and screening results.

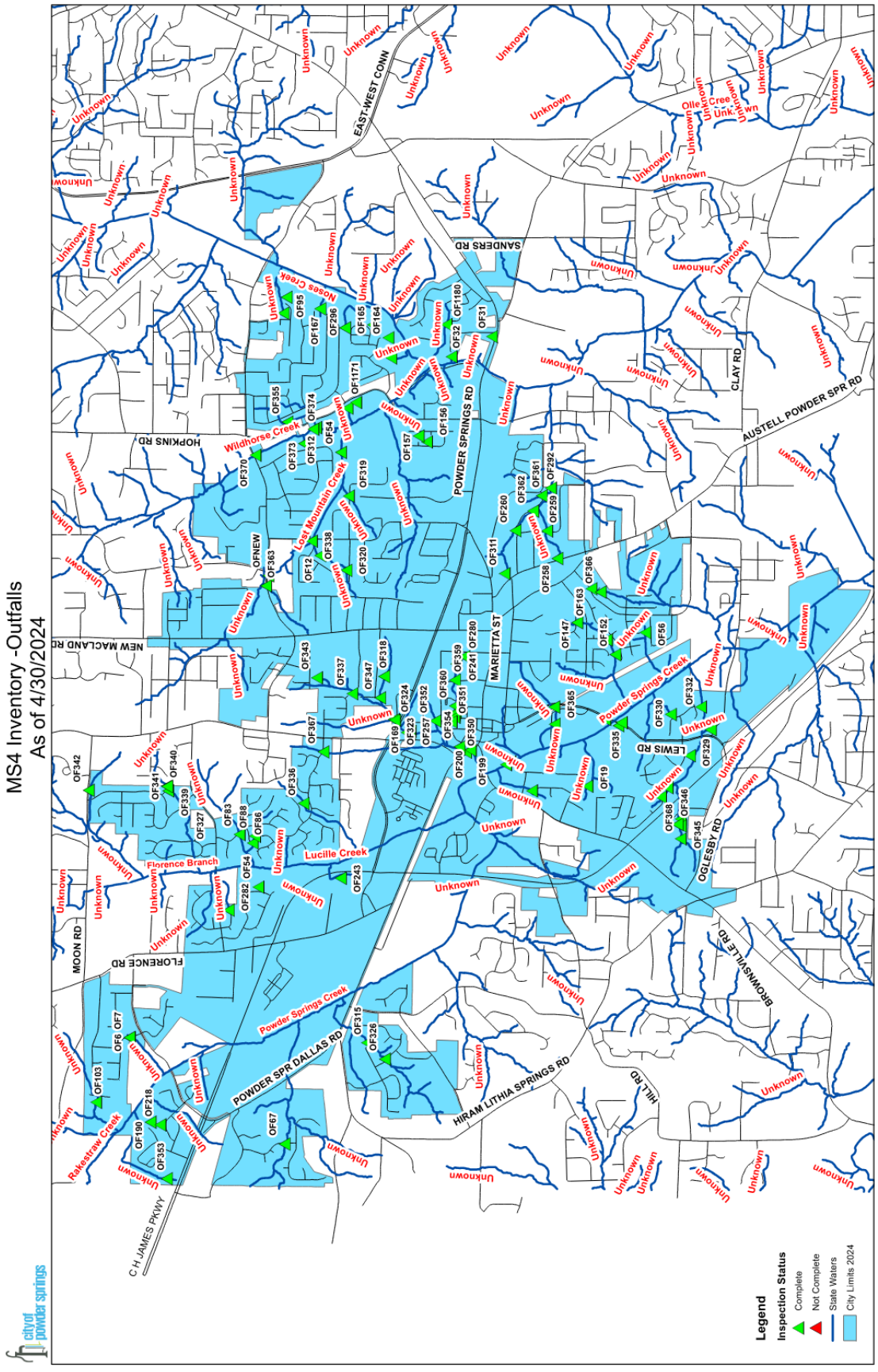
5.2 *Enforcement*

Once City staff have traced a source and they have informed the Code Enforcement Officer or his designee, it shall be the Code Enforcement Officers responsibility to enforce the applicable provisions of the Illicit Discharge Ordinance and the ERP. This ordinance gives representatives of the City 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 or suffer other penalties as outlined within their Stormwater Management Ordinance. Enforcement shall be conducted in accordance with the City's approved Enforcement Response Plan (ERP).

6. Data Collection and Reporting

The City will maintain records of Dry MS4 outfall screening, any source tracing activities, and documentation of any enforcement actions taken. This information will be maintained in a database and included in the Annual Report to EPD.

Attachment A: Outfall Inventory & Map



MS4 Outfalls Type As of June 2024

OBJECTID_12	Outfall Location	Outfall Type	Closed Pipe	Open Channel	Pipe Size	WaterName	Land Use	Name	Subdivisio	longitude	latitude	x	y
6	QUARTERS WAY	Headwall	Metal	Earthen	36	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF6	ELLIOT QRTRS	-84.71143719	33.88523055	-116206.3319	1422866.334
7	QUARTERS WAY	Headwall	Metal	Earthen	36	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF7	ELLIOTT QUARTERS	-84.71140594	33.88525495	-116196.6257	1422874.98
12	EVELYN DRIVE	Pipe with Wings	Metal	Earthen	24	Unnamed tributary to WILDHORSE CREEK	Residential	OF12	GLENBROOK ACRES	-84.66914996	33.87144723	-103486.3205	1417500.706
19	WOODBRIDGE DRIVE	End of Pipe	Metal	Earthen	36	Powder Spring Creek	Residential	OF19	Woodbridge	-84.68937101	33.85189309	-109805.2392	1410565.946
31	Deercreek Dr	Headwall Out	Metal	Earthen	24	Tributary to NOSES CREEK	Residential	OF31	Platinum Creek	-84.6499327	33.85884722	-97766.49041	1412805.612
32	Deercreek Dr	Pipe	Metal	Earthen	30	Tributary to Noses Creek	Residential	OF32	Platinum Creek	-84.6516842	33.86177868	-98272.57874	1413885.533
42	Rose Petal Ln	Headwall Out	Metal	Earthen	48	Tributary to Noses Creek	Residential	OF95	Rosewood Park	-84.64786931	33.87403365	-97006.39893	1418318.4
43	Rose Petal Ln	Headwall Out	Metal		18			OF1032	Rosewood Park	-84.64646754	33.87380969	-96582.75448	1418226.601
54	Lancer Drive	End of Pipe	CMP	Earthen	30	TRIBUTARY TO WILDHORSE CREEK	Undeveloped	OF54	Lancer Place	-84.66007951	33.86963687	-100750.79	1416880.508
56	Starboard Drive	End of Pipe	Metal	Earthen	18	Intermittent stream to POWDER SPRINGS CREEK	Residential	OF56	Powder Cove	-84.67595107	33.84767353	-105747.4431	1408931.666
67	WARREN CREEK DRIVE	Headwall Out	Metal	Earthen	18	Warren Creek	Residential	OF67	WARREN CREEK	-84.7208128	33.87397963	-119134.6484	1418831.629
83	COUNTRY WALK DRIVE	Pipe with Wings	Metal	Concrete	24	Unnamed tributary to Lucille Creek	Residential	OF83	COUNTRY WALK	-84.69360163	33.87723414	-110863.902	1419823.914
86	DEER CHASE	Pipe with Wings	Metal	Concrete	18	Unnamed tributary to Lucille Creek	Residential	OF86	COUNTRY WALK	-84.69435537	33.87625608	-111100.8708	1419471.473
88	WINDING LANE	Pipe with Wings	Metal	Concrete	18	Unnamed tributary to Lucille Creek	Residential	OF88	COUNTRY WALK	-84.69376079	33.87610032	-110921.7386	1419410.335
102	PADDOCKS CT	Headwall Out	Metal	Earthen	30	Unnamed tributary to Powder Springs Creek	Residential	OF103	PADDOCKS WEST	-84.71710224	33.88766275	-117904.1965	1423794.35
114	TEN OAKS CIR	Headwall Out	Metal		24			OF165	WHISPERING GLEN	-84.64890262	33.86752939	-97377.33834	1415958.399
120	ABBOTT DR	Headwall Out	Metal		36			OF1180	ASHLEIGH PARC	-84.64886106	33.86215236	-97411.99688	1414000.836
122	HOPELAND DR	Headwall Out	Metal	Earthen	30			OF54	HOPELAND PARK	-84.69820373	33.87584221	-112273.0238	1419349.596
147	MISTYMORN LANE	Headwall Out	Metal	Earthen	18	Tributary to Powder Springs Creek	Residential	OF147	AIKEN'S MILL	-84.67500448	33.85264155	-105435.3946	1410731.611
150	MORNINGSIDE DRIVE	Headwall Out	Metal	Other	18	Tributary to POWDER SPRINGS CREEK	Residential	OF150	MORNINGSIDE	-84.67656597	33.85051473	-105920.2251	1409965.426
152	MISTYMORN WAY	Headwall Out	Metal	Earthen	18	Tributary to POWDER SPRINGS CREEK	Residential	OF152	AIKEN'S MILL	-84.67782779	33.84986496	-106317.5329	1409741.849
163	FRANK AIKENS RD	End of Pipe	Concrete	Other	18	Tributary to POWDER SPRINGS CREEK	Residential	OF163		-84.67204477	33.85160143	-104545.754	1410331.079
167	Caley Mills Dr	End of Pipe	Metal	Earthen	36	Tributary to NOSES CREEK	Residential	OF167	CALEY'S MILL	-84.64746321	33.87135086	-96913.72319	1417339.519
169	LYNN DRIVE	Pipe with Wings	Concrete	Concrete	24	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF169		-84.68464788	33.86505768	-108253.39	1415322.781
190	STERLINGBROOKE DRIVE	Headwall Out	Metal	Earthen	18	WETLAND which runs into Powder Springs Creek	Residential	OF190	SILVERBROOKE	-84.71882498	33.88370867	-118462.9596	1422368.008
199	POWDER SPRINGS DALLAS ROAD	Flared Pipe	Concrete	Earthen	24	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF199		-84.68645979	33.86076216	-108814.4298	1413768.218
200	POWDER SPRINGS DALLAS ROAD	Flared Pipe	Concrete	Earthen	18	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF200		-84.68618183	33.86037431	-108767.62	1413632.069
202	LEWIS ROAD	End of Pipe	Plastic	Other	18	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF202		-84.68241658	33.85432957	-107671.432	1411401.077
218	Silverbrooke Crossing	Headwall Out	Metal	Earthen	30	Wetlands	Residential	OF218	SILVERBROOKE	-84.71906534	33.88299737	-118542.3659	1422110.899
238	Ten Oaks CIRCLE	Headwall Out	Metal		18			OF164	WHISPERING GLEN	-84.65002459	33.86638755	-97728.06681	1415550.998
241	NORTH AVENUE	Headwall Out	Metal	Other	30	Tributary to POWDER SPRINGS CREEK	Residential	OF241		-84.67864274	33.86145078	-106461.9705	1413965.213
243	FLORENCE CIRCLE	Headwall	Metal	Earthen	36	Unnamed tributary to Lucille Creek.	Industrial	OF243		-84.69743905	33.86986288	-112094.4695	1417167.342
255	BROWNSVILLE ROAD	End of Pipe	CMP	Earthen	15	Powder Springs Creek	Commercial	OF255	POWDER SPRINGS PARK	-84.68720061	33.85755492	-109108.4199	1412594.505
256	Lynn Drive	End of Pipe	Concrete	Earthen	24	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF256		-84.68454004	33.86477401	-108223.1722	1415218.722
257	LYNN DRIVE	Pipe	Concrete	Earthen	24	Tributary to POWDER SPRINGS CREEK	Residential	OF257		-84.68481248	33.86485086	-108305.2155	1415248.72
258	AUSTELL POWDER SPRINGS ROAD	Headwall	Concrete	Earthen	36	Tributary to NOSES CREEK	Undeveloped	OF258		-84.66939997	33.85409237	-103720.4367	1411218.226
259	LINDLEY CIRCLE	End of Pipe	Concrete	Concrete	24	Tributary to POWDER SPRNGS CREEK	Residential	OF259		-84.66698017	33.85484842	-102979.3479	1411470.652
260	LINDLEY CIRCLE	End of Pipe	Concrete	Earthen	24	Tributary to POWDER SPRINGS CREEK	Residential	OF260		-84.66695179	33.85713591	-102949.9826	1412307.996
280	DILLARD STREET	Pipe with Wings	Metal	Earthen	30	Tributary to POWDER SPRINGS CREEK	Residential	OF280		-84.6779916	33.86086846	-106269.4175	1413748.41
282	COUNTRY COVE WAY	Headwall Out	Metal	Earthen	42	Unnamed tributary to Lucille Creek	Residential	OF282	COUNTRY COVE	-84.7002253	33.87801989	-112867.2668	1420157.423
287	JACK VERNON CIRCLE	Headwall Out	Metal	Earthen	36	Tributary to POWDER SPRINGS CREEK	Residential	OF287	PARK PLACE	-84.68285106	33.86140154	-107746.2269	1414003.682

292	SHARON DRIVE	Pipe with Wings	Metal	Earthen	18	Tributary to POWDER SPRINGS CREEK	Residential	OF292		-84.66321507	33.85455147	-101838.044	1411339.66
293	ten oaks ct	Headwall Out	Metal		36			OF1159	WHISPERING GLEN	-84.65180594	33.86617207	-98270.87234	1415485.64
296	MUSTANG DRIVE	Headwall	Metal	Earthen	30	Tributary to NOSES CREEK	Residential	OF296	WILDHORSE HILLS	-84.64915495	33.86955137	-97436.17471	1416696.26
298	OAKVIEW DRIVE EXT	End of Pipe	RCP	Other	18	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF298		-84.68316923	33.86158279	-107808.9812	1414041.381
302		Headwall Out	Metal		36			OF156		-84.65915449	33.86357984	-100525.1654	1414596.101
303		Headwall Out	Metal		18			OF157		-84.65864872	33.8641889	-100366.2058	1414814.078
309	HOPKKINS RD	Pipe	Metal		18			OF1170		-84.65621014	33.86937454	-99579.97229	1416683.727
310	HOPKINS RD	Pipe	Concrete		18			OF1171		-84.65570134	33.86873871	-99431.08648	1416448.539
311	AUSTELL POWDER SPRING RD	End of Pipe	Concrete	Earthen	48	Tributary to POWDER SPRINGS CREEK	Commercial	OF311	STARS CAR WASH	-84.67052449	33.85793983	-104086.4613	1412621.223
312	HOPKINS ROAD	Headwall	Metal	Earthen	36	WILDHORSE CREEK	Residential	OF312		-84.65791466	33.87165088	-100077.5024	1417524.748
315	WALNUT MILL LANE	Headwall	RCP	Earthen	24	Tributary to Powder Springs Creek	Residential	OF315	CAMERON SPRINGS	-84.71187594	33.86794961	-116495.3963	1416579.181
318	Richard D Sailors Parkway	Headwall	CMP	Earthen	36	Unnamed tributary to Powder Springs Creek	Commercial	OF318				-106746.0195	1415887.808
319	3780 Tommy Drive	Pipe with Wings	CMP	Other	24	Unnamed tributary to WILDHORSE CREEK	Residential	OF319				-101917.3215	1416705.683
320	EVELYN DRIVE	Pipe with Wings	CMP	Earthen	18	Unnamed tributary to Wildhorse Creek	Residential	OF320	Glenbrook Acres			-103901.4543	1416815.298
322	BROWNSVILLE ROAD	End of Pipe	CMP	Earthen	18	Powder Springs Creek	Commercial	OF322	Powder Springs Park			-109174.676	1412711.195
323	KATHY CIRCLE	End of Pipe	HDPE	Earthen	18	Powder Springs Creek	Residential	OF323	HAPPY VALLEY			-107904.8038	1415656.301
324	KATHY CIRCLE	End of Pipe	HDPE	Earthen	12	Powder Springs Creek	Residential	OF324	HAPPY VALLEY			-107923.7157	1415624.601
326	BARTOWS BRIDGE ROAD	Headwall	RCP	Earthen	24	Unnamed tributary to Powder Springs Creek	Residential	OF326	CAMERON SPRINGS			-116940.59	1416119.522
327	LOST LAKES DRIVE	Headwall	CMP	Earthen	18	Unnamed tributary of LUCILLE CREEK	Residential	OF327	LOST MOUNTAIN LAKES			-110120.2045	1421282.667
328	OGLESBY ROAD	Flared Pipe	RCP	Concrete	24	Unnamed tributary to Powder Springs Creek	Undeveloped	OF328				-108377.3689	1407261.698
329	FALLS AVENUE	Headwall	RCP	Concrete	30	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF329	SPRINGBROOK ESTATES			-109058.0639	1407830.517
330	LILY BROOKE COURT	Headwall	RCP	Earthen	30	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF330	SPRINGBROOK ESTATES			-107945.4246	1408311.894
331	FALLS AVENUE	Headwall	RCP	Earthen	30	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF331	SPRINGBROOK ESTATES			-109889.667	1408443.569
332	MISTY CREEK COURT	Headwall	RCP	Earthen	30	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF332	SPRINGBROOK ESTATES			-107764.3658	1407506.374
333	LEWIS ROAD	Pipe with Wings	HDPE	Other	18	POWDER SPRINGS CREEK	Undeveloped	OF333				-108038.7965	1410047.856
334	LEWIS ROAD	Pipe with Wings	HDPE	Earthen	18	POWDER SPRINGS CREEK	Undeveloped	OF334				-108209.2622	1409701.429
335	LEWIS ROAD	Pipe with Wings	HDPE	Earthen	18	POWDER SPRINGS CREEK	Undeveloped	OF335				-108135.3396	1409613.571
336	BRADFORD LANE	Pipe with Wings	CMP	Concrete	24	Unnamed tributary to LUCILLE CREEK	Residential	OF336	COUNTRY WALK			-110081.1823	1418097.646
337	WARWICK LANE	Headwall	CMP	Earthen	18	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF337	PEMBROOKE			-107183.4441	1416739.482
338	GLENBROOK DRIVE	Headwall	CMP	Earthen	18	Unnamed tributary to NOSES CREEK	Residential	OF338	GLENBROOK ACREZT			-103094.3755	1417717.783
339	WOODPOND COVE	Headwall	CMP	Earthen	18	Unnamed tributary to LUCILLE CREEK	Residential	OF339	LOST LAKES			-109655.0504	1421882.802
340	WOODPOND COVE	Headwall	CMP	Earthen	36	Unnamed tributary to Lucille Creek	Residential	OF340	LOST LAKES			-109522.6425	1421710.714
341	WOODPOND COVE	Headwall	CMP	Earthen	24	Unnamed tributary to LUCILLE CREEK	Residential	OF341	LOST LAKES			-109539.6095	1421712.181
342	MOON ROAD	End of Pipe	RCP	Earthen	36	Unnamed tributary to Lucille Creek	Residential	OF342	LOST LAKES			-109588.7313	1423792.104
343	COMMODORE ROAD	Pipe with Wings	CMP	Earthen	30	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF343				-106739.9155	1417668.822
344	SHAE COURT	Headwall	CMP	Earthen	30	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF344	VILLAS SEVEN SPRINGS			-110737.2505	1408114.096
345	SHAE COURT	Headwall	CMP	Earthen	24	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF345	VILLAS SEVEN SPRINGS			-110920.5412	1408109.443
346	CALEB CROSSING	Headwall	CMP	Earthen	24	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF346	VILLAS SEVEN SPRINGS			-110879.553	1408205.699
347	PINETREE COURT	Headwall	CMP	Earthen	36	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF347				-107310.586	1416001.874
350	OAKVIEW DRIVE	Flared Pipe	RCP	Earthen	18	Tributary to POWDER SPRINGS CREEK	Undeveloped	OF350				-107879.9784	1414045.496
351	OAKVIEW DRIVE EXT	End of Pipe	RCP	Earthen	24	Tributary to Powder Springs Creek	Undeveloped	OF351				-108001.4979	1414123.093

352	LYNN DRIVE	End of Pipe	RCP	Earthen	24	Unnamed tributary to POWDER SPRINGS CREEK	Residential	OF352				-107970.0007	1414554.42
353	SILVERCREST COURT	Headwall	CMP	Earthen	60	Tributary to POWDER SPRINGS CREEK	Residential	OF353	SILVERBROOK			-119979.8181	1421973.826
354	JACKSON WAY	Flared Pipe	RCP	Concrete	36	Tributary to POWDER SPRINGS CREEK	Residential	OF354				-108672.0266	1413936.863
355	MUSTANG DRIVE	End of Pipe	CMP	Earthen	42	Tributary to WILDHORSE CREEK	Residential	OF355	WILDHORSE HILLS			-99911.48348	1418284.859
356	STEEPLECHASE DRIVE	Headwall	CMP	Earthen	36	Tributary to POWDER SPRINGS CREEK	Residential	OF356	STEEPLECHASE			-110139.328	1408624.155
359	NORTH AVENUE	End of Pipe	CMP	Earthen	36	Tributary to POWDER SPRINGS CREEK	Residential	OF359				-106893.6251	1414009.07
360	JACK VERNON CIRCLE	Headwall	RCP	Other	24	Tributary to POWDER SPRINGS CREEK	Residential	OF360	PARK PLACE			-107579.4501	1414029.435
361	PARKS DRIVE	End of Pipe	RCP	Earthen	18	Tributary to POWDER SPRINGS CREEK	Residential	OF361				-102036.4644	1411592
362	PARKS DRIVE	End of Pipe	RCP	Other	15	Tributary to POWDER SPRINGS CREEK	Residential	OF362				-102443.5715	1411832.809
363	MACEDONIA ROAD	Headwall	RCP	Earthen	30	Tributary to WILDHORSE CREEK	Undeveloped	OF363				-104259.7883	1418952.555
365	LONG STREET	Headwall	RCP	Earthen	18	Tributary to Powder Springs Creek	Residential	OF365				-108131.5094	1411395.498
366	AKINS RIDGE LANE	Headwall	CMP	Other	42	Tributary to WILDHORSE CREEK	Residential	OF366	Akins Ridge			-104635.7317	1410088.89
367	COUNTRY WALK DRIVE	Headwall	RCP	Other	52	Tributary to Powder Springs Creek	Residential	OF367	COUNTRY WALK			-108714.0678	1417542.709
368	BROWNSVILLE ROAD	Headwall	CMP	Earthen	48	Tributary to Powder Springs Creek	Residential	OF368				-111268.5984	1408126.164
369	MACEDONIA ROAD	Headwall	RCP	Earthen	18	Tributary to WILDHORSE CREEK	Commercial	OFNEW				-103988.6837	1418891.682
370	MACEDONIA ROAD	End of Pipe	CMP	Earthen	24	WILDHORSE CREEK	Residential	OF370				-100774.1071	1419149.204
371	WOODBRIDGE CT	Headwall	CMP	Other	18	Tributary to Powder Springs Creek	Residential	OF371	WOODBRIDGE			-109887.2273	1412044.26
373	LANCER DRIVE	End of Pipe	CMP	Earthen	18	Tributary to Wildhorse Creek	Residential	OF373	LANCER PLACE			-100496.17	1417860.526
374	HOPKINS RD	End of Pipe	CMP	Earthen	18	Wildhorse Creek	Residential	OF374				-100119.6108	1417598.203

Attachment B: MS4 Outfall Inspection Checklist

Dry Weather Outfall Screening Form	
Name of City or County:	**Data Sheet Number:**
Date of screening (MM/DD/YY):	Time of screening:
Weather conditions:	
Sampling 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 and watershed name:	
Land use/industries in drainage area:	
GPS Coordinates:	Photo numbers:

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			
Field Test Kit Manufacturer:		Model:	
Fluoride (mg/L):		**(MPN/100ml):**	
Surfactants (mg/L):		**Analysis Comments:**	
Grab sample for lab? (fluoride/surfactants) ❒ Yes ❒ No		Bacteria Grab sample for lab? (*E. coli* coliform) ❒ Yes ❒ No	
Grab Sample ID:		Bacteria Grab Sample ID:	

Outfall Potential for Illicit Discharge:

❒ Unlikely - or- No Flow ❒ Possible (presence of two or more indicators)

❒ Suspect (one or more indicators with severity of 2 or 3) ❒ Obvious - or- Confirmed

Attachment C : Sample Source Tracing Form (Outfalls)

Date			
Outfall ID			
Flow? (Y/N)			
Odor (Describe)			
Color (Describe)			
Turbidity (Describe)			
Floatables (Describe)			
Temperature (◦C)			
pH			
Conductivity			
Flouride			
Surfactants			
Fecal Coliform			
Follow Up Actions			

Attachment C : Sample Source Tracing Form (Outfalls)

Date	8/8/2024		
Outfall ID	OF 67		
Flow? (Yes/No)	Yes		
Odor (Describe)	None		
Color (Describe)	Clear		
Turbidity (Describe)	None		
Floatables (Describe)	None		
Temperature (◦C)	25.7		
pH	6.65		
Conductivity	187.8		
Flouride	N/A		
Surfactants	N/A		
Fecal Coliform	N/A		
Follow Up Actions	Reported Water Leak To Cobb County Water Dept		

Appendix F

Green Infrastructure/Low Impact Development Program
Section 3.3.11 of the Permit

CITY OF POWDER SPRINGS, GEORGIA

GREEN INFRASTRUCTURE / LOW IMPACT DEVELOPMENT (GI/LID) PROGRAM



city of powder springs

Updated: December 2024
for the 2024-2029 Permit Period

Introduction

Green Infrastructure (GI) uses vegetation, soils, and natural processes to manage water and create healthier built environments with fewer negative impacts on surrounding green space and wildlife habitat. At the scale of a large city or region, green infrastructure refers to the overall network of natural areas that provide habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water. These site-specific techniques are collectively described as Low Impact Development (LID), an approach to development that works with nature to manage stormwater as close to its source as possible. LID employs site design priorities such as preserving and recreating natural landscape features, minimizing impervious surfaces, and incorporating stormwater as an on-site resource rather than a waste product.

The use of GI/LID has been supported by the United States Environmental Protection Agency (EPA) and by the Georgia Environmental Protection Division (EPD). The goal is to reduce runoff volume and mimic the natural water cycle to protect against erosion and flooding and provide water quality treatment. In an effort to provide guidance on this new approach to stormwater management, the Metropolitan North Georgia Water Planning District (District), with support from EPA and EPD and in collaboration with the District communities has release the updated 2016 Georgia Stormwater Management Manual (GSMM). The GSMM provides the technical background and guidance to support Powder Springs GI/LID program.

A National Pollutant Discharge Elimination System (NPDES) Phase I Large Municipal Separate Storm Sewer System (MS4) permit was initially issued to the City of Powder Springs on June 15, 1994, and reissued in 1999, 2004, 2009, 2014, 2019, and most recently 2024. In compliance with the Phase I MS4 permit that became effective on June 11, 2024, permittees are required to develop and implement a Green Infrastructure (GI) / Low Impact Development (LID) Program that meets permit requirements.

Background

According to the most recent US Census Bureau data, the City has a population of approximately 19,000 and total area of 7.4 square miles. Powder Springs is located in Cobb County, which is in the Piedmont Plateau of Georgia. Elevation ranges from 750 feet along the Chattahoochee to more than 1,800 feet along the ridgetops. There are gentle to strong slopes that are dissected by waterways. Rainfall averages about 50" per year.

Based on the USDA-NRCS Web Soil Survey, approximately three-quarters of the land area is very suitable for infiltration-based green infrastructure practices. Almost 80% of the soils have deep water table depths of 6 feet or greater, and 70% of the soils overall in the City have a hydrologic soil group (HSG) rating of "B," meaning high potential for infiltration. HSG "A" is the highest potential for infiltration, but this comprises only 2.5% of the land area. There is another 2.5% that is HSG "C" and has a deep water table. Approximately 15% of the soils in the City are not suitable for infiltration. This includes 10% with a water table depth of 12 inches or less (HSGs: "A/D" "B/D" and "C/D"), and 5% with a HSG rating of "D" (lowest potential for infiltration). Lastly, there is about 10% of soils with some potential for infiltration, but it is not as likely. This includes 5% with a HSG "C" and water table depth of 2 feet and 5% classified as "urban" soils or "urban land complex." The soil types with moderately-shallow water table depths and "urban" classifications would need further exploration for groundwater depth restrictions and infiltration potential.

The updated GI/LID requirements for the City of Powder Springs NPDES Phase I MS4 Permit, re-issued in June 2024 for the 2024-2029 permit period, are described in Table 1 and the following Plan sections below:

Table 1: GI/LID NPDES Phase I Large MS4 Permit 2024 Requirements

GI/LID Program Elements	Measurable Goal	SWMP Activity
1. Legal Authority	1.a. 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, reuse, and evapotranspiration. At a minimum, the permittee shall assess those regulations governing residential and commercial development, road design, land use, and parking requirements. During the regulatory review, the permittee shall consider the inclusion of incentives for use of GI/LID practices into the ordinance. If the ordinance(s) are revised during the reporting period, submit a copy of the adopted ordinance(s) with the annual report.	Review City ordinances, building codes, and other regulations annually to ensure they do not impede GI/LID approaches.
	1.b If revisions to the ordinances and codes are necessary, the permittee should include a report on any proposed revisions, including a schedule for completion of the revisions. In subsequent reporting years, the permittee should provide a status report on the ordinance revisions and/or any adopted ordinances. In addition, in subsequent annual reports following the first year of the permit, the permittee should either complete a comprehensive evaluation or reference the first year evaluation and certify that additional revisions to the codes and ordinances are not necessary.	Conduct comprehensive ordinance evaluation, prepare report, and annually provide a status update thereafter.
2. GI/LID Program	2.a. Implement the GI/LID program approved by EPD. The GI/LID program shall include procedures for evaluating the feasibility and site applicability of different GI/LID techniques and practices, and various structures and practices to be considered. If the GI/LID program is revised during the reporting period, submit the revised program to EPD for review with the annual report.	Review the GI/LID Plan annually and make updates as needed.

GI/LID Program Elements	Measurable Goal	SWMP Activity
3. GI/LID Structure Inventory	3.a. Each reporting period, update the inventory of water quality-related GI/LID structures located within the permittee's jurisdiction and at a minimum, constructed after June 11, 2014, (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 GI/LID structures owned by other entities (e.g., Board of Education and other entities not covered by an MS4 permit and that the permittee has legal authority to inspect), and privately-owned non-residential GI/LID structures (e.g., any mixed use development, commercial, etc. structures that the permittee has legal authority to inspect). Track the addition of new water quality-related GI/LID structures through the plan review process, ensure that the structures are added to the inventory, and ensure that maintenance agreements are executed for all non-permittee- owned structures constructed after the effective date of this permit.	Update the inventory with new GI/LID structures (for three separate ownership categories) and ensure maintenance agreements are executed for any new non-permittee structures.
	3.b. Provide an updated inventory, including the type, ownership, and total number of structures, in each annual report.	Submit the updated inventory with required documentation in each annual report.
4. Inspection and Maintenance Program	4.a. Conduct inspections on 100% of the GI/LID structures included in the inventory created in 3 above, within the 5- year permit term. For permittees with less than five inventoried GI/LID structures, at least one inspection must be conducted each reporting period. For permittees with five or more GI/LID structures included on the inventory, at a minimum, the permittee must conduct inspections on 5% of the structures each reporting period, or if inspections are done by geographical area, then one entire area or sector must be inspected each reporting period. If a low percentage of inspections is conducted during one reporting period, then the permittee must increase the inspection frequency in subsequent reporting periods to ensure that 100% of the GI/LID structures are inspected within the 5-year permit term. Provide the number and/or percentage of the total structures inspected and documentation of the inspections conducted during the reporting period in each annual report.	Inspect 100% of permittee-owned; privately-owned non- residential owned; and non-permittee publicly- owned GI/LID structures within a five-year period. Provide the number and/or percentage of the total structures inspected during the reporting period, and inspection documentation, in each annual report.

GI/LID Program Elements	Measurable Goal	SWMP Activity
	4.b. Conduct maintenance on the permittee owned GI/LID structures, as needed. Provide the number of the total structures maintained and documentation of the maintenance performed during the reporting period in each annual report.	Conduct maintenance on all publicly owned GI/LID structures, in accordance with the procedures included in the GI/LID Program.
	4.c. Implement procedures for ensuring those publicly- owned structures owned by other entities and privately-owned non-residential GI/LID structures for which the permittee has legal authority to regulate are maintained as needed. The permittee must retain copies of maintenance agreements finalized after the effective date of this permit and develop a summary list of these agreements. If the permittee has obtained maintenance agreements for structures constructed prior to the effective date of this permit, then these agreements should also be included on the summary list. Update the summary list as new maintenance agreements are executed. Provide an updated summary list and documentation of any activities taken to ensure maintenance of these structure (e.g. letters to owners, enforcement actions) in each annual report.	Ensure that private owners and public, non-permittee owners are maintaining GI/LID structures in accordance with their inspection & maintenance agreements. Maintain copies of maintenance agreements finalized after the effective date of the permit and develop a summary list of agreements. Provide the required documentation with each annual report.

1. Legal Authority

Post- Construction Stormwater Controls

The City has established legal authority to enforce a program to address stormwater runoff into the MS4 from new development and redevelopment projects through the adoption of Post Construction Stormwater Runoff standards that are included in the City's Stormwater Management Ordinance (Article 11 of the City's Unified Development Code). In accordance with Section 3.3.11(a)(2) of the City's MS4 Permit, the City adopted performance standards in October 2020 that require stormwater management systems to retain the first 1.0 inch of rainfall on the site, to the maximum extent practicable.

This ordinance requires the use of post-construction stormwater management and site planning and design criteria to protect stormwater from negative impacts associated with land development, including the stormwater design criteria established in the GSMM. The design criteria and performance standards listed in the City's Ordinance are consistent with the latest version of the GSMM, and the requirements of Section 3.3.11(a)(2) of the City's MS4 permit. The ordinance and design manual apply to new development and redevelopment that creates or adds more than 5,000 square feet of impervious surface or that involves land disturbing activities of 1 acre or more, including projects less than 1 acre if they are part of a larger common plan of development or sale.

