UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

APR 2 4 2018

CERTIFIED MAIL–RETURN RECEIPT REQUESTED: 7005 1820 0003 7458 2123

Mr. Craig Gautreaux
Lafayette Consolidated Government
P.O. Box 4017-C
Lafayette, LA 70502

Re: Administrative Order; Docket Number: CWA-06-2018-1783
NPDES Permit Numbers: LA0042561, LA0036382, LA0036391, LA0036374

Dear Mr. Gautreaux:

Enclosed is an Administrative Order (AO) issued to Lafayette Consolidated Government for violation of the Clean Water Act (CWA) (33 U.S.C. §§ 1251-1387). The violations were identified during a review of the investigation report submitted to the Environmental Protection Agency (EPA) Region 6. The investigation was conducted by EPA's National Enforcement Investigations Center (NEIC), with assistance from EPA Region 6. The violations alleged are for unpermitted discharges and improperly reporting discharges, as well as failure to properly operate and maintain the wastewater collection system and appurtenances.

This AO does not assess a monetary penalty; however, it does require compliance with applicable federal regulations. The AO contains several attainment deadlines. The EPA is committed to ensuring compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) program and my staff will assist you in any way possible. Please reference AO Docket Number CWA-06-2018-1783 on your response.

If you have any questions, please contact Ms. Rachel Matthews, of my staff, at (214) 665-8589.

Sincerely,

Cheryl T. Seager
Director
Compliance Assurance and
Enforcement Division

Enclosure

cc: Ms. Celena Cage
Enforcement Division
LDEQ Office of Environmental Compliance
Galvez Building, 602 North Fifth Street
Baton Rouge, LA 70802

Tracy Mouton
Lafayette Consolidated Government
P.O. Box 4017-C
Lafayette, LA 70502

G. Within thirty (30) days after the completion of each task in Paragraphs A, B, C, D and E, above, Respondent shall submit to EPA a Project Completion Report. The Project Completion Report shall include the following:

i. A detailed description of the task as implemented;
ii. A description of any operating problems encountered and the solutions thereto;
iii. Copies, or Photographs where applicable, of the task.

H. When submitting the Annual Progress Reports and the Conclusion Reports, Respondent shall, by its officers, sign and certify under penalty of law that the information contained in such report is true, accurate, and not misleading by signing the following statement:

*"I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."*

I. If Respondent would like to arrange a meeting with EPA to discuss the allegations in this Section 309(a)(3) Compliance Order, it should contact EPA within thirty (30) days of the effective date of this Order. The meeting will be held at the Region 6 offices, 1445 Ross Ave., Dallas, Texas, and Respondent can provide any information it believes is relevant to this Order. Respondent shall submit to EPA all information or materials it considers relevant to EPA at least ten (10) days prior to the meeting.

J. To arrange a meeting, or comment on this matter, please contact Ms. Rachel Matthews, of my staff, at (214)-665-8589.

K. Any information or correspondence submitted by Respondent to EPA shall be sent to the following address:

Ms. Nancy Williams
Water Enforcement Branch (6EN-WC)
U.S. EPA, Region 6
1445 Ross Ave., Suite 1200
Dallas, TX 75202-2733

GENERAL PROVISIONS

Respondent may seek federal judicial review of the Order pursuant to Chapter 7 of the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

Issuance of this Section 309(a)(3) Compliance Order shall not be deemed an election by EPA to forego any administrative or judicial, civil or criminal action to seek penalties, fines, or any other relief appropriate under the Act for the violations cited herein, or other violations that become known to EPA. EPA reserves the right to seek any remedy available under the law that it deems appropriate. Failure to comply with this Section 309(a)(3) Compliance Order or the Act can result in further administrative action, or a civil judicial action initiated by the United States Department of Justice.

This Order does not constitute a waiver or modification of the terms or conditions of the Respondent's NPDES permit, which remain in full force and effect. Compliance with the terms and conditions of this Order does not relieve the Respondent of its obligation to comply with any applicable federal, state, or local law or regulation.

The effective date of this Order is the date it is received by Respondent.

June 24, 2018
Date

Cheryl T. Seager
Director
Compliance Assurance and
Enforcement Division

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**1445 Ross Avenue, Suite 1200, Dallas, TX 75202**
**FINDINGS OF VIOLATION AND COMPLIANCE ORDER**
Docket Number: CWA-06-2018-1783
Facility Numbers: LA0042561, LA0036382, LA0036391, LA0036374

## STATUTORY AUTHORITY

The following findings are made, and Order issued, under the authority vested in the Administrator of the United States Environmental Protection Agency ("EPA") by Section 309(a) of the Clean Water Act ("the Act"), 33 U.S.C. § 1319(a). The Administrator of EPA delegated the authority to issue this Order to the Regional Administrator of EPA Region 6, who delegated this authority to the Director of the Compliance Assurance and Enforcement Division.

## FINDINGS

1. Lafayette Consolidated Government ("Respondent") is a city-parish unified jurisdiction (municipality) created by or pursuant to State law and having jurisdiction over the disposal of sewage, industrial wastes, or other wastes, which is a "municipality" as that term is defined at Section 502(4) of the Act, and as such, is a "person," as that term is defined at Section 502(5) of the Act, 33 U.S.C. § 1362(5), and 40 C.F.R. § 122.2.

2. At all times relevant to this Order ("all relevant times"), Respondent owned or operated four (4) wastewater treatment plants, as well as their associated collection systems and appurtenances located in and serving the Lafayette Consolidated Government wastewater treatment plants ("facilities"), and was, therefore, an "owner or operator" within the meaning of 40 C.F.R. § 122.2.

3. The wastewater treatment plants are identified as the South Wastewater Treatment Plant, located at 231 West Bayou Parkway, Lafayette; the Ambassador Caffery Wastewater Treatment Plant, located at 4112 Ambassador Caffery Parkway, Lafayette; the East Wastewater Treatment Plant, located at 144 Judy Street, Lafayette; and the Northwest Wastewater Treatment Plant, located at 1201 LaJaunie Road, Lafayette, LA.

4. At all relevant times, the facilities collected and "discharged" "pollutants," as "point sources," (as those terms are defined by Section 502 of the Act and 40 C.F.R. § 122.2) with wastewater discharges to the Vermilion River; which is considered a "water of the United States," within the meaning of Section 502 of the Act, 33 U.S.C. § 1362, and 40 C.F.R. § 122.2.

5. Because Respondent owned or operated facilities that acted as point sources of discharges of pollutants to waters of the United States, Respondent and the facilities were subject to the Act and the National Pollutant Discharge Elimination System ("NPDES") program.

6. Under Section 301 of the Act, 33 U.S.C. § 1311, it is unlawful for any person to discharge any pollutant from a point source to waters of the United States, except with the authorization of, and in compliance with, an NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.

7. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. Any such discharge is subject to the specific terms and conditions prescribed in the applicable permit.

8. Section 402 of the Act, 33 U.S.C. § 1342, authorizes states to request approval from EPA to administer their own permit programs for discharges into navigable waters within their jurisdiction. Pursuant to this provision, the State of Louisiana requested approval from EPA to administer its own permit program for discharges into navigable waters within Louisiana, and such approval was granted by EPA on August 27, 1996. Therefore, pursuant to the State's permit program, the Louisiana Department of Environmental Quality ("LDEQ") has issued Louisiana Pollutant Discharge Elimination System ("LPDES") permits. Violation of a LPDES permit is a violation of Section 301(a) of the Act, 33 U.S.C. § 1311(a).

