Greenville Heart & Soul of the Delta

John H. Cox III
Mayor of Greenville
Bradley R. Jones
Public Works Director

City of Greenville, MS
DEPARTMENT OF PUBLIC WORKS

CITY COUNCIL
Tommy Benson, III, Ward 1
Lois Hawkins, Ward 2
Carolyn Weathers, Ward 3
Betty J. Watkins, Ward 4
Ann Hollowell, Ward 5
Errick D. Simmons, Ward 6

340 Main St. • P. O. Box 897 • Greenville, MS 38701 • Telephone: 662-378-1560 • Facsimile: 662-378-1615 • Email: bjones@greenvillems.org

April 25, 2013

2013 APR 29 11:20 CWI

Brad Ammons, Environmental Engineer
U.S. Environmental Protection Agency, Region 4
Clean Water Enforcement Branch
61 Forsythe Street, S.W.
Atlanta, GA 30303-8960

Re: Information Request of March 29, 2013

Dear Mr. Ammons:

With regards to the questions listed on the Certified Letter of March 29, 2013 please find my responses listed below.

Question 1. (a)Sewer (or main) up? This statement may refer to the individual service line being up or the city main being surcharged. I reviewed the database again and find instances where references are made to both.

(b) Sewer (or main) down? This statement also can be attributed to either service lines or mainlines. I again reviewed the database and find both instances. This is sometimes found in an entry where the customer has no cleanout and the employee(s) checked the City Sewer Main and found that it was down and flowing(not surcharged).

(c) CORRECTED(does this imply an issue on the City's side of the sewer? Mostly yes, remember that the City of Greenville will open service laterals up to the Right of Way and beyond at times. Most of our customers that have access points (cleanouts), have them located close to the house(business). We will use their cleanout as long as it is between the house(business) and the city sewer main. When our employees open a clogged service line the clog could be anywhere between the cleanout and the sewer

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main. If they measure it out and it was clogged on the customer, it is sometimes noted as on the owner.

(d) Station (or lift station) up. The lift station was reported back to the Water/Sewer Operator as not being pumped all the way down.

(e) s/b/u (EPA assumes Sewer backup). Over the years, operators have utilized this shorthand for a sewer backup. In our system, sewer backup means the customer has called in with a sewer service complaint not necessarily a backup into the building. Not all S/B/U's are the result of city sewer system backups or surcharges.

(f) c/o (EPA assumes clean out). Over the years, operators have also utilized this shorthand to denote Clean out.

(g) service line (Is this City owned lateral or privately owned lateral). These refer to both private and public segments of the laterals. I see both references, "City to Repair" and "P/O(property owner) to repair" service line.

Question 2. Under "Category Name" column of Greenville's customer complaint database, what are the codes for sewer complaints (e.g. 670)? Yes, "670" is the budget code, and database code, for sewer complaints.

Question 3. Under "Category Name" column of Greenville's Customer Complaint database, what are the other codes that water/sewer may use (e.g. 560,660,670, etc.) and what does each mean? "560" appears to be a typo, it should have been entered "650" which is the meter reading/billing department. "660" is the code for water maintenance, water main and service repair and maintenance requests. "670" is the code for sewer maintenance.

Question 4. Under "Category Name" column of Greenville's Customer Complaint Database, what does "delivered" mean? This was started as a way of the operators keeping track of which complaints they had delivered to the field crews.

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Question 5. Does Greenville input in the "Category Name" code immediately or after a crew responds to determine the category? The code is entered immediately as the entry is made in the database. This is based on the customers description of the problem. If after a field crew or supervisor checks the complaint and determines it is not sewer but water, then the code is supposed to be changed to the correct department.

Question 6. If Greenville inputs the "Category Name" code immediately, does anyone go back to QA/QC the codes after the City responds (e.g. what if customer complains about drinking water leaking, but it's found to be a sewer leak upon response)? I may have answered this in #5 above. The Water Plant Manager when a field crew or supervisor informs him of a difference in the field(and it happens without fail), he will change the code in the database.

Question 7. What do "Date Promised" and "Date Delivered" mean in Greenville's customer complaint database? "Date Promised" is typically the date the complaint was taken. "Date Delivered" is supposed to be the date the work was completed. There are a number of records where the date delivered is blank. The services were completed but the communication link back to the operators has been a problem periodically. Those communication problems have been resolved with our new complaint system.

Reviewing the CEI Report:

Item 1. d. Gravity Sewer Line Inspection

Over the years the City of Greenville has performed Inspections of gravity sewer lines, both video inspections and smoke testing. Including neighborhood and arterial sewers. As a result of a comprehensive smoke test analysis performed in the late 1970's approximately $8 million dollars we expended to rehabilitate sewers in the mid 1990's. since then we have video inspected approximately two miles of 36" arterial sewer and one-half mile 16" collector, with the 16" collector rehabilitated immediately after.

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Item 4. Sewer Mapping and System Inventory Program

The WCTS are in fact integrated into the City wide maps. These maps were originally drawn utilizing 3" x 5" sewer cards, subdivision designs, etc. The lines are identified with size and material. The City Surveyor has utilized a survey grade GPS rover/base station to shoot in the manholes to correct those maps to within 5mm accuracy. The Engineering Department has been editing those maps to adjust them to this survey, along with the water system maps.

Item 6. Financial Analysis Program, I think a misunderstanding may have taken place, we are budgeted a set amount ($120,000/year for outside contract repairs). According to Greenville employees, there are 590 sewer line repairs known and City gets $160,000 - $170,000 per year to rehabilitate those defects.

I think what was stated was we have a budgetary code "590" which is budgeted at approximately $170,000(this fiscal year = $175,000), and we have a budget of $120,000 for outside repairs.

Additionally, the City has raised water & sewer rates annually for the last eight years to offset the reduction in number of ratepayers.

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Item 7. Equipment, Tools & Inventory Management Program

The City maintains a several 2" and 4" gas powered bypass pumps and 4" and 6" diesel bypass pumps in inventory. We have working relationships with pump rental agencies for delivery within a few hours of larger bypass equipment.

Item 10. Pump Station Operation Program

The City maintains a several 2" and 4" gas powered bypass pumps and 4" and 6" diesel bypass pumps in inventory. We have working relationships with pump rental agencies for delivery within a few hours of larger bypass equipment. Additionally, as we talked about during the CEI we have submitted grant requests through our local Emergency Management Agency for generators for the largest lift stations (including the South Theobald station). I have been notified that this request is still in the review process at the state level.

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.

Brad Jones, Director of Public Works

4/26/2013
Date

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Chuck Jordan
Mayor

Brad Jones
Public Works Director

City of Greenville
Public Works Department

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November 28, 2012

Mr. Brad Amons, Enforcement Officer
U.S. Environmental Protection Agency, Region 4
Clean Water Enforcement Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

'12 DEC 4 AM11:26

Dear Mr. Amons:

Please find attached the information requested in the letter dated October 23, 2012. I believe I have addressed all points contained in the letter. Items 1,2,3, 4,and 5. If you discover anything lacking please contact me. My email address is bjones@greenvillems.org. My cellular number is 662-

Sincerely,

Brad Jones

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Response to U.S. Environmental Protection Agency request for information dated October 23, 2012.

Re: Information Request – Section 308 of the Clean Water Act National Pollutant Discharge Elimination System Permit No. MS0020184, Greenville Wastewater Treatment Plant.

Item 1.a. The City of Greenville has approximately 200 miles of various sizes of gravity and pressure sewer mains. The sewers are constructed of a variety of materials, including vitrified clay, reinforced concrete, poly vinyl chloride, cast iron, ductile iron, and polyethylene.

Item 1.b. The 100 sewer lift stations are included on a Microsoft Excel spreadsheet, including the number and size of the pumps in each.

Item 1.c. The City of Greenville has over the years, eliminated designed bypass points throughout the system as we have discovered them. I.e. during maintenance and capital projects.

Item 1.d. The average design flow of the Wastewater Treatment plant is twenty Million Gallons per Day(20 MGD).

Item 1.e. The peak design flow of the Wastewater Treatment Plant is thirty-three Million Gallons per Day(33 MGD).

Item 1.f. The annual average flow of the Wastewater Treatment Plant for the years 2009, 2010, and 2011 is 3,493,700,000 gallons, or 3.5 Billion Gallons per Year.

Item 1.g. The population served by the Wastewater Treatment Plant it's SSS is 35,764 per the Census Bureau.

Items 2.a. thru 2.k. are presented on a Microsoft Excel spreadsheet.

Item 3. The City of Greenville has no formal written plan for responding to, addressing, and reporting SSO's. A formal written plan would definitely be useful, and we would appreciate any assistance the U.S. E.P.A. might be able to offer in drafting one.

Item 4.a. The Sewer Maintenance Superintendent reports known SSO's to the Public Works Director.

Item 4.b. Estimating SSO volumes can be difficult, but a good faith attempt is made by the Sewer Maintenance Superintendent and/or Public Works Director.

Item 4.c. We employ a team approach to identify the root causes of SSO's. The Sewer Maintenance personnel, Sewer Maintenance Superintendent, Public Works Director, Surveyor, etc. are typically involved in the identification and solution process.

Item 4.d. We attempt to contain and cleanup all SSO's. Backups into buildings are typically cleaned up by contractors. Backups into buildings have never been handled as a SSO since it was never presented to us that these are reportable incidents.

Item 4.e. We, Public Works Director, Street Maintenance Superintendent, etc., do reconnaissance during major storm events for street flooding and potential SSO's.

Item 4.f. All known SSO's are reported through the Wastewater Treatment Plant or the Public Works Director's office.

Item 5. Position Titles are included in the responses to questions 4.a. thru 4.f. above.

CITY OF GREENVILLE, MISSISSIPPI

SEWER SYSTEM

Item Number	Description	Quantity of Pumps	GPM Each	GPM Total
1. b.	**101 - Sewer Lift Stations**			
	South Theobald Lift Station	2	4,500	9,000
	Daniel/Reed Lift Station	4	2,600	10,400
	Tennessee Gas Road Lift Station	2	3,000	6,000
	Peripheral System Influent Station at the WWTP.	2	4,000	8,000
	Hancock/North Theobald Street Lift Station	3	2,000	6,000
	West Percy/South Shelby Lift Station	2	1,500	3,000
	Carrie Stern Lift Station	2	1,500	3,000
	Mary/Reed Lift Station	3	1,100	3,300
	Smith Street Lift Station	3	1,100	3,300
	Fairgrounds Road Lift Station	2	2,300	4,600
	East Alexander/Raceway Road Lift Station	2	1,200	2,400
	North Beauchamp Extended/Thornton Street Lift Station	3	800	2,400
	Sisson Drive Lift Station	2	500	1,000
	1896 Water Plant Lift Station	2	1,500	3,000
	Tennessee Street/Main Canal Lift Station	2	600	1,200
	Canal Street/Bowman Boulevard Lift Station	2	250	500
	Canal Street/Iris Lift Station	2	200	400
	Sudan/Wintergreen Lift Station	2	250	500
	River Club Lift Station	2	150	300
	Cloverdale Lift Station	2	300	600
	Princeton Subdivision Lift Station	2	300	600
	Vessels of Mercy Lift Station	1	200	200
	Countrywood Subdivision Lift Station	2	500	1,000
	Guerdon Road Lift Station	2	300	600
	Champion Drive Lift Station	2	200	400
	West Bayou Road Lift Station(Frank Self's House)	2	350	700
	Tampa Drive Lift Station	2	300	600
	North Bayou Road Lift Station	2	300	600
	Oak Drive/Lillie Lane Lift Station	1	200	200
	Industrial Fill Lift Station	2	250	500
	Warfield Point Lift Station #1 / Bathroom	1	150	150
	Warfield Point Lift Station #2 / Dump Pit and Campground	2	200	400
	Warfield Point Lift Station #3 / Main Entrance	2	200	400
	Greenpoint Industrial Park Lift Station #1 / Stokes King Road	2	850	1,700
	Greenpoint Industrial Park Lift Station #2 / Highland Plantation	2	850	1,700
	Greenpoint Industrial Park Lift Station #3 / Highland Plantation Road	2	1,700	3,400
	Producers Rice Lift Station	2	500	1,000
	Anne Stokes Drive Lift Station	2	200	400
	Cypress Ridge Lift Station	2	200	400
	WildWood Drive Lift Station #1	2	500	1,000
	Wildwood Drive Lift Station #2	2	350	700
	McClain/Plantation Drive Lift Station	1	200	200
	Robinson Lane Lift Station	1	200	200
	Gamari Road Lift Station	1	200	200
	Greenville Mall Lift station	2	200	400
	Lisa Drive Lift Station	2	300	600
	North Medical Park Drive	2	300	600
	Cottonwood Apartments Lift Station	2	250	500
	Causey/South Colorado Lift Station	2	200	400
	Nottingham Apartments Lift Station	2	250	500
	South Beauchamp Lift Station	2	200	400
	Naple Street Lift Station	1	175	175
	Anita Joyce Lane Lift Station	2	200	400
	South Beauchamp/Elizabeth Lift Station	2	200	400
	Elm/Hernando Lift Station	1	300	300
	Hwy 82 West/Quaker Oats Lift Station	1	250	250
	South Broadway/Clay Street Lift Station	2	1,000	2,000
	Phelps/Delesseps Lift Station	2	200	400

	Public Works Compound Lift Station	1	100	100
	Transfer Station Lift Station	1	150	150
	South Broadway Loop Lift Station	1	200	200
	Welcome Center Lift Station	2	150	300
	Wal-Mart Shopping Center Lift Station	2	500	1,000
	St Anthony/Canal Street Lift Station	2	250	500
	North Kirk Circle/Wortham Lift Station	2	200	400
	Gamwyn Drive/Causey Lift Station	2	200	400
	South Eureka/Robertshaw Lift Station	2	200	400
	Moore/4th Street Lift Station	2	500	1,000
	Garden/Reed Rd. Lift Station	2	250	500
	O'Bannon School	2	250	500
	Glendale Road	2	200	400
	East Alexander/Henry Drive Lift Station	2	200	400
	George Lewis Estates Apartments Lift Station	2	200	400
	8th Street/Railroad Avenue Lift Station	1	200	200
	North MLK Blvd/Grenada Dairies Lift Station	1	250	250
	North MLK Blvd/Union Street Lift Station	2	250	500
	Redbud/Union Street Lift Station	1	200	200
	Soccer Field Lift Station	1	100	100
	Shield/Flanagan Street Lift Station	1	200	200
	Theobald/Lacey Street Lift Station	2	500	1,000
	North Broadway/Sampson Rd. Lift Station	2	500	1,000
	Karen Drive Lift Station	1	200	200
	Ferguson Street Lift Station	2	200	400
	Shady Acres Trailer Park Lift Station	1	200	200
	Airbase/Sisson Lift Station	2	300	600
	North Theobald/North MLK Blvd Lift Station	2	250	500
	Theobald/HBR Lift Station	2	250	500
	North Theobald Extended Lift Station	2	250	500
	Pickett/Thornton Street Lift Station	2	400	800
	Legion Drive/Wasson Street Lift Station	2	250	500
	Shannon Drive/Old Leland Drive Lift Station	2	500	1,000
	Marilyn/Barbara Street lift Station	2	300	600
	Essex Place/Oxford Drive Lift Station	2	200	400
	Sampson Road/Townsend Street Lift Station	2	250	500
	Whip-Poor-Will Street Lift Station	2	150	300
	Cauley Cove	2	150	300
	East Park Addition	2	250	500
	Airbase #1	2	200	400
	Airbase #2	2	200	400
	Airbase #3	2	350	700
	Airbase #4	2	750	1,500
Total Number of Pumps		189		

Sanitary Sewer Overflows
2007-2012

TIME/DATE NOTIFIED	TIME/DATE BEGAN	TIME/DATE CITY RESPONDED	TIME/DATE ENDED	LOCATION	DESTINATION	VOLUME(Gallons)	CAUSE	CORRECTIVE ACTION TO STOP	CORRECTIVE ACTION TO PREVENT
12-Jul-12	12-Jul-12	12-Jul-12	2-Aug-12	Wastewater Treatment Plant	Mississippi River	19,000,000	Ultra-violet disinfection system failed. Multiple systems	Installed temporary chlorination disinfection	replaced electronics, replaced bulbs, replaced cooling lines, replaced hydraulic lines
5-Dec-11	5-Dec-11	5-Dec-11	5-Dec-11	567 Anne Stokes Road	Steele Bayou	unknown	Sewer lift station pumps clogged	Cleared pumps	none
8-Oct-11	8-Oct-11	8-Oct-11	8-Oct-11	Producers Rice Mill Lift Station	Steele Bayou	2,500	Pump failure due to excessive water temperature	Installed diesel bypass pump	Install freshwater injection with airgap upstream of lift station to cool water
3-Oct-11		3-Oct-11	3-Oct-11	252 Wildwood	Steele Bayou	250	Grease buildup	Pressure washed sewer main	Pressure washed sewer main
3-Oct-11	October 1, 2011	3-Oct-11	3-Oct-11	Wildwood Lift Station #2	Steele Bayou	25,000	Sludge & Debris buildup in wetwell	Installed diesel bypass pump	Pressure washed and vacuumed wetwell
7-Sep-11	7-Sep-11	7-Sep-11	8-Sep-11	Ultra-violet disinfection system / WWTP	Mississippi River	8,000,000	Cooling system electrical failure, system shutdown	repaired cooling system electrical	Repaired cooling system electrical
24-May-11	24-May-11	25-May-11	21-Oct-11	1402 South Thneobald Lift Station	Mississippi River	3,000,000	Record High Water on Mississippi River caused high groundwater levels to collapse deep gravity sewer that caused an overlaying large diameter pressure main to collapse	Placed a temporary repair clamp on pressure main and installed diesel bypass	replaced deep gravity sewer and pressure main
23-Mar-11	23-Mar-11	23-Mar-11	23-Mar-11	Alexander & 9th Street intersection / manhole	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	none
7-Sep-10	7-Sep-10	7-Sep-10	7-Sep-10	1845 Palmyra Street	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	none
23-Jan-10	23-Jan-10	23-Jan-10	29-Aug-10	Wastewater Treatment Plant	Steele Bayou	10,000,000	Onsite pipeline ruptured	Installed diesel bypass pump to recirculate escaped water	Dug and repaired pipeline, had to work as groundwater subsided from high Mississippi River stage.
3-Sep-08	3-Sep-08	3-Sep-08	6-Sep-08	Citywide	Steele Bayou	Unable to estimate	Complete system flooded due to 6 hour, 14 inch rainfall from Hurricane Gustav	Restarted, pumped out 101 lift stations	None
23-May-08	23-May-08	23-May-08	23-May-08	1484 Ed Gray Drive	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	none
12-Mar-08	12-Mar-08	12-Mar-08	12-Mar-08	706 South Broadway	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	none
14-Feb-08	14-Feb-08	14-Feb-08	14-Feb-08	1665 South David Circle	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	none
17-Oct-07	17-Oct-07	17-Oct-07	17-Oct-07	419 North Broadway	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	None
2-Feb-07	2-Feb-07	2-Feb-07	2-Feb-07	1603 Duncan Drive	Steele Bayou	unknown	Mainline clogged	Pressure washed clog out of mainline	None

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 23 2012

CERTIFIED MAIL 7012 1010 0001 8097 0672
RETURN RECEIPT REQUESTED

City of Greenville
Attn: Ms. Amelia D. Wicks
City Clerk
340 Main Street
Greenville, Mississippi 38701

Re: Information Request–Section 308 of the Clean Water Act
National Pollutant Discharge Elimination System Permit No. MS0020184
Greenville Wastewater Treatment Plant

Dear Ms. Wicks:

Pursuant to Section 308 of the Clean Water Act (CWA), 33 U.S.C. § 1318, the U.S. Environmental Protection Agency, Region 4 hereby requests the City of Greenville (the City) to provide the information set forth in Enclosure A regarding the wastewater treatment plant noted above and its associated sanitary sewer collection system. The City is required to respond to this information request within 30 days of its receipt of this letter. The response should be directed to:

Mr. Brad Ammons, Enforcement Officer
U.S. Environmental Protection Agency, Region 4
Clean Water Enforcement Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

The City's response to this information request should specifically reference the particular section and number of the request and should be organized for the purpose of clarity. In addition, all information submitted must be accompanied by the following certification signed by a responsible City of Greenville official in accordance with 40 C.F.R. § 122.22:

> '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."

Failure to comply with this information request may result in enforcement proceedings under Section 309 of the CWA, 33 U.S.C. § 1319, which could result in the judicial imposition of civil or criminal

penalties or the administrative imposition of civil penalties. In addition, there is potential criminal liability for the falsification of any response to the requested information.

The City shall preserve, until further notice, all records (either written or electronic) which exist at the time of receipt of this letter that relate to any of the matters set forth in this letter. The term 'records' shall be interpreted in the broadest sense to include information of every sort. The response to this information request shall include assurance that these record protection provisions were put in place, as required. No such records shall be disposed of until written authorization is received from the Chief of the Clean Water Enforcement Branch at the U.S. EPA, Region 4.

If you believe that any of the requested information constitutes confidential business information, you may assert a confidentiality claim with respect to such information except for effluent data. Further details, including how to make a business confidentiality claim, are found in Enclosure B.

Also enclosed is a document entitled *U.S. EPA Small Business Resources-Information Sheet*, which may assist you in understanding the compliance assistance resources and tools available. However, any decision to seek compliance assistance at this time does not relieve the City of its obligations to the EPA or the State of Mississippi, does not create any new rights or defenses, and will not affect the EPA's decision to pursue enforcement action.

Please feel free to contact Mr. Brad Ammons, Enforcement Officer at (404) 562-9769 or by email at ammons.brad@epa.gov, if you have questions regarding this notice and information request.

Sincerely,

Denisse D. Diaz, Chief
Clean Water Enforcement Branch
Water Protection Division

Enclosures

cc: Mr. Chris Sanders
Mississippi Department of Environmental Quality

Ms. Pam Richards
Greenville. Mississippi

ENCLOSURE A

SSO PROGRAM
City of Greenville, MS

1. Provide the following:

   a. The size of the City of Greenville's Sanitary Sewer Collection System (SSS) (linear feet or miles);
   b. A list of the pump stations in the SSS, including size (gpm), and indicate if back up power is available and if it is adequate to fully operate the pump station;
   c. A list of all constructed overflow points (any unpermitted constructed discharge points) in the SSS (including pump stations) prior to the headworks of the City of Greenville's WWTP;
   d. The average design flow of the City of Greenville's WWTP;
   e. The peak design flow of the City of Greenville's WWTP;
   f. The annual average flow of the City of Greenville's WWTP; and
   g. The population served by the City of Greenville's WWTP and its respective SSSs.

2. For purposes of this Information Request, a sanitary sewer overflow (SSO) is an overflow, spill, release, or diversion of wastewater from the SSS. SSOs include overflows or releases of wastewater that reach waters of the United States (U.S.); overflows or releases of wastewater that do not reach waters of the U.S.; and wastewater backups into buildings that are caused by blockages or flow conditions in a sanitary sewer other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is not an SSO.

   Provide a listing of all SSOs that occurred from September 2007 to the present. For each SSO provide the following:

   a. Date(s) of the SSO;
   b. Time (and Date if other than a. above) when the City of Greenville was notified that the SSO event occurred;
   c. Time (and Date if other than a. above) when the City of Greenville (or contractor) crew responded to the SSO;
   d. Time (and Date if other than a. above) when the SSO ceased;
   e. Time (and Date if other than a. above) when corrective action was completed;
   f. Location of the SSO, including source (pump station, manhole, etc.);
   g. Ultimate destination of the SSO, such as surface waterbody (by name, if available), storm drain leading to surface waterbody (by name, if available), dry land, building, etc.;
   h. Volume of the SSO;
   i. Cause of the SSO such as grease, roots, other blockages, wet weather (infiltration and inflow), loss of power at pump station, pump failure, etc.;
   j. Corrective actions taken to stop the SSO; and
   k. Corrective actions taken to prevent this or similar SSOs in the future.

   If available, please provide the above information in a Microsoft compatible spreadsheet format.

3. If the City of Greenville has a formal written plan for responding to, addressing, and reporting

SSOs (i.e., a Sewer Overflow Response Plan ("SORP")), provide a copy of the plan.

4. Provide a copy of any additional City of Greenville procedures not included in the SORP (as referenced in Question 3 above) for the following activities:

   a. Documenting SSOs;
   b. Estimating SSO volume;
   c. Identifying root causes of SSOs;
   d. Containment and clean-up of SSOs, including any specific procedures addressing backups into buildings caused by mainline problems;
   e. Identifying wet weather related SSOs and reconnaissance of these during rain events; and
   f. All reporting of SSOs to the permitting authority, the State of Mississippi.

5. Provide the name of the person (or position title) responsible for each of the activities indentified in the City of Greenville's SORP and/or listed in Question 4 above.

ENCLOSURE B

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS
(40 C.F.R. Part 2)

Except for effluent data, you may, if you desire, assert a business confidentiality claim as to any or all of the information that EPA is requesting from you. The EPA regulation relating to business confidentiality claims is found at 40 C.F.R. Part 2.

If you assert such a claim for the requested information, EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, EPA may make the information available to the public without any further notice to you.

40 C.F.R. §2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 29 2013

CERTIFIED MAIL 7012 1010 0001 8097 4076
RETURN RECEIPT REQUESTED

City of Greenville
Attn: Mr. Brad Jones
Director of Public Works
340 Main Street
Greenville, Mississippi 38701

Re: U.S. Environmental Protection Agency and Mississippi Department of Environmental Quality Compliance Evaluation Inspection
Information Request and Notice of Opportunity to Show Cause
National Pollutant Discharge Elimination System Permit No. MS0020184
Greenville Wastewater Treatment Plant and Wastewater Collection System

Dear Mr. Jones:

The U.S. Environmental Protection Agency, Region 4 and the Mississippi Department of Environmental Quality (MDEQ) conducted a Compliance Evaluation Inspection (CEI) of the City of Greenville, Mississippi's (Greenville) Wastewater Collection and Transmission System (WCTS). The objective of this CEI was to assess Greenville's compliance with the Clean Water Act (CWA) and Greenville's National Pollutant Discharge Elimination System (NPDES) permit. Additionally, the EPA evaluated Greenville's Management, Operations and Maintenance Programs related to its WCTS. The inspection results are summarized in the enclosed CEI report.

During the CEI, Greenville provided the EPA with a copy of its water and sewer customer complaint database. The EPA has several questions regarding the database, which are outlined below.

(1) Under the "Problem Description" column of Greenville's customer complaint database, what do the following terms mean: (a) sewer (or main) up; (b) sewer (or main) down; (c) CORRECTED (Does this imply an issue on the City's side of the sewer?); (d) Station (or Lift Station) up; (e) s/b/u (EPA assumes sewer backup); (f) c/o (EPA assumes clean out); (g) service line (Is this City owned lateral or privately owned lateral)?
(2) Under "Category Name" column of Greenville's customer complaint database, what are the codes for sewer complaints (e.g. 670)?
(3) Under "Category Name" column of Greenville's customer complaint database, what are the other codes that water/sewer may use (e.g. 560, 650, 660, etc.) and what does each code mean?
(4) Under "Category Name" column of Greenville's customer complaint database, what does "delivered" mean?
(5) Does Greenville input in the "Category Name" code immediately or after a crew responds to determine the category?

(6) If Greenville inputs the "Category Name" code immediately, does anyone go back to QA/QC the codes after the City responds (e.g. what if customer complains about drinking water leaking, but it's found to be a sewer leak upon response)?
(7) What do "Date Promised" and "Date Delivered" mean in Greenville's customer complaint database?

Pursuant to Section 308 of the CWA, 33 U.S.C. § 1318, the EPA hereby requests Greenville to provide the information set forth in the questions above. Greenville is required to respond to this information request, as well as the enclosed CEI report, within 30 days of its receipt of this letter. The response should be directed to:

Mr. Brad Ammons, Enforcement Officer
U.S. Environmental Protection Agency, Region 4
Clean Water Enforcement Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

Greenville's response to this information request should specifically reference the particular question number of the request and should be organized for the purpose of clarity. In addition, all information submitted must be accompanied by the following certification signed by a responsible City official in accordance with 40 C.F.R. § 122.22:

> "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."

Failure to comply with this information request may result in enforcement proceedings under Section 309 of the CWA, 33 U.S.C. § 1319, which could result in the judicial imposition of civil or criminal penalties or the administrative imposition of civil penalties. In addition, there is potential criminal liability for the falsification of any response to the requested information.

Greenville shall preserve, until further notice, all records (either written or electronic), which exist at the time of receipt of this letter that relate to any of the matters set forth in this letter. The term "records" shall be interpreted in the broadest sense to include information of every sort. The response to this information request shall include assurance that these record protection provisions were put in place, as required. No such records shall be disposed of until written authorization is received from the Chief of the Clean Water Enforcement Branch at the U.S. EPA, Region 4.

If you believe that any of the requested information constitutes confidential business information, you may assert a confidentiality claim with respect to such information except for effluent data. Further details, including how to make a business confidentiality claim, are found in Enclosure B.

Upon review of information submitted by Greenville, pursuant to Greenville's response to the EPA's October 23, 2012, information request letter, as well as information given to the EPA during the January 29, 2013, CEI, the following violations have been identified:

1. Greenville has allowed at least 16 SSOs to occur from February 2007 through July 2012, totaling at least 40,027,750 gallons of untreated sewage that either directly or indirectly affected waters of the U.S. in violation of the CWA and/or in violation of Conditions T-28 (Proper Operation, Maintenance and Replacement) and T-29 (Duty to Mitigate) of Greenville's NPDES permit, issued to Greenville by MDEQ, with an effective date of August 29, 2011.
2. Greenville has failed to report at least 1 SSO to MDEQ in violation of Condition S-4 (Noncompliance Notification – Twenty-Four Hour Reporting). This SSO occurred at the South Theobald pump station and had not been reported to MDEQ as of the date of this CEI.
3. Greenville has experienced numerous sewage building backups according to the electronic customer complaint database provided to EPA during this CEI. Building backups that are caused by flow conditions in the City-owned portion of the WCTS are SSOs and can be indicative of violations of Conditions T-28 (Proper Operation, Maintenance and Replacement) and T-29 (Duty to Mitigate) of Greenville's NPDES permit, issued to Greenville by MDEQ, with an effective date of August 29, 2011.
4. The effluent limit exceedances listed below are a violation of Greenville's NPDES permit.
   - Fecal Coliform (Colonies/100 mL; Monthly Average) – July and August 2012
   - Total Suspended Solids (mg/L; Weekly Average) – November 2011.

Such violations are subject to enforcement action pursuant to Section 309 of the CWA. This Section provides for the issuance of compliance orders, administrative actions to assess penalties and/or the initiation of civil or criminal actions.

To resolve the identified violations and discuss the EPA's possible enforcement actions, including the assessment of appropriate civil penalties, we request that representatives of Greenville contact Mr. Brad Ammons at (404) 562-9769 or via email at ammons.brad@epa.gov, within five business days of Greenville's submittal of the required information requested above to make arrangements for a conference.

In lieu of appearing in the EPA's offices for this meeting, a telephone conference may be scheduled. Greenville's representatives should be prepared to provide all relevant information with documentation, pertaining to the above violations including, but not limited to, any financial information, which may reflect Greenville's ability to pay a penalty. You have the right to be represented by legal counsel. Failure to appear may result in an immediate enforcement action against you or your facilities. The EPA may consider information provided during the meeting or telephone conference in any enforcement proceeding related to this matter.

If you should have any questions regarding this matter, please contact Mr. Brad Ammons.

Sincerely,

James D. Giattina
Director
Water Protection Division

Enclosures

cc: Mr. Chris Sanders
Mississippi Department of Environmental Quality

Mr. Jamon Rucker
Mississippi Department of Environmental Quality

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4
Water Protection Division
Clean Water Enforcement Branch

COMPLIANCE EVALUATION INSPECTION REPORT

City of Greenville, Mississippi
Greenville, Mississippi
NPDES Permit No. MS0020184

Facility Address:
Highland Plantation Road
Greenville, Mississippi 38127

Inspection Date:
January 29, 2013

Inspectors:
Brad Ammons, Environmental Engineer, EPA Region 4
Dennis Sayre, Environmental Engineer, EPA Region 4
Jamon Rucker, Mississippi Department of Environmental Quality

Inspection Report Prepared by:
Brad Ammons
Dennis Sayre

March 19, 2013

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ABBREVIATIONS AND ACRONYMS

CCTV	Closed Circuit Television
CEI	Compliance Evaluation Inspection
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
GIS	Geographic Information System
I/I	Infiltration and Inflow
MDEQ	Mississippi Department of Environmental Quality
MOM	Management, Operation, and Maintenance
NPDES	National Pollutant Discharge Elimination System
SCADA	Supervisory Control and Data Acquisition
SORP	Sewer Overflow Response Plan
SSO	Sanitary Sewer Overflow
SUO	Sewer Use Ordinance
WCTS	Wastewater Collection and Transmission System
WWTP	Wastewater Treatment Plant

I. OVERVIEW

The City of Greenville, Mississippi (Greenville), through its Public Works Department, provides sanitary sewer services for residential, commercial and industrial entities within the City of Greenville, Mississippi. Regarding sanitary sewer services, Greenville is responsible for the operation and maintenance of one (1) Wastewater Treatment Plant (WWTP), approximately 200 miles of sewer lines, approximately 101 sanitary sewer pump stations, and other sanitary sewer related facilities.

The Mississippi Department of Environmental Quality (MDEQ) is authorized under the Clean Water Act (CWA) to implement the National Pollutant Discharge Elimination System (NPDES) program in Mississippi. Greenville is covered under NPDES Permit No. MS0020184. MDEQ has not issued any formal enforcement actions against Greenville related to any of its sewer related facilities.

On October 23, 2012, the Environmental Protection Agency (EPA) sent a CWA Section 308 information request letter to Greenville requesting information related to Sanitary Sewer Overflows (SSOs) from the wastewater collection and transmission system (WCTS). Greenville responded to EPA's CWA Section 308 information request letter on November 28, 2012.

EPA conducted a compliance evaluation inspection (CEI) of Greenville's WCTS on January 29, 2013. The purpose of this CEI was to evaluate compliance with the CWA as it relates to SSOs from the sewer system and any effluent limit violations at the WWTP. Additionally, the purpose of this compliance inspection was to examine the causes and potential corrective actions for SSOs from the sewer system.

During the January 29, 2013 CEI, EPA and MDEQ visited six (6) sewer pump stations and two (2) sewer line canal/drainage way crossings. Below are the specific facilities inspected during the January 29, 2013 CEI.

<u>Pump Stations</u>

- S. Theobald Pump Station
- Anne Stokes Pump Station
- Wildwood #1 Pump Station
- Wildwood #2 Pump Station
- Producers Mill Pump Station
- Tennessee Street Pump Station

<u>Canal sewer crossings</u>

- Reed Road south of Hwy 82
- Cypress Lane at Anne Stokes Road (ended up being a potable water line)

This report describes EPA's findings, and provides an initial analysis of SSOs from the sewer system. In this report, EPA also identifies areas that need to be addressed and presents preliminary recommendations.

II. OBJECTIVES

The specific objective of this WCTS CEI was to assess the sewer system and Greenville's compliance with the CWA and/or its NPDES permit. Additionally, EPA examined the causes of SSOs from Greenville's sewer system and pump stations.

III. INVESTIGATION METHODS

The investigation of Greenville included:

- A review of federal databases and the NPDES permit.
- Review of Greenville's November 28, 2012 response to EPA's CWA Section 308 Information Request Letter.
- Interviews with Greenville personnel.
- Review of Greenville's records/documents.
- Visual inspection of SSO locations in the sewer system and pump stations.

IV. REGULATORY SUMMARY

Greenville is covered by NPDES permit no. MS0020184, which authorizes the discharge of treated wastewater under certain conditions from its WWTP into the Mississippi River. Steele Bayou was listed in MDEQ's 2006 §303(d) list near Issaquena from Black Bayou to the Yazoo River for nutrients, organic enrichment (low dissolved oxygen), and sediment/siltation (NOTE: this section of Steele Bayou is downstream of Greenville). MDEQ has not issued any formal enforcement for SSOs or effluent limit violations of the NPDES permit.

V. INSPECTION SUMMARY AND FINDINGS

EPA conducted a CEI of Greenville's WCTS on January 29, 2013 to evaluate compliance with the CWA and/or provisions of Greenville's NPDES permit.

A. Analysis of SSOs

Discharges from municipal sanitary sewer systems to waters of the United States are prohibited, unless authorized by an NPDES permit. In addition, overflows from the sewer system that do not reach waters of the United States and sewage backups into buildings that are caused by flow conditions in the City's sanitary sewers are indicative of a failure to comply with the proper operation and maintenance and/or other provisions of the NPDES permit.

On November 28, 2012, Greenville submitted to EPA information related to SSOs that occurred from February 2007 through July 2012. EPA analyzed this information and assigned each discharge a cause based on the information provided by Greenville. Greenville uses seven (7) major categories to assign causes to each SSO. These

categories are: Mainline clogged; Hurricane; Pipe collapse; Sludge/debris buildup; Grease buildup; Pump failure; and Pump clogged.

According to Greenville personnel, Greenville identifies SSO events typically by customer complaints.

The average annual total SSO volume from the sewer system and pump stations reported by Greenville from February 2007 through July 2012 is unknown because 9 of the 13 SSOs from the WCTS reported by Greenville in its §308 information request response did not have a volume associated with those SSOs. During the same period, over 61% percent of the SSO occurrences were attributed to either grease or debris blockages in Greenville's sewer pipes.[1] The table below breaks down the causes of SSOs in the sewer system by occurrence.[2]

Cause	Percent
Mainline clogged	53.8%
Hurricane	7.7%
Pipe collapse	7.7%
Sludge/debris buildup	7.7%
Grease	7.7%
Pump failure	7.7%
Pump clogged	7.7%

Greenville reported that it had no locations with chronic or recurring SSOs and/or constructed overflow structures. In addition, Greenville has no written Management, Operations and Maintenance (MOM) Programs.

Finding: Greenville has not reported all of its SSOs to MDEQ and at least in one case, had a major spill that was not reported for weeks and had not been reported as of the date of this CEI. Greenville employees told EPA and MDEQ that they experienced a large SSO at the South Theobald pump station a few weeks prior to this CEI. *See enclosed photos for evidence of this very large SSO at the South Theobald pump station.*

Recommendation: Greenville should develop a written Sewer Overflow Response Plan (SORP) to ensure that Greenville has proper SSO notification, reporting and recordkeeping procedures.

[1] Greenville provided EPA with a copy of its customer complaint database during the January 29, 2013 CEI. In reviewing this database, it appears that Greenville has experienced a lot more SSOs than were reported in Greenville's §308 information request response.

[2] As EPA reviews Greenville's database, it is likely that these percentages will significantly change. Percentages based upon Greenville's reported SSOs in its §308 information request response and do not include 3 violations reported as SSOs at the WWTP.

Finding: Mainline clogging and sludge/debris/grease are the two leading causes of SSO occurrences reported by Greenville in its response to EPA's information request letter.