The City will apply their adopted performance standards during the design of City-construction projects. The City will review its Stormwater Management Ordinance each reporting period and revise it as needed to ensure appropriate post-construction stormwater controls are in place and submit a copy of the ordinance, if revised, to the Georgia EPD with the Annual Report.

Linear Transportation Projects

The City will apply the adopted performance standards during the design of City-construction projects as discussed above, with the possible exception of linear projects. If the City designs a linear construction project, for which it would be impossible to apply the performance standards, the City will develop a feasibility program which sets reasonable criteria for determining when implementing performance standards for linear projects is infeasible. This will be submitted to EPD, and applied to future linear construction projects only upon approval.

Green Infrastructure Ordinance Review

The City completed an evaluation of the City's development regulations (such as transportation design specifications, plumbing codes, landscaping requirements, and other standards) that might prohibit the use of LID practices in 2015 using the US Environmental Protection Agency (EPA) Water Quality Scorecard. A copy of the ordinance evaluation is included in Appendix B of the City's stormwater management plan (SWMP) . The results of this review were considered and recommendations were included in the Powder Springs UDC, which was adopted in December 2015. Sec. 5-35 of the UDC "Drainage and Low Impact Development" requires the following:

Land developers shall utilize, to the maximum extent practicable, stormwater better site design practices as described in the GSMM. During the land development permitting process, a stormwater management plan is required (see article 11 of this development code). As specified in article 11, the city will require the land development applicant to examine and where feasible implement stormwater management methods broadly referred to as "low-impact development" and as specifically referred to in the Georgia Stormwater Management Manual as stormwater better site design practices and limited application structural stormwater controls (i.e., filter strips, grassed channels, and porous concrete, among others (reference: GSMM, Vol. 2, Sec. 3.3).

To meet the requirements of Section 3.3.11(b)(2) of the City's 2024-2029 MS4 permit, the City will perform an updated comprehensive review of building codes, ordinances, and other applicable regulations during the 2024-2025 reporting period. At a minimum, this review will assess regulations that govern residential and commercial development, road design, land use, and parking requirements using applicable sections of the Code and Ordinance Worksheet developed by the Center for Watershed Protection (CWP), the US EPA Water Quality Scorecard or another similar comprehensive code evaluation tool. If any revisions are necessary, the City will provide information about the ordinance revisions needed, adopted ordinances, and/or a schedule for when the revisions will be completed. Thereafter for reporting years 2025-2026, 2026-2027, 2027-2028, and 2028-2029, the City will either complete another comprehensive evaluation or reference the first-year evaluation and certify that additional revisions are not necessary. Documentation of the annual reviews will be maintained.

If revisions to the ordinances and codes are necessary, the permittee should include a report on any proposed revisions, including a schedule for completion of the revisions. In subsequent reporting years, the permittee should provide a status report on the ordinance revisions and/or any adopted ordinances.

2. GI/LID Program

GI/LID refers to a broad range of stormwater practices and structures for a variety of purposes including water quality improvement and combined sewer overflow reduction. It includes a diverse set of site planning techniques (i.e. protection of conservation areas), site design techniques (i.e. reducing impervious surface), and LID structures (i.e. bio-retention areas, enhanced swales, pervious pavement).

New Development and Redevelopment

The most recent Georgia-based guidance on GI/LID BMPs for the Metro-Atlanta Area can be found in the 2016 GSMM. The revised GSMM is referenced in the selection of practices and structures that would be appropriate for implementation in the City of Powder Springs. The City of Powder Springs adopted the GSMM by reference in the City's 2015 UDC.

Criteria to Determine Site Feasibility and Applicability

In an effort to promote the use of GI/LID where it is feasible, the City of Powder Springs will allow and encourage the use of all GI/LID structures, better site planning techniques, and better site design techniques that are included in the 2016 GSMM, through implementation of the UDC. The City of Powder Springs will prioritize installation of the structures outlined:

- Bioretention Basins
- Enhanced Dry Swales
- Enhanced Wet Swales
- Grass Channels
- Infiltration Practices
- Permeable Paver Systems

Appendix B provides a summary of structures categorized as GI/LID (Exhibit B.1) and a summary of better site planning and design techniques (Exhibit B.2). The detailed descriptions in Volume 2 of the GSMM provide information related to design criteria, advantages/disadvantages, maintenance needs, pollutant removal calculations, stormwater management suitability, implementation considerations, runoff reduction credits and other useful information.

Stormwater Management Plan Requirements and Site Plan Review

The City of Powder Springs is the local Issuing Authority (LIA) and is responsible for regulating and enforcing land disturbance activities within the City. The LIA is responsible for processing LDA applications, maintaining a list of active LDA permits, conducting inspections / maintenance reports, and enforcing local protective ordinances and the Georgia Erosion and Sedimentation Control Act (Official Code of Georgia Annotated [OCGA] 12-7-8 (a)).

As previously discussed, as part of the plan review process, the City will work with applicants to determine appropriate features based on the characteristics of a site. The City will continue to refer to guidance from the 2016 GSMM with regards to feasibility and site applicability of GI/LID practices. The City will document the information provided by the permittee that was used to determine site applicability or non-applicability for GI/LID and this information will be attached to the permit file.

In determining the feasibility for new GI/LID structures, a site feasibility study will occur that will investigate the applicability of the prioritized GI/LID structures (as shown in Table 2) for the City of Powder Springs. The setting of the BMP, construction cost, maintenance burden, size limitations, and soil percolation rates will be considered.

Table 2: Site Feasibility of Focused GI/LID Structures

BMP Type	ppropriate Setting	Soil Feasibility	struction Cost	intenance Burden	Runoff Reduction	WQv/TSS
retention Basins	Upland	0.5 in/hr minimum infiltration rate	edium- High	Medium	50-100%	85%
anced Dry Swale	Upland	ineered Media	Medium	Low	50-100%	80%
nced Wet Swale	Floodplain	No restrictions	Medium	Low	0%	80%
Bioswale /Grass Channel	Sitewide	0.25 in/hr minimum infiltration rate	Low	Low	10-25%	50%
nfiltration Practices	Upland	0.5 in/hr minimum infiltration rate	High	High	100%	100%
rmeable Pavers	Upland	No restrictions	High	High	50-100%	80%

In addition to the soil feasibility criteria listed in Exhibit 3, Powder Springs considers other factors when reviewing site plans for GI/LID structures:

- A separation distance of 2 feet is required between the bottom of structure and the elevation of the seasonally high-water table.
- Pretreatment measures should be used to prevent clogging of the basin bottom if runoff is expected to contain heavy sediment loads.
- A separation distance of 2 feet is required between the bottom of the structure and underlying confining layers such as bedrock and clay lenses.
- Minimum setback requirements for most GI/LID structures can include many of the following, depending on the structure type:
    - 10 feet from building foundations/property lines
    - 15 feet down-gradient from buildings
    - 50 feet from septic systems
    - 100 feet from private wells
    - 200 feet from public water supply reservoirs
    - 1,200 feet from public wells
    - 5 miles from airports

Considering the criteria described above, site characteristics can limit the application of GI/LID and require design modifications or alternative practices to maximize runoff reduction and water quality benefits to reduce the effective impervious area. During the plan review process, Powder Springs will consider the following conditions when determining GI/LID practices are not feasible for a specific site:

- Minimum soil infiltration rate cannot be achieved.
- Minimum clearance of the seasonally high-water table cannot be achieved.
- Minimum land area requirements for the proposed structure cannot be achieved.
- Minimum setbacks to property lines, building foundations, wells, septic systems, or surface waters cannot be achieved.
- Minimum space requirements for necessary pretreatment measures cannot be achieved.
- Minimum separation between infiltration practice and confining layers cannot be achieved.
- Utility conflicts cannot be resolved.
- Contaminants that cannot be remediated are present.

3. GI/LID Structure Inventory

Per NPDES Phase I Large MS4 permit requirements, permittees must develop an inventory of privately owned non- residential and publicly owned water quality-related GI/LID structures located within the permittee's jurisdiction, constructed after June 11, 2014.

Definition of GI/LID Structure

The City of Powder Springs considers the following structures to be GI/LID structures and will be included in this inventory. These practices are recommended for the City and are permitted under current regulations. For inventory purposes, the City only recognizes best management practices (BMP's) and structures specifically designed, engineered and approved for stormwater management through the City's Site Plan review process. As additional GI/LID techniques become recognized and generally accepted by stormwater practitioners, they may be added to this plan. Additional structure types are allowed upon request.

Types of GI/LID Structures:

- Bioretention Areas / Rain Gardens
- Dry/Wet Enhanced Swales
- Green Roofs
- Rainwater Harvesting
- Grass Channel/Bioswale
- Infiltration Practices
- Permeable Pavers/Pavement

Exclusion: This inventory does not include, nor will this plan cover, any BMPs on privately-owned, residential parcels, or other BMPs already addressed through other NPDES Phase I MS4 permit requirements or programs, including, but not limited to: grassed ditches, detention and retention ponds, and the structural controls within the storm sewer system.

GI/LID Inventory

The City maintains an inventory of the following GI/LID Structures that are located within City limits that were constructed after June 11, 2014:

1. Permittee-owned GI/LID structures;
2. Publicly-owned structures owned by other entities (such as the Board of Education and other entities not covered by an MS4 permit that the permittee has the authority to inspect); and
3. Privately-owned non-residential GI/LID structures.

The inventory is currently included in a table and photographic format in Appendix A and includes the following information.

- Type of Structure
- Location of Structure
- Number of Structures
- Ownership

New GI/LID structures will be identified through the plan review process and added to the inventory. An updated inventory will be included with each NPDES Phase I MS4 annual report.

4. GI/LID Structure Inspection and Maintenance Program

GI/LID Inspection and Maintenance Program Responsibility

Table 3 summarizes the GI/LID inspection and maintenance responsibilities that are incorporated into the City of Powder Springs SWMP, by nature of approval of this document. Details are provided following the table.

Table 3: GI/LID Inspection and Maintenance Responsibilities

Location	Inspection Responsibility	Maintenance Responsibility
Within MS4	Powder Springs	Powder Springs
Private non-residential	Powder Springs	Property Owner
Private residential	Property Owner	Property Owner
Non-City Owned Public Facilities	Powder Springs	Public Property Owner

Note: The GI/LID inspection and maintenance program includes all GI/LID structures that are included on the City's GI/LID inventory. The inventory must include, at a minimum, include GI/LID structures constructed after June 11, 2014. Inventory of private residential structures is not required by the MS4 permit. Per the City's 2024-2029 permit, ***however, maintenance agreements must be obtained and executed for non-permittee owned structures constructed after the effective date of the renewed permit (June 11, 2024).***

GI/LID Inspection Program

The City will inspect 100% of inventoried GI/LID structures within the 5-year permit period and at least one inspection will be conducted each reporting period. If more than five (5) GI/LID structures are listed on the inventory, the City will inspect at least 5% of the structures annually.

Inspections will be documented using the inspection sheets included within the City's GI/LID Plan or through a field collection application that is downloaded on City-owned smart phones and/or tablets and recorded within the City's GIS layer. The field collection application and paper inspection checklist contain the same questions. A table listing the information that will be collected and documented during site inspections within a GIS database and copies of paper inspection checklists (contained within the GI/LID Plan) are provided in Appendix D and F, respectively, of the City's SWMP.

GI/LID Maintenance Program

If inspections indicate that a City-owned GI/LID structure is in need of maintenance, the City will perform that maintenance, as appropriate, in accordance with the recommendations set forth in the GSMM. Maintenance needs vary for each of the GI/LID BMPs and may include such actions as replacing mulch and plants, removing sediment, sweeping/vacuuming, dewatering, invasive species removal, planting, and removing trash/debris. The City utilizes the GSMM to identify maintenance needs for structures included in the inventory. Maintenance activities for publicly-owned structures follow the same pattern as the inspections, since most structures being repaired or maintained are included as a work order as the result of an inspection. Once maintenance is conducted, information is documented regarding the efforts, final condition, and follow-up needs of the structure. The City of Powder Springs provides the number of public GI/LID BMPs maintained during the reporting period, and documentation of maintenance activities, in each annual report.

In order to ensure that private, non-residential GI/LID structures and publicly-owned structures owned by other entities are maintained by their owner in accordance with the GSMM, the City requires developers of GI/LID structures not owned by the City to complete a maintenance agreement with the City, prior to the issuance of a land disturbing activity permit. The maintenance agreement and stormwater management design plan is approved by the City and recorded with the deed upon approval during the site plan review process. A copy of an example maintenance agreement is included in Appendix C.

The City will retain copies of maintenance agreements finalized after the effective date of the current permit (June 11, 2024) and develop a summary list of the new agreements. This list may also include any

maintenance agreements that were obtained for GI/LID structures constructed in previous permit periods. The summary list will be reviewed and updated each reporting period.

During routine inspections, if the City staff determine that the owner is not properly maintaining their GI/LID structures, they will enforce the provisions of the maintenance agreement and the Stormwater Management Ordinance.

Appendix A – GI/LID Inventory

GI/LID Inventory

2023-2024

Type of Structure	Location	Number of Structures	Ownership	ID
Bioretention	Silverbrook	2	Private	LID01 and LID 02
Bioretention	Abbington Trail	7	Private	LID04
Bioretention	Silverbrook Crossing	2	Public	LID03
Bioretention	Creekwood	2	Private	LID05 and LID 06

B – GI/LID Structures and Better Site Planning and Design Techniques

EXHIBIT B.1

Summary of Potential GI/LID Structures in Cobb County

BMP Structure	Location in Volume 2 GSMM 2016 (Section and PDF page #)	Description	Runoff Reduction	Stormwater Management and Treatment							Site Applicably						Cost Considerations	
			RR	WQv / TSS	CPv	Qp25 / Qf	Total P	Total N	Fecal Coliform	Metals	LID/ GI	Drainage Area (ac)	Space Req'd (% of Imperv. Area)	Max Site Slope	Minimum Head (Elevation Difference)	Depth to Water Table	Construction Cost	Maintenance Burden
Bioretention Areas	Section 4.2 (page 398)	Bioretention areas are shallow stormwater basins or landscaped areas that utilize engineered soils and vegetation to capture and treat stormwater runoff. Bioretention areas may be designed with an underdrain that returns runoff to the conveyance system or designed without an underdrain to exfiltrate runoff into the soil.	Yes	85%	†	†	80%	60%	90%	95%	Yes	5 max	3 - 6%	20 %	3 ft .	2 ft.	Med - High	Med
Enhanced Dry Swales	Section 4.8 (page 454)	Enhanced swales are vegetated open channels that are designed and constructed to capture and treat stormwater runoff within dry or wet cells formed by check dams or other structures.	Yes	80%	†	X	50%	50%	X	40%	Yes	5 max	10 - 20%	4%	3 - 5 ft.	2 ft.	Med	Low
Enhanced Wet Swales	Section 4.8 (page 454)	Enhanced swales are vegetated open channels that are designed and constructed to capture and treat stormwater runoff within dry or wet cells formed by check dams or other structures.	No	80%	†	X	25%	40%	X	20%	Yes	5 max	10 - 20%	4%	1 ft.	Below	Med	Low
Grass Channels	Section 4.9 (page 466)	Grass channels are vegetated open channels that provide "biofiltering" of stormwater runoff as it flows across the grass surface.	Minimal	50%	†	X	25%	20%	X	30%	Yes	5 max	10%	4%	‹1 ft.	2 ft.	Low	Low
Infiltration Practices	Section 4.12 (page 490)	An infiltration practice is a shallow excavation, typically filled with stone or an engineered soil mix, which is designed to temporarily hold stormwater runoff until it infiltrates into the surrounding soils. Infiltration practices are able to reduce stormwater quantity, recharge the groundwater, and reduce pollutant loads.	Yes	100%	†	†	100%	100%	100%	100%	Yes	5 max	2 - 3%	6%	1 ft.	2 ft.	High	High
Permeable Paver Systems	Section 4.15 (page 508)	A permeable paver system is a pavement surface composed of structural units with void areas that are filled with pervious materials such as gravel, sand, or grass turf. The system is installed over a gravel base course that provides structural support and stores stormwater runoff that infiltrates through the system into underlying permeable soils.	Yes	80%	†	†	50%	50%	N/A**	60%	Yes	N/A	No restriction	6%	2 - 4 ft.	2 ft.	High	High

√ BMP can meet the stormwater management or treatment requirement

† BMP may meet the stormwater management or treatment requirement depending on size, configuration, and site constraints

X BMP may contribute but is not likely to fully meet the stormwater management or treatment requirement

EXHIBIT B.2

Summary of Potential Better Site Planning and Design Techniques in Cobb County

Better Site Planning Techniques	Location in Volume 2 GSMM 2016 (Section and PDF page #)	Description
Preserved Undisturbed Natural Areas	Section 2.3.2 (page 269)	Important natural features and areas such as undisturbed forested and vegetated areas, natural drainageways, stream corridors, wetlands and other important site features should be delineated and placed into conservation areas.
Preserve Riparian Buffers	Section 2.3.2 (page 270)	Naturally vegetated buffers should be delineated and preserved along perennial streams, rivers, lakes, and wetlands.
Avoid Floodplains	Section 2.3.2 (page 271)	Floodplain areas should be avoided for homes and other structures to minimize risk to human life and property damage, and to allow the natural stream corridor to accommodate flood flows.
Avoid Steep Slopes	Section 2.3.2 (page 273)	Steep slopes should be avoided due to the potential for soil erosion and increased sediment loading. Excessive grading and flattening of hills and ridges should be minimized.
Minimize Siting on Porous or Erodible Soils	Section 2.3.2 (page 274)	Porous soils such as sand and gravels provide an opportunity for groundwater recharge of stormwater runoff and should be preserved as a potential stormwater management option. Unstable or easily erodible soils should be avoided due to their greater erosion potential.
Fit Design Practice to Terrain	Section 2.3.2.2 (page 276)	The layout of roadways and buildings on a site should generally conform to the landforms on a site. Natural drainageways and stream buffer areas should be preserved by designing road layouts around them. Buildings should be sited to utilize the natural grading and drainage system and avoid the unnecessary disturbance of vegetation and soils.
Locate Development in Less Sensitive Areas	Section 2.3.2.2 (page 278)	To minimize the hydrologic impacts on the existing site land cover, the area of development should be located in areas of the site that are less sensitive to disturbance or have a lower value in terms of hydrologic function.
Reduce Limits of Clearing and Grading	Section 2.3.2.2 (page 279)	Clearing and grading of the site should be limited to the minimum amount needed for the development and road access. Site footprinting should be used to disturb the smallest possible land area on a site.
Utilize Open Space Development	Section 2.3.2.2 (page 280)	Open space site designs incorporate smaller lot sizes to reduce overall impervious cover while providing more undisturbed open space and protection of water resources.
Consider Creative Development Design	Section 2.3.2.2 (page 282)	Planned Unit Developments (PUDs) allow a developer or site designer the flexibility to design a residential, commercial, industrial, or mixed-use development in a fashion that best promotes effective stormwater management and the protection of environmentally sensitive areas.
Reduce Roadway Lengths and Widths	3.3.3.1 (page 89)	Strategies to reduce impervious cover by making streets narrower while still meeting transportation objectives.
Reduce Building Footprints	3.3.3.4 (page 106)	Reducing footprint size of commercial building and residences by using alternate or taller buildings while maintaining the same floor to area ratio (the ratio of building square footage to lot size)
Reduce the Parking Footprint/ Reducing Paved Parking and Walking Areas	3.3.3.3 (page 101)	Reducing the footprint of paved parking lots, driveways, and sidewalks to reduce imperviousness
Reduce Setback and Frontages	3.3.2.3 (page 78)	Reduce front yard building setback to 20 feet to reduce the required length of driveways and sidewalks. Reduce side yard setback to 25 feet or less and frontage length to 80 feet or less to allow for denser development and shorter road lengths.

EXHIBIT B.2

Summary of Potential Better Site Planning and Design Techniques in Cobb County

Better Site Planning Techniques	Location in Volume 2 GSMM 2016 (Section and PDF page #)	Description
Use Fewer or Alternative Cul-de-Sacs/ Alternative Roadway Components	3.3.3.2 (page 95)	Alternatives to large cul-de-sacs and curb-and gutter stormwater conveyance
Create Parking Lot Stormwater 'Islands"	2.3.1.2 (page 267)	Reduction of impervious cover
Use Buffers and Undisturbed Areas	2.3.1.2 (page 267)	Utilization of natural features for stormwater management
Use Natural Drainageways Instead of Storm Sewers	2.3.1.2 (page 267	Utilization of natural features for stormwater management
Use Vegetated Swale Instead of Curb and Gutter	2.3.1.2 (page 267)	Utilization of natural features for stormwater management
Use Soil Restoration Practices to Improve Native Soils	2.3.1.2 (page 267)	Utilization of natural features for stormwater management
Drain Rooftop Runoff to Pervious Area	2.3.1.2 (page 267)	Utilization of natural features for stormwater management

Appendix C – Maintenance Agreement

LETTER OF CREDIT MAINTENANCE AGREEMENT (UDC § 11-9)

For_____Subdivision

Account # _____

THIS AGREEMENT, entered into this_____day of_____, 20_____, between_____ (hereinafter called the "Subdivider" with its principal place of business at_____and the City of Powder Springs, a Georgia municipal corporation, (hereinafter called "City"), and _____, (herein after called "Issuer"), with its principal place of business at_____.

WITNESSETH:

WHEREAS, the Subdivider is obligated under the terms of the Unified Development Code of the City of Powder Springs for the maintenance of public improvements, including but not limited to roads, waterlines, sewer lines, and storm drainage facilities located in the subdivision known as _____for a period of two (2) years following recordation of the final plat or completion of all required improvements, whichever occurs later.

WHEREAS, the Subdivider has received approval of the constructed improvements in accordance with the construction plans and specifications on file and now must provide adequate surety for the maintenance thereof; and

WHEREAS, the Subdivider certifies that any and all persons, firms, or corporations providing labor and/or materials required for construction of said improvements will be paid in full; and

WHEREAS, the parties have agreed that the Issuer is acceptable to all parties to act in such capacity;

NOW, THEREFORE, in consideration of the foregoing premises, it is hereby agreed:

1. The Subdivider has secured the attached unconditional irrevocable Letter of Credit in the sum of_____ dollars ($ _____) with the Issuer, to guarantee all improvements against defects in materials, workmanship, and design and further guarantee that all such improvements will be maintained in first-class condition for a minimum of two (2) years following

recordation of the final plat or completion of all required improvements, whichever occurs later.

2. The Issuer agrees to disburse funds to the full amount of the Letter of Credit only upon receipt of "Proper Authorization" as hereinafter defined. "Proper Authorization" shall mean authority in written form from the _____ stating that a disbursement is authorized:

   (a) To the Subdivider upon delivery of "Proper Authorization" from the _____. The City, through the _____, shall issue such "Proper Authorization" upon finding that the improvements meet City standards within the two-year term hereof.

   (b) To the City upon delivery of "Proper Authorization" from the _____, upon his determination that any portion or all of the said materials, workmanship, or design is unacceptable. The City is authorized, but not obligated, to correct any defective materials or workmanship and unacceptable design and to use the funds acquired from the Letter of Credit for such purposes.

3. The full amount of the Letter of Credit shall be held by the Issuer as security guaranteeing materials, workmanship, and design for the period stated herein unless "Proper Authorization" is delivered to the Issuer by the _____ under Item 2(b) above. However, the Issuer on one or more occasions may release all or any portion of such funds upon delivery of "Proper Authorization" from the_____ at any time and the City agrees to release said funds if the Subdivider shall make other arrangements approved by the City in accordance with the Unified Development Code for the balance of the two-year term. If the materials, workmanship, and design are acceptable for two (2) years following recordation of the final plat or completion of all required improvements, whichever occurs later, the_____shall upon approval by the City authorize the Issuer in writing to release the full amount of the Letter of Credit held by the Issuer to the Subdivider.

4. The Issuer hereby acknowledges that it has extended an unconditional irrevocable Letter of Credit, referred to in Item 1 above, and represents that it has no obligation whatsoever to any of the parties hereto except to release said funds within 10 days upon delivery of "Proper Authorization" from the_____. The Subdivider does hereby release and hold the Issuer harmless from any and all claims whatsoever by

it against the Issuer for releasing such funds to the City in accordance with the terms thereof. This Agreement shall not be terminated or otherwise allowed to expire without at least 30 days written notice to that effect from the Issuer to both the City and Subdivider.

5. If the funds are inadequate to pay for any costs covered by this Agreement, the Subdivider shall pay any and all costs beyond coverage.

6. Should any provision of the attached unconditional irrevocable Letter of Credit conflict with the terms of this Agreement, the terms of this Agreement shall control.

WITNESS the hands and official seals of the parties hereto on the day and year first above written.

CITY OF POWDER SPRINGS, GEORGIA

BY: _____

(Corporate Seal)

SUBDIVIDER: _____

By: _____

Title: _____

(Corporate Seal)

ISSUER: _____

By: _____

Title: _____

Approved as to form:

By: _____

City Attorney

983919_1.DOC

Appendix D – BMP Inspection Forms

Bioretention Area					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet Structure					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet structure is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet structure.					
Water is going through structure (i.e. no evidence of water going around the structure).					
Diversion structure (high flow bypass structure or other) is free of trash, debris, or sediment. Comment on overall condition of diversion structure and list type.					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Weir – area is free of trash, debris, and sediment is less than 25% of the total depth of the weir.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Rock Lined Plunge Pools – area is free of trash debris and sediment. Rock thickness in pool is adequate.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					

Bioretention Area					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
No evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
Vegetation within and around practice is maintained per landscaping plan. Grass clippings are removed.					
Mulching depth of 3-4 inches is maintained. Comment on mulch depth.					
Native plants were used in the practice according to the planting plan.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, tips of leaves turning brown or yellow, blackened roots, etc.).					
Plants seem to be healthy and in good condition. Comment on condition of plants.					
Emergency Overflow					
Emergency overflow is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Outlet Structure					
Outlet structure is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Results					
Overall condition of Bioretention Area:					
Additional Comments					
Notes: *If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.					

Dry Enhanced Swale/Wet Enhanced Swale					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet Structure					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet structure is mowed and grass clippings are removed (for dry enhanced swale).					
No evidence of gullies, rills, or excessive erosion around the inlet structure.					
Water is going through structure (i.e. no evidence of water going around the structure).					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Weir – area is free of trash, debris, and sediment is less than 25% of the total depth of the weir.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Rock Lined Plunge Pools – area is free of trash debris and sediment. Rock thickness in pool is adequate.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					
For dry enhanced swale, no evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					

Plants were used in the practice according to the planting plan.					

Dry Enhanced Swale/Wet Enhanced Swale

Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
Vegetation within and around practice is maintained per landscaping plan. Grass clippings are removed.					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
No evidence of undesirable vegetation.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, tips of leaves turning brown or yellow, blackened roots, etc.).					
Plants seem to be healthy and in good condition. Comment on condition of plants.					
No evidence of erosion around the sides of the check dam.					
Cleanout caps are in place and in good condition (for dry enhanced swale).					
The underdrain appears to be unclogged evidenced by water exiting the practice freely (for dry enhanced swale).					
Pea gravel diaphragm or other flow spreader is clean and working properly.					
Emergency Overflow					
Emergency overflow is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Outlet Structure					
Outlet structure is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Results					
Overall condition of Enhanced Swale:					
Additional Comments					

Notes: *If a specific maintenance item was not checked, please explain why in the appropriate comment box.

Grass Channel					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet.					
No signs of clogging or damage around the inlet.					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
No evidence of erosion in the practice.					
No evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					
No undesirable vegetation located within the practice.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, blackened roots, etc.).					
Grass within and around practice is maintained at the proper height (3-4 inches). Grass clippings are removed.					
Grass cover seems healthy with no bare spots or dying grass.					

Grass Channel					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
No accumulating sediment within the grass channel.					
Outlet					
Outlet is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding.					
Results					
Overall condition of Grass Channel:					
Additional Comments					
Notes: * If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.					

Infiltration Practice					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc. Drainage ways are in good condition.					
Area around the inlet structure is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet structure.					
Water is going through structure (i.e. no evidence of water going around the structure).					
Diversion structure (high flow bypass structure or underdrain) is free of trash, debris, or sediment. Comment on overall condition of diversion structure and list type.					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Forebay – No undesirable vegetation.					
Forebay – No signs of erosion, rills, or gullies. Erosion protection is present on site.					
Forebay – No signs of standing water.					
Filter Strip– area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion or sediment accumulation.					
Filter Strip – No signs of unhealthy grass, bare or dying grass. Grass height is maintained to a height of 6 – 15 inches.					
Filter Strip– No signs of erosion, rills, or gullies. Erosion protection is present on site.					
Filter Strip – No undesirable vegetation.					

Filter Strip – No signs of standing water (examples include: stains, odors, mosquito larvae, etc).					

Infiltration Practice

Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
No signs of ponding water more than 48 hours after a rain storm event (examples include: stains, odors, mosquito larvae, etc).					
No undesirable vegetation growing within the practice.					
Native plants were used in the practice according to the landscaping plan.					
Observation well is capped and locked when not in use					
Flow testing has been performed on infiltration practice to determine if underdrain is clogged.					
Emergency Overflow and Outlet Structure					
Area is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
No signs of sediment accumulation.					
Grass height of 6 – 15 inches is maintained.					
Results					
Overall condition of Infiltration Practice:					
Additional Comments					

Notes: *If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.

Permeable Bricks/Blocks					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, leaves, etc. removed).					
Area around the practice is mowed and grass clippings are removed. No signs of bare or dead grass.					
No evidence of gullies, rills, or erosion around the practice.					
Water is permeating the bricks/blocks (i.e. no evidence of water going around the practice).					
Bricks/blocks are structurally sound. No signs of cracks or splitting.					
Aggregate between the bricks/blocks is reasonable.					
No evidence of long-term ponding or standing water in the practice.					
Grass in the concrete grid is healthy, no dead grass or bare spots.					
Grass in the concrete grid is mowed and grass clippings are removed.					
Structure seems to be working properly. No signs of the bricks/blocks settling. Comment on overall condition of bricks/blocks.					
Vegetation within and around practice is maintained. Grass clippings are removed.					
No exposed soil near the bricks/blocks that could cause sediment accumulation within the practice.					
Cleanout caps are present and not missing (if applicable).					
The underdrain system has been flushed properly and there is no sign of clogging (if applicable).					
Results					
Overall condition of Permeable Bricks/Blocks:					

Permeable Bricks/Blocks					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
Additional Comments					

Notes: * If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.

Biohabitats
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TECHNICAL MEMORANDUM

Date: February 16, 2015

To: David Braswell, WK Dickson

From: Kevin Nunnery and Sara McGarity, Biohabitats, Inc.

RE: City of Powder Springs Stormwater Management Plan Revision
Subject: Municipal Code Review to Identify Green Infrastructure Opportunities and Constraints

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Biohabitats was retained by WK Dickson and tasked with reviewing existing and relevant City of Powder Springs Unified Development Code Articles (3-6, 8-9, and 11), Chapters 5 and 11 of the Code of Ordinances, and the Comprehensive Plan-Community Agenda, to identify areas for enhancement and areas for constraint removal, so that green infrastructure opportunities are more broadly and consistently supported.

Review Process
Biohabitats utilized past experience with similar projects, guidance documents produced by the U.S. Environmental Protection Agency (EPA), the Center for Watershed Protection, the Atlanta Regional Commission and the State of Georgia, along with model ordinances from other jurisdictions, to frame the review and analysis of the Powder Springs documents. Table 1 lists the documents reviewed to inform our recommendations.

Table 1: Code Review Reference Documents

Document Title	Authoring Entity
EPA Water Quality Scorecard for Powder Springs, Georgia	Environmental Protection Agency completed by Powder Springs
Georgia Storwmater Management Manual	Atlanta Regional Commission
Better Site Design: A Handbook for Changing Development Rules in Your Community	Center for Watershed Protection
Code and Ordinance Worksheet from Better Site Design Handbook	Center for Watershed Protection
Recommended Model Development Principles for James City County, Virginia - Consensus of the Local Site Planning Roundtable	Builders for the Bay
Recommended Model Development Principles for Harford County, Maryland - Consensus of the Local Site Planning Roundtable	Builders for the Bay
Recommended Model Development Principles for Baltimore County, Virginia - Consensus of the Local Site Planning Roundtable	Builders for the Bay
Montgomery County, Maryland Code Review - Memos, Presentations, and Findings	Biohabitats
Quality Community Objectives Local Assessment	Georgia Department of Community Affairs

The steps of the review process were as follows:

- The completed EPA Water Quality Scorecard for Powder Springs was reviewed and criteria and comments relevant to the code review were highlighted and categorized as direct code comments and opportunities for code improvement.
- The Community Agenda was reviewed and sections relevant to the review were noted. Noted sections were then closely read and recommendations developed and recorded into the spreadsheet.
- Each Article and Chapter identified for review was read and text in the code pertaining to topics within green infrastructure practice, environmental site design and stormwater management were highlighted. Recommendations were developed addressing the highlighted text and added to the review spreadsheet.
- Direct code comments from the EPA Water Quality Scorecard were added to top of the spreadsheets of the corresponding Article or Chapter. Improvement opportunities from the EPA Water Quality Scorecard criteria were then added within the body of the spreadsheets. Direct comments were included at the top to distinguish them as important recommendations expressly suggested by the completed scorecard.

Recommendations Excel Workbook Description
The recommendations Excel workbook was developed to organize the results of the code review into an easily readable format that would also help facilitate further review and the revision process.

The recommendations workbook contains a total of 10 spreadsheets or worksheets, a single worksheet is provided for each Article of the Unified Development Code, Chapter of the Code of Ordinances and the Comprehensive Plan-Community Agenda. Each worksheet contains columns described in Table 2.

