Little Rock Wastewater

February 27, 2017

RECEIVED one (1) bound 2016 Annual Report to the Consent Administrative Order in accordance with LIS NO. 06-037 Dated March 9, 2006.

_____
ADEQ Representative

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Little Rock Wastewater

VIA HAND DELIVERY

February 27, 2017

Mr. Caleb Osborne
Associate Director - Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Re: 2016 Annual Report on the
Collection System Management Program (CSMP)
Little Rock Wastewater
Little Rock, Arkansas
Arkansas Department of Environmental Quality
Consent Administrative Order LIS No. 06-037

Dear Mr. Osborne:

Little Rock Wastewater is pleased to submit one original with a copy on a thumb drive of the referenced 2016 Annual Report on the implementation and effectiveness of the Collection System Management Program in compliance with the Arkansas Department of Environmental Quality Consent Administrative Order LIS No. 06-037 ("CAO") as referred to on Page 7, Paragraph V of the CAO.

Should you have any questions regarding this submittal, please contact me at 501-688-1416 or e-mail at john.holloway@lrwu.com.

Sincerely,

LITTLE ROCK WASTEWATER

John Holloway, P.E.
Director of Engineering Services

Attachment

***NOTE:** The 2016 Annual Report will be available at the following link http://www.lrwu.com/capitalprojects for the individuals listed below. If you have any problems accessing this information, please do not hesitate to contact me.

cc: Little Rock Water Reclamation Commission
Greg Ramon, CEO
John Jarratt, Chief Administration Officer
Howell Anderson, P.E., Chief Operating Officer
Little Rock Wastewater Directors
Mayor Mark Stodola
City Manager Bruce Moore
City Attorney Tom Carpenter

2016 ANNUAL REPORT

CONSENT ADMINISTRATIVE ORDER

FEBRUARY 28, 2017

IN ACCORDANCE WITH

LIS NO. 06-037

DATED MARCH 9, 2006

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
CONSENT ADMINISTRATIVE ORDER
ANNUAL REPORT
FOR 2016

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ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
CONSENT ADMINISTRATIVE ORDER
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I. INTRODUCTION

By letter dated March 20, 2006, the Arkansas Department of Environmental Quality ("ADEQ") sent Little Rock Wastewater ("LRW") the ADEQ Consent Administrative Order ("CAO") dated March 9, 2006, with Attachments "A" and "B." ADEQ specified the annual reporting date for the implementation and effectiveness of the Collection System Management Program ("CSMP") on or before February 28 each year in which the CAO remains effective. This report is submitted in compliance with this requirement.

II. IMPLEMENTATION AND EFFECTIVENESS OF THE COLLECTION SYSTEM MANAGEMENT PLAN ("CSMP")

In 2012 and 2015, the Little Rock Board of Directors granted LRW rate adjustments that support funding for a portion of the projects needed to comply with the CAO. The 2012 rate adjustment supports the study, design, and construction of projects into 2017. The 2015 rate adjustment supports the study, design, and construction of projects through 2021.

In 2016, LRW continued its efforts by engaging with consultants for the study, design, and construction of major capital improvement projects outlined in the 2010 SECAP Update. Specifically, LRW continued capacity-related facility projects by working with consultants and contractors to commence construction of for the Scott Hamilton Drive Peak Flow Facility (formerly known as the Mabelvale Pike Peak Flow Attenuation Facility). Additionally LRW, in conjunction with consultants initiated development of construction documents for Adams Field Treatment Facility Parallel Treatment. LRW also initiated planning documents for Phase III of capital improvements at the Fourche Creek Wastewater Treatment Facility. On the collection system side in 2016, LRW initiated the construction of projects in the Allsopp/Country Club, Leawood, and Lower Swaggerty areas. Within the year, preliminary engineering was initiated for the Middle Hinson, Overlook, Jimerson, Sherrill Heights, and River Ridge projects. Preliminary engineering was completed on the 36th Street to Mabelvale Pike Outfall. Also during 2016, LRW continued its service line replacement program targeted at maintaining reliable sewer service to the ratepayers and will also provide the benefit of reducing private sources of inflow which contribute to the cause of capacity related overflows.

All major compliance efforts will be discussed with other activities in the order mentioned, consisting of (III) Projects Update;(IV) Other Compliance Actions; (V) 2016 Non-Capacity Related Sanitary Sewer Overflows; and, (VI) 2016 Capacity Related Overflows and (VII) Project Schedule Update.

III. PROJECTS UPDATE

The System Evaluation Capacity Assurance Plan (SECAP) Update is the Capital Improvement Plan (CIP) to mitigate overflows for the designated design storm.

LRW has listed the CIP projects in the 2017 budget and scheduled the projects accordingly. The report lists one storage facility, operation adjustments, capacity improvements, and other pertinent items to mitigate overflows. The Grassy Flat main was completed which required a capacity increase from an 18-inch mainline to a 30-inch mainline. The one storage site project is under construction, Scott Hamilton Drive Peak Flow Facility (formerly referred to as the Mabelvale Pike Peak Flow Attenuation Facility), adding 31 million gallons of storage capacity to the existing facility. On December 1, 2015, LRW was granted a discharge permit modification allowing parallel treatment to the existing biological train. The new facility configuration will allow for 94 million gallons per day of continuous treatment while meeting discharge permit parameters. The new approach will eliminate the need for additional storage at the Adams Field Wastewater Treatment Facility (AFWTF). There are multiple projects listed in the SECAP Update to increase the capacity of existing gravity mains. A large diameter main (42-inch & 48-inch) proposed from 36th Street to Mabelvale Pike is the largest line project required. Multiple projects such as manhole adjustments and upsizing of mains are included in the report. The SECAP Update assumed all previous collection system projects would be completed. The following are projects already completed or currently included in the 2017 budget.

A. Little Maumelle Wastewater Treatment Facility

Construction of the project was completed in March 2011, and the facility was placed in operation in July 2011.

B. Peak Flow Attenuation Facilities

Construction of the projects was completed in August 2011.

C. Cantrell Road Pump Station and Force Main Upgrade

Construction of the projects was completed in November 2015.

D. Scott Hamilton Drive Peak Flow Facility (formerly referred to as Mabelvale Pike Peak Flow Attenuation Facility)

The SECAP Update identified the need for additional storage to complement the existing storage facility on Scott Hamilton Drive. The additional storage, along with a hydraulic upgrade at the Peak Flow Pump Station, will further reduce the effects of inflow and infiltration (I/I) within the North and South 60 Sewer Interceptors thereby mitigating sanitary sewer overflows (SSOs) within the service area for the identified design storm. The preliminary engineering report identified the need for an additional 31 MG of storage. The Conditional Use Permit phase is completed. LRW progressed towards completion of the design phase efforts for this project in mid-2016. The project was bid, and construction began in September 2016.

The Peak Flow Pump Station was designed with a vacant pump position so the capacity of the station could be readily increased when storage becomes available. The increased capacity of the station will reduce the occurrence of SSOs for the design storm event with an additional 31 MG storage at the Scott Hamilton Peak Flow Facility. The additional pump is scheduled to be installed in 2017 along with the additional storage basin.

The five-year forecast prepared in conjunction with the 2017 capital budget allocates project cost of $6,069,094 in 2017; $8,299,700 in 2018; and $548,384 in 2019.

E. Fourche Creek Wastewater Treatment Facility Hydraulic Upgrade

The hydraulic upgrade of the Arch Street Pump Station from 36 million gallons per day (MGD) to 45 MGD necessitated the hydraulic upgrade of the Fourche Creek Wastewater Treatment Facility (FCWTF) to a minimum of 45 MGD. In 2008, LRW, with its consultant CDM, completed a 20-year CIP to assess treatment processes, identify deficiencies, and plan for improvements to the facility to meet future hydraulic and process needs. The overall project was divided into four phases. Phase One was the addition of the new disinfection system, with a project cost of $9,756,140.97. The disinfection project was completed January 2011. The second phase was the addition of a secondary clarifier, with a project cost of $10,066,644.03, was completed October 2011. With the completion of the second phase, the treatment facility can hydraulically handle 45 MGD. The third phase will address headworks, and primary clarifier needs with a project cost estimate of $3,659,000 to be initiated in 2017, and $4,988,820 in 2018. Phase Four of FCWTF does not include any improvements pertaining to the SECAP Update. This project is scheduled to be completed in 2018.

F. Adams Field Wastewater Treatment Facilities Nutrient Removal

In 2015, the Arkansas Department of Environmental Quality (ADEQ) determined that the oxygen demanding constituent of all municipal wastewater discharges, ammonia nitrogen (NH3-N), has a significant effect on the predicted dissolved oxygen (DO) level in the Arkansas River. The ADEQ water quality model indicated that an NH3-N permit limit of 7.0 mg/l for the Adams Field facility would be needed to meet the in-stream DO water quality standard of 5.0 mg/l.