Recommendations: Greenville should develop and implement a Gravity Line Operations & Preventative Maintenance Program for routine cleaning of the entire WCTS, as well as a Fats, Oils and Grease (FOG) Control Program to prevent the entry of FOG into the WCTS. However, many municipal utilities attribute SSOs to grease, when the true cause of the blockage is different. For example, grease may not block a sewer unless there are roots, offset joints and/or other sewer defects that cause the grease to accumulate. Therefore, Greenville should have a standard procedure for investigating the underlying causes of the SSOs more thoroughly, develop and implement a Sanitary Sewer Evaluation System (SSES) and Rehabilitation Program, and institute a system-wide preventative cleaning program. As at least one of the reported SSOs was attributed to sludge/debris in the wet well of a pump station, Greenville should also develop a Pump Station Operations and Preventative Maintenance Program to ensure proper O&M of the pump stations that Greenville owns and operates.

Finding: Greenville only has 2 of its 101 sewer pump stations on Supervisory Control and Data Acquisition (SCADA) and none of the pump stations visited had on-site alarms or backup power. In addition, Greenville employees stated that there are several pump stations in their WCTS that are too large for the largest portable generator the City owns.

Recommendations: Greenville should consider installing SCADA systems on the Pump Stations it owns and operates. Greenville should install on-site alarms (visual and/or audible) at the pump stations it owns and operates. Finally, Greenville should either install on-site generators and/or purchase portable generator(s) that are large enough to power the City's largest pump stations.

B. Capacity, Management, Operation, and Maintenance Programs

EPA assessed several of Greenville's CMOM programs through this inspection. The following sections will discuss and provide recommendations for several MOM programs.

1. Continuous Sewer System Assessment Program

a. Prioritization

This was not specifically discussed during the inspection. However, it appears that the City does not prioritize sewer areas for inspection/assessment.

Recommendations: Greenville should develop and implement a sewer WCTS prioritization program to drive its sewer inspection/assessment activities.

b. Corrosion Defect Identification

Greenville has experienced several sewer line breaks in the past. In fact, Greenville's largest reported SSO of 3 million gallons was due to a 30" force main break along the Mississippi River. While that SSO was not directly attributed to corrosion, EPA noted signs of corrosion in other parts of the WCTS during this CEI. *See attached photos for evidence.*

Recommendations: Greenville should identify any major sewer line that may be subject to corrosion. Therefore, Greenville should develop a program that includes procedures for corrosion identification, corrosion identification forms, performance goals, corrosion defect analysis, and a mechanism to collect this data.

c. Manhole Inspection

While this was not discussed specifically, Greenville does not appear to have a WCTS-wide system of inspecting manholes.

Recommendations: Greenville should develop a program to routinely inspect manholes within the entire sewer system. The program should include standard manhole inspection procedures, inspection forms, performance goals, manhole defect analysis, and a mechanism for collecting this data.

d. Gravity Sewer Line Inspection

Greenville does not appear to have a WCTS-wide system of inspecting gravity sewer lines as Greenville employees told EPA and MDEQ that the only time gravity lines are CCTV'd is after a SSO occurs. In fact, Greenville has to hire a contractor to conduct CCTV inspections.

Recommendations: Greenville should develop and implement a program to routinely inspect gravity sewer lines as part of the recommended SSES and rehabilitation program. This program should use industry-standard methods of inspection (e.g. Closed-Circuit Television of gravity sewer lines, dyed water flooding, smoke testing, etc.). Finally, this inspection program should also inspect sewer laterals.

e. Flow Monitoring

Greenville does not have any flow meters in its WCTS. According to Greenville personnel, there are two locations in the WCTS that have wet weather capacity limitations: (1) the Smith interceptor and (2) the interceptor located near the intersection of Reed Road and South Colorado Street. In fact, EPA noted several locations of other capacity-limited sewers during this CEI. *See attached photos for evidence.*

Recommendations: Greenville should develop a flow monitoring program to support engineering analyses related to sewer system capacity and peak flow evaluations. This program would help in understanding the causes of and finding possible locations of SSOs, and help in the development of a sewer model. The program may include the use of an appropriate number of calibrated permanent or temporary flow meters during specific sewer system assessment activities. The program should also include adequate rainfall measurement and mechanisms to collect the flow monitoring information.

f. Gravity System Defect Analysis

Greenville does not appear to have any Gravity System Defect Analysis program as employees told EPA that it does not inspect the sanitary sewers by CCTV unless a SSO has already occurred.

Recommendations: Greenville should develop and implement a program that analyzes gravity sewer system defects. This program should include industry standard defect codes (available from different sources), written defect identification procedures and guidelines, a standardized process for cataloging gravity system defects, and mechanisms to collect and save this data for further analysis. This data could be used to develop and/or support rating criteria used in the prioritization scheme.

g. Pump Station Performance and Adequacy

According to Greenville personnel, there are two crews that check pump stations. These crews drive by each pump station daily (Monday-Friday) and do a more detailed check on each station once a month.

According to the pump station check sheet that was provided to EPA and MDEQ, it appears that Greenville only records the date, # of working pumps, the wet well level and if electrical controls are working during its monthly pump station check. If pump run times are not recorded, there is no real way for Greenville to determine the adequacy of its pumps.

Recommendations: Greenville should develop and implement a program that evaluates pump station performance and adequacy. The program should include trend analysis of pump run-times, pump start counters, historical review of causes for pump failures or SSOs, and mechanisms to collect and analyze this data. Greenville should specifically consider installing SCADA systems on its pump stations. Greenville should use this data to evaluate if pump stations are adequate to handle flows, and identify performance problems.

2. Infrastructure Rehabilitation Program

In the last five years, Greenville has not completed any WCTS rehabilitation except

for that paid for by a 2010 State Revolving Fund (SRF) loan from MDEQ. This 2010 SRF loan was for the South Colorado Street (All Saints Circle) sewer project in the amount of $479,465.

Recommendations: Greenville should conduct a system-wide SSES and Rehabilitation Program. Specifically, the SSES should evaluate all gravity sewer line defects, manhole defects, pump station defects, force main defects and siphon defects. Finally, a post-rehabilitation inspection program should be developed and implemented in order to review the effectiveness of the rehabilitation program.

3. System Capacity Assurance Program

a. Capacity Assurance for New Connections, and
b. Protocols for Capacity Assurance

Greenville does not have a formal, written WCTS capacity assurance program. As mentioned above, Greenville employees identified to the 2 following capacity limited areas in the City's WCTS:

- Smith interceptor
- Reed Road at South Colorado Street interceptor (18" pipe).

In addition, EPA noted several locations of capacity limited sewers/pump stations during this CEI. *Please see attached photos for evidence.*

Recommendations: Greenville should develop and implement a formal program to ensure that there is adequate capacity to collect, transmit, and treat additional sewage expected as a result of prospective new sewer connections. Greenville should develop standardized design flow rules of thumb (i.e., regarding pipe roughness, manhole head losses, accuracy of distance and slope on as-built drawings, and water use). Additionally, Greenville should use techniques to predict the impacts of additional flow (i.e., hydraulic model of sewer system) and flow metering to confirm mathematical estimations of existing peak flow. The program should also require the certification of adequate capacity by a registered Professional Engineer.

4. Sewer Mapping and System Inventory Program

Greenville has not placed the WCTS maps into a geographic information system (GIS). In fact, City employees could not locate an entire WCTS map and told EPA that the sewer map is on 3x5 index card sized paper.

Recommendations: Greenville should develop and implement a Sewer Mapping and System Inventory Program that will ensure that a sewer system inventory exists, is updated, and cataloged. Greenville has not placed its WCTS inventory into GIS, or

other holistic mapping program. Greenville should establish goals and schedules to enter this information into GIS or other mapping program by a certain date.

5. Information Management System

Greenville has a One Call complaint phone number as well as a water/sewer complaint phone number. If a complaint is received during normal work hours (i.e. 8am-5pm for the One Call number and 7am-4pm for the water/sewer number, Monday – Friday), the information is entered immediately into a database, a work order is created and a response crew is dispatched. If a complaint is received after hours, it is forwarded to the WWTP, the on-call crew is called for response and the complaint and resolution of the complaint is not entered into the database until the next business day. The City had started using a new complaint/work order database about 60 days prior to this inspection and an electronic copy of the old database was provided to EPA.

Recommendation: Greenville should use its new database to shift resources from a reactive maintenance approach to a preventative and eventually, a predictive maintenance approach. The database should be used to prioritize sewer inspection/assessment activities, as well.

6. Financial Analysis Program
   a. Operations & Maintenance Budget Program
   b. Capital Improvement Budget Program, and
   c. Customer Rate Setting Analysis Program

Greenville employees stated that they are budgeted a set amount of capital improvement money each year for the WCTS and must do as much rehabilitation as possible with that amount ($120,000/year for outside contract repairs). According to Greenville employees, there are 590 sewer line repairs known and the City gets $160,000 - $170,000 per year to rehabilitate those defects. Greenville does any point repairs at 6 foot depth or less with City staff and equipment (any repairs deeper than 6' are contracted out). There is no plan to rehabilitate the entire WCTS and any capital improvements are generally spent under reactionary circumstances. The O&M budget and customer rate setting were not specifically discussed.

Recommendations: Greenville should develop and implement a program to analyze and recommend customer rates every year to secure sufficient funds to satisfy all the capital improvement and operation and maintenance financial needs.

7. Equipment, Tools & Inventory Management Program

This program was not specifically discussed during the inspection. However, Greenville has only two (2) portable generators (a 10kW and a 100 kW) and no

portable pumps. Greenville does not have enough or large enough portable generators and/or portable pumps available for the number and size of pump stations the City owns. In addition, Greenville owns two (2) combination jet/vacuum trucks, but only one is dedicated to water & sewer.

Recommendations: Greenville should develop and implement an Equipment, Tools and Inventory Management Program. Specifically, this program should address equipment, tools and other items (e.g. spare pipe or pump parts) needed to address SSOs due to power outages, pump failures (mechanical), and line breaks.

8. Customer Service Programs

a. Customer Complaints

As discussed above, Greenville has two customer complaint phone numbers for normal business hours and those phone numbers are routed to the WWTP for after-hours complaint calls.

Recommendation: Greenville should use the complaint database to inform the public of rehabilitation needs and prioritize WCTS assessment and rehabilitation work.

b. Public Education Program

Greenville's Fats, Oils and Grease (FOG) compliance/enforcement program is run by the City's Permits Division. No details were provided about the Permits Division's FOG public education program (e.g. residential grease management, food disposal practices, flyers, bill inserts, public event outreach, materials to encourage proper FOG disposal, etc.). EPA and Greenville did not specifically discuss public education related to other sewer issues (e.g. maintenance or rehabilitation needs requiring increased customer rates, problems caused by illegal sewer connections, etc.).

Recommendations: Greenville should develop and implement a written, formal public education program to educate the public about FOG management, food disposal, illegal connections, and the need for increased customer rates due to maintenance or rehabilitation work needed.

9. Legal Support Programs

a. Inter-Jurisdictional Agreement Program

Greenville has no publically owned satellite systems. Therefore, at this time, there is no need for a formal inter-jurisdictional agreement.

b. Ordinance Program

EPA and Greenville did not discuss the City's Sewer Use Ordinance (SUO). However, EPA found the City's SUO online at the following website.

http://www.municode.com/library/MS/Greenville

Recommendation: Greenville should review, evaluate and revise its SUO for items such as FOG control, pretreatment requirements, and any sewer design criteria.

c. Pretreatment Legal Support Program

The State of Mississippi is the Control Authority for purposes of the pretreatment program. However, Greenville, if it has not already, should consider establishing local limits per EPA's *Local Limits Development Guidance* (EPA 833-R-04-002 A/B, July 2004) to protect its POTW system and notify MDEQ what the resulting local limits are.

d. Grease Control Legal Support Program

The City's online SUO outlines a limit of 100 mg/L for fats, wax, oil & grease (Part II, Chapter 7, Article III., Division 3, Section 7-144.(2) of Greenville's online ordinances), as well as the requirement of a grease trap/interceptor for certain sewer use customers (Part II, Chapter 7, Article III., Division 3, Section 7-146. of the online ordinances). According to Part II, Chapter 3, Article III, Division 1, Section 3-46. of the online version of Greenville's ordinances, the City has adopted the International Plumbing Code, 2003 edition, as its plumbing code. Finally, the SUO outlines penalties for violations of the SUO (Part II, Chapter 7, Article III., Division 3, Section 7-152).

e. Service Laterals Legal Support Program

EPA did not specifically ask about this Program in the §308 information request letter, and the only requirements on service laterals in Greenville's online SUO are for new construction/re-development (e.g. a new building using an old building's private lateral).

Recommendation: Greenville should address leaky or defective sewer service laterals and Greenville's authority in requiring remediation of defective private service laterals in its SUO.

f. Septic Tank Haulers Legal Support Program

EPA did not specifically ask about this Program in the §308 information request letter or during its inspection. EPA did not find any requirements for hauled waste

(e.g. require a waste hauler permit; getting approval to dump wastes; outlining specific locations to dump wastes, etc.) in Greenville's online ordinances.

Recommendation: Greenville should address septic tank haulers and other wastes hauled for disposal in its sewer use ordinance.

g. "Call Before You Dig" Legal Support Program
EPA did not specifically ask about this Program in the §308 information request letter or during its inspection. According to Greenville's customer complaint database, there have been several SSOs attributed to contractors as well.

Recommendations: Greenville should review, evaluate and revise its "Call Before You Dig" Legal Support Program.

10. Water Quality Monitoring

a. Impact Monitoring Program

Greenville does not take or analyze water quality samples to assess impacts on waters of the United States after an SSO event.

Recommendations: Greenville should establish a specific threshold on when to assess the impact of pollution due to a specific SSO from the sewer system. This program should also include mechanisms to collect the data and transmit the information to the regulatory agency (MDEQ). Additionally, it should include established sampling parameters, standard sampling procedures, and quality assurance/quality control procedures.

11. Pump Station Operation Program

Greenville does not have a formal, written Pump Station Operation Program. According to Greenville staff, the pump station crews check the pump stations daily (Monday – Friday). However, given that Greenville does not have either a bypass pump (for mechanical problems) or a portable generator (for electrical problems) large enough to power its estimated 10-12 largest lift/pump stations, Greenville will not be able to react quickly enough in instances of mechanical or electrical failures to prevent SSOs, including unpermitted discharges.

Recommendations: Greenville should develop and implement a formal, written Pump Station Operation Program that includes equipment to react to either mechanical or electrical failures at its pump stations. The PSOP should address either purchasing of on-site electrical generators or portable generators large enough to power Greenville's largest pump stations. In addition, Greenville should investigate the purchase of bypass pump(s) large enough to pump flows expected at its largest pump stations in the case of mechanical failures.

12. Corrosion Control Program

Greenville has experienced several sewer line breaks in the past, including but not limited to, a 10 million gallon SSO at the WWTP (Jan. 2010) and a 3 million gallon SSO when the 30" force main ruptured along South Theobald Street (May 2011). While neither SSO was directly attributed to corrosion by Greenville employees during this inspection, EPA believes this may be the beginning signs of further deterioration and/or corrosion of the City's WCTS. In addition, EPA noted signs of corrosion in other areas of Greenville's WCTS. *See attached photos for evidence.*

Recommendations: Greenville should establish a Corrosion Control Program that includes an inspection program for infrastructure that is or is suspected to be subject to corrosion problems. Additionally, this program should develop and implement site-specific corrosion control measures, a monitoring program to evaluate the corrosion control measures, and performance measures to assess how well the program is being implemented. This program should also incorporate standard communication procedures between the sewer operations staff and pretreatment control staff to initiate investigation and prevention steps where adverse effects on the system are occurring, or could occur, from industrial user discharges.

13. Fats, Oils, and Grease Control Program

Greenville does not have a formal, written Fats, Oils and Grease (FOG) Control Program. While Greenville has a numeric limitation of the discharge of FOG in its SUO, it appears to only apply to commercial or industrial sources of FOG. During the inspection, EPA observed large grease quantities in several pump station wet wells in residential areas, as well as in pump station wet wells that served commercial/industrial areas. *See attached photos for evidence.*

Recommendations: FOG can and has caused blockages in Greenville's WCTS. Additionally, FOG could increase operation and maintenance work due to increased blockages and sewer cleaning requirements. Greenville should review, update, revise and continue to implement its FOG Ordinance, as well as begin more public education and outreach about the true costs of dealing with FOG.

In addition, many municipal utilities attribute SSOs to grease, when the true cause of the blockage is different. For example, grease may not block a sewer unless there are roots, offset joints and/or other sewer defects that cause the grease to accumulate. Therefore, Greenville should investigate the underlying causes of the SSOs more thoroughly, develop and implement a Sanitary Sewer Evaluation System (SSES) and Rehabilitation Program and institute a system-wide preventative cleaning program.

14. Pump Station Preventative Maintenance Program

Greenville does not have a formal, written Pump Station Preventative Maintenance Program. While Greenville's sewer crews conduct a daily drive-by of all the pump

stations (Monday – Friday), there is no preventative maintenance conducted on the pump stations. As the City does not own enough or large enough portable generators (for electrical issues) or bypass pumps (for mechanical issues), Greenville is only beginning to experience the costs of years of reactive maintenance of its numerous pump stations.

Recommendation: Given the number, age and size of the City's pump stations, Greenville must move from an informal, reactive maintenance program to a more formal, preventative maintenance program for its pump stations.

15. Force Main Preventative Maintenance Program

Greenville does not have a formal, written Force Main Preventative Maintenance Program. No mention of preventative maintenance was mentioned during the inspection.

Recommendation: Given the number, size, location and age of Greenville's force mains, Greenville must move from no force main preventative maintenance to a formal, written preventative maintenance program for its force mains.

16. Gravity Line Preventative Maintenance Program
    a. Routine Hydraulic Cleaning Program and
    b. Routine Mechanical Cleaning Program

Greenville does not have a formal, written Gravity Line Preventative Maintenance Program. The Public Works Department owns 2 combination jet/vacuum trucks: one is dedicated to Water and Sewer; the other is dedicated to the Streets Department. No mention was made of mechanical cleaning equipment. According to Greenville employees, approximately 90% of the water/sewer combination truck's work is response to trouble calls.

Recommendations: Greenville should develop and implement a formal, written Gravity Line Preventative Maintenance Program that accurately determines cleaning needs, establishes priorities, and schedules cleaning activities. This program should have adequate staff and necessary equipment. Additionally, this program should have written standard cleaning procedures, standard forms, performance measurements, and a mechanism to collect this data. Finally, this program should encompass the entire WCTS, while also addressing cleaning "hot spots."

c. Root Control Program

Greenville does not have in place a routine root control program and the response to root problems is a reactionary program rather than an ongoing maintenance

program. According to Greenville employees, the City does have a root cutter and some liquid root killer, but they are not used preventatively.

Recommendations: Greenville should develop a root control program that accurately determines root control needs, establishes priorities, and schedules activities. This program should have adequate staff and the necessary equipment. Additionally, this program should have written standard root control procedures, standard forms, performance measurements, and a mechanism to collect this data.

17. Emergency Response Plan for Sewer System

Greenville does not have a formal, written Emergency Response Plan (ERP) for its Sewer System. Greenville has experienced several emergencies (e.g. Mississippi River flooding in 2011 or the rupture of the 30" sewer main near South Theobald Street in May 2011) where an ERP would be necessary.

Recommendations: Greenville should develop and implement a formal, written Sewer System Emergency Response Plan (a.k.a. Contingency Plan). Specifically, the ERP should address such items as Public Notification, Regulatory Agency Notification, an Emergency Flow Control Program, an Emergency O&M Plan, and finally, Preparedness Training.

C. Greenville WWTP

The Greenville WWTP operates under NPDES Permit No. MS0020184 issued by MDEQ. EPA did not tour the wastewater treatment plant during this inspection.

Greenville has experienced several bypasses of treatment and effluent limit violations of the NPDES permit at the Greenville WWTP.

Recommendations: Greenville should develop and implement a Process Controls Plan. In addition, Greenville should consider conducting a Comprehensive Performance Evaluation (CPE) and Composite Correction Program (CCP) as outlined in EPA's Handbook *Improving POTW Performance Using the Composite Correction Program Approach* (EPA-625/6-84-008; October 1984).

VI. ATTACHMENTS

A. Inspection Photos
B. Attendance Lists

ATTACHMENT A: Inspection Photos

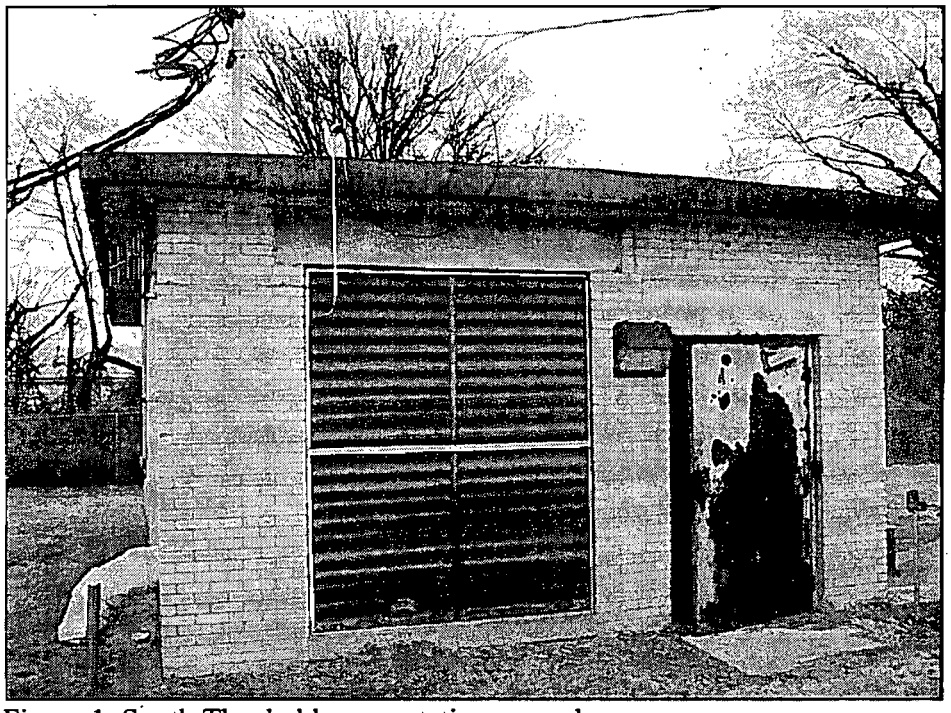


Figure 1. South Theobald pump station pump house.

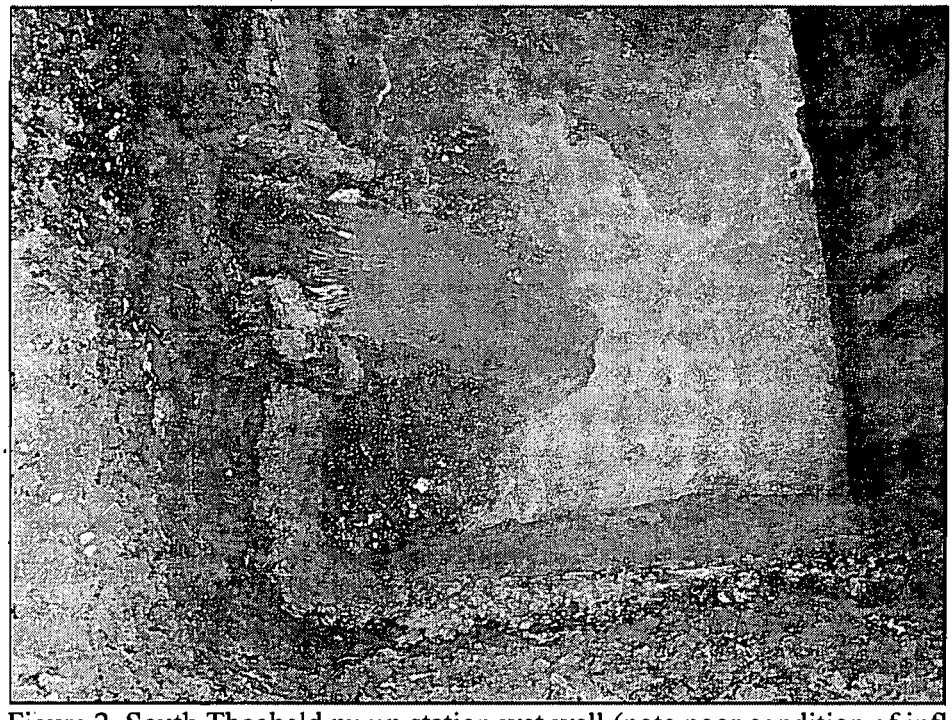


Figure 2. South Theobald pump station wet well (note poor condition of influent pipe).

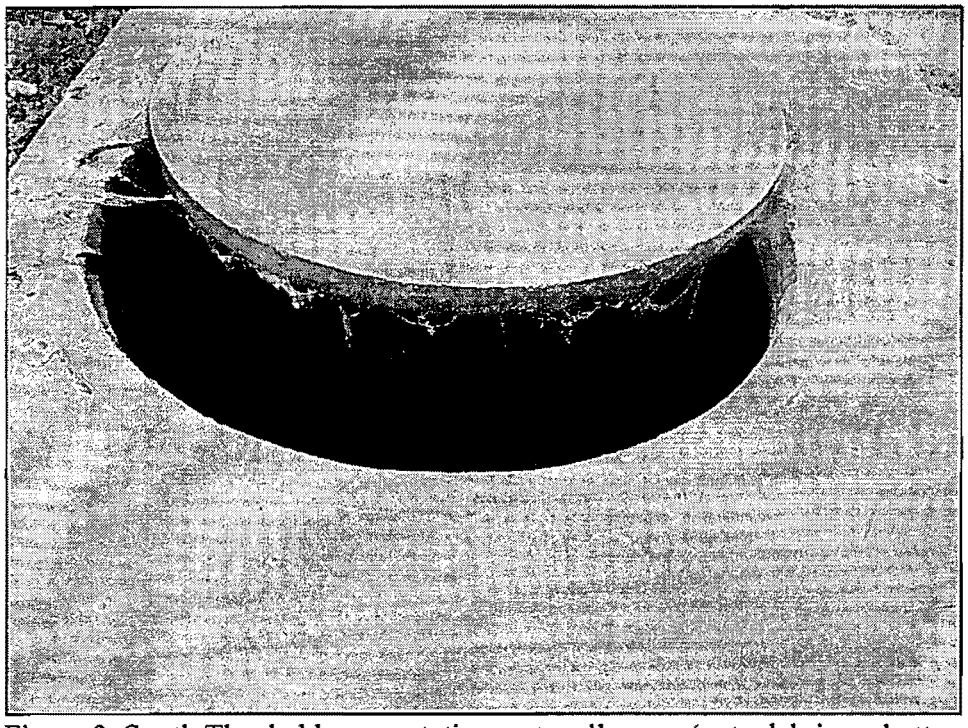


Figure 3. South Theobald pump station wet well cover (note debris on bottom of cover showing debris from recent SSO).

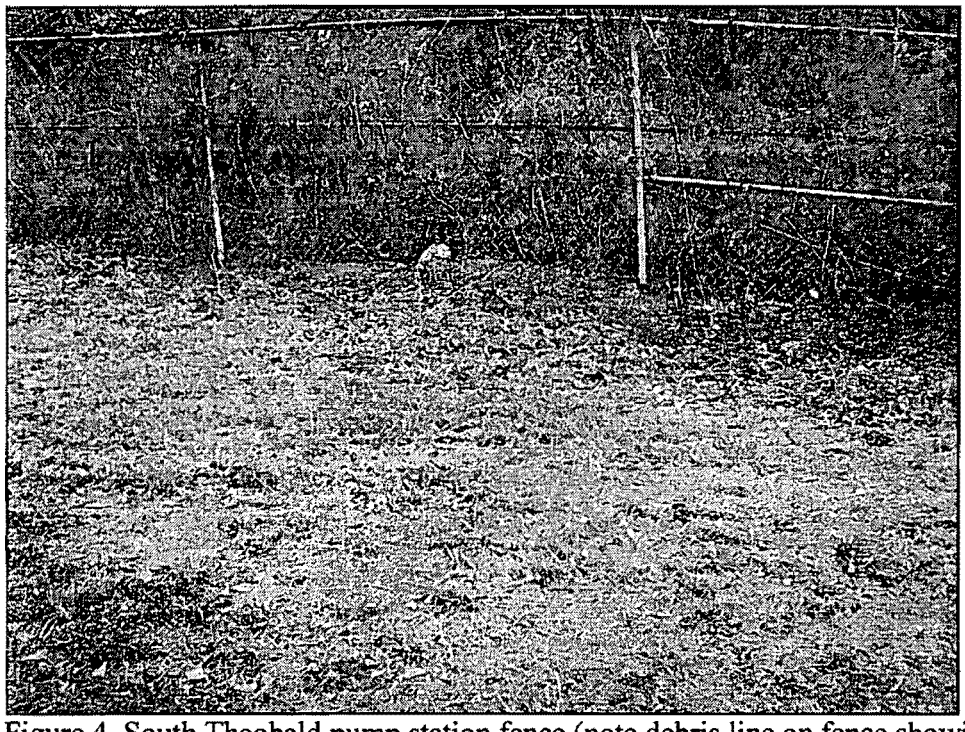


Figure 4. South Theobald pump station fence (note debris line on fence showing height of wastewater during recent SSO). This area drains to a roadside ditch that enters a canal.

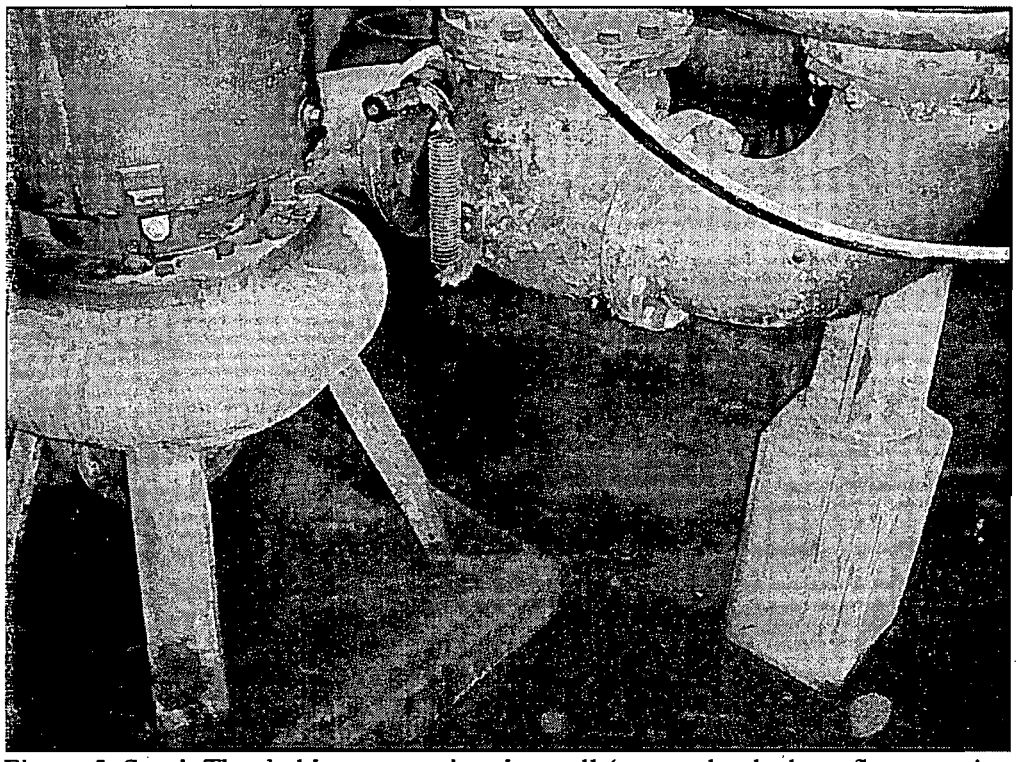


Figure 5. South Theobald pump station dry well (note valve leak on floor causing stain).

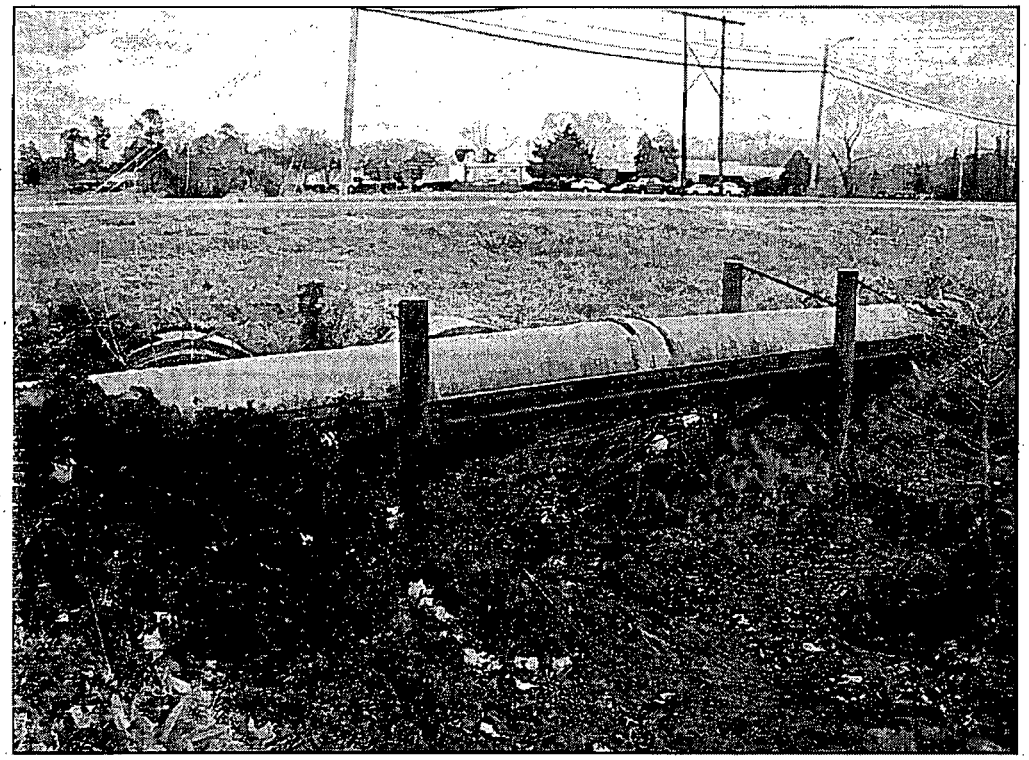


Figure 6. Canal crossing (Reed Road south of Hwy. 82). Steel pipe is inside the concrete pipe.

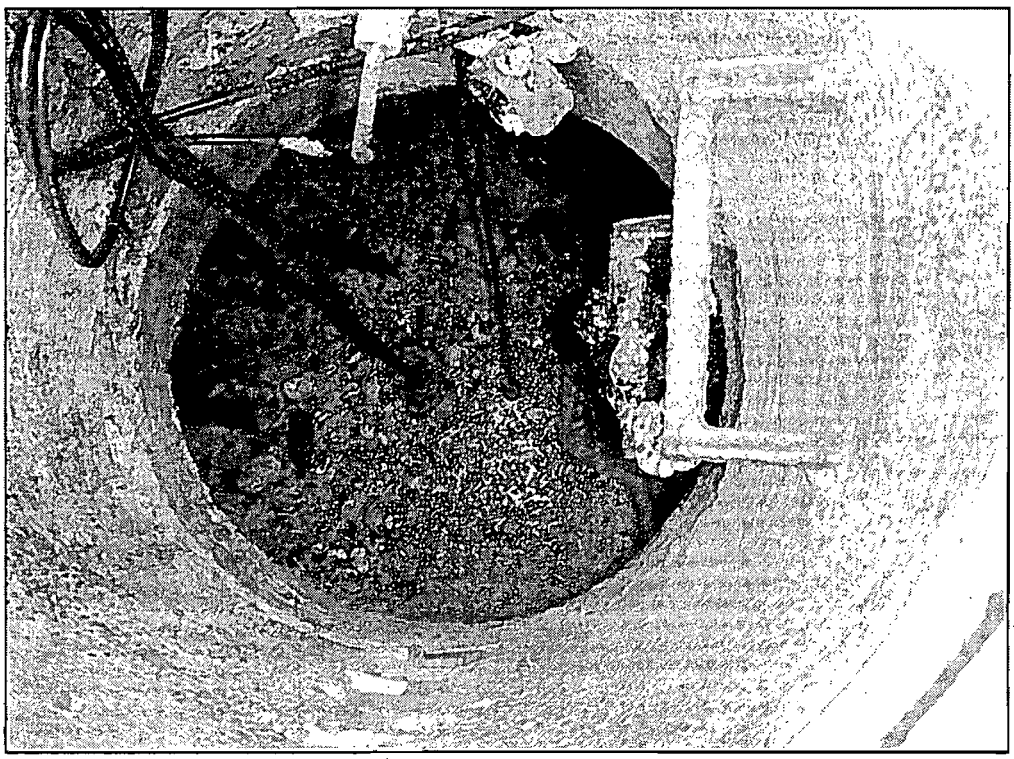


Figure 7. Anne Stokes pump station wet well (note heavy grease).

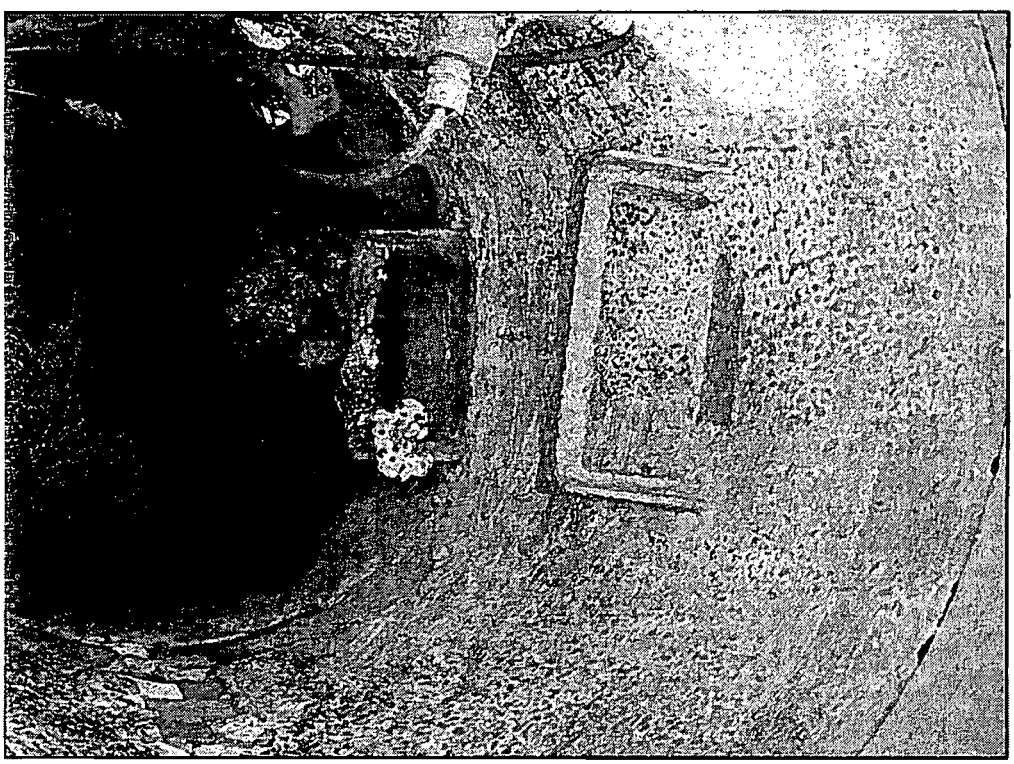


Figure 8. Anne Stokes pump station wet well (note dried debris on ladder rung showing surcharge).