Table 2: Worksheet Columns Description

Column Heading	Description
Section Number	Provides the location within the code relating to the recommendation.
Addition, Deletion, Change	Categorizes the type of code revision that would be required. Distinguishes the recommendation as an addition, deletion or change to the code. The rows are color coded according to this column. Additions are color coded green, deletions color coded red and changes color coded yellow.
Preliminary Recommendation	Provides the preliminary recommendation.
Relevant Other Code	If the recommendation pertains to other sections of the code those sections are noted in this column.
Notes	Column where additional information relevant to the recommendation is included.

A “Source” column is also included in the Community Agenda worksheet to include the reference document supporting the recommendation.

The recommendations are presented in the order they appear in the code with the exception of the EPA Water Quality Scorecard direct comments which are at the top of each worksheet and separated by a bold line. The workbook is formatted to print as a 8.5”x11” landscape oriented document.

Summary of Recommendations

The code review resulted in 202 individual recommendations broken down by Article or Chapter as shown in Table 3.

Table 3: Number of Recommendations by Article or Chapter

Article or Chapter	Number of Recommendations
Unified Development Code: Article 3 – Restrictions on Particular Uses	24
Unified Development Code: Article 4 – Lot and Building Standards	29
Unified Development Code: Article 5 – Landscaping, Buffers, Tree Conservation	23
Unified Development Code: Article 6 – Parking and Loading Requirements	14
Unified Development Code: Article 8 – Project Design Standards	25
Unified Development Code: Article 9 – Land Development Activities	30
Unified Development Code: Article 9 – Procedures and Permits	18
Code of Ordinances Chapter 5 - Buildings, Construction and Related Activities	2
Code of Ordinances Chapter 11 - Municipal Utilities and Services	3
Powder Springs Comprehensive Plan Community Agenda	34

The recommendations address design standard barriers, process barriers, terminology and section requirement inconsistencies, code that is currently not restrictive enough, code that is currently too restrictive, and opportunities to improve code to encourage and improve desired practices. The review recommendations were broken down into the following eight categories. The key findings are summarized by category and presented in order of importance and potential beneficial impact from revisions. While recommendations from a specific category may be found throughout the code, the articles where the recommendations are concentrated are noted.

1. Stormwater terminology and BMPs - Stormwater management is addressed in multiple sections within the code resulting in inconsistency in requirements and terminology. The sections should be brought into agreement referencing the most recent code while not losing still relevant features of the older code. There are many barriers to implementing stormwater BMPs due to design standards that do not provide exemptions for BMPs. Design standards for features such as curbs, parking lot islands and landscsape buffers for visual screening that would restrict implementation of BMPs should be revised. Creating consistency across articles and design standards that easily allow for BMPs to be incorporated into designs would have a significant positive impact on stormwater management. (Articles 5, 6, 8, 9, 11)

2. Impervious Cover – The current code has many barriers to implementing porous/permeable pavement. Design standards for driveways, sidewalks, parking lots and other features that could benefit from porous pavement should be revised to allow for porous/permeable pavement. Also, development requirements for parking and street design could result in excess impervious cover. These requirements should be revised to ensure development results in the smallest area of impervious cover possible. There are many opportunities within the code to reduce stormwater runoff by minimizing impervious cover and promoting porous/permeable pavement that will benefit the city. (Articles 4, 6, 8)

3. Buffer – Stream buffers or stream greenways are addressed in multiple sections within the code resulting in inconsistency in requirements and terminology. The sections should be brought into agreement referencing the most recent code while not losing still relevant features of the older code. Based on scientific research, current stream buffer width requirements could be widened. Stream buffers should also be expanded to include adjacent floodplains, wetlands, and steep slopes all of which are

critical to maintaining stream quality. Moreover, current exemptions in the code could result in unnecessary damages to buffers and should be revised. Finally, requirements for rezoning and plan approval could be revised to incorporate consideration of the buffer and other natural resources. Enhancing stream buffers results in higher quality streams that improve overall stormwater management. (Articles 5, 9, 11)

4. Cluster development – Cluster development/open space development/conservation subdivisions are addressed in multiple sections within the code resulting in inconsistency in requirements and terminology. The sections should be brought into agreement referencing the most recent code while not losing still relevant features of the older code. The code is lacking exemptions for cluster development in the design standards creating a barrier for cluster development designs. Also, there are additional process steps required for cluster development approval that are disincentives to implementation. Strong efforts should be made to ensure the approval process for cluster development is no more stringent than conventional development approval. Finally, there are many opportunities to strengthen the current cluster development requirements to bolster beneficial impacts from such development. (Articles 3, 4, 8, 9, 11, and Chapter 5)

5. Trees – While there are few barriers, there are many opportunities to improve tree conservation practices within the code. Creating a list of recommended trees that include native species would have an immediate positive impact. Opportunities to improve tree conservation practices include encouraging preservation of native trees in addition to specimen trees and strengthening tree canopy requirements. Additionally, there are some tree conservation plan and speculative clearing exemptions that could cause avoidable negative impacts, that should be revised. (Articles 5, 9)

6. Vegetation – There are many opportunities within the code to encourage use of native vegetation. Including native plant species in landscaping requirements would be an effective way to begin encouraging this practice. Additionally, there are requirements in the code for landscaping vegetation that are too restrictive, such as the requirement to use sod for all front, side and rear yards of residences. These requirements should be revised to allow for native vegetation as well as implementing low water use/water efficient landscaping practices. (Articles 4, 5, 11)

7. Open Space Open space needs to be clearly addressed within the code. There are several exemptions and code sections that should be revised, because language is not restrictive enough, and could negatively impact open space. There are also opportunities to improve and enhance open space requirements and management practices to create greater positive impacts. (Articles 3, 4, 9)

8. Other – There are code requirements that prohibit implementation of certain green innovations such as green roofs, living/green walls, and alternative wastewater technologies. Rain barrels should also be expressly allowed as an accessory structure and exempt from outdoor watering restrictions. These requirements should be revised such that these practices can begin to be implemented. (Articles 3, 8, and Chapter 11)

Key findings from recommendations for the Community Agenda address the Future Development Areas, Issues and Opportunities, and Goals and Policies sections. In the Future Development Areas section there are opportunities to include several additional Quality Community Objectives such as open space preservation, environmental protection, and transportation alternatives within specific development types. In the Issues and Opportunities section, additional opportunities are suggested that support and promote green infrastructure and stormwater management practices for the topics of Natural Cultural Resources, Community Facilities & Services and Transportation. In the Goals and Policies section there are many opportuntities to add specific goals and policies that would encourage desirable development and stormwater management practices. Recommendations for new policies are suggested for Goals 15, 16, 18, 23, 25 and 28 that address topic areas of Natural and Cultural Resources, Landuse and Transportation.

Based on the results of the code review, the following stormwater and landscape management practices have good applicability for Powder Springs in the context of the potential code changes.

- Locating stormwater BMPs in buffers (landscape buffers for visual screening, not stream buffers), setbacks, and parking lot islands
- Reducing impervious cover and allowing for and encouraging permeable pavement
- Small scale green infrastructure such as rain barrels, green roofs, micro-bioretention, stormwater planters, and stormwater curb extensions
- Expanding stream buffers
- Developing a diverse list of native tree species
- Specifying native species requirements for landscaping plans

PROTECT NATURAL RESOURCES (INCLUDING TREES) AND OPEN SPACE

1.A.1

Sensitive Natural Lands/ Critical Area Protection

QUESTIONS: Are development policies, regulations, and incentives in place to protect natural resource areas and critical habitat?

GOAL: Protect natural resource areas (e.g., forests, prairies) and critical habitat (e.g., conservation corridors, buffer zones, wildlife preserves) from future development.

WHY: Protection of significant tracts of critical lands and wildlife habitat will aid in protecting and improving water quality by increasing infiltration and groundwater recharge, preventing erosion and contamination of ground water and surface water resources, and protecting sources of drinking water.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Identify and map critical natural resource areas (e.g., steep slopes, wildlife habitat, forests, drinking water source areas).	1	0.5	The Comprehensive Plan defines steep slope as greater than 25%. There are no areas in the city with this slope. There are few areas identified as having slopes between 15% and 25%. Section 9-13 outlines the requirements for conservation and open space developments. If someone chooses to develop this type of development any slope areas greater than 25% of at least a 5000 SF area must be included in the conservation areas (9-13d(2)), unless it is demonstrated that it is counter to the purposes of the code section. The community assessment does contain maps for the critical areas listed except for wildlife habitat, which is only described by text. The assessment states "none of the Part V water supply watershed criteria apply directly to the city"; " there are no groundwater recharge areas, no protected mountains, no protected river corridors and no scenic sites".
The local comprehensive plan contains a natural resource protection element with goals calling for preservation of identified critical natural resource areas.	1	0.5	The Comprehensive Plan contains goals and policies concerning Natural and Cultural Resources. There is a goal of "Protect natual resources and sensitive environmental features from encroachment by development." This portion of the comprehensive plan could be strengthened to include additional goals and policies. Natural resource protection in the Comp Plan is geared toward conservation for greenways, recreation and floodplains; conservation for other resources (wildlife, forest, drinking water sources areas) are not mentioned.
Identify key natural resource areas for protection in jurisdiction's parks and open space plan.	1	1	Comprehensive Plan Assessment - Appendix A. Figure 8 identifies all parks and conservation lands owned by the City. This map can be expanded to show conservation easements on private property. The City has provided this information to the Atlanta Regional Commission who has included it in their regional parks and greenspace mapping. Additionally, the future land use map shows some private properties located in the floodplain as parks/recreation/conservation. The city does not have a traditional written parks and open space plan, but it has adopted and implemented or is in the process of implementing the Silver Comet Linear Park plan and the Community Enhancement Master Plan, both of which contain park and open space features (and historical info as well - i.e. the historic seven springs) The Community Agenda has as Goal 16 "provide for community open space, parks and recreational opportunities'.
Assist landowners in identifying sensitive natural areas and laying out developments to avoid such areas.	1	1	Using GIS we are able to identify wetlands and floodplains on a property. We provide this information to developers when requested. Landowners are provided this information relative to their specific property when they inquire. We provide or address this data with developers in plan review meetings.
Local plans establish and enforce areas which are available for development and which lands are a priority for preservation.	1	1	The Future Land Use Map in the Comprehensive Plan identifies the floodplain other areas for parks/recreation/conservation. The Unified Development Code has a number of restrictions found in Article 5 and 9 concerning development in greenways, streambuffers, floodplains, etc. Section 5-5 of the UDC adopts the U.S. Fish and Wildlife Sevice Map covering the City of Powder Springs. The City's short term work program includes a greenspace masterplan.
REMOVE BARRIERS:			
Protection of sensitive natural areas and wildlife habitat qualifies for credit towards local open space dedication and set-aside requirements.	1	1	Section 5-17 of the UDC requires that 10% of each residential lot in a subdivision and 10% of any commercial/industrial project of the tree canopy be retained. Trees in these areas, as long as they are not in SFHA, greenways, buffers, utility easement or wetlands can be counted toward tree unit requirements. Section 4-15(j) requires all residential developments to maintain 20% of the site for open space and be preserved in perpetuity. Protection of sensitive areas can be used to meet this requirement. Clustered lot subdivisions, 3-3, allow floodplains, wetlands, lakes and stream greenways within a development to be included within the open space requirement. This similar 'credit' is not found in the open space requirement in article 4.
ADOPT INCENTIVES:			
Provide financial support to or collaborate with land trusts to acquire critical natural areas.	1	0	No funding available at this time for this type of endeavor.
Establish a dedicated source of funding for open space acquisition and management (e.g., bond proceeds, sales tax).	2	0	Cobb County has a fund for acquisition of open space. The City should continue its communication with the County about land acquisitions in the City. There are several land acquisition processes available through the USDA, Fish and Wildlife, Forestry Service, and through ARC. These are specific to large/regional tracts of land.
Adopt a transferable developments rights program to provide an incentive for landowners to preserve sensitive natural lands and wildlife habitat.	1	0	Probably not workable in the City.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
Land use regulations provide for the creation of cluster and conservation subdivision on the periphery of urban growth areas to encourage preservation of intact blocks of sensitive natural areas.	1	0.5	Section 4-11 of the UDC outlines requirements for clustered lot subdivisions. This option is available after special use approval in any single-family detached subdivision in any zoning district. Section 9-13 outlines requirements for Conservation Subdivision and Open Space Development. These are allowed by right in R15, R20, R30 , MDR and MXU zoning districts. Per a previous analysis: "The conservation subdivision is not necessarily the best development type for all circumstances. It is most appropriate in low- to moderate-density residential communities where the zoning density is low enough to allow sufficient clustering and open space preservation. In urban areas and development nodes, the better option may be a mixed-use development incorporating both residential and commercial uses in a design reminiscent of a village or neighborhood." (Powder Springs would be a good area for these type developments). While 3-3 states that open space is not required to be contiguous, it does require that 40% be set aside and that areas cannot be less than 1 acre in size. However, this section is inconsistent with 4-11 and 9-13 and all 3 sections should be reviewed for appropriate amendment or deletion. Given that 9-13 was adopted after 3-3 and 4-11 and is more restrictive (and more flexible), that is the section that would control over the others, but the inconsistencies need to be removed or fixed.
ENACT REGULATIONS			
Adopt regulations to protect steep slope, hillsides, and other sensitive natural lands (e.g., by limiting development on slopes > 30% or requiring larger lot sizes in sensitive areas).	2	1	Section 9-9 of the UDC limits devlopment in stream buffers. Section 9-10 limits development in the flood plain. Section 5-5 states that projects within 50 feet of a wetland must seek a permit from the Army Corps of Engineers. Stream buffers with adjacent wetlands should also be expanded to include the wetlands. Buffers are recommended as 30-100 feet for sediment and phosphorus removal, 100-160 ft for nitrogen removal, and 100-300 ft for wildlife protection.
Adopt wildlife habitat protection regulations aimed at preserving large contiguous blocks of habitat areas.	2	1	There are no regulations specifically aimed at wildlife habitat protection. However, Section 9-13 outlines the requirements for conservation and open space developments. One purpose of this section is to preserve in perpetuity unique or sensitive natural areas, one of which is specified as wildlife habitat. If someone chooses to develop this type of development populations of endangered or threatened species or habitat for such species must be included in the open space area, unless it is demonstrated that it is counter to the purposes of the code section (9-13d(2)). In order to meet the definition of Conservation Subdivision or Open Space Development at least 40% of the site must be open space, of that, at least 75% must be contiguous.
Create agriculture/natural resource zoning districts (e.g., minimum lot size of 80 acres and larger) to preserve agricultural areas and forests.	2	0	The City does not have land available for these types of zoning districts. Parcel sizes in PS are too small.
Subject Total	**17**	**7.5**	

1.A.2.a

Protection of Water Bodies/Aquifers

QUESTIONS: Are no-development buffer zones and other protective tools in place around wetlands, riparian areas, and floodplains that improve/protect water quality?
GOAL: Protect critical areas such as wetlands, floodplains, lakes, rivers, and estuaries with a mandatory no-development buffer.
WHY: The use of these practices will reduce pollutant loads and hydrologic alterations to water bodies.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Identify and map critical water resource areas.	1	1	Appendix A of the Community Assessment of the Comprehensive Plan includes a map (Figure 2) identifying the water supply watersheds of Powder Springs. Figure 5 identifies the floodplains in the City. The map in the comprehensive plan shows the floodplains adopted in 1992. The current SFHA adopted in December 2008 are available through the City GIS department. The City uses this updated data. Additional education could be considered for potential developers/property owner by using FEMA's mapping feature and the creation of Firmettes. This may assist these individuals to view properties in a smaller scale than the overall FIRM panels. Firmettes lack definition on a parcel by parcel view, but could be utilized for large developments.
The local comprehensive plan contains a water quality protection element with goals calling for protection of identified water bodies and other water resource areas such as wetlands.	1	1	The Comprehensive Plan contains goals and policies concerning Natural and Cultural Resources. There is a goal of "Protect natual resources and sensitive environmental features from encroachment by development. This portion of the comprehensive plan should be strengthened to include additional goals and policies directly related to water quality. Comp Plan Goal 18: Policy 18.3 Enforce water supply watershed protection standards in order to protect community water supplies from potential sources of pollution - AND - Policy 18.6 Continue working with the Metropolitan North Georgia Water District to ensure adequate water capacity and maintain water quality.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
Identify key critical water resource areas for protection in jurisdiction's parks and open space plan.	1	0.5	The City has a map of existing public facilities, but does not have one identifying critical areas for protection. The Future Land Use map does identify properties within the floodplain as having a FLU designation of Parks/Recreation/Conservation. Comp Plan Goal 15: Policy 15.2 Target environmentally sensitive areas such as floodplains and wetlands along Noses Creek and Powder Springs Creek for greenspace acquisition and explore funding opportunities through the Georgia Land Conservation Program and through Cobb County's bond issue to help fund the acquisition. AND Policy 15.3 Encourage use of conservation subdivision designation in appropriate areas for the protection of sensitive natural resources and provision of community open space. We have no traditional parks and open space plan but have the Linear Park, CEMP and LCI plans - all of which, along with Comp Plan, call for protecting water resource areas.
Cooperate in developing regional approaches to watershed protection and stormwater management.	1	1	The Metropolitan North Georgia Water Planning District encourages a coordinated regional approach in dealing with watershed issues. Comp Plan Goal 18: Policy 18.6 Continue working with the Metropolitan North Georgia Water District to ensure adequate water capacity and maintain water quality. The city has adopted the MNGWP ordinances and we are required to participate in this regional approach.
REMOVE BARRIERS:			
Wetlands and other water bodies and buffer areas qualify for credit against local open space dedication/set-aside regulations.	1	1	Section 3-3 states requirements for Clustered Lot Subdivisions. Section 3-3(a)3 states that floodplains, wetlands, lakes and stream greenways withing the develoment may be included withing the community open space requirements. UDC 9-13(d)(2)a. The minimum restricted Open Space shall comprise at least 40% of the gross tract area. AND (d)(3) Permitted Uses of Open Space b. Meadows, woodlands, wetlands, wildlife corridors, game preserves, or similar conservation-oriented areas.
ADOPT INCENTIVES:			
Protected water bodies and buffer areas qualify for twice the credit (or more) against open space requirements set by the municipality.	1	0	
Restoration of degraded riparian/wetland areas qualifies for additional open space credit within the local municipal system.	1	0	
Transfer of density from protected riparian areas/buffers to upland portions of development sites.	1	0	
ENACT REGULATIONS			
Riparian and wetland buffer areas required by local land use regulations ·Buffer is at least 50 feet (as measured from the top of bank) = 1 point · Buffer is at least 100 feet (as measured from the top of bank) = 2 points · Buffer is greater than 100 feet (as measured from the top of bank) = 3 points	1 to 3	1	Section 9-9(d)(1) requires a 50 ft buffer from the top of the bank and an additional 25 feet of limited impervious area. Wetland buffers are not required.
Critical water resource areas cannot be counted in calculating allowable density on a site (e.g., on a 200-acre site with 50 acres of wetlands, only 150 acres can be used to calculate density under zone district regulations, and only those 150 acres may be developed).	1	1	Section 9-13(b)(3) does not allow wetlands, the 100 year floodplain, or bodies of open water over 5000 sf in contiguous area to be included in density calculations. However, it is not clear if the provision would apply unless they were developing it as a conservation subdivision. Article 4 establishes a maximum density. It could be a policy decision to only allow the density based on net acre and thereby preserving the conservation area/natural sites/wetlands during the zoning/development process.
Development in floodplains is prohibited or must demonstrate no adverse impacts upstream and downstream (See resources below for details on "no adverse impact" approach to floodplain management).	2	1	Section 9-10(k)(3) states standards for development in the floodplain. These regulations do not meet all "No Adverse Impact requirements". One element of our ordinance, the 3-foot freeboard requirement, is a No Adverse Impact best management practice. "No Adverse Impact floodplain management is an approach that insures that the action of one property owner does not adversely impact the properties and rights of other property owners, as measured by increased flood peaks, flood stage, flood velocity, and erosion and sedimentation."
Stormwater quality and quantity performance standards exist for development sites (e.g., restrictions on sedimentation levels, pre/post development flows).	1	1	Section 9-11(i) states post development standards. Code requires concept meeting and plan that addresses existing conditions and existing natural resources followed by a management plan that details how post development runoff will be controlled or managed. Must include pre and post development downstream analysis and include an erosion and sediment control plan and a landscape and open space plan and operation and maintenance plan. All runoff must be treated before discharge. Steam channels must be protected and downstream overbank flood and property protection must be provided by controlling the post flood discharge rate to the pre develpment rate for the 25 year, 24-hour storm event. Quantity and quality are addressed. Controls and facilities need to follow the state manual. City can impose additional requirements.
Local regulations require restoration of degraded riparian/wetland areas on a development site.	1	1	Section 9-11(i)2 requires restoration of stream buffer if applicable.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
Compensation for damage to riparian/wetland areas must be on a minimum 2:1 basis on- or off-site.	1	0.5	Section 404 of the federal Clean Water Act addresses compensatory mitigation.
Performance standards exist and are well enforced for stormwater discharges to wetlands that protect the hydrologic regimes and limit pollutant loads.	1	0.5	Illicit discharge is not permitted in the wetlands, but there is no similar prohibition for stormwater. UDC 9-11 Stormwater Runoff Control for New Development and Redevelopment requires that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable in order to re-duce flooding, streambank erosion, nonpoint source pollution and increases in stream temperature, and maintain the integrity of stream channels and aquatic habitats. The section also details the permitting process and requires amond other things to provide a stormwater management plan along with Hydrology study and other criterias to establish the impact the project has on the system.
Subject Total	**15**	**10.5**	

1.A.2b

Protection of Water Bodies/Aquifers

QUESTION: Does the community have protection measures for source water protection areas through land use controls and stewardship activities?
GOAL: Protect source water areas from current or potential sources of contamination.
WHY: These practices will help safeguard community health, reduce the risk of water supply contamination, and potentially reduce water treatment costs. Pts. Pts. Implementation Tools and P

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Local land use plans identify aquifer recharge/source water areas and recommend protective measures.	0	0	N/A
Require that all stormwater inlets carry a notice regarding discharge to receiving waters.	1	0.5	Some catch basins have been stenciled with a notice. This activity is ongoing.
Map and publish wellhead and aquifer recharge areas to alert developers to potential restrictions.	0	0	N/A
ADOPT INCENTIVES:			
Identification of drinking water source protection and aquifer recharge areas with a dedicated funding source in place to purchase and protect such areas.	0	0	NA
Protection of critical water source areas qualifies for additional credit towards local open space requirements.	0	0	NA
ENACT REGULATIONS:			
Adopt well-head protection regulations/zones to prevent incompatible development and uses.	0	0	NA
Adopt aquifer protection regulations/zones to prevent incompatible development and uses.	0	0	NA
Subject Total	**1**	**0.5**	

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References

1.B

OPEN SPACE PROTECTION

1.B.1

Open Space Protection

QUESTION: Does the jurisdiction have adequate open space in both developed and greenfield areas of the community?
GOAL: Create open space networks throughout a community that serve a dual function of providing recreational areas and assisting in the management of stormwater runoff.
WHY: In addition to providing open space throughout a community as an amenity, such a network can provide large areas that contribute little to stormwater loads and can provide large areas for the infiltration and purification of stormwater.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Adopt a community-wide open space and parks plan.	1	1	The Comprehensive Plan contains goals and policies concerning Natural and Cultural Resources. The City should include some of these goals, as well as information concerning parks in the assessment and LOS discussion to complete a open space and parks plan. Park plans are also addressed in separate plans - CEMP, LCI, Park, Greenspace. Traditional parks plans are addressed by the county.
The local comprehensive plan contains an open space/parks element that recognizes the role of open space in sustainable stormwater management.	1	0.5	The Comprehensive Plan contains a goal for parks. This goal should be expanded and it should recognize the importance of stormwater management. The Unified Development Code does contain provisions regarding open space and stormwater management.
REMOVE BARRIERS:			
Green infrastructure practices count towards local open space set aside requirements up to 50% of total.	1	0	Green infrastructure is not mentioned.
Allow and encourage retrofits of abandoned or underutilized public lands to serve as permanent or temporary open space and green infrastructure sites.	1	1	Linear Park project includes ROW no longer needed. A portion of this project will be utilized for stormwater management. The city could consider accepting donations of lands that cannot be developed for open space.
ADOPT INCENTIVES:			
Additional open space credits are eligible for green stormwater management facilities improved/designed for public recreational purposes.	1	0	
Provide credit against open space impact fees for green roofs.	1	0	
ENACT REGULATIONS:			
Adopt neighborhood policies and ordinances that work to create neighborhood—not development site—open space amenities that are within ¼ to ½ mile walking distance from every residence.	1	0.5	Code calls for amenity areas in residential developments
Adopt an open space impact fee to purchase passive open space that can assist in stormwater management.	1	0.5	The City has a parks and recreation impact fee. The Capital Improvement Element includes the linear park project that has open space and stormwater areas. The fee is for the development of that park, which happens to include a stormwater area but those impact fees cannot be used to purchase other open space to be used in stormwater managment.
Adopt open space dedication and/or set aside requirements based on the demand generated by the development. As a baseline, use the average open space requirements adopted by the National Recreation and Park Assn. (e.g., 10 acres of community and neighborhood parks for every 1,000 persons in a development or fraction thereof).	1	1	Section 4-15 "General Standards for Residential Development requires that each development provide a minimum of 20% open space". The comprehensive plan has adopted a level of service standard for parks and recreation that is equivalent to 7.5 acres per 1000 population. The LOS also includes a standard that all residents should be within a 2 mile radius of an active recreation park. The LOS analysis of the comprehensive needs to be updated. Requirement based on demand exists (7.5 acres per 1000 people), but at a lower standard than baseline mentioned (10 acres for every 1000 people). We have a 20% open space requirement for all residential development; it may need to be expanded to capture commmercial developments where critical natural areas exist.
Subject Total	**9**	**3**	

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References

1.C. **TREE PROTECTION**

1.C.1 **Tree Protection**

QUESTION: Does the local government have a comprehensive public urban forestry program?
GOAL: Protect and maintain trees on public property and rights-of-way and plant additional trees to enhance the urban tree canopy.
WHY: Mature trees provide multiple community benefits, reduce overall stormwater runoff, and improve stormwater quality.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Survey and inventory existing trees on public lands and street rights-of-way. Document the characteristics and location of street trees and urban tree canopy to inform public tree planting, adoption, and maintenance programs.	1	0	Not complete at this time. A limited inventory has been completed for diseased and dying trees. The city has tried to acquire funding for this activity, but does not have the available matching funds for the project.
Select tree species based on known performance for managing stormwater runoff. Publish list and make widely available for homeowners/others that plant street trees.	1	0.5	Section 5-25 creates a Tree Commission. The tree commission shall assist in the development and maintenance of technical specifications and guidelines and may produce and maintain in the appendices of this Development Code a list of kinds and species of trees recommended for planting. List has not been created.
Conduct education and outreach about tree protection, proper maintenance, and replanting opportunities through printed materials, workshops, events, and signage.	1	0.5	The City has developed and printed a tree preservation on residential property brochure. The brochure should be available on line and in our materials in the lobby. City also uses local paper from time to time to place notices or informational material in the city section.
Adopt a policy to protect existing trees on local government development sites (e.g., municipal parking lots, municipal buildings).	1	1	Section 5-17(b) states that public entities doing work in ROW or easements to ensure continuous utility or government services are exempt from tree conservation regulations, but all other public land is subject to the same standards for tree conservation and replanting as private land.
Maintain an active tree maintenance program for public trees, including pest control, pruning, watering, and similar measures.	1	0.5	Periodic review of diseased trees. Critical condition trees are trimmed or removed. There are no newly planted trees in the City. Trees have recently been installed as part of road projects, and the City is responsible for their maintenance. Every year volunteer groups intall landscape materials at city facilities but regular and dedicated maintenance appears lacking due to lack of resources, although we have an established plant maintenance plan for 17 publicly landscaped sites.
REMOVE BARRIERS:			
Acknowledge trees as part of community infrastructure and develop a coordinated design for locating public utilities to provide enough space for mature tree canopy and root development.	1	0.5	Clearing only allowed in phases so that existing trees will not be impact with utilities. There are no policies or codes in place to limit conflicts with infrastructure and newly planted trees. However, City would prefer large trees not be planted by water/sewer lines or sidewalks because of damage caused by trees.
ADOPT INCENTIVES:			
Provide free or reduced-price trees to homeowners to be used as street trees.	1	0	The City does not have funding available. The following Federal programs may provide some financial assistance - Federal: Environmental Quality Incentives Program; Wildlife Habitat Improvement Program; Wetlands Reserve Program (WRP-limited). The Arbor Day Foundation offers 10 free trees with every new membership ($10). City could promote membership and tree planting? Also, if you turn your Christmas Tree into the "Chipper" you get a seedling to plant.
ENACT REGULATIONS:			
Require any public trees removed or damaged during construction associated with private development to be replaced on- or off-site with an equivalent amount of tree caliper (e.g., remove a 24-inch diameter tree/replace with 6 four-inch diameter trees).	1	1	All development is required to maintain a certain percent of tree canopy (Sec. 5-18) and a minimum number of tree units based on acreage and land use (Sec. 5-19). Any tree that is damaged in the construction process that was identified as being saved is required to replaced with the equivalent number of tree units. Additionally, any specimen tree that is damaged during construction must be replaced with trees equivalent to 8 times the tree units (Sec 5-19(c)(2)c.)
Adopt construction protection rules for all public trees (e.g., fencing, no storage of hazardous materials, avoid cutting into root zones).	1	1	Section 5-20 outlines standards for tree protection for all trees saved during construction.
Subject Total	**9**	**5**	

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
1.C.2			

Tree Protection

QUESTION: Has the community taken steps to protect trees on private property?

GOAL: Preserve trees on private property and require replacement when trees are removed or damaged during development.

WHY: Mature trees provide multiple environmental, economic, and community benefits, including improved water and air quality, reduced heat island effects, lowered energy costs, and improved community aesthetics. Pts.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Community plans specifically include tree preservation and replacement as community goals.	1	1	Tree preservation policies are inlcluded under goals for economic development and sense of place. Goal 25 includes "review, revise and strengthen the city's tree ordinance; enhance right of way with appropriate landscaping and streetscaping. More outreach with the public about our ordinance would be helpful. Also not allowing speculative clearing would be helpful. The CEMP has a 'landscape and gateway plan' that includes major transportation corridors and recommended trees along those corridors (page 28). The City also has an approved Greenspace Plan in place.
Conduct educational sessions for builders and developers regarding appropriate tree protection techniques and/or publish a technical tree protection manual.	1	0.5	UDC 5-20 Protection of Existing Trees" gives detailed information about construction standards, location and types of tree preservation devices and materials….. However, no education sessions or published manuals have been offered in the City, but we do have the tree brochure.
Follow maintenance and inspection timelines and meet canopy goals and milestones by ensuring old trees survive, replacing dead or diseased trees, and planting new trees.	1	0.5	
REMOVE BARRIERS:			
Set up maintenance and inspection agreements for private properties meeting stormwater requirements or receiving stormwater fee credit for trees.	1	0.5	Section 9-11(h)(3)k. Requires that all on site stormwater facility or practice, unless dedicated to and accepted by the City, grant an execute an easement and an inspection and maintenance agreement binding on all subsequent owners of land served by the stormwater facility or use. Stormwater utility ordinance and associated manuals and credits will address maintenance of private facilities.
Set up long-term maintenance and inspection schedules for trees on public lands.	1	0.5	Public works has an informal maintenance schedule.
ADOPT INCENTIVES:			
Support local non-profits that plant trees and provide educational services.	1	0.5	City participated with CobbTrees in replanting open space area on Hopkins Road. City works with "Keep Powder Springs Beautiful". We have in the past supplied some of the landscape materials used by churches who have landscaped different areas.
Provide financial incentives for tree purchases and planting.	1	0	
A tree fund has been established to receive in-lieu payments when trees must be removed from a development site to accommodate permitted projects.	1	1	Section 5-21 adopts a tree fund for alternate compliance.
Trees of a specified minimum size count towards a percentage of stormwater management requirements (e.g., partial credit given for each mature tree exceeding a specified height or canopy size).	1	0	Sec. 5-3 defines how tree units are calculated. Larger trees saved earn higher tree unit calculations. The document, City Trees Sustainability Guiding and Best Practices, provides some guidance concerning granting stormwater credit for tree preservation. But there is no provision at this time for stormwater requirement credits for tree plantings; but it could be addressed in the utility credit manual.
Trees over a specified minimum size (e.g., 3-inch caliper) protected during development are credited towards landscaping requirements. ·meeting the established landscape requirement = 1 point ·exceeding the established landscape requirement = 2 points	1 to 2	2	Sec. 5-3 defines how tree units are calculated. Trees located anywhere except for excluded areas can be used to meet tree unit or landscaping requirements (Sec. 5-19). The code does not specifically state that retained trees can be used to meet landscape requirements (ie. one tree unit per every 40 feet of frontage), but it is implied. We may need to add language to the UDC. UDC 5-19(c) Specimen trees. (1) Preservation. a. The City of Powder Springs strongly advocates the preservation of specimen trees. In order to encourage the preservation of specimen trees and the incorporation of these trees into the design of projects, additional density credit will be given for specimen trees that are successfully saved by a design feature specifically designated for such purpose. Credit for any specimen tree thus saved would be 2 times the assigned unit value shown in Table 5-1 when using the extraordinary measures associated with protecting and assuring the survival of such trees. Density credit is given. Existing trees count toward landscaping requirement depending on location.
ENACT REGULATIONS:			
Require permits before removing trees on proposed development or redevelopment sites. Provide fines and/or stop-work authority for permit violations.	1	1	Sec. 11-5(f) requires that landscaping, buffering, and tree conservation plans must be reviewed during the development plan review process, and prior to a LDP being issued. Section 12-4(c) outlines inspection, violation and stop work procedures relating to land development activity. Section 11-6 requires a land development permit for development activity, including clearing.
Set minimum tree preservation standards for new development sites.	1	1	All development is required to maintain a certain percent of tree canopy (Sec. 5-18) and a minimum number of tree units based on acreage and land use (Sec. 5-19). The American Forests organization recommends an average tree canopy of 40%. The City should look at its entire tree canopy to see if it meets this recommendation.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
Require site plans or stormwater plans to include tree preservation.	1	1	Under Article 9, no land development activities can occur without a stormwater concept plan that includes a natural resources inventory (including forest cover and native vegetative areas). Also, the stormwater management system concept plan must include the City's and the County's greenspace plan, and the stormwater management plan must include a detailed landscaping and vegetative plan as well as a description of who will be responsible for ongoing maintenance of vegetation for stormwater management and what practices will be used to ensure that adequate vegetative cover is preserved. Protection of stream channles from erosion shall be provided with preservation, restoration or reforestation of the buffer. And the applicant may take credit for water quality treatment volume requirements for use of stormwater better site design practices if minimum criteria in the state manual are followed.
Require/allow tree replacement off-site for infill sites.	1	1	The City allows payment into a tree fund and tree replacement off site.
Subject Total	**13**	**10.5**	

1.C.3

Tree Protection

QUESTION: Are street trees encouraged or required as part of road and public right-of-way capital improvement projects?
GOAL: Leverage existing capital funds to plant more street trees and add multiple benefits to the public right-of-way.
WHY: Street trees can help manage and reduce stormwater runoff while providing multiple public and environmental benefits.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Local comprehensive and transportation plans support the planting of street trees by all private and public development projects.	1	1	The 1996 Community Enhancement Master Plan includes street trees in all its proposed projects. Language should be added to the Comprehensive Plan placing an emphasis on street trees. Comp Plan includes under Natural and Cultural Resouces Opportunities "Future planning efforts could be focused on transportation enhancements throughout the downtown corridor. Enhancements could include improved street and sidewalk connectivity, allocation of additional parking, additional street trees, lighting and other landscape improvements compatible with the area's historic character."
Capital improvement plans include tree planning as part of project budgets.	1	1	Recent street improvements include the addition of street trees when budget is available. We do provide trees when the budget (or space) allows.
ADOPT INCENTIVES:			
Offer incentives, such as reduced setbacks or increased building densities, in exchange for additional tree preservation beyond ordinance requirements.	1	0	Code should be reviewed to see if incentives can be added.
ENACT REGULATIONS:			
All private and public developments are required to plant street trees in accordance with size, spacing, and other local government requirements.	1	0.5	Section 5-7 exempts single-family and two family subdivisions from planting street trees. Trees for meeting requirement for frontage landscape strips may not be located in the ROW. We could consider amending the code so that all development provide street trees. This would help toward defining the roadway and providing a sense of place.
New street designs and redesigns of existing streets take into account space for tree development and require necessary surface area and volume of soil dependent on type of tree species selected (this includes lateral root growth as well as direct downward growth to accommodate mature tree canopy and roots without adversely affecting other utilities).	1	0.5	UDC requires that landscape strips for commercial development be at least 8 feet wide. The City of Powder Springs does not have any landscape requirements or standards for street projects. However, it has been the city's policy, following adoption of the CEMP, to include street trees and landscaping in our projects where space allows and where budget allows.
Street specifications require permeable paving for sidewalks and other surfaces to reduce stormwater runoff and allow street trees to benefit from the available water.	1	0	
Subject Total	**6**	**3**	

Natural Resources Total	**70**	**40**
Percent of Points	**100%**	**48.78%**

PROMOTE EFFICIENT, COMPACT DEVELOPMENT PATTERNS AND INFILL

2.A

Support Infill and Redevelopment

2.A.1

QUESTION: Are policy incentives in place to direct development to previously developed areas?
GOAL: Municipalities implement a range of policies and tools to direct development to specific areas.
WHY: Municipalities can realize a significant reduction in regional runoff if they take advantage of underused properties, such as infill, brownfield, or greyfield sites. Redeveloping already degraded sites such as abandoned shopping centers or underutilized parking lots rather than paving greenfield sites for new development can dramatically reduce total impervious area while allowing communities to experience the benefits and opportunities associated with growth.