In a letter dated May 21, 2015, ADEQ notified LRW that the next renewal permit will include new limits for NH3-N and directed LRW to begin working toward compliance in the next permit. The letter went on to say that LRW's failure to meet future permit limits could result in a significant noncompliance issue that will make this issue more difficult and costly to remove.

To achieve compliance, ADEQ directed LRW to submit two progress reports identifying steps taken toward evaluating and selecting operational changes and treatment options. Progress Report No. 1 was submitted on February 1, 2016, and indicated LRW's inability to comply with future NH3-N limits on a consistent basis with its current treatment system configuration. By February 1, 2017, Progress Report No. 2 shall enumerate changes in operational and treatment processes. The forecast prepared within the 2017 capital budget allocates project cost of $150,000 in 2017, $33,800,000 between 2019 and 2022, and $5,860,000 between 2024 and 2026.

G. Adams Field Parallel Treatment–(previously Storage/Disinfection)

The SECAP Update identified the need for additional storage at the AFWTF to complement existing and proposed storage facilities (Scott Hamilton Drive Peak Flow Facility). The additional storage would allow for extended hydraulic pass-through of rainfall dependent I/I

volume thereby mitigating sanitary sewer overflows within the service area for the identified design storm. However, the amount of storage prescribed in the SECAP Update limits the wet weather capacity of the facility to the duration of the design storm. Also, elevated flow rates through the biological portion of the facility hinder the ability of the facility to remove NH3-N. Within the 2016-2017 permit cycle, ADEQ requires more stringent limits on the amount of NH3-N within the effluent.

In 2014 LRW applied for and was granted in late 2015 a permit modification that will allow for parallel treatment of the biological system. A parallel treatment system used during wet weather events will take peak flows from the biological treatment train allowing it to run steady state and thereby remove NH3-N to within permit limits. Also, parallel treatment will prove effective in adequately treating effluent to within permit limits during wet weather events. The advantage of a parallel treatment system over storage is that the facility can maintain its peak capacity for a much longer duration than the design storm thereby reducing the amount of spillage within the collection system. With this permit modification, LRW abandoned the concept of additional storage at the facility and initiated parallel treatment design in 2016. The forecast prepared within the 2017 capital budget allocates project cost of $18,187,775 between 2017 and 2018.

H. Fourche Creek Wastewater Treatment Facility Nutrient Removal

Effective October 1, 2014, the ADEQ renewed a permit for the facility. Within the permit, ADEQ directed LRW to comply with a schedule for ammonia based limits predicated upon general water quality standards for this segment of the Arkansas River. At 18-months after the effective date of the renewed permit, Report No. 1 was submitted which contained an evaluation of the current treatment system, as configured, and its inability to comply with the final ammonia nitrogen (NH3-N) limits on a consistent basis. Before the deadline for Report No. 2, correspondence was received from ADEQ indicating their re-evaluation of the water quality model incorporating more accurate river widths, and site-specific instream values instead of ecoregion-based values. According to this ADEQ letter, the re-evaluation of the modeling analysis and the ammonia toxicity calculations determined that NH3-N limits are not needed for this facility. Both the updated model and the updated ammonia toxicity calculations were technically reviewed and deemed technically acceptable by EPA. Therefore, it was the ADEQ recommendation that LRW file for an NPDES permit modification application as soon as possible to have the final CBOD5 and NH3-N limits and the remaining compliance schedule removed from the current permit. On October 13, 2016, LRW filed with ADEQ the FCWTF Permit Modification Application requesting these changes.

I. Jamison Pump Station Upgrade

The Jamison Road Pump Station was constructed in 1993. The station consists of five submersible pumps which include two 25 HP and three 150 HP pumps. There are two grinders and screens – one on each of the inlet channels. Dry weather flow at the station is approximately 2 MGD. Peak pumping capacity is approximately 16 MGD. Overall the wet well, valve vault, and building structure are in good condition and the station is functioning as designed. No changes are immediately required, but the SECAP recommended installing back-up power, painting the ferrous surfaces at the station, and replacing the grinders with a

mechanical bar screen when maintenance of the grinders becomes an issue. The forecast prepared within the 2017 capital budget allocates project cost of $640,657 in 2019 and $1,648,908 in 2020. The project is scheduled to start in 2019 and be completed in 2020.

J. Overflow Mitigation Projects

In the late 1980s, LRW was the first municipality in Arkansas to establish a program to address excessive I/I which leads to SSOs during or following wet weather events. During the 1990s, LRW shifted its focus not only to address excessive I/I within public mains but to restore capacity to basin outfalls that were undersized for designated wet weather events and labeled this effort as the Overflow Mitigation Program (OMP). The program has reduced the number of overflow points within the city as well as reduced the amount of extraneous rainwater that was treated. LRW will continue this program as evidenced by the following identified future projects and corresponding funding efforts:

1. Overflow Mitigation Projects funded by State of Arkansas Revolving Loan Fund (RLF) XI:

a. Allsopp North/Country Club Rehabilitation $8,867,300

The Allsopp North/Country Club mainline cured-in-place pipe (CIPP) rehabilitation project was completed. The second phase of rehabilitation, Pipe Burst and Open Cut Construction, was completed in November 2015. The Allsopp North/Country Club project is the largest overflow mitigation project the utility has designed to date.

b. Allsopp Park/Country Club Outfall $4,869,945

These two outfall projects traversed some rather difficult terrain within the city's riverfront region and required careful attention to their environmental surroundings. Both outfall replacement projects were designed by McClelland Consulting Engineers (MCE), and MCE performed construction administration. The construction efforts were completed in February 2015.

c. Leawood OMP $6,829,800

The CIPP portion of this OMP has been completed. Construction of the second phase of rehabilitation, containing Pipe Burst and Open Cut Construction began in February 2016 and is scheduled to be completed in February 2017.

d. Lower Swaggerty OMP $6,075,900

The CIPP portion of this OMP has been completed. Construction of the second phase of rehabilitation, containing Pipe Burst and Open Cut Construction began in May 2015 and is scheduled to be completed in February 2017.

e. Pleasant Valley OMP $2,723,073

The CIPP portion of this OMP was combined with the rehabilitation, containing Pipe Burst and Open Cut Construction. This project was completed in October 2015.

f. Echo Valley OMP **$3,501,354**

The CIPP portion of this OMP was combined with the rehabilitation, containing Pipe Burst and Open Cut Construction. This project was begun in September 2014. Construction has been completed with final close-out of the contract in September 2016. A section of the outfall was pulled from the original contract, due to a major conflict with a 48" waterline, redesigned and bid as the Millbrook Upsize section of another project including Bishop St. Upsize and 17th Street Pipeburst Upsize. This work was completed in April 2016.

g. 0H – 0G Relocation **$580,800**

The 36" outfall serving the Baptist Hospital, the Natural Resources Complex, as well as West Financial District, was previously under design for relocation. The proposed relocation was disapproved by the Federal Highway Administration, due to being, in essence, a longitudinal utility installation inside the right-of-way of an Interstate Highway. Therefore, it was determined necessary to stabilize the existing 36" pipe in place as well as internally rehab the pipe, to help ensure the long-term integrity of this vital interceptor. The external stabilization phase was completed in November 2014. Bids for the Internal Rehabilitation phase were opened on September 4, 2015, and the work was completed in March 2016.

h. 42" Force Main Inspection & Diversion Structure – R29 $2,942,318

Since its installation in the early 1980s, the force main serving the FCWTF has undergone five major repairs due to hydrogen-sulfide degradation. This investigation will afford an internal review and structural determination of the remaining pipe. The unique situation of investigating while surcharged with raw wastewater created a challenge that until only recently has technology been available to "see" through this medium and evaluate the surrounding pipe material. A technology using the SmartBall was completed in the summer of 2014. No leaks were detected, but the ARVs on the force main will need to be upsized and access points will be installed at the locations. During the installation of the access points, further investigation will be performed internally on the force main. A diversion structure to allow flows to be transferred from the 30" Fourche Force Main to the Adams 60" during high flows is installed near Springer Boulevard which addresses the R29 project. The construction on this project began January 2016 and was completed in December 2016.

i. Allsopp North/Country Club Manhole Rehab **$431,900**

This manhole rehab project will help to address I/I, as well as repair any structural deterioration within the Allsopp North/Country Club basins. Construction on this project began in July 2016 and is scheduled to be completed by April 2017.

j. Leawood Manhole Rehab **$525,036**

This manhole rehab project will help to address I/I, as well as repair any structural deterioration within the Leawood area. Construction on this project began in 2016 and is scheduled to be completed by March 2017.

