CITY OF NORCROSS, GA
ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN

Procedures included below are deemed to be the most appropriate for the City of Norcross's (City) land use, resources and environment. These procedures constitute a program that will be the most likely to detect illicit discharges. Please note the City will follow the standards and methodologies for surface water quality monitoring set forth by the Metropolitan North Georgia Water Planning District (MNGWPD).

1. Dry Weather Screening Location and Schedule

Outfalls to be sampled will be selected based on the City's map of discharges that outfall to Waters of the State.

The City has two watersheds. The City will conduct annual inspections by watershed sector such that 100% of the City will be screened over the course of the permit. Discharges to be sampled in any given year will be prioritized based on the following criteria without regard to the order in which they are listed here:

- Outfall leads to impaired waters listed stream;
- Age of development, i.e. older areas of town will receive priority for dry weather screening;
- Visual screening results, or other evidence of illicit discharge;
- Proximity to industrial or commercial facilities.

Discharges sampled during each year will be noted on a map, and that map will be provided to the EPD in the Annual Report.

If an outfall is added to the City during the course of a permit year through a new infrastructure project or development project, the outfall will be screened in that year if:

- The outfall is located in the watershed sector being screened in that year
- Or the outfall is located in a previously screened watershed sector

Please note outfalls added to the City after the dry weather screening for that year has been completed will be dry weather screened the following year if located in a previously screened area.

City outfalls that are found to have a dry weather flow regardless of their watershed sector will be screened that year and appropriate action taken.

2. Field Screening/Sampling Procedures

a) *Weather Conditions:* Screening will take place during dry weather conditions (i.e. no rain or snow event >0.1"/day in the previous 72 hours). If there is no flowing water at the time of field screening, the sample team will record "no flow observed." If flow is observed, the sample team will perform visual and chemical monitoring (as described below) to determine if there is an illicit discharge.

b) Visual Screening: Sample team will record the following observations about the outfall:
- Visually inspect the discharge for rate of flow, color, oil sheen, floatables, stains from illicit dumping, and odor.
- Visually inspect discharge for biological indicators including: emergent vegetation, algae blooms, lack of or stunted vegetation, presence or absence of aquatic life, and fish kills.

c) Chemical Screening and/or Sampling: Sample team will sample the flow for the following parameters:
- Measure the discharge from the outfall for the following parameters using a probe(s): pH, temperature, and conductivity.
- Sample the discharge with a colorimeter or test kit for fluoride and surfactants/detergents. Please note that if a colorimeter or test kit is not available, the samples will be delivered to a certified laboratory for analysis.

d) Fecal Coliform Monitoring: Collect grab samples for fecal coliform if conductivity or surfactants are measured above baseline limits in Section 3. A sample should also be taken if visual evidence is present including milky white or gray color and floatables, a sewage odor, or other applicable evidence of potential sanitary sewer discharge.

3. Baseline Limits for Sampling Parameters

If dry weather field sampling detects limits of the above-mentioned parameters that exceed the baseline limits described below, an illicit discharge is likely, and an attempt to trace the source as outlined in Section 4 will be performed. The following parameters were chosen to address the potential contaminants most likely to be found in the local area, including wastewater, wash water, construction site runoff and industrial contaminants.

Parameter	Baseline Limit	Potential Source of Contamination
pH	Less than 6.0 or greater than 9.0	Low pH – Industries including textile mills, pharmaceuticals, metal finishers/fabricators, companies dealing in resins, fertilizers or pesticides.
		High pH – Industries including soap manufacturers, metal plating, concrete, lime and rubber or plastic producers.
Conductivity	Greater than 300 µmho/cm	Presence of contaminating ions from wastewater (sanitary or industrial).
Fluoride	Greater than 0.2 mg/L	Presence of contaminating ions from wastewater (sanitary or industrial) or potable water.
Detergents/ Surfactants	Greater than 0.2 ppm	Industrial and household wash water, wastewater, laundromats.

4. Illicit Discharge Source Tracing

Once an illicit discharge is detected through the dry weather screening program, it will be the responsibility of the City to attempt to trace the source and remove the illicit connection. The source tracing program will involve four elements:

- Visual inspection
- Additional field sampling
- Stormwater inspection
- Dye testing

If there is a dry weather flow, the City will initiate a source tracing and removal program. City staff will visually inspect up-system of the outfall in question to search for evidence indicating the source of the illicit discharge or illegal dumping. If the up-system search does not provide definitive evidence of the source, then City staff may elect to perform one or more of the following: additional field sampling, dye testing, and/or stormwater inspection.

Additional field sampling may be performed within the conveyance system. Samples will be taken at storm sewer line connections and convergences to determine the source of illicit discharge.

The City may also elect to perform a stormwater site inspection at a facility suspected of having an illicit connection. During inspection, dye testing may be performed to determine if a tie-in exists. Potential illegal connections, such as floor drains, will be investigated as part of this inspection process.

Dye testing may be performed if the suspected illicit connection is likely to be an illegal sanitary sewer line tie-in, i.e. sampling revealed high levels of fecal coliform, detergent, or high conductivity. In dye testing, non-toxic fluorescent dye is flushed down a toilet or sink. If the dye appears in the storm sewer system, then an illegal tie-in is confirmed.