Implementation Tools and Policies	Pts. avail.	Points rc	Notes and local References
ADOPT PLANS/EDUCATE:			
Local Plans identify potential Brownfield and greyfield sites and support their redevelopment.	1	1	The Comprehensive Plan and Livable Centers Initiative Plan do not specifically call out 'Brownfield' or 'Greyfield' but do support the policy of redevelopment or development of these types of properties. The community assessment identifies commercial redevelopment areas and declining neighborhoods as locations for improvements and developments. "The city is encouraging development trends to include renovation and adaptive reuse of historic buildings for office and/or retail space as well as encouraging compatible new infill developments designed to complement and enhance the mix of uses in the downtown core." Also, current commercial areas in decline and "available for redevelopment" include New Macland at Macedonia, Austell Powder Springs Road, Powder Springs Road at Sailors Parkway and Forest Hill, and CHJames at Brownsville Road. Neighborhood "redevelopment areas" include the area north of the town square.
Capital improvement plans include infrastructure improvements for identified Brownfield and Greyfield sites.	1	0.5	Again, these areas are not specifically identified as such, but our Comp Plan, LCI plan and SPLOST program call for infrastructure improvements in the Town Center redevelopment area, Austell Powder Springs Road, South Town Square.
Educate lending and financial institutions about benefits and local priorities of directing development to existing areas.	1	0.5	We provide some feedback to potential builders/developers and have worked with Bank owned properties in the past.
Conduct outreach to community to ensure support for local forms and patterns of development.	1	0.5	The Mayor and Council meet the first Saturday of each month with the public to hear the suggestions and concerns of the attendees. It would be a good idea to expand to include a 'presentation' of sorts about plans and projects from the Comprehensive Plan and receive continued feedback.
REMOVE BARRIERS:			
Establish a Brownfield program to remove uncertainty regarding cleanup and liability issues.	1	0	Monetary requirements would be an issue; other than one potential area, unaware of brownfield sites in the city
ADOPT INCENTIVES:			
Provide incentives such as density bonuses and accelerated permitting for Brownfield and Greyfield sites.	1	0.5	Our comprehensive plan and LCI plan do differentiate in broad policies but probably not as effectively or directly as it could; the UDC does not differentiate except that the mixed-use is more strongly encouraged or achievable in areas where infill is appropriate or recommended. Also in the commercial overlay, the FAR is 2 [see 2-6(m)]
Adopt funding mechanisms for remediating/redevelopment Brownfield and greyfield sites.	1	1	Used bond monies to redevelop the ACE site for the public safety facility; used bonds and grant monies to redevelop the old elementary school for the library and community center; used HUD monies for redevelopment of the Ron Anderson Rec Center; researching other funding option to supplement general fund for renovations to the old barbershop and lawnmower repair; underground storage tanks removed from old lawnmower repair shop. Comprehensive Plan makes recommendations for expanding the reinvestment incentives and in establishing a revolving loan fund.
Streamline permitting procedures to facilitate infill and Brownfield redevelopment plan review.	1	0.5	We already have a quick turnaround in plan review; we should examine the procedures of a place that is regarded as development friendly to determine if there are changes we can make. The comprehensive plan recommends in Goal 7 to inventory and assess potential and existing industrial and commercial properties (inventory done; assessment?); create an electronic database of sites (done); created printed and electronic site information packets (printed incomplete); create a roster of economic development tools and incentives (incentives ordinance); develop a handbook detailing permit process step by step (checklist done; should it be expanded to include greater detail?) create a collection and distribution system for commercial real estate agents (information provided to brokers) – this is essentially complete and only a few minor detail would be required to finish; however, it is not limited to specific sites but to all available sites. TO checklist developed and easy to follow; meet with FM and Building official to see if can stream line any further.
Establish TIF districts to encourage redevelopment.	1	0.5	We have identified a location for a TAD and have prepared a draft redevelopment plan; we should pursue its completion but that depends in large part on political support, public support, available developers interested in the site, etc. Comprehensive Plan recommends that an analysis be conducted (updated) to determine if the downtown and APS corridor have the required depressed economic and social conditions.
ENACT REGULATIONS:			
In local codes, ordinances and policies, the municipality differentiates between Greenfield and infill development.	1	0.5	Our comprehensive plan and LCI plan do differentiate in broad policies but probably not as effectively or directly as it could; the UDC does not differentiate except that the mixed-use is more strongly encouraged or achievable in areas where infill is appropriate or recommended. Also in the commercial overlay, the FAR is 2 [see 2-6(m)]

Implementation Tools and Policies	Pts. avail.	Points rc	Notes and local References
Subject Total	**10**	**5.5**	

2.B.1

QUESTION: Does the municipality direct growth to areas with existing infrastructure, such as sewer, water, and roads?
GOAL: Adopt policies, incentives, and regulations to direct new development to areas that have infrastructure, such as water and sewer. However, in situations where development is in areas with no sewer infrastructure, permitting alternative treatment options that can allow for higher density development or clustering of houses will reduce the overall water quality impact.
WHY: Sewer and water authorities can play a major role in directing a region's growth by determining when and where new infrastructure investment will occur. Well-drafted facility planning areas can direct growth by providing sewer service in areas least likely to impact water resources.

Implementation Tools and Policies	Pts. avail.	Points rc	Notes and local References
ADOPT PLANS/EDUCATE:			
Local plans recommend urban growth areas/boundaries. Development is encouraged within urban grwoth boundaries and discouraged outside of them.	1	0.5	No boundaries exist. However, mixed use in a CAC and the central business district allow 12 upa and these locations are in the center of the city or at major nodes – away from the fringes. Growth boundary/mechanism to preserve wetlands/ecological sites?
Analyze which areas are appropriate for higher density development based on existing infrastructure capacity, cost of providing services and access.	2	1	The comprehensive plan and UDC do identify areas recommended for mixed use, and thus, higher density development, but those recommendations are not based on any cost benefit analysis of assessment of capacities.
Capital improvement plans for public infrastructure target funding inside urban growth boundary.	2	1	We do not have a capital improvement plan other than the CIE for parks and public safety, and the SPLOST program, and we do not have an urban growth boundary. But the use of the SPLOST funds and the impact fees for CIE are, in practice, targeted in the 'town center' or established areas and not in Greenfield areas (except arguably Lewis Road, which is inside the LCI study area).
Local sewer/water authority capital improvement plans follow development policies established in local comprehensive plans and target areas with existing development/infrastructure.	1	0	
REMOVE BARRIERS:			
Development standards addressing landscaping, buffering, parking, and open space are tailored for infill areas to avoid creating unnecessary hurdles to development.	2	1	5-8 and 5-9(a) requires front or side lot line landscaping in all districts except the CBD. This lesser requirement may encourage development in the downtown. Parking requirements in downtown can be modified.
Remove prohibitions on accessory dwelling units in infill areas to increase density of development.	2	0.5	We do allow accessory apartments under limited circumstances with council approval [3-4(b)] but this may be inside the primary structure instead of a stand alone. Also, guest houses, which are allowed, specifically may not be rented [3-24] so perhaps reconsider?
Off-site regional water retention/detention is encouraged to avoid costly on site retention in densely developed infill areas and to provide benefit to priority retrofit sites, such as schools.	2	1	This is not 'encouraged' per se, but is allowed under 9-11(h)(8): "the stormwater mgmt plan for each land development project shall provide for stormwater mgmt measures located on the site of the project, unless provisions are made to manage stormwater by an off-site or regional facility….a plan must be submitted showing the adequacy of such facility and that it will not result in certain impacts".
Package plants and other wastewater treatment trains are encouraged for development in limited circumstances where growth is appropriate but sewers/treatment capacity does not exist.	1	0	Cobb County has water on Finch, Angham and Story Roads so they were able to loop the water system to serve Cameron Springs. However, the developer installed a sewer trunk line across Finch Road and paralleled the Railroad to Powder Springs Creek to tap into the county trunk line at the creek.
Technical information and analysis on the effectiveness of various treatment systems are readily available to developers. Local governments have determined which systems work best for their soil conditions and topography and have made this information available to the development community.	0	0	Not currently applicable at our scale. Treatment facilities are handled by Cobb County-Marietta Water Authority.
Allow a wide variety of housing types and sizes within infill areas and reduced minimum lot sizes.	1	0.5	We do allow some variety of housing types as well as reduced lots sizes in the MXU and CBD. [See 2-6 (e) and (f) and Table 4-1]. Also the UDC does permit an applicant to apply for a variance from the density requirements.
ADOPT INCENTIVES:			
Increased development incentives and allowable height in infill areas.	1	0.5	Density of 12 upa allowed in mixed use districts if in CAC, DAC and CBD; also height can be established on a project by project basis during site plan review this may need to be reviewed so that it can be modified during the design review process as the above provision appears to relate to the time when a zoning approval is sought. [See 2-6 and table 4-5; although table 4-5 seems to conflict with 2-6]
Reduce impact fees for infill development based on less demand for new infrastructure.	1	0	
Create development incentives for green roofs (increased FAR, additional building height, etc).	1	0	

Implementation Tools and Policies	Pts. avail.	Points rc	Notes and local References
Include provision in storm water management requirement that reduces on site management requirements for projects that decrease total imperviousness on previously developed sites.	1	0.5	BMP available to mitigate adverse impacts on storm water quantity & quality; code could be amended to be more specific.
ENACT REGULATIONS:			
Zoning and land development regulations implement urban service areas/urban growth boundary policies by restricting development in outlying areas.	1	0.5	Development is not restricted beyond the future land use recommendations in the comprehensive plan. There are no established urban growth boundaries, and the least intense zoning is R30. Comp Plan further limits development based on compatibility of adjoining uses and infrastructure availability. Comp plan encourages development in town center or at nodes aay from outlying areas.
Adopt adequate public facility and concurrency ordinances that require adequate public infrastructure to be available when development comes on line (e.g. water, sewer, roads).	1	0.5	The DRI provisions provide a limited concurrency tool but the provisions only apply when the proposal meets or exceeds a certain threshold. It is noted however that for zoning and special use approvals, if the development is > 500,000 SF of nonresidential floor area or 350 dwelling units, a traffic study and a hydrology study is required. If less than this threshold, a traffic study and hydrology study and other studies of the development's impact may be required if deemed necessary to render a decision [11-2; 11-3]. Additionally, consideration of the comprehensive plan is required for zoning and special use approvals, and the comprehensive plan did establish Level of Service (LOS) standards for public facilities and services. (see page 65 of the Community Agenda of the Comprehensive Plan).
Adopt large lot/ag zoning (1 unit/160 acres) on fringe of city to restrict inappropriate greenfield development.	1	0	
Enact transitional compatibility standards to ensure that new denser infill development is compatible with existing neighborhood/adjacent development.	1	1	Current Design standards require that 'buildings or other improvements shall be compatible with the orientation, shape, volume, massing, proportion, rhythm, scale and materials of the context, setting and streetscape of the site" [8-18]. Language could be more direct and other ordinances should be examined for helpful language.
Subject Total	**22**	**8.5**	

	Implementation Tools and Policies	Pts. avail.	Points rc	Notes and local References
2.C	ENCOURAGE MIXED USE DEVELOPMENTS			
2.C.1	QUESTION: Are mixed-use and transit-oriented developments allowed or encouraged? GOAL: Revise codes and ordinances to allow for the "by right" building of mixed-use and transit-oriented developments. WHY: Mixed-use developments allow for the co-locating of land uses, which decreases impervious surfaces associated with parking and decreases vehicle miles traveled—resulting in a reduction of hydrocarbons left on roadways and reduced air deposition. Transit-oriented development (TOD) produces water quality benefits by reducing: (1) land consumption due to smaller site footprints; (2) parking spaces and the impervious cover associated with them; and (3) average vehicle miles traveled, which, in turn, reduces deposition of air pollution into water bodies.			
	Implementation Tools and Policies	**Pts. avail.**	**Points rc**	**Notes and local References**
	ADOPT PLANS/EDUCATE:			
	Comprehensive plans identify appropriate areas for higher density mixed use developments and recommend policies to encourage their development.	1	1	See policies 1.1, 1.2, 2.1, 3.1, 10.1, 13.1, 13.2, 13.3, 14.1, 14.2, 14.4, 15.4, 15.5, 19.2, 19.5, 19.6, 19.7, 19.8, 23.1, 23.4, 23.5, 23.6, 24.5, 24.6, 26.1, 26.2 of the Comprehensive Plan, Community Agenda. The Community Agenda also recommends the following initiatives and implementation measures: LCI study that recommended town center redevelopment; complete urban redevelopment plan; south town square redevelopment; key parcel database for development (completed but a problem with our database is that it identifies all areas rather than targeting recommended areas);strategies encouraging mixed use development (however some of the strategies have yet to be developed and adopted such as density or FAR bonuses); commercial overlay and improvement districts; TAD creation; and reinvestment incentives. See pages 65-76 in Comprehensive Plan, Community Agenda.
	Local capital improvement plans and funding are targeted to areas appropriate for mixed use development.	2	1	Lewis Road is in the LCI study area (even though a Greenfield site), where a mix of uses is recommended; funding sought and obtained to improve this road to facilitate a mixed use development/environment for employment development and housing choices. Also, splost funds targeted for redevelopment area infrastructure improvements.
	REMOVE BARRIERS:			
	Zoning ordinances can create by right mixed use and TOD districts or overlays through amendments.	1	0.5	The MXU districts that exist were created through property owner rezoning applications rather than city initiated actions; however, the overlay exists and the FAR of 2 in the overlay is allowed by right. Staff prepared a draft Lewis Road overlay district to target mixed use development. The amendment included detailed text and map amendment.
	Initiate map amendments to designate mixed use and TOD areas, eliminating the need for developers to secure zoning amendments	1	0	
	ADOPT INCENTIVES:			
	Parking requirements are reduced to reflect decreased automobile use.	1	1	Maximum and minimum [6-2]. The maximum cap limits the amount of parking (and is further limited in the overlay); while there is a minimum, the minimum can be waived upon a determination by public works that adequate parking is otherwise available.
	Credit given for adjacent on street parking, which can count for local parking requirements.	1	0	On street parking is not allowed
	Shared parking and alternative parking arrangements encouraged	1	1	This is shown in Article 6 and Article 8 of the UDC.
	Mixed use districts feature increased densities and height.	1	1	MXU and CBD districts in certain areas allow increased densities (12 upa) and height as established on a project by project basis. Section Article 2. We have low lot coverage standards; a higher coverage and a greater FAR may achieve more density.
	Accessory parking structures are not counted against maximum FAR on a site.	1	0	4-4 appears to suggest that the accessory structure is included in the FAR for a site.
	ENACT REGULATIONS:			
	Zoning code requires a minimum mix of uses and minimum density in designated mixed use and TOD areas.	1	0.5	See Table 2-2. Revision may be necessary because its application has not resulted in true mixed use developments.
	Auto oriented uses and drive throughs are restricted or prohibited in mixed use and TOD areas.	1	0	See Table 2-4; Restaurants, limited service, WITH drive through is not allowed in MXU. However, a multitude of auto oriented uses are allowed, which seems to outweigh any benefit of restricting a drive through restaurant. And unless there is significant density of housing in that MXU district where people can actually walk from home to a service or use, it really would be impractical in the COPS to restrict auto oriented uses and drive throughs (unless we have widespread, established public transit here). Key is having both density & mixed use.
	Subject Total	**12**	**6**	

Compact Development Patterns and Infill	**44**	**20**
Percent of Points	**100%**	**45%**

DESIGN COMPLETE, SMART STREETS THAT REDUCE OVERALL IMPERVIOUSNESS

3.A

Street Design

3.A.1

QUESTION: Do local street design standards and engineering practices encourage streets to be no wider than necessary to move traffic effectively? Do street designs vary according to: street type (arterial streets, collector streets, neighborhood streets) and ·urban context (urban core, transit station area, suburban center, general suburban, rural)? Do policies allow narrow neighborhood streets designed to slow traffic and create safer conditions for pedestrians and bicyclists?
GOAL: Appropriate street widths allow narrower lanes for certain street types, thereby reducing overall imperviousness.
WHY: The width of travel lanes, parking lanes and sidewalks should be tailored to the urban setting. Where appropriate, narrowing travel lane width to 10-11 feet, rather than the standard 12-13 feet, can significantly reduce the total amount of impervious surfaces. Such streets can also substantially improve conditions for walking, biking, and using transit, which reduces automobile use and overall demand for parking spaces.

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Adopt Plans/Educate			
Comp plan emphasizes alternative modes of transportation (walking, biking and transit) to reduce vehicle miles traveled and width and prominence of roads/streets.	1	1	Comp plan vision statement emphasizes that we will work towards expansion of these activities as an amenity and refuge from automotive traffic. 28.1,2,4,7,9 Continue trans planning to address congestion, transit, land use; concentrate development in areas with existing infrastructure; provide more transit; traffic analysis plan to promote multimodal travel. Comp Plan Update Appendix B - Transportation Element, Opportunities: Support opportunities and transportation alternatives which reduce the need of the private automobile to get to places, thereby reducing traffic congestion. Comp plan identifies an opportunity of creating greater connectivity and operational effective by mixing travel modes with respect to pedestrian, bicycle, transit.
Comp plan calls for distributing traffic across several parallel streets, reducing the need for high capacity streets with wide rights-of-way.	1	0.5	The Comp Plan and UDC require interparcel access. UDC Section 4-15 instructs that cul-de-sac shall be subject to approval by City Engineer and and shall be permitted only where environmentally sensitive conditions mandate its use. Additionally, Transportation element requires connectivity, but shows approx 65% of City does not have connectivity.
Comp plan planning process brings emergency response & other local govt dept to table early in the process to discuss street design:	1	0.5	Policy 29.1 indicates the City should work with Cobb County in providing vital emergency services. We advise the Fire Marshal's office on all zonng and site plan review phases of development. However, there is no poractive approach in street design alternatives; we only seek their input when a proposal is submitted but we don't ask them to vary any standard.
Adopt formal bicycle/pedestrian master plan.	1	1	City has a bike/ped master plan. The plan is contained in the community enhancement master plan, which has governed all of our transportation and splost funded projects, but we do not have a formal bike/ped plan.
Create "safe routes to school" programs or other pedestrian/bike safety initiatives.	1	0.5	Comp Plan under Transportation Opportunities indicates to continue working with various agencies to promote safe routes to schools. Currently being implemented as a pilot program at select schools. (none in Powder Springs).
Make consistent improvements to walking/biking conditions to develop a formal bicycle/pedestrian master plan.	1	1	Sidewalk and capital improvement projects contemplate multi-use on the facilities. Citywide plan has been considered and inventory taken of existing facilities in order to develop needed projects and close gaps.
Remove Barriers			
Comprehensive plan endorses context-sensitive street design with narrower streets in appropriate locations.	1	0.5	(1) Suburban Residential encourages traditional neighborhood development (minimizing setback, pedestrian oriented deisng, and public open space), sidewalks and pedestrian linkages to trail system, roadway safety improvements, and traffic calming. (2) Village Center supports "main street" retail center and pedestrian freindly development. Policy 28.3: Roadway designs should be contemplated in a Context Sensitive Design manner, where the roadway design factors the existing community conditions in the final design of the corridor. Context Sensitive Design is a program developed by the Federal Highway Administration (FHWA) in an effort to ensure that new transportation facilities are being developed and implemented in a way that provides positive results for connectivity, capacity, and the aesthetics of the local area. Should consider an amendment to place this as a policy rather than just an opportunity and improve the code/comp plan so that this is encouraged rather than just mentioned.
Improve pedestrian crossing to encourage walking.	1	0.5	Certain intersections have been improved to provide tactile feel for handicap access and have added decorative materials to provide aesthetic beauty to otherwise blank concerete sidewalks. Policy 28.5 of the Comprehensive Plan says that Design better pedestrian facilities such as sidewalks, traffic calming measures and crossing in high traffic areas as recommended in the LCI study and which will allow for better connectivity to the Silver Comet Trail and make the town more pedestrian friendly. The high traffic volumes of CH James and RD Sailors are listed as an issue for pedestrian safety. Railroad pedestrian crossing project identified in the LCI Study.Recommended block length of 300 feet for walkability; Section 8-3(d) has requirements for blocks greater than 1000 feet and may need to change.

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Consolidate utilities in the street right-of-way to improve sidewalk design and function.	1	1	Utility locations are required to be within the right-of-way. Standards details show where these improvements need to be located. The sidewalk detail could be amended. Because our adopted detail does not have a conflict between sidewalk and utility, code meets this requirement. However, a different detail that allowed combined utilities or utilities under sidewalk would result in smaller right-of-way and more compact design.
Negotiate with state department of transportation or county transportation department to allow different design standards for regional roads passing through downtowns or other key areas.	1	0.5	Lewis Road provides bike lanes on either side and also provides ample walkway/multi use trail. Curent DOT policy issue limits access on CH James. Comp Plan encourages Cobb DOT to open additional access points to further diversify the City's tax base and encourage usability of this high-volume roadway. SR6 access and design also requested/negotiated.
Promote street standards for fire safety that include attributes of narrow streets (20 feet widths) while identifying factors relevant to local government departments involved with streets such as public works, engineering, and utilities.	2	1	Cobb County code requires minimum 24' pavement. PW asked if there is a new design criteria for local streets including alleys as one way streets. Fire Marshal said that the IFO required 20 feet; have not had any discussions with FM about alternate design. Reluctance by PW because of impacts to its responsibilities.
Take formal control of state or county roads within city boundaries to ensure power over design and operations.	2	1	Other than CH James Pkwy, all roads are maintained by the City. However, still subject to county or state requirements on all roads at intersection because the traffic signal belongs to a different entity; accordingly always need that jurisdiction's approval for operational issues. Cost is a factor in taking over control.
Adopt Incentives:			
Developments that provide comprehensive pedestrian/bicycle circulation systems allowed reducing number of vehicle parking spaces. (See parking section below for greater detail.)	1	0.5	UDC requires development review and emphasizes usable pedestrian areas. The City could contemplate an amendment requiring larger sidewalks/pavement marking for bicycles. While not allowed by right, one could seek a variance to reduce parking and it would likely be approved. Have not ever been presented a development with a comprehensive circulation system and rarely (if ever) receive a request to reduce parking.
Developments with approved comprehensive mobility/transportation plans allowed building narrower, less costly streets and alleys.	1	0.5	Street design details do not provide flexibility. The standards are common throughout Cobb County. We could encourage adding onstreet parking and design cued streets to mitigate traffic issue, but have to be wary since Fire Marshal and other emergency responders have specific roadway width requirements. Several developments approved for rear entry alleys and narrower streets.
Enact Regulations:			
Revamp local government technical street specifications to allow context-sensitive, innovative street design with narrower travel lanes, without curb and gutter, etc., in appropriate circumstances (See Institute of Transportation Engineers Recommended Practice document below).	2	0.5	Design criteria needs to be reviewed and update to require narrower streets for certain types of developments. Use of rollover curbs at intersections to allow tighter turnaround for Fire and Emergency vehicles. Street design in MXU district cluster style development in other residential districts can be reviewed during zoning/site plan process. However, our requirements do not address context sensitive design at all; we follow AASHTO and MUTCD - (see 8-2).
Emergency response professionals and other local government departments involved with streets (e.g. public works, engineering, utilities) have endorsed or adopted design standards for narrower neighborhood streets.	1	0	Following Cobb County's ordinance. New Mableton Ordinance does not provide widths for road design. Cobb Development Ordinance dictates roadway width which are followed by Cobb Fire Marshal's office.
Development review process involves emergency response early on to reach consensus on appropriate project street design and access.	1	0.5	Development process requires plans to be reviewed. Issues arising from site plan review are usually presented during zoning and plat review phases of development. We do submit to FM for review and feedback. Again, City uses AASHTO standards for road design. FM is not involved in decision about appropriate street design, other than to verify that streets are wide enough for emergency vehicle travel.
Development review process requires submittal of project pedestrian/bicycle circulation plans with safe street routes and other pedestrian/bicycle-friendly features in addition to traffic circulation plans for larger developments.	1	0	Comp Plan provides this language. Currently no new development has been approved. UDC does not require submittal, but could be a stipulations at time of zoning.
Apply formal connectivity index or other measures to ensure adequate internal street and pedestrian/bicycle connections.	2	0.5	Splost currently being utilized to connect gaps in the sidewalks network. Some sidewalks are expanded to allow multi-use. UDC 4-15 limits use of cul-de-sacs. City is currently at 65% unconnected streets. Formal connectivity is not addressed in our code.
Zoning/subdivision regulations require minimum number of connections between new project and surrounding developments and neighborhoods.	2	0.5	UDC requires a minimum number of connections to local roads, but not defined to existing neighborhoods. No new connections are allowed on CH James per DOT. UDC does not require connections between neighboring developments.
Subject Total	25	10	

3.A.2

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
QUESTION: Are shared driveways, reduced driveway widths, two-track driveways, and rear garages and alleys encouraged for all single-family developments? **GOAL:** Encourage alternative forms and decreased dimensions of residential driveways and parking areas. **WHY:** Off-street parking and driveways contribute significantly to the impervious areas on a residential lot. Reducing such dimensions can minimize the amount of stormwater runoff from a site.			
Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Remove Barriers:			
Allow developments that utilize shared driveways and rear-loaded garages to permit overnight parking in driveways and on-street.	1	0	Comp Plan encourages TND design, but UDC does not require. No on street parking detail is available. Code of ordinances prohibits on street parking; also 6-5(d) driveway width cannot exceed 10 feet. However, a development has been approved for rear loaded garages to allow parking in the driveways.
Development code prohibits homeowner covenants forbidding overnight parking in driveways, on-street overnight parking, and shared driveways.	1	0	
Adopt Incentives:			
Allow developments with narrow driveways and rear-loaded garages to reduce number of parking spaces for guests.	1	0	
Zoning/subdivision regulations require minimum number of connections between new project and surrounding developments and neighborhoods.	2	0.5	
Enact Regulations:			
Shared driveways are permitted or required for single-family residential developments.	1	1	
Minimum widths for single-family driveways reduced to 9 feet.	1	0	Current design standards require two car garages. Driveways are required to accommodate a maximum of four vehicles per home. And a minimum of 2; driveway width not allowed to exceed 10 feet; 9 feet is not prohibited.
Two-track driveways are allowed by technical street/subdivision specifications.	1	0	Current single family residential parking design is on a concrete slab.
Single-family residential developments encouraged/required to be designed with minimum percentage of alley-accessible, rear-loading garages. * Alleys/garages encouraged =1 * Alleys/garages required=2	1 to 2	0.5	The UDC requires rear loaded garages in the mixed use zoning district and as part of the Comp plan for several land use districts. Commercial development overlay requires parking on the side or rear of a commercial space.UDC 4-15 requires 50% side or rear entry garage for new development.
Subject Total	9	2	

3.B

GREEN INFRASTRUCTURE ELEMENTS AND STREET DESIGN

3.B.1

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
QUESTIONS: Are major street projects required to integrate green infrastructure practices as a standard part of construction, maintenance, and improvement plans? **GOAL:** Formally integrate green infrastructure into standard roadway construction and retrofit practice. **WHY:** Consistent projects to improve or repair streets provide opportunities to include green infrastructure retrofits as part of larger project budget, design, and construction.			
Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Adopt Plans/Educate:			
Comprehensive/transportation plans promote green infrastructure practices in street design.	1	0	
Street projects costs estimates include green infrastructure designs and asses cost savings from reduced hard infrastructure.	1	0	
Remove Barriers:			
Technical street specifications allow/require integration of green infrastructure elements into street projects construction.	1	0	
Allow street-side swales to replace conventional curb and gutter for managing stormwater and for separating sidewalks from street traffic in appropirate circumstances.	1	0	Section 4-15 requires curb and gutter in new subdivisions. Retrofit of existing streets has included sidewalks. Section 8-4 also requires curb and gutter

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Adopt Incentives:			
Undertake consistent effort to secure state and federal funds (e.g., transportation enhancements) to pay for green infrastructure elementes.	1	0	
Streets with green infrastructure count towards stormwater requirements.	1	0	
Enact Regulations:			
Adopt green infrastructure retrofit standards for major street projects.	1	0	
Adopt technical specifications and design templates for green infrastructure in private and public right-of-way.	1	0	
All local road projects required to allocate a minimum of the total project cost to green infrastructure elements.	1	0	
Subject Total	9	0	

3.B.2

QUESTION: Do regulations and policies promote use of pervious materials for all paving areas, including alleys, streets, sidewalks, crosswalks, driveways, and parking lots?
GOAL: Build and retrofit these surfaces with pervious materials to reduce stormwater runoff and its negative impacts.
Note: While eliminating sidewalks or placing sidewalks on only one side of the road can reduce impervious cover, this strategy is most typically appropriate for rural areas. However, other effective strategies can achieve the same runoff reductions that will not limit residents' options for recreation and transportation.
WHY: Streets, sidewalks, and other hard surfaces contribute a large portion to a municipality's total imperviousness. Making these surfaces more permeable protects water quality, reduces flooding, and can recharge groundwater.

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Adopt Plans/Educate:			
Sponsor/approve pilot programs to determine appropriate pervious materials for different paving areas (e.g., permeable concrete for sidewalks, permeable pavers for driveways), as well as process for installation and maintenance.	1	0.5	UDC Section 6-6, gravel parking is permitted either through SUA or via administrative approval for additional parking. Pavers located in City trail head for Lucille trail. Additional provisions are subject to review by the Mayor and City Council. No pilot program current exists.
Pilot project results incorporated into standard practice for all new paved areas and retrofits of existing paved surfaces.	1	0	
Adopt policy to replace impervious materials with pervious materials where practical.	1	0	
Remove Barriers:			
Technical street specifications allow pervious paving materials in appropriate circumstances (e.g., not allowed over aquifer recharge areas).	1	0	
Adopt Incentives:			
Create formal program offering incentives (e.g., cost sharing, reduction in street widths/parking requirements, assistance with maintenance) to property owners who utilize pervious pavement elements.	1	0	
Enact Regulations:			
Adopt requirement that some percentage of parking lots, alleys, or roads in a development utilize pervious materials.	1	0	

Implementation Tools and Policies	Pts. avail.	Pts. Rec.	Notes and local References
Development approvals that allow/require use of pervious materials include requirements for continuing maintenance/cleaning of pervious surfaces.	1	0	
Subject Total	7	0.5	

Design Streets that Reduce Imperviousness Total	**50**	**12.5**
Percent of Points	**100%**	**25%**

ENCOURAGE EFFICIENT PARKING

4.A

REDUCED PARKING REQUIREMENTS

4.A.1

QUESTION: Does your local government provide flexibility regarding alternative parking requirements (e.g., shared parking, off-site parking) and discourage over-parking of developments? Do parking requirements vary by zone to reflect places where more trips are on foot or by transit?
GOAL: Match parking requirements to the level of demand and allow flexible arrangements to meet parking standards.
WHY: Inflexible parking requirements that do not allow for alternative approaches, as well as standards that require too much parking for specific uses increase the amount of impervious surface in a development. Over-parking a development also encourages greater vehicle use and detracts from the overall pedestrian environment.