k. **Echo Valley Manhole Rehab** **$283,446**
This manhole rehab project will help to address I/I, as well as repair any structural deterioration within the Echo Valley area. Construction on this project began in 2016 and is scheduled to be completed by March 2017.

l. **Pleasant Valley Manhole Rehab** **$431,400**
This manhole rehab project will help to address I/I, as well as repair any structural deterioration within the Pleasant Valley area. Construction on this project began in July 2016 and is scheduled to be completed by April 2017.

m. **Springer Blvd – R1** **$1,159,089**
This project consists of the upsizing of the mainline and addresses any I/I, as well as structural deterioration. Construction began in October 2016 and is scheduled to be completed by March 2017.

n. **West Markham Mainline – R6** **$1,523,519**
This project consists of the upsizing of the mainline and addresses any I/I, as well as structural deterioration. Construction is scheduled to begin in January 2017 and is scheduled to be completed by July 2017.

o. **Bishop Street Relay – R14** **$287,964**
This project consisted of the upsizing of the mainline and addressed any I/I, as well as structural deterioration. This project was combined with the Millbrook Relay and 17th Street Pipeburst Upsize projects and bid together. Construction began in April 2016 and was completed in September 2016.

p. **Grassy Flat Main – R27** **$1,016,199**
This project consisted of the upsizing of the mainline and addressed any I/I, as well as structural deterioration. Construction began in July 2016 and was completed in December 2016.

q. **Lower Swaggerty OMP Manhole Rehab** **$544,000**
This manhole rehab project will help to address I/I, as well as repair any structural deterioration within the Lower Swaggerty area. Construction on this project began in July 2016 and is scheduled to be completed by April 2017.

r. **17th Street Pipeburst Upsize – R15** **$378,662**
This project consisted of upsizing three sections of the main line by re-laying and pipe bursting to provide adequate hydraulic capacity. This project was combined and bid with Bishop Street Upsize and Millbrook Upsize projects. Construction on this project began in April 2016 and was completed in September 2016.

s. **Fair Park Relay – R12** **$114,665**

This project consisted of upsizing three sections of the main line to provide adequate hydraulic capacity. This project was combined and bid as a package with the W. Markham Street Relay project. Construction on the Fairpark Relay portion began in July 2016 and was completed in August 2016.

2. Overflow Mitigation Projects Planned for RLF 2016:

RLF 2016 Projects

36th Street to Mabelvale Pike Outfall	$840,444
Cantrell Basin I/I Reduction SSES	1,781,875
Granite Mountain OMP	3,466,850
Jimerson West OMP	422,789
Longfellow OMP - Subbasin 11400	207,452
Mainline Improvements for Modeled Overflows/Growth	60,000
Markham to Rodney Parham Relay	166,535
Middle Hinson	1,303,419
Overlook/Pinnacle Point 10070	179,375
River Ridge - SB 11200 OMP	71,856
Rodney Parham Relay	57,564
Rose Creek Central OMP	443,834
Scott Hamilton Peak Flow Equalization Facilities	14,917,178
Sherrill Heights - SB 11000 OMP	70,200
Trenchless Sewer Line Renewal	1,700,000
University Avenue Relay	715,896
Upper Country Club Outfall	117,486
Victory St. Relay	8,764
Service Line Replacement Program	1,000,000
Total	**$27,531,517**

3. Overflow Mitigation Projects Planned for RLF 2018:

RLF 2018 Projects

17th Street Relay	$382,204
36th Street to Mabelvale Pike Outfall	15,945,528
Abigail Street Relay	81,739
Barrow OMP	349,549
Jimerson West OMP	2,465,667
Little Maumelle Sludge Line Design	2,493,783
Longfellow OMP	1,506,951
Lower Swaggerty OMP	1,187,929
Mainline Improvements for Modeled Overflows/Growth	4,908,310
Middle Hinson	9,241,369
Overlook/Pinnacle Point 10070	1,073,112
River Ridge OMP	349,305
Roselawn Cemetery Relay	596,411
Rock Creek Remediation	750,000
Rose Creek Central OMP	2,582,831
Rose Creek East Relay	752,202
Sewer Assessment Lines >18" (550,000 LF Total)	7,000,000

Subbasin 30100 OMP	263,367
Sherrill Heights OMP	255,286
Trenchless Sewer Line Renewal	2,500,000
Upper County Club Outfall	2,801,755
Walton Heights OMP	224,789
Total	**$57,712,087**

4. Overflow Mitigation Projects Planned for RLF 2019:

RLF 2019 Projects

Cantrell Basin I/I Reduction Construction'	$2,671,394
Jamison Pump Station Upgrade	2,289,565
Rebsamen Sewer Basin I/I Reduction	2,951,237
Rock Creek & Grassy Flat Sewer Basin I/I Reduction	2,951,237
Service Line Replacement Program	1,000,000
Trenchless Sewer Line Renewal	1,100,000
Two Rivers Park Pump Station	3,524,435
Total	**$16,487,868**

- **Project purpose:** SECAP/CAO/Sierra Club - Protect Health, Environment

5. Overflow Mitigation Projects Planned for RLF 2020:

RLF 2020 Projects

Barrow OMP SB 30700	2,837,778
Cantrell Basin I/I Reduction Construction'	6,296,074
Rebsamen Sewer Basin I/I Reduction	9,700,755
Rock Creek & Grassy Flat Sewer Basin I/I Reduction	8,826,574
Sewer Repairs Lines >18" (368,000 old) 25% = 92,125 LF	6,000,000
Subbasin 30100 OMP	1,501,445
Trenchless Sewer Line Renewal	1,440,000
Walton Heights - Basin 11600 OMP	1,694,015
Total	**$38,296,641**

- **Project purpose:** SECAP/CAO/Sierra Club - Protect Health, Environment

6. Overflow Mitigation Projects Planned for RLF 2022:

RLF 2022 Projects

Allsopp Park South Near CRPS	1,192,283
Boyle Park Mainline	729,570
Cantrell Basin I/I Reduction SSES & Construction	5,927,631
Rebsamen Sewer Basin I/I Reduction	4,658,998
Rock Creek & Grassy Flat Sewer Basin I/I Reduction	3,468,143
Sewer Repairs Lines >18" (368,000 old) 25% = 92,125 LF	6,000,000
Trenchless Sewer Line Renewal	1,440,000
Total	**$23,416,625**

- **Project purpose:** SECAP/CAO/Sierra Club - Protect Health, Environment

7. Overflow Mitigation Projects Planned for RLF 2024:

RLF 2024 Projects

Collection System Projects	6,498,770
Sewer Repairs Lines >18" (368,000 old) 25% = 92,125 LF	6,000,000
Trenchless Sewer Line Renewal	1,440,000
Total	**$13,938,770**

- **Project purpose:** SECAP/CAO/Sierra Club - Protect Health, Environment

8. Future Overflow Mitigation Projects:

Future Projects

Walnut Valley OMP	$2,791,600
Chicot Subbasin 40704	$3,138,700
Cloverdale Subbasin 40703	$4,771,400
Mabelvale Pike Subbasin 40701	$2,955,800
Meadowcliff Subbasin 40701	$4,864,200
Quapaw South SB 20401	$2,017,800
District 84 OMP	$3,066,000
Upper Coleman OMP	$5,557,500
District 119 OMP	$3,767,100
Mabelvale OMP	$2,365,300
Quapaw North OMP	$1,995,600
Foreman Lake OMP	$1,252,100
Hall High South OMP	$3,987,400
Total	**$42,530,500**

9. Overflow Mitigation Projects Completed under RLF VIII:

a. **Jimmerson Creek (RLF VIII) –** Completed in 2010.

b. **Jimmerson West Outfall (RLF VIII) –** Completed in 2010.

c. **Jimmerson East and Upper Hinson Manhole Rehab (RLF VIII) –** Completed in 2010.

d. **Allsopp South (RLF VIII) -** Completed in 2011.

e. **Barton (RLF VIII) –** Completed in 2011.

f. **System Evaluation and Capacity Assurance Plan Update (RLF VIII) –** Completed in 2010.

IV. OTHER COMPLIANCE ACTIONS

A. Signage/Public Notification/Public Information:

As required in the Agreement, LRW staff developed a Sanitary Sewer Overflow Response Plan (SSORP) which was authorized by the Little Rock Sanitary Sewer Committee, now the Little Rock Water Reclamation Commission (LRWRC), on September 18, 2002. The SSORP, as amended, is included in this document as

Attachment A. The plan establishes a protocol for maintenance crews to follow when responding to an SSO event and specifies internal and regulatory reporting procedures. The SSORP is reviewed and revised annually to ensure all policies, procedures, and contacts are accurate. The response protocol includes provisions for temporary signage and posting notices at individual residences. Temporary signage currently used by LRW is shown in Attachment B. A copy of the "door hanger" LRW uses to post residences is provided in Attachment C.