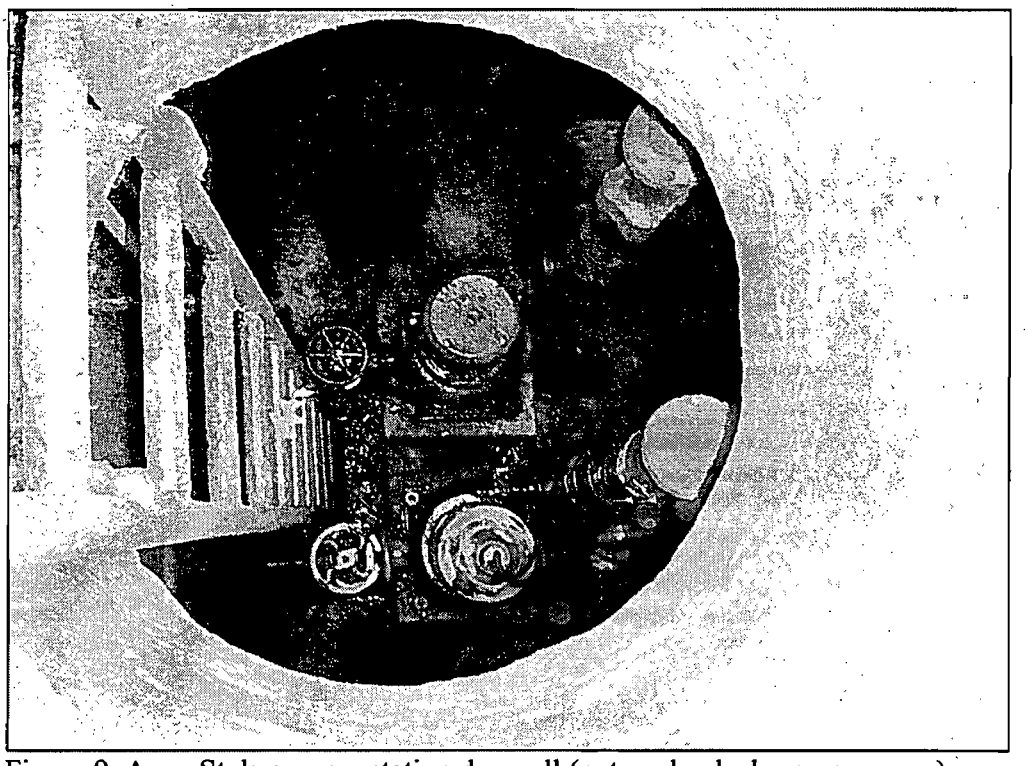


Figure 9. Anne Stokes pump station dry well (note valve leak on one pump).

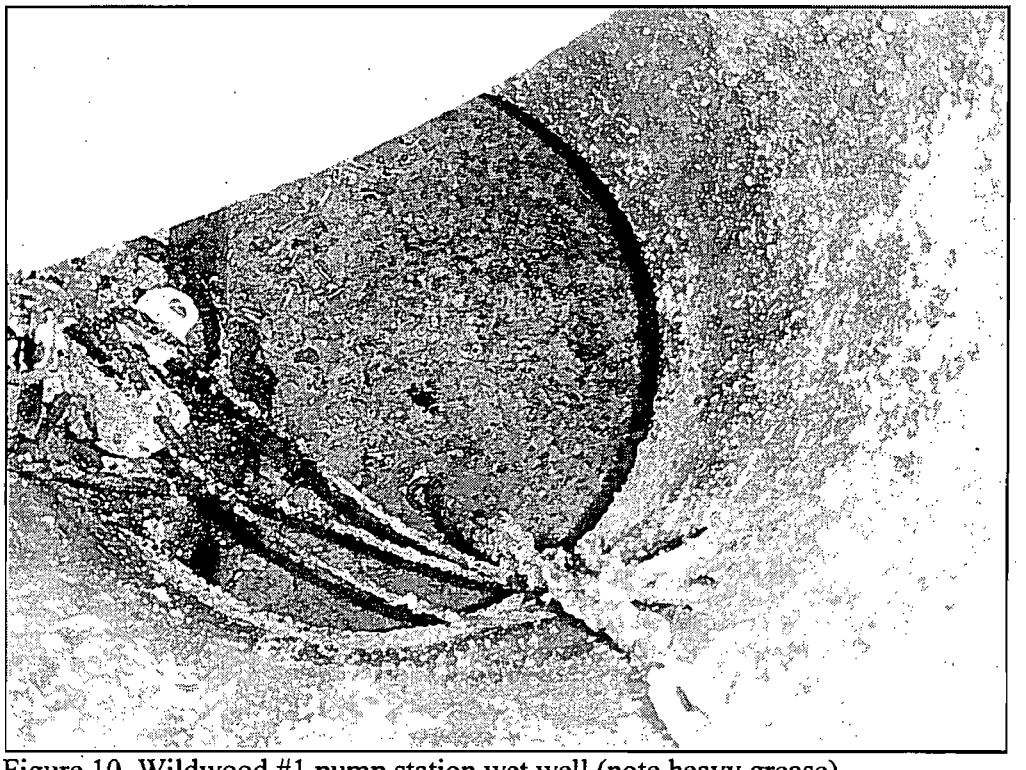


Figure 10. Wildwood #1 pump station wet well (note heavy grease).

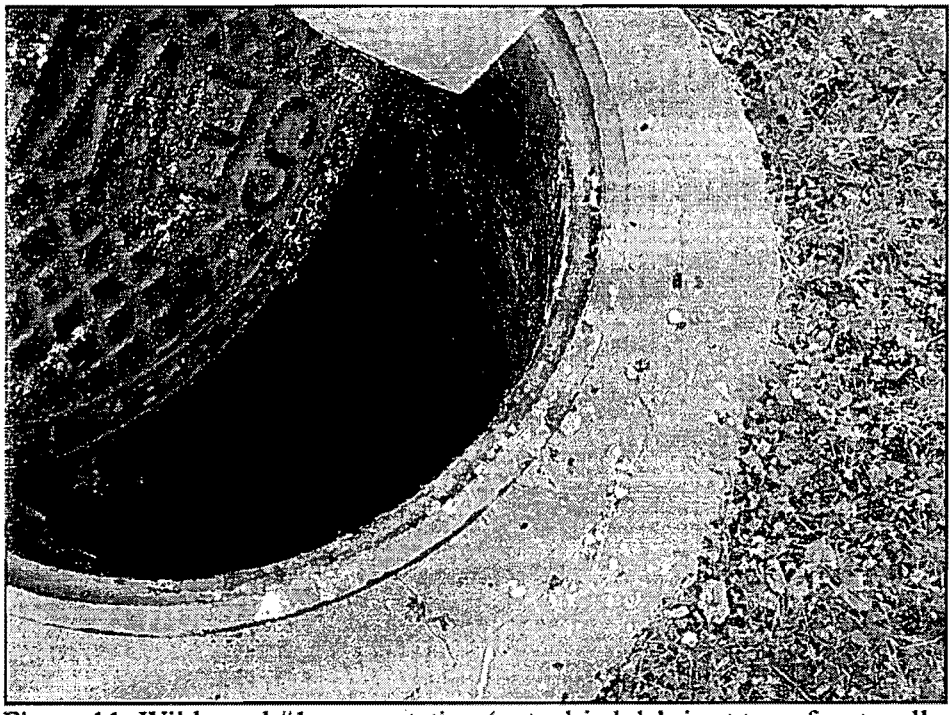


Figure 11. Wildwood #1 pump station (note dried debris at top of wet well and on outside of wet well showing evidence of recent SSO).

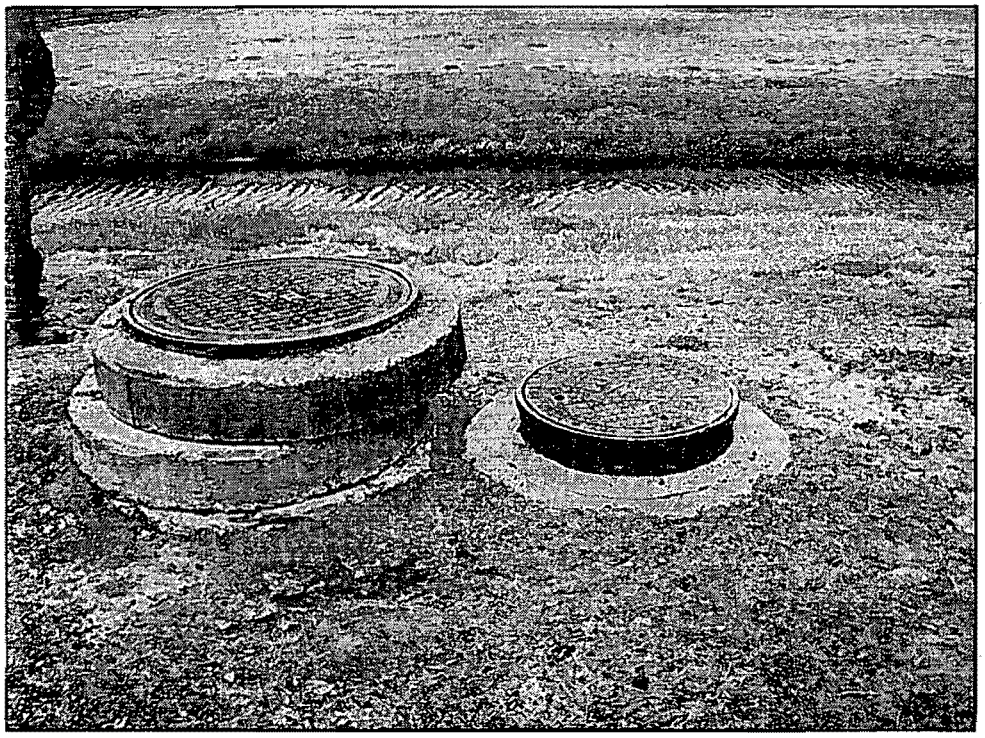


Figure 12. Wildwood #1 pump station (wet well on right; dry well on left; note canal in background).

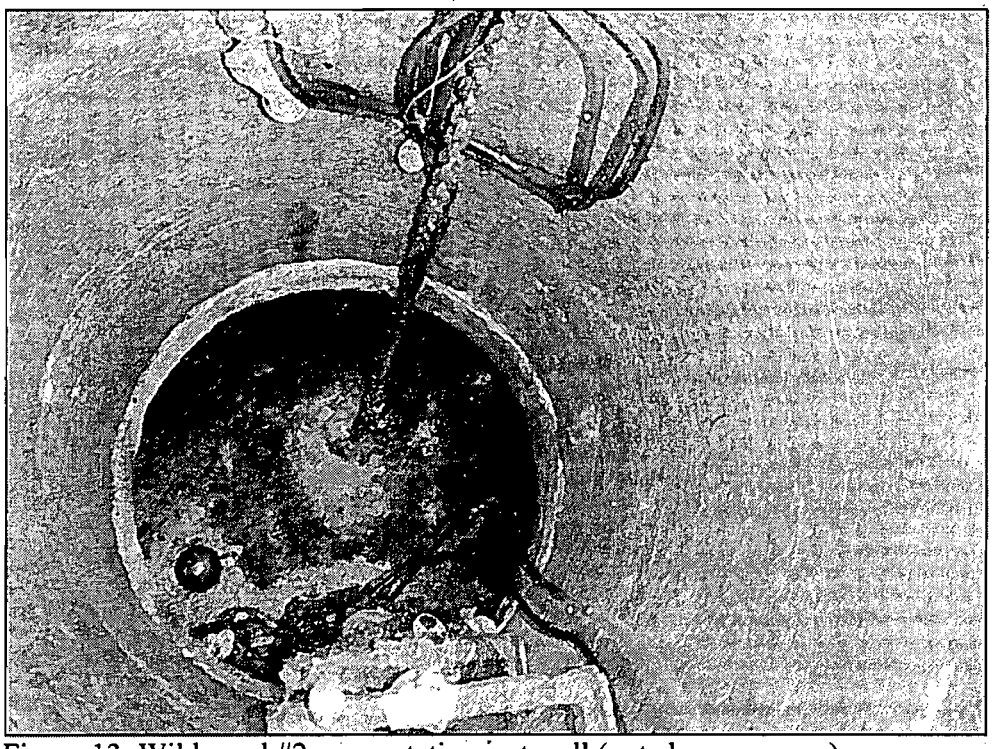


Figure 13. Wildwood #2 pump station wet well (note heavy grease).

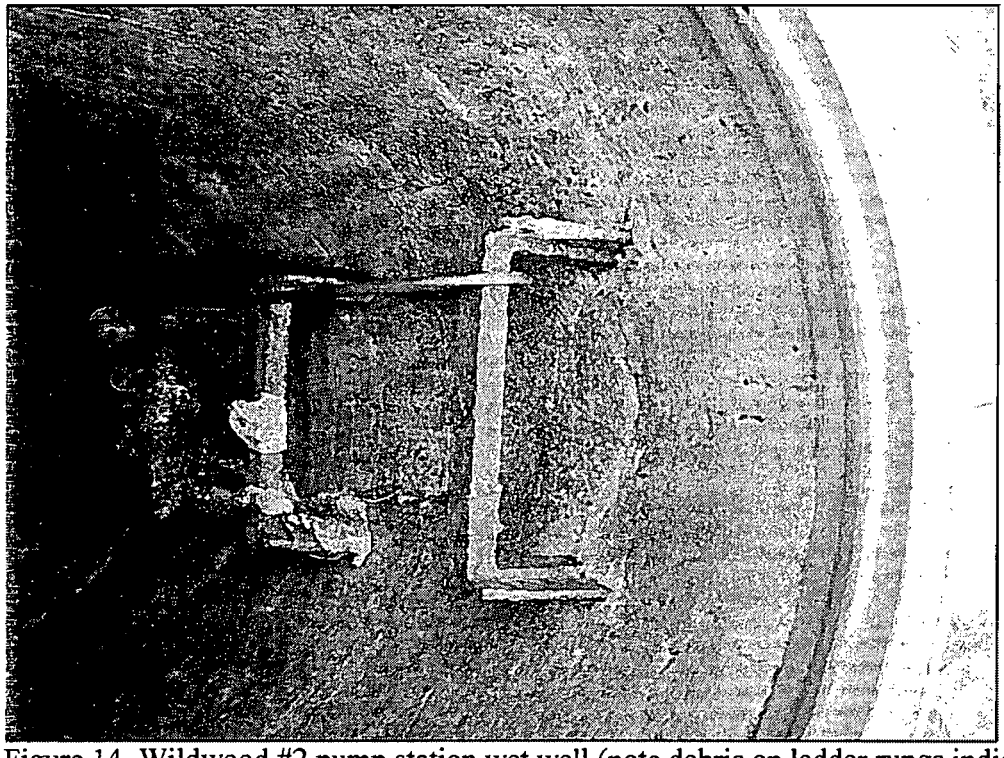


Figure 14. Wildwood #2 pump station wet well (note debris on ladder rungs indicative of surcharge).

Figure 15. Wildwood #2 pump station wet well (note milky white influent from upstream apartment complex, which is indicative of FOG).

Figure 16. Producer's Mill pump station in background (note upstream manhole in wet area).

Figure 17. Producer's Mill pump station (note bypass hose into force main left connected).

Figure 18. Tennessee Street pump station (note grease, plastics and other debris in wet well).

ENCLOSURE B

RIGHT TO ASSERT BUSINESS CONFIDENTIALITY CLAIMS
(40 C.F.R. Part 2)

Except for effluent data, you may, if you desire, assert a business confidentiality claim as to any or all of the information that EPA is requesting from you. The EPA regulation relating to business confidentiality claims is found at 40 C.F.R. Part 2.

If you assert such a claim for the requested information, EPA will only disclose the information to the extent and under the procedures set out in the cited regulations. If no business confidentiality claim accompanies the information, EPA may make the information available to the public without any further notice to you.

40 C.F.R. §2.203(b). **Method and time of asserting business confidentiality claim.** A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4
Water Protection Division
Clean Water Enforcement Branch

COMPLIANCE EVALUATION INSPECTION REPORT

City of Greenville, Mississippi
Greenville, Mississippi
NPDES Permit No. MS0020184

Facility Address:
Highland Plantation Road
Greenville, Mississippi 38127

Inspection Date:
January 29, 2013

Inspectors:
Brad Ammons, Environmental Engineer, EPA Region 4
Dennis Sayre, Environmental Engineer, EPA Region 4
Jamon Rucker, Mississippi Department of Environmental Quality

Inspection Report Prepared by:
Brad Ammons
Dennis Sayre

March 19, 2013

	Date	Time 1	Time 2	Location of SSO	SSO Source	SSO Destination	SSO Volume	SSO Cause	Corrective Action
1	2/4/2007	4:00 A.M.	12:00 p.m. (2/16/2007)	Mixon	manhole		7,000	Grease and roots	Flushed service line and replaced main sewer line
2	2/15/2007	11:45 a.m.	12:30 p.m.	2206 Hardy St.	manhole	none	30,000	Grease	Flushed sewer main and put out chemical treatment
3	3/9/2007	1:00 p.m.	2:30 p.m.	5064 Hwy 42	manhole	none	1,000	Grease	Flushed sewer main and put out chemical treatment
4	3/9/2007	3:00 p.m.	4:30 p.m.	5910 U.S. Hwy 98	manhole	none	500	Grease	Flushed sewer main and put out chemical treatment
5	5/18/2007	11:00 a.m.	1:00 p.m.	Turtle Creek Mall	pump station	none	6,000	Pump station went down	Flushed main line and repaired pump station
6	9/10/2007	10:00 a.m.	3:00 p.m.	218 Little Creek	pump station	pond	10,000	No pumps in lift station	Pumped sewer out of lift station
7	9/24/2007			218 Little Creek	pump station	pond	2,000	Stopped up pump	Pulled pump
8	10/20/2007			Little Creek Station	pump station	pond	10,000	Pumps down	Pumped sewer out of lift staton
9	10/22/2007	9:00 a.m.	2:00 p.m.	Little Creek Station	pump station	pond	12,000	Pumps down	Pumped sewer out of lift staton
10	11/12/2007	7:15 a.m.	8:30 a.m.	Sweetwater	manhole	none	3,000	Grease clogged in manhole	Flushed the main line and applied chemical treatment
11	11/19/2007	7:00 a.m.	10:00 a.m.	215 Westover	manhole		1,000	Grease	Flushed the main line and applied chemical treatment
1	1/11/2008			Canal Place	pump station		800	Pumps down	Pumped down with vac con truck
2	1/22/2008	12:15	12:30	46 Vickers Circle	manhole	none	1,000	Grease	Flushed manhole and put in chemical treatment
3	8/5/2008	3:00 p.m.	10:30 p.m. (8/7/2008)	Gross Creek Parkway	pump station	Mixon creek	50,000	Power failure to pump station	Replaced transfer switch, washed down contaminated area with clean water and put out odorine 10 for smell
1	2/20/2009	1:00 p.m.	3:00 p.m.	Little creek	lift station	pond	unknown	Overload tripped	Reset overload
2	6/12/2009	4:00 p.m.	4:30 p.m.	1116 Ida Ave.	manhole	ditch	300	Blockage in main	Flushed main
3	8/5/2009	12:40 p.m.	2:00 p.m.	Little Creek	pump station	pond	unknown	Overload tripped	Reset overload and replaced overload
4	9/2/2009			South Lagoon	pump station	none	5,000	Rotted drainline	Cut and plugged line; disinfected area
5	9/16/2009	9:00 a.m.	1:00 p.m.	USA Yeast	lift station			Bad bypass hose	Replaced hose
6	10/22/2009			Pemont Lift Station	lift station	woods	unknown	Pumps burnt up	Replaced pumps
7	11/13/2009			Little Creek	pump station	lake	unknown	Pumps stopped up	Pulled and unstopped pumps
8	12/2/2009	1:00 p.m.	1:30 p.m.	207 Paton Ave.	clean out	none	65	Main blockage by unknown material	Repaired main and removed blockage; disinfected area
9	12/5/2009	10:00 a.m.	10:20 a.m.	102 South 11th Ave.	manhole	none	300	Main blockage	Flushed mainline
10	12/6/2009	4:00 p.m.	4:30 p.m.	202 N. 19th Ave.	manhole	ditch	350	Main blockage	Flushed line
11	12/8/2009	11:30 a.m.	3:00 p.m.	309 5th Ave.	manhole	none	1,200	Main blockage and rainfall (2"-3" rain event)	Unblocked main, picked up loose debris and put out 20 gallons of disinfectant
12	12/8/2009	9:00 a.m.	3:00 p.m.	Hardy St.	manhole	Gordon's creek	3,600	2"-3" rain event	Tried to locate infiltration point; contained debris from getting into creek
13	12/9/2009	11:30 a.m.	1:30 p.m.	713 Williams St.	manhole	none	400	Grease blockage	Unstopped main, treated main to keep grease build-up down and treated contaminated area
14	12/9/2009	11:40 a.m.	5:45 p.m.	North Lagoon	pump station	river	4,000	Sand (3"-4" rain event)	Removed sand from standpipes; replaced entire line
15	12/9/2009	12:00 p.m.	6:30 p.m.	North Lagoon	pump station	river	unknown	Pumps down	Bypassed pump and sanitized area
16	12/11/2009	11:00 a.m.	6:00 p.m. (12/12/2009)	North Lagoon	pump station	creek	unknown	Pumps stopped pumping	Bypassed pump and sanitized area
17	12/12/2009	2:00 p.m.	8:00 p.m. (12/13/2009)	Manchester Dr & S. 40th Ave.	manhole	ditch	4,000	3"-4" rain event	None
18	12/12/2009	4:30 p.m.	12:00 p.m.	301 N. 21st Ave.	manhole	Gordon's creek	10,000	3"-4" rain event	None
19	12/12/2009	12:00 a.m.		W. 7th St & N. 19th Ave.	manhole	none	2,000	3"-4" rain event	Tried to locate infiltration point
20	12/12/2009	12:30 p.m.	12:00 a.m. (12/13/2009)	Roby St. & Mallory St.	manhole	ditch	3,000	3"-4" rain event	None
21	12/12/2009	1:00 p.m.	1:00 a.m. (12/13/2009)	John St. & Kaite Ave.	manhole	ditch	5,000	3"-4" rain event	Tried to locate infiltration point
22	12/12/2009	1:00 p.m.	1:00 a.m. (12/13/2009)	108 John St.	manhole	ditch	8,000	3"-4" rain event	Tried to locate infiltration point
23	12/12/2009	11:00 a.m.	6:00 a.m. (12/13/2009)	107 Palmetta Ave.	manhole	Gordon's creek	20,000	3"-4" rain event	None
24	12/12/2009	2:00 p.m.	6:00 a.m. (12/13/2009)	130 Cooper St.	manhole	Gordon's creek	30,000	3"-4" rain event	Tried to locate infiltration point
25	12/12/2009	10:00 a.m.	12:00 a.m. (12/13/2009)	47 Vicker Circle	manhole	none	5,000	3"-4" rain event	Repair main on Columbia St.
26	12/12/2009	11:00 a.m.	2:00 a.m.	600 Block Columbia St.	manhole	none	15,000	3"-4" rain event	Main relocation; cleaned up debris
27	12/12/2009	10:00 a.m.	12:00 a.m.	112 N. 19th Ave.	manhole	creek	6,000	3"-4" rain event	None
28	12/12/2009	3:00 p.m.	2:00 a.m.	200 Block West 6th St.	manhole	ditch	5,000	3"-4" rain event	None
29	12/12/2009	10:00 a.m.	6:00 a.m. (12/13/2009)	1900 Hardy St.	manhole	Gordon's creek	15,000	3"-4" rain event	Main was interlined
30	12/12/2009	10:00 a.m.	12:00 a.m.	104 Park	manhole	creek	6,000	3"-4" rain event	None
31	12/12/2009	8:00 a.m.	12:00 p.m. (12/13/2009)	1100 Arledge St.	manhole	creek	15,000	3"-4" rain event	Cleaned up debris
32	12/13/2009	5:00 a.m.	8:00 a.m.	155 Bushman Alley	manhole	none	1,500	3"-4" rain event	Cleaned up debris in area and put out disinfectants and deodorizers

33	12/13/2009 5:00 p.m.	6:00 a.m.	309 5th Ave.	manhole	none	7,300	3"-4" rain event	Cleaned up debris in area and put out disinfectants and deodorizers
34	12/14/2009 3:15 p.m.	1:00 a.m. (12/15/2009)	525 Corinne St.	manhole	Gordon's creek	3,000	1"-2" rain event	None
35	12/14/2009 2:30 p.m.	1:00 a.m. (12/15/2009)	419 S. 21st Ave.	manhole	creek	3,000	1"-2" rain event	None
36	12/14/2009 2:30 p.m.	1:00 a.m. (12/15/2009)	417 S. 21st Ave.	manhole	creek	3,000	1"-2" rain event	None
37	12/14/2009 3:30 p.m.	3:00 a.m. (12/15/2009)	Cooper	manhole	Gordon's creek	25,000	1"-2" rain event	None
38	12/14/2009 3:00 p.m.	3:00 a.m. (12/15/2009)	107 Palmetto	manhole	Gordon's creek	30,000	1"-2" rain event	None
39	12/14/2009 2:00 p.m.	1:00 a.m. (12/15/2009)	Paul Ave & Hardy St.	manhole	Gordon's creek	3,000	1"-2" rain event	None
40	12/23/2009 10:00 a.m.	11:30 p.m.	Burkett	pump station	creek	unknown	Control Problems	Installed bypass pump, replaced OCAT board and sanitized area
41	1/1/2010		Shadowood Dr.	pump station	none	1,000	Pumps down	Called MS power, repaired lift station and sanitized area
42	1/13/2010 3:00 p.m.	5:00 p.m.	Burkett	pump station	creek	300,000	Power failure	Set up bypass pumps and sanitized area
43	1/29/2010 2:45 p.m.	5:30 p.m.	208 Fuller St.	pump station	yard	20	PVC pipe	Replaced PVC pipe and sanitized area
1	3/7/2010 3:00 a.m.			pump station	none	1,000	Lift station rehab	Fixed bypass pump and reahbbed station
2	3/31/2010 7:53	8:00	Hardy St. & 104 37th Ave.	clean out	none	300	Blockage in service line	Flushed service line and treated contaminated area
3	4/9/2010 4:30 p.m.			lift station	none	1,200	Lift station rehab	Loss vacuum, rehab station and pump station was repaired
4	4/12/2010 1:30			lift station	none	800	Lift station rehab	Loss vacuum, rehab station and fixed vacuum
5	4/27/2010 10:00 a.m.		USA Yeast	lift station	woods	800,000	Loss vacuum	Replaced check valve and sanitized the area
6	5/10/2010 9:00 p.m. -11:00 p.m.	3:00 a.m. - 5:00 a.m.	USA Yeast	lift station	woods	500,000	Bypass pump running hot	Called L.J. Morgan and replaced bypass pumps
7	5/14/2010		217 Methodist Blvd	service line	none	300	Cave in on service line	Flushed service line and treated contaminated area
8	5/17/2010 3:00 p.m.	3:22 p.m.	301 Hutchinson Ave.	manhole		300	Blockage	Flushed main and washed down area with chemical treatment
9	5/18/2010		602 Broadway	manhole	none	300	Cave in on manhole (3" rain event)	Flushed main washed down with chemical treatment 4 times a day
10	6/10/2010 12:47		200 Block East 7th	manhole	none	600	Blockage	Pumped manhole
11	6/10/2010 12:47		224 East 7th St.	manhole	none	600	Cave in on manhole	Pump manhole 2-3 times per day
12	6/10/2010 1:00 p.m.	1:16 p.m.	105 Pine Heaven Circle	manhole	none	300	Roots in main	Flushed main
13	6/11/2010 1:45		224 East 7th St.	manhole	none	600	Cave in on manhole (3" rain event)	Pumped mahole 2-3 times per day
14	6/29/2010 2:45		106 South 37th Ave.	main	ditch	300	Cave in on service line	Flushed main and washed down area
15	6/30/2010 7:30		224 East 7th St.	manhole	none	600	Blockage; cave in on main	Pumping manhole 4 times a day
16	7/5/2010		J.M. Tatum Rd.	pump station	none	6,000	Pump failed	Replaced pumps; disinfected area
17	7/14/2010 2:37		725 Hwy 49 North	service line	creek	300	Cave in on service line	Washed area down
18	7/15/2010 10:26		725 Hwy 49 North	service line	creek	600	Cave in on service line	Washed area down
19	7/22/2010 4:30 p.m.		120 Plaza Dr.	manhole	none	800	Blockage in main	Chemical treatment to flush main and oderine to kill the smell
20	8/4/2010	8/6/2010	Moplusa Timberland - Bonhomie #2	pump station	none	300	Pump failure - power was off	Got pumps working and sprayed disenfectant
21	8/16/2010	8/16/2010	USA Yeast	pump station	none	500	By pass lost prime	Repaired pump and rehabbed pumped station
22	8/20/2010 8:00 a.m.	2:00 p.m.	200' East of 155 Cross Creek Parkway	pump station	creek	300	Force main break	Shut down pump station and repaired 6" force main, washed down area and picked up contaminated soil and trash
23	8/24/2010 12:30	12:46	421 S 28th Ave.	manhole	creek	300	Blockage in main	Flushed main
24	9/18/2010 6:00 p.m.	9:00 p.m.	Village	lift station		50	Tripped breaker	Reset breaker and wired up pump #1, santized the area
25	12/17/2010 11:30	3:05	125 Satchel Rd	manhole	none	600	Blockage in main	Flushed main
26	12/17/2010 4:00 p.m.	6:30 p.m. (12/19/2010)	Piedmont Apartments	lift station	woods	1,500	Pump #1 stopped up and pump #2 has bad motor	Vacuum truck pumped down station; pump #1 upstopped; sanitized and disinfected the area
27	12/20/2010 11:45		3406 Campbell Dr.	manhole	none	300	Grease blockage	Flushed main
28	1/1/2011 4:15	5:25	Corner of Hall & Dabbs	manhole		300	Blocked main	Flushed the main line
29	1/7/2011		Piedmont lift station	pump station	none	1,500	Pump came off guide rails	Pump was pulled and put back on guide rails; guide rails were fixed
30	1/9/2011	1/10/2011	Turtle Creek Crossing lift station	pump station	none	2,500	Bad transducer	Replaced transducer
31	1/10/2011 3:30 p.m.	2:00 p.m. (1/11/2011)	Hwy 49 South	manhole	ditch	1,300	8" main blockage	Blew main open and put 20 gallons of PH-7-12 to dissolve blockage; put odorine 10 and limiline in ditch to kill smell and germs

32	1/28/2011 8:00 a.m.	2:00 p.m. (1/31/2011)	705 Hall Ave.	manhole	none	300	Main blocked by unknown obstruction found to be a 4" gas main bored	Flushed main, washed down area and applied chemcial treatment to area; repaired sewer main
1	2/8/2011 5:00 p.m.	7:00 p.m.	Highway Patrol	pump station	woods	400	Overload tripped	Reset overload and replaced; sanitized the area
2	2/11/2011 3:15 p.m.	12:00 p.m. (2/20/2011)	1900 N. 31st Ave.	manhole	Mixon creek	2,700	Main was blocked by broken manhole bricks	Removed brick from mouth of pipe opening; treated the contaminated area
3	2/14/2011 2:59		2904 Hardy Street	service line	none		Unknown	Flushed service line and treated contaminated area
4	2/19/2011		119 City Park Circle	manhole	Gordon's creek	900	Sewer main cave-in	By-pass pump set-up; repaired sewer main; treated overflow area
5	2/21/2011 10:00	11:01	206 Rhodes Dr.		none	300	Grease blockage	Flushed main
6	2/23/2011 10:00 a.m.	12:30 a.m.	Williams St. & Bay St.	manhole 6556	Leaf river	800	Grease build up in main	Flushed ditch with clean water, added Odorine 10 for smell and granular for disinfectant; treated main with PH-7-12 to dissolve grease blockage
7	3/3/2011 1:00 p.m.	1:30 p.m.	Williams Street	manhole 6556	none	80	Grease build up in main	Unblocked the main; cleaned sewer main at manhole above and below blockage; cleaned area with disinfectant and deodorizer
8	3/5/2011 1:30 p.m.	11:30 p.m.	614 Duke Ave.	manhole	none	150	4" rain event	Tried to locate infiltration point; sanitized area
9	3/5/2011 3:00 p.m.	9:00 p.m.	11 N. 19th Ave.	manhole	none	100	4" rain event	Tried to locate infiltration point; sanitized area
10	3/5/2011 5:00 p.m.	6:30 p.m.	S. 16th & Concart	manhole	none	75	4" rain event	Tried to locate infiltration point; sanitized area
11	3/5/2011 2:00 p.m.	11:00 p.m.	1835 Hardy St.	manhole	none	200	4" rain event	Tried to locate infiltration point; sanitized area
12	3/5/2011 4:00 p.m.	6:00 p.m.	1221 Franklin St.	manhole	none	200	4" rain event	Tried to locate infiltration point; sanitized area
13	3/5/2011 3:30 p.m.	5:00 p.m.	103 Park Ave.	manhole	none	100	4" rain event	Tried to locate infiltration point; sanitized area
14	3/7/2011 12:40	12:55	2507 W. 7th St.	main	storm drain	100	Grease blockage	Flushed main and sanitized overflow area
15	3/8/2011		Melissa Lane	manhole	stream	100	Blockage in main	Flushed main; flushed creek with fresh water and put out deoderixor and disinfectant
16	3/10/2011 9:06 a.m.	9:23 a.m.	606 Dixie Ave.	manhole	none	100	Grease blockage	Unblocked main; disinfected area and washed down with clear water
17	3/10/2011 12:34 p.m.	2:50 p.m.	117 Ruby Ave.	main	none	100	Grease blockage	Flushed main; disinfected area and washed down with clear water.
18	3/11/2011 12:00	12:30	Melissa Lane	manhole	none	100	Unknown blockage	Blew main open to remove blockage; washed down area and put out disinfectant
19	3/15/2011 6:00 p.m.	12:00 p.m.	Village Station	pump station	woods	1,500	Pump station stopped up	Vac-Con Truck and sanitized area
20	3/17/2011 2:30 p.m.	2:00 p.m. (3/27/2011)	209 Sullivan Dr.	8" sewer main	creek and lake	450	Contractor bore through sewer main	Dammed area around break to contain overflow as much as possible; repaired 4' of main; put disinfectant and deodorizer in contaminated area
21	3/24/2011 7:00	7:20	209 Rhodes Dr.	manhole	none	100	Unknown main blockage	Flushed main, put out disinfectant and washed down manhole
22	3/29/2011 12:00 a.m.	7:00 a.m.	4900 Hwy 98	manhole	stream	150	Bypass pump failure	Repaired pump; picked up debris; washed down overflow area and put disinfectant in area
23	4/4/2011 5:35 p.m.	5:47 p.m.	1005 Edward	manhole	none	50	Unknown blockage	Flushed main, washed down street and around manhole; disinfected
24	4/5/2011 4:10 p.m.	4:40 p.m.	217 Cypress	manhole	none	100	Unknown blockage	Flushed main and put disinfectant around manhole
25	4/5/2011 9:30 a.m.	10:30 a.m.	Village pump station	pump station	grass	250	Wet well board	Repaired board; santizied grass area
26	4/7/2011 12:30 p.m.	1:00 p.m. (4/8/2011)	3402 Campbell Dr.	manhole	none	600	Main line was blocked	Flushed and chemically treated the main line
27	4/9/2011		Village	pump station	creek	600	Pump failed	Pump truck (vac); disinfectant sprayed
28	4/11/2011		Dixie Pine	pump station	ditch	500	Pump failed	Turn pump on (man) to pump down; replaced board; disinfectant poured out

29	4/20/2011			Village pump station	pump station	none	700	Pump quit pumping	Pump truck pumped station down; repaired pump
30	4/20/2011			Highway Patrol lift station	lift station	none	500	Pumps burnt up	Pump truck pumped station down; new pumps ordered
31	5/1/2011 5:12 p.m.	12:00 a.m. (5/2/2011)		4700 Hardy St.	manhole	creek	200	Grease blockage in main line	Treated grease blockage with chemicals; removed solids from area, and washed down contaminated area; put out deodorizer and disinfectant
32	5/10/2011 11:00	11:26		816 Edwards St.	service line	none	100	Grease blockage	Unblocked service line; treated manhole with PH-7-12; cleaned up overflow area and put out disinfectant
33	5/23/2011 5:30 p.m.	6:30 p.m.		Richburg #2	pump station	none	50	Control problems/floats	Pump down station manually; replace control board/floats; sanitized area
34	5/27/2011 12:19	12:37		Adeline & S. 37th Ave.	manhole	none	100	Grease blockage	Flushed main and treated manhole with PH-7-12; picked up debris, washed down area and put out disinfectant in contaminated area
35	6/15/2011			Bon Homie lift station	pump station	none	100	Busted check valve	Replaced check valve
36	6/15/2011			Bonhomie Rd.	pump station	none	50	Power	Restored power; used granulated deodorizer
37	6/28/2011 3:00 p.m.			111 Durby Rd	main	stream	10	Broken main	Grenadier Plus (5 gals) placed in affected area and flushed with clear water
38	7/13/2011 2:45 p.m.	3:15 p.m.		4505 Hwy 98	manhole	none	50	Blocked main	Flushed main and treated line
39	7/24/2011 12:00 p.m.	6:00 p.m.		Eva St.	manhole	stream	100	2" - 3" rain event	Washed down area; flushed with fresh water and used chemical treatement
40	7/26/2011 2:30 p.m.	8:30 p.m.		1909 Eva St.	manhole	stream	100	2" rain event	Washed down area with clean water and put out disinfectant
41	8/11/2011			Petro lift station	pump station	none	500	Loss of power	Restored power
42	8/28/2011			J.W. Tatum Rd. (Hwy Patrol)	pump station	none	100	Loss of power	Restored power; repair/replaced fuse at control panel; applied granulated deodorizer surrounding area
43	8/31/2011 10:00	12:30		125 Lake Estate Dr.	pump station manhole	none	100	Pump station	Put out disinfectant; repaired pump in pump station and washed down area
44	10/5/2011 11:00 a.m.	12:30 p.m.		49 Sharmount	manhole	ditch	200	Main blockage by unknown material	Flushed main line to remove blockage; washed ditch out with clean water and put disinfectant in ditch
45	10/11/2011			Rear Piedmont Apartment Complex	pump station	none	100	Broken sewer main	Removed and replaced broken sewer line at easement; applied granulated deodorizer surrounding area
46	10/22/2011 6:00 p.m.	2:00 a.m. (10/23/2011)		100 Breckenridge	manhole	ditch	300	Blockage in main	Flushed the main and put out disinfectant
47	10/24/2011			Brookline Dr.	village pump station	none	100	Pumps down	Removed and replaced relay at add-a-phase; applied granulated deodorizer in surrounding areas
48	11/28/2011			North 35th & Hardy St	manhole		300	Grease blockage	Flushed main and treated manhole with 10 gallons of PH-7-12; put out disinfectant
49	12/23/2011 9:00 a.m.	2:00 p.m.		Turtle Creek Crossing	manhole	ditch	2,000	Lift station main breaker tripped	Temporarily turned pumps in manhole to pump down; permanent corrective action was to pull the pump and require; put out disinfectant
50	1/8/2012 10:00 a.m.			116 Saucier Drive	manhole	stream		Main broken between manhole A2 and A10	Put disinfectant in ditch until repair can be made
51	1/17/2012 8:30 a.m.	2:30 p.m. (1/19/2012)		3408 Campbell Loop	manhole	Mixon creek	1,000	Unknown blockage in main	Kept ditch flushed with clear water, cleaned up large debris in area, washed down contaminated area and put disinfectant in creek and granular deodorizer to help with the smell
52	1/19/2012 10:39 a.m.	11:49 a.m.		1002 Edwards Street	manhole		100	Grease blockage	Flushed main and treated with 20 gallons of PH-7-12; put out disinfectant
53	1/23/2012			Turtle Creek Crossing			1,000	Switch gear and overload/start pump #2 breaker thrown	Reset switch gear and overload/starter

RESPONSE TO E.P.A. REQUEST

FOR INFORMATION

ENCLOSURE "A"

REQUESTED BY:

THE CITY OF HATTIESBURG

APRIL 10, 2012

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC
ENGINEERING SOLUTIONS FOR SOUTH MISSISSIPPI

INTRODUCTION

The City of Hattiesburg has a population of approximately 50,000 people that reside in both Forrest and Lamar County, Mississippi. Sanitary sewer disposal is provided to residential and commercial customers through a network of gravity sewer mains, lift stations and force mains both inside and outside of the city limits. Sanitary sewer treatment is accomplished by two systems of aerated lagoons. These systems are the North Lagoon, which is permitted for a maximum daily flow of 4 million gallons per day (MGD), and the South Lagoon, which is permitted for a maximum daily flow of 20 MGD.