Implementation Tools and Policies	Pts. avail.	Pts. Recd.	Notes and local References
Adopt Plans/Educate:			
The comprehensive plan recognizes the advantages to reduced parking requirements generally and specifically for mixed-use and transit-oriented developments.	1	1	Comp Plan Policy 23.3 promotes shared parking as does Article 6 of UDC for mixed use and commercial areas.
The comprehensive plan recommends alternative, flexible approaches to meeting parking demands (e.g., shared parking, counting on-street spaces towards site parking requirements).	1	1	Comp Plan Policy 23.3 promotes shared parking as does Article 6 of UDC for mixed use and commercial areas. LCI study further added shared parking between public and private users.
Comprehensive/bicycle plans recommend provision of bicycle parking spaces/storage lockers and concomitant reduction in vehicle parking space requirements.	1	0.5	Comp Plan in the Business and Commercial Improvement District language suggest bicycle and pedestrian facilities. GRTA park-n-ride has bike parking. Additionally, usability of the Silver Comet trail to promote more bike friendly activity and alternative transportation systems. The provision of bike parking, which is not highlighted in the plans, is not tied to any reduction in vehicle parking space.
Remove Barriers:			
Allow flexibility in meeting parking space requirements through shared parking, off-site parking, and similar approaches.	1	1	Article 6 provides for shared parking. Off site parking must be within a set distance and on a parcel with identical zoning as the subject property. Recommend evaluation of current minimum distance requirement for offsite parking.
Permit businesses with different peak demand periods to share their required parking spaces.	1	1	Shared parking agreement required.
Adopt Incentives:			
Permit reduction in vehicle parking spaces through the provision of a minimum number of bicycle parking spaces.	1	0.5	UDC under 6-2 provides a maximum number of parking spaces (and a minimum, which is 80% of the max). PW director can waive parking requirements in CBD if determined the adequate parking already exists. No relation is made between bike parking and vehicular parking.
Allow by-right reduction in required parking spaces (e.g., 25%) in mixed-use and transit-oriented developments and districts.	1	1	Parking ratios are established in the MXU district as shown in Article 3 of the UDC.
Permit developers to undertake parking studies to establish that specific developments (e.g., senior housing, affordable housing) require fewer parking spaces than typical projects.	1	1	UDC requires for large scale projects (DRI). Council has ability to request parking and traffic studies as part of the zoning process. Would probably allow a developer to submit such a study if they were proposing a variance to provide parking at a rate less than the minimum.
Create parking districts to finance/construct centralized parking lots/structures as shared parking facilities to reduce on-site parking.	1	0.5	DA can utilize bonds for the construction of a downtown parking garage. Design has been preliminarily created, but not implemented.
Enact Regulations:			
Revise parking regulations to reduce minimum below standard ITE (Institute of Transportation Engineers) requirements based on analysis of local develoments and actual parking demand/experience.	1	0.5	UDC contemplates maximum number of parking spaces.
Charge developers for every space beyond parking minimums to offset environmental impacts.	1	0	Parking maximum is established. A Variance is necessary prior to approving more spaces than permited. Fee would have to be set by the Mayor and City Council.

Implementation Tools and Policies	Pts. avail.	Pts. Recd.	Notes and local References
Enact parking standards that allow credit for adjacent on-street parking.	1	0	Credit would have to be set by the Mayor and City Council. Off-site parking is permitted with restriction provided in Article 6 of the UDC. But on street parking is prohibited.
Allow by-right reduction in required parking spaces (e.g., 25%) in mixed-use and transit-oriented developments and districts.	1	0.5	UDC allows a maximum number of parking spaces. Minimum number is established as 80% of the max. Shared parking can also be reviewed to further reduce the number of parking spaces. Use of the property can further limit the number of parking spaces. No by-right reduction standards exist.
Subject Total	**13**	**8.5**	

4.B. TRANPORTATION DEMAND MANAGEMENT ALTERNATIVES

4.B.1

QUESTIONS: Can developers use alternative measures such as transportation demand management or in-lieu payments to reduce required parking?
GOAL: Provide flexibility to reduce parking in exchange for specific actions that reduce parking demands on site.
WHY: Incentives such as transit passes, vanpool arrangements, flexible work schedules, market-priced facilities, and separate leasing for spaces in apartments and condominiums have quantifiable impacts on parking demand. Incorporating them into parking requirements creates the opportunity to meet demand with less impervious cover.

Implementation Tools and Policies	Pts. avail.	Pts. Recd.	Notes and local References
Adopt Plans/Educate:			
Comprehensive/transportation plans recognize transportation demand management as an approach to reducing vehicle miles traveled and parking requirements.	1	1	Vision statement and other section of Comp Plan address transportation as a vital way to manage vehicle trips, encourage redevelopment, and efficiently use existing parking facilities. Transportation element of the Comp Plan relied on 2005 & 2010 ARC TDM Models.
Remove Barriers:			
Rather than include parking spaces with an apartment lease, allow tenants to opt-out by treating parking as a separate optional lease agreement.	1	0	
Adopt Incentives:			
Allow businesses that offer employee transit passes, provide vans for employee commuting, allow flexible working arrangements, or charge market rates for parking to 1) provide fewer parking spaces or 2) pay less into a parking district fund for required parking spaces.	1	0	
Allow developers to make in-lieu fee payments for parking. Fees utilized by local government/parking authority to provide off-site parking lots/structures.	1	0	
Provide mechanisms for car sharing in transit-oriented development. Where done, area parking requirements are reduced.	0	0	N/A
Enact Regulations:			
Create a parking district and allow/require businesses to support public garages rather than provide their own on-site parking.	1	0	
Require large developments to adopt transportation demand management techniques to lower vehicle use and parking demand.	1	0	Developments are considered at time of zoning. Transportation plans are required based on size of Development. Parking count reductions can be considered at time of application. (Article 11 and Article 6). We do not require this; we do require certain studies for DRI's to 'mitigate' but not to lower. Transportation demand management not addressed.
Subject Total	**6**	**1**	

Implementation Tools and Policies	Pts. avail.	Pts. Recd.	Notes and local References
4.C. MINIMIZE STORMWATER FROM PARKING LOTS			
4.C.1 **QUESTION:** Are there requirements for landscaping designed to minimize stormwater in parking lots? **GOAL:** Require substantial landscaping to help reduce runoff. **WHY:** Parking lots generate a large amount of impervious cover. Requiring landscaping reduces the environmental impact of parking and can provide additional community benefits by providing shade and, if appropriately placed, creating natural barriers between pedestrians and cars.			
Implementation Tools and Policies	Pts. avail.	Pts. Recd.	Notes and local References
Adopt Plans/Educate:			
Comprehensive plans calls for landscaping in parking lots to help reduce stormwater runoff.	1	0.5	UDC requires landscape islands. UDC calls for implementing CIDs for stormwater among other things. The landscape island is not tied to the runoff issue; could be modified to address. Landscaping practices specific to reduction of stormwater runoff in parking areas include: Swales, Filter strips/vegetated buffer strips,
Remove Barriers:			
Allow alternative or innovative landscaping solutions that provide stormwater management functions to count towards perimeter or other landscaping requirements.	1	0.5	All new development and certain development in the Commercial Development Overlay are required to submit a landscape plan for the property. Alternative landscape ideas must be reviewed by City landscape architect/engineer.
Adopt Incentives:			
Parking lot landscaping and green roofs on parking structures credited towards meeting local stormwater management requirements.	1	0	
Give additional landscaping credit for preservation of large, mature trees within parking lots.	1	1	Speciman size trees are required to be maintained or strict number of trees required to replace a speciman tree. (Article 5) Tree units count required per zoning district. Tree units are assigned based on size (caliper) of tree. No additional landscape credit given for trees based on size.
Do not count parking structures with green roofs against allowable floor area ratio of a site.	1	0	
Enact Regulations:			
Adopt parking lot landscape regulations that require provisions of trees, minimum percent of parking lot interior area to be landscaped (e.g., 10%), and minimum sized landscaping areas (e.g., minimum of 25 square feet for island planting areas).	1	1	UDC provides specific parameters for parking lot islands and amount of landscape area/materials in Article 5. Article 5 does require 10% of parking area to be landscaped, but does not use a percentage for islands.
In parking lot landscaping regulations, specify the types and sizes of shrubs and strees most appropriate for controlling/reducing stormwater runoff.	1	0.5	Landscape is reviewed by City landscape architect. Their recommendation could be asked to address this issues. Policy could be changed to required additional consideration to address this issue. Landscape requirement not related to stormwater runoff.
Adopt standards requiring a minimum area of the parking lots to drain into landscape areas.	1	0	
Require the management of runoff from parking lots through green infrastructure practices, including trees, vegetated islands, swales, rain garden, or other approaches.	1	0.5	For infill/redevelopment, vegetated islands and rain gardens adopted to reduce runoff.
Enact specific alternative landscaping and parking regulations to support infill development (parking requirements, parking lot landscaping options that focus on perimeter landscaping to encourage smaller lots, etc.).	1	0.5	Reduced requirements for landscape strips and buffers in CBD.

Implementation Tools and Policies	Pts. avail.	Pts. Recd.	Notes and local References
Require parking structures to incorporate green roofs to reduce stormwater runoff.	1	0	
Reduce drive aisle width in parking lots to decrease the amount of pervious surface. For multi-family developments, drive aisles can be shared. In commercial developments, typical drive aisles can be reduced 5-10%.	1	0	
Subject Total	**12**	**4.5**	

Encourage Efficient Parking Total	**31**	**14**
Percent of Points	**100%**	**45%**

ADOPT GREEN INFRASTRUCTURE STORMWATER MANAGEMENT PROVISIONS

5.A **GREEN INFRASTRUCTURE PRACTICES**

5.A.1 QUESTION: Are green infrastructure practices encouraged as legal and preferred for managing stormwater runoff?
GOAL: Make all types of green infrastructure allowed and legal and remove all impediments to using green infrastructure (including for stormwater requirements), such as limits on infiltration in rights-of-way, permit challenges for green roofs, safety issues with permeable pavements, restrictions on the use of cisterns and rain barrels, and other such unnecessary barriers.
WHY: Green infrastructure approaches are more effective and cost efficient than conventional stormwater management practices in many instances, and provide other substantial community benefits.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Inform the public, through education and outreach programs, that green infrastructure practices can manage stormwater runoff on their property.	1	0.5	Public information available on web site. Brochures distributed at City Hall and at town hall meetings. No public information regarding green infrastructure available from the City. The City should work to create a brochure showing some easy things homeonwers can do on their property - rain barrels, downspout disconnects, rain gardens, etc. Cobb County Water System has a flyer illustrating how to build a rain barrel, the City should consider displaying this flyer at the water department. The Community Agenda of the Comprehensive Plan identies the issue "Continued public education is necessary to protect the city's natural resources. Education is specifically valuable in the areas of wetlands and floodplain protection, storm water management, and erosion and sedimentation control."
Create a green infrastructure workshop or training program for internal and external reviewers to ensure that the stakeholders who use this tool will have the ability to understand and use it effectively.	1	0.5	The city has purchased a training video that is available for use by the public
REMOVE BARRIERS:			
Development and other codes encourage and allow property owners to adopt home-based green infrastructure practices, such as rain gardens, rain barrels, and other rainwater harvesting practices.	1	0.5	The Unified Development Code does not specifically address home based green infrastructure. However the state amendment to the plumbing code, applicable to development in the City, addresses rain water recycling. The city's code could be amended to specifically list rain barrels and other similar infrastructure in the customary accessory uses. Code of Ordinances does contain the county's health regulations permitting the use of greywater.
Review and change, where necessary, building codes or other local regulations to ensure that all local government departments/agencies have coordinated with one another to ensure that green infrastructure implementation is legal, e.g. remove restrictions on downspout disconnection.	1	0.5	Building code and plumbing code supports the reuse of stormwater. City standard specifications could be amended to address green infrastructre more directly.
ADOPT INCENTIVES:			
Credit green infrastructure practices towards required controls for stormwater runoff.	1	1	Section 9-11(a) describes the purpose of the section and includes the statement "Encourage the use of nonstructural stormwater management and stormwater better site design practices" Better site design practices are referenced in the Georgia Stormwater Manual and include green infrastructure practices such as conservation, siting, minimizing impervious areas. Section 9-11(i) states that the use of site design measures may allow for a reduction; minimum criteria under which credit may apply set forth in manual.
Establish a "Green Tape" expedited review program for applications that include green infrastructure practices.	1	0.5	All development is already streamlined. Practice is to give preference to green development but no written policy in place
Reduce stormwater utility rates based on the use of green infrastructure practices.	1	0.5	Stormwater utility ordinance has received first reading; 2nd reading and adoption anticipated June 2011; ordinance provides for credits or reductions to stormwater utilility rates. When the credit manual is adopted, it could include credit for green infrastructure.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ENACT REGULATIONS			
Zoning and subdivision regulations specifically permit green infrastructure facilities, including but not limited to: (1 point for each technique to a maximum of 4 points) · Green roofs; Infiltration approaches, such as rain gardens, curb extensions, planter· gardens, permeable and porous pavements, and other designs where the intent is to capture and manage stormwater using soils and plants; · Water harvesting devices, such as rain barrels and cisterns; and · Downspout disconnection.	1 to 4	1	Unified Development Code does not specifically permit green infrastructure. Gravel parking areas are defined as semipervious, and are only permitted after special use application. An amendment could be considered allowing pervious pavements by right. 2009 Georgia State Amendments to the ICC plumbing code permits rain barrels. During plan review staff requested applicant to install rain garden to offset runoff.
Developers are required to meet stormwater requirements using green infrastructure practices where site conditions allow. Developers must provide documentation for sites that do not allow on-site infiltration, reuse, or evapotranspiration to meet locally determined performance stormwater management standards.	1 to 2	1	Developers are not required to use green infrastructure. However, they are required to provide documentation for all sites showing site conditions and compliance with performance management standards, which may include better design practices.
Subject Total	**13**	**5.5**	

5.A.2

QUESTION: Do stormwater management plan reviews take place early in the development review process?
GOAL: Incorporate stormwater plan comments and review into the early stages of development review/site plan review and approval, preferably at pre-application meetings with developers.
WHY: Pre-site plan review is an effective tool for discussing with developers alternative approaches for meeting stormwater requirements. This will incorporate green infrastructure techniques into new projects at early design stages, well before construction begins.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Encourage/require a pre-site plan meeting with developers to discuss stormwater management and green infrastructure approaches. · Voluntary = 1 point ·Mandatory = 2 points	1 to 2	2	At pre-site plan meeting, stormwater management and green infrastructure is discussed. Section 9-11 requires a concept plan and consultation meeting.
Include landscape architects in design and review of stormwater management plans.	1	1	
ADOPT INCENTIVES:			
Provide accelerated review of projects where developer attended a pre-application meeting.	1	0.5	All development is already streamlined. Could create a written policy giving preference to first review to green development.
ENACT REGULATIONS			
Preliminary stormwater plan review occurs contemporaneously with preliminary site plan review and before any development approvals.	1	1	Stormwater plan review should but does not usually occur at preliminary site plan review (Section 9-11 requires concept plan and consultation meeting). Stormwater review is completed prior to any development approvals.
Development applications must include preliminary/conceptual stormwater management plans that incorporate green infrastructure elements and describe how stormwater management standards will be met.	1	0.5	Development plans must include stormwater plans, but there is not a requirement for green infrastructure elements.
Subject Total	**6**	**4.5**	

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
5.A.3 QUESTION: Do local building and plumbing codes allow harvested rainwater for exterior uses, such as irrigation, and non-potable interior uses, such as toilet flushing? GOAL: Ensure that the municipality allows and encourages stormwater reuse for non-potable uses. WHY: Stormwater reuse is important for dense, urban areas with limited spaces for vegetated green infrastructure practices.			
Implementation Tools and Policies	**Pts. avail.**	**Points rcd**	**Notes and local References**
ADOPT PLANS/EDUCATE:			
Local government provides information brochures/manual for homeowners describing acceptable rainwater harvesting techniques.	1	0.5	No rainwater harvesting techniques brochures available to public at this time but stormwater management is addressed on the web site. The City could develop additional brochures or at least make the Cobb Water System flyers available to the public.
REMOVE BARRIERS			
Local development, building, and plumbing codes updated to allow reuse of stormwater for non-potable purposes.	1	0.5	Building code and plumbing code supports the reuse of stormwater.
ADOPT INCENTIVES:			
Reduce stormwater management facility requirements for developments employing comprehensive rainwater harvesting.	1	0	This should be considered in the development of a stormwater utility credit manual.
Reduce stormwater utility rates based on the use of harvest and reuse techniques.	1	0	This should be considered in the development of a stormwater utility credit manual.
ENACT REGULATIONS:			
Require developments to adopt rainwater harvesting techniques as elements of stormwater management plans.	1	0	Rainwater harvesting is not required at this time.
Subject Total	**5**	**1**	

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
5.A.4 QUESTION: Are provisions available to meet stormwater requirements in other ways, such as off-site management within the same sewershed or "payment in lieu" of programs, to the extent that on-site alternatives are not technically feasible? GOAL: Allow off-site management of runoff while still holding developers responsible for meeting stormwater management goals. WHY: In some cases, it is impracticable or infeasible to treat all or even some of the stormwater runoff on site. In such instances, alternative means should be provided through contribution to off-site mitigation projects or off-site stormwater management facilities (preferably green infrastructure facilities).			
Implementation Tools and Policies	**Pts. avail.**	**Points rcd**	**Notes and local References**
For infill and redevelopment areas, off-site green stormwater management plans should be developed in cooperation between local government and landowners/developers. Allowing off-site management of stormwater runoff requires sewershed designation within the local government to ensure that true mitigation is possible and realize the equal stormwater management and water quality benefits through off-site management.	2	1	To allow off-site SWM requires "sewershed designation", which we currently do not have; however offsite management is allowed.
Retrofit projects that will utilize green infrastructure stormwater management techniques should be identified and prioritized within the sewershed.	1	0.5	Section 9-11 allows reduction in stormwater quality treatment volume for use of stormwater better site design practices. Staff has begun to require rain gardens, rain collection and similar ideas for redevelopment and expansion projects (Shell Station).
Amend stormwater management regulations and development codes as necessary to allow off-site stormwater management, especially for infill and redevelopment areas.	1	1	Off-site stormwater management is allowed under Section 9-11. Offsite stormwater management is permitted as long as the area is dedicated to the use.
Establish system that allows/requires payment-in-lieu fees for off-site stormwater management facilities. Fees should be set sufficiently high as to cover the true cost of off-site management. Consider limitations on amount of off-site management allowed (more for infill areas, less for greenfield sites).	1	0	No payment-in-lieu is offered at this time.
Subject Total	**5**	**2.5**	

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References

5.B.1

QUESTION: Does your stormwater ordinance include monitoring, tracking, and maintenance requirements for stormwater management practices?
GOAL: Incorporate monitoring, tracking, and maintenance requirements for stormwater management practices into your municipal stormwater ordinance.
WHY: These measures will help ensure that the successful tracking and monitoring of green infrastructure practices remain in proper working condition to provide the performance required by the stormwater ordinance.

Implementation Tools and Policies	Pts. avail.	Points rcd	Notes and local References
ADOPT PLANS/EDUCATE:			
Develop a system to monitor and track stormwater management practices deployed at greenfield and redevelopment sites. Tracking of management practices should begin during the plan review and approval process with a database or geographic information system (GIS). The database should include both public and private projects.	1	0.5	No stormwater management practices database tracking system in place at this time. However, a database/GIS exists for a large percentage of stormwater infrastructure that aids in inspection and monitoring. Staff currently conducting field verifications of structures/systems and attributes, which will need to be included in database. A database of the tracking results should be created.
Provide model checklist for maintenance protocols for ease of inspection, tracking, and enforcement.	1	1	Public Works has checklist which they use for inspections, but checklist is not given out to the public.
Sponsor demonstration projects for green infrastructure management best practices.	1	0	
REMOVE BARRIERS:			
Ensure that proper local agencies have authority to enforce maintenance requirements.	1	1	Authority to enforce is in place. Section 9-11 requires an easement and a maintenance and inspection agreement for all facilities not dedicated to the City. This is binding on all subsequent owners of the property.
ADOPT INCENTIVES:			
Create self-inspection maintenance certification program that allows developers/landowners to train/retain private inspectors to certify compliance with stormwater management plans and long-term maintenance.	1	0	
ENACT REGULATIONS:			
Require long-term maintenance agreements that allow for public inspections of the management practices and account for transfer of responsibility in leases and/or deed transfers.	1	1	Section 9-11 requires an easement and a maintenance and inspection agreement for all facilities not dedicated to the City. This is binding on all subsequent owners of the property.
Conduct inspections every 3 to 5 years, prioritizing properties that pose the highest risk to water quality, inspecting at least 20% of approved facilities annually.	1	1	
Develop a plan approval and post-construction verification process to ensure compliance with stormwater standards, including enforceable procedures for bringing noncompliant projects into compliance.	1	1	
Inspections of construction sites occur at for at least 25% of permitted projects to ensure proper installation of approved practices.	1	1	
Require conservation/green infrastructure bond/escrow in zoning/subdivision ordinances to ensure installation/maintenance of green infrastructure storm water management facilities.	1	0.5	Section 9-11 does require as builts of installed stormwater management plans, certified by a PE as in compliance with approved plans, prior to releasing performance securities.
Subject Total	**10**	**7**	

Adopt Green Infrastructure Stormwater Management Total	**39**	**20.5**
Percentage of Points Earned	**100%**	**53%**

Appendix G

Enforcement Response Plan (ERP)
Section 3.3.6 of the Permit

1. The MS4 was required to develop an Enforcement Response Plan (ERP) that describes the action to be taken for violations of the Storm Water Management Program.

   A. Provide the date the ERP was approved by EPD: March 3, 2021

   B. If the ERP has not yet been approved, provide the date submitted to EPD: N/A

2. A copy of the ERP must be attached to this Appendix.

Enforcement Response Plan

City of Powder Springs, GA Revised: November 2020

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1.0 Introduction

1.1 Enforcement Response Plan

The City of Powder Springs has prepared an Enforcement Response Plan (ERP) as required by the City 's National Pollutant Discharge Elimination System (NPDES) Phase I Municipal System Storm Sewer System (MS4) Permit. The ERP is an addendum to the City 's Stormwater Management Plan (SWMP). This document outlines the actions and procedures that will be used by City staff when illicit discharges, post construction stormwater quality violations, and other stormwater violations occur that violate the City 's Stormwater Management Ordinance and Soil Erosion and Sedimentation Control Ordinance. The ERP provides a regulatory framework and timeline for enforcement actions, including an escalating series of actions that will be employed for stormwater violations and other stormwater issues.

1.2 Enforcement Authority

The City of Powder Springs has established adequate legal authority through its Code of Ordinances to enforce the stormwater provisions of the City's NPDES Phase I MS4 Permit. There are two (2) ordinances primarily used to enforce the City's Stormwater Management Program: 1) the Stormwater Management Ordinance and 2) the Soil Erosion and Sedimentation Control Ordinance.

Stormwater Management Ordinance

The Stormwater Management ordinance prohibits illicit discharges to the public MS4, grants the City the authority to enter private property to investigate suspected illicit discharges, and also provides the City with the means to enforce post construction violations of this ordinance. Under Article 8 Division VII of the City of Powder Springs Code of Ordinances entitled 'Utilities', the City has codified its land development regulations which include the "Stormwater Management Ordinance" regulations in Article 11.

Soil Erosion and Sedimentation Control Ordinance

The Soil Erosion and Sedimentation Control Ordinance, commonly referred to as an Erosion and Sedimentation (E&S) ordinance, prohibits excessive soil erosion and resulting sedimentation during land-disturbing activities, establishes provisions for application of control measures and practices, and sets minimum requirements for proper design, installation, and maintenance of best management practices. Under Article 8 of the City of Powder Springs Code of Ordinances entitled 'Land Development Requirements', the City has codified its land development regulations which include the 'Soil Erosion and Sedimentation Control' regulations in Article 9.

The City of Powder Springs is currently a Local Issuing Authority (LIA) for LDA Permits as defined by the Georgia Erosion & Sedimentation Act (GESA). The Georgia Environmental Protection Division (EPD) has determined that any program in compliance with the regulations of GESA will also be considered in compliance with those requirements of the NPDES Phase I MS4 program for Construction Site Structural and Non-Structural Controls.

2.0 Illicit Discharges & Illegal Connections

2.1 Purpose [Sec. 19-1]

The City of Powder Springs, through the City's Illicit Discharge and Illegal Connection Ordinance and through implementation of this ERP, seeks to protect the public health, safety, environment and general welfare through the regulation of non-stormwater discharges to the City of Powder Springs separate storm sewer system. This ordinance establishes methods for controlling the introduction of pollutants into the City of Powder Springs separate storm sewer system in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process.

The objectives of this ordinance are to:

(1) Regulate the contribution of pollutants to the City of Powder Springs separate storm sewer system;

(2) Prohibit illicit discharges and illegal connections to the City of Powder Springs separate storm sewer system;

(3) Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the City of Powder Springs 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 ordinance

2.2 Verbal and Written Warning

Upon identification of a non-egregious illicit discharge from private property to the City's stormwater system and when the property owner takes steps immediately to eliminate and to clean-up the discharge, a verbal warning to the responsible party may be deemed sufficient enforcement by the City. The City takes multiple factors into consideration when making the determination to issue a verbal warning, such as the compliance history of the site/operator (i.e., first-time offense versus repeat offense), the severity of the issue (whether the illicit discharge has entered and contaminated the City's stormwater system), whether the illicit discharge was accidental/unintentional, and the general good faith of the violator, as well as how easily and quickly the illicit discharge or potential illicit discharge can be remedied while at the site. The City will take steps, when issuing a verbal warning, to educate the responsible party about stormwater pollution and how to prevent future re-occurrences. Recurring or repeated violations, flagrant and/or intentional violations, or failure to properly and immediately eliminate and remediate the illicit discharge as instructed, will escalate the violation to the written notice procedures described below.

The City may also issue a verbal warning when a potential stormwater issue is identified that has not resulted in an illicit discharge or illegal connection, such as poor housekeeping practices, and inform the responsible party of corrective actions/best management practice(s) that should be implemented and a timeframe for completion. The City may also use a verbal warning in advance of a forthcoming, formal Notice of Violation (NOV) to give the property owner or responsible party advance notice.

The City staff or their designee may issue a verbal warning that may consist of a direct conversation while onsite, a phone call, or an email to notify the responsible person/property owner of a minor violation (as

described above) or potential stormwater violation. The City will keep records of all verbal warnings issued. The City may require, at its discretion, the responsible person/property owner to submit documentation of the corrective actions completed and/or the City may conduct a follow-up inspection to verify compliance.

2.3. Violations [Sec. 19-12]

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

In the event the violation constitutes an immediate danger to public health or public safety, the City of Powder Springs 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.

2.4. Notice of Violation [Sec. 19-13]

Whenever the City of Powder Springs finds that a violation of this ordinance has occurred, the City of Powder Springs may order compliance by written notice of violation.

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 ordinance 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 City of Powder Springs by filing a written notice of appeal within thirty (30) days of service of notice of violation.

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.

2.5 Appeal of Notice of Violation [Sec. 19-15]

Any person receiving a Notice of Violation may appeal the determination of the City. The notice of appeal must be received within thirty (30) days from the date of the Notice of Violation. Hearing on the appeal shall take place within 15 days from the date of receipt of the notice of appeal. The decision of the appropriate authority or their designee shall be final.

2.6. Enforcement Measures After Appeal [Sec. 19-16]

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 10 days of the decision of the appropriate authority upholding the decision of the City of Powder Springs, then representatives of the City may enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

2.7. Costs of Abatement of The Violation [Sec. 19-17]

Within 45 days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the assessment or to the amount of the assessment within 15 days of such notice. If the amount due is not paid within thirty (30) days after receipt of the notice, or if an appeal is taken, within thirty (30) days after a decision on said appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

2.8 Civil Penalties [Sec. 19-18]

In the event the alleged violator fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within ten days, or such greater period as the City of Powder Springs shall deem appropriate, after the City has taken one or more of the actions described above, the City of Powder Springs may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.

2.9 Criminal Penalties [Sec. 19-19]

For intentional and flagrant violations of this ordinance, the City of Powder Springs may issue a citation to the alleged violator requiring such person to appear in municipal court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

2.10 Violations Deemed A Public Nuisance [Sec. 19-20]

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 ordinance is a threat to public health, safety, welfare, and environment and is declared and deemed a nuisance, and may be abated by injunctive or other equitable relief as provided by law.

2.11 Remedies Not Exclusive [Sec. 19-21]

The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable Federal, State or local law and the City of Powder Springs may seek cumulative remedies. The City of Powder Springs may recover attorney's fees, court costs, and other expenses associated with enforcement of this ordinance, including sampling and monitoring expenses.

2.12 Citizen Complaints

Members of the public can greatly assist the City by being the eyes and ears of the City. Citizens are encouraged to contact the City if they see illegal dumping or illicit discharge activities. The City of Powder Springs's official website provides contact information and an email link (on the main webpage) for citizens wishing to report illicit discharges or illegal dumping. The City of Powder Springs takes each complaint seriously and follows the procedures listed below to follow up on every complaint or tip.

1. When a complaint is received, all possible known information is recorded in the Request Tracker.
2. Inspection or investigation of the complaint is scheduled within **three (3) business days** of receiving a complaint (note - an immediate inspection may occur based on the severity of the violation).
3. Property or site is inspected.
4. Any and all violations are documented and photographed.
5. Attempt is made to have an in-person meeting with owner, operator, tenant, and/or Manager of property.
6. Case file is opened if violation has occurred.
7. The database is reviewed to check for previous violations at the same site.
8. Enforcement strategy is established (see enforcement mechanisms / actions).
9. The City may re-inspect the site to confirm compliance.
10. Case file closed out when property is in compliance with date of final inspection and compliance recorded.

2.13 Tracking

A list of all identified violations and enforcement actions will be maintained. The list will include pertinent information including:

- Facility Information
    - Name of owner/operator
    - Address
    - Type of site or issue (citizen complaint, IDDE , etc.)
- Date of complaint and site investigation
- Description of violation
- Enforcement actions used
- Time frame for
    - Investigation
    - Corrective action
    - Re-inspection
- Documentation of all actions taken
    - Inspection photos, notes, etc.
    - Enforcement actions taken
    - Referrals to other departments or agencies
- Date of violation resolution
- Notice of violations provided to violators as well as any other correspondence will be maintained on file.

2.14 Enforcement Mechanism Summary

The City evaluates each case individually to determine the type of appropriate actions / enforcement responses that are outlined above. These factors include a determination of the severity of the problem, potential danger to public health or safety, duration of non-compliance, effects on State waters, effects on the MS4, compliance history of the violator, and general good faith of the violator.

The City may elect to issue a verbal warning in some cases as outlined above in Section 2.2. If an active violation is discovered and an NOV is issued, the City may determine if this is an isolated incident and a NOV sent to the violator may be sufficient, assuming the violation is adequately corrected within the specified timeframe. Severe violations would be addressed with more severe enforcement actions. If a violation has occurred over a long period of time, enforcement actions will be escalated appropriately. If the violation has resulted in environmental harm to the water quality of State waters or poses danger to public health or safety, then the City shall respond with severe and prompt enforcement actions, including remediating the violation and recouping costs from the violator. If the violator has damaged the MS4 or has caused such an action that

will require additional costs, the City may assess the recovery of these costs as part of the assessment of penalties.

Examples of specific Illicit Discharge and Illegal Connection violations that may occur and the enforcement mechanisms that may be used to address the violations thru the City's Stormwater Management Ordinance are provided in Table 2.1. A flow chart (Figure 2.1) is also provided to visually illustrate enforcement procedures for violations of the City of Powder Springs's Stormwater Management Ordinance.