5. Violations and Enforcement

Following completion of the source tracing effort, the City will document the measures taken to identify the source as well as the results of the investigation and any actions taken therein. The City Code Enforcement Department will first visit the site and give a verbal warning with a 24-hour deadline to correct the violation. If the violation is determined to be intentional then a citation will immediately be issued. If after 24-hours the property owner has not corrected the violation then a notice of violation will be issued. The provisions of the Illicit Discharge and Illegal Connection Ordinance will be used when determining violations, sending notifications, and enforcing measures necessary to abate the violation and/or restore the property.

1. Once an illicit discharge is discovered or reported a sample will be taken and tested per this plan.
2. An official with the public works department will visit the site to issue a 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, premises or land upon which the violation is occurring, or has occurred;
c. A statement specifying the nature of the violation;
d. A description of the remedial measures necessary to restore compliance with this article and a time schedule for the completion of such remedial action;
e. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed; and,
f. A statement that the determination of violation may be appealed to the department by filing a written notice of appeal within 30 days of service of notice of violation.

Such notice of violation may require without limitation:

a. The performance of monitoring, analysis, and reporting;
b. The elimination of illicit discharges and illegal connections;
c. That violations of this article shall cease and desist;
d. The abatement of nonstormwater discharges, the remediation of land or the effects of pollution, and the restoration of any affected property to its unaffected condition;
e. Payment of costs to cover administrative and abatement costs;
f. The implementation of pollution prevention practices;
g. The development and provision to the department of written remediation or action plans;
h. The development and provision to the department of documents showing the location and discharge points of conveyances, pipes, channels, or drains; and
i. Any other actions that will lead to the remedy of a condition of violation of this article.

3. 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 three days of the decision of the director upholding the decision of the director or his designee, then, in addition to any other remedies that may be available, representatives of the department or its contractors may enter upon the subject private premises, property or facility, where they are then authorized to take any and all actions or measures necessary to abate the violation and/or restore the property. Such measures or actions shall include but not be limited to repairs, maintenance, containment, cleanup and remediation. It shall be a violation of this article for any person, owner, agent or person in possession of any premises, property or facility to refuse to allow the department or designated contractor to enter upon the premises for the purposes set forth above.
4. *Criminal Penalties* – For violations of this article, the Department may issue a citation to the alleged violator requiring such person to appear in a court of competent jurisdiction to answer charges for such violation. Upon conviction, such person shall be punished by a fine not to exceed $1,000.00 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.

6. Quality Assurance/Quality Control (QA/QC) Procedures

a) *Confirmation:* All visual observations will be documented via a digital photograph of the outfall. If the screening reveals values outside the acceptable range for dry weather screening, a re-screening may be conducted within 24 hours, at least four hours after the first screening. If the re-screening reveals values outside these ranges, the City must initiate source tracing procedures.

b) *Equipment:* Probe(s) will be used to measure temperature, dissolved oxygen, turbidity, conductivity, and pH. Brands that will be acceptable will include LaMotte, Hach, and Horiba. A colorimeter will be used to measure fluoride and surfactants. If reagents are not available for testing with the colorimeter, an individual testing kit may be purchased for that particular parameter. Acceptable brands will include LaMotte and Hach. Alternatively, a sample may be collected and sent to a laboratory for analysis.

c) *Probes:* Any probes used to measure turbidity, conductivity, dissolved oxygen, and pH must be calibrated at the start of each day when sampling will take place. Readings should be taken directly in outfall flow, if possible. All probes should be washed with distilled water before and after each reading is taken. If in-flow sampling is not possible, then a container or bucket should be used to collect a sample to take readings. The bucket should be rinsed twice with flow from outfall and readings taken on the third fill. Dissolved oxygen (DO) should only be measured if a reading can be taken in-flow. A bucket with flow from an outfall will not give an accurate DO reading.

d) *Colorimeter or Test Kits:* Containers used to test samples in the colorimeter or test kits must be rinsed twice with sample water before a sample is analyzed. Gloves must be worn while sampling or performing field analysis. Manufacturer's directions should be followed for all reagents used in the measurement of surfactants and total fluoride. After a sample has been analyzed, the container should be rinsed with distilled water. All reagent waste must be disposed of properly.

e) *Fecal Coliform Procedure:* Fecal coliform samples must be taken directly in the outfall flow in a sterilized container to avoid contamination. Samples will be de-chlorinated with Sodium Thiosulfate, and stored in a cooler with ice. Samples will be processed within six hours of the event. Fecal samples may only be performed once at applicable outfalls during sampling event due to cost considerations. Fecal coliform samples will be taken to a local EPA/State accredited laboratory for testing.

7. Sample Team and Training

The City will ensure that Sample Team members will be trained on these procedures before beginning dry weather screening. The City will train staff internally or send staff to similar training being conducted locally. If training is not available, the City will contract with an approved testing company to conduct the tests.

8. Data Collection and Reporting

The Sample Team will be responsible for collecting all dry weather screening data, keeping a copy on site and including a copy in the Annual Report to EPD. Should a suspected illicit discharge be detected through the dry weather screening program, it will also be the responsibility of the Sample Team to notify the appropriate party to initiate source tracing procedures as described in the SWMP.

9. Complaint Response

The City's official website contains information on stormwater management issues. The website has an area where any citizen can report a stormwater complaint. These complaints are logged electronically and forwarded to the proper department for investigation and resolution.

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 (check): ☐RCP ☐CMP ☐PVC ☐HDPE ☐Other: _____ ☐ Open Channel (check): ☐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 ☐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):		Fecal Coliform (MPN/100ml):	
Surfactants (mg/L):		Analysis Comments:	
Grab sample for lab? (fluoride/surfactants) ☐Yes ☐No		Bacteria Grab sample for lab? (fecal 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