PURPOSE

On January 31, 2012, the City of Hattiesburg received an Information Request from the Environmental Protection Agency (EPA). At the request of the City of Hattiesburg, the EPA granted a 30 day time extension to the reply of this request. The time extension allowed the City to respond to the request on or before April 10, 2012. This report has been compiled specifically as response to Enclosure "A" of the Information Request. Each request outlined in Enclosure "A" will be addressed in this report as follows:

1. Existing Sewer Collection System
2. South Lagoon
    a. Average Design flow rate in MGD
    b. Peak Design flow rate in MGD)
    c. Population Served by the facility

3. North Lagoon
    a. Average design flow rate in MGD
    b. Peak design flow rate in MGD
    c. Population served by the facility
4. SSO Occurrences
5. SSO Reporting Procedures

SEWER COLLECTION SYSTEM

The sanitary sewer system can be divided into three distinct drainage basins. These drainage basins are in direct relation to the contours of the natural ground which is a desirable trait of gravity sanitary sewer systems. With the three drainage basins, the City has developed over the years, three collection systems and two treatment systems. The systems are named the North System or (Mixon's Creek) and the South System or (Gordon's Creek or Laurel Street). A smaller drainage basin (Burkett's Creek) is present in the southern portion of the city and is combined with the South System. The three sewer basins are depicted in Appendix A.

There are many different types of lines in function, material and size throughout the City's system. Tables 2 and 3 outline the total lengths of each pipe size and total length, number and percentage of each pipe material in the city. The most prevalent material in the system is concrete pipe and 8 inch diameter is the most common size.

Table 1 - Length of Sewer Pipe By Diameter

Total Length of Pipes by Size			
	South Lagoon	North Lagoon	Total
	Length (ft)	Length (ft)	Length (ft)
Gravity Sewer			
Total length of 4" Pipe	1,664.08		1,664.08
Total length of 6" Pipe	125,543.92	1,244.72	126,788.64
Total length of 8" Pipe	858,754.28	154,558.86	1,013,313.14
Total length of 10" Pipe	90,834.71	26,583.18	117,417.89
Total length of 12" Pipe	77,071.22	5,943.00	83,014.22
Total length of 15" Pipe	39,845.82	14,082.00	53,927.82
Total length of 16" Pipe	512.00		512.00
Total length of 18" Pipe	49,576.35	21,340.69	70,917.04
Total length of 24" Pipe	30,508.24	4,492.12	35,000.36
Total length of 30" Pipe	16,209.41	2,640.16	18,849.57
Total length of 36" Pipe	4,473.23		4,473.23

Force Main			
Total length of 4" Pipe	6,919.31	13,081.62	20,000.93
Total length of 6" Pipe		23,417.57	23,417.57
Total length of 8" Pipe	13,704.33	7,572.46	21,276.79
Total length of 16" Pipe		15,345.07	15,345.07

The complete system contains approximately 5,700 manholes that are composed of either concrete or brick. These manholes vary in diameter and depth depending on their topographic location and placement in the City.

Table 2 - Length of Sewer Pipe By Material

Total Length of Pipes by Material				
Material	**South Lagoon**	**North Lagoon**	**Total**	**Percent**
	Length (ft)	**Length (ft)**	**Length (ft)**	
Concrete	588,963	73,297	662,260	41.2%
PVC	404,747	72,466	477,213	29.7%
Unknown	145,470	71,166	216,636	13.5%
Clay	148,678	-	148,678	9.3%
Truss	79,126	18,462	97,587	6.1%
Other	2,781	763	3,544	0.2%
TOTAL	**1,369,765**	**236,154**	**1,605,919**	**100.0%**

The North Collection System is the smaller of the two systems and discharges into the North Lagoon. The system generally includes the area west of Interstate 59, west of 40th Avenue from Hardy Street to 7th Street, west of 34th Avenue from 7th Street to Highway 49, and north of the Highway 42 Bypass from Highway 49 to Campbell Road (Hercules). This system also collects waste from residential subdivisions that are outside the city limits. These residences are on the West side of the City. The estimated amount of collection line in the North system is 236,154 linear feet of pipe. There are 17 sewer lift stations in this system serving an estimated

population of 8,759 people as well as commercial and industrial users. The discharge from this sewer system is treated at the North Lagoon.

The South Collection System services the remainder of the City of Hattiesburg. This area includes all of the historic Oaks District, Palmers Crossing, Lincoln Road, etc. This area is served by approximately 1,369,765 linear feet of collection line and 58 sewer lift stations that serve an estimated population of 41,241 people as well as commercial and industrial users. All discharge from this system is treated in the South Lagoon. In addition to this population, the South Lagoon also treats the City of Petal, Mississippi with a population of 9,573 people as well as commercial users. A listing of these lift stations can be found in Appendix B of this report.

SOUTH LAGOON TREATMENT FACILITY

The South Lagoon of the City of Hattiesburg is a series of three aerated lagoons that feed into a polishing lagoon prior to discharge. The facility was expanded to its existing state in the early 1960's as part of an EPA grant. The South Lagoon is located at 1903 East Hardy Street, and discharges directly to the Leaf River approximately 1.9 miles downstream from the confluence of the Bouie River and the Leaf River. The existing facility encompasses approximately 470 acres and has a permitted capacity of 20 million per gallons day (MGD). According to DMR reports the highest monthly average flow was 16.5 MGD over the past 3 years of record. This provides adequate capacity to receive additional flows on a permit basis. The facility is currently experiencing compliance difficulties due to industrial wastewaters which overload the system.

The City of Hattiesburg is under contract with various projects, described later in this section, with the goal of correcting these issues.

The original design parameters for the facility are denoted on the final plans for the facility as follows:

DESIGN DATA FOR SOUTH LAGOON		
Design Parameter	**Estimated (1970)**	**Estimated (1990)**
Population	55,600	75,500
Population Equivalent	69,500	94,100
Sewage Flow Maximum Average	8.41 MGD	11.56 MGD
Sewage Flow Maximum Average Per Capita	151 gal/day	153 gal/day
Domestic BOD Loading (lbs per day/capita)	10,008 lbs per day	13,590 lbs per day
Industrial BOD Loading	2,510 lbs per day	3,350 lbs per day
Total BOD Loading	12,518 lbs per day	16,940 lbs per day

The design data for this facility did not address the design parameters of each individual cell. Additionally, loadings for each cell cannot be calculated at this time. Flow into the plant, particularly into each treatment cell, was not being monitored until June 2011.

Domestic wastewater contributors are not individually monitored in the City of Hattiesburg. The City serves approximately 11,000 domestic connections, but there is no way to separate the domestic constituent of this flow from the general wastewater stream. Wastewater flow is approximated for billing using a percentage of the potable water usage per connection on a monthly basis. The population served by the facility is approximately 51,000 people. This

includes the population of the City of Petal, MS whose wastewater is discharged into the South Lagoon.

NORTH LAGOON TREATMENT FACILITY

The North Lagoon treatment facility, located on Lakeview Road, is a series of two aerated lagoons that flow into a third polishing cell before discharge into the Bouie River. The existing facility was constructed in 1970 and has an area of 37 acres with the lagoons comprising approximately 19 acres of the total area. The facility has a permitted flow of 4.0 MGD, but a design capacity of 2.0 MGD. According to DMR reports the highest monthly average for flow was 2.70 MGD over the past 3 years of record. This average flow does not leave adequate capacity for any additional permitted flows. The facility also started to see failures in treatment capability due to the constant overloading of the facility.

The original design parameters for the facility are as follows:

DESIGN DATA FOR NORTH LAGOON		
Design Parameter	**Design**	**Actual (over 3 years)**
Sewage Flow Maximum Average	2.00 MGD	1.87 MGD
Average BOD Loading (lbs per day)	3,400 lbs per day	4,519 lbs per day
Average TSS Loading (lbs per day)	3,400 lbs per day	3,131 lbs per day
Peak BOD Loading (lbs per day)	6,800 lbs per day	17,271 lbs per day
Peak TSS Loading (lbs per day)	6,800 lbs per day	14,193 lbs per day
Removal Efficiencies BOD	90%	93%
Removal Efficiencies TSS	90%	83%

The shortfall in capacity was realized by the City of Hattiesburg and in 2009 a project was initiated to expand the facility. That project is currently under construction and has a projected completion date of August 2012. The expanded facility will increase design capacity to 4.0 MGD. The proposed facility will cover a total area of 61.0 acres, with the added lagoons covering 16 acres of that total. The additional lagoons will provide sufficient capacity for additional permitted flows and treatment.

The design parameters for the newly designed facility are as follows:

DESIGN DATA FOR NORTH LAGOON	
Design Parameter	**Design**
Sewage Flow Maximum Average	4.00 MGD
Average BOD Loading (lbs per day)	9,700 lbs per day
Average TSS Loading (lbs per day)	6,700 lbs per day
Peak BOD Loading (lbs per day)	19,400 lbs per day
Peak TSS Loading (lbs per day)	13,400 lbs per day
Removal Efficiencies BOD	90%
Removal Efficiencies TSS	90%

At the time of this report, the North Lagoon served a population of approximately 8,759 people.

SSO Occurences

As defined by the Information Request, "a sanitary sewer overflow (SSO) is an overflow, spill, release, or diversion of wastewater from the sanitary sewer system (SSS)." A five year record of the occurrences can be found in Appendix C of this report. The City of Hattiesburg has reported 142 occurrences since February 2007. One item that has been added to the occurrence report since the compilation of this report is the ultimate destination of the SSO. In each case, for the City of Hattiesburg, the SSO will ultimately be received at the Bouie River or the Leaf River. In the future this information will be included in each report.

Due to the requirements of this report, the City of Hattiesburg has begun an investigation into all constructed overflows in the system. This is a difficult process since most of these were constructed many years ago. To date there have been 31 constructed overflows discovered and 30 of them have been closed. There is one that has remained in place due to an imminent project to repair the entire line which is broken at this time. The City of Hattiesburg is continuing to search out any constructed overflows within the system in order to close them. A listing of the constructed overflows can be found in Appendix D. A listing the Wet Weather Sanitary Sewer Overflow/Bypass Locations that have been discovered since receipt of the request for information by the EPA can be found in Appendix E.

SSO Reporting

The current procedures for reporting SSO occurrences are as follows:

In the event that a sanitary sewer overflow has the potential for reaching state waters or impacting public health:

- Notification must be given to MDEQ within 24 hours of the event.
- This notification can be made by calling 601-961-5171 or by faxing the information to 601-961-5674. (Currently ATTN.: Mr. Jamon Rucker, OPC/Envir. Compliance & Enforcement)
- If oral notification is given, a written report must also be submitted within five days of the event.
- Site cleanup and disinfection must be done immediately.
- Notification of event to Supervisor must be done immediately.

These procedures have been developed through MDEQ annual inspections, MDEQ verbal instructions and NPDES Permit requirements. There is no Council Adopted SOP nor is there an official Department SOP. These instructions have been given to every employee responsible for the reporting of sanitary sewer bypass/overflows. The Department uses the MDEQ Bypass/Overflow Report for recording and reporting purposes. A copy of this form can be found in Appendix F of this report. The following list gives the responsible position of those responsible for each activity required in the reporting of an SSO occurrence:

1) Documenting

   a) Sewer Lagoon Crew Supervisor

   b) Sewer Lagoon Facility Maintenance Repairer

   c) Sewer Crew Foreman

   d) Sewer Equipment Operator

2) Estimating Volume

   a) Sewer Lagoon Crew Supervisor

   b) Sewer Lagoon Facility Maintenance Repairer

   c) Sewer Crew Foreman

   d) Sewer Equipment Operator

3) Identify Cause

   a) Department General Manager

   b) Sewer Division Manager

   c) Sewer Lagoon Crew Supervisor

   d) Sewer Lagoon Facility Maintenance Repairer

   e) Sewer Crew Foreman

   f) Sewer Equipment Operator

4) Containment and Cleanup

   a) Sewer Crew Foreman

   b) Sewer Equipment Operator

5) Wet Weather Reconnaissance

   a) Department Director

   b) Department General Manager

   c) Sewer Division Manager

d) Sewer Lagoon Crew Supervisor

e) Sewer Lagoon Facility Maintenance Repairer

f) Sewer Crew Foreman

g) Sewer Equipment Operator

6) Reporting to MDEQ

a) Sewer Lagoon Crew Supervisor

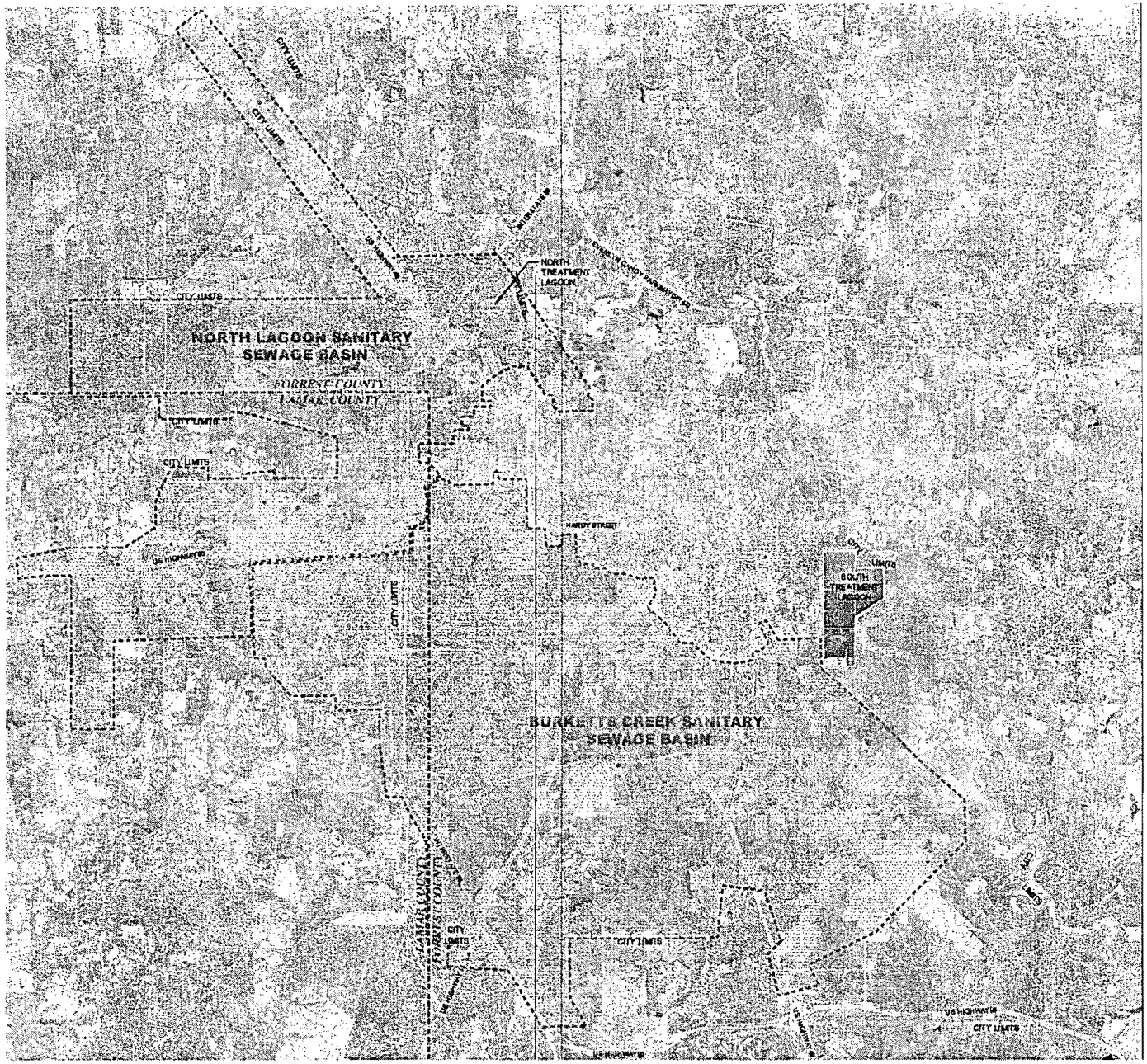
b) Sewer Lagoon Facility Maintenance Repairer

c) Sewer Crew Foreman

d) Sewer Equipment Operator

Appendix A

HRG



LEGEND

- NOTES LOCATION OF SANITARY SEWER PUMP STATION

CITY OF HATTIESBURG
SANITARY SEWAGE TREATMENT AREA MAP

GRAPHIC SCALE

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC

DRAWING No.: 1278.001 DATE: 04-09-2012

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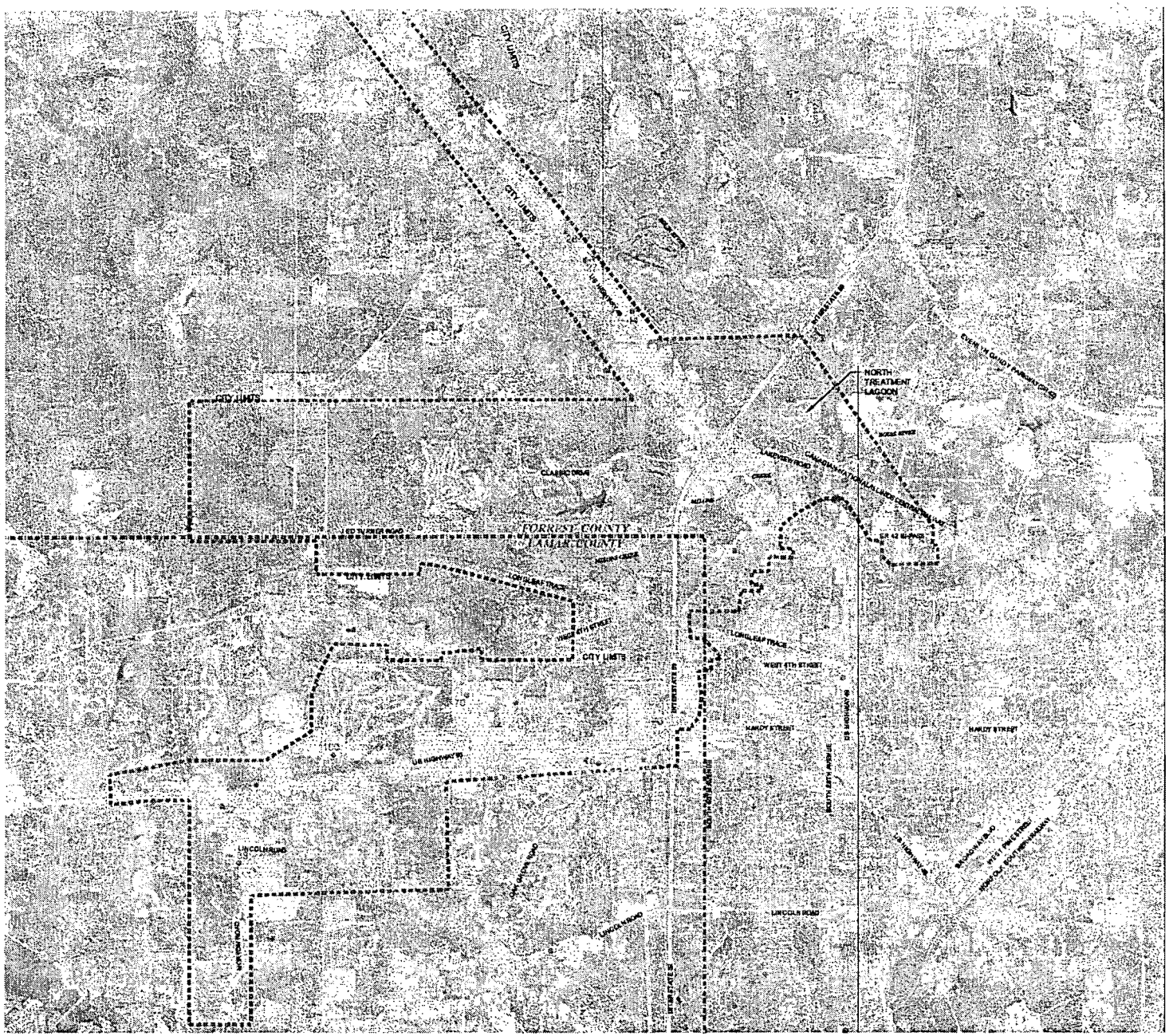

LEGEND

- NOTES LOCATION OF SANITARY SEWER PUMP STATION AND STATION NUMBER

CITY OF HATTIESBURG
NORTH LAGOON SANITARY SEWAGE BASIN MAP

GRAPHIC SCALE

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC
ENGINEERING SOLUTIONS FOR SOUTH MISSISSIPPI

DRAWING No.: 1278.001 DATE: 04-09-2012

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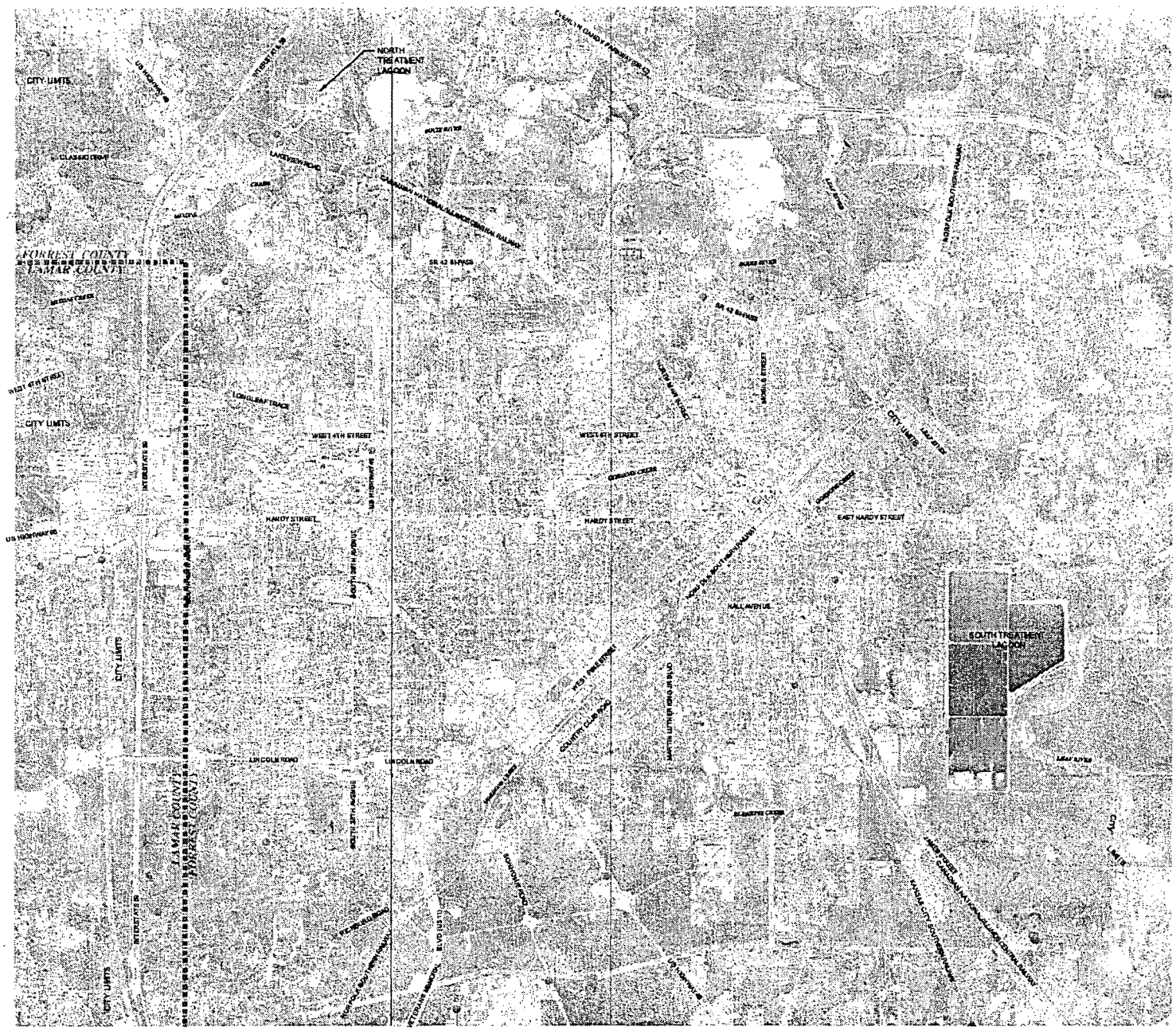

LEGEND

- NOTES LOCATION OF SANITARY SEWER PUMP STATION AND STATION NUMBER

CITY OF HATTIESBURG
LAUREL STREET SANITARY SEWAGE BASIN MAP

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC
ENGINEERING SOLUTIONS FOR NORTH MISSISSIPPI

DRAWING No.: 1278.001 DATE: 04-09-2012

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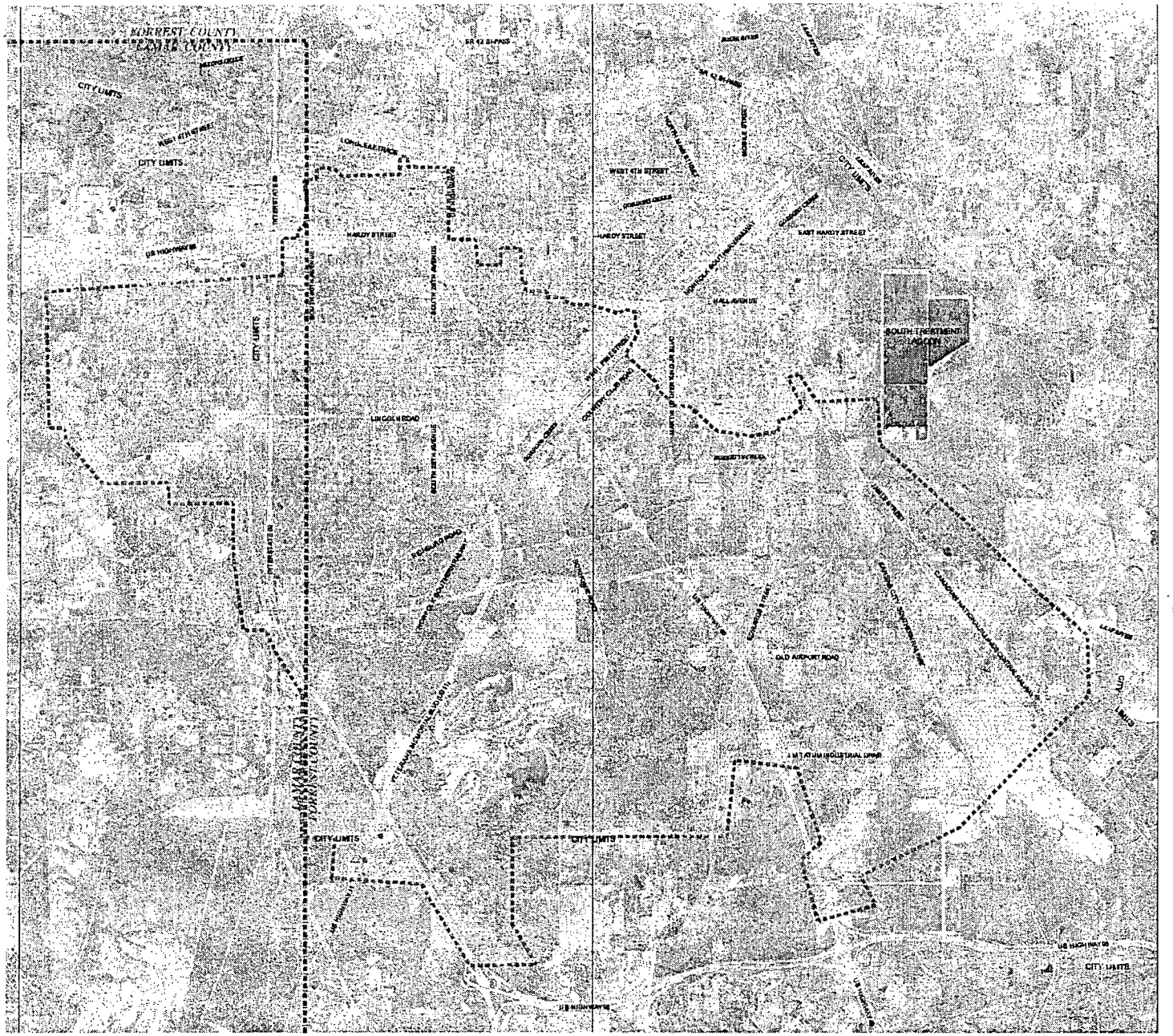

LEGEND

- NOTES LOCATION OF SANITARY SEWER PUMP STATION AND STATION NUMBER

CITY OF HATTIESBURG
BURKETTS CREEK SANITARY SEWAGE BASIN MAP

GRAPHIC SCALE

(IN FEET)

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC

DRAWING No.: 1278.001 DATE: 04-09-2012

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Appendix B

SEWER LIFT STATIONS

2/25/2011

Charles Cooper, Shane Jerrell

CITY OF HATTIESBURG INFORMATION											CONTROL SYSTEMS INFORMATION				
Number	LIFT STATION	LOCATION	NOTES	COST	JOB NUMBER	FLA	HP	VOLT	PHASE	PUMPS	CURRENT READING	LATITUDE	LONGITUDE	MISCELLANEOUS	PICTURES
1	63rd Street	Behind Lyon's Auto.	Pump #1 packing, Pump #2 rebuild, Pump #3 rebuild, Valve #1 replace	$ 41,400.00	36237	-	50	480	3	4	n, n, n, 42.7	31.7915897	89.8765515	SCADA: Pump 1 and 2- Shop, Pump 3 - Not Working, Pump 4: Run Hrs - 0?, Current YES, Outflow YES, Switch YES	YES
2	98 Place		[illegible]												
3	Academy	At airport in industrial park	OK		33881	13.2	5	240	3	2	10.6, 10.7	31.8428715	89.9291793	Fail CTU, Has To Be Turned On Manually EVERYTIME	YES
4	Annie Street		OK		10473	5.8	1.5	240	3	2	6.9, -	31.8162035	89.8703138	Not On Scada, SS Lock Holder and Latches	YES
5	Arledge Street	Arledge & Asher	Pump #2 discharge pipe Loose - Off	$ 575.00	25216	19	7.5	240	3	2	10.9, n	31.8126079	89.8808014	Pump 2 - Repair	NO
6	Avenue B	Ave. B & Glinda Lane	Pump #1 high amps - Off	$ 3,565.00	17219	22	5	240	1	2	Not Hooked Up Yet, 28.2	31.8049804	89.9376033	Not On Scada, SS Latches	NO
7	Barkley Road	Near Railroad	OK		38077	12.2	5	240	3	2	12.2, -	31.8250247	89.9073334	2nd Pump Needed, Single Pole Breaker Needed, SCADA Switch GOOD, SCADA CURRENT ?	YES
8	Barracudda	Heritage Meth. Church	OK		36196	-	7.5	240	3	2	19.1, 19.1	31.6959260	89.8709838	SCADA: Ouflow ? Pump 1 and 2: Switch, Current ?? Both were in Auto	YES
9	Beverly Hills	Plantation apts.	[illegible]		33880	21.1	5	240	1	2	Not Working, 19	31.7637187	89.8399768	Pump 1 Not Working? SCADA: Outflow YES, Pump 1 and 2: Switch YES, Current NO, YES	YES
10	Bonhomie Road #1	Pine Belt Mental Health Whse.	OK									31.7890401	89.9412934		
11	Bonhomie Road #2	Behind Molpus Timber	OK									31.7910171	89.9100413		
12	Burkett	South Lagoon	Pump #4	$ 48,300.00	38611	124	100	480	3	4	78, 83, 74, Not Working	31.8260478	89.8855966	SCADA: Outflow NOT WORKING is 0 when Pumps Running, Pump 1,2,3: Switch YES, Current YES. Pump 4: NOT WORKING cuz CT needs Replacing.	YES
13	Canal Place	Off S. 40th Ave. Ext.	OK		28285-34778	15.5	2	240	1	2	10.9, 6.3	31.7564004	89.9084671	SCADA: Ouflow ? Pump 1 and 2: Switch, Current ?? Both were in Auto	YES
14	Cascades #1		OK		38211	54,27?	20,10?	240	3	2	28.6, 25.8	31.7668633	89.8959515	RTU YES But Not On Scada	NO
15	Cascades #2		OK		38211	54,27?	20,10?	240	3	2	45.6, 47.7	31.7632320	89.9001135	RTU YES But Not On Scada	NO
16	Coon Hunters	James St. @ Coonhunters Club	OK		17227	15.2	5	240	3	2	12, -	31.8446297	89.9179952	SS Latches	NO
17	Dixie Pine Road	Near Resinal	OK		19265-39317	24.8	10	240	3	2	24.8, 22.2	31.8214263	89.8984834	SS Lock Holder	YES
18	Duncan Lake Ext		OK									31.8301242	89.9033735		
19	E. 8th Street		OK		10473-34778	5.8	1.5	240	3	2	5.8, 5.6	31.8035205	89.8497908	SS Lock Holder and Latches, SCADA Fine	YES
20	E. Laurel	South Lagoon	Pump #2	$ 51,750.00	32621	52	40	480	3	4	n, n, 68, 62	31.8281013	89.8668630	FINE	YES
21	Elks Lake Road	Near Petro Rd.	OK		17219	30	7.5	240	3	2	18.4, 17.5	31.8079821	89.9229765	Not On Scada	NO
22	Emergency Management		OK		33390	14.8--20.2	5--7.5	240	3	2	18.7, 18.3	31.7661104	89.9459225	New Deadfront Needed Urgently, Lightning Hit. SCADA: Outflow, Current, Switch ???, Alarm for Low Level WORKS	YES
23	Fuller Street		OK		39317	12	2	240	1	1	8.3	31.7798672	89.8769142	SCADA: Outflow, Current, Switch ???, Alarm for Low Level WORKS	YES
24	Green Hut	Industrial Dr. @ W.L. Runnels	Pump #2 high amps - Off	$ 51,750.00	39317	-	40	240	3	2	28.2, -	31.8315623	89.9287400	2nd Pump Belt Not Working, SCADA PUMP # 1: Current YES 92.4, Switch YES, Call For YES, Running YES, Off YES, BUT NO OUTFLOW ?	YES

CITY OF HATTIESBURG INFORMATION					CONTROL SYSTEMS INFORMATION										
Number	LIFT STATION	LOCATION	NOTES	COST	JOB NUMBER	FLA	HP	VOLT	PHASE	PUMPS	CURRENT READING	LATITUDE	LONGITUDE	MISCELLANEOUS	PICTURES
25	Greystone	J.Ed Turner, Greystone & Augusta Court	Needs to be installed. Wet well in place. Tie-in forcemain and gravity lines	$ 97,500.00								31.7266975	89.8375977		
26	Gulfport Street		[illegible]									-	-		
27	Hwy 49N #1	Big K	OK		17226	23	,7.5	240	3	2	85.2, 16.5	31.7466702	89.8014164	SS Latches, and SS Lock Holder, Not On SCADA	NO
28	Hwy 49N #2	Rawls Springs	OK		17226	15.2	5	240	3	2	9.4, 11.8	31.7444925	89.7975933	Not On Scada, SS Latches & Lock Holder	NO
29	Hwy 49N #3	Raynor's Catfish	OK		17226	15.2	5	240	3	2	11.3, 10.6	31.7325861	89.7819560	Not On Scada, SS Latches & Lock Holder	NO
30	Hwy Patrol	J.M Tatum Industrial Dr.	Pump #2 rebuild	$ 3,565.00	28798	-	5	240	3	2	13.2, -	31.8168558	89.9323795	Not On Scada	NO
31	James Street	Hood Rd. & James St.	OK		17227	15.2	5	240	3	2	12.8, 12.7	31.8328049	89.9077649	FINE	NO
32	Jervis Mims Rd #2		OK		33390	14.8	5,7.5	240	3	2	40, 40	31.7679458	89.9427866	No Water In Pit, Runs Only 8 hrs/month, SCADA Screen Not Working AT ALL for Pump # 1 and # 2 Should be in Auto But Shown In OFF	YES
33	Jervis Mims Rd.	Jervis Mims Rd. off Vet. Memorial	OK		18942	66	25	240	3	2	59, 58	31.7759359	89.9472823	Not On Scada, SS Latches	NO
34	Julian Street		Pump and controls	$ 17,365.00	-	app. 14	app. 2	240	1	2	6.1, Not Hooked up yet	31.8090782	89.8420779	Duplex Controller Only	NO
35	Lake Estates Drive	Near Pinetree	OK		19124	-	10	240	3	2	20.8, 21.9	31.7310533	89.8212254	ss Latches and Lock Holder	NO
36	Lake Forgetful	98 West	Needs piping	$ 575.00								31.7257430	89.8694607		
37	Lake Serene	Behind Lake Serene Grocery	OK		27151	-	app. 1	240	3	2	5.8, 5.8	31.7085080	89.8702571	NOT ON SYSTEM BUT CSI PRODUCT	NO
38	Lake Shore Drive	J Ed Turner Rd.	OK		19490-34778	28	11	240	3	2	18.5, 19.1	31.7272491	89.8305408	SCADA FINE, Needs SS Latches and Lock Holder	YES
39	Landry Lewis	Movie Star Rest.	Not in service		37370	14.8	5	240	3	2	10.7, n	31.7064152	89.8806205	SCADA - NOT WORKING, 2nd Pump Not Working	YES
40	Lincoln Rd #1	Lincoln Center	OK		30956	27	20	480	3	2	13.1, 13.5	31.7418959	89.8926192	SCADA: Level Changed On Screen. Outflow ? Pump 1 anad 2: Switch, Current ??	YES
41	Lincoln Rd #2	Lincoln Rd. ext.	OK		34342	27	10	240	3	2	20.6, 20.5	31.7118370	89.8788338	SCADA BAD	YES
42	Little Creek Drive	Country Club Area	Pump #1 stopped up - Off	$ 7,590.00	23844-38077	-	3	240	1	2	12.1, 10.7	31.7300253	89.8193921	SCADA FINE	YES
43	Logans		Not in service									-	-		
44	Mammoth Springs Rd.	Hwy 49 N./behind Mitchell Cranes	OK		24485-39317	42	15	240	3	2	26.7, 27.1	31.7521240	89.8081938	Eff. Flow - NOT SHOWING, Current and Switch were FINE	YES
45	Mayfair	100 Mayfair Dr.	Pump on order		30467	-	2	240	1	2	n, 14.1	31.7476478	89.8679970	Pump 1 Repair	NO
46	McDonalds	Hwy 98 West	Not in service									-	-		
47	Nellwood	Richburg Rd. - Woodhaven Sub.	OK		27883-39317	21.5	3	240	3	2	24.7, -	31.7631713	89.9157921	NOT ON SCADA, Needs to be on SCADA Has RTU, 2nd Pump Locked Up	NO
48	North Lagoon	Lakeview Rd.	OK		36236	n	20,20,40	480	3	3	n, 60.2, 53.5	31.7682606	89.8253036	SCADA: Switch - Not Presprong when Pumps were flickering On/Off. Current and Outflow - same situation as above.	YES
49	Norton Rd / Hwy 11		OK		36792	27	10	240	3	2	n	31.7057765	89.8987941	NO POWER/OVERGROWN.	NO
50	Oak Grove	Oak Grove Rd.	OK		26685	-	2	240	3	2	5.6, 5.6	31.7528967	89.8674319	FINE	NO
51	Oakwood		Pump #1 clogged	$ 3,565.00	27883-39317	21.5	7.5	240	1	2	16.8, 17	31.7590355	89.9180329	NOT ON SCADA, Needs to be on SCADA Has RTU	YES
52	Old Hwy 11	Keith's gas station	OK									31.7045447	89.8730967		
53	Petro Collision	Old Hwy 11 near Ramey's	OK		30956	21	15	480	3	2	No Power/Overgrown	31.7036830	89.8768705	NO POWER/OVERGROWN.	YES
54	Piedmont		Pump on order		-	-	app. 5	240	1	2	18.4, 23.6	31.7887569	89.8979328	NOT ON SCADA	NO