9. Respondent applied for and was issued four (4) State of Louisiana LPDES Permits: South Wastewater Treatment Plant (No. LA0036374); the Ambassador Caffery Wastewater Treatment Plant (No. LA0042561); the East Wastewater Treatment Plant (No. LA0036382); and the Northeast Wastewater Treatment Plant (No. LA0036391) ("herein after referred to as "permits") under Section 402 of the Act, 33 U.S.C. § 1342, with the most recent effective dates of October 1 and November 1, 2014. At all relevant times, Respondent was authorized to discharge pollutants from the four facilities to waters of the United States only in compliance with the specific terms and conditions of the respective permits.

10. Each of the plants has a "Wastewater Collection and Transmission System" ("WCTS") comprised of Force Mains, Gravity Sewer Mains, Lift Stations, manholes, access vaults/structures, flow-regulating devices/structures, etc. used to transmit wastewater to the respective plant for treatment.

11. Each of the respective LDEQ permits establish the discharge points (i.e., outfalls) at the respective plants from which discharges are authorized. Each plant has only one outfall designated as Outfall 001. Any discharge from a point at the respective plant or from its collection system other than the permitted outfall is a violation of the permit conditions and a violation of Section 301 of the Act.

12. A "Sanitary Sewer Overflow" or "SSO" is an unpermitted discharge from the WCTS and a violation of the respective permit because the discharge is not from an outfall authorized by the permit and is an unauthorized discharge pursuant to Section 301 of the Act. SSOs are therefore a violation of Section 301 of the Act.

13. Each respective permit requires Respondent to report to LDEQ any non-compliance with permit conditions, including discharges from any location other than a permitted outfall.

14. LDEQ receives non-compliance reports from the Respondent regarding SSOs from the respective plant's WCTS. A summary of reported SSOs during the period from January 2008 through December 2016 is contained in Attachment A, incorporated herein by reference.

15. Each SSO is a violation of the conditions of the respective permits and is a violation of Section 301 of the Act, 33 U.S.C. § 1311.

16. Pursuant to Section "Other Condition" Paragraph F of each respective permit, when an SSO occurs, Respondent is required to report, among other information, the duration of an overflow, the discharge location, and the estimated volume of the overflow in the monthly Discharge Monitoring Reports ("DMRs").

17. Respondent violated Section "Other Condition" Paragraph F of each respective permit by failing to report in the DMRs from January 2014 through December 2016 the duration, and the estimated volume of each SSO.

18. Pursuant to Section B "Proper Operation and Maintenance" under Standard Conditions, Paragraph (3) of each respective permit, Respondent is required to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Respondent to achieve compliance with the conditions of the permits. This section also requires appropriate quality assurance procedures as well as the operation of back-up or auxiliary facilities which are installed by the Respondent when the operation is necessary to achieve compliance with the conditions of the permits and requires Respondent to provide an adequate operating staff which is duly qualified to carry out operation, maintenance and other functions necessary to ensure compliance with the conditions of the permits.

19. During April 10 through April 13 of 2017, EPA's National Enforcement Investigations Center ("NEIC"), with assistance from EPA Region 6, conducted a sanitary sewer compliance investigation of the facility's wastewater collection systems. During the investigation, EPA inspectors observed multiple issues with the wastewater utility operation and maintenance program and identified violations and problem areas that contributed/caused SSOs. The NEIC Report is contained in Attachment B, incorporated herein by reference.

20. Respondent violated Section B "Proper Operation and Maintenance" under Standard Conditions, Paragraph 3 of the respective permits, as specified below:

a. Quality assurance procedures, such as Standard Operating Procedures ("SOPs") for lift station inspections, or proper operation and maintenance ("O&M"), are non-existent.
b. Many lift stations show deterioration and lack of proper O&M.
c. There is no structured process for scheduling and documenting O&M activities regarding the collection systems and lift stations.
d. There is no formal training program for proper collection system O&M activities.
e. Several lift stations do not have functional alarm systems.
f. Several lift stations either did not include back-up or auxiliary facilities, or similar systems. In some cases, the similar systems are extremely dangerous or highly corroded.
g. There was excessive scum and solids in the final clarifier at the South WWTP.
h. There is no critical parts inventory for lift stations and pumps.
i. There are safety issues regarding the bypass quick connect at the Greenbriar lift station, as noted in the NEIC inspection report.
j. The Farrel Lift Station has highly corroded equipment and structures, as noted in the NEIC inspection report.
k. There is no fence or sign to ensure the protection of public health at the Beaver Park retention pond, which is used as containment for SSOs in the area.

21. Each violation of the conditions of the respective permits is a violation of Section 301 of the Act, 33 U.S.C. § 1311.

## SECTION 309(a)(3) COMPLIANCE ORDER

Based on the foregoing Findings and pursuant to the authority of Section 309(a)(3) of the Act, EPA hereby orders Respondent to take the following action to achieve compliance with the permits and with the goal of eliminating SSOs:

A. After the effective date of this Order, Respondent shall start including in the DMRs the duration, and the estimated volume of each SSO as required by the permits.

B. Within thirty (30) days of the effective date of this Order, Respondent shall address the problem of excess scum and solids at final clarifier at the South WWTP.

C. Within thirty (30) days of the effective date of this Order, Respondent shall install a fence or signs at the Beaver Park retention pond, which is used as a containment area for the discharge from SSOs, to ensure the protection of public health.

D. Respondent shall accomplish the following tasks and comply with the following schedule of activities for each wastewater treatment plant, the associated collection system, and associated appurtenances:

| ACTIVITIES | COMPLETION DATE |
|---|---|
| 1. Develop and implement an SOP for lift station inspections, and proper O&M processes. | July 1, 2018 |
| 2. Develop and implement a comprehensive training program for all staff participating in collection system O&M, or other activity regarding the upkeep of the collection systems. | December 1, 2019 |
| 3. Develop a critical parts inventory for lift stations and pumps. | July 1, 2019 |
| 4. Address all lift station non-functional alarms, inadequate and housekeeping discrepancies noted in the NEIC inspection report. | July 1, 2018 |
| 5. Incorporate all lift station operation & maintenance activities into the current asset management program (Cityworks). | January 1, 2019 |
| 6. Correct safety issues regarding the bypass quick connect at Greenbriar lift station, as noted in the NEIC inspection report. | March 1, 2019 |
| 7. Investigate and address issues regarding highly corroded equipment and structures at the Farrel lift station, as noted in the NEIC inspection report. | June 1, 2019 |
| 8. Implement a comprehensive cleaning program to clean all pipes and manholes in a 10-year rotation with the first rotation completed by November 1, 2030. The 10-year rotation cycle starts November 1, 2020. | November 1, 2030 |
| 9. Implement a comprehensive inspection program to inspect all lines and manholes in a 10-year rotation to be completed by November 1, 2030. The 10-year rotation inspection cycle starts November 1, 2020 | November 1, 2030 |
| 10. Based on the cleaning program in Activity D.8, above, and the inspection program in Activity D.9, above, Rehabilitate defective pipes and manholes within 3 years of defect discovery. All rehabilitation shall be completed by November 1, 2033. | November 1, 2033 |

E. Respondent shall develop and implement a Capacity, Management, Operation, and Maintenance ("CMOM") Program and shall finalize the CMOM Program by May 1, 2020. Sixty days prior to finalization of the CMOM Program, Respondent shall submit the draft CMOM program, in electronic format to EPA for review and comment. The CMOM Program shall contain the components specified in EPA's "Guide for Evaluating Capacity, Management, Operation, and Maintenance CMOM Programs at Sanitary Sewer Collection Systems." While the CMOM is being developed, Respondent shall continue operation and maintenance activities, including the following:

i. Begin implementation of the cleaning and inspection program activities listed under D.8 and D.9, not later than November 1, 2018.
ii. Respondent shall inspect a minimum of 10% of all pipes per year beginning not later than January 1, 2020. Prioritize cleaning of sewer pipes that have not been cleaned in last three years and in areas with frequent SSOs.