Practically all the SSO Notification Program requirements contained in the Agreement are addressed in the SSORP, including the provisions for permanent signage at recurring SSO locations on public property. Locations eligible for permanent signage are in Table A-1 of the SSORP.

An example of permanent signage placed at recurring SSO sites is shown in Attachment D.

V. 2016 NON-CAPACITY RELATED SANITARY SEWER OVERFLOWS

A. <u>Compliance Standard</u>: The Settlement Agreement limits the number of non-capacity related SSOs per 100 miles of sanitary sewer operated and maintained by LRW in LRWRC's collection and treatment system. The Settlement Agreement specifies the following "interim schedule" for non-capacity related SSOs:

Calendar Year	Number of Non-Capacity Related SSOs per 100 Miles of Sewer
2002	12
2003	11
2004	10
2005	9
2006	8
2007	7
2008	6

When LRWRC has reduced non-capacity related SSOs to 6 per 100 miles of sewer mains for two (2) consecutive calendar years, LRWRC shall be deemed to have complied with all provisions of this agreement related to non-capacity related SSOs.

B. <u>Non-Capacity Related SSOs in 2016</u>: There were 60 non-capacity related SSOs reported in 2016. Of the 60 total, thirteen (13) SSOs were related to construction and vandalism. The result was a total of 47 non-capacity related overflows attributed to the operation and maintenance of the LRW collection system. Of the 47 non-capacity related overflows, nine (9) SSOs were attributed to debris; nine (9) SSO were attributed to equipment failure; eight (8) SSOs were attributed to grease; four (4) SSOs were attributed to line failures; seventeen (17) SSOs were attributed to roots.* A complete listing of non-capacity related SSOs is provided under Attachment E.

* In March 2007, LRW eliminated the combination of "Roots & Grease" as a code in reporting the cause of an overflow. LRW decided to use either "Roots" or "Grease" to improve reporting and tracking of SSOs.

C. **Compliance Assessment:** LRW has reduced the number of non-capacity related sanitary sewer overflows attributed to the operation and maintenance of the collection system owned by LRW to below 6 per 100 miles of sewer lines for twelve (12) consecutive calendar years, - 2004 with a total of 42; 2005 with a total of 53; 2006 with a total of 42; 2007 with a total of 46; 2008 with a total of 33; 2009 with a total of 38; 2010 with a total of 39; 2011 with a total of 45; 2012 with a total of 49; 2013 with a total of 46; 2014 with a total of 36; and 2015 with a total of 36; 2016 with a total of 47. Therefore, under the Settlement terms in Paragraph No. 5, page 10, LRW is deemed to have complied with all provisions of this Settlement related to non-capacity related SSOs.

D. **Additional Projects Not Covered By SECAP:** In addition to the progress made on SECAP projects during 2016, LRW spent approximately $3,780,468.00 renewing or replacing structurally deteriorated sewer mains. Old deteriorated sewers are sources of infiltration/inflow and are prone to blockage, contributing to both the number of capacity and non-capacity SSOs.

In a continued effort to maximize rehabilitation dollars, LRW treated 32,261 feet of mainline in 2016 with a contracted chemical root removal company with a total cost of $48,419.55. Root removal is an important component of LRW's Plan 66 that targets SSO reduction.

LRW personnel completed work on 267 line segments that needed point repairs as well as relocated or replaced 5,983 feet of sewer line.

11,843 feet of sewer line was rehabilitated under the 2016 maintenance contracts for pipe bursting and cured-in-place-pipe (CIPP), for a total cost of $6,000,000.

In 2016, the Cleaning and Inspection Department Televised 603,600 feet, Hand Cleaned 585,605 feet, Hydro Cleaned 1,680,350 feet, and Line Walked 1,326,947 feet of sewer lines.

VI. 2016 CAPACITY RELATED SANITARY SEWER OVERFLOWS

A. **Compliance Standard:** The Settlement Agreement requires capacity related SSOs be mitigated, provided that SSOs may occur without a breach of the Settlement Agreement if rainfall amounts exceed a duration-quantity table that essentially defines a two-year storm event ("qualifying event"). A qualifying event shall occur if any of the twelve permanent rain gauges within the collection system record a two-year storm event. More specific, to that end, the agreement required completion of a study recommending and establishing a time line for specific actions to address capacity related SSOs. The study would serve as the foundation for a long-term compliance program.

B. **Capacity Related SSOs in 2016:** There was 191 capacity related SSOs reported in 2016 at 85 locations. There were four (4) rain events recorded in 2016 measuring above the Design Storm which resulted in one hundred sixty-eight (168) capacity related overflows. The remaining twenty-three (23) capacity related overflows occurring in 2016, resulted from rain events measuring below the Design Storm threshold. A complete listing of capacity related SSOs is provided under Attachment F.

VII. UPDATE OF THE CONSTRUCTION PROJECTS PURSUANT TO ATTACHMENT "B" OF THE CAO

The SECAP Update lists projects which will address the objectives of the CAO. The table on the following page updates the anticipated completion dates of these projects.

VIII. CONCLUSION

LRW has remained committed to educating our customers and the stakeholders of Little Rock on programs available to assist with maintaining a reliable sewer system, preventing overflows, and projects they may affect the area they live or work in. Many of these programs have received national recognition over the years and continue to be successful in their intent. LRW strives to improve upon these programs and to develop new programs as the world of wastewater collection and treatment changes through new technologies, regulations, and industry knowledge. Since the development of these programs, LRW has seen a noticeable drop in the frequency and severity of SSOs.

Since the filing of the Consent Administrative Order in 2006, LRW has come a long way in mitigating SSOs. LRW plans on taking a holistic approach to improving the current aging collection system by rehabilitating and replacing existing infrastructure that contributes to SSOs. The established maintenance procedures and schedules continue to provide the desired results by minimizing mainline stoppages within the system through replacement of structural pipe failures. LRW is committed to protecting public health and being a good steward of the environment.

ATTACHMENT A

SANITARY SEWER OVERFLOW RESPONSE PLAN

SANITARY SEWER OVERFLOW RESPONSE PLAN

TABLE OF CONTENTS

Little Rock Wastewater
SANITARY SEWER OVERFLOW RESPONSE PLAN
(As Amended January, 30, 2017)

I. AUTHORITY

A. National Pollutant Discharge Elimination System ("NPDES")
NPDES Permit for AFWTF # AR0021806
NPDES Permit for FCWTF # AR0040177
NPDES Permit for LMTP #AR0050849
Issued by Arkansas Department of Environmental Quality ("ADEQ")

II. GENERAL

The **Sanitary Sewer Overflow Response Plan ("SSORP")** is designed to ensure that every report of a confirmed sanitary sewage overflow is immediately dispatched to the appropriate crew so that the effects of the overflow can be minimized with respect to the impacts on public health, sewer system integrity, quality of surface waters, and customer service. The SSORP further includes provisions to ensure safety pursuant to the directions provided by ADEQ and that notification and reporting is made to the appropriate local, state, and federal authorities. For purposes of this SSORP, "confirmed sewage spill" is also sometimes referred to as "sewer overflow," "overflow," or "sanitary sewer overflow" or ("SSO"). The effective date of this plan is **September 30, 2002.**

A. Objectives

The primary objectives of the SSORP are to protect public health and the environment, as well as, to satisfy regulatory agencies and waste discharge permit conditions which address procedures for managing SSOs, and to minimize risk of enforcement actions against Little Rock Wastewater ("LRW").

Additional objectives of the SSORP are as follows:

- Provide appropriate customer service;
- Protect wastewater treatment plant and collection system personnel;
- Protect the collection system, wastewater treatment facilities, and the assets of LRW; and
- Protect private and public property beyond the collection and treatment facilities.

This plan shall not supersede existing emergency plans or standard operating procedures (SOPs) unless directed by the LRW Chief Executive Officer (C.E.O.).

B. Organization of Plan

The key elements of the SSORP are addressed individually as follows:

Section III	Overflow Response Procedure
Section IV	Public Advisory Procedure
Section V	Regulatory Agency Notification Plan
Section VI	Media Notification Procedure
Section VII	Distribution and Maintenance of SSORP

C. SSO Tracking

A procedure to track the frequency, type and location of SSOs has been prepared under *Appendix A.*

Data on each SSO occurrence is maintained in a database that can be analyzed based on any recorded SSO parameter. The database is maintained and backed up on a regular basis by the Information Services Department.