CITY OF HATTIESBURG INFORMATION											CONTROL SYSTEMS INFORMATION				
Number	LIFT STATION	LOCATION	NOTES	COST	JOB NUMBER	FLA	HP	VOLT	PHASE	PUMPS	CURRENT READING	LATITUDE	LONGITUDE	MISCELLANEOUS	PICTURES
55	Pine Tree	Country Club Area	OK		16081-39317	42	15	240	3	2	33.4, 33.5	31.7365158	89.8228133	SCADA: Outflow YES, Pump 1 and 2: Switch YES Current NO	YES
56	Railroad Street	Deadend	OK		15690	56	20	240	3	2	40.6, 52.3	31.8278018	89.9149666	SCADA Pump # 1 ON, Current YES, Eff. Flow YES, Switch YES, Running YES, Off YES	YES
57	Ramey's	Behind Ramey's Market	[illegible]									-	-		-
58	Rawls Springs Loop	Hwy 49 N	Replace control board then reroute to gravity flow	$ 56,465.00								-	-		
59	Richburg Road #1	Southern Oak Catering	OK									31.7760694	89.9034655		
60	Richburg Road #2	100 Richburg Hills Rd.	OK									-	-		
61	Scott Street	Hwy 42 Bypass middle of road	OK									31.8049116	89.8420680		
62	Shadowood Drive	Off S. 40th Ave.	OK		18941	30	5	240	1	2	21.7, 22.0	31.7574920	89.9027711	SS Latches	NO
63	Southern Farm & Garden	Hwy 49 S.	OK									31.7960679	89.8997013		
64	Stepts Ave.	Tatum Indus. Dr.	OK		16039-	21	7.5	240	3	2	17.9, 17.5	31.8375274	89.9207252	SCADA Pump # 1 ON, Current YES, Depth Change YES, Eff. Flow YES, Switch YES, Running YES, Off YES	YES
65	Sullivan Drive	Behind Kohler	Pump #2 need start relay	$ 345.00	15935	21	7.5	240	3	2	16.7, -	31.8250902	89.9293799	Not On Scada, Need New Pump, SS Latches and SS Screws	NO
66	Tatum Blvd.	Burkett Creek	OK		37134	42	15	240	3	2	30, 30	31.7928509	89.9038501	NOT ON SCADA	YES
67	Tatum Park	Off Vet. Mem. Dr.	OK		17555	21	7.5	240	3	2	14, 14.9	31.7830281	89.9127508	Not On Scada, SS Latches	NO
68	Timberton #1	Troon Street	OK		34778	-	4	240	1	2	21.4, 17.3	31.7808036	89.9252547	SCADA Pump # 1: Current ?, Switch YES, Outflow ?	YES
69	Timberton #2	Timberton Golf C.	OK		34778	-	4	240	1	2	18.5, 18.2	31.7885184	89.9281787	SCADA Pump # 1: Current YES, Switch YES, Outflow ?	YES
70	Turtle Creek Crossing	Behind Willie T's	OK		29909	27	20	480	3	2	69.6, 63.6	31.7326520	89.8587688	SCADA: Outlow ? Pump 1 and 2: Switch, Current ?? Both were in Auto	YES
71	Turtle Creek Mall	Weathersby Rd. @ Mall	OK		15248-35747	-	20	480	3	2	35.5, 34.7	31.7381642	89.8598505	SCADA: Outflow ON when Pumps Off? Pump 1 and 2: Switch, Current ??	YES
72	USA Yeast	USA Yeast JM Tatum Industrial	Bypassed		26759	65	50	480	3	3	42, 42, 42	31.8432190	89.9254013	SCADA Outflow ?, Pump #1 and # 2 ?, Pump # 3 GOOD	YES
73	USM	Hwy 49 S./W 4th St.	Pump on order		14705-39317	n, n, 64	n,n,50	480	3	3	n, n, 59.7	31.7761350	89.8569464	3 Pumps Total: 1 and 2 Pulled for Repair. SCADA Switch Pump 3 Showed Running, SCADA Needs to UPDATE	YES
74	USM Golf Course		[illegible]		35074	-	-	240	3	-	No Pumps	31.7457691	89.8322183	RTU YES Pumps Not There, Not Online Yet BUT Water In Pit	NO
75	Village Subdivision	H'burg CC Golf Course	Pump on order		22006	21	7.5	240	3	2	n, 21.7	31.7344250	89.8262265	Pump 1 Pulled, and Not On Scada	NO
76	Wispak		OK		37658	78	30	240	3	2	75, 63.5	31.8287884	89.9317521	FINE	YES

Note Coordinates updated 04-09-2012

SEWER LIFT STATIONS

2/25/2011

Charles Cooper, Shane Jerrell

										2003 Report Information											
Number	LIFT STATION	LIFT STATION NO.	NORTHING	EASTING	LATITUDE	LONGITUDE	INVERT IN	TOP	BOTTOM	PUMPS OFF	1ST PUMP ON	2ND PUMP ON	3RD PUMP ON	4TH PUMP ON	HIGH WATER ALARM	DIAMETER OF WELL	HP	GPM	TDH	FORCE MAIN SIZE	NOTES
1	63rd Street	13	835,020.49	660,114.17	31-18-50.9	89-18-40.3	165.5	175.0	155.0	158.0	160.5	161.5	162.5	163.5	165.5	-	-	300	-	-	-
2	98 Place		-	-																	
3	Academy		853,837.78	643,949.60																	
4	Annie Street	14	843,956.44	662,137.81	31-19-11.3	89-16-57.4	136.7	146.0	130.7	132.7	135.7	136.2	-	-	136.7	-	1.5	80	15	4"	-
5	Arledge Street	2	842,679.60	658,866.40	0	0	142.3	148.4	137.5	138.5	141.3	142.3	-	-	142.3	-	-	80	-	-	-
6	Avenue B	16	840,079.37	641,193.38	31-15-43.9	89-17-41.1	208.9	216.5	202.9	204.9	207.4	208.4	-	-	208.9	-	5.0	80	37'	4"	-
7	Barkley Road	3	847,277.30	650,668.17	31-17-17.9	89-16-18.6	136.7	147.4	130.7	133.0	136.0	135.0	-	-	136.0	6'	-	75	-	-	Note: 75 GPM @ 43' TDH to 575 @ 18' TDH
8	Barracudda		800,201.98	661,510.68																	
9	Beverly Hills		824,774.05	671,384.92																	
10	Bonhomie Road #1		834,291.96	639,985.99																	
11	Bonhomie Road #2		834,913.64	649,706.06																	
12	Burkett		847,583.44	657,425.02																	
13	Canal Place		822,315.28	650,070.75																	
14	Cascades #1		826,083.44	653,998.29																	
15	Cascades #2		824,775.05	652,691.77																	
16	Coon Hunters	28	854,442.55	647,429.26	31-16-46.2	89-14-55.9	132.6	138.9	127.6	129.6	131.5	132.5	-	-	132.6	6'	5.0	80	35	4"	-
17	Dixie Pine Road	26	845,941.14	653,405.80	31-17-45.0	89-16-34.1	135.8	150.0	130.0	132.3	133.3	134.3	-	-	135.3	6'	-	300	37'	8"	-
18	Duncan Lake Ext		849,120.37	651,916.41																	
19	E. 8th Street	15	839,282.13	668,469.91	31-20-13.8	89-17-51.6	157.0	163.4	151.0	153.0	156.0	156.5	-	-	139.0	-	1.5	80	15'	4"	-
20	E. Laurel	22	848,274.63	663,249.39	31-19-22.5	89-16-07.6	-	-	121.8	122.8	(1.0)	-	-	-	-	-	-	80	-	-	-
21	Elks Lake Road	17	841,125.56	645,748.58	31-16-29.0	89-17-29.2	172.8	184.0	167.2	169.2	171.3	172.3	-	-	172.8	6'	7.5	80	50'	4"	-
22	Emergency Management		825,964.77	638,464.11																	
23	Fuller Street	31	830,756.96	659,960.58	31-18-49.2	89-19-29.4	200.8	205.8	195.8	196.8	199.8	200.8	-	-	-	36"	1.5	40	15'	-	-
24	Green Hut	30	849,722.07	644,044.53	31-16-12.5	89-15-50.1	145.4	154.4	139.9	140.9	144.4	145.4	-	-	-	-	-	80	-	-	-

2003 Report Information

Number	LIFT STATION	LIFT STATION NO.	NORTHING	EASTING	LATITUDE	LONGITUDE	INVERT IN	TOP	BOTTOM	PUMPS OFF	1ST PUMP ON	2ND PUMP ON	3RD PUMP ON	4TH PUMP ON	HIGH WATER ALARM	DIAMETER OF WELL	HP	GPM	TDH	FORCE MAIN SIZE	NOTES
25	Greystone		811,299.16	672,000.19																	
26	Gulfport Street		-	-																	
27	Hwy 49N #1	7	818,463.21	683,314.89	31-22-39.8	89-21-52.4	148.8	165.0	143.8	145.8	145.8	147.8	-	-	148.8	6'	7.5	80	44'	4"	-
28	Hwy 49N #2	8	817,660.43	684,496.35	31-22-51.4	89-22-01.8	151.8	158.7	146.8	148.8	150.8	151.3	-	-	151.8	6'	5.0	80	28'	4"	-
29	Hwy 49N #3	9	813,286.30	689,319.91	31-23-38.9	89-22-52.5	156.7	165.7	151.7	153.7	155.7	156.2	-	-	156.9	6'	5.0	80	28'	4"	-
30	Hwy Patrol	29	844,383.24	642,860.01	31-16-00.5	89-16-51.6	166.5	173.0	162.0	163.0	165.5	166.5	-	-	-	-	-	80	-	-	-
31	James Street	27	850,109.08	650,563.69	31-17-17.0	89-15-45.9	126.1	126.1	120.6	122.6	124.6	125.6	-	-	126.1	6'	5.0	80	40	4"	-
32	Jervis Mims Rd #2		826,622.54	639,445.58																	
33	Jervis Mims Rd.	19	829,543.63	638,078.07	31-15-12.6	89-19-42.3	290.3	301.9	283.7	285.7	287.2	288.5	-	-	288.7	6'	25.0	200	116	6"	-
34	Julian Street	20	841,281.69	670,884.92	31-20-37.8	89-17-28.6	134.2	158.0	128.3	130.3	133.3	133.8	-	-	-	60"	-	100	21'	4"	-
35	Lake Estates Drive	5	812,837.19	677,105.33	31-21-38.0	89-22-57.0	215.0	223.3	210.0	211.0	214.0	215.0	-	-	-	-	-	80	-	-	-
36	Lake Forgetful		811,044.70	662,089.43																	
37	Lake Serene		804,777.06	661,782.12																	
38	Lake Shore Drive		811,479.67	674,196.26																	
39	Landry Lewis		804,046.54	658,551.80																	
40	Lincoln Rd #1		816,990.28	654,945.59																	
41	Lincoln Rd #2		806,013.61	659,124.83																	
42	Little Creek Drive	32	812,458.05	677,671.93	31-21-43.6	89-23-01.4	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-
43	Logans		-	-																	
44	Mammoth Springs Rd.		820,466.04	681,225.76																	
45	Mayfair		819,009.21	662,620.25																	
46	McDonalds		-	-																	
47	Nellwood		824,801.10	647,818.32																	
48	North Lagoon	10	826,384.51	675,959.09	31-21-27.3	89-20-20.7	-	155.0	133.0	135.0	137.0	137.5	138.0	-	-	16'	35.0	80	-	8"	-
49	Norton Rd / Hwy 11		803,868.94	652,897.37																	
50	Oak Grove		820,917.06	662,813.13																	
51	Oakwood		823,303.41	647,106.86																	
52	Old Hwy 11		803,343.63	660,885.27																	
53	Petro Collision		803,041.40	659,708.55																	
54	Piedmont		834,054.34	653,460.41									-								

										2003 Report Information												
Number	LIFT STATION	LIFT STATION NO.	NORTHING	EASTING	LATITUDE	LONGITUDE	INVERT IN	TOP	BOTTOM	PUMPS OFF	1ST PUMP ON	2ND PUMP ON	3RD PUMP ON	4TH PUMP ON	HIGH WATER ALARM	DIAMETER OF WELL	HP	GPM	TDH	FORCE MAIN SIZE	NOTES
55	Pine Tree	6	814,828.89	676,629.65	31-21-33.4	89-22-34.0	196.5	207.3	190.5	191.5	195.5	196.5	-	-	-	-	-	80	-	-	-
56	Railroad Street	23	848,311.11	648,308.79	31-16-54.6	89-16-06.5	128.8	150.0	122.7	125.7	127.3	128.3	-	-	128.8	9'	20.0	600	62'	6"	-
57	Ramey's		-	-																	
58	Rawls Springs Loop			-																	
59	Richburg Road #1		829,455.50	651,695.81																	
60	Richburg Road #2		-	-																	
61	Scott Street		839,765.89	670,873.95																	
62	Shadowood Drive	18	822,694.96	651,845.21	31-17-28.5	89-21-01.9	324.7	330.8	319.7	320.7	323.7	324.7	-	-	-	-	-	80	-	-	-
63	Southern Farm & Garden	33	836,719.44	652,936.98	31-17-40.0	89-18-20.4	185.7	190.7	180.7	181.7	184.7	185.7	-	-	-	-	-	80	-	-	-
64	Stepts Ave.	25	851,867.18	646,555.58	31-16-37.4	89-15-25.5	123.4	146.2	117.4	119.4	121.9	122.9	-	-	123.4	6'	7.5	200	42'	4"	-
65	Sullivan Drive	24	847,369.52	643,822.01	31-16-10.2	89-16-17.2	154.9	162.5	149.0	151.0	153.4	154.4	-	-	154.9	5'	3.0	80	19'	4"	-
66	Tatum Blvd.		835,561.78	651,636.39																	
67	Tatum Park		832,015.57	648,835.29																	
68	Timberton #1	-21	831,245.03	644,947.75	31-16-20.6	89-19-23.0	240.0	246.0	236.0	237.0	239.0	240.0	-	-	-	-	-	80	-	-	-
69	Timberton #2	35	834,060.87	644,061.11	31-16-12.0	89-18-50.5	210.8	218.8	205.8	206.8	209.8	210.8	-	-	-	-	-	80	-	-	-
70	Turtle Creek Crossing		813,526.66	665,437.64																	
71	Turtle Creek Mall	12	815,535.10	665,126.46	31-19-39.6	89-22-25.2	207.1	234.5	196.7	197.5	204.0	205.0	-	-	206.0	96"	20.0	312	84'	6"	-
72	USA Yeast	37	853,952.36	645,124.15	31-16-23.3	89-15-01.4	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
73	USM	36	829,340.25	666,153.02	31-19-50.4	89-19-46.1	176.7	191.9	170.9	175.9	179.3	180.4	-	-	181.2	10.5' x 16.4'	56.0	500	-	-	-
74	USM Golf Course		818,221.90	673,736.47																	
75	Village Subdivision	1	814,077.95	675,561.53	31-21-22.8	89-22-42.6	207.0	215.0	203.0	205.0	205.5	206.5	-	-	207.0	60"	7.5	80	53'	4"	-
76	Wispak		848,722.23	643,111.21																	

Note Coordinates updated 04-09-

Appendix C

HRG

Appendix D

HRG

Date of SSO	Time SSO Began	Time of Notification	Time of Response	Time SSO Ceased	Time Corrective Action Complete	Location of SSO	Source of SSO	Desitnation of SSO	Volume of SSO (in gallons)	Cause of SSO	Corrective Action
2/4/2007	4:00 AM			12:00 p.m. 2/16/2007		Mixon	manhole		7,000	Grease and roots	Flushed service line and replaced main sewer line.
2/15/2007	11:45 a.m.			12:30 p.m.		2206 Hardy St.	manhole	none	30,000	Grease	Flushed sewer main and put out chemical treatment.
3/9/2007	1:00 p.m.			2:30 p.m.		5064 Hwy 42	manhole	none	1,000	Grease	Flushed sewer main and put out chemical treatment
3/9/2007	3:00			4:30		5910 U.S. Hwy 98	manhole	none	500	Grease	Flushed sewer main and put out chemical treatment.
5/18/2007	11:00 a.m.			1:00 p.m.		Turtle Creek Mall	pump station	none	6,000	Pump station went down	Flushed main line and repaired pump station.
9/10/2007	10:00 a.m.			3:00 p.m.		218 Little Creek	pump station	pond	10,000	No pumps in lift station	Pumped sewer out of lift station.
9/24/2007						218 Little Creek	pump station	pond	2,000	Stopped up pump	Pulled pump
10/20/2007						Little Creek Station	pump station	pond	10,000	Pumps down	pumped swer out of lift staton
10/22/2007	9:00 a.m.			2:00 p.m.		Little Creek Station	pump station	pond	12,000	pumps down	pumped swer out of lift staton
11/12/2007	7:15 a.m.			8:30 a.m.		Sweetwater	manhole	none	3,000	Grease clogged in manhole	Flushed the main line and applied chemical treatment
11/19/2007	7:00 a.m.			10:00 a.m.		215 Westover	manhole		1,000	Grease	Flushed the main line and applied chemical treatment.
1/11/2008						Canal Place	pump station		800	Pumps Down	Pumped down with vac-con truck.
1/22/2008	12:15			12:30		46 Vickers Circle	manhole	none	1,000	Grease	Fluhsed manhole and put in chemical treatment
8/5/2008	3:00 p.m			10:30 p.m. 8/7/2008		Gross Creek Parkway	pump station	Mixon Creek	50,000	Power failure to lift station	Replaced transfer switch, washed down contaiminated area with clean water and put out odorine 10 for smell.
2/20/2009	1:00 p.m.			3:00 p.m.		Little creek	lift station	pond	unknown	Overload Tripped	Re-set overload.
6/12/2009	4:00 p.m.			4:30 p.m.		1116 Ida Ave.	manhole	ditch	300	Blockage in main	Flushed main.
8/5/2009	12:40 p.m.			2:00 p.m.		Little Creek	pump station	pond	unknown	OL Trip	Reset OL and replaced OL.
9/2/2009						South Lagoon	pump station	none	2,000 - 5,000	Rotted drainline	Cut and plugged line. Disenfected area.
9/16/2009	9:00 a.m.			1:00 p.m.		USA Yeast	lift station			Bad bypass hose	Replaced hose.
10/22/2009						Pemont Lift Station	lift station	woods	unknown	Pumps burnt up	Replaced pumps.
11/15/2009						Little Creek	pump station	lake	unknown	Pumps stopped up.	Pulled and unstopped pumps.
12/2/2009	1:00 p.m.			1:30 p.m.		207 Paton Ave.	clean out	none	65	Main blockage by unknown material	Reparied main and removed blockage. Disenfected area.
12/5/2009	10:00 a.m.			10:20 a.m.		102 South 11th Ave.	manhole	none	300	Main blockage.	Flushed main line.
12/6/2009	4:00 p.m.			4:30 p.m.		202 N. 19th Ave.	manhole	ditch	350	Main blockage	Fluhsed main.
12/8/2009	11:30 a.m.			3:00 p.m.		309 5th Ave.	manhole	none	1,200	Main blockage and raintall (2-3" rain event)	Unblocked main, picked up loose debris and put out 20 gallons of disinfectant.
12/8/2009	9:00 a.m.			3:00 p.m.		Hardy St.	manhole	Gordon's Creek	3,600	2"-3" rain event	Tried to locate infiltration point. Contained debris from getting into creek.
12/9/2009	11:30 a.m.			1:30 p.m.		713 Williams St.	manhole	none	400	Grease blockage	Unstopped main, treated main to keep grease buildup down and treated contaminated area.
12/9/2009	11:40 a.m.			5:45 p.m.		North Lagoon	pump station	river	4,000	Sand (3"- 4" rain event)	Removed sand from stand pipes, replaced entire line
12/9/2009	12:00 p.m.			6:30 p.m.		North Lagoon	pump station	river	unknown	Pumps down.	By passed pump and sanitized area.
12/11/2009	11:00 a.m.			6:00 p.m. 12/12/2009		North Lagoon	pump station	creek	unknown	Pumps stopped pumping	By passed pump and sanitized area.
12/12/2009	2:00 p.m.			8:00 p.m. 12/13/2009		Manchester Dr & S. 40th Ave.	manhole	ditch	4,000	3" - 4" rain event	none
12/12/2009	4:30 p.m.			12:00 p.m.		301 N. 21st Ave.	manhole	Gordon's Creek	10,000	3" - 4" rain event	none
12/12/2009	12:00 a.m.					W. 7th St & N. 19th Ave.	manhole	none	2,000	3" - 4" rain event	Tried to locate infiltration point.
12/12/2009	12:30 p.m.			12:00 a.m.		Roby St. & Mallory St	manhole	ditch	3,000	3" - 4" rain event	none
12/12/2009	1:00 p.m.			1:00 a.m.		John St. & Kaite Ave.	manhole	ditch	5,000	3" - 4" rain event	Tried to locate infiltration point.
12/12/2009	1:00 p.m.			1:00 a.m.		108 John St.	manhole	ditch	8,000	3" - 4" rain event	Tried to locate infiltration point.

12/12/2009	11:00 a.m.			6:00 a.m. 12/13/2009		107 Palmetta Ave.	manhole	Gordon's Creek	20,000	3" - 4" rain event	none
12/12/2009	2:00 p.m.			6:00 a.m. 12/13/2009		130 Cooper St.	manhole	Gordon's Creek	30,000	3" - 4" rain event	Tried to locate infiltration point.
12/12/2009	10:00 a.m.			12:00 a.m. 12/13/2009		47 Vicker Circle	manhole	none	5,000	3" - 4" rain event	Repair main on Columbia St.
12/12/2009	11:00 a.m.			2:00 a.m.		600 Block Columbia St.	manhole	none	15,000	3" - 4" rain event	Main relocation. Cleaned up debris.
12/12/2009	10:00 a.m.			12:00 a.m.		112 N. 19th Ave.	manhole	creek	6,000	3" - 4" rain event	None.
12/12/2009	3:00 p.m.			2:00 a.m.		200 Block West 6th St.	manhole	ditch	5,000	3" - 4" rain event	None.
12/12/2009	10:00 a.m.			6:00 a.m. 12/13/2009		1900 Hardy St.	manhole	Gordon's Creek	15,000	3" - 4" rain event	Main was interlined.
12/12/2009	10:00 a.m.			12:00 a.m.		104 Park	manhole	creek	6,000	3" - 4" rain event	None
12/12/2009	8:00 a.m.			12:00 p.m. 12/13/2009		1100 Arledge St.	manhole	creek	15,000	3" - 4" rain event	Cleaned up debris.
12/13/2009	5:00 a.m.			8:00 a.m.		155 Bushman Alley	manhole	none	1,500	3" - 4" rain event	Cleaned debris up in area and put out disinfectants and deoderizors.
12/13/2009	5:00 p.m.			6:00 a.m. 12/13/2009		309 5th Ave.	manhole	none	7,300	3" - 4" rain event	Cleaned debris up in area and put out disinfectants and deoderizors.
12/14/2009	3:15 p.m.			1:00 a.m. 12/15/2009		525 Corinne St.	manhole	Gordon's Creek	3,000	1" - 2" rain event	none
12/14/2009	2:30 p.m.			1:00 a.m. 12/15/2009		419 S. 21st Ave.	manhole	creek	3,000	1" - 2" rain event	none
12/14/2009	2:30 p.m.			1:00 a.m. 12/15/2009		417 S. 21st Ave.	manhole	creek	3,000	1" - 2" rain event	none
12/14/2009	3:30 p.m.			3:00 a.m. 12/15/2009		Cooper	manhole	Gordon's Creek	25,000	1" - 2" rain event	none
12/14/2009	3:00 p.m.			3:00 a.m. 12/15/2009		107 Palmetto	manhole	Gordon's Creek	30,000	1" - 2" rain event	none
12/14/2009	2:00 p.m.			1:00 a.m. 12/15/2009		Paul Ave & Hardy St.	manhole	Gordon's Creek	3,000	1" - 2" rain event	none
12/23/2009	10:00 a.m.			11:30 p.m.		Burkett	pump station	creek	unknown	Control problems	Installed bypass pump, replaced CICAT board and sanitized area.
1/1/2010						Shadowood Dr.	pump station	none	1,000	Pumps down.	Called MS power, repaired lift station adn sanitized area.
1/13/2010	3:00 p.m.			5:00 p.m.		Burkett	pump station	creek	300,000	power failure	Set up by pass pumps and sanitized the area.
1/29/2010	2:45 p.m.			5:30 p.m.		208 Fuller St.	pump station	yard	20	PVC pipe	Replaced PVC pipe and sanitized area.
3/7/2010	3:00 a.m.						pump station	none	1,000	Rehabbing lift station	Fixed bypass pump and rehabbed station.
3/31/2010	7:53			8:00		Hardy St. & 104 37th Ave.	clean out	none	300	Blockage in service line	Flushed service line and treated contaminated area
3/31/2010	7:53			8:00		Hardy St. & 104 37th Ave.	clean out	none	300	Blockage	Flushed service line and treated contaminated area
4/9/2010	4:30 p.m.						lift station	none	1,200	Lift station rehab	Loss vacuum, rehab station, pump station was repaired.
4/12/2010	1:30						lift station	none	800	Lift station rehab	Loss vacuum, rehab station, fixed vacuum.
4/27/2010	10:00 a.m.					USA Yeast	lift station	woods	800,000	Loss vacuum	Replaced check valve and sanitized the area.
5/10/2010	9:00 p.m.- 11:00 p.m.			3:00 a.m. - 5:00 a.m.		,USA Yeast	lift station	woods	500,000	By pass pump running hot	Called L.J. Morgan and replaced bypass pumps.
5/14/2010						217 Methodist Blvd	service line	none	300	Cave in on service line	Flushed service line and treated contaminated area
5/17/2010	3:00 p.m.			3:22 p.m.		301 Hutchinson Ave.	manhole		300	Blockage	Flushed main and wased down area with chemical treatment.
5/18/2010						602 Broadway	manhole	none	300	Cave in on manhole (3" rain event)	Flushed main, washed down with chemical treatment 4 times a day.
6/10/2010	12:47					200 Block East 7th	manhole	none	600	Blockage	pumped manhole
6/10/2010	12:47					224 East 7th St.	manhole	none	600	Cave in on manhole	Pump manhole 2-3 times per day
6/10/2010	1:00 p.m.			1:16 p.m.		105 Pine Heaven Circle	manhole	none	300	Roots in main	Flushed main.
6/11/2010	1:45					224 East 7th St.	manhole	none	600	Cave in on manhole (3" rain event)	Pumped mahole 2-3 times per day
6/29/2010	2:45					106 South 37th Ave.	main	ditch	300	Cave in on service line	Flushed main and washed down area.

6/30/2010	7:30					224 East 7th St.	manhole	none	600	Blackage. Cave in on main	Pumping manhole 4 times a day.
7/5/2010						J.M. Tatum Rd.	pump station	none	6,000	Pump failed	Replaced pumps. Disenfected area.
7/14/2010	2:37					725 Hwy 49 North	service line	creek	300	Cave in on service line	washed down area
7/15/2010	10:26					725 Hwy 49 North	service line	creek	600	Cave in on service line	washed down area
7/22/2010	4:30 p.m.					120 Plaza Dr.	manhole	none	800	Blockage in main	Chemical treatment to flush main and odorine to kill the smell.
8/4/2010				8/6/2010		Moplusa Timberland - Bonhomic #2	pump station	none	300	pump failure - power was off	Got pumps working and sprayed disenfectant.
8/16/2010				8/16/2010		USA Yeast	pump station	none	500	By pass lost prime	Repaired pump and rehabbed pump station.
8/20/2010	8:00 a.m.			2:00 p.m.		200' East of 155 Cross Creek Parkway off powerline ROW	force main	creek	300	Force main break	Shut down pump station and repaired 6" force main. Washed down area and picked up contaminated soil and trash.
8/24/2010	12:30			12:46		421 S 28th Ave.	manhole	creek	300	Blockage in main	Flushed main.
9/18/2010	6:00 p.m.			9:00 p.m.		village	lift station		50	Tripped breaker	Reset breaker and wired up pump #1. Sanitized the area.
12/17/2010	11:30			3:05		125 Satchel Rd	manhole	none	600	Blockage in main	Flushed main.
12/17/2010	4:00 p.m.			6:30 p.m. 12/19/2010		Piedmont Apartments	lift station	woods	1,500	#1 pump stopped up and #2 pump has bad motor.	Vacuum truck pumped down station, pump #1 unstopped and sanitized and disenfected the area.
12/20/2010	11:45					3406 Campbell Dr.	manhole	none	300	Grease blockage	Flushed main.
1/1/2011	4:15			5:25		Corner of Hall & Dabbs	manhole		300	Blocked main	Flushed the main line
1/7/2011						Piedmont Lift Station	pump station	none	1,500	Pump came off guide rails	Pump was pulled and put back on guide rails. Guide rails were fixed.
1/9/2011				1/10/2011		Turtle Creek Crossing Lift Station	pump station	none	2,500	Bad Transducer	Replaced transducer
1/10/2011	3:30 p.m.			2:00 p.m. 1/11/2011		Hwy 49 South	manhole	ditch	1,300	8" main blockage	Blew main open and put 20 gallons of PH-7-12 to dissolve blockage. Put Odorine 10 and Limline in ditch to kill smell and germs.
1/28/2011	8:00 a.m.			2:00 p.m. 1/31/2011		705 Hall Ave.	manhole	none	300	Main blocked by unknown obstruction found to be 4" gas main bored.	Flushed main, washed down area and applied chemical treatment to the area. Repaired sewer main.
2/8/2011	5:00 p.m.			7:00 p.m.		Highway Patrol	pump station	woods	400	Overload tripped	Reset overload and replaced. Sanitized the area.
2/11/2011	3:15 p.m.			12:00 p.m. 2/20/2011		1900 N. 31st Ave.	manhole	Mixon Creek	2,700	Main was blocked by broken manhole bricks	Removed brick from mouth of pipe opening, treated the contaminated area.
2/14/2011	2:59					2904 Hardy Street	service line	none		Unknown	Flushed service line and treated contaminated area
2/19/2011						119 City Park Circle	manhole	Gordon's Creek	900	Sewer main cave-in	By-pass pump set-up. Repaired sewer main. Treated overflow area.
2/21/2011	10:00			11:01		206 Rhodes Dr.		none	300	Grease blockage.	Flushed main.
2/23/2011	10:00 a.m.			12:30 a.m.		Williams St. & Bay St.	manhole 6556	Leaf River	800	Grease build up in main.	Flushed ditch with clean water, added Odorine 10 for smell and granular for disinfectant. Treated main with PH-7-12 to dissolve grease blockage.
3/3/2011	1:00 p.m.			1:30 p.m.		Williams Street	manhole 6565	none	80	Grease build up in main.	Unblocked the main. Cleaned sewer main at manhole above and below blockage. Cleaned area with disenfectant and deoderizer.
3/5/2011	1:30 p.m.			11:30 p.m.		614 Duke Ave.	manhole	none	150	4" rain event	Tried to locate infiltration point. Sanitized area.
3/5/2011	3:00 p.m.			9:00 p.m.		11 N. 19th Ave.	manhole	none	100	4" rain event	Tried to locate infiltration point. Sanitized area.
3/5/2011	5:00 p.m.			6:30 p.m.		S. 16th & Concart	manhole	none	75	4" rain event	Tried to locate infiltration point. Sanitized area.
3/5/2011	2:00 p.m.			11:00 p.m.		1835 Hardy St.	manhole	none	200	4" rain event	Tried to locate infiltration point. Sanitized area.
3/5/2011	4:00 p.m.			6:00 p.m.		1221 Franklin St.	manhole	none	200	4" rain event	Tried to locate infiltration point. Sanitized area.
3/5/2011	3:30 p.m.			5:00 p.m.		103 Park Ave.	manhole	none	100	4" rain event	Tried to locate infiltration point. Sanitized area.
3/7/2011	12:40			12:55		2507 W. 7th St.	main	Storm Drain	100	Grease blockage	Flused main and sanitized overflow area.
3/8/2011						Melissa Lane	manhole	stream	100	Blockage in main	Flushed main. Flushed creek with fresh water and put out deoderixor and disinfectant.
3/10/2011	9:06 a.m.			9:23 a.m.		606 Dixie Ave.	manhole	none	100	Grease blockage	Unblocked main. Disinfected area and washed down with clear water.
3/10/2011	12:34 p.m.			2:50 p.m.		117 Ruby Ave.	main	none	100	Grease blockage	Flushed main. Disinfected area and washed down with clear water.

3/11/2011	12:00			12:30		Melissa Lane	manhole	none	100	Unknown blockage	Blew main open to remove blockage. Washed down area and put out disinfectant.
3/15/2011	6:00 p.m.			12:00 p.m.		Village Station	pump station	woods	1,500	Pump station stopped up.	Vac-Con Truck and sanitized area.
3/17/2011	2:30 p.m.			2:00 p.m. 3/27/2011		962 Sullivan Dr.	8" sewer main	creek and lake	450	Contractor bore through sewer main.	Dammed area around break to contain overflow as much as possible. Repaired 4' of main. Put disinfectant and deodenzor in contaminated area.
3/24/2011	7:00			7:20		209 Rhodes Dr.	manhole	none	100	Unknown main blockage	Flushed main. Put out disinfectant and washed down manhole.
3/29/2011	12:00 a.m.			7:00 a.m.		4900 Hwy 98	manhole	stream	150	By pass pump failure	Repaired pump. Picked up debris, washed down overflow area and put disinfecant in area.
4/4/2011	5:35 p.m.			5:47 p.m.		1005 Edward	manhole	none	50	Unknown blockage	Flushed main, washed down street and around manhole. Disinfected.
4/5/2011	4:10 p.m.			4:40 p.m.		217 Cypress	manhole	none	100	Unknown blockage	Flushed main and put disinfectant around manhole
4/5/2011	9:30 a.m.			10:30 a.m.		Village Pump Station	pump station	grass	250	Wet well board	Repairedboard. Sanilized grass area.
4/7/2011	12:30 p.m.			1:00 p.m. 4/8/2011		3402 Campbell Dr.	manhole	none	600	Main line was blocked	Flushed and chemically treated the main line.
4/9/2011						Village	pump station	creek	600	Pump failed.	Pump Truck (vac). Disenfectant sprayed.
4/11/2011						Dixie Pine	pump station	ditch	500	Pump failed	Turn pump on (man) to pump down. Replaced board. Disinfectant poured out.
4/20/2011						Village Pump Station	pump station	none	700	Pump quit pumping	Pump truck pumped station down. Repaired pump
4/20/2011						Highway Patrol Lift Station	pump station	none	500	Pumps went up	pump truck pumped station down. New pumps ordered
5/1/2011	5:12 p.m.			12:00 a.m. 5/2/2011		4700 Hardy St.	manhole	creek	200	Grease blockage in main line.	Treated grease blockage with chemicals. Removed solids from area wash down contaminated area. Put out deoderizor and disenfectant.
5/10/2011	11:00			11:26		816 Edwards St.	service line	none	100	Grease blockage	Unblocked service line. Treated manhole with PH-7-12. Cleaned up overflow area and put out disenfectant.
5/23/2011	5:30 p.m.			6:30 p.m.		Richburg #2	pump station	none	50	Control problems/floats	Pump down station manual. Replac control board/floats Sanitaized the area.
5/27/2011	12:19			12:37		Adeline & S. 37th Ave.	manhole	none	100	Grease blockage	Flushed main and treated manhole with PH-7-12. Picked up debris, washed down area and put out disinfectant in contaminated area.
6/15/2011						Bon Homie Lift Station	pump station	none	100	Busted check valve	Replaced check valve.
6/15/2011						Bonhomie Rd.	pump station	none	50	Power	Restored power. Used granulalated deoderizer.
6/28/2011	3:00 p.m.					111 Durby Rd.	main	stream	10	Broken Main	Grenadier Plus (5 gals) placed in affected area and flushed with clear water.
7/13/2011	2:45 p.m.			3:15 p.m.		4505 Hwy 98	manhole	none	50	Blocked main	Flushed main and treated the line.
7/24/2011	12:00 p.m.			6:00 p.m.		Eva St.	manhole	stream	100	2" - 3" rain event	Washed down area. Flushed with fres water and used chemical treatement.
7/26/2011	2:30 p.m.			8:30 p.m.		1909 Eva St.	manhole	stream	100	2" rain event	Washed down area with clean water and put out disinfectant.
8/11/2011						Petro Lift Station	pump station	none	500	Loss of power	Restored power.
8/28/2011						J.W. Tatum Rd. (Hwy Patrol)	pump station	none	100	Loss of power	Restored power. Repair/replaced fuse at control panel. Applied granularted deodorizer surrounding area.
8/31/2011	10:00			12:30		125 Lake Estate Dr.	pump station manhole	none	100	Pump station	Put out disinfectant, repaired pump in pump station and washed down area.
10/5/2011	11:00 a.m.			12:30 p.m.		49 Sharmount	manhole	ditch	200	Main blockage by unknown material	Flushed main line to remove blockage. Washed ditch out with clean water and put disinfectant in ditch.
10/11/2011						Rear Piedmont Apartment Complex	pump station	none	100	Broken sewer main.	Removed and replaced broken sewer line at easement. Applied granulated deoderizer surrounding area
10/22/2011	6:00 p.m.			2:00 p.m. 10/23/2011		100 Breckenridge	manhole	ditch	300	Blockage in main	Flushed the main and put out disinfectant.