F. Annual Progress Report. Respondent shall submit annual progress reports to EPA to describe in detail the specific actions taken and the progress on complying with the schedule of activities listed above. The annual progress reports are due on January 31st of each year which will cover the activities during the previous calendar year. The first annual progress report shall be due on January 31, 2019. Annual progress reports shall provide a detailed description of activities conducted regarding Paragraphs A, B, C, D, and E, above during the year with estimated percent completion of each activity during the year and to completion date. The Annual Report shall include the following in electronic spreadsheet form:

i. Number of feet of non-plastic pipe inspected;
ii. Number of feet of plastic pipe inspected;
iii. Number of feet of non-plastic pipe repaired and/or rehabilitated;
iv. Number of feet of plastic pipe repaired and/or rehabilitated;
v. Number of manholes inspected;
vi. Number of manholes repaired and/or rehabilitated
vii. Description of activities regarding the development of the CMOM Program and description of components that were implemented;
viii. A description of any problems encountered, and the solutions thereto;
ix. An SSO Report, in electronic spreadsheet form, describing each SSO that occurred during the year, including the date, the time, the cause, the location, the estimated gallons of discharge, and a description of any health or environmental effects.

Attachment A

**Summary of SSOs from 2014-2016**

| Year | SSOs reported | SSOs per 100 miles of pipe |
|---|---|---|
| 2014 | 76 | 11.5 |
| 2015 | 71 | 10.79 |
| 2016 | 141 | 21.43 |

United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC

**NEICVP1227E01**

# CLEAN WATER ACT COMPLIANCE INVESTIGATION

**Lafayette SSO Investigation**
Lafayette, Louisiana
NEIC Project No.: VP1227

August 2017

**Project Manager:**

Daren Vanlerberghe, Environmental Engineer

**Other Contributor:**
Brian McKeown, P.E., Environmental Engineer

**Prepared for:**

EPA Region 6
1445 Ross Avenue
Dallas, Texas 75202

**Authorized for Release by:**

David Gwisdalla, Field Branch Chief

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
P.O. Box 25227
Building 25, Denver Federal Center
Denver, Colorado 80225-5227

## CONTENTS



## TABLES



## APPENDICES

*(*NEIC-Created Documents)*



**This Contents page shows all of the sections contained in this report and provides a clear indication of the end of this report.**

# INTRODUCTION

At the request of U.S. Environmental Protection Agency (EPA) Region 6, EPA's National Enforcement Investigations Center (NEIC) conducted a sanitary sewer overflow (SSO) Clean Water Act (CWA) compliance investigation of the sanitary sewer system leading to the city of Lafayette, Louisiana (Lafayette) wastewater treatment plants (WWTPs). Pollution control, wastewater generation, and management operations for Lafayette are subject to environmental permits and regulations administered by the EPA and the Louisiana Department of Environmental Quality (LDEQ).

## FACILITY AND REGULATORY BACKGROUND

Lafayette is located along the Vermilion River in southcentral Louisiana, with a population of 120,623 (2010 Census). Lafayette is the parish seat of Lafayette Parish, Louisiana. The City of Lafayette and Lafayette Parish have a common representative body and executive officer under the Lafayette Consolidated Government (LCG). The LCG operates public works to serve the City of Lafayette and unincorporated areas of Lafayette Parish. Lafayette is served by the Lafayette Utilities System (LUS), a city-parish government-run, publicly owned utility company. Established in 1897, LUS provides electric, drinking water, telecommunications, and wastewater services throughout the City of Lafayette, as well some unincorporated parts of the parish.

LCG owns and operates (through LUS) the following four WWTPs: Ambassador Caffery WWTP, East WWTP, Northeast WWTP, and South WWTP. LDEQ issued a Louisiana Pollutant Discharge Elimination System (LPDES) permit to LCG for each of the four WWTPs (**Appendices A through D**). The permit numbers, permit effective dates, and locations of the four WWTPs are listed in **Table 1**. The LPDES permits cover the entire publicly owned treatments works (POTW) associated with the WWTPs, also known as the "POTW treatment plants," as defined at 40 Code of Federal Regulations (CFR) § 403.3(r). The term POTW includes the sewers, pipes, and other conveyances if they convey wastewater to a POTW treatment plant (40 CFR § 403.3(q)). All four Lafayette WWTP permits contain the requirement to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by Lafayette to achieve compliance with the conditions of the permits (Standard Conditions for LPDES Permits (Revised 2-4-14), Section B.3. Proper Operation and Maintenance).

Table 1. LAFAYETTE WWTP PERMIT SUMMARY
Lafayette SSO Investigation
Lafayette, Louisiana

| | Ambassador Caffery WWTP | East WWTP | Northeast WWTP | South WWTP |
|---|---|---|---|---|
| LPDES Permit No./ Effective Date | LA0042561/ October 1, 2014, for 5 years | LA0036382/ November 1, 2014, for 5 years | LA0036391/ November 1, 2014, for 5 years | LA0036374/ November 1, 2014, for 5 years |
| Location | 4112 Ambassador Caffery Parkway, Lafayette, LA 30° 09' 50" N 92° 03" 29" W | 144 Judy Street, Lafayette, LA 30° 13' 01" N 92° 00" 04" W | 1201 LaJaunie Road, Lafayette, LA 30° 15' 53" N 91° 58" 38" W | 231 West Bayou Parkway, Lafayette, LA 30° 11' 40" N 92° 01" 33" W |

EPA Region 6 issued a series of administrative orders (AOs) to Lafayette in the 1990s for "bypasses and overflows of the collection system" caused by infiltration/inflow (I/I) problems. The orders were issued to all four Lafayette WWTPs and required the submittal of comprehensive plans and maintenance procedures being employed by Lafayette to eliminate and prevent recurrence of bypasses and overflows. According to LUS, $173 million was invested in WWTP and collection system upgrades in response to the orders, and all EPA orders were closed by November 2008. The NEIC inspection did not assess specific compliance with the EPA orders, and NEIC had no discussions with Lafayette regarding the orders, other than in general terms as they related to historical work conducted on the collection system and WWTPs.

## ON-SITE INSPECTION SUMMARY

NEIC conducted the on-site inspection of Lafayette from April 10 through April 13, 2017. The NEIC inspection team consisted of Daren Vanlerberghe and Brian McKeown. Rachel Matthews and David Esparza of EPA Region 6 also participated in the inspection. Shane Miller and Douglas Hale of the LDEQ were also present for portions of the inspection.

Credentials were presented to Craig Gautreaux, LUS wastewater operations manager, during the opening meeting on April 10, 2017. A closing meeting was held on April 13, 2017, to discuss the preliminary inspection observations. NEIC stressed that final determinations will be made in conjunction with EPA regional personnel and following review of documents provided by Lafayette.