III. OVERFLOW RESPONSE PROCEDURE

The Overflow Response Procedure presents a strategy for LRW to mobilize labor, materials, tools, and equipment to correct or repair any condition which may cause or contribute to an unpermitted discharge. The plan considers a wide range of potential system failures that could create an overflow to surface waters, land, or buildings.

A. Receipt of Information Regarding a SSO

A SSO may be detected by LRW employees or by others. The Collection System Maintenance Dispatcher is primarily responsible for receiving phone calls from the public of possible SSOs from the wastewater collection system, and for forwarding service requests to the Responding Crew(s).

Generally, Dispatchers in the Collection System Maintenance Division receive telephone calls from the public reporting possible SSOs. The emergency phone line is staffed 24 hours per day, every day of the year. The Communications Department has a program in place for educating the public to report SSOs that they observe and to provide the phone number to be called.

1. The Dispatcher (or Response Crew Leader) obtains all relevant information available regarding the possible overflow including:

    a. Time and date call was received;

    b. Specific location;

    c. Description of problem;

    d. Time and date overflow was observed;

    e. Caller's name and phone number;

    f. Observations of the caller (e.g., odor, duration, back, or front of property); and

    g. Other relevant information that will enable the Responding Crews to quickly locate, assess and stop the SSO.

Once the SSO has been confirmed by the Responding Crew, the Dispatcher records/inputs the SSO information and creates a service request number for assignment to the Responding Crew. The Dispatcher consults Arc Map to determine if the drainage area is a named waterway.

Dispatcher informs Responding Crew if the result is a named waterway so that the proper Overflow Report Form can be completed. A Red Overflow Report Form is used when the drainage area is a named waterway (creek/stream/river).

2. Pump station failures are monitored and received by operators on duty at the Adams Field, Fourche Creek, and Little Maumelle Wastewater Treatment Facilities. The operator on duty immediately conveys all information regarding alarms to the Superintendent of Facilities and Equipment in order to initiate the investigation. Investigating crew determines if the failure resulted in an overflow and then reports the findings to the Collection System Maintenance Dispatcher if an SSO has occurred. A completed Overflow Report Form shall be sent via e-mail to the Collection System Maintenance Administrator for documentation.

3. SSOs detected by any personnel in the course of their normal duties are reported immediately to the Collection System Maintenance Dispatcher who records all relevant SSO information and dispatches a Response Crew and additional response crews as needed.

4. Collection System Maintenance Emergency Crew or Response Crew confirms the SSO. Until verified, the report of a possible spill will not be referred to as a "sewer overflow."

   If an overflow has occurred, the crew leader completes the appropriate Overflow Report Form and follows the Sanitary Sewer Overflow Response Tracking Protocol (See Figure III-1)

LITTLE ROCK WASTEWATER UTILITY

SANITARY SEWER OVERFLOW OR BYPASS REPORTING FORM

SERVICE REQUEST NUMBER: _____

REPORTED BY: _____ ADDRESS: _____

CALL TIME: _____ **AM or PM** (circle one) CALL DATE: _____

RESPONSE DATA:

CREW LEADER: _____

ARRIVAL TIME _____ **AM or PM** DATE: _____

COMPLETED TIME: _____ **AM or PM** DATE: _____

ACTION(S) TAKEN:

_____ **HC** = Hydro-cleaned/Jet-Vac

_____ **HR** = Hand/Machine Rodded

_____ **PN** = Public Notification

_____ **WO** = Work Order

_____ **DD** = Disinfected & Deodorized/Environmental Cleanup

_____ **LIME** = Lime Applied to Affected Area/Environmental Cleanup

_____ **GPPE** = Generator Used to Power Pumps/Equipment

_____ **EN** = Notify Engineering

SSO DATA:

DATE OF SSO: _____ **TIME OF SSO:** _____ **AM or PM**

LOCATION: _____ ADDRESS: _____

CAUSE:

_____ **RO** = Root(s)

_____ **G** = Grease

_____ **R** = Rainfall/I&I

_____ **CO** = Construction

_____ **D** = Debris

_____ **LF** = Line Failure/Break

_____ **HC** = Hydro Cleaning

_____ **VA** = Vandalism

_____ **EF** = Equipment Failure

_____ **PF** = Power Failure

IMPACT OF SSO INCIDENT:

_____ **GRPUB** = SSO Reached Public Land Only

_____ **GRPVT** = SSO Reached Private Property

_____ **TP** = SSO Occurred at Treatment Plant

ACTIVE DISCHARGE: _____ YES _____ NO (Evidence of Discharge)

OBSERVED FLOWRATE: _____ **GALLONS PER MINUTE**

ESTIMATED DURATION: _____ **MINUTES**

ESTIMATED VOLUME: _____ **GALLONS**

NOTE: IF SSO is active when found, the actual volume may be greater than the known volume.

ENVIRONMENTAL **NEAH** = No Evidence of Adverse Health or Environmental Impacts

LITTLE ROCK WASTEWATER UTILITY
SANITARY SEWER OVERFLOW OR BYPASS REPORTING FORM
WHEN USING THIS FORM, SEND AN EMAIL WITH THE SSO DATE AND LOCATION TO SSOADEQ@adeq.state.ar.us WITHIN 24 HOURS!

SERVICE REQUEST NUMBER: _____

REPORTED BY: _____ ADDRESS: _____

CALL TIME: _____ AM or PM (circle one) CALL DATE: _____

RESPONSE DATA:

CREW LEADER: _____

ARRIVAL TIME: _____ AM or PM DATE: _____

COMPLETED TIME: _____ AM or PM DATE: _____

ACTION(S) TAKEN:

_____ **HC** = Hydro-cleaned/Jet-Vac
_____ **HR** = Hand/Machine Rodded
_____ **PN** = Public Notification
_____ **WO** = Work Order
_____ **DD** = Disinfected & Deodorized/Environmental Cleanup
_____ **LIME** = Lime Applied to Affected Area/Environmental Cleanup
_____ **GPPE** = Generator Used to Power Pumps/Equipment
_____ **EN** = Notify Engineering

SSO DATA:

DATE OF SSO: _____ TIME OF SSO: _____ AM or PM (circle one)

LOCATION: _____ ADDRESS: _____

CAUSE:
_____ **RO** = Root
_____ **G** = Grease
_____ **R** = Rainfall/I&I
_____ **CO** = Construction
_____ **D** = Debris
_____ **LF** = Line Failure/Break
_____ **HC** = Hydrocleaning
_____ **VA** = Vandalism
_____ **EF** = Equipment Failure
_____ **PF** = Power Failure

IMPACT OF SSO INCIDENT:

_____ **CR** = SSO Reached Receiving Water (circle/stream/river)
_____ **CB** = SSO Contained in Building/Basement Backup
_____ **GRCB** = SSO Reach Ground Surface AND Building
_____ **GRPUB** = SSO Reached Public Land Only
_____ **GRPVT** = SSO Reached Private Property
_____ **TP** = SSO Occurred at Treatment Plant

If **CR**, provide name of waterway: _____

ACTIVE DISCHARGE: _____ YES _____ NO (Evidence of Discharge)

OBSERVED FLOWRATE: _____ **GALLONS PER MINUTE**

ESTIMATED DURATION: _____ **MINUTES**

ESTIMATED VOLUME: _____ **GALLONS**

NOTE: IF SSO is active when found, the actual volume may be greater than the known volume.

IF "CRCB" IS CHECKED, ESTIMATE GALLONS WITHIN BUILDING: _____

ENVIRONMENTAL DAMAGE:

_____ **OEHC** = Observed or Evidence of Human Contact
_____ **OEEI** = Observed or Evidence of Environmental Impact
_____ **EFK** = Evidence of Fish Kill

FIGURE III-1. SSO RESPONSE TRACKING PROTOCOL

1. Crew that locates overflow fills out Overflow Report Form:
   a) RED FORMS are used when there is evidence of human contact or environmental impact. When using this form, the responding crew leader shall send an email to SSOADEQ@adeq.state.ar.us within 24 hours, stating the date and location of the SSO (as per the revised AFWWTP permit language). Dispatcher will use the Arc Map database to assist Responding Crew in determining if an SSO in a drainage area is a named waterway (creek/stream/river). If it is determined that the fate is a named waterway, the SSO shall be reported on a red Overflow Report Form.

   b) BLACK FORMS are used when there is NO evidence of environmental impact and/or human contact.

2. Crew that locates overflow notifies Dispatch. Dispatch assigns a service number for tracking.

3. Response Crew (or Locating Crew) installs warning signs

4. Response Crew (or Locating Crew) takes photographs *before* cleanup

5. Response Crew cleans and sanitizes

6. Response Crew verifies cleanup is done correctly. If within a structure assures photos are taken within the structure, volume is estimated, the Customer Flood Report is properly completed, and contact information for the Safety & Risk Administrator is provided if applicable (i.e. damage claims).