10/24/2011						Brookline Dr.	Village Pump Station	none	100	Pumps down	Removed and replaced relay at a 3d-a-phase. Applied granulated deodorizer in surrounding area.
11/28/2011						North 35th & Hardy St	manhole		300	Grease blockage	Flushed main and treated manhole with 10 gallons of PH-7-12. Put out disinfectant.
12/23/2011	9:00 a.m.			2:00 p.m.		Turtle Creek Crossing	manhole	ditch	2,000	Lift station main breaker tripped	Temporarily turned pumps in manhole to pump down. Permanent corrective action was to pull the pump and rewire. Put out disinfectant
1/8/2012	10:00 a.m.					116 Saucier Drive	manhole	stream		Main broke between manhole A2 and A10	Put disinfectant in ditch until repair can be made.
1/17/2012	8:30 a.m.			2:30 p.m. 1/19/2012		3408 Campbell Loop	manhole	Mixon Creek	1,000	Unknown blockage in main	Kept ditch flushed with clear water, cleaned up large debris in area, washed down contaminated area and put disinfectant in creek and granular deodorizer to help with smell.
1/19/2012	10:30 a.m. 11:40 a.m.					1002 Edwards Street	manhole		100	Grease blockage	Flushed main and treated with 20 gallons of PH-7-12. Put out disinfectant
1/23/2012						Turtle Creek Crossing			1,000	Switch gear and overload/starter #2 pump breaker thrown	Reset switch gear and overload/starter

Located Constructed Overflows

City of Hattiesburg

Number	Address/Location	Manhole #	Open/Plugged	Remarks
1	Cahal Street	A550 & A551	Plugged	
2	Arledge Street	C412	Plugged	
3	Jackie Doyle Community Center	B817	Open	Will be fixed in rehabilitation project
4	South 34th Avenue	G417	Plugged	
5	301 N. 21st Avenue	B286	Plugged	
6	301 N. 21st Avenue	B284	Plugged	
7	Lincoln Road	Unlisted	Plugged	

Appendix E

HRG

Wet Weather Sanitary Sewer Overflow/Bypass Locations

City of Hattiesburg

Number	Address/Location	Remarks
1	1021 Franklin Street	
2	W. 4th Street at Fountainbleu Apts.	
3	Intersection of Robe St. & Mallory St.	
4	Intersection of Pott St. & Camp St.	
5	1920 Brooklane Avenue	
6	419 South 21st Street	
7	Camp Street between S. 23rd & S. 24th	
8	Intersection of Hall St. & Dabb St.	
9	Intersection of N. 19th Ave. & Ferrel St.	
10	Intersection of Chesterfield Rd. & S. 40th Street	
11	Inersection of N. 38th Ave. & Hardy St.	
12	1006 Edwards Street	
13	614 Duke Street	
14	1107 Franklin Street	
15	Intersection of Franklin St. & Duke St.	
16	Intersection of S. 40th Ave. & Manchester Rd.	
17	Intersection of S. 31st Ave. & Delwood St.	
18	Intersection of Milton Barnes Rd. and Franklin St.	2 Manholes
19	104 S. 30th Avenue	
20	28th Avenue Place	
21	119 City Park Circle	
22	301 N. 21st Avenue around back on Quinn side	On Quinn St. side
23	Intersection of Pearl St. & N. 25th Ave.	By Church Steps
24	Intersection of John St. & Katy St.	
25	107 Palmetto St.	
26	103 Park Avenue	
27	1607 High Street	Bella Vista Apts. Building A
28	1712 Camp Street	
29	314 E. 3rd Street	
30	Intersection of W. 7th St. & N. 19th Ave	
31	104 Meadowbrook Drive	

Appendix F

HRG

WASTEWATER BYPASS/OVERFLOW REPORT
TO THE MISSISSIPPI OFFICE OF POLLUTION CONTROL

I. PERMITTEE NAME: _____

II. PERMIT NO.: _____

III. Bypass source (i.e., manhole, pump station, etc.): _____

_____

_____

IV. Source location (i.e., street, etc.): _____

_____

_____

V. Date/time bypass began (estimate if necessary): _____

_____

VI. Date/time bypass ended (estimate if necessary): _____

_____

VII. Volume of wastewater bypassed (estimate if necessary): _____

_____

VIII. State waters affected (i.e., river, stream, lake, etc.): _____

_____

IX. Cause of bypass: _____

_____

X. Temporary corrective actions taken: _____

_____

XI. Permanent corrective actions taken: _____

_____

XII. Number of bypasses at this location in the past 12 months: _____

_____

XIII. What actions were taken to prevent or minimize adverse environmental impact?

_____

_____

XIV. If bypass caused due to inflow of rainfall, how many inches of rain fell in the area? _____

Signature: _____

Title: _____

Address: _____

_____

Date: _____

RESPONSE TO E.P.A. REQUEST

FOR INFORMATION

COMPLIANCE EVALUATION INSPECTION REPORT

REQUESTED BY:

THE CITY OF HATTIESBURG

February 25, 2013

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC
ENGINEERING SOLUTIONS FOR SOUTH MISSISSIPPI

INTRODUCTION

The City of Hattiesburg (COH) has approximately 53,000 people and encompasses 54 square miles of land area. The residents and commercial customers are provided sanitary sewer disposal in the form of gravity sewer mains, lift stations with force mains and sewerage treatment lagoons. The sewer collection facilities have a lifespan that ranges from circa 1900 to the present. For many years the City has reported Sanitary Sewer Overflows (SSO) to the Mississippi Department of Environmental Quality (MDEQ) as is prescribed by the laws of the State of Mississippi.

On January 31, 2012, the City of Hattiesburg received an Information Request from the Environmental Protection Agency (EPA). At the request of the City of Hattiesburg, the EPA granted a 30 day time extension to the reply of this request. The time extension allowed the City to respond to the request on or before April 10, 2012. Upon reviewing the material submitted in response to the request, the EPA made an onsite inspection on August 13, 14 & 16, 2012. The findings of this inspection were issued in a Compliance Evaluation Inspection Report on September 19, 2012.

PURPOSE

On December 13, 2012 a meeting was held between the COH and the EPA to discuss the issues found in the Compliance Evaluation and Inspection Report. The report outlined areas of concern found by the EPA during the inspection. These concerns relate to the SSO's that have been previously reported by the COH. The following report is an assessment of the COH's current progress on rectifying areas of violation outlined in the Compliance Evaluation and Inspection Report.

EXISTING MANAGEMENT, OPERATIONS AND MAINTENANCE

The report issued by the EPA in September 2012 can be found in Appendix A of this document. It outlines several SSO locations and six (6) items of concern. These areas of concern are as follows:

1. Mapping Program
2. Grease Control Program
3. Root Control Program
4. Capacity Assurance Program
5. Preventative Maintenance & Inspection
6. Emergency Response

Mapping Program

The COH completed an initial mapping program between 2003 and 2008. This information was put into a GIS program in 2011. Currently the maps are updated by the COH Engineering Department, GIS Division and the consulting firm of Shows, Dearman and Waits, Inc.

Grease Control Program

A Grease Control Ordinance was adopted by the City Council in October 2012. A copy of this Ordinance can be found in Appendix B of this report. At this time, the COH is notifying affected customers of the new program requirements outlined in the ordinance. The COH will then begin identifying and documenting problem areas as indicated in the ordinance. Given the relatively recent implementation of the policy, the results of the program are not readily discernible.

Root Control Program

The City owns and operates a video inspection system used to perform non-invasive inspection of sewer mains and laterals. The City owns and operates a sewer main and lateral cleaning fleet consisting of vacuum trucks and jet trucks. The COH has a term bid for CCTV and root removal in addition to the COH's maintenance crews. A copy of this contract can be found in Appendix C of this report. Typically, when roots are found to be a problem they are removed from the system. This is usually discovered when conducting Closed Circuit Television investigation on a problematic sewer line. The city also applies root herbicides that are safe for trees in the contact area.

Capacity Assurance Program

The system's ability to handle added flow is typically analyzed when an entity applies for City Water and Sewer service. The required flows are analyzed in the current sewer model using the HYDRA software. The model utilized domestic and commercial connections and assumes flow contributions for each. These flows are then modeled on a diurnal demand curve in order to calculate required flow capacities, and therefore provide the remaining capacity in the system. Industrial contributors are analyzed for peak discharge conditions. Pre-treatment areas can be utilized as storage containment areas to limit system overloads.

Preventative Maintenance and Inspection

The COH conducts weekly inspections of lift stations to insure proper operation and maintenance of these systems. The COH has backup power provided or available to prevent overflows due to power outages. Wet Weather inspections of the sewer system are also utilized to pin point overflow locations and to aid in identifying the causes. The COH utilize a biennially renewed term bid to assist in immediate repairs while maintaining normal operations and maintenance. The term bid provides for quick deployment of contract forces for emergency repairs. The term bid also provides for quick deployment of bypass pumps in the event of catastrophic failure of pump stations or collection lines. The COH has begun smoke testing to determine possible cross-connection areas, damaged collection lines, or missing access covers which contribute to the inflow and infiltration of the collection system. The COH utilizes in-line backflow prevention in areas of wet weather overloading as an immediate safeguard to inhabited structures.

Starting in 2006, the COH began to utilize the U.S. Army Corp of Engineers' 592 funding program to make corrections to the sewer system. The 592 grant was used to make $4.8 million in rehabilitation to the collection and treatment system. In order to address many of the acute maintenance issues in the COH's utility system, the COMSWIP program was formed in 2011. COMSWIP is a prioritized list of utility improvement projects that uses bonds to correct the most obvious system deficiencies. In the first 14 months of the program the City has designed, contracted and constructed the projects allocated for the first three years. The current

prioritization list along with a map of those projects can be found in Appendix D of this report. This list is reviewed and modified as needed during the design and bidding process according to the most critical needs at that time.

Emergency Response

Sewer overflows and pump station failures are documented by the Sewer Department personnel and are corrected as soon as possible. The COH has an on-call system with personnel available at all times which are notified of problems immediately. The COH monitors pumping stations through the SCADA system along with the routine on-site inspections. When an SSO does occur, the Sewer Department has an SSO Reporting Procedure, which can be found in Appendix E of this report. There is also constant communication between management and staff to insure a quick response and correction of the issue. The COH uses a two-radio system that is monitored by management and staff to insure that normal established procedures are followed in a timely manner. The COH has an organizational chart for notification of emergency action prior to implementation and following an emergency event. Finally, the COH has standard methods of containment, clean-up, and disinfection that are used in the event of an emergency response and are evident in the chemical distribution records.

CONCLUSIONS

By engaging in a self assessment process most of the deficiencies of the system will be realized, documented and solutions can then be implemented. The mapping

system will be constantly updated with data gathered from developers, engineers, COH staff or citizens and will be disseminated from the COH's consultants and COH staff. The COH's newly implemented Grease Program will help to identify, document, correct, and prevent repeat grease related overflows. The COH's use of contract labor and COH maintenance crews will continue to identify and correct collection lines that have root infiltration. The use of flow monitoring will identify possible collection line obstructions and calibrate the system model in order to better verify system capacity.

As this process moves forward, the COH proposes to begin a self assessment process. Without this assessment, corrective measures cannot be designed, timelines cannot be predicted and finances cannot be budgeted. Therefore, the COH will present the EPA with a timeline and financial breakdown to assess the sewer system. After completion of the self assessment the COH can plan, design and correct the SSO issues noted in the EPA's Compliance Inspection Report. The COH will also institute a system of checks that will verify that the corrective measures have been effective in removing the discharges.

The 592 and COMSWIP programs have addressed a multitude of obvious system problems, but lack the ability to prove its impacts to SSO issues. The projects constructed to date were prioritized not just on SSO issues, but also on street failures, sewer backups, treatment upgrades and recurrent maintenance problems. All of these are issues that a city must consider when serving its citizens and that must be corrected

in regard to public health and safety. Therefore, the impact of the 592 and COMSWIP projects to date on SSOs is limited and unclear.

In order to expand the COMSWIP program and address the noted violations, the COH will need to change its prioritization process. The COH has begun a rate study and model, which will help determine the time frame for additional project implementation. As discussed before, this cannot be done without a comprehensive self assessment of the sewer system. Once the assessment is made a solution can be designed, corrections can be made and the true impact on the system can be quantified.

APPENDIX A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NOV 6 2012

CERTIFIED MAIL 7012 1010 0001 8097 2874
RETURN RECEIPT REQUESTED

City of Hattiesburg
c/o Mr. Matthew Boutwell, Director-Water and Sewer
P.O. Box 1898
Hattiesburg, Mississippi 39403-1898

Re: Notice of Opportunity to Show Cause
National Pollutant Discharge Elimination System Permit Nos. MS0020303 and MS0020826

Dear Mr. Boutwell:

On January 27, 2012, the U.S. Environmental Protection Agency, Region 4 sent an Information Request Letter pursuant to Section 308 of the Clean Water Act (CWA) to the City of Hattiesburg (the City) requesting information related to Sanitary Sewer Overflows (SSOs) from the sewer system. The EPA received the City's responses, dated March 5 and April 10, 2012. On August 13, 14 and 16, 2012, the EPA conducted an on-site Compliance Evaluation Inspection of the Wastewater Collection and Transmission System (WCTS) associated with Hattiesburg's Publically Owned Treatment Works. The objective of the inspection was to assess the City's compliance with the CWA and the National Pollutant Discharge Elimination System (NPDES) permit and to evaluate the general condition of the WCTS. The inspection results are summarized in the Compliance Inspection Report mailed to the City on September 19, 2012.

As a result of the City's response and the information gathered pursuant to the aforementioned on-site inspection, the EPA has concluded that the City is in violation of the CWA as follows:

> During the period from February 1, 2007, to December 31, 2011, the City had reported 142 SSOs, including SSOs that reached navigable waters, SSOs that did not reach navigable waters and building backups, that violated either the CWA or Permit Condition T-28 of the City's NPDES permits by failing to properly operate, maintain and replace those portions of the collection system that are experiencing SSOs. Such SSOs were not authorized by the NPDES permit. Therefore, these overflows violated Section 301(a) of the CWA, 33 U.S.C § 1311(a).

Such violations are subject to enforcement action pursuant to Section 309 of the CWA. This Section provides for the issuance of compliance orders, administrative actions to assess penalties and/or the initiation of civil or criminal actions. To resolve the violations and discuss the EPA's possible enforcement actions, including the assessment of appropriate civil penalties, we request that representatives of the City contact Mr. Dennis Sayre at (404) 562-9756 or via email at

sayre.dennis@epa.gov within five business days of receipt of this letter to make arrangements for a conference.

In lieu of appearing in the EPA's offices for this meeting, a telephone conference may be scheduled. The representatives should be prepared to provide all relevant information with documentation, pertaining to the above violations including, but not limited to, any financial information, which may reflect your ability to pay a penalty. You have the right to be represented by legal counsel. Failure to appear may result in an immediate enforcement action against you or your facilities. The EPA may consider information provided during the meeting or telephone conference in any enforcement proceeding related to this matter.

Sincerely,

Maurice L. Horsey IV, Chief
Municipal and Industrial Enforcement Section
Clean Water Enforcement Branch

cc: Mr. Chris Sanders
Mississippi Department of Environmental Quality

Mr. Rusty Lyons
Mississippi Department of Environmental Quality

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 19 2012

CERTIFIED MAIL 7012 1010 0001 8097 3017
RETURN RECEIPT REQUESTED

City of Hattiesburg
c/o Mr. Mathew Boutwell, Director
Hattiesburg Water and Sewer Department
P.O. Box 1898
Hattiesburg, Mississippi 34903-1898

Re: Compliance Evaluation Inspection Report for August 13, 14 and16, 2012 Inspections
National Pollutant Discharge Elimination System Permit Nos.: MS0020303 and MS0020826

Dear Mr. Boutwell:

The U.S. Environmental Protection Agency, Region 4 and the Mississippi Department of Environmental Quality conducted a Compliance Evaluation Inspection (CEI) of the City of Hattiesburg's (the City) Wastewater Collection and Transmission System (WCTS) from August 13 through August 16, 2012. The objective of this inspection was to assess the City's compliance with the Clean Water Act and the City's National Pollutant Discharge Elimination System permits, as well as evaluate the general condition of the sewer treatment plant and WCTS. Additionally, the EPA examined the City's Management, Operation, and Maintenance Programs. The inspection results are summarized in the enclosed CEI report.

If you have specific questions about the inspection report, please contact Mr. Dennis Sayre at (404) 562-9756 or via email at sayre.dennis@epa.gov.

Sincerely,

Maurice L. Horsey IV, Chief
Municipal and Industrial Enforcement Section
Clean Water Enforcement Branch

Enclosure

cc: Mr. Chris Sanders, P.E.
Mississippi Department of Environmental Quality

Mr. Jamon Rucker
Mississippi Department of Environmental Quality

United States Environmental Protection Agency
Washington, D. C. 20460

Water Compliance Inspection Report

Section A: National Data Coding (i.e., PCS)

Transaction	Code	NPDES	yr / mo / dy	Inspection Type	Inspector	FacType
1 N	2	3 MS0022031	11 12 1208 13 17 18	C	19 J	20 1

Remarks

21 66

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	BI	QA	Reserved
67 5 2 69 70	3	71 N	72 N	73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected (*For industrial users discharging to POTW, also include POTW name and NPDES permit number*)	Entry Time / Date	Permit Effective Date
City of Hattiesburg POTW (Collection System) 1903 East Harding St, Hattiesburg, MS 39401	1530, 8/13/2021	6/7/2010
	Exit Time / Date	**Permit Expiration Date**
	2130, 8/16/2012	5/31/2015

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Arnold Landrum
Water and Sewer GM
601.545.4530 x4689

Other Facility Data (*e.g., SIC NAICS, and other descriptive information*)
221320

Name, Address of Responsible Official/Title/Phone and Fax Number
Mathew Boutwell, Director
900 James Street, Hattiesburg, MS 39401
601.408.0586

Contacted [X] Yes [ ] No

Section C: Areas Evaluated During Inspection (*Check only those areas evaluated*)

X	Permit		Self-monitoring Program		Pretreatment Program		MS4
X	Records / Reports		Compliance Schedule		Pollution Prevention		
X	Facility Site Review		Laboratory		Storm Water		
	Effluent / Receiving Waters	X	Operation & Maintenance		Combined Sewer Overflow		
	Flow Measurement		Sludge Handling / Disposal	X	Sanitary Sewer Overflow		

Section D: Summary of Findings/Comments

(*Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary*)

SEV Codes	SEV Description
B 0 0 2 0	Improper O&M
A 0 0 2 0	WW SSO - Discharge to Waters

Name (s) and Signature(s) of Inspector(s)	Agency / Office / Phone and Fax Numbers	Date
Dennis Sayre	EPA, Region 4 404-562-9756	9-13-12
Signature of Management Q A Reviewer	**Agency / Office / Phone and Fax Numbers**	**Date**
Maurice Horsey	EPA, Region 4 404-562-9764	9/19/12

INSTRUCTIONS

Section A: National Data System Coding *(i.e., PCS)*

Column 1: Transaction Code: Use N, C, or D for New, Change, or Delete. All inspections will be *new* unless there is an error in the data entered.

Columns 3-11: NPDES Permit No. Enter the facility's NPDES permit number - third character in permit number indicates permit type for U=unpermitted, G=general permit, etc.. *(Use the Remarks columns to record the State permit number, if necessary.)*

Columns 12-17: Inspection Date. Insert the date entry was made into the facility. Use the year/month/day format (e.g., 04/10/01 = October 01, 2004).

Column 18: Inspection Type*. Use one of the codes listed below to describe the type of inspection:

A Performance Audit
B Compliance Biomonitoring
C Compliance Evaluation (non-sampling)
D Diagnostic
F Pretreatment (Follow-up)
G Pretreatment (Audit)
I Industrial User (IU) Inspection
J Complaints
M Multimedia
N Spill
O Compliance Evaluation (Oversight)
P Pretreatment Compliance Inspection
R Reconnaissance
S Compliance Sampling
U IU Inspection with Pretreatment Audit
X Toxics Inspection
Z Sludge - Biosolids
Combined Sewer Overflow-Sampling
$ Combined Sewer Overflow-Non-Sampling
+ Sanitary Sewer Overflow-Sampling
& Sanitary Sewer Overflow-Non-Sampling
\ CAFO-Sampling
= CAFO-Non-Sampling
2 IU Sampling Inspection
3 IU Non-Sampling Inspection
4 IU Toxics Inspection
5 IU Sampling Inspection with Pretreatment
6 IU Non-Sampling Inspection with Pretreatment
7 IU Toxics with Pretreatment
! Pretreatment Compliance (Oversight)
@ Follow-up (enforcement)
(Storm Water-Construction-Sampling
) Storm Water-Construction-Non-Sampling
: Storm Water-Non-Construction-Sampling
~ Storm Water-Non-Construction-Non-Sampling
< Storm Water-MS4-Sampling
- Storm Water-MS4-Non-Sampling
> Storm Water-MS4-Audit

Column 19: Inspector Code. Use one of the codes listed below to describe the *lead agency* in the inspection.

A — State (Contractor)
B — EPA (Contractor)
E — Corps of Engineers
J — Joint EPA/State Inspectors—EPA Lead
L — Local Health Department (State)
N — NEIC Inspectors
O— Other Inspectors, Federal/EPA (Specify in Remarks columns)
P— Other Inspectors, State (Specify in Remarks columns)
R — EPA Regional Inspector
S — State Inspector
T — Joint State/EPA Inspectors—State lead

Column 20: Facility Type. Use one of the codes below to describe the facility.

1 — Municipal. Publicly Owned Treatment Works (POTWs) with 1987 Standard Industrial Code (SIC) 4952.
2 — Industrial. Other than municipal, agricultural, and Federal facilities.
3 — Agricultural. Facilities classified with 1987 SIC 0111 to 0971.
4 — Federal. Facilities identified as Federal by the EPA Regional Office.
5 — Oil & Gas. Facilities classified with 1987 SIC 1311 to 1389.

Columns 21-66: Remarks. These columns are reserved for remarks at the discretion of the Region.

Columns 67-69: Inspection Work Days. Estimate the total work effort (to the nearest 0.1 work day), up to 99.9 days, that were used to complete the inspection and submit a QA reviewed report of findings. This estimate includes the accumulative effort of all participating inspectors; any effort for laboratory
analyses, testing, and remote sensing; and the billed payroll time for travel and pre and post inspection preparation. This estimate does not require detailed
documentation.

Column 70: Facility Evaluation Rating. Use information gathered during the inspection (regardless of inspection type) to evaluate the quality of the facility
self-monitoring program. Grade the program using a scale of 1 to 5 with a score of 5 being used for very reliable self-monitoring programs, 3 being satisfactory, and 1 being used for very unreliable programs.

Column 71: Biomonitoring Information. Enter D for static testing. Enter F for flow through testing. Enter N for no biomonitoring.

Column 72: Quality Assurance Data Inspection. Enter Q if the inspection was conducted as followup on quality assurance sample results. Enter N otherwise.

Columns 73-80: These columns are reserved for regionally defined information.

Section B: Facility Data

This section is self-explanatory except for "Other Facility Data," which may include new information not in the permit or PCS (e.g., new outfalls, names of receiving waters, new ownership, other updates to the record, SIC/NAICS Codes, Latitude/Longitude).

Section C: Areas Evaluated During Inspection

Check only those areas evaluated by marking the appropriate box. Use Section D and additional sheets as necessary. Support the findings, as necessary in a brief narrative report. Use the headings given on the report form (e.g., Permit, Records/Reports) when discussing the areas evaluated during the inspection.

Section D: Summary of Findings/Comments

Briefly summarize the inspection findings. This summary should abstract the pertinent inspection findings, not replace the narrative report. Reference a list of attachments, such as completed checklists taken from the NPDES Compliance Inspection Manuals and pretreatment guidance documents, including effluent data when sampling has been done. Use extra sheets as necessary.

*Footnote: In addition to the inspection types listed above under column 18, a state may continue to use the following wet weather and CAFO inspection types until the state is brought into ICIS-NPDES: K: CAFO, V: SSO, Y: CSO, W: Storm Water 9: MS4. States may also use the new wet weather, CAFO and MS4 inspections types shown in column 18 of this form. The EPA regions are required to use the new wet weather, CAFO, and MS4 inspection types for inspections with an inspection date (DTIN) on or after July 1, 2005.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4
Water Protection Division
Clean Water Enforcement Branch

COMPLIANCE EVALUATION INSPECTION REPORT

Hattiesburg Wastewater Collection and Transmission System
City of Hattiesburg
Forrest County and Lamar County
Mississippi
NPDES Permit No. MS0020303 and MS0020826

Address:
900 James Street
Hattiesburg, MS 39401

Inspection Dates:
August 13 – August 16, 2012

Inspectors:
Dennis Sayre, Enforcement Inspector, EPA Region 4
Sara Schiff, Enforcement Inspector, EPA Region 4
Jamon Rucker, MDEQ-Office of Pollution Control

Inspection Report Prepared by:
Dennis Sayre

September 18, 2012

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ABBREVIATIONS AND ACRONYMS

CMOM	Capacity, Management, Operation, and Maintenance
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	United States Environmental Protection Agency
MDEQ	Mississippi Department of Environmental Quality
GIS	Geographic Information System
GPM	Gallons per Minute
I/I	Infiltration and Inflow
ICIS	Integrated Compliance Information System
NPDES	National Pollutant Discharge Elimination System
MGD	Million Gallons per Day
SSES	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
WCTS	Wastewater Collection and Transmission System
WWTP	Wastewater Treatment Plant

I. OVERVIEW

The City of Hattiesburg, Mississippi's Water and Sewer Department (the Department) provides sanitary sewer and drinking water services for residential, commercial and industrial entities in and around the City of Hattiesburg (the City), Mississippi. Regarding the sanitary sewer services, the City's Water and Sewer Department is responsible for the operation and maintenance of two wastewater treatment lagoons, approximately 304 miles of sewer lines, 77 pump stations and other sewer related appurtenances serving approximately 62,860 customers.

On January 27, 2012 the Environmental Protection Agency sent a Information Request Letter (§308 Letter) pursuant to Section 308 of the Clean Water Act (CWA), requesting the City to provide information related to Sanitary Sewer Overflows (SSO) from the City's Wastewater Collection and Transmission System (WCTS). EPA received and evaluated the City's response, dated March 5 and April 10, 2012.

The EPA conducted a Compliance Evaluation Inspection (CEI) of the City's WCTS on August 13 and 14, 2012 and again on August 16, 2012. The portions of the inspection that occurred on August 13 and August 16 were independent site visits (EPA inspectors only) of select portions of the WCTS. The August 14 inspection consisted of City personnel, Mississippi Department of Environmental Quality (MDEQ) personnel and EPA inspectors for interviews and accompanied site visits.

The purpose of this CEI was to evaluate compliance with the CWA and the City's National Pollutant Discharge Elimination System (NPDES) permits as it relates to SSOs from the WCTS, and to assess the City's Capacity, Management, Operations and Maintenance (CMOM) programs. Additionally, the purpose of this compliance inspection was to examine the causes and potential corrective actions for SSOs from the WCTS and related pump stations. The EPA also conducted a Reconnaissance Inspection on the Hattiesburg South Sewage Treatment Lagoon to evaluate the overall condition of the facility and observe work being performed to add aeration equipment and remove sludge. The Lagoon will not be discussed in this report.

During the inspection on August 14, 2012 the EPA requested from City management written documentation of the CMOM programs, including inspection and maintenance records, interviewed management personnel and visited various sites in the WCTS with City personnel and a MDEQ inspector. Sites visited included the Cross Creek Pump Station (PS); the University of South Mississippi (USM) PS at US-49 and W. 4th Street; the Village PS; the E. Laurel PS; and manholes at N. 19th Avenue and Pearl Street. Sites visited by EPA inspectors on August 13th and 16th included manholes in the vicinities of: 1) Cypress Avenue and Duke Avenue and Edwards Street; 2) N. 19th Avenue and Pearl Street; 3) J.M. Tatum Industrial Blvd; and, 4) the vicinity of Turtle Creek Mall. This report describes the EPA's findings.

II. OBJECTIVES

The specific objectives of the inspection were to assess the City's compliance with the CWA and its NPDES permits and to assess the City's CMOM programs.

III. INVESTIGATION METHODS

The investigation included:

- Review of the Integrated Compliance Information System - NPDES (ICIS-NPDES) federal database, state documents and the NPDES Permits;
- Review of the City's response to EPA's §308 Letter;
- Review of the City's NPDES permits and related documents;
- Interviews with the City's Water and Sewer Department personnel; and,
- Visual inspection.

IV. REGULATORY SUMMARY

The MDEQ is authorized under the CWA to implement the NPDES program in Mississippi. The City owns and operates two sewage treatment lagoons and their associated WCTS. The South Lagoon is a 430 acre wastewater treatment lagoon classified as a major treatment plant, permitted to treat 20 Million Gallons per Day (MGD) of domestic and industrial wastewater and is authorized under Mississippi's NPDES Permit No. MS0020303 (the South Lagoon Permit). A municipal wastewater treatment plant permitted to treat 1 MGD or more of wastewater is classified as a major treatment plant. The South Lagoon Permit authorizes discharge of treated wastewater from the sewage treatment plant into the Leaf River in the Lower Leaf River Watershed. The North Lagoon is also a major treatment plant authorized under MDEQ's NPDES Permit No. MS0020826 (the North Lagoon Permit) to treat 4 MGD of domestic and industrial wastewater. The North Lagoon Permit authorizes discharge of treated wastewater from the North Lagoon to the Bowie River, a tributary of the Leaf River located in the Upper Leaf River Watershed.

The Leaf River is listed as impaired for pathogens, sediment, organic enrichment/low dissolved oxygen and nutrients from well north of the City of Hattiesburg to approximately 23 miles downstream to its confluence with Tallahala Creek. The Bowie River is impaired for pathogens, sediment, organic enrichment/low dissolved oxygen and nutrients from its confluence with Okatoma Creek to its confluence with the Leaf River just north of the City. MDEQ has developed a Total Maximum Daily Load (TMDL) for pathogens and a Phase I nutrient TMDL for both the Bowie and the Leaf Rivers to address these impairments. Phase I TMDLs are developed so that when more data are available and nutrient water quality standards are developed, Phase II TMDLs could address nitrogen and/or phosphorus loads as needed.

SSOs are prohibited discharges based on Sections 301 and 402 of the CWA which stipulate that, with few exceptions, the discharge of pollutants by any person is prohibited without a

permit. SSOs may be a contributing factor in the impairment of waters in the Leaf River Watershed. Also, Section IV.L of MDEQ's Regulation WPC-1 states that "the discharge of any wastewater from a facility operating under a State permit to waters of the State shall constitute a violation of the permit, except as provided in Section IV.A.20. and 27., or as authorized under separate permit pursuant to Section 402 of the Federal Act." SSOs that reach waters of the state constitute a violation of the NPDES permit.

V. INSPECTION SUMMARY AND FINDINGS

The EPA performed an on-site inspection of the WCTS and reviewed regulatory documents and historic records submitted by the City to MDEQ and the EPA. This section will provide a summary of both means of inspection as well as any recommendations to the City to improve the WCTSs' performance.

A. Management Interview

The EPA met with the City's Water and Sewer Department Director, the General Manager, the Water Plant Supervisor, the Wastewater Division Manager, the Sewer Department Supervisor and MDEQ's inspector at approximately 8:30 a.m., August 14, 2012. Topics of discussion included the use and documentation of any CMOM programs including Fats, Oil, and Grease (FOG) Control; root control; capacity assurance; preventive maintenance and inspections; emergency response; and pump station back-up power.

The EPA discussed concerns relating to SSOs in detail with the Director and inquired about each CMOM program mentioned above to determine whether a formal or non-formal (not in writing) program existed for use to manage various operations and maintenance needs of the WCTS. The Director indicated that no formal written program existed for any CMOM programs but discussed in detail the procedures used to respond to SSO reports received from the public or discovered internally.

The City primarily utilizes a system referred to as the "Action Center" to address citizen complaints. According to the City's website, the Action Center "is the information exchange center between city departments and local residents. When a citizen calls with a concern, an Action Center operator will log the request into a new citywide software system (EnerGOV) and the appropriate department will be notified to address the problem." The City becomes aware of SSOs typically from complaints received at the Action Center, from calls to the Water and Sewer Department Dispatcher(s), or from calls to the Wastewater Treatment Plant (WWTP) Operator after normal operating hours.

The Division Manager receives all of the complaints and is responsible for sending out response crews and assigning work orders. After normal hours of operation, the WWTP Operator is responsible for dispatching response crews to SSOs and other customer complaints. The City's Water and Sewer Department is approximately 95% manned to the level proposed by the Department and has at their disposal three 2-man pump truck crews

and two sewer maintenance crews. Major equipment on-hand includes two vac-trucks, three pump trucks, two CCTV trucks and a smoke test system.

The Department currently does not have a formal written sewer overflow response plan and currently maintains a basic trouble call database that has limited data tracking ability for SSO occurrences and maintenance actions.

B. Permit Review

Both the North and South Lagoons' NPDES Permits contain MDEQ's standard conditions for operating and maintaining publically owned treatment works (POTW). Of note, condition T-28 (Proper Operation, Maintenance and Replacement), specifically states that the "permittee shall at all times properly operate, maintain, and when necessary, promptly replace all facilities and systems of collection, treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit." The WCTS and the WWTPs make up the POTWs.

C. Site Inspection

On August 13, 2012, the EPA performed an independent site inspection on various manholes located throughout the City. EPA's inspection team visited manholes located in four separate sections of the City (referred to here as Areas 1 through 4); specifically, (Area 1) - Manholes on Cypress Avenue, Duke Avenue and Edwards Street located just west of the South Lagoon; (Area 2) - N 19th Avenue and Pearl Street located in the central section of the City; (Area 3) - J.M. Tatum Industrial Blvd located in the south side of the City; and, (Area 4) - In the vicinity of Turtle Creek Mall. Weather conditions on August 13, 2012 were dry, hot and humid.

Area 1 is an older section of town and consists mainly of low to lower middle income and minority residents. The EPA suspected that the City is experiencing SSOs in this area due to information gathered from the §308 Letter. Inspectors did not see any visible signs of SSOs in this area but noted a couple of manholes in the road ways that displayed sunken or indented asphalt (by one or two inches, extending out 18 inches or more) on one side of the manhole cover, which may be a sign of chronic surcharging in the manhole.

Area 2 is also an older section of the City that appeared to consist primarily of lower middle to middle income residents. The EPA suspected that the City is experiencing SSOs in this area due to information gathered from the §308 Letter. Inspectors did not note any visible signs of SSOs at any of the manhole covers, but noted a large hole in the lateral of a residence at 200 N. 19th Avenue that appeared to be caused by recent surcharging in the City's WCTS. Conversations with a local resident indicated that there is a back-flow preventer on the lateral that prevents sewage from entering the home and that the sewers overflow regularly in this area. Figures 1 through 4 display pictures of this area.

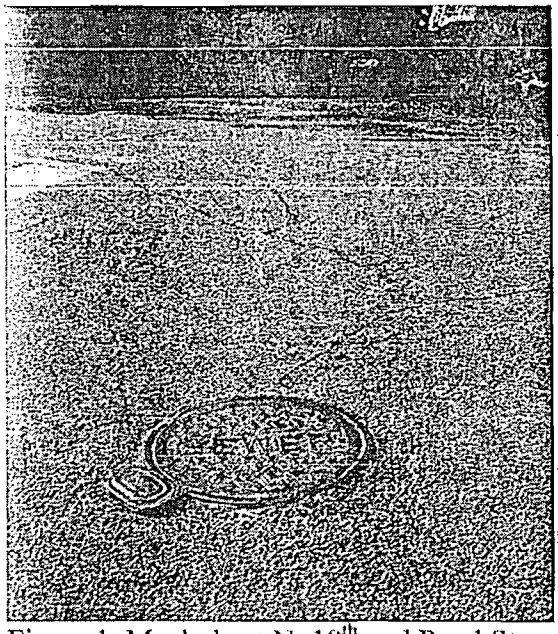


Figure 1. Manhole at N. 19th and Pearl St. (Area 2)

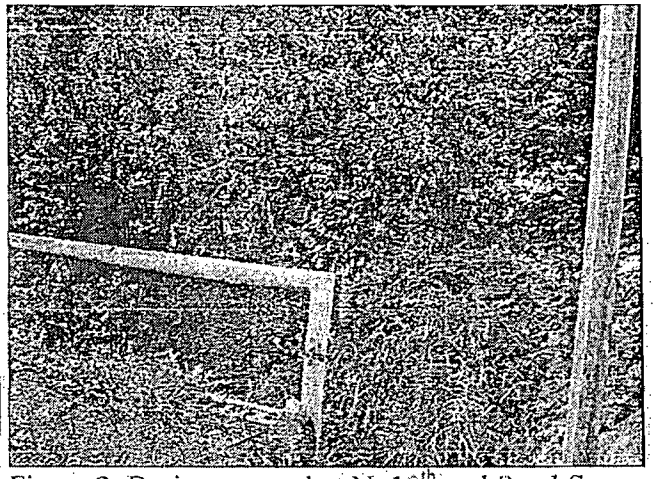


Figure 2. Drainage canal at N. 19th and Pearl St.

Figure 3. Manhole just south of at N. 19th and Pearl St.