NEIC assessed Lafayette's wastewater collection system operation and maintenance (O&M) program, including provisions in Lafayette's LPDES permits associated with proper operation and maintenance and collection system overflow reporting. The assessment included detailed discussions and field observations of the WWTPs, collection system, lift stations, manholes, and sewer cleaning and televising activities. The assessment also included a review of records, including system maps, system inventory records and schematics, operator logs,

maintenance records, overflow reports, development project information, and system studies. Photographs taken by NEIC during the inspection are located in **Appendix E.**

## System Overview

LUS provides wastewater and sewage treatment services to approximately 44,000 retail customers. At the time of the NEIC inspection, the LUS collection system included more than 658 miles of collection pipe, 12,313 manholes, and 179 lift stations. The four WWTPs have a total permitted daily capacity of 18.5 million gallons per day (MGD) and a total average daily flow of 16 MGD. **Appendix F** contains descriptions of the four WWTPs, including plant layout and process flow diagrams. **Table 2** contains a summary of the four WWTPs and associated collection system information based on permit application information.

**Table 2. SUMMARY OF LAFAYETTE WWTPS and COLLECTION SYSTEM**
**Lafayette SSO Investigation**
**Lafayette, Louisiana**

| | | Ambassador Caffery WWTP | East WWTP | Northeast WWTP | South WWTP |
|---|---|---|---|---|---|
| Population Served | 2010 | 49,842 | 23,348 | 9,946 | 43,482 |
| | 2030 (projected) | 57,737 | 26,030 | 11,709 | 57,901 |
| Collection system description | | Collection system consists of 72 lift stations. 62 percent of the collection system is older pipe with brick manholes undergoing rehabilitation. The remainder is polyvinyl chloride (PVC) pipe and precast concrete manholes. | Collection system consists of 36 lift stations. 7 were built after 1978, and 26 are more than 10 years old. 84 percent of the collection system is older pipe with brick manholes. The remainder is PVC pipe and precast concrete manholes. | Collection system consists of 18 lift stations. 12 were built before 1985. 36 percent of the collection system is clay pipe. The remainder is truss pipe, PVC pipe, and precast concrete manholes. | Collection system consists of 37 lift stations. 11 were built after 1985. 26 are more than 10 years old. 90 percent of the collection system is older pipe with brick manholes. The remainder is PVC pipe and precast concrete manholes. |
| WWTP information | | The WWTP began operation in 1984, and the last major renovation was in 2008. | The WWTP began operation in 1960, and the last major renovation was in 1999. | The WWTP began operation in 1978, and the last major renovation was in 1990. | The WWTP began operation in 1952, and the last major renovation was in 2014. |
| WWTP permitted design capacity | | 6.0 MGD | 4.0 MGD | 1.5 MGD | 7.0 MGD |
| WWTP Average Flow (2015) | | 6.1 MGD | 3.5 MGD | 1.2 MGD | 5.7 MGD |

Table 2. SUMMARY OF LAFAYETTE WWTPS and COLLECTION SYSTEM
Lafayette SSO Investigation
Lafayette, Louisiana

| | Ambassador Caffery WWTP | East WWTP | Northeast WWTP | South WWTP |
|---|---|---|---|---|
| WWTP Wet Weather Handling Capacity | 19.0 MGD | 8.2 MGD | 7 acre/25 MG retention pond | 13.0 MGD |
| Industrial users | Milk Products | Petroleum Helicopters, Inc. | Cintas Corporation (uniform laundry), Bell Helicopter Textron, Inc. | Reptile Tannery, Baker Hughes Oilfield Operations, Milk Products, Stuller, Inc. |

LUS also operates 13 package plants (permitted separately) that are outside of the city and are not connected for discharge to any of the four WWTPs. LUS operates and maintains 13 lift stations associated with the package plants. In addition, LUS operates and maintains three lift stations that are associated with ponds that do not discharge to any of the four WWTPs.

**Operations Responsibility Overview**

LUS has primary responsibility for operation and maintenance (O&M) of the Lafayette wastewater collection system and WWTPs. Within LUS, the wastewater operations division is most directly responsible for collection system, lift station, and WWTP O&M. The environmental compliance division (industrial pretreatment, grease control) and the engineering/power supply division (new construction, system studies, long range planning) are also responsible for collection system activities. The wastewater operations division has 141 employees and consists of wastewater collection, wastewater maintenance, and wastewater plant operation functions.

Wastewater collection staff are responsible for collection system pipe and manhole repairs, new manhole and pipe installation, manhole and pipe testing, and televising and cleaning of sewer lines. Wastewater collection has 37 full-time employees and consists of a repair group and investigative group. The repair group has two field sections (north and south), each with three, 3-person crews. The investigative group includes the televising and cleaning staff. LUS uses on-demand contract support for repairs as needed. LUS also uses a contractor for its chemical root control program.

Wastewater collection crews work one shift, Monday through Friday, with one crew available on-call 24 hours a day on a rotating 2-week basis. Repair equipment includes backhoes, mini-excavators, direct boring equipment, lateral line pipe bursting equipment, a concrete truck, smoke machines, pipe plugs, and submersible pumps. LUS has one trailer-mounted jet machine and three jetter/vacuum trucks for cleaning and has six push cameras and one truck with two main line camera systems (one backup) for televising.

Wastewater collection has a list of about 140 items for routine maintenance activities (e.g., cleaning sewer line sag points). Otherwise, they perform work in response to work orders and customer complaints. LUS uses Cityworks®, a geographic information system (GIS)-based software system that electronically manages O&M activities and records. For the most part, this system can be accessed and updated in the field.

Wastewater maintenance staff are responsible for conducting lift station inspections and maintenance. Wastewater maintenance staff included ten mechanics and three instrument technicians/electricians who work one shift, Monday through Friday. One mechanic is on-call after normal business hours. According to LUS, all lift stations are inspected three times a week; "problem" lift stations are inspected more frequently. Suction lift pumps are repaired in-house by LUS staff, while submersible pumps are repaired by the manufacturer or a contactor. LUS has also used a contractor for lift station pump rehabilitation in recent years. Lift stations are also vacuumed out on a set schedule, from once a year up to four times a year, depending on the lift station.

While wastewater collection staff rely heavily on Cityworks® for scheduling and documenting collection system O&M activities, wastewater maintenance staff have not yet used Cityworks® for lift station O&M activities. To document lift station inspections, mechanics manually fill out a "Lift Station Clock Sheet," which only includes pump run time information and a "Remarks" column that typically is notated with the mechanic's initials and "OK" or "Good" (**Appendix G**). Also, LUS provided NEIC an extensive list of standard operating procedures (SOPs) for wastewater collection activities; however, no written SOPs were available for wastewater maintenance activities for lift stations. As described by LUS representatives, mechanics are assigned a set of lift stations and route for inspections and rely on their experience and familiarity with those lift stations. When asked about a critical parts inventory for lift stations and pumps, LUS representatives stated that mechanics keep track of parts and equipment themselves and have "been around a long time."

LUS representatives acknowledged that the facility has no formal training program for O&M activities and relies mainly on on-the-job training. LUS provided no O&M training records during the inspection.

**Lift Station Overview and Inspections**

At the time of the inspection, LUS had 179 lift stations in service, with 163 lift stations conveying wastewater to one of the four Lafayette WWTPs. **Appendix H** contains an LUS lift station inventory followed by the same list of lift stations with additional information such as associated WWTP and service voltage. The inventory includes the lift station name/number and location, design type (e.g., suction lift, submersible, flooded suction), year constructed, number of pumps and pump capacity, pump type (constant or variable speed), alarms and telemetry

information, and emergency power information. According to LUS, no lift stations have designed or constructed overflow points.