Table 2.1: Illicit Discharge / Illegal Connections Enforcement Procedures

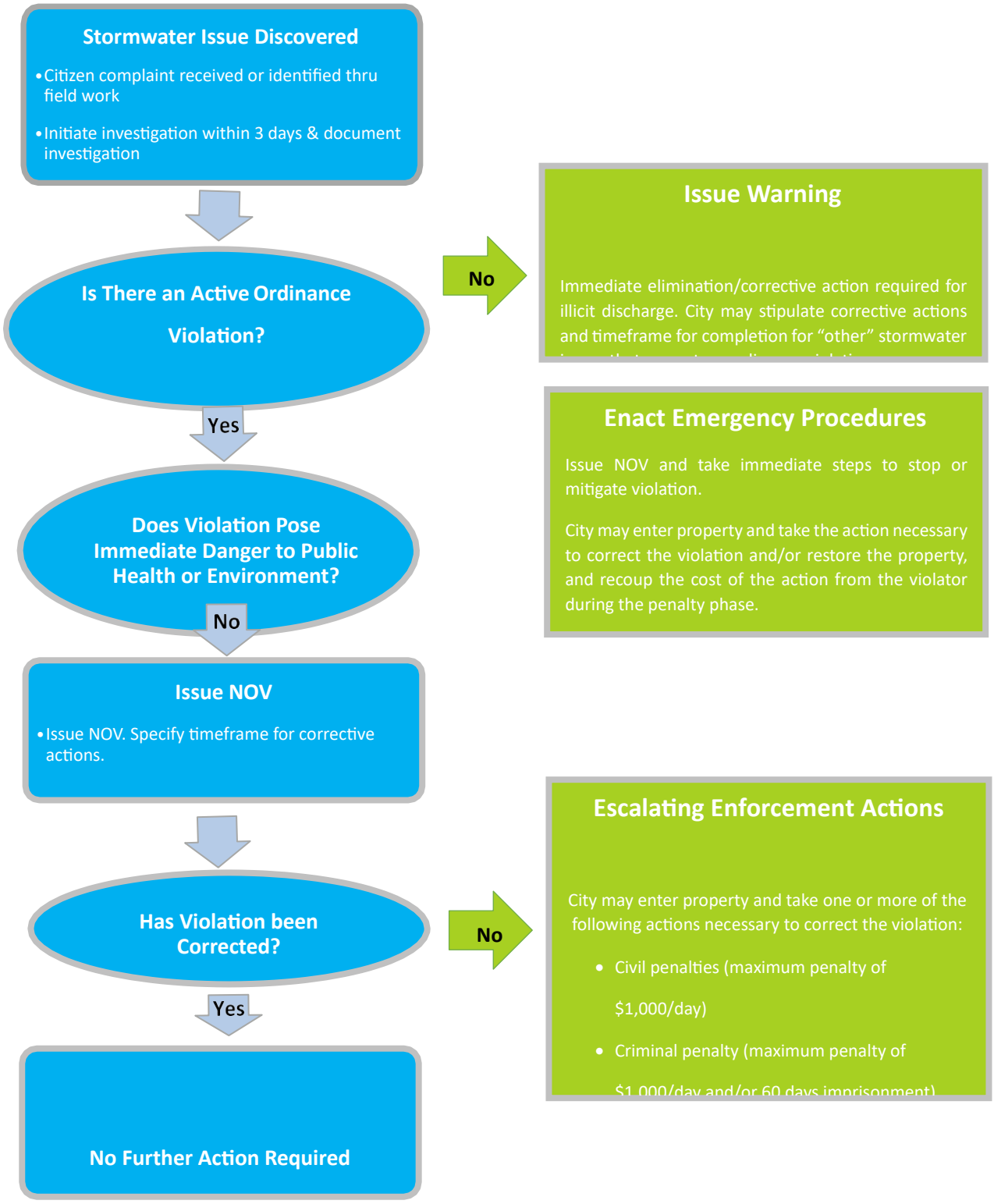
Violation	Examples	Action Required by Site / Violator	Enforcement Action	Timeframe to Complete Remediation	Ordinance Citation(s)
Illicit Discharge	▪ Discharge of residential pool water to the street (1st offense) if chlorine content is unknown/chlorine expected to be present ▪ Auto maintenance activities or other automobile-related mechanical issues that inadvertently result in minor oil-stained soils or minor fluid leaks (i.e., oil changes, oil pan leak, 1st offense) ▪ Minor amount of litter and debris in a parking lot or from open trash can that is or could wash into CS4 (i.e., not intentional dumping of wastes)	Responsible party takes steps immediately to eliminate the non- egregious illicit discharge and to clean-up the discharge	Issue Verbal Warning, followed by NOV if discharge / litter is not immediately eliminated/ remediated	Remediation must be completed immediately. If not,City will proceed with NOV and escalating enforcement actions as needed.	N/A
Illicit Discharge	▪ Improper disposal/illegal dumping of household/ commercial/industrial chemicals and wastes to the MS4 (e.g., grease, oils, paint, etc.) ▪ Discharge of sewage, process wastewater, or wash water to the MS4 (e.g., commercial vehicle wash water, boat wash water, mop water)	Elimination or cessation of violating discharges, practices, and/or operations	Issue NOV *A	30 days or less as stipulated in NOV (unless an Appeal is approved that additional time is necessary)	Sec. 19-7
Illegal Connection	Illegal connection of pipes/conveyances that allow illicit discharges to enter the MS4 (e.g., connection from septic tank system, restrooms, floor drains)	Elimination of illegal connection	Issue NOV *A	30 days or less as stipulated in NOV (unless an Appeal is approved that additional time is necessary)	Sec. 19-8
Poor Housekeeping	Household/cleaning chemicals are stored outside or unlidded (not resulting in an illicit discharge to the MS4)	Improve housekeeping practices	Issue Verbal or Written warning *B	30 days or less	N/A

A* After issuance of NOV, escalating enforcement actions will be taken and penalties may be assessed if the violation is not corrected. The City will take any and all measures to correct the violation and impose appropriate penalties. If the violation is not corrected, the City may assess civil and criminal penalties of up to $1,000/day. See Sections 2.3 - 2.11 for more information on the enforcement measures and penalties that may be assessed.

B* Warnings will be used for minor issues that are easy to rectify and are not actively violating the City ’s Stormwater Management Ordinance & Illicit Discharge Prohibition.

Figure 2.1: Illicit Discharge / Illegal Connections Enforcement Flow Chart

Enforcement Procedures for Violations of the City of Powder Springs Stormwater Management Ordinance



3.0 Highly Visible Pollutant Sources (HVPS) and Industrial Sites

3.1 Purpose

The City of Powder Springs maintains an inventory of industrial sites and commercial businesses and facilities that are considered highly visible pollutant sources (HVPS). The City must inspect 100% of facilities listed on the inventories in the permit period and document the inspections on an approved site inspection checklist. The inspections are conducted to identify illicit discharges and illegal connections to the City 's MS4 that violate the City 's Stormwater Management Ordinance. The inspections also identify poor housekeeping practices that could potentially lead to stormwater violations and best management practices that could be implemented to reduce the potential for stormwater pollution.

3.2 Verbal and Written Warning

Upon identification of a non-egregious illicit discharge from private property to the City's stormwater system and when the property owner takes steps immediately to eliminate and to clean-up the discharge, a verbal warning to the responsible party may be deemed sufficient enforcement by the City. The City takes multiple factors into consideration when making the determination to issue a verbal warning, such as the compliance history of the site/operator (i.e., first-time offense versus repeat offense), the severity of the issue (whether the illicit discharge has entered and contaminated the City's stormwater system), whether the illicit discharge was accidental/unintentional, and the general good faith of the violator, as well as how easily and quickly the illicit discharge or potential illicit discharge can be remedied while at the site. The City will take steps, when issuing a verbal warning, to educate the responsible party about stormwater pollution and how to prevent future re-occurrences. Recurring or repeated violations, flagrant and/or intentional violations, or failure to properly and immediately eliminate and remediate the illicit discharge as instructed, will escalate the violation to the written notice procedures described below.

The City may also issue a verbal warning when a potential stormwater issue is identified that has not resulted in an illicit discharge or illegal connection, such as poor housekeeping practices, and inform the responsible party of corrective actions/best management practice(s) that should be implemented and a timeframe for completion. The City may also use a verbal warning in advance of a forthcoming, formal Notice of Violation (NOV) to give the property owner or responsible party advance notice.

The City staff or their designee may issue a verbal warning that may consist of a direct conversation while onsite, a phone call, or an email to notify the responsible person/property owner of a minor violation (as described above) or potential stormwater violation. The City will keep records of all verbal warnings issued. The City may require, at its discretion, the responsible person/property owner to submit documentation of the corrective actions completed and/or the City may conduct a follow-up inspection to verify compliance. If corrective actions have not been completed, the City will determine the best course of action, which could include issuance of an NOV or penalties if violations of the City 's Stormwater Management Ordinance are identified.

3.3. Violations [Sec. 19-12]

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

In the event the violation constitutes an immediate danger to public health or public safety, the City of Powder Springs 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.

3.4. Notice of Violation [Sec. 19-13]

Whenever the City of Powder Springs finds that a violation of this ordinance has occurred, the City of Powder Springs may order compliance by written notice of violation.

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 ordinance 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 City of Powder Springs by filing a written notice of appeal within thirty (30) days of service of notice of violation.

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.

3.5 Appeal of Notice of Violation [Sec. 19-15]

Any person receiving a Notice of Violation may appeal the determination of the City of Powder Springs. The notice of appeal must be received within thirty (30) days from the date of the Notice of Violation. Hearing on the appeal shall take place within 15 days from the date of receipt of the notice of appeal. The decision of the appropriate authority or their designee shall be final.

3.6. Enforcement Measures After Appeal [Sec. 19-16]

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 10 days of the decision of the appropriate authority upholding the decision of the City of Powder Springs, then representatives of the City of Powder Springs may enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

3.7. Costs of Abatement of The Violation [Sec. 19-17]

Within 45 days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the assessment or to the amount of the assessment within 15 days of such notice. If the amount due is not paid within thirty (30) days after receipt of the notice, or if an appeal is taken, within thirty (30) days after a decision on said appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

3.8 Civil Penalties [Sec. 19-18]

In the event the alleged violator fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within ten days, or such greater period as the City of Powder Springs shall deem appropriate, after the City of Powder Springs has taken one or more of the actions described above, the City of Powder Springs may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.

3.9 Criminal Penalties [Sec. 19-19]

For intentional and flagrant violations of this ordinance, the City of Powder Springs may issue a citation to the alleged violator requiring such person to appear in municipal court to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

3.10 Violations Deemed A Public Nuisance [Sec. 19-20]

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 ordinance is a threat to public health, safety, welfare, and environment and is declared and deemed a nuisance, and may be abated by injunctive or other equitable relief as provided by law.

3.11 Remedies Not Exclusive [Sec. 19-21]

The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable Federal, State or local law and the City of Powder Springs may seek cumulative remedies. The City of Powder Springs may recover attorney's fees, court costs, and other expenses associated with enforcement of this ordinance, including sampling and monitoring expenses.

3.12 Citizen Complaints

Members of the public can greatly assist the City by being the eyes and ears of the City. Citizens are encouraged to contact the City if they see illegal dumping or illicit discharge activities. The City of Powder Springs's official website provides contact information and an email link (on the main webpage) for citizens wishing to report illicit discharges or illegal dumping. The City of Powder Springs takes each complaint seriously and follows the procedures listed below to follow up on every complaint or tip.

1. When a complaint is received, all possible known information is recorded in the Request Tracker.
2. Inspection or investigation of the complaint is scheduled within **three (3) business days** of receiving a complaint (note - an immediate inspection may occur based on the severity of the violation).
3. Property or site is inspected.
4. Any and all violations are documented and photographed.
5. Attempt is made to have an in-person meeting with owner, operator, tenant, and/or Manager of property.
6. Case file is opened if violation has occurred.
7. The database is reviewed to check for previous violations at the same site.
8. Enforcement strategy is established (see enforcement mechanisms / actions).
9. The City may re-inspect the site to confirm compliance.
10. Case file closed out when property is in compliance with date of final inspection and compliance recorded.

3.13 Tracking

A list of all identified violations and enforcement actions will be maintained. The list will include pertinent information including:

- Facility Information
    - Name of owner/operator
    - Address
    - Type of site or issue (citizen complaint, industrial, HVPS, etc.)
- Date of complaint and site investigation
- Description of violation
- Enforcement actions used
- Time frame for
    - Investigation
    - Corrective action
    - Re-inspection
- Documentation of all actions taken
    - Inspection photos, notes, etc.
    - Enforcement actions taken
    - Referrals to other departments or agencies
- Date of violation resolution
- Notice of violations provided to violators as well as any other correspondence will be maintained on file.

3.14 Enforcement Mechanism Summary

The City evaluates each case individually to determine the type of appropriate actions / enforcement responses that are outlined above. These factors include a determination of the severity of the problem, potential danger to public health or safety, duration of non-compliance, effects on State waters, effects on the MS4, compliance history of the violator, and general good faith of the violator.

The City may elect to issue a verbal warning in some cases as outlined above in Section 2.2. If an active violation is discovered and an NOV is issued, the City may determine if this is an isolated incident and a NOV sent to the violator may be sufficient, assuming the violation is adequately corrected within the specified timeframe. Severe violations would be addressed with more severe enforcement actions. If a violation has occurred over a long period of time, enforcement actions will be escalated appropriately. If the violation has resulted in environmental harm to the water quality of State waters or poses danger to public health or safety, then the City shall respond with severe and prompt enforcement actions, including remediating the violation

and recouping costs from the violator. If the violator has damaged the MS4 or has caused such an action that will require additional costs, the City may assess the recovery of these costs as part of the assessment of penalties.

Examples of specific Illicit Discharge and Illegal Connection violations and stormwater-related issues that may occur at Industrial and Commercial sites, as well as enforcement mechanisms that may be used to address the violations thru the City's Stormwater Management Ordinance, are provided in Table 3.1. A flow chart (Figure 3.1) is also provided to visually illustrate enforcement procedures for violations of the City of Powder Springs's Stormwater Management Ordinance.

Table 3.1: HVPS and Industrial Site Inspection Enforcement Procedures

Violation	Examples	Action Required by Site / Violator	Enforcement Action	Timeframe to Complete Remediation	Ordinance Citation(s)
Illicit Discharge	▪ Auto maintenance activities or other automobile-related mechanical issues that inadvertently result in minor oil- stained soils or minor fluid leaks (i.e., oil changes, oil pan leak, 1st offense) ▪ Minor amount of litter and debris in a parking lot or from open trash can that is or could wash into City stormwater system (i.e., not intentional dumping of wastes)	Responsible party takes steps immediately to eliminate the non-egregious illicit discharge/potential illicit discharge and to clean-up the discharge	Issue Verbal Warning, followed by NOV if discharge is not immediately eliminated/remediated	Remediation must be completed immediately. If not, City will proceed with NOV and escalating enforcement actions as needed.	N/A
Illicit Discharge	▪ Improper disposal/illegal dumping of household/ commercial/industrial chemicals and wastes to the MS4 (e.g., grease, oils, pesticides, fertilizers, etc.) ▪ Discharge of sewage, process wastewater, or wash water to the MS4 (e.g., commercial vehicle wash water, boat wash water, mop water)	Elimination or cessation of violating discharges, practices, and/or operations	Issue NOV*A	30 days or less as stipulated in NOV (unless an Appeal is approved that additional time is necessary)	Sec. 19-7
Illegal Connection	Illegal connection of pipes/conveyances that allow illicit discharges to enter the MS4 (e.g., connection from septic tank system, restrooms, floor drains)	Elimination of illegal connection	Issue NOV*A	30 days or less as stipulated in the NOV (unless an Appeal is approved that additional time is necessary)	Sec. 19-8
Noncompliance with Stormwater Pollution Plan (SWPPP) and Stormwater Industrial General Permit (for Industrial Sites only)	▪ Not conducting & documenting facility site inspections ▪ Not conducting outfall inspections ▪ Lack of appropriate spill response equipment	Comply with SWMPP and Stormwater Industrial General Permit	Document noncompliance and recommend corrective actions, if appropriate. Notify the Georgia EPD*B	N/A-Timeframe established by Georgia EPD	N/A
Improper chemical and/or waste storage	▪ Open, unmarking or leaking containers, outdoor storage, lack of secondary containment (in situations where there is not an active illicit discharge)	Implement corrective actions to correct poor housekeeping (e.g., equip containers with lids, labels, indoor storage and/or secondary containment	Issue verbal or written warning *C	30 days or less	N/A

Inadequate or inaccessible spill response equipment	▪ Spill kit does not contain materials sufficient to clean up spill ▪ Spill kit is not located in an area that can easily be accessed/not near source of potential spill	Purchase and/or relocate appropriate spill response equipment	Issue verbal or written warning*c	30 days or less	N/A

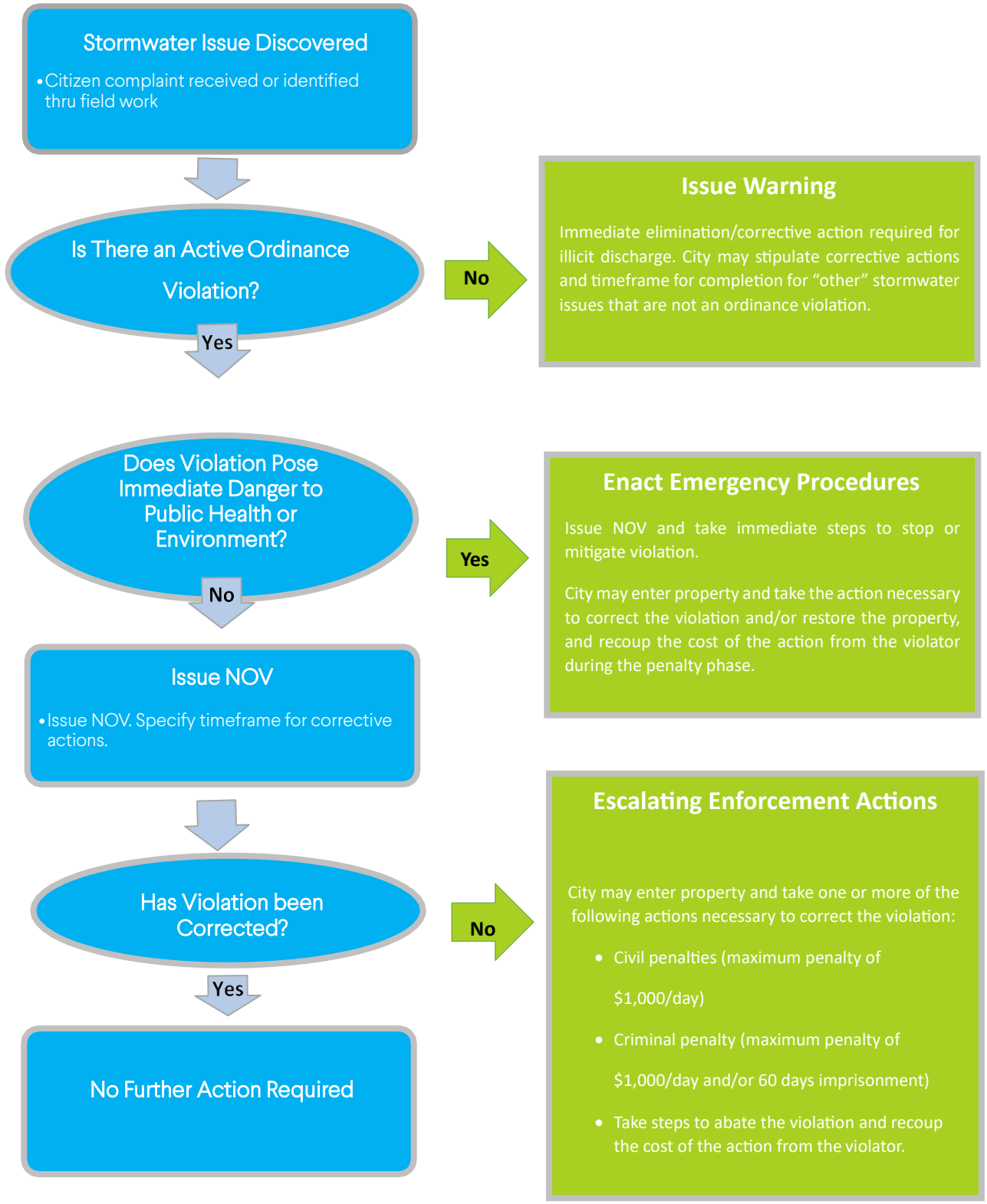
A* After issuance of NOV, escalating enforcement actions will be taken and penalties may be assessed if the violation is not corrected. The City will take any and all measures to correct the violation and impose appropriate penalties. If the violation is not corrected, the City may assess civil and criminal penalties of up to $1,000/day. See Sections 3.3 - 3.11 for more information on the enforcement measures and penalties that may be assessed.

B* If noncompliance with the SWMPP and/or IGP results in an illicit discharge to the City 's MS4, the City would issue an NOV and proceed with enforcement actions.

C* Warnings will be used for minor issues that are easy to rectify, are not actively violating the City 's Stormwater Management Ordinance & Illicit Discharge Prohibition, and/or are not enforceable thru the City 's Stormwater Management Ordinance.

Figure 3.1: HVPS and Industrial Site Enforcement Flow Chart

Enforcement Procedures for Commercial and Industrial Facilities that Violate the City of Powder Springs Stormwater Management Ordinance



4.0 Construction Site Stormwater Management

4.1 Purpose

The Soil Erosion and Sedimentation Control Ordinance, commonly referred to as an Erosion and Sedimentation (E&S) ordinance, prohibits excessive soil erosion and resulting sedimentation during land-disturbing activities, establishes provisions for application of control measures and practices, and sets minimum requirements for proper design, installation, and maintenance of best management practices at construction sites.

Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities. Therefore, plans for those land-disturbing activities which are not exempted by the City's E&S Ordinance shall contain provisions for application of soil erosion and sedimentation control measures and practices. The provisions shall be incorporated into the erosion and sedimentation control plans. Soil erosion and sedimentation control measures and practices shall conform to the minimum requirements of Section 9-11 B & C of the E&S Ordinance. The application 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 and sedimentation pollutions during all stages of any land-disturbing activity.

4.2 Inspection and Enforcement [Division IV]

The City of Powder Springs 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.

The City of Powder Springs 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

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.

4.3 Penalties and Incentives [Sec. 9-39]

The following enforcement mechanism will be used in the event a person violates the City's E&S ordinance.

4.3.1 Failure to Obtain A Permit for Land-Disturbing Activity [Sec. 9-36]

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.

4.3.2 Stop-Work Orders [Sec. 9-37]

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;

a) For a third and each subsequent violation, the Director or the Local Issuing Authority shall issue an immediate stop-work order; and;

b) All stop-work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred.

c) 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.

4.3.3 Bond Forfeiture [Sec. 9-38]

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 Article 9. 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.

4.3.4 Monetary Penalties [Sec. 9-39]

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. Each day during which violation or failure or refusal to comply continues shall be a separate violation.

4.4 Tracking

A list of all identified E&S-related violations and enforcement actions will be maintained. The list will include pertinent information including:

- Facility Information
    - Name of owner/operator
    - Address
    - Type of site or issue (citizen complaint, construction inspection, etc.)
- Dates
    - Inspections and re-inspections
    - Violations reported/discovered
    - Notice of violation issued
    - Stop Work Order
- Land Disturbance Permit
    - Address / Location
    - Owner / Permit Applicant
- Description of violation/noncompliance issue
- Type of Enforcement actions used
    - Notice of Violation (first, second, or subsequent)
    - Stop Work Order
    - Bond Forfeiture
    - Monetary Penalties

- Time frame for
    - Investigation
    - Corrective action
    - Re-inspection
- Documentation of all actions taken
    - Inspection photos, notes, etc.
    - Enforcement actions taken
        - Referrals to other departments or agencies
- Date of violation resolution and re-inspection date
- Notice of violations provided to violators as well as any other correspondence will be maintained on file.

4.5 Enforcement Mechanism Summary

The City evaluates each case individually to determine the type of appropriate actions / enforcement responses that are outlined above. These factors include a determination of the severity of the problem, potential danger to public health or safety, duration of non-compliance, effects on State waters, effects on the MS4, compliance history of the violator, and general good faith of the violator.

Examples of E&S violations and enforcement mechanisms are provided in Table 4.1. A flow chart (Figure 4.1) is also provided to visually illustrate enforcement procedures.

Table 4.1: Construction Site Stormwater Management Enforcement Procedures

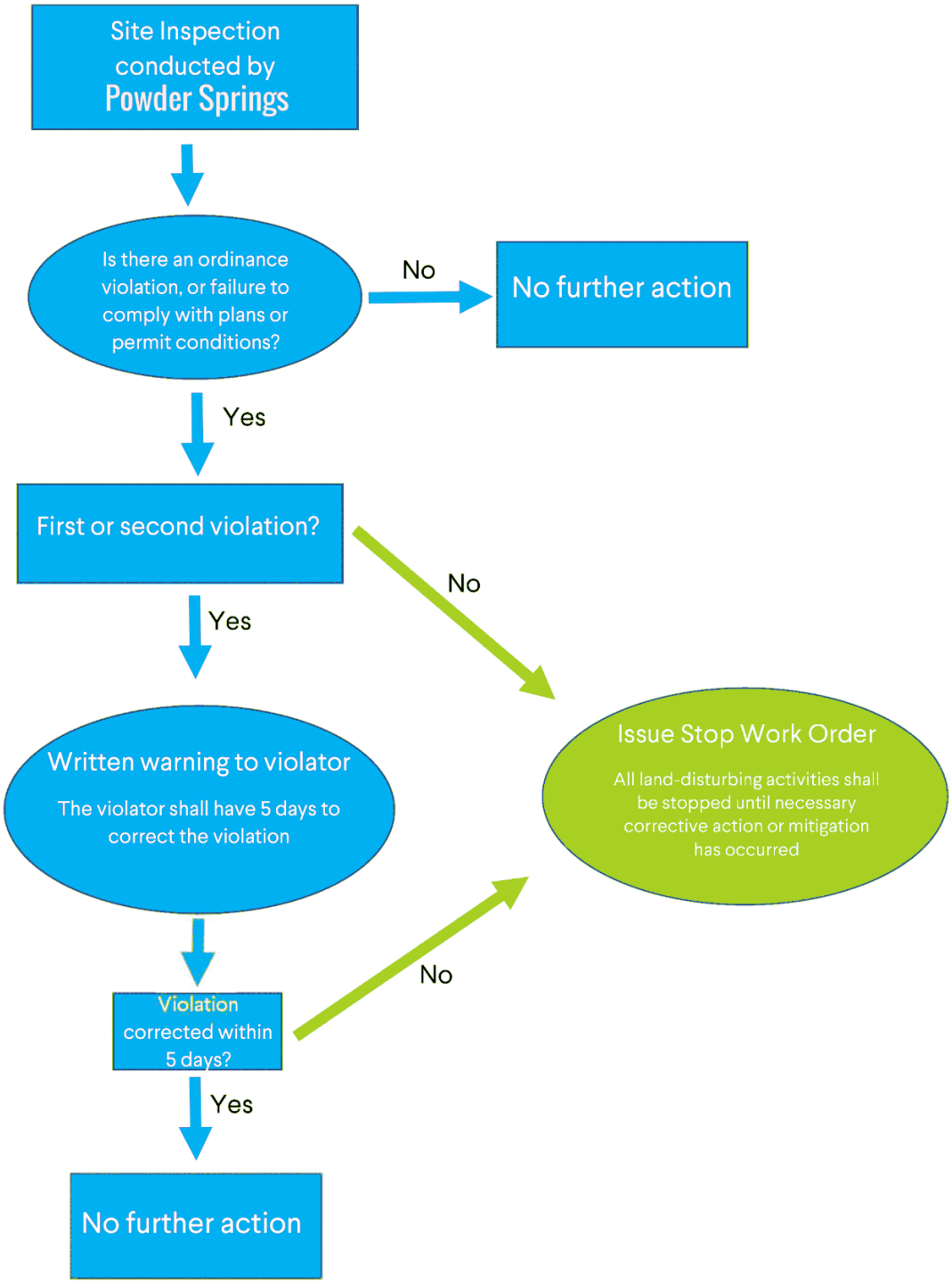
Violations	Action Required by Site	Enforcement Mechanisms	Time to Complete Remediation	Ordinance Citation
No Level 1A on site	Get a certified person on site as soon as possible	Give a written warning for the 1st and 2nd offense. For the 3rd offense a Stop Work is to be issued	Work may resume once a Level 1A is on site	9-11
No permit	Stop work	Post a Stop Work order, issue a site inspection form, and log into the E&S list	Work may resume once a permit is granted	9-11
Silt fence is more than 1/2 full	Remove the built-up silt	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	This is to be completed by the end of the work day. Special considerations can be made by the inspector, but in no case shall more than 24 hours be given for this repair as the contractor is to inspect E&S on a daily basis	9-11
Silt fence fabric is falling	Replace silt fence and remove any built-up silt	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	This is to be completed by the end of the work day. Special considerations can be made by the inspector, but in no case shall more than 24 hours be given for this repair as the contractor is to inspect E&S on a daily basis	9-11
Construction exit not in place	Immediately stop all site activity until the construction exit is in place. No vehicles should leave the site unless the sediment is removed from their tires	Post a Stop Work order, issue a site inspection form, and log into the E&S list	24 hours at most as this is required maintenance and should be checked weekly by the site	9-11
Construction exit is in disrepair and tracking is occurring	Maintain pad to original specifications	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	24 hours at most as this is required maintenance and should be checked weekly by the site	9-11
Inlet sediment trap not installed correctly	Replace as specified on plans	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	24 hours	9-11

Inlet sediment trap is more than half full	Remove the built-up silt	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	This is to be completed by the end of the work day. Special considerations can be made by the inspector, but in no case shall more than 24 hours be given for this repair as the contractor is to inspect E&S on a daily basis	9-11

Failure to maintain a stream buffer	Immediately stop all work in the buffer. Take every action to repair the buffer. Replace double row of type C silt fence at the buffer to prevent future encroachments	Post a Stop Work order, issue a site inspection form, and log into the E&S list	As soon as possible, but not more than 24 hours	9-11
Significant amounts of sediment leaving site	Immediately stop work and clean up the sediment which has left the site. Repair and update erosion control to prevent a future reoccurrence	Post a Stop Work order, issue a site inspection form, and log into the E&S list	As soon as possible, but not more than 24 hours	9-11
An area has gone longer than 14 days without grading	Stabilized site in accordance with site plan	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	48 hours	9-11
Failure to maintain BMPs in accordance with the plans and the Georgia Manual for Erosion and Sediment Control	Perform maintenance as outlined on the plans or the Georgia Manual for Erosion and Sediment Control	For the 1st and 2nd offense post a Notice of Violation. On the 3rd and subsequent offense post a stop work order. With each of these actions issue a site inspection form listing all violations with a time and date to complete remediation, and log into the E&S list	In no case shall more than 24 hours be given for actions requiring daily inspections	9-11

Figure 5.1: Construction Site Enforcement Flow Chart

Enforcement Procedures for Construction Sites that Violate the City of Powder Springs E&S Ordinance



5.0 Post-Construction Stormwater Management

5.1 Purpose [Sec. 11-2]

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 post-construction stormwater runoff and nonpoint source pollution associated with new development and redevelopment. Proper management of post-construction 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.

5.2 Stormwater Design Manual [Sec 11-5]

The City of Powder Springs will utilize the information presented in the latest edition of the Georgia Stormwater Management Manual, and any local relevant addenda, to ensure the proper implementation of post-construction stormwater management requirements.

5.3 Failure to Maintain [Sec. 11-43]

If the responsible party fails or refuses to meet the terms and conditions of an approved stormwater management inspection and maintenance agreement and plan and/or other post construction requirements, the City may correct a violation by performing the work necessary to place the stormwater management practice in proper working condition after **thirty (30) days** written notice. If, however, the violations pose an immediate danger to public health or safety, the City must only provide a **24-hour notice** to correct the violation. The City of Powder Springs may assess the responsible party for the cost of the repair work, which shall be a lien on the property, and may be placed on the ad valorem tax bill for such property and collected in the ordinary manner for such taxes by the City of Powder Springs.

5.4 Verbal and Written Warning

The City may issue a warning when minor post-construction issues are identified and the property owner or operator takes immediate steps to address the issue. Warnings should only be used for minor issues that are easy to rectify and have not caused serious and negative impact to the City's stormwater system or egregiously violated the stormwater inspection and maintenance agreement. In some cases, the stormwater issue may be addressed while the City inspector is onsite. Otherwise, the verbal/written warning will set forth an established deadline for corrective actions to be completed. All corrective actions shall be completed within **ten (10) business days**.

The City takes multiple factors into consideration when making the determination to issue a verbal warning, such as the compliance history of the site/operator (i.e., first-time offense versus repeat offense), the severity of the issue, whether the violation was accidental/unintentional, and the general good faith of the violator. The City will take steps, when issuing a verbal warning, to educate the responsible party about proper post-construction design and how to prevent future re-occurrences. Recurring or repeated violations, flagrant and/or intentional violations, or failure to properly and immediately eliminate and remediate the violation as instructed, will escalate the violation to the written notice described below. The City may also use a verbal

warning in advance of a forthcoming, formal NOV to give the property owner or responsible party advance notice.

The City staff or their designee may issue a verbal warning that may consist of a direct conversation while onsite, a phone call, or an email to notify the responsible person/property owner of a minor violation (as described above) or potential stormwater violation. The City will keep records of all verbal warnings issued. The City may require, at its discretion, the responsible person/property owner to submit documentation of the corrective actions completed and/or the City may conduct a follow-up inspection to verify compliance.

5.5 Violations, Enforcement and Penalties [Sec. 11-47]

Any action or inaction that violates the requirements of an approved stormwater management design plan, permit or inspection and maintenance agreement and plan, or other post construction requirement, may be subject to the enforcement actions outlined in the City's ordinance, as summarized below. Any such action or inaction that is continuous with respect to time may be deemed a public nuisance and may be abated by injunctive or other equitable relief.

5.6 Notice of Violation [Sec. 19-13]

The City's Ordinance summarizes the procedure to be followed by City staff in the event that a Notice of Violation (hereafter referred to interchangeably as NOV or notice of violation) is issued for a post construction violation. The ordinance text states the NOV shall include the following information:

1. The name and address of the owner, applicant, or other responsible person;
2. The address or other description of the site upon which the violation is occurring;
3. A statement specifying the nature of the violation;
4. A description of the remedial measures necessary to bring the action or inaction into compliance with the provisions of this ordinance, or the terms and conditions of the approved stormwater management design plan, permit, or inspection and maintenance agreement and plan, and the date for the completion of such remedial measures.
5. A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is issued; and
6. A statement that the determination of the violation may be appealed to the City of Powder Springs by filing a written notice of appeal within thirty (30) days after the notice of violation (except, that in the event the violation constitutes an immediate danger to public health or safety, a written notice of appeal must be filed within 24 hours after the violation.)

5.7 Penalties

Before assessing further penalties, the City will notify the responsibility party in writing of its intended action and provide at least **ten (10) days** to correct the violation. If, however, the violations pose an immediate danger

to public health or safety, the City must only provide a **24-hour notice** to correct the violation. In the event that remedial measures have not been completed in accordance with the terms and timeframe set forth in the NOV, the following penalties may be assessed as stated in the City's ordinance:

1. ***Stop Work Order.*** The City may issue a stop work order that shall be served on the owner, applicant, or other responsible person. The stop work order shall remain in effect until the owner, applicant, or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise corrected the violation or violations described therein. The stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the remedial measures necessary to correct such violation or violations.