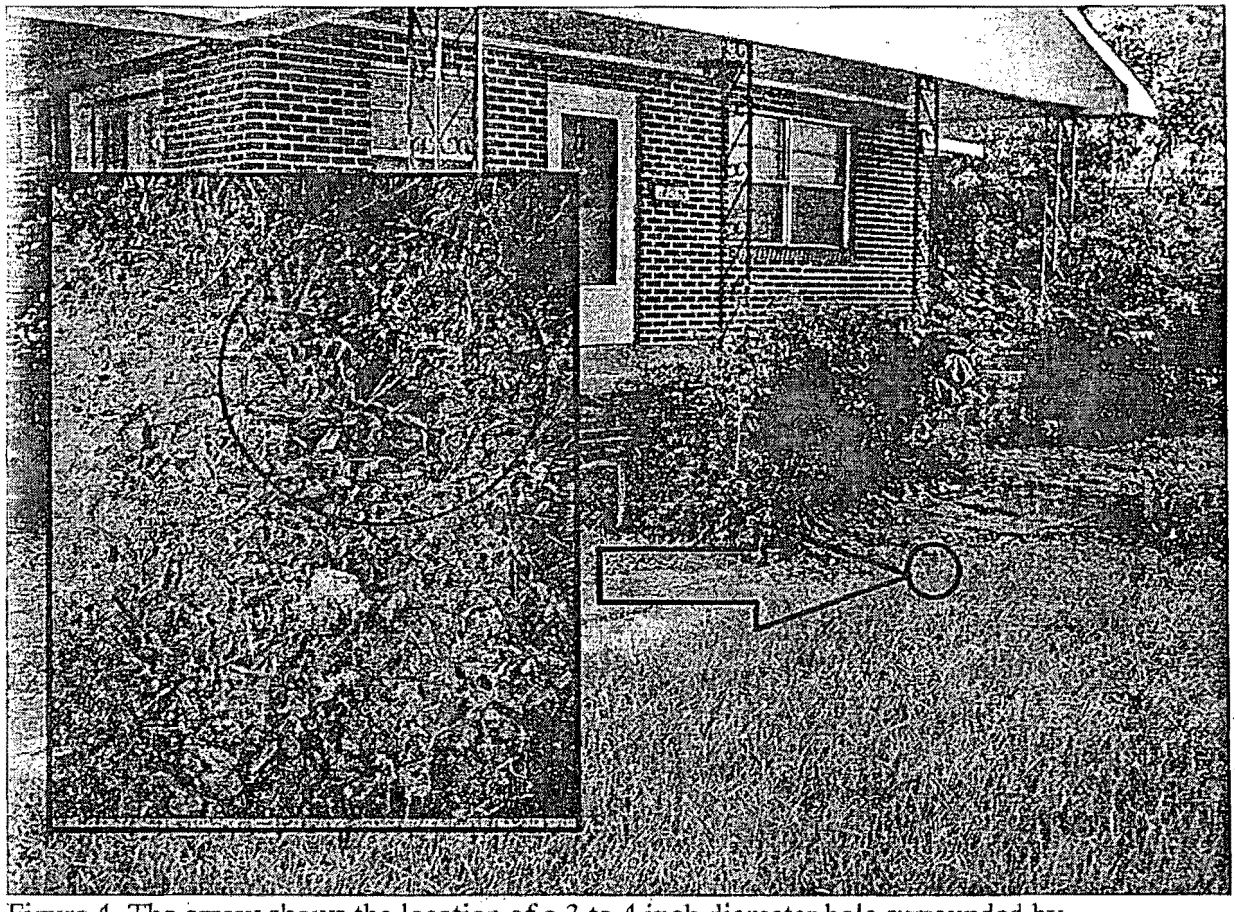


Figure 4. The arrow shows the location of a 3 to 4 inch diameter hole surrounded by sewage debris located in residential yard.

Inspectors did not note any signs of overflows in Area 3 or Area 4 but did note a broken manhole crown on Turtlecreek Drive next to Turtle Creek Mall.

On August 14th, the inspection team visited Areas 1, 2 and 4 with City personnel and the MDEQ inspector. The manhole cover in Figure 1 above was removed and inspected. The interior of the manhole displayed signs of chronic surcharging due to thick buildup of sewage debris on the top rung of the manhole ladder (see Figure 5). City personnel also removed the cover to the manhole with the broken grout around the crown located at Turtle Creek Mall; there were no signs of surcharging in this manhole. Damage to the exterior of the manhole crown appears to be caused by external conditions such as impact from a vehicle and appeared to have no effect on system performance. This manhole belongs to the mall, not the City.

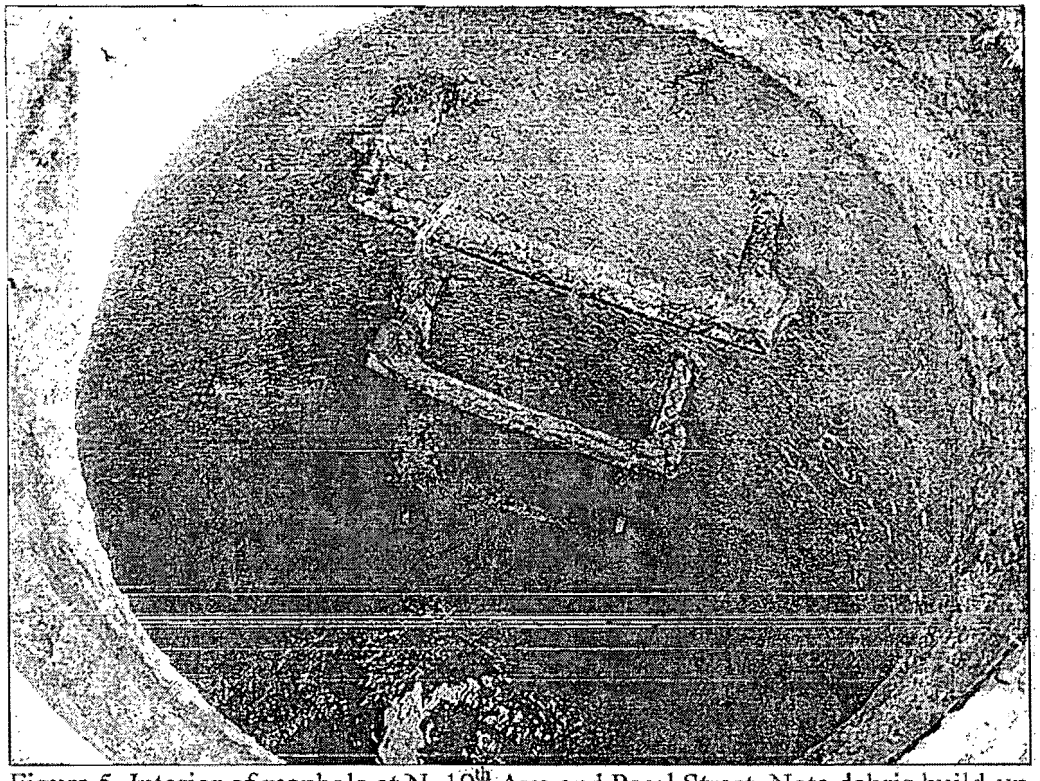


Figure 5. Interior of manhole at N. 19th Ave and Pearl Street. Note debris build-up on the top ladder rung as well as the lower elevated ladder rungs.

Inspectors also visited the Cross Creek Pump Station (PS); the USM PS at US-49 and W. 4th Street; the Village PS; the E. Laurel PS; manholes at N. 19th Avenue and Pearl Street; and manholes at Pearl Street. The Cross Creek PS appeared to be in good working order; the USM PS appeared to be working properly but inspectors noted a sewage smell emanating from the wet well area which may have indicated a maintenance deficiency such as excessive solids in the wet well. In addition, inspectors noted two recently replaced pumps in the USM PS. This PS is scheduled for rehabilitation in 2013. The 4th Street PS and E. Laurel PS appeared to be in adequate operating condition. The Village PS was experiencing a failed pump and had a portable pump on a trailer connected to the wet well as a temporary pump-around until the pump is replaced. City personnel stated that the pump is scheduled for replacement the following week due to a delay in parts delivery.

EPA inspectors were unexpectedly in the City on August 16, 2012. On the evening of August 16th, a fairly heavy, but not untypical rain event for this area occurred. The rain started at about 6:50 or 6:55 p.m. and the event's peak intensity started around 7:00 p.m. and ended within 30 minutes then dwindled to a light shower until approximately 8:45 p.m. EPA inspectors intended to revisit Area 2 (N. 19th and Pearl) to observe any possible SSOs. On the way to Area 2, the inspector who went out on reconnaissance (Dennis Sayre) observed an active SSO on Hardy Street at approximately 7:08 p.m. (see Figure 6 below).

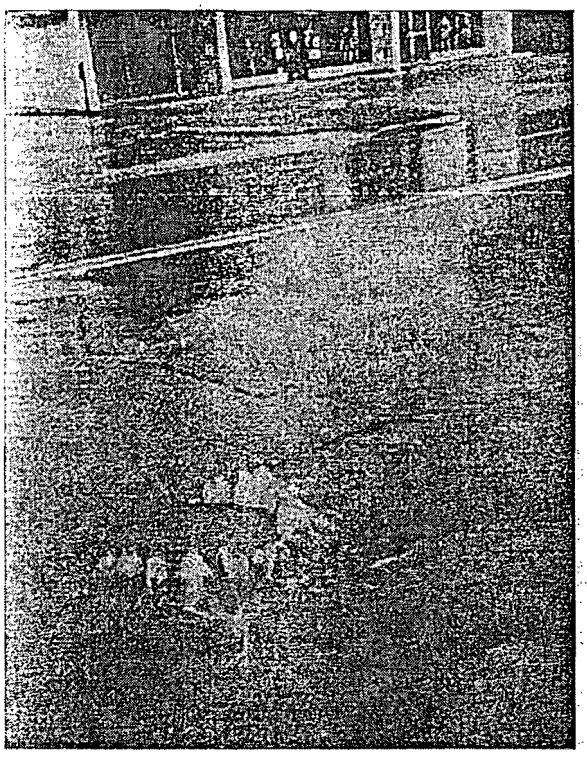


Figure 6. SSO on Hardy Street in front of the Sunflower Grocery Store. Note the indentation of the asphalt on one side of the manhole cover, indicative of chronic surcharging.

The EPA inspector called the WWTP Operator at 7:25 p.m. to report that an overflow was occurring at this location. City personnel arrived on scene at 7:31 p.m. and placed a large safety traffic cone on the manhole to prevent traffic hazards. The flow from this SSO was observed entering a stormwater culvert.

The EPA inspector then drove to the N. 19th and Pearl Street location and observed SSOs at that location and one block to the east at 105 Park Avenue (see Figures 7 through 11 below).

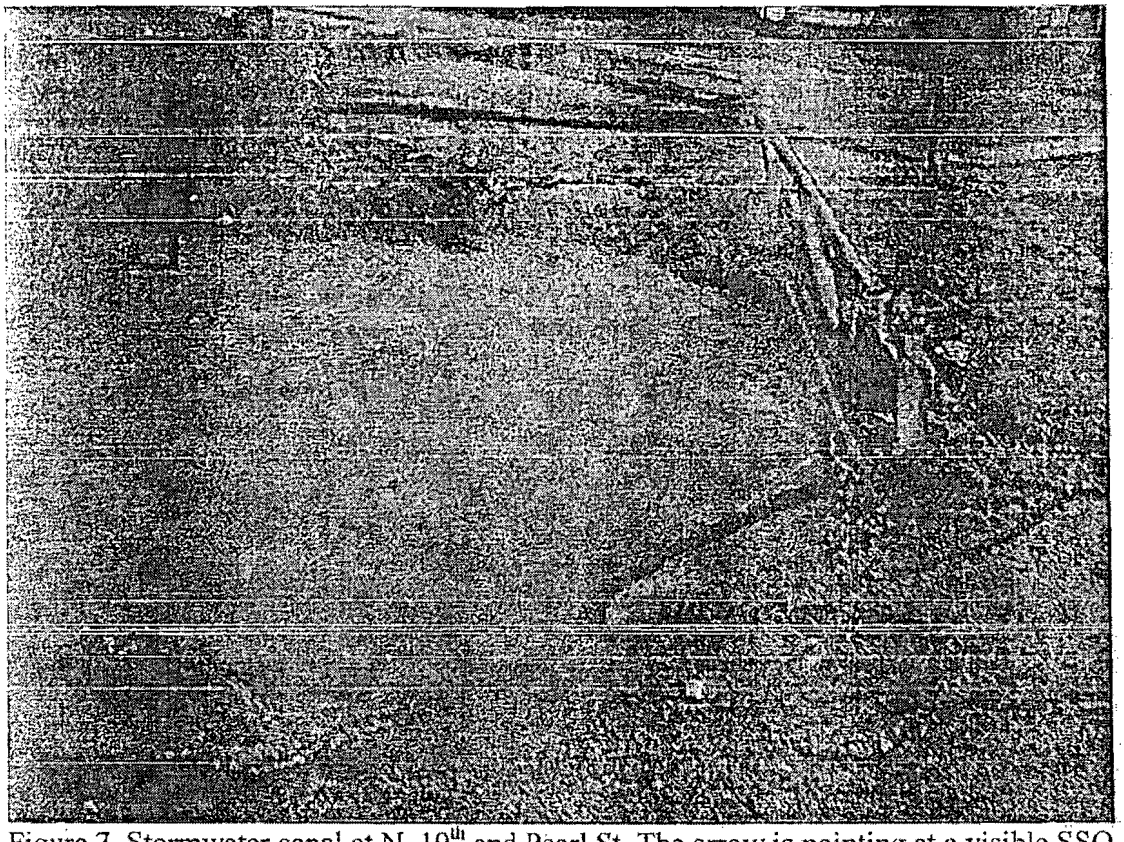


Figure 7. Stormwater canal at N. 19th and Pearl St. The arrow is pointing at a visible SSO emanating from a lateral within the City's right of way at 200 N. 19th Avenue in the resident's front yard (See Figure 8.)

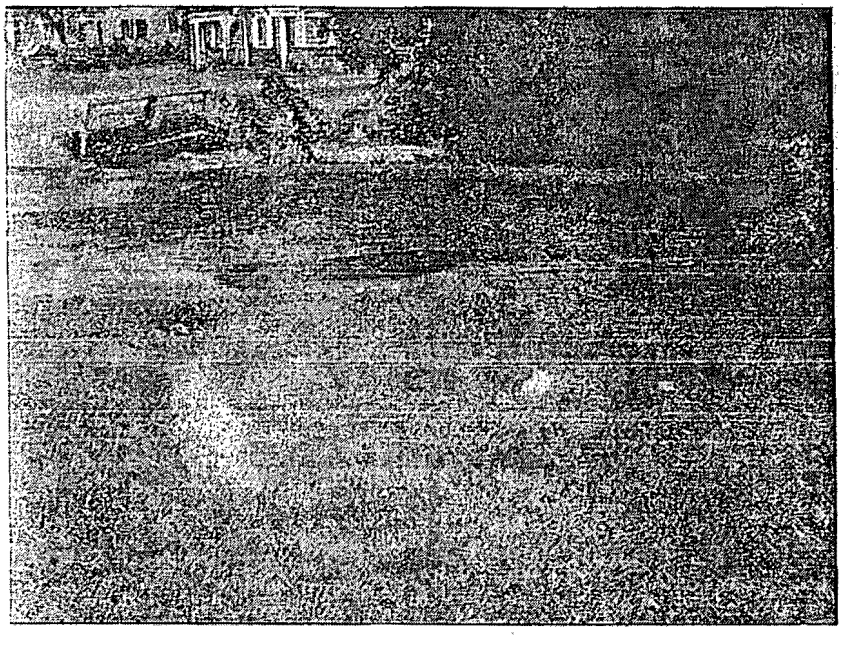


Figure 8. SSO from lateral within the City's right of way at 200 N.19th Avenue.

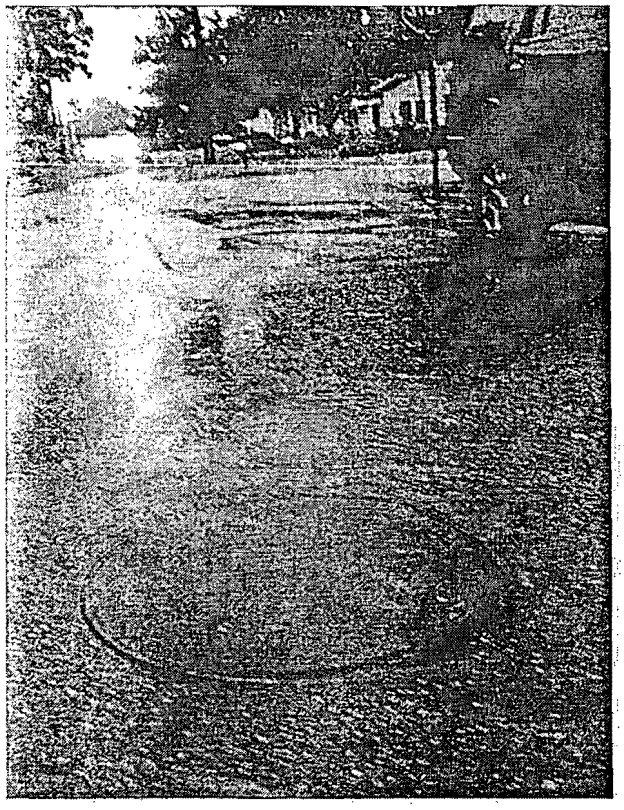


Figure 9. Manhole overflowing at 200 N. 19th Avenue.

Figure 10. SSO from private lateral at 200 N. 19th Ave. Same location as seen in Figure 4.

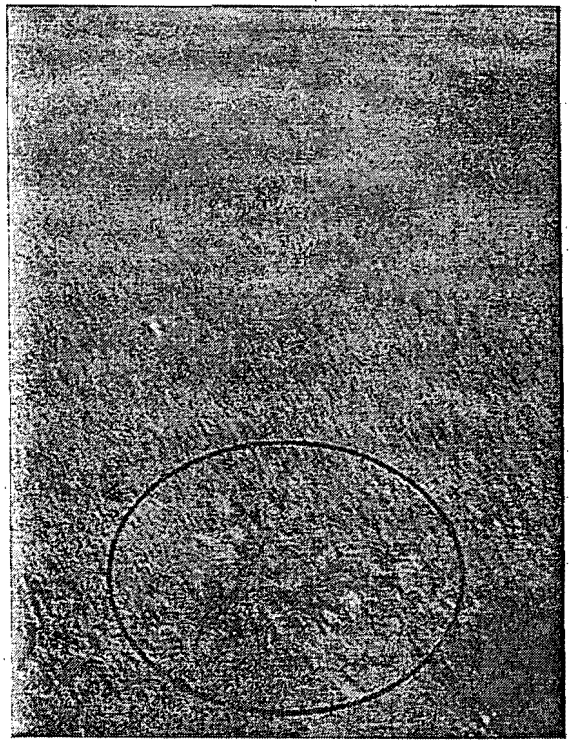


Figure 11. SSO at 105 Park Avenue. Sewage was being discharged into the stormwater canal in the background.

Both the N. 19th Avenue and the Park Avenue locations discharge into the same stormwater canal which in turn discharges into Gordons Creek. The Park Avenue manhole location is approximately 90 yards from the stormwater canal's confluence with Gordons Creek and the N. 19th Avenue SSO location is approximately 170 yards upstream from the Park Avenue location. The EPA inspector returned to these locations at approximately 8:50 p.m. The SSO located on Hardy Street appeared to have ceased but the SSOs at the intersection of N. 19th Avenue and Pearl Street and at Park Avenue were still occurring. The EPA called the WWTP Operator at 8:55 p.m. and reported the SSOs in this area.

I. Post inspection observations:

The EPA discussed observations noted during the unaccompanied site inspection portions of this inspection as a follow-up with the Director, who stated excessive inflow and infiltration (I/I) is causing the SSOs in the area surrounding N. 19th Avenue and Pearl Street. The Director submitted to the EPA a spreadsheet document titled "Proposed Sewer Projects" that included capital improvement projects for the WCTS and two maps that highlighted sewer related projects that are scheduled for completion to address collection system deficiencies. Figure 12 shows planned projects that are to address deficiencies in one area of concern (those areas visited in Area 1 above, west of the South Lagoon). Figure

13 shows the sewer projects listed that would affect Area 2.

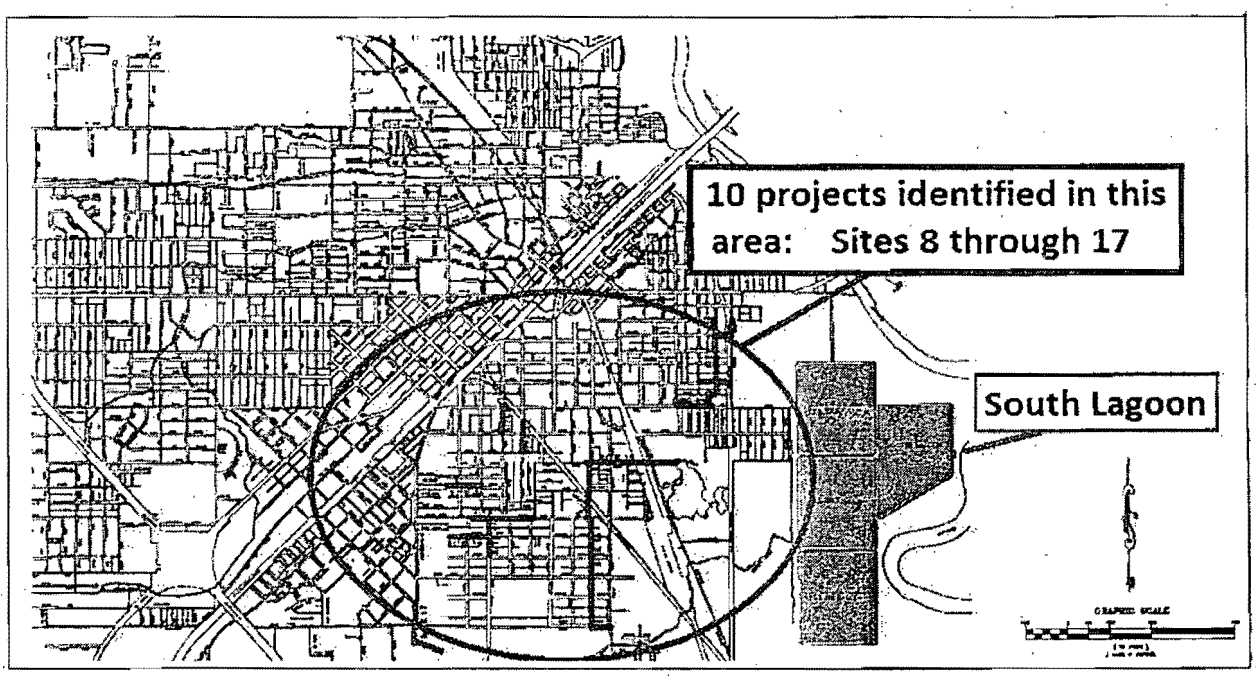


Figure 12. There are 10 construction sites (identified by red lines) identified throughout this area to address WCTS deficiencies (Area 1).

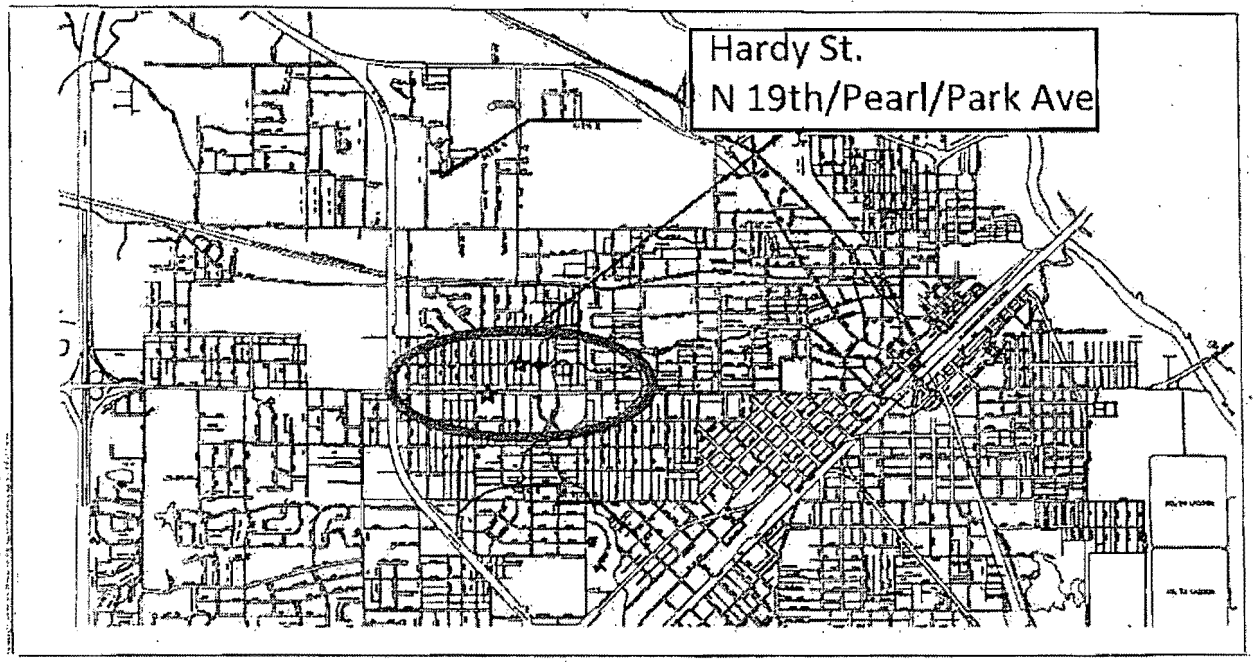


Figure 13. There are seven construction sites (identified by red lines) identified in this drawing that affect three separate areas of the WCTS; Sites 1 through 7. The red stars indicate the areas where SSOs were observed (Area 2).

The list of capital improvement projects listed on the Proposed Sewer Projects spreadsheet appears to be a separate list from those projects identified in maps shown in Figures 12 and 13. Figure 14 shows a picture summary of sewer projects presented in the Proposed Sewer Projects spreadsheet.

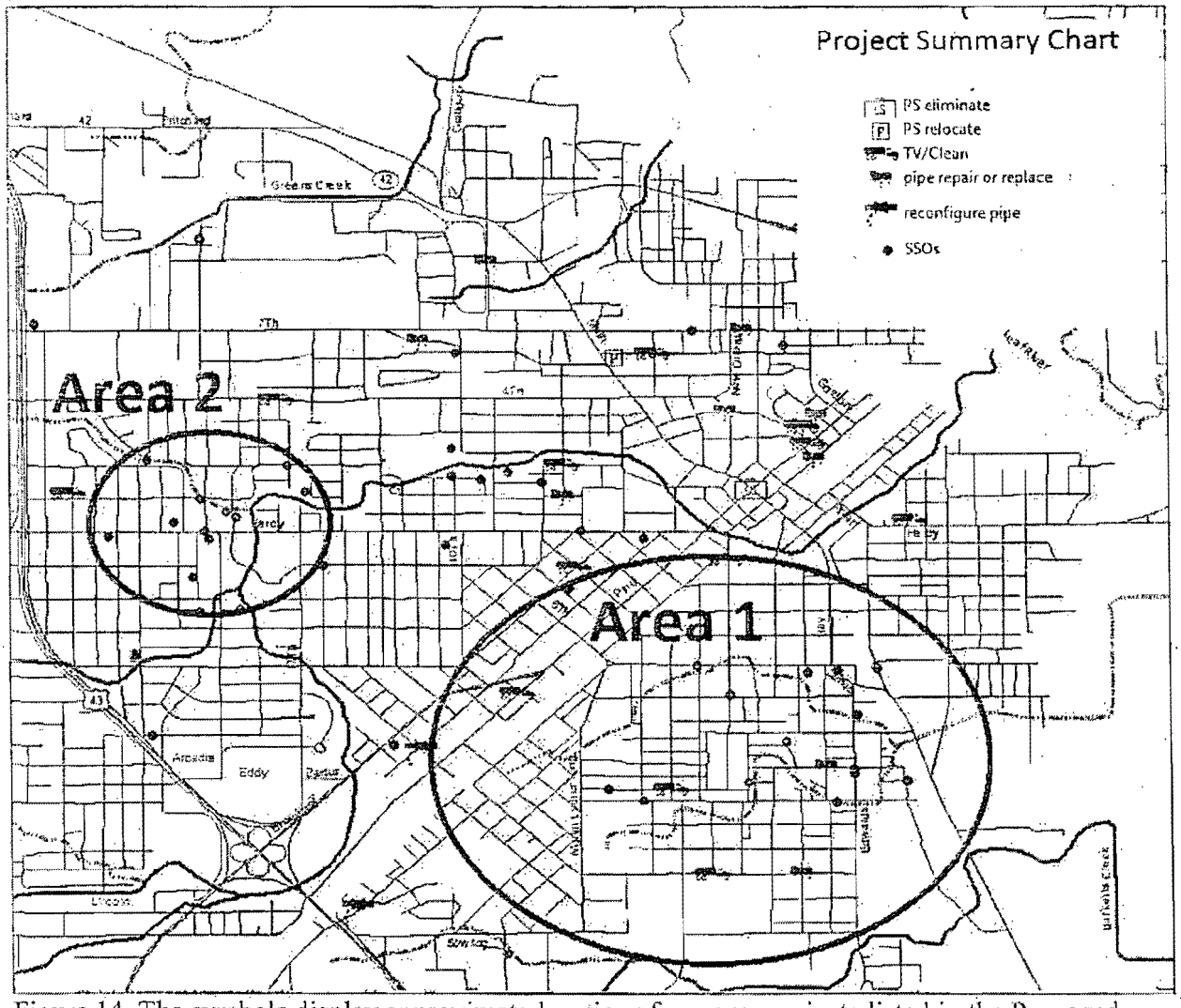


Figure 14. The symbols display approximate locations for sewer projects listed in the Proposed Sewer Projects spreadsheet. Areas 1 and 2 are as described in Section C above. The SSOs displayed are reported SSOs and all symbols represent approximate locations.

II. Findings and concerns:

The City personnel that assisted with the on-site inspection of the WCTS were very helpful, courteous and displayed a good working knowledge of the WCTS.

It is evident from the amount of pump station pumps that have been replaced, the amount of

work being performed at the South Lagoon (not discussed in this report), the elimination of a handful of constructed overflow points within the past few years and a fresh management team (the top management has been with the City for 3 years or less) that the City has taken great strides to improve their POTWs. However, there are areas of concern that the EPA believes are not adequately addressed; specifically, there are observed SSOs in areas of the City that discharge directly, or indirectly through stormwater sewers, into waters of the United States and there are observed SSOs that are occurring in the yards of the citizens of the City. Overflowing sewers in residential areas present an immediate health hazard through contact with sewage and prevents the use of sewer systems for hours due to inadequate capacity during wet weather events, creating adverse health and sanitation issues inside the residential houses.

The City has divided the WCTS into three distinct sections; namely, the North Lagoon Sanitary Sewage Basin (SSB), the Laurel Street SSB and the Burketts Creek SSB. The sections of the City believed to be experiencing SSOs due to excessive I/I are located primarily in the Laurel Street SSB. Judging from information outlined in Figures 13 and 14, the TV/cleaning and capital improvement projects currently scheduled do not appear to address the excessive I/I that is causing SSOs in and around Area 2. Also, though it appears that there is significantly more activity planned for Area 1, due to a lack of project description, it is unclear whether the projects displayed in Figures 12 and 14 adequately address SSOs in Area 1 of the Laurel Street SSB.

D. Management, Operation, and Maintenance Programs

The City does not have a formal CMOM Program as outlined in EPA's *Management, Operation and Maintenance, Comprehensive List of Programs for Sewer and Treatment Systems,* (July 2000). Comments provided for programs listed below are based on the interview with Department personnel.

1. Mapping Program

The City performed a pipe survey between 2003 and 2008, according to EPA's interview with the Director, and placed a GIS mapping program on-line in 2011. There were no formal written mapping programs utilized by the City to ensure standard mapping protocol, map updates and accuracy.

Recommendation:
Formal Mapping Program documentation should be developed to ensure consistency of map protocol and to provide official guidance for map review and maintenance.

2. Grease Control Program

The City has no formal, written Fats, Oils and Grease (FOG) Control Program outside of any guidance in the City's ordinances. No documentation for grease control was provided that gives specific guidance to City personnel to manage grease build-up in the WCTS.

However, the Department has submitted proposed code changes to give it more authority regarding grease trap use in the City.

Recommendation:
The EPA recommends that the City develop documents that outline procedures and provide guidance on how to manage and reduce FOG build-up in the WCTS. A valid grease program includes: providing guidance documents for permitting, inspection, enforcement, compliance tracking, and budgeting; establishing inspection priorities; public education guidance; and establishing performance goals and outlining inter-agency cooperation between the Department and other legal authorities involved in grease trap rules, codes or regulations.

3. Root Control Program

Root control is performed on an "as needed" basis by the City maintenance personnel. No documentation was provided that outlined specific requirements to manage root penetration in the WCTS.

Recommendation:
The EPA recommends the development and implementation of a grease, roots and sewer cleaning program. This program should include: guidance for scheduling hydraulic cleaning, root clearing, and mechanical cleaning activities; personnel responsible for the activity; equipment available; scheduling guidance for preventive maintenance and routine inspections; the use of standard forms, reporting procedures, and tag out/lock out procedures; and procedures for recordkeeping.

4. Capacity Assurance Program

The City does not have any formal, written capacity assurance program that gives specific guidance to Department personnel to address capacity issues when building, adding, or modifying the WCTS. A formal written Capacity Assurance Program maintained by the Department can clarify the requirements and needs of the Department while using the City's codes and ordinances as minimum standard guidance.

Recommendation:
The City should develop a capacity assurance program to include specific criteria for approval of additions to the WCTS, balancing Permit requirements and the City's codes and ordinances; performance measures used to approve or deny an extension of the WCTS; and procedures used to calculate capacity in the WCTS and at the WWTPs.

5. Preventive Maintenance and Inspection Programs

No formal written documents were provided that outlined specific guidance for preventive maintenance and inspection programs. No formal preventive maintenance programs are known to be utilized by the City.

Recommendation:
The EPA recommends that the City develop formal, written CMOM Programs with an aggressive Preventive Maintenance and Inspection Program. Preventive Maintenance and Inspection Programs can have a significant positive impact on the future condition of the WCTS. A properly implemented Preventive Maintenance and Inspection Program can prevent a massive outlay of expenses needed to repair or replace parts of the system that City personnel 'did not see' failing due to the lack of prevention. Relatively small preventive maintenance expenses now can save the City larger repair expenses in the future.

6. Emergency Response

The City did not present formal written documents meant to provide guidance for emergency response to SSOs or pump station failure.

Recommendation:
The EPA recommends that the City develop Emergency Response Plans (including a Pump Station Emergency Response Plan and a Sewer Overflow Response Plan, separately or as a combined document) that provides an outline for emergency response, mitigation and clean up in the event of pump station failure and/or SSOs. The Emergency Response Plans should include, at a minimum: emergency contact information; location(s) of auxiliary power including portable generators; location(s) of portable pumping equipment; guidance for initiating auxiliary power with fixed or portable generators in the event that fixed generators do not start; guidance for installing portable pumps during high flow; mitigation and clean-up procedures; public notification guidelines; and, applicable Contingency Plans.

SEP 27 2012

MLB

APPENDIX B

ADOPT AN ORDINANCE AMENDING CHAPTER 21
OF THE CODE OF ORDINANCES ESTABLISHING
DISCHARGE WASTE TO CITY FACILITIES BY
PORTABLE HAULERS

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF HATTIESBURG, MISSISSIPPI:

SECTION 1. Discharge Waste to City Facilities by Portable Haulers

A. Discharge Limits and Conditions

Portable waste haulers shall not discharge waste to the City facilities without written permission from the Director of Water and Sewer. No discharge to any City facility or any facility that discharges to the City is prohibited except at the City's designated area. All wastewater pumpers shall have a valid City of Hattiesburg Domestic Wastewater Discharge Permit renewed annually. All discharges are subject to random testing to determine the chemical and/or bacteriological content of the discharge. Only domestic wastewater discharge is allowed. The discharge of fats, oils, or grease (F.O.G.), industrial wastewater, unusually high strength wastewater, hazardous waste or commercial wastewater into any City facility, collection system or any other system that is treated by the City is prohibited.

B. Insurance

All portable waste haulers shall provide the City's Water and Sewer Department with current valid certification, licensing, or permit as issued by the Mississippi State Board of Health, Mississippi Department Environmental Quality, and/or other federal, state, or county agency authorizing the pumping or hauling of domestic wastewater. Each hauler shall be insured for at least $1,000,000 of combined single limit vehicle liability insurance. The insurance coverage shall cover all work performed by the wastewater hauler while transporting and discharging wastewater and shall include, but not be limited, to liability arising out of disposal of any hazardous waste, spilled material on public property, and fines, penalties, assessments, and/or damages, or any other costs incurred or imposed by the City as a result of the hauler's activities.

C. Discharge Area

The designated portable haulers' discharge area shall be secured at all times. No discharge is allowed without designated City personnel present during discharge. A minimum of 30 minutes notice to the Water and Sewer Department Office is required prior to arrival at the discharge area. Portable waste discharge is allowed only from 9:00 a.m. to 2:00 p.m., Monday through Friday. Portable waste discharge is prohibited on Official Holidays of the City of Hattiesburg.

D. Certification of Contents

All haulers shall provide as a minimum for each load prior to discharging the following:

- Name of Company performing service;

- Date and time service performed;
- Unique vehicle/tank identifying information performing service;
- Name of driver delivering waste;
- Address of person or site for services performed;
- Type facility pumped (Septic Tank, Pump Chamber, ATS, Lift Station, Holding Tank, Portable Toilet, Grease Trap, Grease Interceptor, Sand Separator, Oil Separator, etc.) at each site;
- Volume in gallons pumped at each site;
- Certification that each load is fully compliant with the City's Sewage Disposal Ordinance and contains no prohibited or hazardous materials as defined in 40 CFR 261 or other;
- Signature of driver

E. **Right of Refusal**

The City shall have the right to refuse to accept the discharge of any hauled waste if in the opinion of the observing City personnel the waste does not meet the conditions under which the permit was granted. Discharge may be refused if in opinion of the observing City personnel that the waste could cause operational or maintenance problems to City's facility, are detrimental to the health of City employees or cause violations to the City's NPDES Permit or other City, State or Federal laws and regulations.

F. **Payment for Discharging**

Wastewater haulers shall pay an annual licensing fee of $100, and in addition, thereto, such wastewater hauler shall pay a dumping fee for each load discharged. The fee for wastewater dumping shall be $30 for each load less than 1000 gallons, $40 for each load of 1000 gallons and $10 per additional 1,000 gallons. All haulers shall provide certification for each tank's volume capacity. Fees shall be based on the tank's available capacity regardless of how full the tank is at time of discharge. Each hauler shall provide the City with valid road privilege information for each truck. Each hauler shall provide the City with unique identification numbers permanently applied for each tank.

G. **Penalties/Fines/Damages**

Any unauthorized discharge at the City's treatment facilities, the City's collection system or any other system that is treated by the City shall be result in the hauler prohibited from all future discharging into the City's system. The violation shall also be a misdemeanor punishable by a $1000 fine and/or up to 60 days in jail per violation. The violator shall also be liable for all costs associated with the unauthorized discharge. Any discharge of waste in excess of the limits as described in other sections of the City's Chapter 21 Sewage Disposal Ordinance shall be a misdemeanor punishable by a $1000 fine per violation. The violator shall also be liable for all costs associated with the unauthorized discharge.

H. **Liability**

The wastewater hauler shall assume all liability for any injuries or damages caused and/or incurred while on the City's property and hold the City harmless for such.

SECTION 2. Grease Control

Purpose

The purpose of this ordinance is to control discharges of fats, oils or grease (F.O.G.), waste food and sand into the public sewerage collection or treatment system. FOG, waste food and sand interfere with the operation of the sewerage system and cause blockages in the system lines, NPDES violations and penalties and environmental damages. The discharge of fats, oils or grease (F.O.G.) into any City facility is prohibited. This ordinance establishes regulations for the sizing, installation, maintenance and operation of FOG, waste food and sand interceptors.

Definitions

A. **Black Water** - Waste water from sanitary fixtures such as toilets and urinals.

B. **Gray Water** - All wastewater other than "Black Water" as defined in this section of the Ordinance.

C. **Grease** - A waste material composed primarily from fats and oil of animal and vegetable origins. The terms fats, oil and grease as used in the ordinance shall be deemed as Grease by definition. Grease does not include petroleum-based products.

D. **Bulk Service Kitchen** - A facility that prepares bulk quantities of food, such as hospitals, schools or caterers.

E. **Common Grease Interceptor** - A device that receives grease waste from more than one facility having different operators or types of operators.

F. **Food Courts** - Areas in which multiple food preparation establishments having different owners may be sharing seating space and/or plumbing facilities.

G. **Food Service Facility (FSF)** - Any facility whose operations include cutting, cooking, baking preparing or serving food or which disposes of food related waste.