7. Response Crew removes warning signs

8. Response Crew takes photographs *after* cleanup

9. Response Crew verifies Overflow Report Form is turned into Collection System Maintenance Administrator (Same Day)

10. Collection System Maintenance Administrator downloads photographs into database

11. Collection System Maintenance Administrator enters overflow information into the SSO event database

12. Plant Superintendent reports SSO data to ADEQ and other departments as required by NPDES Permits

B. Dispatch of Appropriate Crews to Site of Sewer Overflow

Failure of any element within the wastewater collection system that threatens to cause or causes a SSO triggers an immediate response to isolate and correct the problem. Crews and equipment are available to respond to any SSO location 24-hours a day. Additional maintenance personnel are designated "on call" in the event that extra crews are needed. Appendix B summarizes the SSO Action Plan.

1. Dispatching Crews

   - Dispatchers receive notification of possible SSOs (as outlined in Section III-A entitled "Receipt of Information Regarding an SSO") and dispatch an Emergency Crew or the appropriate area Response Crew as required.

   - Dispatchers notify the appropriate Supervisor by phone regarding SSOs and field crew locations.

2. Crew Instructions and Work Orders

   - Responding crews are dispatched by phone. The Maintenance Dispatcher receives instructions from the responding crews or their Supervisors regarding the appropriate crews, materials, supplies, and equipment needed.

   - Dispatchers verify that the entire message has been received and acknowledged by the crews who were dispatched. All standard communications procedures are followed. All employees being dispatched to the site of a SSO proceed immediately to the site of the overflow. Any delays or conflicts in assignments are reported immediately to the Supervisor for resolution.

   - In all cases Response Crews report their findings to Supervisor immediately upon making their investigation, including possible damage to private and public property. If Supervisor has not received findings from the field crew within 1 hour, Supervisor contacts the response crew to determine the status of the investigation.

3. Additional Resources

- The Supervisor receives requests for additional personnel, material, supplies, and equipment from crews working at the site of a SSO, and conveys the requests to the appropriate parties.

4. Preliminary Assessment of Damage to Private and Public Property

- The focus is to resolve the problem. The Response Crews use discretion in assisting the property owner/occupant as reasonably as they can. Be aware that LRW could face increased liability for any further damages inflicted to private property during such assistance. In the event the SSO occurs inside a structure, the Safety & Risk Administrator shall be notified and shall personally assess and document all damages as well as notify the Supervisor of the event. The Response Crew shall enter private property for purposes of overflow reporting. NOTE: A Collections System Maintenance Supervisor can take the place of the Safety & Risk Administrator in damage assessment activities relating to the time-sensitive information in the case that the Safety & Risk Administrator is unable to be on site at that time. In this case, the Collection System Maintenance Supervisor will provide the customer with the Safety & Risk Administrator's business card. All communication regarding damage claims will take place between the property owner and the Safety & Risk Administrator. The crew shall take appropriate still photographs, if possible, of the area of the SSO and the impacted area in order to thoroughly document the nature and extent of impact.

5. Field Supervision and Inspection

- The Responding Crew (or whomever confirmed the SSO), visits the site of the SSO, if possible, and takes photos and installs warning signage to ensure that provisions of this Overflow Response Plan and other directives are met.

6. Coordination with Hazardous Material Response

- Upon arrival at the scene of an SSO, should a suspicious substance (e.g., oil sheen, foamy residue) be found on the ground surface, or should a suspicious odor (e.g., gasoline)

not common to the sewer system be detected, the responding crew should secure the immediate area and should contact the Dispatcher or Safety & Risk Department. **Remember that any vehicle engine, portable pump or open flame (e.g., cigarette lighter) can provide the ignition for an explosion or fire should flammable fluids or vapors be present. Keep a safe distance and observe caution until assistance arrives.**

- Subsequent response actions should follow existing LRW procedures for "DETECTING POTENTIAL EXPLOSIVE OR TOXIC CONDITONS". These procedures are detailed in the LRW Safety Manual and attached as Appendix C.

- Only when the Safety & Risk Department determines it is safe and appropriate for personnel to resume activities can they then proceed under the SSORP with the containment, clean- up activities, and correction.

C. Overflow Correction, Containment, and Clean-Up

SSOs of various volumes occur from time to time in spite of concerted prevention efforts. Spills may result from blocked sewer lines, pipe failures, or mechanical malfunctions among other natural or man-made causes. LRW is constantly on alert and ready to respond upon notification and confirmation of an overflow.

This section describes specific actions to be performed by the crews during a SSO.

The objectives of these actions are:

- To protect public health, the environment and property from sewage overflows and to restore the surrounding area back to normal as soon as possible;

- To promptly notify the regulatory agency's communication center of preliminary overflow information and potential impacts;

- To contain the SSO to the maximum extent possible including preventing the discharge of sewage into surface waters; and

- To minimize the LRW exposure to any regulatory agency penalties and fines.

Under most circumstances, LRW handles all response actions with its own maintenance forces. They have the skills and experience to respond rapidly and in the most

appropriate manner. An important issue with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and repair the problem do not produce a problem elsewhere in the system. For example, repair of a force main could require the temporary shutdown of the pump station and diversion of the flow at an upstream location. If the closure is not handled properly, sewage system backups may create other overflows.

Circumstances may arise when LRW could benefit from the support of private-sector construction assistance. This may be true in the case of large diameter pipes buried to depths requiring sheet piling and dewatering should excavation be required. LRW may also choose to use private contractors for open excavation operations that might exceed one day to complete.

1. **Responsibilities of Response Crew upon Arrival**

   It is the responsibility of the initial Responding Crew that arrives at the site of an SSO to protect the health and safety of the public by mitigating the impact of the SSO to the extent possible. Should the SSO not be the responsibility of LRW, LRW shall notify Little Rock Code Enforcement of the incident.

   Upon arrival at an SSO, the initial response crew:

   - Determines the cause of the overflow, e.g. sewer line blockage, pump station mechanical or electrical failure, sewer line break, etc.;

   - Identifies and requests, if necessary, assistance or additional resources to correct the overflow or to assist in the determination of its cause;

   - Takes immediate steps to stop the overflow, e.g. relieves pipeline blockage, manually operates pump station controls, repairs pipe, etc. Extraordinary steps may be considered where overflows from private property threaten public health and safety (e.g., an overflow running off of private property into the public right-of-way); and

   - Requests additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the SSO.

2. **Initial Measures for Containment**

   Measures to contain and / or recover the overflowing sewage are initiated in order to minimize the impact to public health or the environment.

- Determine the immediate destination of the SSO. Dispatchers can use the Arc Map database to assist in determining if the destination of the SSO is a named waterway (creek/stream/river).

- Identify and request the necessary materials and equipment to contain or isolate the overflow if not readily available; and

- Take immediate steps to contain the overflow, e.g., block or bag storm drains, recover through vacuum truck, divert into downstream manhole, etc. if conditions allow as determined by LRW Maintenance Department.

- In the event an SSO has discharged into a creek, stream, or river, immediate measures to eliminate and contain the discharge will be taken. Immediate steps to eliminate the SSO discharging into a creek, stream, or river can include the following:

    - Establish bypass pumping of sewer to other areas of the collection system or holding tanks until repairs can be made

    - Utilize equipment that can vacuum sewer to eliminate or contain overflow until repairs can be made

  Once corrective action has been taken to restore flow to the collection system, immediate measures will be taken to contain and remove contaminants from the waterway as feasible. The focus is to remove oxygen-depleting solids from water, returning it back into the collection system. Efforts can include the following:

    - Establishing strategic points of containment along the waterway and removing contaminants through pumping, vacuuming, sweeping, etc.

    - Applying disinfectants as feasible along edges of waterway to eliminate contamination

    - Utilize portable aerators as feasible along edges of waterway to maintain adequate oxygen levels in water to preserve aquatic life until proper removal of contaminants is achieved

3. **Additional Measures Under Potentially Prolonged Overflow Conditions**

In the event of a prolonged sewer line blockage or a sewer line collapse, a portable bypass pumping operation should be set up around the obstruction.

- Take appropriate measures to determine the proper size and number of pumps required to effectively handle the sewage flow.
- Implement continuous or periodic monitoring of the bypass pumping operation as required.
- Address regulatory agency issues in conjunction with emergency repairs.

4. **Cleanup**

SSO sites are to be thoroughly cleaned after an overflow. No readily identified residue (e.g., sewage solids, papers, rags, plastics, rubber products) is to remain.