According to the inventory, six lift stations have only one pump (no backup pump). According to LUS, the reason is mostly due to size limitations at the station. All six lift stations with only one pump have only local red light alarms and no telemetry or telemetry/supervisory control and data acquisition (SCADA) coverage. According to LUS, all lift stations have quick connects for bypass pumps, and LUS has 10 to 12 available bypass pumps. While the inventory states that all lift stations have emergency power, only the Beaver, Acacia, and Old Maurice lift stations have permanent, on-site backup power generators. For the remaining lift stations, LUS has six portable generators for emergency power.

LUS uses three levels of systems for identification and notification of lift station issues such as high-level alarms, pump failures, and power failures. Forty-two lift stations are equipped with fiber-connected telemetry with communication to computer systems and the LUS SCADA system. Lift stations equipped with telemetry/SCADA systems allow the highest level of station awareness, including the ability to remotely see pump run status and to control pumps in some instance. Fifty-five lift stations are equipped with MISSION® auto-dialer telemetry systems, where notifications are automatically dialed to the on-call mechanic and a dispatcher (available 24 hours). Eighty-two lift stations are equipped with only local red light/audible alarms and no SCADA or telemetry systems. The red light alarms provide a local visual and audible alarm for nearby citizens or operators driving by a lift station, typically with an adjacent sign that states "If red light flashes call 291-5700." According to LUS, all lift stations are equipped with red light alarms at a minimum. According to LUS, $200,000 has been budgeted each year in 2018, 2019, and 2020 to upgrade lift stations that have only local red light alarms to include telemetry or telemetry/SCADA systems, with a goal of telemetry or telemetry/SCADA coverage for all lift stations.

On April 12, 2017, 10 lift stations were inspected. The 10 lift stations inspected were selected on the basis of the frequency of SSOs associated with those lift stations and/or the relative large size/capacity of the lift station. **Table 3** is a summary of the inspected lift stations with information from the LUS lift station inventory.

**Table 3. SUMMARY OF INSPECTED LIFT STATIONS**
**Lafayette SSO Investigation**
**Lafayette, Louisiana**

| Lift Station Number/Name | Associated WWTP | Design Type/Year Constructed | Capacity (gallons per foot) | Number of Pumps/Pump Capacity (GPM) | Telemetry |
|---|---|---|---|---|---|
| 8 – Beaver Park | East | Flooded suction/1966 | 975 | 1 – 1,150<br>2 – 1,500 | MISSION® |
| 13 – James | South | Flooded suction/1955 | 206 | 1 – 400<br>2 – 300<br>3 – 175 | SCADA LUS fiber |

Table 3. SUMMARY OF INSPECTED LIFT STATIONS
Lafayette SSO Investigation
Lafayette, Louisiana

| Lift Station Number/Name | Associated WWTP | Design Type/Year Constructed | Capacity (gallons per foot) | Number of Pumps/Pump Capacity (GPM) | Telemetry |
|---|---|---|---|---|---|
| 15 – Heymann Park | East | Flooded suction and submersible/ 1966 | 147 | 1 – 2,000<br>2 – 2,000<br>3 – 2,992<br>4 – 2,992<br>5 – 2,992 | SCADA LUS fiber |
| 17 – Greenbriar | South | Flooded suction/1959 | 238 | 1 – 1,050<br>2 – 1,050 | SCADA LUS fiber |
| 18 – Acacia | South | Flooded suction/1966 | 1,925 | 1 – 900<br>2 – 1,800<br>3 – 3,600<br>4 – 3,600 | SCADA LUS fiber/MISSION® |
| 20 – Old Maurice | Ambassador Caffery | Submersible and submersible dry pit/1962 (upgraded in 2014) | 3,449 | 1 – 3,400<br>2 – 3,400<br>3 – 7,000<br>4 – 7,000<br>5 – 7,000 | SCADA LUS fiber |
| 29 – Brown Park | Northeast | Suction lift/1967 | 211 | 1 – 1,700<br>2 – 1,700 | SCADA LUS fiber |
| 52 – Row Four | Ambassador Caffery | Submersible/ 1977 | 376 | 1 – 700<br>2 – 700 | SCADA LUS fiber |
| 54 – Republic | Ambassador Caffery | Submersible/ 1979 | 376 | 1 – 650<br>2 – 650 | SCADA LUS fiber |
| 204 – Farrel | Ambassador Caffery | Submersible/ 2013 | 846 | 1 – 2,500<br>2 – 2,500 | SCADA LUS fiber |

The following is a summary of observations and issues identified during the inspection of the lift stations.

- NEIC observed that general housekeeping was poor at the Greenbriar and Acacia lift stations. NEIC observed debris and trash inside the Greenbriar and Acacia lift station buildings (**Appendix E, photographs IMGP0022, IMGP0023, IMGP0037, and IMGP0039**), and the lights were not operational inside the Greenbriar lift station building.
- NEIC identified the following issues with the red light local alarms used for localized signaling of lift station issues.
  - The James and Row Four lift stations did not have red light local alarms (**Appendix E, photographs IMGP0016, IMGP0017, IMGP0018, and IMGP0047**).
  - The red light local alarms and signs at the Greenbriar and Acacia lift stations were obstructed by a new fence and tree, respectively (**Appendix E, photographs IMGP0025**

**and IMGP0040**). The Old Maurice lift station had a red light local alarm but no associated sign with the telephone number to call for notification of the alarm.

  - At the Acacia lift station, lifting the high wet well level float failed to trigger the red light local alarm.

- The James lift station did not have an intrusion alarm at the lift station building. The intrusion alarm for the control building at the Old Maurice lift station was disabled with a plastic tie (**Appendix E, photograph IMGP0028**).
- There was no quick connect location for a bypass pump observed at the Heymann Park lift station. At the Greenbriar lift station, the quick connect location for the bypass pump was very difficult to access and would not be easy or safe for the mechanic to quickly connect the bypass pump.
- Equipment and structures at the Farrel lift station were highly corroded (**Appendix E, photographs IMGP0053 and IMGP0054**). The Farrel lift station was constructed in 2013 and has experienced hydrogen sulfide issues.

**Wet Weather Treatment and System Capacity Overview**

As discussed in the regulatory background section of this report, EPA Region 6 issued a series of administrative orders to Lafayette in the 1990s for "bypasses and overflows of the collection system" caused by I/I problems. According to LUS, $173 million was invested in WWTP and collection system upgrades in response to the orders. During the inspection, LUS provided information regarding strategies for addressing I/I and wet weather treatment capacity at the four WWTPs. The following is a summary of the information provided by LUS. The design capacities listed in the LPDES permits for the respective WWTPs, and also listed in Table 2, have not been modified since the issuance of the permits in 2014 to reflect the information summarized below.

- Ambassador Caffery WWTP
  - Built three-cell, 7.5-million gallon (MG)-capacity retention basin for wet weather flows
  - Increased dry weather treatment capacity to 9.25 million gallons per day (MGD) by building sequencing batch reactors (SBRs) in 2002
  - Increased wet weather treatment capacity to 19 MGD by use of the SBRs
- East WWTP
  - Built three-cell, 3-MG-capacity retention basin for wet weather flows
  - Increased wet weather treatment capacity to 8.2 MGD by installing two additional final clarifiers
- Northeast WWTP
  - Converted 7-acre, 25-MG pond to receive wet weather flows
  - Use second secondary clarifier during wet weather to lower surface overflow rates
- South WWTP
  - Built two-cell, 3.5-MG-capacity retention basin for wet weather flows

- Increased dry weather treatment capacity to 9 MGD
- Increased wet weather treatment capacity to 13 MGD
- Additional upgrades are scheduled to increase the dry weather treatment capacity to 12 MGD and the wet weather treatment capacity to 28 MGD through additional SBRs

The retention basins at the Ambassador Caffery, East, and South WWTPs are equipped with emergency overflow structures from which wastewater could overflow directly to the Vermillion River (**Appendix E, photographs IMGP0005, RIMG0037, and RIMG0022**). The overflow locations are not listed in the LPDES permits for the respective WWTPs. The overflow locations are included on diagrams in the permit applications for the respective WWTPs. Current LUS staff stated that they were not aware of discharges ever occurring from the overflow points.