2. ***Withhold Certificate of Occupancy.*** The City of Powder Springs may refuse to issue a certificate of occupancy for the building or other structure constructed or being constructed on the development site until the owner, applicant, or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise corrected the violation or violations described therein.

3. Permit ***Suspension, Revocation, or Modification.*** The City of Powder Springs may suspend, revoke, or modify the permit authorizing the land development activity. A suspended, revoked, or modified permit may be reinstated after the owner, applicant, or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise corrected the violation or violations described therein. The permit may be modified as the City of Powder Springs may deem necessary to enable the owner, applicant, or other responsible person to take the remedial measures necessary to correct such violation or violations.

4. ***Civil Penalties.*** In the event the owner, applicant or other responsible party fails to take the remedial measures set forth in the notice of violation or otherwise fails to correct the violation or violations described therein, by the date set forth in the notice of violation, the City of Powder Springs may impose a penalty not to exceed $1,000 (depending on the severity of the violation) for each day the violation remains unremediated after the date set forth in the violation.

5. ***Criminal Penalties.*** For intentional and flagrant violations of this ordinance, the City of Powder Springs may issue a citation to the owner, applicant or other responsible persons, requiring said person to appear in Court to answer criminal charges. Upon conviction, such person shall be punished by a fine not to exceed $1,000, imprisonment for up to 60 days, or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

5.8 Citizen Complaints

Members of the public can greatly assist the City by being the eyes and ears of the City. Citizens are encouraged to contact the City if they see post construction violations. The City of Powder Springs's official website provides contact information for citizens wishing to report issues. The City of Powder Springs takes each complaint seriously and follows the procedures listed below to follow up on every complaint or tip.

1. When a complaint is received, all possible known information is recorded in the Request Tracker.
2. Inspection or investigation of the complaint is scheduled within **three (3) business days** of receiving a complaint (note - an immediate inspection may occur based on the severity of the violation).
3. Property or site is inspected.
4. Any and all violations are documented and may be photographed.
5. Attempt is made to have an in person meeting with owner, operator, tenant, and/or Manager of property.
6. Case file is opened if violation has occurred.
7. The database is reviewed to check for previous violations at the same site.
8. Enforcement strategy is established (see enforcement mechanisms / actions).
9. The City may re-inspect the site to confirm compliance.
10. Case file closed out when property is in compliance with date of final inspection and compliance recorded.

5.9 Tracking

A list of all identified violations and enforcement actions will be maintained. The list will include pertinent information including:

- Facility Information
    - Name of owner/operator
    - Address
    - Type of site or issue (citizen complaint, post construction, etc.)
- Date of complaint and site investigation
- Description of violation
- Enforcement actions used
- Time frame for
    - Investigation
    - Corrective action
    - Re-inspection
- Documentation of all actions taken
    - Inspection photos, notes, etc.
    - Enforcement actions taken

    - Referrals to other departments or agencies
- Date of violation resolution
- Notice of violations provided to violators as well as any other correspondence will be maintained on file.

5.10 Enforcement Mechanism Summary

The City evaluates each case individually to determine the type of appropriate actions / enforcement responses that are outlined above. These factors include a determination of the severity of the problem, potential danger to public health or safety, duration of non-compliance, effects on State waters, effects on the MS4, compliance history of the violator, and general good faith of the violator.

Examples of post-construction violations and enforcement mechanisms are provided in Table 5.1. A flow chart (Figure 5.1) is also provided to visually illustrate enforcement procedure

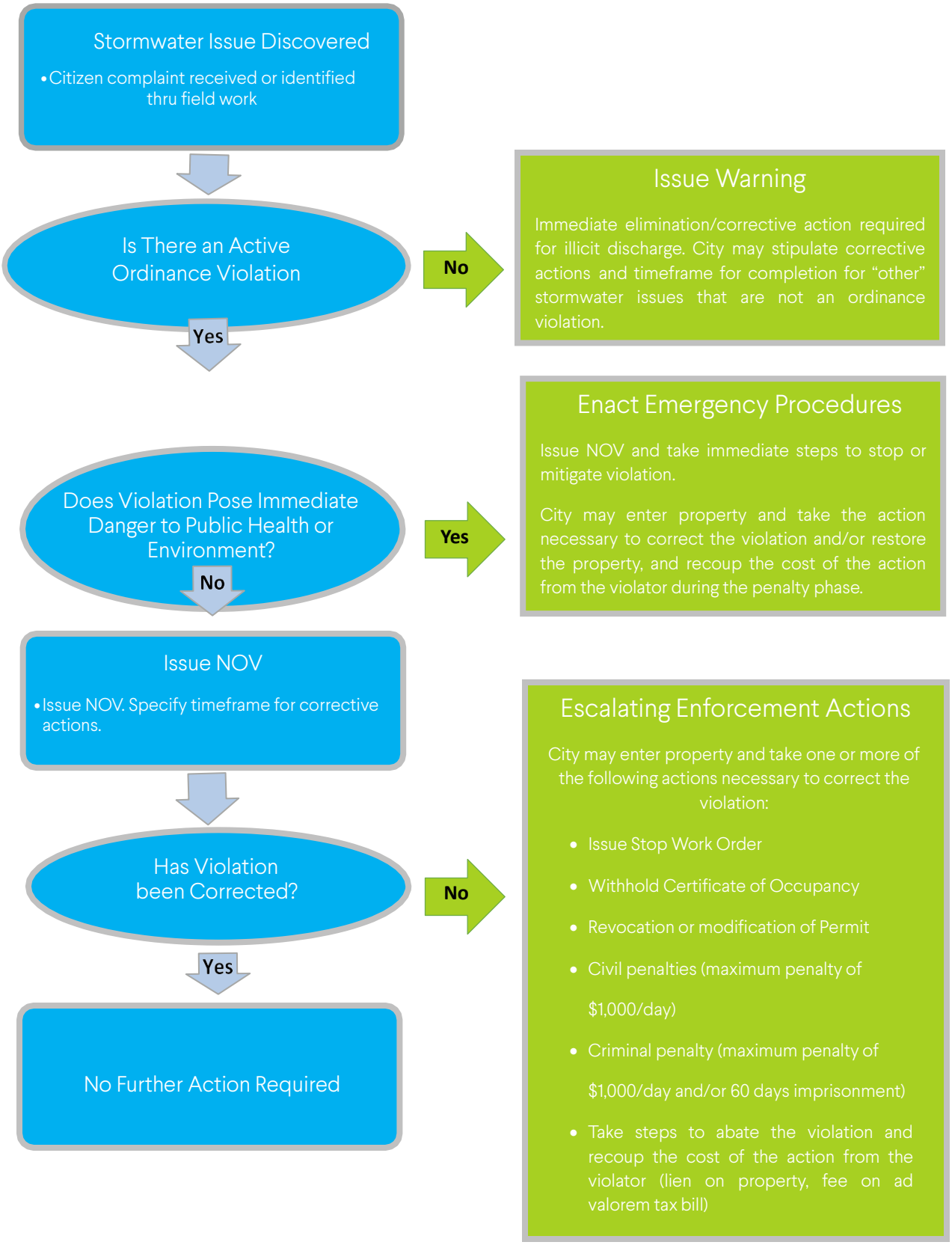
Table 5.1: Post Construction Stormwater Management Enforcement Procedures

Violation Example	Action Required by Site / Violator	Enforcement Action	Timeframe to Complete Remediation	Ordinance Citation(s)
• Minor erosion around inlet/outlet of a bioretention cell • Minor erosion around inlet/outlet of a bioretention cell	Immediate correction of deficiency noted	Issue Verbal Warning, followed by NOV if issue is not immediately eliminated/remediated	Remediation must be completed within 10 business days. If not, City will proceed with NOV and escalating enforcement actions as needed.	N/A
Dam, Side Slopes, Pond Floor, Outlet Structure, Emergency Spillway, Outfalls into Detention Pond, Sediment Accumulation, Trash and Debris	Correction of deficiency noted	Issue NOV *	24 hours if violation poses an immediate danger to public health & safety; otherwise, 30 days or less as specified in NOV (unless an Appeal is approved that additional time is necessary)	11-47

*After issuance of NOV, escalating enforcement actions will be taken and penalties may be assessed if the violation is not corrected. The City will take any and all measures to correct the violation and impose appropriate penalties. If the violation is not corrected, the City may assess civil and criminal penalties of up to $1,000/day, issue a stop work order, refuse a certificate of occupancy, or revoke/modify the LDA permit. See Sections 5.5 – 5.7 for more information on the enforcement measures and penalties that may be assessed.

Figure 5.1: Post Construction Stormwater Management Enforcement Procedure Flow Chart

Enforcement Procedures for Violations of Post Construction Standards in the City 's Stormwater Management Ordinance



Appendix H

Impaired Waters
Section 3.3.7 of the Permit

1. Population at the time of permit issuance: 10,000

2. The Impaired Waters Plan must, at a minimum, include:
   - A list of impaired waters and the pollutant(s) of concern, including the date of the 303(d) list used;
   - A 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 the waters and within the same watershed;
   - The sample location (instream or at the outfalls);
   - Information on the sample type, frequency, and any seasonal considerations;
   - Schedule for starting monitoring for any newly identified pollutants
   - BMPs that will be implemented to address each pollutant of concern; and
   - A schedule for implementing the BMPs;
   - The information to be included in each annual report, including the monitoring data, an assessment of data trends, and an assessment of the effectiveness of the BMPs.

3. If the population exceeds 10,000, and a water is impaired for bacteria, then the MS4 must also address the following in the Impaired Waters Plan:
   - Sampling frequency for bacteria
   - A description of the development of a Sampling Quality and Assurance Plan if the data is below water quality standards for two years.

NOTE: SEE ATTCHED IMPAIRED WATERS PLAN

Impaired Waters

Impaired Waters Monitoring and Implementation Plan

Noses Creek

Updated November 2024

prepared for

City of Powder Springs, Georgia

prepared by

Integrated Science & Engineering, Inc.

1039 Sullivan Road, Suite 200

Newnan, Georgia 30265

678.552.2106

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1. INTRODUCTION AND BACKGROUND

The City of Powder Springs (City) has developed this Impaired Waters Monitoring and Implementation Plan (MIP) to monitor water quality within an impaired segment of Noses Creek. Noses Creek is listed on the 2024 305(b)/303(d) report as not meeting its designated use due to Biota-F. This MIP is intended to satisfy requirements of the City's Phase I Large NPDES Permit to monitor and evaluate water quality within the impaired segment of Noses Creek, whose drainage basin includes portions of the City.

CONTACT

The primary contact with the City who will serve as a liaison with the Georgia Environmental Protection Division (EPD) is provided below.

Contact	
Name:	Tina Garver
Title:	Community Development Director
Mailing Address:	4181 Atlanta Street Powder Springs, GA 30127
Telephone:	(770) 943-8001 Ext. 361
Email:	tgarver@cityofpowdersprings.org

2. STREAM IMPAIRMENT

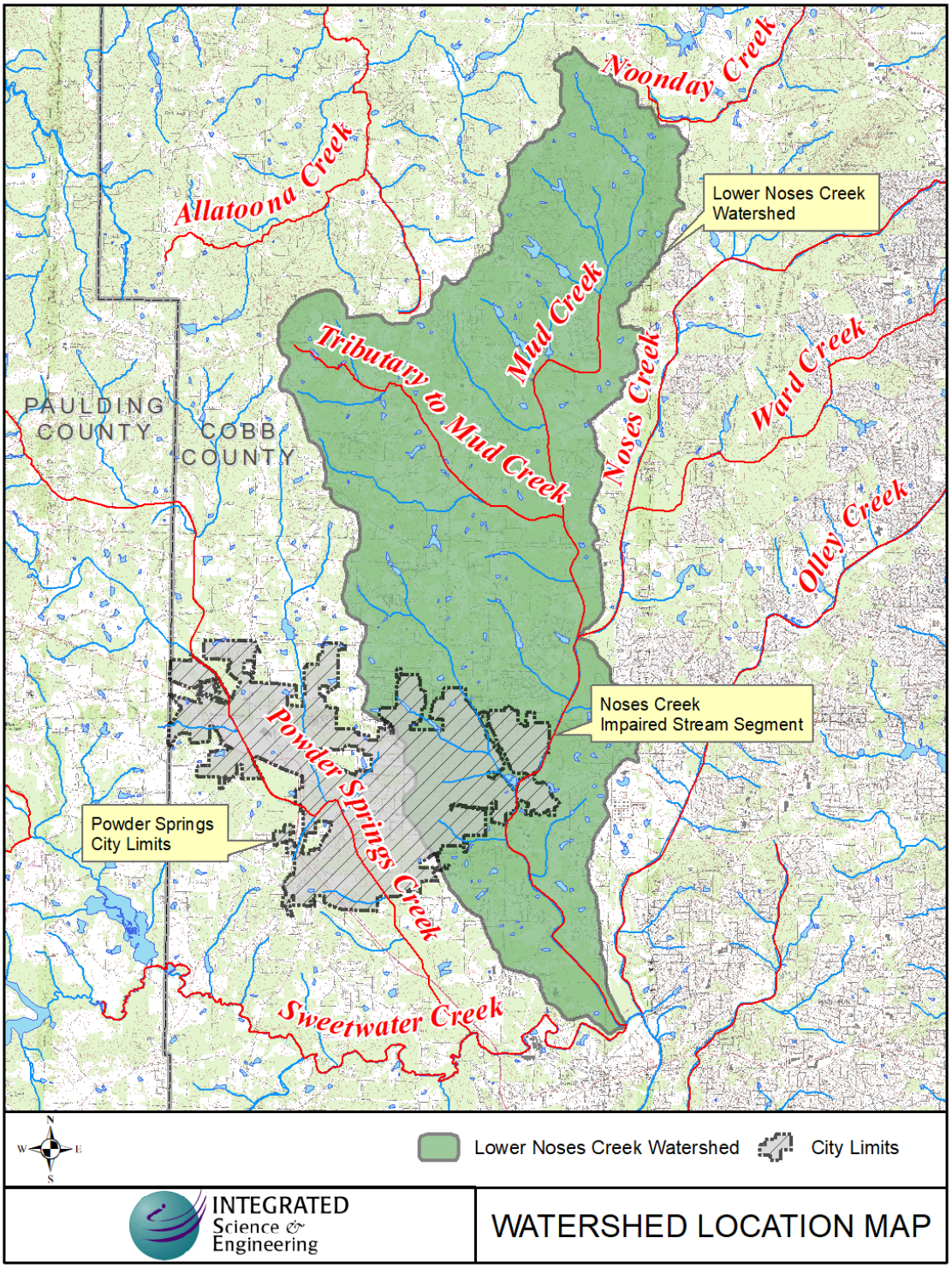
The 2024 305(b)/303(d) list identifies Noses Creek as not supporting its designated use of fishing. Details of the impairment are as follows:

Reach Name	Reach Location	Criterion Violated	Potential Cause(s)	Category	Extent
Noses Creek	Ward Creek to Sweetwater Creek	Biota-F	Urban Runoff	5	7 miles

EPD assigned all waters to one of five categories. EPD's explanation of Category 5 is: "Data indicate that at least one designated use is not being supported and TMDL(s) need to be completed for one or more pollutants".

The impaired segment of Noses Creek in relation to the City of Powder Springs is displayed on Figure 1.

FIGURE 1 - LOWER NOSES CREEK WATERSHED



3. WATER QUALITY SAMPLING & MONITORING PLAN

Water quality sampling methods will conform to the guidance in the EPD Watershed Protection Branch's *Protocols for Collection of Water Quality Data for Flowing Waters (Streams and Rivers)*, May 20, 2020.

GRAB SAMPLING

Sampling will be performed by collecting manual, "grab" samples for laboratory analysis. Grab samples are discrete water samples collected from the surface water body. Samples will be taken from the stream at a point as near to the centerline of the stream as feasible. Where possible, the sample will be collected directly into the sample container. If direct access to the stream is not within reach or wadeable, then supplemental sampling equipment (i.e. sampling rod with sterile collection bucket) will be utilized.

HANDLING AND PRESERVATION

After sample collection, sample handling will be minimized to ensure samples are not contaminated. Water samples will be sealed and placed on ice inside a cooler for delivery to the laboratory. Total suspended solids samples will be delivered to the laboratory within one day after sample collection to meet the laboratory holding time of 7 days.

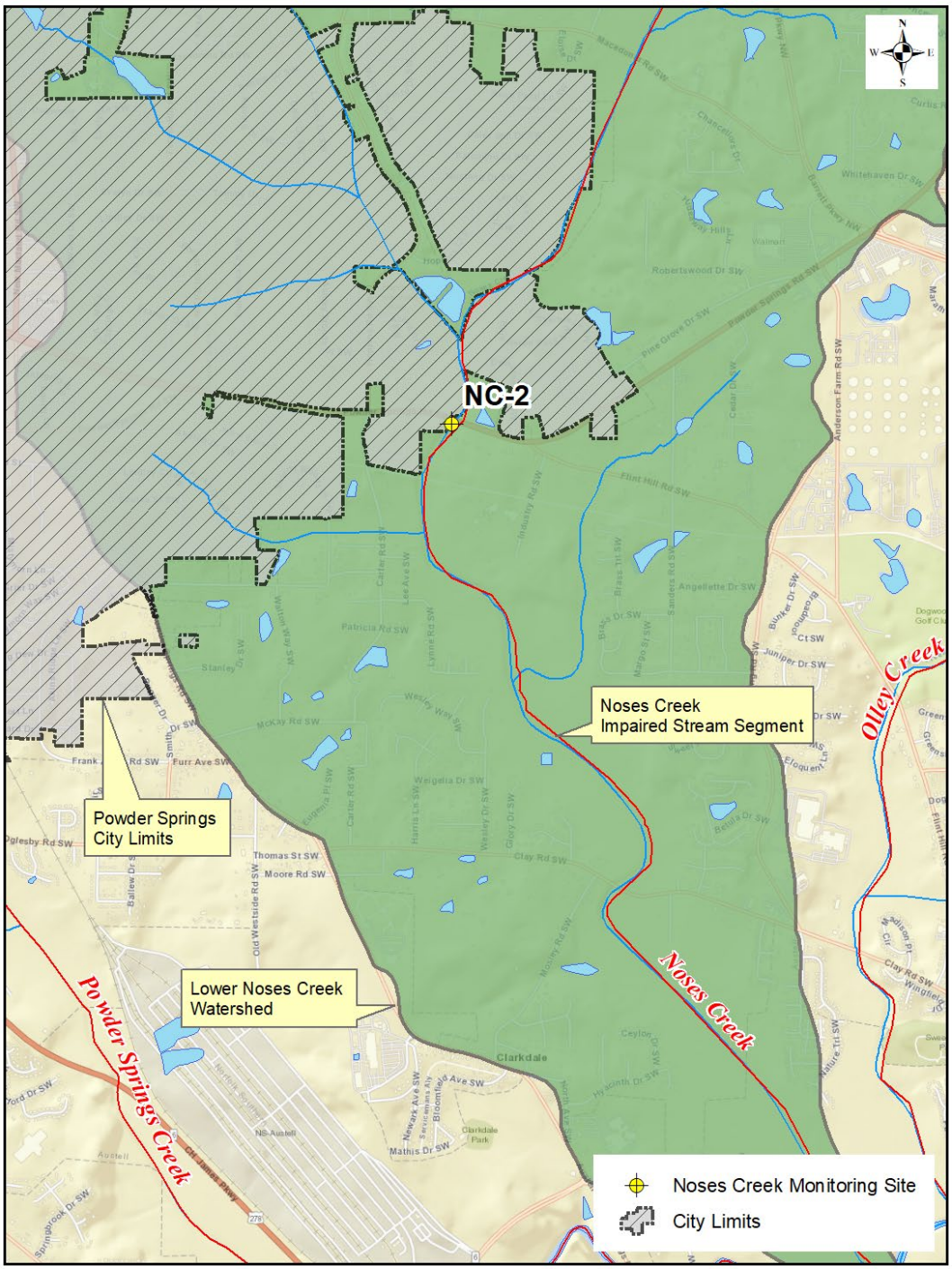
MONITORING LOCATION

Water quality monitoring will be performed at the location described in Table 1 and shown on Figure 2.

TABLE 1 – NOSES CREEK MONITORING LOCATION

Site ID	Road Crossing	Latitude	Longitude
NC-2	Powder Springs Road	33.859223	-84.652805

FIGURE 2 - NOSES CREEK MONITORING SITE



PARAMETER

Water quality samples will be collected as "grab" samples and analyzed for total suspended solids (TSS). TSS will serve as a surrogate in place of Biota-F monitoring. TSS will be analyzed according to the analytical methods summarized herein:

Parameter	Reporting Limit	Analytical Methods
Total Suspended Solids	5.0 mg/L	SM 2540D EPA 160.2

Analytical standards must comply with the requirements of *Title 40, Code of Federal Regulations*, Part 136. Sample analyses will be performed by an analyst certified in compliance with the *Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act*, as amended, or by a laboratory facility accredited in compliance with the *Georgia Rules for Commercial Environmental Laboratory Accreditation* (O.C.G.A. 12-2-9).

SAMPLING FREQUENCY

TOTAL SUSPENDED SOLIDS

Samples will be collected at NC-2 two times per year and analyzed in a laboratory for total suspended solids.

QUALITY ASSURANCE

For all laboratories, the Quality Assurance/Quality Control measures required by specific methods referenced in 40 CFR Part 136 must be implemented. Adequate records on analytical procedures ("bench sheets") and the Quality Assurance/Quality Control measures shall be maintained to document their proper implementation and performance, and the records shall remain on file and available for review for a minimum of three years.

4. BEST MANAGEMENT PRACTICES

The City will continue to implement its Stormwater Management Program (SWMP) under its current Phase I Large MS4 NPDES permit. The City will evaluate the monitoring data to ascertain the level of contamination in the reaches and its likelihood of origination within the City. As part of this MIP, the City will implement a number of best management practices (BMPs) in an effort to reduce the discharge of sediment from the MS4 into Noses Creek, which could influence the Biota-F impairment. These BMPs will include:

DRY WEATHER SCREENING OF THE MS4 OUTFALLS

The City is currently required to implement an illicit discharge detection and elimination (IDDE) program via their NPDES Phase I MS4 permit. As part of the IDDE program, the City is required to screen 100% of their MS4 outfalls within a 5-year period to determine if non-stormwater discharges are emanating from the system. Procedures for how to screen the system and source trace any discharges are included in the City's SWMP. Any illicit discharges discovered as part of this procedure will be documented, tested and source traced to their originating locations to determine if pollutants are being introduced to the stream. If a discharge is found, appropriate actions will be taken, which may include education, warnings and citations as warranted.

EROSION & SEDIMENT CONTROL PROGRAM

The City is an authorized Local Issuing Authority (LIA) and will continue to implement the State Erosion & Sediment Control Program in accordance with State Law, including the requirement that developers implement any supplemental BMPs as outlined in the Manual for Erosion & Sediment Control ("Green Book"). The City will ensure that construction sites are properly inspected and enforcement actions are taken as needed to bring the site into compliance.

IMPLEMENTATION SCHEDULE

The following schedule outlines the implementation plan for the BMPs discussed herein:

Annually (Beginning 2024-)

- Conduct Water Quality Monitoring
  - Total Suspended Solids – two samples per year at monitoring site NC-2.
- Conduct Dry Weather Screening on approximately 20% of the MS4 outfalls each reporting period.
- Implement the Erosion & Sediment Control Program

- Review the latest 305(b)/303(d) list to check if an impaired waterway within the City has been added to the list. Revise the MIP to address newly listed impairments.

5. EVALUATION AND REPORTING

EVALUATION OF MONITORING DATA

The City will evaluate the TSS data annually to determine if TSS loadings within the Lower Noses Creek watershed are increasing or decreasing. Since the State of Georgia has not established criteria for TSS, a standard has been established for the purposes of this MIP to evaluate the sampling results. This standard, referred to as a "common standard," is a value that if exceeded may indicate a threat to the aquatic ecosystem. The value shown herein is based on generally accepted water quality thresholds or has been utilized in other water quality studies:

TABLE 2 - WATER QUALITY STANDARDS

Parameter	Common Standard
Total Suspended Solids	20 mg / L

ANNUAL REPORTING

Each year, the City will develop a brief water quality report for Noses Creek outlining:

- Monitoring results of that year's data
- Trend analysis of the water quality monitoring data
- Documentation of any activities undertaken in that year pursuant to this MIP
- Recommendations of any revised or additional activities based on the evaluation

The analysis of each year's water quality data along with the trend analyses will be utilized to compare the water quality data relative to the standard and if the trend is showing improvement or degradation relative to previous years. The report will include an evaluation of the implementation and effectiveness of each BMP. If the trend analyses indicate that water quality is remaining stationary or improving, then a determination that the chosen BMPs are effective will be made. If the trend analyses indicate that water quality is showing further degradation, then either revised or additional BMPs will be identified for sources located within the City.

A copy of this report and sampling results / data will be included in the City's annual report for its Phase I Stormwater Management Program due June 15th of each year. If water quality monitoring data indicates there is no longer a water quality impairment, then the City of Powder Springs will work with EPD to develop a protocol to de-list the stream segment.

Impaired Waters Monitoring and Implementation Plan

Powder Springs Creek

Updated November 2024

prepared for

City of Powder Springs, Georgia

prepared by

Integrated Science & Engineering, Inc.

1039 Sullivan Road, Suite 200

Newnan, Georgia 30265

678.552.2106

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1. INTRODUCTION AND BACKGROUND

The City of Powder Springs (City) has developed this Impaired Waters Monitoring and Implementation Plan (MIP) to monitor water quality within an impaired segment of Powder Springs Creek. Powder Springs Creek is listed on the 2024 305(b)/303(d) report as not meeting its designated use due to Biota-F. This MIP is intended to satisfy requirements of the City's Phase I Large NPDES Permit to monitor and evaluate water quality within the impaired segment of Powder Springs Creek, whose drainage basin includes portions of the City.

CONTACT

The primary contact with the City who will serve as a liaison with the Georgia Environmental Protection Division (EPD) is provided below.

Contact	
Name:	Tina Garver
Title:	Community Development Director
Mailing Address:	4181 Atlanta Street Powder Springs, GA 30127
Telephone:	(770) 943-8001 Ext. 361
Email:	tgarver@cityofpowdersprings.org

2. STREAM IMPAIRMENT

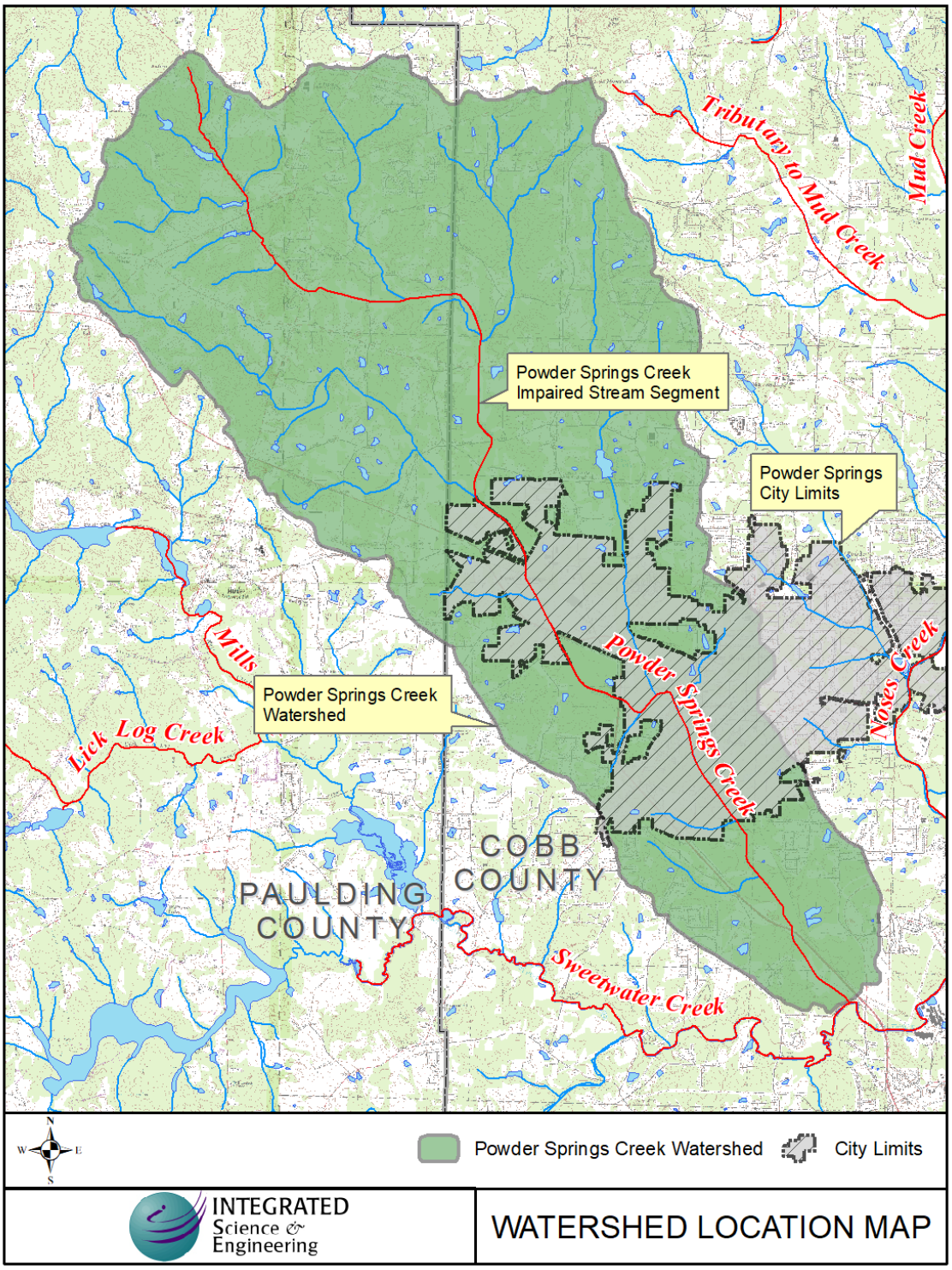
The 2024 305(b)/303(d) list identifies Powder Springs Creek as not supporting its designated use of fishing. Details of the impairment are as follows:

Reach Name	Reach Location	Criterion Violated	Potential Cause(s)	Category	Extent
Powder Springs Creek	Headwaters to Sweetwater Creek	Biota-F	Urban Runoff	5	12 miles

EPD assigned all waters to one of five categories. EPD's explanation of Category 5 is: "Data indicate that at least one designated use is not being supported and TMDL(s) need to be completed for one or more pollutants".

The impaired segment of Powder Springs Creek in relation to the City of Powder Springs is displayed on Figure 1.

FIGURE 1 - POWDER SPRINGS CREEK WATERSHED



3. WATER QUALITY SAMPLING & MONITORING PLAN

Water quality sampling methods will conform to the guidance in the EPD Watershed Protection Branch's *Protocols for Collection of Water Quality Data for Flowing Waters (Streams and Rivers)*, May 20, 2020.

GRAB SAMPLING

Sampling will be performed by collecting manual, "grab" samples for laboratory analysis. Grab samples are discrete water samples collected from the surface water body. Samples will be taken from the stream at a point as near to the centerline of the stream as feasible. Where possible, the sample will be collected directly into the sample container. If direct access to the stream is not within reach or wadeable, then supplemental sampling equipment (i.e. sampling rod with sterile collection bucket) will be utilized.

HANDLING AND PRESERVATION

After sample collection, sample handling will be minimized to ensure samples are not contaminated. Water samples will be sealed and placed on ice inside a cooler for delivery to the laboratory. Total suspended solids samples will be delivered to the laboratory within one day after sample collection to meet the laboratory holding time of 7 days.

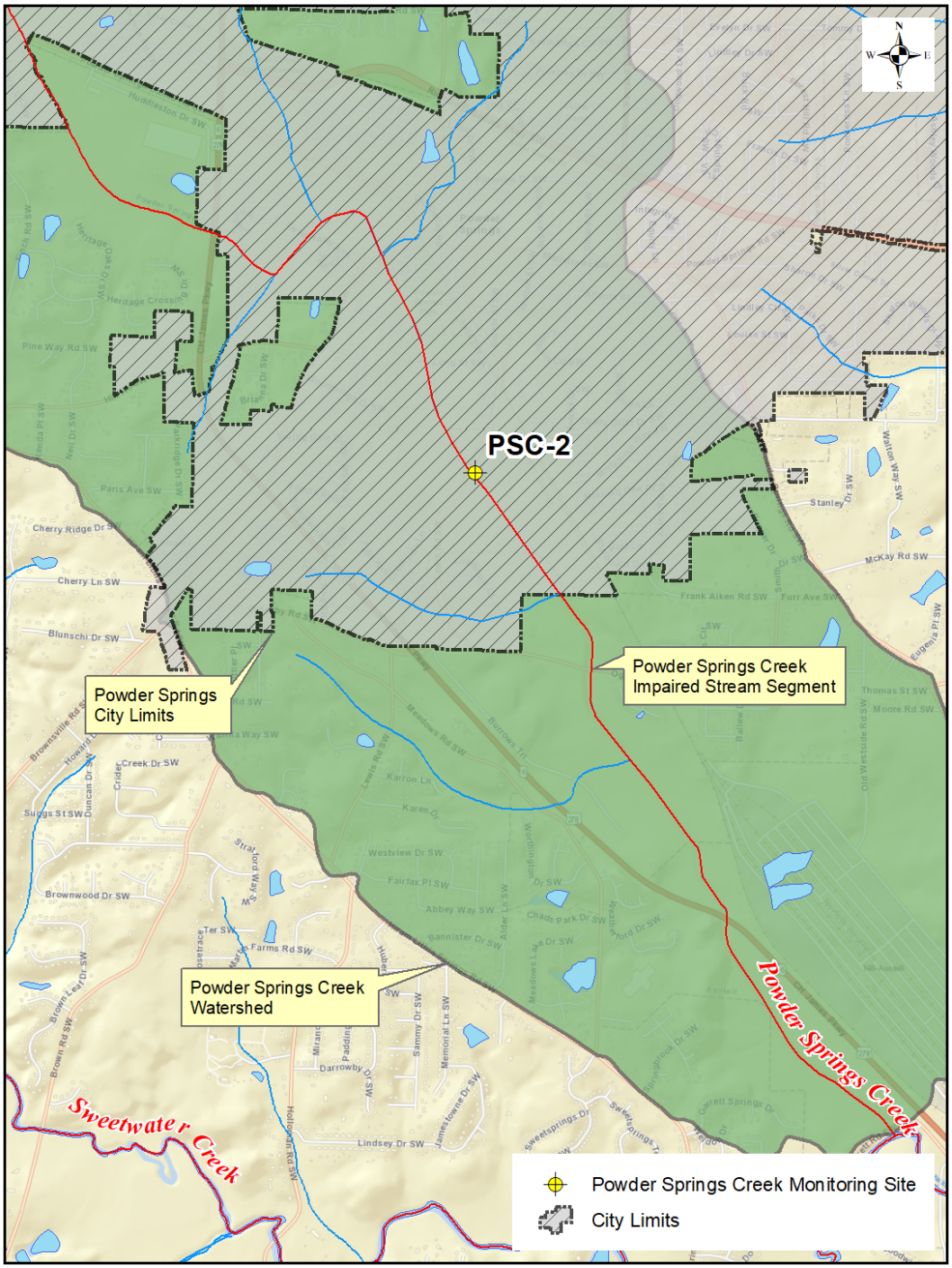
MONITORING LOCATION

Water quality monitoring will be performed at the location described in Table 1 and shown on Figure 1.