- Where practical, thoroughly flush the area and clean of any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal.
- Secure the overflow to prevent contact by members of the public until the site has been thoroughly cleaned. If posting is required, refer to Section IV.
- Where appropriate, disinfect and deodorize the overflow site.
- Where sewage has resulted in ponding, pump the pond dry and dispose of the residue in accordance with applicable regulations and policies.
- If a ponded area contains sewage which cannot be pumped dry, it may be treated with approved waterway application that is designed to kill bacteria. If sewage has discharged into a body of water that may contain fish or other aquatic life, do not use bleach or other appropriate disinfectant and contact the Arkansas Game & Fish Commission for specific instructions.
- Use of portable aerators may be required where complete recovery of sewage is not practical and where severe oxygen depletion in existing surface water is expected.
- Do not use enzymes in flowing creeks, streams, or waterways

D. Overflow Report

Emergency Crew or Response Crew completes an Overflow Report Form (See Figure III-1). Emergency Crew or Response Crew promptly notifies Dispatcher when the SSO is eliminated. Information regarding the SSO includes the following:

- Indication that the SSO reached surface waters, i.e., all SSOs where sewage was observed running to surface waters, or where there was obvious indication (e.g. sewage residue) that sewage flowed to surface waters.

- Indication that the SSO reached and discharged without containment onto public land, private property, or treatment plant. If the overflow was contained in a named creek/stream/river, the name of the waterway must be supplied. Dispatchers can utilize the Arc Map database to help in determining if the SSO reached a named waterway (creek/stream/river).

- Indication that the SSO had not reached surface waters. Guidance in characterizing these overflows includes:

  a. SSO to covered storm drains (with no public access) where personnel verify, by inspection, that the entire volume is contained in a sump or impoundment and where complete clean up occurs leaving no residue.

  b. Preplanned or emergency maintenance jobs involving bypass pumping if access by the public to a bypass channel is restricted and subsequent complete clean up occurs leaving no residue. Any preplanned bypass under these circumstances will not be considered an overflow; and

  c. SSOs where observation or on-site evidence clearly indicates that all sewage was retained on land and did not reach surface water and where complete cleanup occurs leaving no residue.

- Determine the start time of the SSO by one of the following methods:

a. Date and time the information was received and/or reported to have begun and later substantiated by the Emergency Crew or Response Crew: See below for how the time of the SSO is determined:

- Capacity-Related Overflows:
  1. An email is received by Collection System Maintenance from Engineering personnel, confirming that a category (A, B, C,) rain event has occurred and also stating at what time it became a category (A, B, C) rain event.

  2. Collection System Maintenance personnel reviews LRW Operations rainfall data (based upon minute-by-minute data from Little Rock rain gauge locations) to determine the time that the rain began to diminish.

  3. From this data, Collection System Maintenance personnel determines the TIME OF SSO by choosing a time that is approximately one (1) hour after the rain began to diminish, thus allowing the water to begin seeping into the ground and into the LRW Collection System.

  4. The determined TIME OF SSO is sent to all Right-of-Way Crews/Response Crew via email (and is also communicated to Dispatchers)

  5. The determined TIME OF SSO is consistently used by all Right-of-Way Crews/Response Crews on the LRW Overflow Report Form in the *Date of SSO* and *Time of SSO* fields for each SSO found that is related to the corresponding rain event.

- Non-Capacity Related Overflows:

  1. The TIME OF SSO is when the Response Crew arrives on site and confirms that the reported sewage spill is an actual overflow. Thus, the *Time of SSO* and the *Start Time* will be identical and will be recorded as such in the Hansen database system as well as on the LRW Overflow Report Form.

b. Visual observation; or

c. Pump station and lift station flow charts and other recorded data.

- Determine of the stop time of the SSO by one of the following methods:

a. When the blockage is cleared or flow is controlled or contained; or

b. The arrival time of the Emergency Crew or Response Crew, if the SSO stopped between the time it was reported and the time of arrival.

- Visual observations

  An estimation of the rate of SSO in gallons per minute (GPM) by one of the following criteria

  a. Direct observation of the overflow. See Appendix D for guidance on estimating sewer overflow rates.

  b. Measurement of actual overflow from the sewer main.

- Determination of the volume of the SSO:

  a. When the rate of the overflow is known, multiply the duration of the overflow by the overflow rate; or

  b. When the rate of the overflow is not known, investigate the surrounding area for evidence of ponding or other indications of overflow volume.

- Photographs of the event, before and after cleanup, when possible.

- Assessment of any damage to the exterior areas of public/private property: Personnel shall enter private property for purposes of estimating determining SSO volume.

E. Customer Satisfaction

- When a "fishkill/human contact" SSO is reported, the Hansen database automatically notifies the Communications Department when all SSO information is entered into the database. The Communications Department will then contact the reporting citizen and discuss the actions taken and the problem resolution. If the resident wants to make a claim for damages incurred, the Communications Department informs the resident of LRW's damage claim process. When a "non- fishkill" SSO occurs, the Communications Department is notified and, if necessary, takes any follow up action required (i.e. notify media or residents affected).

F. Responding to Overflow Locations Where a SSO has Reoccurred Prior to the Initial SSO being Completed

- When an SSO has been confirmed to have reoccurred prior to the initial SSO reported being closed, then the initial SSO reported will be closed with associated details.

- The reoccurring SSO that has been confirmed will be recorded as another SSO incident with associated details.

- In the event that manhole locations listed in Appendix A, Table A-2 of this document become inaccessible to LRW crews, the crew will conduct site visits daily until the site becomes accessible; crews will use an emergency call work order activity to track the daily site visits/to document site conditions. If an SSO has in fact occurred once the manhole becomes accessible, the same service request will be associated to the emergency work orders AND to the SSO for tracking purposes. All associated work order numbers can be found associated to the same service request number.

IV. PUBLIC ADVISORY PROCEDURE

This section describes the actions LRW takes, in cooperation with ADEQ and the Arkansas Department of Health to limit public access to areas potentially impacted by unpermitted discharges of pollutants to surface water bodies from the wastewater collection system. Temporary and permanent public notices will be provided as indicated below. A sample of both notices is provided in Appendix E.

A. Temporary Public Notice for Polluted Surface Water Bodies or Ground Surfaces that Result from Uncontrolled Wastewater Discharges from LRW Facilities

LRW has the primary responsibility for determining when to post notices of polluted surface water bodies or ground surfaces that result from uncontrolled wastewater discharges from its facilities. The postings do not necessarily prohibit use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination.

Table IV-1 outlines the decision process to recommend to the Chief Operating Officer (C.O.O.) that posting of a confirmed SSO be undertaken or that there is reasonable potential for an SSO to occur, thus the need to post in advance. If posting is deemed necessary, ADEQ shall be notified.

B. Permanent Public Notice

LRW shall place a permanent notice at manholes located on City-owned property that may experience SSOs more than once in any twelve-month period. A list of applicable manholes has been provided in Appendix A, Table A-1.

Table IV-1

Decision Process to Post Temporary Signage for Polluted Surface Water Bodies or Ground Surfaces that Result from Uncontrolled Wastewater Discharges from LRW Facilities

Category	Step	Event
Reported Overflow	1	Collection System Maintenance Division Supervisor or Response Crew confirms that the SSO that is not posted has resulted in ponded wastewater (ground surface or ditch ponding) or direct discharge to body-contact recreational waters between May 1st and September 30th.
	2	Collection System Maintenance Division Supervisor notifies Chief Operating Officer Division and provides relevant SSO information. a) SSO Location b) Remedial actions being taken
	3	Collection System Maintenance Supervisor dispatches investigator to consult with Collection System Maintenance Division on remedial actions and need and extent of posting
	4	Dispatched Investigator notifies Collection System Maintenance Division of assessment and makes recommendation on posting
	5	Collection System Maintenance Supervisor consults Chief Operating Officer for final decision on posting
	6	If Chief Operating Officer decides posting is required, Chief Operating Officer directs Collection System Maintenance Division to post warning sign(s) and notifies the Communications Coordinator of intent to post and location
	7	Warning sign(s) is/are posted by Collection System Maintenance Division
Potential Overflow	1	Reasonable potential for SSO that will result in ponded wastewater (ground surface or ditch ponding) or direct discharge to body-contact recreational waters between May 1st and September 30th identified.
	2	Collection System Maintenance Supervisor identifying potential SSO consults with Chief Operating Officer for final decision on posting
	3	If Chief Operating Officer decides posting is required, Chief Operating Officer directs Collection System Maintenance Division to post warning signs and notifies the Communications Department of intent to post and location
	4	Warning sign(s) is/are posted by Collection System Maintenance Division

C. Other Public Notification

If the Chief Operating Officer (C.O.O.) determines additional public notification is needed, the Communications Department will make said notifications under the C.O.O.'s direction.