H. **Garbage Grinder** - A device that chops, shreds or grinds up solid or semisolid waste materials into smaller portions for discharge into the sanitary sewer collection system.

I. **Grease Interceptor** - A large tank or device designed and constructed to separate, trap and hold grease substances from the sewage discharge from a facility and to prevent them from entering the sanitary sewer collection system. Grease interceptors shall be located outside of food service facilities.

J. **Grease Trap** - A small Grease Interceptor located inside a facility and typically mounted under sink. A container designed and constructed to separate, trap and hold fats, oil and grease that is placed under or near sinks or other facilities to prevent the discharge of these waste substances into the sanitary sewer collection

system.

K. **Hauler** - An individual or company who transfers waste from the site of a customer/waste producer/waste generator to an approved disposal or treatment facility.

L. **Single Service Restaurant** - A restaurant or food service facility that serves meals only on throwaway plates, dishes and utensils.

M. **Standard Restaurant** - A restaurant or food service facility that serves meals on plates, dishes and utensils that area washed and reused.

N. **Multi-family Dwelling** - A classification of housing where multiple separate housing units for inhabitants are contained within one building or several buildings within one complex (apartments, duplexes, townhouses, condominiums, dorms, etc.).

SECTION 3. General Criteria

A. **Installation Requirements for New Facilities.** All proposed or newly remodeled food service facilities or multi-family dwellings shall be required to install an approved, properly operated and maintained grease interceptor. No indoor grease traps will be acceptable.

B. **Phased Implementation for Existing Facilities.** All existing food service facilities or multi-family dwellings shall conduct their operations in such a manner that grease originating at the facility is captured on the user's premises and then disposed of properly.

1. The City will inspect each facility periodically or as necessary to assure that each facility is complying with the City's Sewage Disposal Ordinance.

2. The City will identify and target "grease problem areas" in the wastewater collection system through maintenance records and emergency call outs for grease related sewer problems. All food service facilities and multi-family dwellings upstream of the identified areas will be subject to inspection.

3. Following inspections, notifications will be sent to the inspected facilities contributing to the grease problem. The facility shall then submit to the City a plan to the City outlining measures to be implemented by the facility to become compliant. A follow-up inspection will be conducted to verify compliance with the Ordinance.

C. **Prohibited Discharges.** Black water from food service facilities shall not be discharged into the grease interceptor unless specifically approved, in writing by the City. Multi-family dwelling black water discharge into grease interceptors is acceptable.

D. **Floor Drains.** Only floor drains which discharge or have the potential to discharge grease shall be connected to the grease interceptor.

E. **Garbage Grinders and Dishwashers.** It is recommended that solid food waste be disposed of through normal solid waste/garbage disposal procedures. The use of garbage grinders that discharge into the sanitary sewer is discouraged and shall be connected to the interceptor is used.

F. **Location.** A grease interceptor shall be installed and connected so that it is easily accessible for inspection, cleaning and removal of the intercepted grease at any time.

Grease interceptors shall be installed outside of the building it serves. Location of grease interceptors shall be approved by the City. The preferred location is on the outside of an outside wall and upstream from the black water drain line.

SECTION 4. Design Criteria

A. **Construction of Grease Interceptor.** Grease interceptors shall be constructed in accordance with City standards. A minimum of two compartments with a separation baffle and inlet and outlet fittings designed for grease retention are components. All interceptors are subject to written approval of the City.

B. **Access.** All interceptors shall be constructed in a location outside the building they serve in such a manner that they are accessible for maintenance and inspection at all times. Two manholes shall be provided on each interceptor for access. The access shall be a minimum of one inch above the surrounding grade and shall consist of a cast iron frame and cover.

C. **Load Bearing Capacity.** If the interceptor is located in an area subject to traffic or other loads, it shall be designed to have adequate load bearing capacity.

D. **Inlet and Outlet Piping.** One inlet and outlet tee shall be provided for each grease interceptor. Wastewater shall enter the grease interceptor only through the inlet tee.

E. **Grease Interceptor Sizing.** The required minimum size of an interceptor shall be determined by the City with no interceptor being less than 500 gallons. If the calculated required capacity is in excess of 1500 gallons, multiple units may be used in series.

F. **Upgrades or Changes.** Changes or upgrades proposed to be made to any existing or new facility that affects grease discharge shall be reported to the City.

SECTION 5. Grease Interceptor Maintenance.

A. **Cleaning and Pumping.** The user shall bear all expenses to maintain the grease interceptor. Grease interceptor maintenance shall include the removal of all contents including floating matter, wastewater and sludge. No waste shall be disposed of back into the interceptor it was removed from or any other interceptor. The interceptor shall be pumped out completely at each cleaning. A depth of solids measurement equal to or greater than one fourth of the interceptor's depth shall be considered to be in non-compliance.

B. **Cleaning and Pumping Frequency.** The minimum frequency for pumping out of grease interceptors shall be monthly. Request to extend the cleaning schedule must be supported by maintenance records.

C. **Disposal of Interceptor Waste.** Waste removed from interceptors shall be disposed of at a facility licensed to receive and process such waste. No waste removed from an interceptor shall be returned to any portion of the sanitary collection system.

D. **Additives.** Any additive such as enzymes and bacteria introduced into the grease interceptor or buildings discharge line for the purpose of treating grease and/or sludge shall be reported on the user's maintenance record. The use of additives does not relieve the user from performing the maintenance requirements set forth herein.

E. **Records.** A written record shall be maintained by each facility required to have a grease interceptor which confirms and tracks the pumping, hauling and disposal of waste collected from each interceptor. The user is required to utilize licensed disposal service

providers. The user shall keep a copy of the service manifest from the hauler. The Log shall contain the date, time, disposal service provider, volume pumped, signature of user authorizing pumping, signature of service provider and disposal site. The Log shall be maintained for the previous two-year period. The Log shall be readily available for inspection by the City.

SECTION 6. Enforcement.

The enforcement of this Ordinance shall be by the administrative authority of the City of Hattiesburg. Any user found to be in violation of the requirements of this Ordinance is subject to corrective action by the City which may include but not be limited to the following:

A. **Notice of Violation.** Any user found to be in violation shall be issued a written notice detailing the infraction. The user shall submit a plan for the satisfactory correction of the deficiency within 14 days of the date of the notice.

B. **Suspension of Service.** Water and wastewater services may be suspended to a user when deemed necessary by the City to prevent an actual or imminent discharge which:

1. may present in the opinion of the City an endangerment to the public or environment;

2. causes sanitary sewer overflows as a result of stoppages or requires excessive maintenance to be performed on the sanitary sewer system to prevent stoppages;

3. causes a violation to any condition of the City's NPDES permits.

Any user notified of a suspension of water and sewer service shall immediately cease or eliminate discharge. If the user fails to voluntarily comply, the City may immediately terminate water and sewer service. Water and sewer services may be reinstated to the user when all conditions causing the suspension have been eliminated corrected and the reconnection fee has been paid. The user shall submit a statement to the City detailing the cause of the incident and state the action taken to prevent future occurrences. The statement shall be submitted within 14 days of the violation.

C. **Administrative Penalty.** Any user determined to have violated any provision of this Ordinance may be assessed an administrative penalty not to exceed $1000 per violation per day. Assessments may be added to the user's water and sewer account.

D. **Request for Hearing and Appeal.** Any user subjected to a penalty, order or directive of the City of Hattiesburg issued under the provisions of this program is entitled to a hearing before the City Council. Such appeal or hearing shall be requested in writing within ten days of the issuance of the penalty, order or directive. The requested hearing shall be held in a timely manner and the affected user shall have the opportunity to be heard. The City shall issue a written response to the user requesting the hearing.

SECTION 7. That this Ordinance take effect and be in force thirty (30) days from and after passage as provided by law.

The forgoing ordinance having been reduced to writing, the same was introduced by Council member Ware, seconded by Council member Carroll, and was adopted by the following vote to-wit:

YEAS: Bradley
Delgado
Carroll
Ware
Naylor

NAYS: None

The President thereby declared the motion carried and the Ordinance adopted, this the 2nd day of October, A.D., 2012.

(SEAL)

ATTEST:

CLERK OF COUNCIL

ADOPTED:

PRESIDENT

The above and forgoing Ordinance, having been submitted to and approved by the Mayor, this the 2nd day of October, A.D., 2012.

ATTEST:

CITY CLERK

APPROVED:

MAYOR

APPENDIX C

ITEM #4 - FURNISH PIPE LINING AND RELATED SERVICES FOR THE SEWER DIVISION, PUBLIC SERVICES DEPARTMENT

ITEM NO.	ITEMS/SIZES	PRIMARY SUNCOAST INFRASTRUCTURE	ALTERNATE INSITUFORM TECHNOLOGIES
CURED-IN-PLACE PIPE (UP TO 300 LF)			
1	8" X 6 MM, UP TO 26' DEEP	3,000.00	3,000.00
2	10" X 6 MM, UP TO 26' DEEP	3,600.00	3,200.00
3	12" X 6 MM, UP TO 16' DEEP	3,600.00	2,640.00
4	12" X 7.5 MM, 16'-26' DEEP	3,856.00	2,800.00
5	15" X 6 MM, UP TO 8' DEEP	3,540.00	2,400.00
6	15" X 7.5 MM, 8'-12' DEEP	3,768.00	2,520.00
7	15" X 9 MM,12'-26' DEEP	3,996.00	2,700.00
8	18" X 7.5 MM, UP TO 12' DEEP	3,775.00	2,750.00
9	18" X 9 MM, 12'-20' DEEP	4,000.00	3,000.00
10	18" X 10.5 MM, 20'-26' DEEP	4,225.00	3,250.00
11	21" X 9 MM, UP TO 12' DEEP	2,320.00	3,200.00
12	21" X 10.5 MM, 12'-20' DEEP	2,520.00	3,400.00
13	21" X 12 MM, 20'-26' DEEP	2,560.00	3,800.00
14	24" X 9 MM, UP TO 12' DEEP	1,860.00	3,000.00
15	24" X 12 MM, 12'-20' DEEP	2,070.00	3,300.00
16	24" X 13.5 MM, 20'-26' DEEP	2,220.00	3,450.00
17	27" X 10.5 MM, UP TO 12' DEEP	1,975.00	2,875.00
18	27" X 13.5 MM, 12'-20' DEEP	2,175.00	3,000.00
19	27" X 15 MM, 20'-26' DEEP	2,250.00	3,125.00
20	30" X 12 MM, UP TO 12' DEEP	1,820.00	2,600.00
21	30" X 15 MM, 12'-20' DEEP	2,040.00	2,700.00
22	30" X 16.5 MM, 20'-26' DEEP	2,140.00	2,800.00
23	36" X 12 MM, UP TO 12' DEEP	1,560.00	2,175.00
24	36" X 13.5 MM,12'-20' DEEP	1,620.00	2,250.00
25	36" X 15 MM, 20'-26' DEEP	1,725.00	2,325.00
	TOTAL BID PRICE	68,215.00	72,260.00
CURED-IN-PLACE-PIPE (301 TO 700 LF)			
26	8" X 6 MM, UP TO 26' DEEP	2,900.00	2,800.00
27	10" X 6 MM, UP TO 26' DEEP	3,500.00	3,000.00
28	12" X 6 MM, UP TO 16' DEEP	3,520.00	2,480.00
29	12" X 7.5 MM, UP TO 8' DEEP	3,760.00	2,640.00
30	15" X 6 MM, UP TO 8' DEEP	3,420.00	2,280.00
31	15" X 7.5 MM, 8'-12' DEEP	3,600.00	2,400.00
32	15" X 9 MM, 12'-26' DEEP	3,840.00	2,580.00
33	18" X 7.5 MM, UP TO 12' DEEP	3,650.00	2,650.00
34	18" X 9 MM, 12'-20' DEEP	3,900.00	2,900.00
35	18" X 10.5 MM, 20'-26' DEEP	4,050.00	3,150.00
36	21" X 9 MM, UP TO 12' DEEP	2,320.00	3,120.00
37	21" X 10.5 MM, 12'-20' DEEP	2,520.00	3,320.00
38	21" X 12 MM, 20' - 26' DEEP	2,560.00	3,720.00
39	24" X 9 MM, UP TO 12' DEEP	1,890.00	2,940.00
40	24" X 12 MM, 12'-20' DEEP	2,070.00	3,240.00
41	24" X 13.5 MM,20'-26' DEEP	2,220.00	3,390.00
42	27" X 10.5 MM, UP TO 12' DEEP	1,975.00	2,825.00
43	27" X 13.5 MM, 12'-20' DEEP	2,175.00	2,950.00
44	27" X 15 MM, 20' - 26' DEEP	2,250.00	3,075.00

ITEM #4 - FURNISH PIPE LINING AND RELATED SERVICES FOR THE SEWER DIVISION, PUBLIC SERVICES DEPARTMENT

BID TABULATION

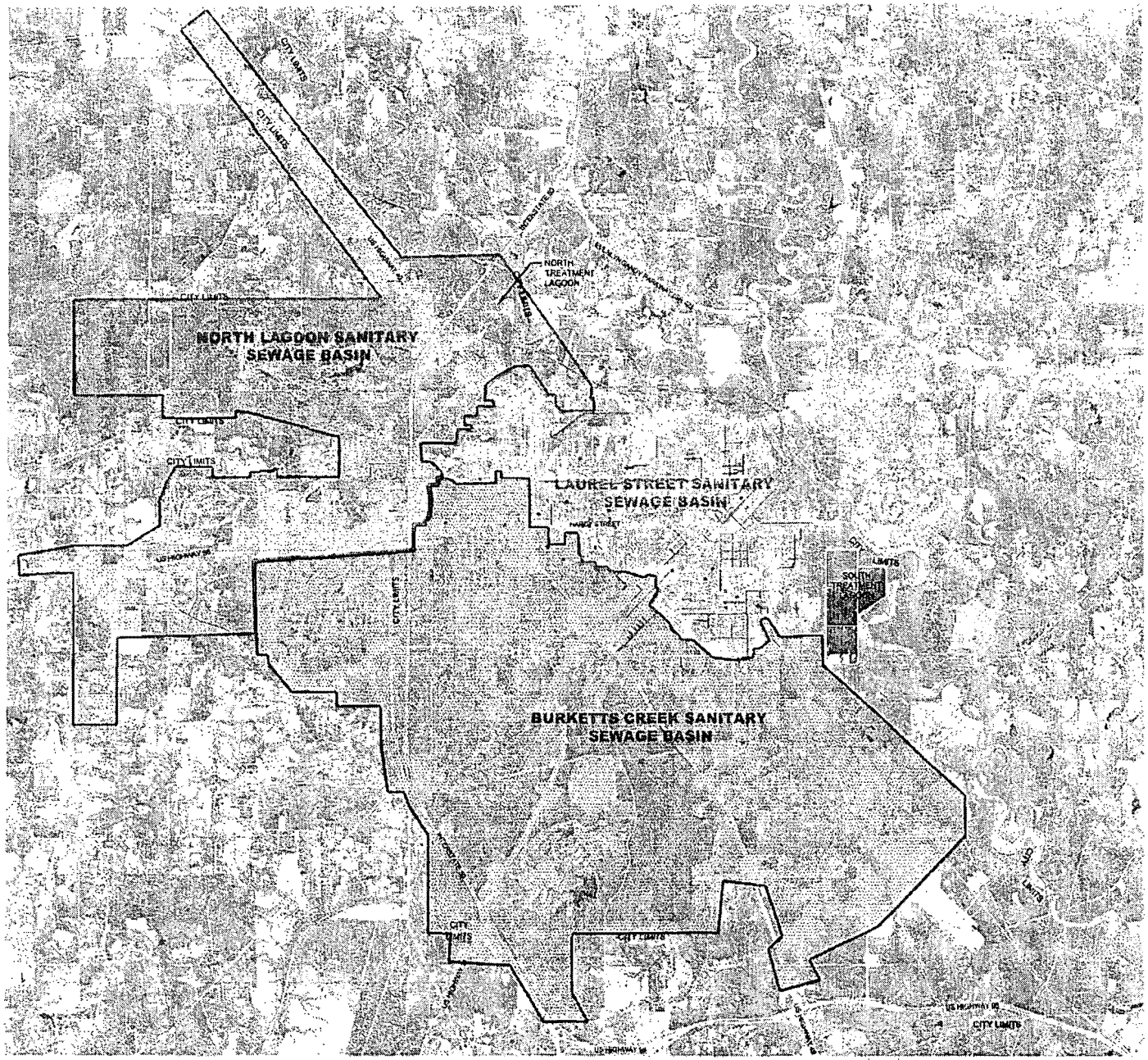
ITEM NO.	ITEMS/SIZES	SUNCOAST INFRASTRUCTURE	INSITUFORM TECHNOLOGIES
CURED-IN-PLACE-PIPE (301 TO 700 LF) CONT'D			
45	30" X 12 MM, UP TO 12' DEEP	1,820.00	2,560.00
46	30" X 15 MM, 12'-20' DEEP	2,040.00	2,660.00
47	30" X 16.5 MM, 20' - 26' DEEP	2,140.00	2,760.00
48	36" X 12 MM, UP TO 12' DEEP	1,545.00	2,145.00
49	36" X 13.5 MM, 12'-20' DEEP	1,620.00	2,220.00
50	36" X 15 MM, 20'-26' DEEP	1,725.00	2,295.00
	TOTAL BID PRICE	67,010.00	70,100.00
CURED-IN-PLACE-PIPE (701 LF & UP)			
51	8" X 6 MM, UP TO 26' DEEP	2,700.00	2,700.00
52	10" X 6 MM, UP TO 26' DEEP	3,300.00	2,900.00
53	12" X 6 MM, UP TO 16' DEEP	3,360.00	2,400.00
54	12" X 7.5 MM, UP TO 8' DEEP	3,520.00	2,560.00
55	15" X 6 MM, UP TO 8' DEEP	3,300.00	2,220.00
56	15" X 7.5 MM, 8'-12' DEEP	3,420.00	2,340.00
57	15" X 9 MM, 12'-26' DEEP	3,660.00	2,520.00
58	18" X 7.5 MM, UP TO 12' DEEP	3,550.00	2,600.00
59	18" X 9 MM, 12' - 20' DEEP	3,750.00	2,850.00
60	18" X 10.5 MM, 20'-26' DEEP	3,950.00	3,100.00
61	21" X 9 MM, UP TO 12' DEEP	2,320.00	3,080.00
62	21" X 10.5 MM, 12'-20' DEEP	2,520.00	3,280.00
63	21" X 12 MM, 20'-26' DEEP	2,560.00	3,680.00
64	24" X 9 MM, UP TO 12' DEEP	1,890.00	2,910.00
65	24" X 12 MM, 12'-20' DEEP	2,070.00	3,210.00
66	24" X 13.5 MM, 20'-26' DEEP	2,220.00	3,360.00
67	27" X 10.5 MM, UP TO 12' DEEP	1,975.00	2,800.00
68	27" X 13.5 MM, 12'-20' DEEP	2,175.00	2,925.00
69	27" X 15 MM, 20'-26' DEEP	2,250.00	3,050.00
70	30" X 12 MM, UP TO 12' DEEP	1,820.00	2,540.00
71	30" X 15 MM, 12'-20' DEEP	2,040.00	2,640.00
72	30" X 16.5 MM, 20'-26' DEEP	2,140.00	2,740.00
73	36" X 12 MM, UP TO 12' DEEP	1,545.00	2,130.00
74	36" X 13.5 MM, 12'-20' DEEP	1,620.00	2,205.00
75	36" X 15 MM, 20'-26' DEEP	1,725.00	2,280.00
	TOTAL BID PRICE	65,380.00	69,020.00
RELATED SERVICES FOR CURED-IN-PLACE-PIPE			
76	REMOTE CUTTING OF BRANCH SEWER SERVICE CONNECTION	7,500.00	1,500.00
77	MAN-ENTRY CUTTING OF BRANCH SEWER SERVICE CONNECTION	10.00	0.10
78	EXTERNAL RECONNECTION OF SEWER SERVICE BY EXCAVATION	10.00	25,000.00
	TOTAL BID PRICE	7,520.00	2,520.00

ITEM #4 - FURNISH PIPE LINING AND RELATED SERVICES FOR THE SEWER DIVISION, PUBLIC SERVICES DEPARTMENT

BID TABULATION

ITEM NO.	ITEMS/SIZES	SUNCOAST INFRASTRUCTURE	INSITUFORM TECHNOLOGIES
MOBILIZATION SERVICES			
79	UP TO $30,000 PER WORK ORDER	7,500.00	5,500.00
80	30,001 TO $60,000 PER WORK ORDER	5,000.00	5,500.00
81	60,001 AND UP PER WORK ORDER	2,500.00	2,000.00
82	REMOTE REMOVAL OF PROTRUDING SERVICE LATERAL	1,500.00	1,500.00
83	ROOT REMOVAL IN 8" & 10" SEWERS	15.00	15.00
84	ROOT REMOVAL IN 12" & 15" SEWERS	12.00	12.00
85	ROOT REMOVAL IN 18" & 21" SEWERS	7.50	7.50
86	ROOT REMOVAL IN 24" SEWERS	5.00	5.00
87	ROOT REMOVAL IN 27" SEWERS	4.00	4.00
88	ROOT REMOVAL IN 30" SEWERS	3.00	3.00
89	ROOT REMOVAL IN 36" SEWERS	2.00	2.00
90	TV INSPECTION OF 6"-12" SEWERS	3,750.00	1,750.00
91	TV INSPECTION OF 15"-21" SEWERS	6,000.00	2,000.00
92	TV INSPECTION OF 24"-36" SEWERS	12,000.00	4,000.00
93	ADDITIONAL SETUP FOR TV INSPECTION	1,000.00	0.10
94	BYPASSING SETUP FOR EACH 3" PUMP	0.10	0.10
95	BYPASSING SETUP FOR EACH 4" PUMP	0.08	400.00
96	BYPASSING SETUP FOR EACH 6" PUMP	5,100.00	4,500.00
97	BYPASSING SETUP FOR EACH 8" PUMP	0.04	6,000.00
98	BYPASSING FOR EACH 3" PUMP	2.00	2.00
99	BYPASSING FOR EACH 4" PUMP	1.60	4,000.00
100	BYPASSING FOR EACH 6" PUMP	7,800.00	2,500.00
101	BYPASSING FOR EACH 8" PUMP	0.80	20,000.00
102	NORMAL CLEANING, 8" & 10" SEWER	770.00	22.00
103	HEAVY CLEANING, 8" & 10" SEWER	18.00	18.00
104	NORMAL CLEANING, 12" & 15" SEWER	650.00	13.00
105	HEAVY CLEANING, 12" & 15" SEWER	11.00	11.00
106	NORMAL CLEANING, 18" & 21" SEWER	520.00	8.00
107	HEAVY CLEANING, 18" & 21" SEWER	9.50	1,900.00
108	NORMAL CLEANING, 24" SEWER	525.00	7.00
109	HEAVY CLEANING, 24" SEWER	6.00	1,800.00
110	NORMAL CLEANING, 27" SEWER	400.00	5.00
111	HEAVY CLEANING, 27" SEWER	4.50	1,800.00
112	NORMAL CLEANING, 30" SEWER	340.00	4.00
113	HEAVY CLEANING, 30" SEWER	3.50	1,750.00
114	NORMAL CLEANING, 36" SEWER	270.00	3.00
115	HEAVY CLEANING, 36" SEWER	2.50	1,250.00
	TOTAL BID PRICE	55,733.12	68,291.70
	GRAND TOTAL BID PRICE	**263,858.12**	**282,191.70**

APPENDIX D



LEGEND

- NOTES LOCATION OF SANITARY SEWER BYPASS OR OVERFLOW
- NOTES LOCATION COMPLETED 592 PROGRAM SEWER REHABILITATION PROJECTS
- NOTES LOCATION CURRENT SEWER REHABILITATION PROJECTS
- NOTES LOCATION FUTURE SEWER REHABILITATION PROJECTS

CITY OF HATTIESBURG
SANITARY SEWAGE TREATMENT AREA MAP

GRAPHIC SCALE

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC
ENGINEERING SOLUTIONS FOR SOUTH MISSISSIPPI

DRAWING No.: 1278.001 DATE: 02-25-2013

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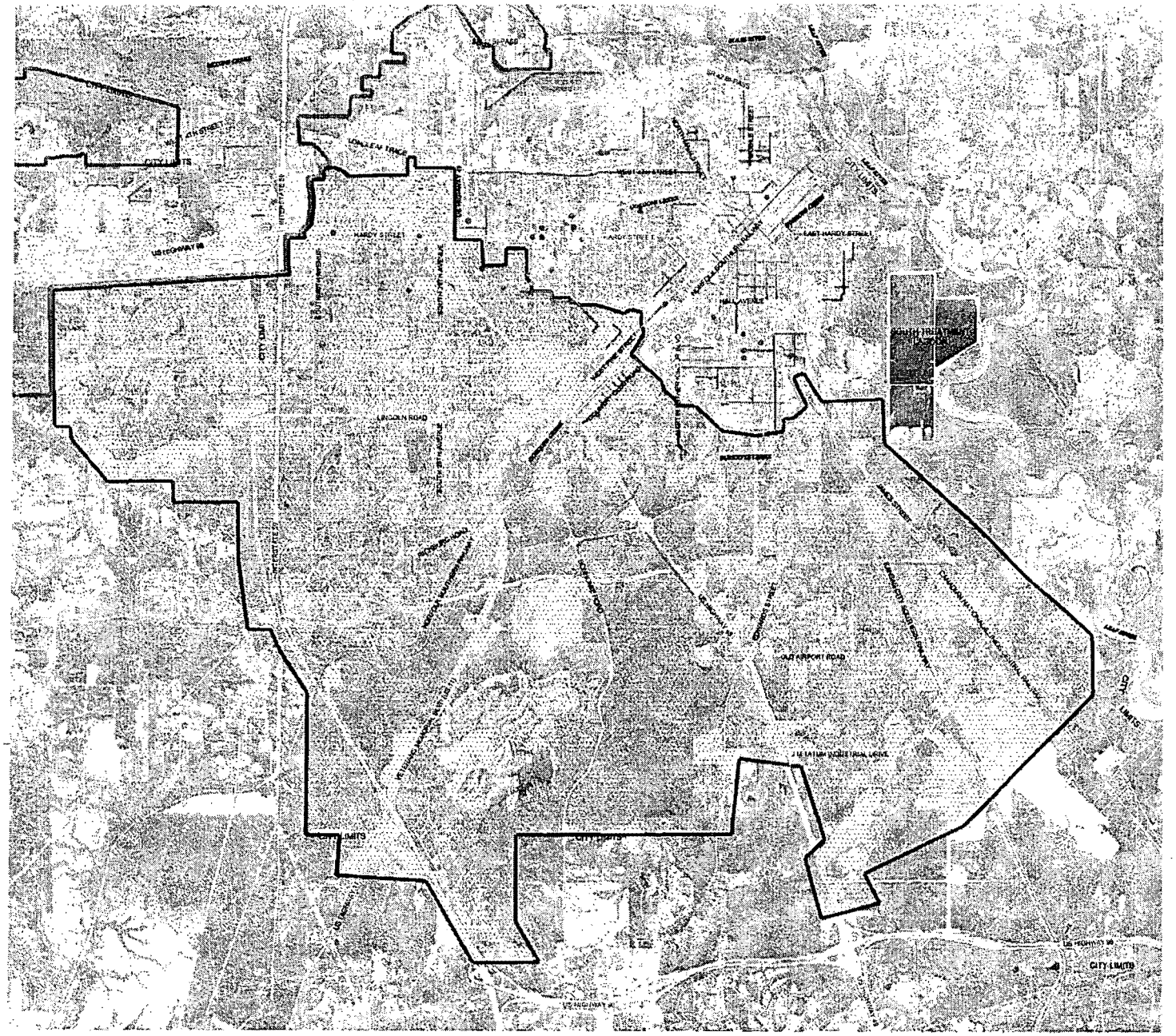

LEGEND

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CITY OF HATTIESBURG

BURKETTS CREEK SANITARY SEWAGE BASIN MAP

GRAPHIC SCALE

(IN FEET)
1 inch = 4000 ft.

PREPARED BY:

HRG
HATTIESBURG RESOURCE GROUP, LLC
ENGINEERING SOLUTIONS FOR SOUTH MISSISSIPPI

DRAWING No.: 1278.001 DATE: 02-25-2013

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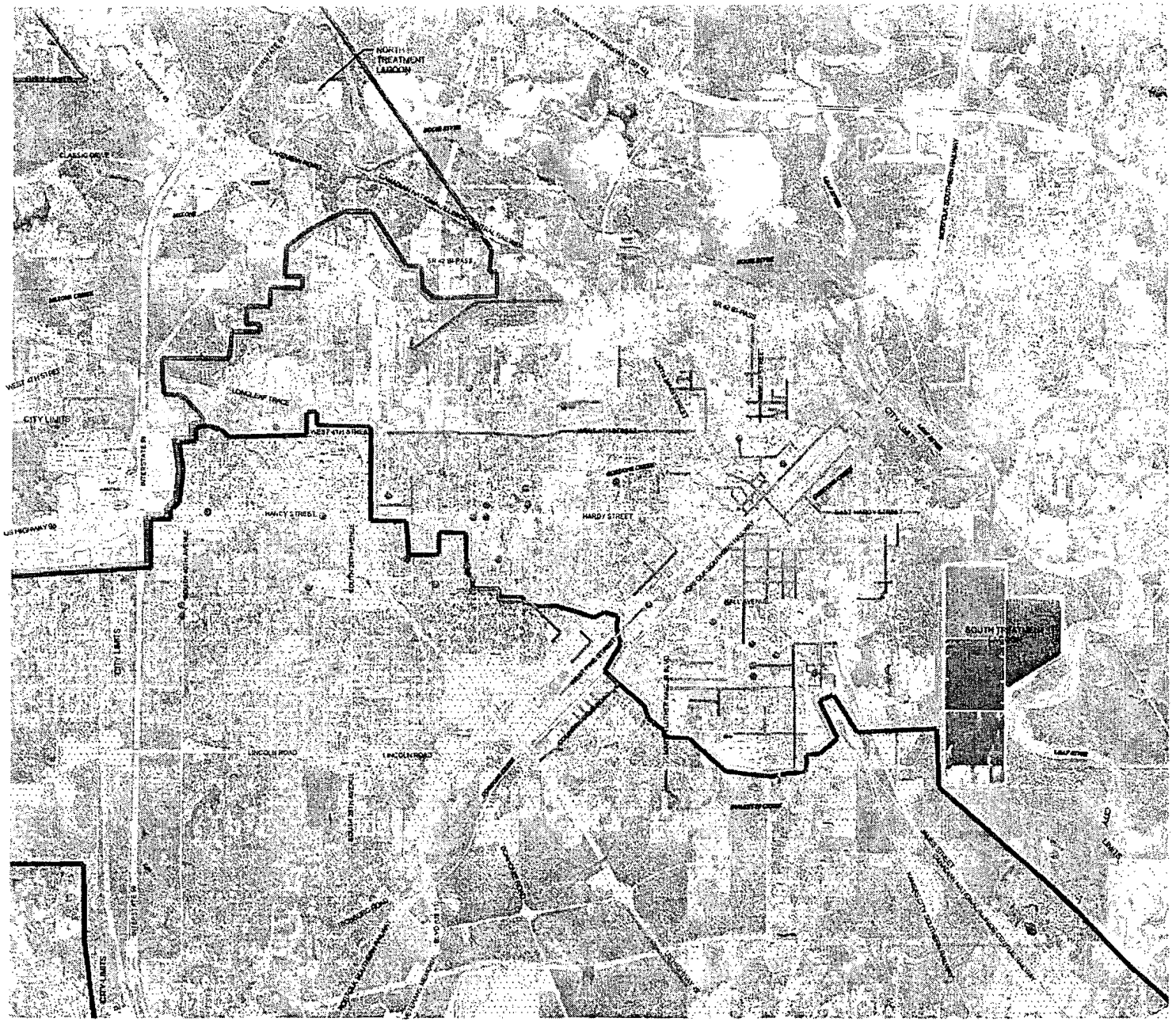

LEGEND

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- NOTES LOCATION COMPLETED 592 PROGRAM SEWER REHABILITATION PROJECTS
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- NOTES LOCATION FUTURE SEWER REHABILITATION PROJECTS

CITY OF HATTIESBURG

LAUREL STREET SANITARY SEWAGE BASIN MAP

GRAPHIC SCALE

PREPARED BY:

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ENGINEERING SOLUTIONS FOR SOUTH MISSISSIPPI

DRAWING No.: 1278.001 DATE: 02-25-2013

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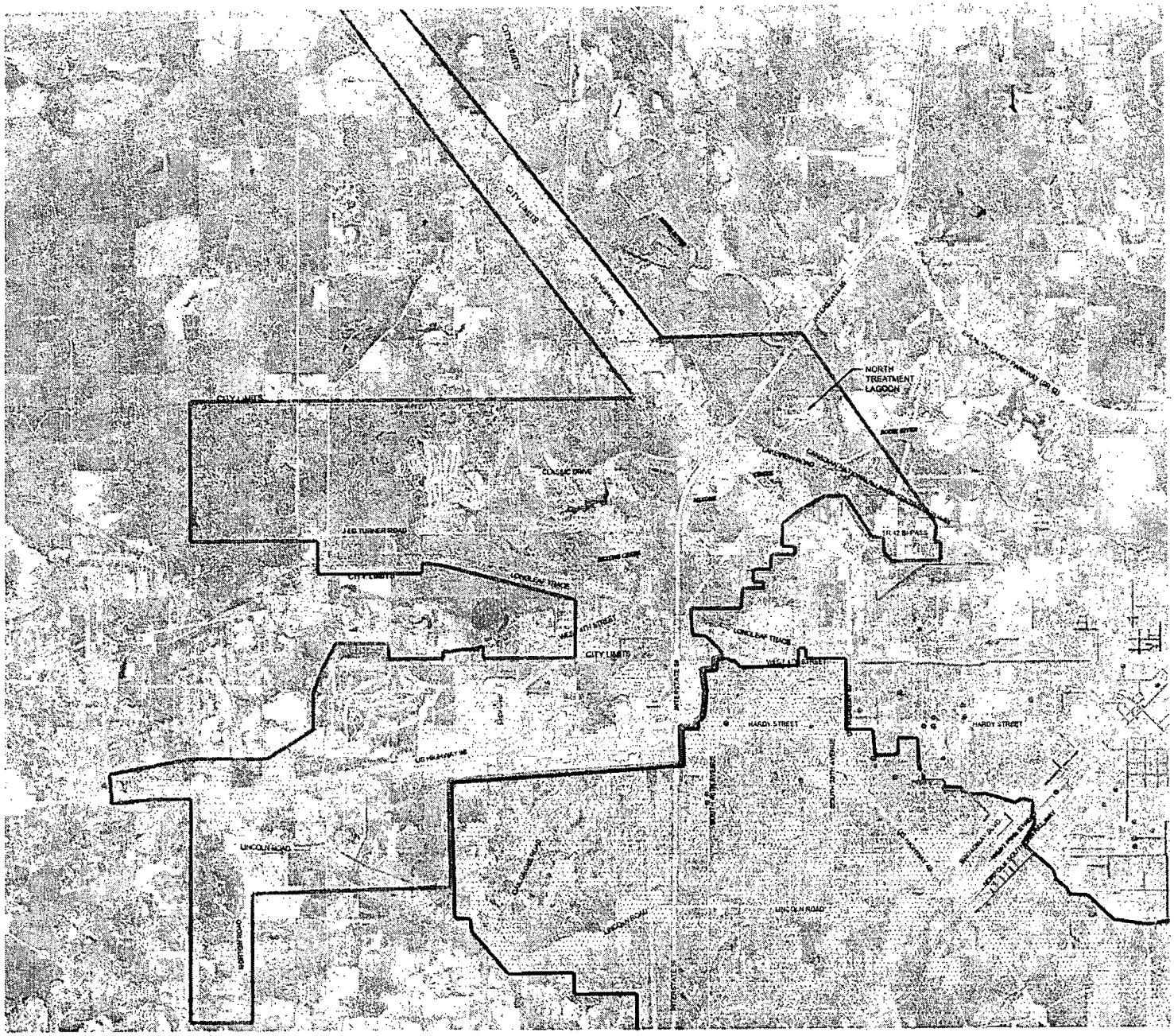

LEGEND

- ● - NOTES LOCATION OF SANITARY SEWER BYPASS OR OVERFLOW
- ——— - NOTES LOCATION COMPLETED 592 PROGRAM SEWER REHABILITATION PROJECTS
- ——— - NOTES LOCATION CURRENT SEWER REHABILITATION PROJECTS
- ——— - NOTES LOCATION FUTURE SEWER REHABILITATION PROJECTS

CITY OF HATTIESBURG
NORTH LAGOON SANITARY SEWAGE BASIN MAP

GRAPHIC SCALE

PREPARED BY:

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DRAWING No.: 1278.001 DATE: 02-25-2013

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APPENDIX E

SANITARY SEWER OVERFLOW (SSO) REPORTING

These procedures have been developed through MDEQ annual inspections, MDEQ verbal instructions and NPDES Permit requirements. There is no Council Adopted SOP nor is there an official Department SOP. These instructions have been given to every employee responsible for the reporting of sanitary sewer bypass/overflows. The Department uses the MDEQ Bypass/Overflow Report found on MDEQ's website at

http://www.deq.state.ms.us/mdeq.nsf/pdf/ECED_Bypass_Report/$File/Bypass%20Report.pdf?OpenElement.

In the event that a sanitary sewer overflow has the potential for reaching state waters or impacting public health:

- Notification must be given to MDEQ within 24 hours of the event.
- This notification can be made by calling 601-961-5171 or by faxing the information to 601-961-5674. (Currently ATTN.: Mr. Jamon Rucker, OPC/Envir. Compliance & Enforcement)
- If oral notification is given, a written report must also be submitted within five days of the event.
- Site cleanup and disinfection must be done immediately.
- Notification of event to Supervisor must be done immediately.

EPA Request For Information (1/31/2012)

ENCLOSURE A

SSO PROGRAM

ITEM 4

a) Documenting

   i) Sewer Lagoon Crew Supervisor

   ii) Sewer Lagoon Facility Maintenance Repairer

   iii) Sewer Crew Foreman

   iv) Sewer Equipment Operator

b) Estimating Volume

   i) Sewer Lagoon Crew Supervisor

   ii) Sewer Lagoon Facility Maintenance Repairer

   iii) Sewer Crew Foreman

   iv) Sewer Equipment Operator

c) Identify Cause

   i) Department General Manager

   ii) Sewer Division Manager

   iii) Sewer Lagoon Crew Supervisor

   iv) Sewer Lagoon Facility Maintenance Repairer

   v) Sewer Crew Foreman

   vi) Sewer Equipment Operator

d) Containment and Cleanup

   i) Sewer Crew Foreman

   ii) Sewer Equipment Operator

e) Wet Weather Reconnaissance

i) Department Director

ii) Department General Manager

iii) Sewer Division Manager

iv) Sewer Lagoon Crew Supervisor

v) Sewer Lagoon Facility Maintenance Repairer

vi) Sewer Crew Foreman

vii) Sewer Equipment Operator

f) Reporting to MDEQ

i) Sewer Lagoon Crew Supervisor

ii) Sewer Lagoon Facility Maintenance Repairer

iii) Sewer Crew Foreman

iv) Sewer Equipment Operator