TABLE 1 – POWDER SPRINGS CREEK MONITORING LOCATION

Site ID	Road Crossing	Latitude	Longitude
PSC-2	Lewis Road	33.849735	-84.683406

FIGURE 2 – POWDER SPRINGS CREEK MONITORING SITE



PARAMETER

Water quality samples will be collected as "grab" samples and analyzed for total suspended solids (TSS). TSS will serve as a surrogate in place of Biota-F monitoring. TSS will be analyzed according to the analytical methods summarized herein:

Parameter	Reporting Limit	Analytical Methods
Total Suspended Solids	5.0 mg/L	SM 2540D EPA 160.2

Analytical standards must comply with the requirements of *Title 40, Code of Federal Regulations*, Part 136. Sample analyses will be performed by an analyst certified in compliance with the *Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act*, as amended, or by a laboratory facility accredited in compliance with the *Georgia Rules for Commercial Environmental Laboratory Accreditation* (O.C.G.A. 12-2-9).

SAMPLING FREQUENCY

TOTAL SUSPENDED SOLIDS

Samples will be collected at PSC-2 two times per year and analyzed in a laboratory for total suspended solids.

QUALITY ASSURANCE

For all laboratories, the Quality Assurance/Quality Control measures required by specific methods referenced in 40 CFR Part 136 must be implemented. Adequate records on analytical procedures ("bench sheets") and the Quality Assurance/Quality Control measures shall be maintained to document their proper implementation and performance, and the records shall remain on file and available for review for a minimum of three years.

4. BEST MANAGEMENT PRACTICES

The City will continue to implement its Stormwater Management Program (SWMP) under its current Phase I Large MS4 NPDES permit. The City will evaluate the monitoring data to ascertain the level of contamination in the reaches and its likelihood of origination within the City. As part of this MIP, the City will implement a number of best management practices (BMPs) in an effort to reduce the discharge of sediment from the MS4 into Powder Springs Creek, which could influence the Biota-F impairment. These BMPs will include:

DRY WEATHER SCREENING OF THE MS4 OUTFALLS

The City is currently required to implement an illicit discharge detection and elimination (IDDE) program via their NPDES Phase I MS4 permit. As part of the IDDE program, the City is required to screen 100% of their MS4 outfalls within a 5-year period to determine if non-stormwater discharges are emanating from the system. Procedures for how to screen the system and source trace any discharges are included in the City's SWMP. Any illicit discharges discovered as part of this procedure will be documented, tested and source traced to their originating locations to determine if pollutants are being introduced to the stream. If a discharge is found, appropriate actions will be taken, which may include education, warnings and citations as warranted.

EROSION & SEDIMENT CONTROL PROGRAM

The City is an authorized Local Issuing Authority (LIA) and will continue to implement the State Erosion & Sediment Control Program in accordance with State Law, including the requirement that developers implement any supplemental BMPs as outlined in the Manual for Erosion & Sediment Control ("Green Book"). The City will ensure that construction sites are properly inspected and enforcement actions are taken as needed to bring the site into compliance.

IMPLEMENTATION SCHEDULE

The following schedule outlines the implementation plan for the BMPs discussed herein:

Annually (Beginning 2024-)

- Conduct Water Quality Monitoring
  - Total Suspended Solids – two samples per year at monitoring site PSC-2.
- Conduct Dry Weather Screening on approximately 20% of the MS4 outfalls each reporting period.
- Implement the Erosion & Sediment Control Program
- Review the latest 305(b)/303(d) list to check if an impaired waterway within the City has been added to the list. Revise the MIP to address newly listed impairments.

5. EVALUATION AND REPORTING

EVALUATION OF MONITORING DATA

The City will evaluate the TSS data annually to determine if TSS loadings within the Powder Springs Creek watershed are increasing or decreasing. Since the State of Georgia has not established criteria for TSS, a standard has been established for the purposes of this MIP to evaluate the sampling results. This standard, referred to as a "common standard," is a value that if exceeded may indicate a threat to the aquatic ecosystem. The value shown herein is based on generally accepted water quality thresholds or has been utilized in other water quality studies:

TABLE 2 - WATER QUALITY STANDARDS

Parameter	Common Standard
Total Suspended Solids	20 mg / L

ANNUAL REPORTING

Each year, the City will develop a brief water quality report for Powder Springs Creek outlining:

- Monitoring results of that year's data
- Trend analysis of the water quality monitoring data
- Documentation of any activities undertaken in that year pursuant to this MIP
- Recommendations of any revised or additional activities based on the evaluation

The analysis of each year's water quality data along with the trend analyses will be utilized to compare the water quality data relative to the standard and if the trend is showing improvement or degradation relative to previous years. The report will include an evaluation of the implementation and effectiveness of each BMP. If the trend analyses indicate that water quality is remaining stationary or improving, then a determination that the chosen BMPs are effective will be made. If the trend analyses indicate that water quality is showing further degradation, then either revised or additional BMPs will be identified for sources located within the City.

A copy of this report and sampling results / data will be included in the City's annual report for its Phase I Stormwater Management Program due June 15th of each year. If water quality monitoring data indicates there is no longer a water quality impairment, then the City of Powder Springs will work with EPD to develop a protocol to de-list the stream segment.

2023/2024 Impaired Waters Monitoring & Evaluation

Noses Creek Powder Springs Creek

prepared for

City of Powder Springs, GA

May 2024

prepared by

Integrated Science & Engineering, Inc.

1039 Sullivan Road, Suite 200

Newnan, Georgia 30265

678.552.2106

INTEGRATED Science & Engineering

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APPENDICES

Appendix A: Lab Reports
Appendix B: BMP documentation

1 INTRODUCTION AND STUDY OBJECTIVES

In the past, Cobb County has conducted stream monitoring as a requirement of their Watershed Protection Plan and shared data with the City of Powder Springs (City). The City has determined that they will begin conducting monitoring of Noses Creek and Powder Springs Creek to ensure accurate collection of data. Segments of each of these waterbodies within the city limits are identified in the 2022 Integrated 305(b)/303(d) list as not meeting their designated use of fishing due to Biota-F. In March 2024, Impaired Waters Monitoring and Implementation Plans (MIPs) were prepared to formalize monitoring protocols. This Monitoring & Evaluation Report is intended to satisfy requirements of the City's Stormwater Management Program (SWMP) to monitor and evaluate water quality within impaired waterways within the City to maintain compliance with the City's Phase I Municipal Separate Storm Sewer System (MS4) stormwater permit.

2 NOSES CREEK

2.1 STREAM IMPAIRMENT

The 2022 Integrated 305(b)/303(d) list identifies Noses Creek within the City of Powder Springs as not supporting its designated use of fishing. Details of the impairment from the 305(b)/303(d) list are provided in Table 1:

TABLE 1 - NOSES CREEK STREAM IMPAIRMENT

Reach Name	Reach Location	Criterion Violated	Potential Cause(s)	Extent
Noses Creek	Ward Creek to Sweetwater Creek	Biota-F	Urban Runoff	7 miles

2.2 WATER QUALITY MONITORING

2.2.1 MONITORING LOCATIONS

One segment of Noses Creek located within the city limits is currently being monitored for Total Suspended Solids (TSS) as a surrogate for fish biota. Samples were collected at one location listed in Table 2.

TABLE 2 - NOSES CREEK MONITORING LOCATION

Site ID	Road Crossing	Latitude	Longitude
NC-2	Powder Springs Road	33.859223	-84.652805

2.2.2 PARAMETERS

Water quality samples were collected as “grab” samples and analyzed for TSS.

2.2.3 SAMPLING FREQUENCY

The MIP requires total suspended solids (TSS) sampling to be performed twice each year. During the reporting period, the City conducted two TSS sampling events.

2.2.4 MONITORING RESULTS

The State of Georgia has not established criteria for TSS. However, a "common standard" may be used as a value that if exceeded, may indicate a threat to the aquatic environment. This value, 20 mg/L, is generally accepted as a water quality threshold. During the reporting period, TSS concentrations were below the laboratory reporting limit (BRL) of 5.0 mg/L during a dry weather event and only slightly above the BRL during a wet weather event. Table 3 contains the sampling results.

TABLE 3 - NOSES CREEK TSS MONITORING RESULTS

Parameter	Units	Sample Date	NC-2
Total Suspended Solids (TSS)	mg /L	04/15/2024	BRL < 5.0
		04/22/2024	6.5

2.2.5 TREND ANALYSIS

In order to establish a trend, at least three years of monitoring data is required. In the past, Cobb County did not monitor Noses Creek for TSS. Because the 2023-2024 reporting period was the first time that TSS data was collected in Noses Creek, inadequate data is available to establish a water quality trend. A trend for the water quality in Noses Creek will be provided with the 2025-2026 reporting period. However, all TSS sampling conducted within the 2023-2024 reporting period met the common standard. This is a promising indication that the best management practices implemented by the City may be effective in addressing sources of TSS.

3 POWDER SPRINGS CREEK

3.1 STREAM IMPAIRMENT

The 2022 Integrated 305(b)/303(d) list identifies Powder Springs Creek within the City of Powder Springs as not supporting its designated use of fishing. Details of the impairment from the 305(b)/303(d) list are provided in Table 4.

TABLE 4 – POWDER SPRINGS CREEK STREAM IMPAIRMENT

Reach Name	Reach Location	Criterion Violated	Potential Cause(s)	Extent
Powder Springs Creek	Headwaters to Sweetwater Creek	Biota-F	Urban Runoff	12 miles

3.2 WATER QUALITY MONITORING

3.2.1 MONITORING LOCATIONS

One segment of Powder Springs Creek located within the city limits is currently being monitored for Total Suspended Solids (TSS) as a surrogate for fish biota. Samples were collected at one location listed in Table 5.

TABLE 5 – POWDER SPRINGS CREEK MONITORING LOCATION

Site ID	Road Crossing	Latitude	Longitude
PSC-2	Lewis Road	33.849735	-84.683406

3.2.2 PARAMETERS

Water quality samples were collected as “grab” samples and analyzed for TSS.

3.2.3 SAMPLING FREQUENCY

The MIP requires total suspended solids (TSS) sampling to be performed twice each year. During the reporting period, the City conducted two TSS sampling events.

3.2.4 TSS MONITORING RESULTS

The State of Georgia has not established criteria for TSS. However, a “common standard” may be used as a value that if exceeded, may indicate a threat to the aquatic environment. This value, 20 mg/L, is generally accepted as a water quality threshold. During the reporting period, TSS concentrations were

below the laboratory reporting limit (BRL) of 5.0 mg/L during a dry weather event and only slightly above the BRL during a wet weather event. Table 6 contains the sampling results.

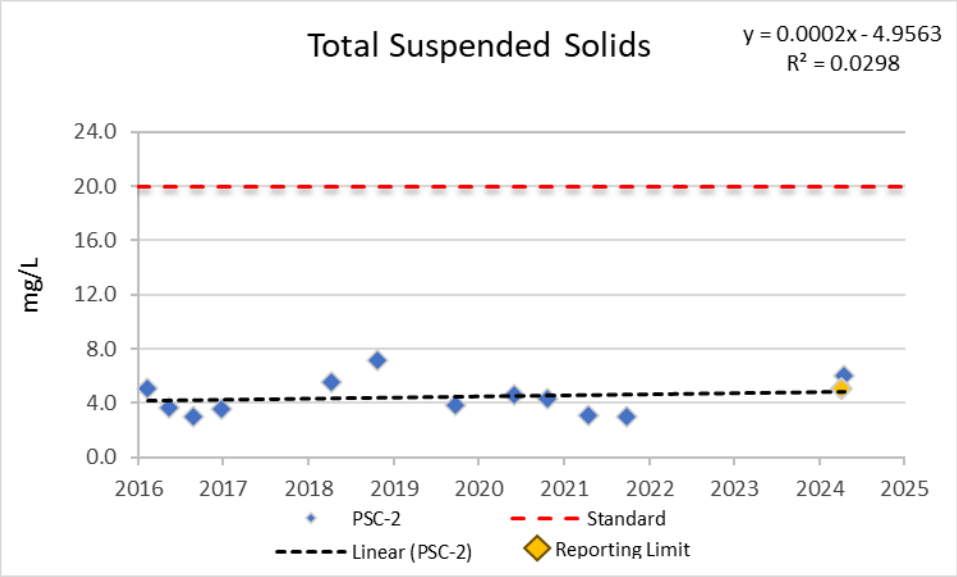
TABLE 6 – POWDER SPRINGS CREEK TSS MONITORING RESULTS

Parameter	Units	Sample Date	PSC-2
Total Suspended Solids (TSS)	mg/L	04/15/2024	BRL < 5.0
		04/22/2024	6.0

3.2.5 TSS TREND ANALYSIS

All TSS sampling collected during the 2023-2024 reporting period met the common standard. In the past, Cobb County conducted water quality monitoring of Powder Springs Creek as part of their Watershed Protection Plan at monitoring location ID RV_12_15979 (latitude 33.849716, longitude -84.683417), the same location as Site PSC-2. This data was uploaded to EPD's GOMAS site. Data is available intermittently between 2016-2021, with no data reported for 2017, 2022, and 2023. This historical data, in conjunction with the City's monitoring data collected in 2023-2024, was used to conduct a trend analysis (Figure 1).

FIGURE 1 POWDER SPRINGS CREEK TSS TREND 2016-2021, 2024



The slightly degrading trend is due to the laboratory reporting limit of 5.0 mg/L during 2023 versus the detection limit of 3.0 mg/L in the Cobb County data from previous years. This skews the 2023 results upward, which appears to indicate a degrading trend. Analytical results show every TSS concentration well below the common standard of 20.0 mg/L indicated by the dashed red line.

The data provided by Cobb County was not collected on a routinely consistent basis between 2016 to 2021. There is a variation in the number of samples collected each year. Data is not available for 2017, 2022 or 2023. Because of this, the trend analysis may not be completely accurate. After the City completes the collection of data for three years, the Cobb County data will be removed from the trend analysis.

The laboratory reports are provided in Appendix A.

4 ASSESSMENT OF THE EFFECTIVENESS OF CURRENT BMPS

Beginning during the 2023-2024 reporting period, the City began conducting their own stream monitoring, rather than relying on Cobb County. This action ensures the City has the most accurate monitoring results. Because three years of data are needed in order to establish a data trend, the City cannot provide an accurate trend analysis of Noses Creek at this time. In addition, the historical data for Powder Springs Creek used to develop a trend analysis may skew the results. Accurate trend analyses of Noses Creek and Powder Springs Creek will be provided after the City has obtained three years of monitoring data in the 2025-2026 reporting period.

In the March 2024 MIPs, the City outlined activities to be implemented to address the fish biota impairments in Noses Creek and Powder Springs Creek. These activities include:

- Dry Weather Screening of Outfalls
- Implementation of a Construction Site Management Program

The City inspects a portion of its MS4 outfalls each reporting period to ensure that 100% of the outfalls are inspected within the 5-year permit cycle. The outfalls were inspected during dry weather to identify any potential illicit discharges, including any sources contributing to TSS levels. During the reporting period, the City inspected 24 outfalls. The City determined that 8 of the inspected structures were actually outlets and not outfalls. Of the remaining 16 outfalls inspected, the City identified dry weather flow at 6 outfalls. Source tracing revealed that 2 of the 6 flows were illicit discharges and were referred to Cobb County Sewer for remediation. The remaining 4 dry weather flows were determined to most likely be groundwater sources (see attached spreadsheet).

Because Biota F impairments are due to sediment in the stream, the chosen best management practices include activities to reduce the amount of total suspended solids reaching the streams. This includes such activities as street sweeping and a construction site management program. The City is an authorized Local Issuing Authority. The City ensures that all active construction sites are thoroughly inspected at a frequency to identify any deficiencies. If problems are noted on the site, the City immediately takes enforcement to ensure the deficiencies are corrected. This ensures that sediment does not leave a construction site and potentially enter the stream. During the 2023-2024 reporting period, the City conducted construction site inspections to ensure best management practices were in place to address erosion and sedimentation. During the reporting period, the City conducted 463 inspections of 58 construction sites. The City issued 19 verbal warnings. Spreadsheets documenting the inspections and any noted deficiencies are attached.

At both the Noses Creek and Powder Springs Creek monitoring sites, the TSS levels were well below the common standard during the 2023-2024 reporting period. Therefore, the BMPs appear to currently be effective.

APPENDIX A

eurofins | Environment Testing

April 17, 2024

Jason Ray
Integrated Science & Engineering, Inc.

1039 Sullivan Road, Suite 200
Newnan GA 30265

RE: Powder Springs

Dear Jason Ray: Order No: 2404H03

Eurofins Environment Testing Southeast-Atlanta, LLC (EETSE-Atlanta) received 2 samples on April 15, 2024 1:42 pm for the analyses presented in following report.

No problems were encountered during the analyses except as noted in the Case Narrative or by qualifiers in the report or QC Summary. Additionally, all results for the associated Quality Control samples were within EPA and/or EETSE-Atlanta established limits.

EETSE-Atlanta accreditations are as follows:

-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/23-06/30/24.

-State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective through 06/30/24 and Total Coliforms/ E. coli, effective 04/25/23-04/24/24.

-AIHA LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Metals and PCM Asbestos), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/25.

These results relate only to the items tested as received. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Corene Dephillips

Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Analytical Environmental Services, Inc.
3080 Presidential Drive, Atlanta, GA 30340 Phone: (770) 457-8177

CHAIN OF CUSTODY

Work Order: 2404H03
Page 1 of 1

COMPANY: ISE	ADDRESS: 1039 Sullivan Rd STE 200 Newnan, GA 30265
PHONE: (678) 552.2106	EMAIL: jray@intse.com
SAMPLED BY: Glenn K	SIGNATURE: Glenn Kowalski

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	ANALYSIS REQUESTED: TSS	PRESERVATION (see codes)	REMARKS	Number of Containers
1	PSC-2	4.15.24	1110	X		SW	1		dry event	1
2	NC-2	↓	1120	↓		↓	1		↓ ↓	1
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. Glenn Kowalski	4.15.24/1342	1. Zaagan Mely	04/15/24 1342
2.		2.	
3.		3.	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
(Client) FedEx UPS US mail courier
other: _____

PROJECT INFORMATION
PROJECT NAME: Powder Springs
PROJECT #:
SITE ADDRESS:
SEND REPORT TO: Jason Ray
INVOICE TO (IF DIFFERENT FROM ABOVE):
QUOTE #: _____ PO#: _____

RECEIPT
Total # of Containers: 2

Turnaround Time (TAT) Request
- [x] Standard
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [ ] Other _____

REGULATORY PROGRAM (if any):
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water ST=Stormwater WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

4.30.20_COC

White Copy - Original; Yellow Copy - Client

Client:	Integrated Science & Engineering, Inc.	**Client Sample ID:**	PSC-2
Project Name:	Powder Springs	**Collection Date:**	4/15/2024 11:10:00 AM
Lab ID:	2404H03-001	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Residue, Suspended (TSS) by SM2540D-2015								
Residue, Suspended (TSS)	BRL	5.0		mg/L	374714	1	04/17/2024 09:00	EZ

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	F	Analyzed in the lab which is a deviation from the method
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Client:	Integrated Science & Engineering, Inc.	**Client Sample ID:**	NC-2
Project Name:	Powder Springs	**Collection Date:**	4/15/2024 11:20:00 AM
Lab ID:	2404H03-002	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Residue, Suspended (TSS) by SM2540D-2015								
Residue, Suspended (TSS)	BRL	5.0		mg/L	374714	1	04/17/2024 09:00	EZ

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	F	Analyzed in the lab which is a deviation from the method
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

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SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Integrated Science & Engineering, Inc.** Work Order Number: **2404H03**
2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ☑ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	◉	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	○	◉	○		
5.	Custody seals intact on shipping container?	○	○	◉		
6.	Cooler temperature(s) within limits of 0-6°C? [See item 12 for temperature recordings.]	◉	○	○		
7.	Chain of Custody (COC) present?	◉	○	○		
8.	Chain of Custody signed, dated, and timed when relinquished and received?	◉	○	○		
9.	Sampler name and/or signature on COC?	◉	○	○		
10.	Were all samples received within holding time?	◉	○	○		
11.	TAT marked on the COC?	◉	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions.	

12. Cooler 1 Temperature 1.8 °C | Cooler 2 Temperature _____ °C | Cooler 3 Temperature _____ °C | Cooler 4 Temperature _____ °C
Cooler 5 Temperature _____ °C | Cooler 6 Temperature _____ °C | Cooler 7 Temperature _____ °C | Cooler 8 Temperature _____ °C

13. Comments: _____

I certify that I have completed sections 1-13 (dated initials). ZB 04/15/24

		Yes	No	N/A	Details	Comments
14.	Temperature blanks present?	○	◉	○		
15.	Were sample containers intact upon receipt?	◉	○	○		
16.	Custody seals present on sample containers?	○	◉	○		
17.	Custody seals intact on sample containers?	○	○	◉		
18.	Do sample container labels match the COC?	◉	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
19.	Are analyses requested indicated on the COC?	◉	○	○		
20.	Were all of the samples listed on the COC received?	◉	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
21.	Was the sample collection date/time noted?	◉	○	○		
22.	Did we receive sufficient sample volume for indicated analyses?	◉	○	○		
23.	Were samples received in appropriate containers?	◉	○	○		
24.	Were VOA samples received without headspace (< 1/4" bubble)?	○	○	◉		
25.	Were trip blanks submitted?	○	○	◉	listed on COC ☐ not listed on COC ☐	

26. Comments: _____

I certify that I have completed sections 14-26 (dated initials). BMS 4/16/24

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
27.	Have containers needing chemical preservation been checked?*	○	○	◉		
28.	Containers meet preservation guidelines?	○	○	◉		
29.	Was pH adjusted at Sample Receipt?	○	○	◉		

***Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH. This also excludes metals by EPA 200.7, 200.8 and 245.1 which will be verified between 16 and 24 hours after preservation.**

I certify that I have completed sections 27-29(dated initials). BMS 4/16/24

Client: Integrated Science & Engineering, Inc.
Project Name: Powder Springs
Lab Order: 2404H03

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
2404H03-001A	PSC-2	4/15/2024 11:10:00AM	Surface Water	Residue, Suspended (TSS) by SM2540D		4/17/2024 9:00:00 AM	04/17/2024
2404H03-002A	NC-2	4/15/2024 11:20:00AM	Surface Water	Residue, Suspended (TSS) by SM2540D		4/17/2024 9:00:00 AM	04/17/2024

Client: Integrated Science & Engineering, Inc.
Project Name: Powder Springs
Workorder: 2404H03

ANALYTICAL QC SUMMARY REPORT

BatchID: 374714

Sample ID: **MB-374714** Client ID: Units: **mg/L** Prep Date: **04/17/2024** Run No: **542987**
SampleType: **MBLK** TestCode: **Residue, Suspended (TSS) by SM2540D-2015** BatchID: **374714** Analysis Date: **04/17/2024** Seq No: **12945523**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Residue, Suspended (TSS)	BRL	5.0									

Sample ID: **LCS-374714** Client ID: Units: **mg/L** Prep Date: **04/17/2024** Run No: **542987**
SampleType: **LCS** TestCode: **Residue, Suspended (TSS) by SM2540D-2015** BatchID: **374714** Analysis Date: **04/17/2024** Seq No: **12945524**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Residue, Suspended (TSS)	240.0	20.0	226.7		106	80.41	119.59				

Sample ID: **2404H17-001BDUP** Client ID: Units: **mg/L** Prep Date: **04/17/2024** Run No: **542987**
SampleType: **DUP** TestCode: **Residue, Suspended (TSS) by SM2540D-2015** BatchID: **374714** Analysis Date: **04/17/2024** Seq No: **12945529**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Residue, Suspended (TSS)	6.500	5.0						6.500	0	10	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

End of Report

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April 23, 2024

Jason Ray
Integrated Science & Engineering, Inc.

1039 Sullivan Road, Suite 200
Newnan GA 30265

RE: Powder Springs

Dear Jason Ray: Order No: 2404O16

Eurofins Environment Testing Southeast-Atlanta, LLC (EETSE-Atlanta) received 2 samples on April 22, 2024 11:10 am for the analyses presented in following report.

No problems were encountered during the analyses except as noted in the Case Narrative or by qualifiers in the report or QC Summary. Additionally, all results for the associated Quality Control samples were within EPA and/or EETSE-Atlanta established limits.

EETSE-Atlanta accreditations are as follows:

-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/23-06/30/24.

-State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective through 06/30/24 and Total Coliforms/ E. coli, effective 04/25/23-04/24/24.

-AIHA LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Metals and PCM Asbestos), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/25.

These results relate only to the items tested as received. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Corene Dephillips

Project Manager

AES | ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Analytical Environmental Services, Inc.
3080 Presidential Drive, Atlanta, GA 30340 Phone: (770) 457-8177

CHAIN OF CUSTODY

Work Order: 2404014
Page 1 of 1

COMPANY:	ADDRESS:
ISE	1039 Sullivan Rd STE 200 Newnan, Ga 30265
PHONE: (678) 552.2106	EMAIL: jray@intse.com
SAMPLED BY: Glenn K	SIGNATURE:

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	ANALYSIS REQUESTED: TSS	PRESERVATION (see codes)	REMARKS	Number of Containers
1	PSC-2	4.22.24	1005	x		SW	1		wet weather	1
2	NC-2	↓	1015	↓		↓	1		↓ ↓	1
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1.	4.22.24/1110	1.	4.22.24 1110
2.		2.	
3.		3.	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
(Client) FedEx UPS US mail courier
other: _____

PROJECT INFORMATION
PROJECT NAME: Powder Springs
PROJECT #:
SITE ADDRESS:
SEND REPORT TO: Jason Ray
INVOICE TO (IF DIFFERENT FROM ABOVE):
QUOTE #: _____ PO#: _____

RECEIPT
Total # of Containers: 2

Turnaround Time (TAT) Request
- [x] Standard
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [ ] Other _____

REGULATORY PROGRAM (if any):
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water ST=Stormwater WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

4.30.20_COC

White Copy - Original; Yellow Copy - Client

Client:	Integrated Science & Engineering, Inc.	**Client Sample ID:**	PSC-2
Project Name:	Powder Springs	**Collection Date:**	4/22/2024 10:05:00 AM
Lab ID:	2404O16-001	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Residue, Suspended (TSS) by SM2540D-2015								
Residue, Suspended (TSS)	6.0	5.0		mg/L	374992	1	04/23/2024 09:00	EZ

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	F	Analyzed in the lab which is a deviation from the method
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Client:	Integrated Science & Engineering, Inc.	**Client Sample ID:**	NC-2
Project Name:	Powder Springs	**Collection Date:**	4/22/2024 10:15:00 AM
Lab ID:	2404O16-002	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Residue, Suspended (TSS) by SM2540D-2015								
Residue, Suspended (TSS)	6.5	5.0		mg/L	374992	1	04/23/2024 09:00	EZ

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	F	Analyzed in the lab which is a deviation from the method
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

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SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Integrated Science & Engineering, Inc.** Work Order Number: **2404O16**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ☑ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	◉	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	○	◉	○		
5.	Custody seals intact on shipping container?	○	○	◉		
6.	Cooler temperature(s) within limits of 0-6°C? [See item 12 for temperature recordings.]	◉	○	○		
7.	Chain of Custody (COC) present?	◉	○	○		
8.	Chain of Custody signed, dated, and timed when relinquished and received?	◉	○	○		
9.	Sampler name and/or signature on COC?	◉	○	○		
10.	Were all samples received within holding time?	◉	○	○		
11.	TAT marked on the COC?	◉	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions.	

12. Cooler 1 Temperature 0.6 °C Cooler 2 Temperature 0.6 °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C
Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

13. Comments: _____

I certify that I have completed sections 1-13 (dated initials). ZB 04/22/24

		Yes	No	N/A	Details	Comments
14.	Temperature blanks present?	◉	○	○		
15.	Were sample containers intact upon receipt?	◉	○	○		
16.	Custody seals present on sample containers?	○	◉	○		
17.	Custody seals intact on sample containers?	○	○	◉		
18.	Do sample container labels match the COC?	◉	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
19.	Are analyses requested indicated on the COC?	◉	○	○		
20.	Were all of the samples listed on the COC received?	◉	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
21.	Was the sample collection date/time noted?	◉	○	○		
22.	Did we receive sufficient sample volume for indicated analyses?	◉	○	○		
23.	Were samples received in appropriate containers?	◉	○	○		
24.	Were VOA samples received without headspace (< 1/4" bubble)?	○	○	◉		
25.	Were trip blanks submitted?	○	○	◉	listed on COC ☐ not listed on COC ☐	

26. Comments: _____

I certify that I have completed sections 14-26 (dated initials). BMS 4/22/24

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
27.	Have containers needing chemical preservation been checked?*	○	○	◉		
28.	Containers meet preservation guidelines?	○	○	◉		
29.	Was pH adjusted at Sample Receipt?	○	○	◉		

***Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH. This also excludes metals by EPA 200.7, 200.8 and 245.1 which will be verified between 16 and 24 hours after preservation.**

I certify that I have completed sections 27-29(dated initials). BMS 4/22/24

Client: Integrated Science & Engineering, Inc.
Project Name: Powder Springs
Lab Order: 2404O16

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
2404O16-001A	PSC-2	4/22/2024 10:05:00AM	Surface Water	Residue, Suspended (TSS) by SM2540D		4/23/2024 9:00:00AM	04/23/2024
2404O16-002A	NC-2	4/22/2024 10:15:00AM	Surface Water	Residue, Suspended (TSS) by SM2540D		4/23/2024 9:00:00AM	04/23/2024

Client: Integrated Science & Engineering, Inc.
Project Name: Powder Springs
Workorder: 2404O16

ANALYTICAL QC SUMMARY REPORT

BatchID: 374992

Sample ID: **MB-374992** Client ID: Units: **mg/L** Prep Date: **04/23/2024** Run No: **543418**
SampleType: **MBLK** TestCode: **Residue, Suspended (TSS) by SM2540D-2015** BatchID: **374992** Analysis Date: **04/23/2024** Seq No: **12958445**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Residue, Suspended (TSS)	BRL	5.0									

Sample ID: **LCS-374992** Client ID: Units: **mg/L** Prep Date: **04/23/2024** Run No: **543418**
SampleType: **LCS** TestCode: **Residue, Suspended (TSS) by SM2540D-2015** BatchID: **374992** Analysis Date: **04/23/2024** Seq No: **12958446**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Residue, Suspended (TSS)	270.0	20.0	226.7		119	80.41	119.59				

Sample ID: **2404O16-002ADUP** Client ID: **NC-2** Units: **mg/L** Prep Date: **04/23/2024** Run No: **543418**
SampleType: **DUP** TestCode: **Residue, Suspended (TSS) by SM2540D-2015** BatchID: **374992** Analysis Date: **04/23/2024** Seq No: **12958448**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Residue, Suspended (TSS)	6.000	5.0						6.500	8.00	10	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

End of Report

Appendix I

Municipal Employee Training
Section 3.3.8 of the Permit

Employee Category	Primary Job Duties	Examples of Relevant Training Topics
Public Works Staff	Maintenance of stormwater infrastructure and streets/ROWs; green infrastructure maintenance; litter pick-up; investigating illicit discharges; pond maintenance	• BMPs for stormwater structure and street/ROW maintenance • Good housekeeping practices for municipal facilities • Proper waste management and disposal practices • How to identify and eliminate illicit discharges • Green infrastructure & pond maintenance practices
Community Development/ Engineering Staff	Site plan review; permitting; construction site inspections and enforcement (limited as the City is not an LIA)	• Site plan review procedures • How to track additions of new structures for MS4/outfall/pond/green infrastructure inventories, etc. • Green infrastructure design and construction • Construction site inspections / requirements of the E&S ordinance
Code Enforcement Staff	Enforcement of local ordinances	• Training regarding use of the City's Enforcement Response Plan • Tracking of site investigations and complaint resolution
City Administrative Staff / City Clerk	Logging stormwater-related questions and complaints into the City's Work Order system; public education and public involvement activity coordination; ordinance updates; webpage management	• Educational topics to include in Public Education/Public Involvement BMPs & stormwater webpage • Ways to encourage active public participation • Regulatory requirements for local ordinances