**Sanitary Sewer Overflow Identification, Reporting, and Frequency**

Lafayette experiences both dry weather SSOs and wet weather-related SSOs from the collection system, with the majority of reported SSOs attributed to I/I during rain events. According to LUS, the majority of dry weather SSOs are caused by sewer line stoppages (roots, grease, debris in sewer line), and 75 to 80 percent of the dry weather SSOs are identified through citizen calls. Calls from citizens are relayed from the dispatcher to the wastewater collection staff for response. LDEQ may also receive calls from citizens regarding SSOs. LDEQ will inform LUS, and may respond as well.

LUS maintains a list of rain-related overflow locations, where SSOs from specific manholes occur frequently during wet weather (**Appendix I**). The list contains 64 manhole locations and includes the destination of the overflow, such as a ditch, road drain, or coulee (large storm water ditch/canal). A typical response to an SSO involves the wastewater collection staff checking the area of the overflow and cleaning the area with water and chlorine. LUS did not have a written SOP for identifying, responding to, reporting, and correcting SSOs. Also, the wastewater collection SOP for sewer line stoppages does not include checking for potential SSOs in the area of the stoppage.

SSO occurrences are compiled monthly by WWTP area into a "Collection System Overflow Report" and submitted to LDEQ with the monthly discharge monitoring reports (DMRs) for the respective WWTPs. **Appendix J** contains overflow reports from January 2012 to January 2017. The reports include blocks for entering the overflow date, time, address and/or manhole number, lift station area/number, estimated duration of the overflow, estimated volume of the overflow, environmental impacts, cause of the overflow, and actions taken to address the overflow. According to LUS, if the overflow report specifies a rain-related event as the cause of the overflow, the rainfall amount in the report is taken from the associated WWTP and not necessarily the actual overflow location.

The estimated duration of the overflow is recorded as "unknown" on all but a very few overflow reports, and the estimated volume is recorded as "unknown" on all overflow reports. The environmental impacts of the overflow are recorded as "no noticeable impacts" or "no visible impacts" on all overflow reports. The overflow reports do not include the discharge location of the overflow, such as a storm drain, ditch, or coulee.

There is no notification to the public regarding the occurrence and incidents of SSOs in Lafayette, and the human health and environmental impacts that may occur due to the SSOs. One of the frequent rain-related overflow locations is the Beaver Park retention pond. The retention pond is adjacent to a public park and tennis courts (**Appendix E, photograph RIMG0075**). There is no signage or fencing around the retention pond area, and no indication that this retention pond is used for containing SSOs. Also, nothing is specifically done during actual SSO events to notify the public or indicate in the area that an SSO has occurred, according to LUS. Twelve overflows were reported in the Beaver Park area from January 2012 to January 2017, with five overflows specifically reported as reaching the retention pond.

A storm event beginning on August 12, 2016, and lasting several days caused catastrophic flooding in the Lafayette area. The storm produced more than 2 feet of rain in the area. LUS did not report specific SSO events during this time, because most of the collection system, including lift stations, was under water due to the flooding. The following statement was reported by LUS for August 2016: "Due to a 30" plus rain event on August 12, 13, 14, and 15, we had a number of lift station basins that were under water. Because of this, we had no way to estimate the number of discharges we had in our system." As a result of the August 2016 storm and flooding, lift stations, including the Beaver Park and Acacia lift stations, were damaged and operated using bypass pumps for an extended period of time. This limited the ability of the stations to handle even smaller rain events, resulting in reported SSOs.

According to discussions with LUS staff, Lafayette experiences issues in the collection system with rain events above approximately 3 inches. However, many of the reported SSOs were attributed to I/I-related to rain events less than 3 inches. As stated above, the rainfall amount in the overflow report is taken from the associated WWTP and not necessarily the actual overflow location. Also, LUS staff stated that localized rain may be greater in portions of the collection system during a given storm event. While understanding that the reference to issues with 3-inch rain events was a general statement, and the reporting of rainfall amounts in the overflow reports is not precise, the following is the number of reported SSOs that were attributed to I/I-related to rain events of less than 3 inches, from January 2014 to January 2017, by associated WWTP.

- Ambassador Caffery WWTP – 11
- East WWTP – 18
- Northeast WWTP – 3
- South WWTP - 37

A common benchmark or metric for assessing the frequency of SSOs, and comparing the relative performance of sanitary sewer systems, is the number of SSOs per 100 miles of sewer pipe per year. The following are the median SSO frequency benchmarks from various sources.

- *2004 Report to Congress on Impacts and Control of Combined Sewer Overflows and Sanitary Sewer Overflows* – 4.5 SSOs per 100 miles of sewer pipe per year

- *2005 American Water Works Association Benchmarking Performance Indicators for Water and Wastewater Utilities* – 4.3 SSOs per 100 miles of sewer pipe per year (all regions of the United States) and 5.66 SSOs per 100 miles of sewer pipe per year (southern region of the United States)

- *2013-2014 California Statewide Sanitary Sewer Overflow Reduction Program Annual Compliance Update* – 4.39 SSOs per 100 miles of sewer pipe per year

Based on having 658 miles of sewer pipe, the following is the SSO frequency for Lafayette for 2014, 2015, and 2016 based on reported SSOs.

- 2014 – 11.55 SSOs per 100 miles of sewer pipe per year (76 reported SSOs)
- 2016 – 10.79 SSOs per 100 miles of sewer pipe per year (71 reported SSOs)
- 2016 – 21.43 SSOs per 100 miles of sewer pipe per year (141 reported SSOs; no SSOs were reported or counted for the August 2016 storm event)

For reference, the average annual total rainfall amount in Lafayette is approximately 60 inches. The total rainfall in Lafayette in 2014, 2015, and 2016 was 59 inches, 65 inches, and 81 inches, respectively.

## SUMMARY OF FINDINGS

Findings identified by NEIC during the investigation are summarized in **Table 4**. These findings are linked to specific supporting documents that can be found in individual appendices to this table. These findings are categorized as either potential areas of noncompliance or areas of concern. Areas of concern are inspection observations of potential problems or activities that could impact the environment, result in future or current noncompliance, and/or are areas associated with pollution prevention.

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
Lafayette, Louisiana

| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| **POTENTIAL AREAS OF NONCOMPLIANCE** | | | |
| 1 | **LPDES Permit Nos. LA0042561 (Ambassador Caffery WWTP), LA0036382 (East WWTP), LA0036391 (Northeast WWTP), LA0036374 (South WWTP)**<br><br>**Other Conditions F.** – *As an exception to STANDARD CONDITIONS FOR LPDES PERMITS, Section D.6.e.(1), the permittee shall report all overflows in the collection system with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and the ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). All other overflows and overflows which endanger human health or the environment must be reported in the manner described in STANDARD CONDITIONS FOR LPDES PERMITS, Section D.6 of the permit.* | **Finding**<br><br>**Lafayette was not including all required information when reporting overflows in the collection system with its DMR submittals, as specified in Other Conditions F. of its LPDES permits.**<br><br>**Supporting Notes**<br><br>Lafayette reports overflows in the collection system (i.e., SSOs) on a monthly basis to LDEQ with its monthly DMR submittals for the respective WWTPs. Other Conditions F. of the LPDES permits for the four WWTPs requires the overflows to be summarized and reported in tabular format, with specific items to be included in the summaries. Lafayette provided NEIC collection system overflow reports from January 2012 to January 2017, organized by the associated WWTP (**Appendix J**). Lafayette was not including the ultimate discharge location if not contained on the overflow reports. Also, Lafayette was not including the duration of the overflows on most reports (estimated as "unknown") and was not including an estimated volume of the overflows (estimated as "unknown"). While Lafayette provided overflow reports from 2012 to 2017, the permit condition NEIC reviewed during the inspection became effective October 1, 2014, for the Ambassador Caffery WWTP and November 1, 2014, for the East, Northeast, and South WWTPs. | **Appendix A** – LPDES Permit No. LA0042561 (Ambassador Caffery WWTP)<br><br>**Appendix B** – LPDES Permit No. LA0036382 (East WWTP)<br><br>**Appendix C** – LPDES Permit No. LA0036391 (Northeast WWTP)<br><br>**Appendix D** – LPDES Permit No. LA0036374 (South WWTP)<br><br>**Appendix J** – Collection System Overflow Reports |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
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| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | | | Discussions with Lafayette staff, documented in project logbooks |
| 2 | **LPDES Permit Nos. LA0042561 (Ambassador Caffery WWTP), LA0036382 (East WWTP), LA0036391 (Northeast WWTP), LA0036374 (South WWTP)**<br><br>**Standard Conditions for LPDES Permits (Revised 2-4-14), Section B.3. Proper Operation and Maintenance**<br><br>*a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.*<br>*b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and other functions necessary to ensure compliance with the conditions of this permit.* | <u>Finding</u><br><br>**Lafayette was not properly operating and maintaining all facilities and systems of treatment and control at the four POTWs, including maintaining appropriate quality assurance procedures.**<br><br><u>Supporting Notes</u><br><br>NEIC identified several deficiencies during the inspection related to the LUS sanitary sewer system operation and maintenance program. In general, LUS lacked a formal, documented program for lift station O&M activities. The following are examples of O&M issues and deficiencies NEIC identified during the inspection.<br><br>• Wastewater collection staff rely heavily on Cityworks® software for scheduling and documenting O&M activities for the collection system; however, wastewater maintenance staff have not yet used Cityworks® for lift station O&M activities. To document lift station inspections, mechanics manually fill out a "Lift Station Clock Sheet" (**Appendix G**), which only includes pump run time information and a "Remarks" column that typically is notated with the mechanic's initials and "OK" or "Good." Also, while LUS issues and tracks work orders for its collection system using Cityworks®, it has no structured process for scheduling and documenting lift station activities.<br>• LUS provided standard operating procedures for the collection system O&M activities; however, no SOPs were provided for lift station O&M activities.<br>• As described by LUS representatives, mechanics are assigned a set of lift stations and route for inspections and rely on their experience and familiarity with those lift stations. When asked about a critical parts inventory for lift stations and pumps, LUS representatives stated that mechanics keep track of parts and equipment themselves and have "been around a long time." | **Appendix A** – LPDES Permit No. LA0042561 (Ambassador Caffery WWTP)<br><br>**Appendix B** – LPDES Permit No. LA0036382 (East WWTP)<br><br>**Appendix C** – LPDES Permit No. LA0036391 (Northeast WWTP)<br><br>**Appendix D** – LPDES Permit No. LA0036374 (South WWTP)<br><br>**Appendix E** – NEIC Photographs<br><br>**Appendix G** – Lift Station Clock Sheets<br><br>Discussions with Lafayette staff, |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
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| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | | • LUS representatives acknowledged that the facility has no formal training program for O&M activities and relies mainly on on-the-job training. LUS provided no O&M training records to NEIC LUS during the inspection.<br>• Because of a lack of a formal, documented O&M and training program, there is a concern with staff succession planning as well as coverage for existing staff when they are unavailable. Without a formal program, institutional knowledge may not be transferred when staff members leave their positions. Also, for example, only one LUS staff person is trained to operate the sewer television truck and camera equipment.<br>• NEIC identified several issues during the inspection of LUS lift stations.<br>o NEIC observed general housekeeping was poor at the Greenbriar and Acacia lift stations. NEIC observed debris and trash inside the Greenbriar and Acacia lift station buildings (**Appendix E, photographs IMGP0022, IMGP0023, IMGP0037, and IMGP0039**), and the lights were not operational inside the Greenbriar lift station building.<br>o NEIC identified the following issues with the red light local alarms used for localized signaling of lift station issues.<br>▪ The James and Row Four lift stations did not have red light local alarms (**Appendix E, photographs IMGP0016, IMGP0017, IMGP0018, and IMGP0047**).<br>▪ The red light local alarms and signs at the Greenbriar and Acacia lift stations were obstructed by a new fence and tree, respectively (**Appendix E, photographs IMGP0025 and IMGP0040**). The Old Maurice lift station had a red light local alarm but no associated sign with the number to call for notification of the alarm.<br>▪ At the Acacia lift station, lifting the high wet well level float failed to trigger the red light local alarm.<br>o The James lift station did not have an intrusion alarm at the lift station building. The intrusion alarm for the control building at the Old Maurice lift station was | documented in project logbooks |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
Lafayette, Louisiana

| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | | disabled with a plastic tie (**Appendix E, photograph IMGP0028**).<br>o There was no quick connect location for a bypass pump observed at the Heymann Park lift station. At the Greenbriar lift station, the quick connect location for the bypass pump was very difficult to access and would not be easy or safe for the mechanic to quickly connect the bypass pump.<br>o Equipment and structures at the Farrel lift station were observed to be highly corroded (**Appendix E, photographs IMGP0053 and IMGP0054**). The Farrel lift station was constructed in 2013 and has experienced hydrogen sulfide issues | |
| 3 | **LPDES Permit No. LA0036374 (South WWTP)**<br><br>**Standard Conditions for LPDES Permits (Revised 2-4-14), Section B.3. Proper Operation and Maintenance**<br><br>*a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.* | <u>Finding</u><br><br>**Lafayette was not properly operating and maintaining all facilities and systems of treatment and control at the South WWTP.**<br><br><u>Supporting Notes</u><br><br>During the inspection on April 11, 2017, NEIC observed excessive scum and solids in a final clarifier at the South WWTP (**Appendix E, photograph RIMG0028**). | **Appendix D** – LPDES Permit No. LA0036374 (South WWTP)<br><br>**Appendix E** – NEIC Photographs |
| **AREAS OF CONCERN** | | | |
| A | **LPDES Permit Nos. LA0042561 (Ambassador Caffery WWTP), LA0036382 (East WWTP), LA0036391 (Northeast WWTP), LA0036374 (South WWTP)**<br><br>**Other Conditions F.** – *As an exception to STANDARD CONDITIONS FOR LPDES PERMITS, Section D.6.e.(1), the permittee shall report all overflows in the collection system with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format.* | <u>Concern</u><br><br>**Lafayette's LPDES permits contain ambiguous language regarding the reporting requirements for overflows from the collection system (i.e., SSOs), and other specified discharges.** | **Appendix A** – LPDES Permit No. LA0042561 (Ambassador Caffery WWTP)<br><br>**Appendix B** – LPDES Permit |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
Lafayette, Louisiana

| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | *The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and the ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). All other overflows and overflows which endanger human health or the environment must be reported in the manner described in STANDARD CONDITIONS FOR LPDES PERMITS, Section D.6 of the permit.*<br><br>**Standard Conditions for LPDES Permits (Revised 2-4-14), Section D.6. Requirements for Notification**<br><br>a. *Emergency Notification – As required by LAC 33.I.3915, in the event of an unauthorized discharge that does cause an emergency condition, the discharger shall notify the hotline (DPS 24-hour Louisiana Emergency Hazardous Materials Hotline) by telephone at (225) 925-6595 (collect calls accepted 24 hours a day) immediately (a reasonable period of time after taking prompt measures to determine the nature, quantity, and potential off-site impact of a release, considering the exigency of the circumstances), but in no case later than one hour after learning of the discharge. (An emergency condition is any condition which could reasonably be expected to endanger the health and safety of the public, cause significant adverse impact to the land, water, or air environment, or cause severe damage to property.) Notification required by this section will be made regardless of the amount of the discharge. Prompt Notification Procedures are listed in Section D.6.c. of these standard conditions.*<br><br>*A written report shall be provided within seven calendar days after the notification. The report shall contain the information listed in Section D.6.d. of these standard conditions and any additional information in LAC 33:I.3925.B.* | Supporting Notes<br><br>Lafayette's LPDES permits contain an exception (Other Conditions F.) to the standard 24-hour reporting requirements (Standard Condition D.6.e.(1)), which may normally apply to SSOs. The exception requires Lafayette to report all overflows in the collection system with the monthly DMR submittals. The exception also contains language stating that "all other overflows and overflows which endanger human health or the environment must be reported in the manner described in STANDARD CONDITIONS FOR LPDES PERMITS, Section D.6 of the permit." It is not clear what is meant by "all other overflows." Also, SSOs, by their nature, may endanger human health or the environment, which may trigger more frequent and detailed reporting requirements such as those under STANDARD CONDITIONS FOR LPDES PERMITS, Section D.6.a. for emergency conditions.<br><br>In addition, it is not clear whether the "Emergency Notification" or "Twenty-four Hour" reporting requirements apply to certain discharges. And, those requirements differ. For example, emergency notification is required when "an unauthorized discharge" causes "an emergency condition," defined as "any condition which could reasonably be expected to endanger the health and safety of the public." At the same time, twenty-four-hour reporting is required when, among other things, a discharge "may endanger human health or the environment." | No. LA0036382 (East WWTP)<br><br>**Appendix C** – LPDES Permit No. LA0036391 (Northeast WWTP)<br><br>**Appendix D** – LPDES Permit No. LA0036374 (South WWTP) |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
Lafayette, Louisiana

| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | e. *Twenty-four Hour Reporting – The permittee shall report any noncompliance which may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours:*<br>*(1) Any unanticipated bypass which exceeds any effluent limitation in the permit (see LAC 33:IX.2701.M.3.b.):*<br>*(2) Any upset which exceeds any effluent limitation in the permit:*<br>*(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the state administrative authority in Other Conditions of the permit to be reported within 24 hours (LAC 33:IX.2707.G.).* | | |
| B | **LPDES Permit Nos. LA0042561 (Ambassador Caffery WWTP), LA0036382 (East WWTP), LA0036374 (South WWTP)** | **Concern**<br><br>**Emergency overflow points from retention basins at the Ambassador Caffery, East, and South WWTPs were not identified as outfalls or potential discharge locations in the respective NPDES permits and respective NPDES permit applications.**<br><br>**Supporting Notes**<br><br>Current Lafayette staff stated that they were not aware of discharges ever occurring from the overflow points. | **Appendix A** – LPDES Permit No. LA0042561 (Ambassador Caffery WWTP)<br><br>**Appendix B** – LPDES Permit No. LA0036382 (East WWTP)<br><br>**Appendix D** – LPDES Permit |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
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| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | | | No. LA0036374 (South WWTP)<br><br>Discussions with Lafayette staff, documented in project logbooks |
| C | | <u>Concern</u><br><br>**Concerns were identified with Lafayette's procedures for addressing SSOs, including the lack of a public notification process for SSO occurrences.**<br><br><u>Supporting Notes</u><br><br>LUS did not have a written SOP for identifying, responding to, reporting, and correcting SSOs. Also, the wastewater collection SOP for sewer line stoppages does not include checking for potential SSOs in the area of the stoppage. There is no notification to the public regarding the occurrence and incidents of SSOs in Lafayette, and the human health and environmental impacts that may occur due to the SSOs. One of the frequent rain-related overflow locations is the Beaver Park retention pond. The retention pond is adjacent to a public park and tennis courts (**Appendix E, photograph RIMG0075**). There is no signage or fencing around the retention pond area, and no indication that this retention pond is used for containing SSOs. Also, nothing is specifically done during actual SSO events to notify the public or indicate in the area that an SSO has occurred, according to LUS. Twelve overflows were reported in the Beaver Park area from January 2012 to January 2017, with five overflows specifically reported as reaching the retention pond. | **Appendix E** – NEIC Photographs<br><br>**Appendix J** – Collection System Overflow Reports<br><br>Discussions with Lafayette staff, documented in project logbooks |
| D | | <u>Concern</u><br><br>**The frequency and occurrence of rain-related SSOs from the Lafayette collection system is a concern.** | **Appendix J** – Collection System Overflow Reports<br><br>Discussions with Lafayette |

Table 4. SUMMARY OF FINDINGS
Lafayette SSO Investigation
Lafayette, Louisiana

| # | Regulatory Citation | Findings/Supporting Notes | Evidence |
|---|---|---|---|
| | | **Supporting Notes**<br><br>Based on SSO reporting provided by Lafayette with monthly DMRs, the majority of SSO events in Lafayette are rain-related; however, other causes (main line blockages, pump station failures, force main breakages, etc.) contributed to the SSO occurrences. Lafayette reported 288 SSO events during 2014 through 2016. NEIC identified the following issues related to the frequency and causes of SSOs in Lafayette.<br><br>• According to discussions with LUS staff, Lafayette experiences issues in the collection system with rain events above approximately 3 inches. However, some of the reported SSOs were attributed to rain events of less than 3 inches. The following is the number of reported SSOs that were attributed to I/I-related to rain events of less than 3 inches, from January 2014 to January 2017, by associated WWTP.<br>o Ambassador Caffery WWTP - 11<br>o East WWTP – 18<br>o Northeast WWTP – 3<br>o South WWTP – 37<br>• A common benchmark or metric for assessing the frequency of SSOs, and comparing the relative performance of sanitary sewer systems, is the number of SSOs per 100 miles of sewer pipe per year. Lafayette had an SSO frequency rate significantly higher than median national benchmarks during 2014, 2015, and 2016.<br>• While Lafayette has conducted some limited site-specific infiltration/inflow studies in recent years, there has not been a system-wide I/I study since the early to mid-1990s, and a system-wide sewer system evaluation survey (SSES) has not been documented since 1982.<br>• Lafayette has invested in capital improvements at the four WWTPs, including increased retention and pumping capacity for high flows during storm events. However, due to the number of SSOs reported from the collection system caused by rain events, the ability to convey wastewater from the collection system to the WWTPs is a concern, as well as the I/I, particularly in the older sections of the collection system | staff, documented in project logbooks |