V. REGULATORY AGENCY NOTIFICATION PLAN

The Regulatory Agency Notification Plan establishes procedures that LRW follows to provide formal notice to ADEQ as necessary in the event of SSOs. The reporting criteria that are listed below explain to whom various forms of notification should be made and also provide those agencies/individuals to be contacted.

Agency notifications will be performed in parallel with other internal notifications. The procedures for providing notification to the media of an SSO are presented in Section VI - Media Notification Procedure. Internal notification and mobilization of personnel are detailed in Section III - Overflow Response Procedure.

A. Immediate Notification

Upon data entry of a SSO event, an automated electronic event notification is sent to the Adams Fields Plant Operations Superintendent. The Adams Field Facility Superintendent then notifies and reports the SSO to ADEQ in compliance with LRW's Adams Field's NPDES Permit. For convenience, the applicable NPDES Permit reporting requirements are reprinted below.

> "The permittee shall report all overflows with the Discharge Monitoring Report (DMR) 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 overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g. storm sewer system, ditch, tributary). Overflows, which endanger health or the environment, shall be orally reported to this department (Enforcement Section of Water Division) within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment shall be provided within 5 days of the time the permittee becomes aware of the circumstance."

The Operations Secretary is responsible for meeting the 24-hour oral, fax, or online notification requirement. The name, mailing address, e-mail address, and telephone number for LRW's primary ADEQ contact is provided below:

Leslie Allen-Daniel
ADEQ Enforcement Analyst
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72218
Telephone: 501.682.0630
Email: allen-daniel@adeq.state.ar.us

B. Secondary Notifications

After those parties identified in *Section A. Immediate Notification* have been contacted, the Chief Operating Officer will notify other federal, state, and local agencies, as well as other interested and possibly impacted parties as directed by the Chief Operating Officer.

VI. MEDIA NOTIFICATION PROCEDURE

When an SSO has been confirmed and is a threat to public health, take the following actions, if necessary, to notify the media:

A. Sewer investigator or Response Crew verifies overflow and reports back to the Dispatcher.

B. The Dispatcher informs the Communications Department. The primary contact should be the Communications Coordinator

C. After hours and weekend SSOs should also be reported to the Communications Department at the contact numbers listed in *Table VI-1*.

D. All media requests received should be referred to the Communications Department.

E. The following personnel are authorized to be interviewed by the media and are the designated spokespersons:

1. Chief Executive Officer
2. Communications Coordinator
3. Chief Operations Officer
4. Chief Legal Officer

Table VI-1 provides contact names and numbers for the Communications Department.

Table VI-1
Little Rock Wastewater Media Contacts

Contact	Contact Name	Office	Mobile
Primary	Greg Ramon, Chief Executive Officer	501.688-1404	501-529-6340
Backup	Kenetta Ridgell, Communications Coordinator	501.688.1470	870.818.7993

VII. DISTRIBUTION AND MAINTENANCE OF SSORP

Annual updates to the SSORP reflect all changes in policies and procedures as may be required to achieve its objectives.

A. Submittal and Availability of SSORP

Copies of the SSORP and any amendments are distributed to the following departments and functional positions:

Department	Functional positions
Administration	Chief Executive Officer
Legal Services	Chief Legal Officer
Engineering	Director, Engineering
Maintenance	Director, Chief Operating Officer
Operations	Director, Superintendents
EAD	Director

All other personnel who may become incidentally involved in responding to overflows should also be familiarized with the SSORP.

B. Review and Update of SSORP

Review of the SSORP is conducted annually and amended as appropriate.

LRW should:

- Update the SSORP with the issuance of a revised or new NPDES permit or state waste discharge permit;
- Conduct annual training sessions with appropriate personnel; and
- Review and update, as needed, the various contact person lists included in the SSORP.
- Along with the submittal of the annual Consent Administrative Order Report, this SSORP document will be updated and submitted as part of the entire report.

C. Practical Resources

There will be laminated guides printed and furnished to all employees that are involved with the SSO Response Plan, which will provide an overview of the of procedures as well as essential phone numbers. There will also be a quick reference for estimating sewer overflow volumes.

D. Training

Each division will be responsible for training their own personnel. The training should include any employee who is involved in or may possibly be involved in the SSO process. These persons are provided a copy of the SSO Response Plan and said plan will be reviewed in depth with them. This training should take place annually or when revisions occur so that all personnel are brought up to date of any changes that may occur. Each division should also review their response efforts at these annual training sessions and should take suggestions to revise procedures. These suggestions will then be submitted to all divisions for review to determine if the revisions are required.

APPENDIX A. Procedure to Track Sanitary Sewer Overflows

The procedure to track the frequency and location of SSOs will be as defined below:

A. All SSOs will have a work order prepared within our work order database, which currently is Hansen.

B. SSOs will be defined as capacity: (**SOC** = Sewer Overflow Capacity) (**SOCP** = Sewer Overflow Capacity Private/capacity overflow occurring on privately-owned assets) or non-capacity: (**SONC** = Sewer Overflow Non-Capacity). The definition of a non-capacity will be one that overflows due to an obstruction in the main line, line failure, or equipment failures. The definition of a capacity related overflow is one that has insufficient carrying capacity to handle inflow and/ or infiltration during a storm event. Engineering shall maintain and update a list of capacity related SSOs. Several other codes have been defined as follows: (**SONCO**) Sewer Overflow Non-Capacity due to vandalism or contractor damage, (**SONCP**) = Sewer Overflow Non-Capacity Private / overflow occurring on a privately owned assets)

C. The work order will also include the asset number to identify the overflow locations, which will always be the upstream manhole number of the sewer main asset. A service number will also be assigned by Dispatch for tracking all associated activities.

D. Monthly reports will be prepared providing the number of capacity and non-capacity SSOs.

E. In addition to work order data, information on all reported SSOs will be maintained in an "event" database. The SSO event database (DMR) has been designed to contain all information required for regulatory reporting. Reports generated from the database will have the capability of pulling SSO locations based upon dates, assets and occurrences within a set time frame.

F. An initial list of reported capacity related SSOs has been developed for inclusion in the Permanent Signage phase of this SSORP. This list shall be maintained and annually updated as conditions and overflow mitigation efforts work to improve capacity related deficiencies in the collection system. The following list, Table A-1, contains those SSO sites that are to be equipped with permanent signage.

Table A-1

SSOs Eligible for Permanent Signage

SSO Manhole Number	Subbasin Number
-10-B008	60301
2H004	30030
2H017	30040
2H018	30040
2H019	30040
2H064	30030
2H074	30700
2K167	30700
2O025	30501
2O026	30501
2R026	40703
3D108	11501
3I036	30700
3K058	30700
3K061	30700
3N004	30501
3N005	30501
3N007	30501
3N055	30400
4B003	20030
4B005	10090
4L017	20030
4L076	20030
4N013	40030
4N016	30400
4N030	40702
4N089	30501
5C003	10090
5C007	11070
5L030	20030
6C006	10080

G. A second list has been developed, and shall be maintained, by Engineering that defines each potential capacity related SSO manhole by its respective Storm Level. Three such levels have been defined for simplicity in tracking the collection system's response to varying rainfall intensities. Storm Level A indicates an event that exceeds one inch of rainfall in a 24-hour period. These SSO manholes are early indicators of the collection system's response to wet weather conditions. The next tier, Level B, consists of SSO manholes that have the propensity to trigger when rainfall amounts exceed the one year or greater frequency, i.e. 3.5 inches over a 24-hour period. The last tier, Level C, are SSO manholes that only trigger in excess of a two year frequency storm event, i.e. 4.1 inches over a 24-hour period. Rainfall amounts, recorded by the SCADA network at various stations throughout the collection system, are continuously reported to the SCADA monitoring stations and to individual computers supported by the SCADA viewing software. Engineering shall be responsible for monitoring existing rainfall conditions and notifying Maintenance when Level A, B and Level C have been reached. The following list, Table A-2, provides the known, or suspected, SSO manholes that have the potential to discharge during wet weather events.

Table A-2. ***Capacity Related SSOs by Storm Level***

Storm Level	Status	Manholes	Area
A	Active	0G015	31300
A	Active	0G019	31300
A	Active	0G025	31300
A	Active	0G087	31300
A	Active	-10-B008	60301
A	Active	10I112	10901
A	Active	10J009	20700
A	Active	10L013	20800
A	Active	11K107	20700
A	Investigate	-1A048	11600
A	Active	1B012	11502
A	Active	1B018	11502
A	Active	1G087	30060
A	Active	2B068	11502
A	Active	2E080	31100
A	Active	2H019	30040
A	Active	2H074	30030
A	Active	2K142	30700
A	Active	2K143	30700
A	Active	2K167	30700
A	Active	2O025	30501
A	Active	2O026	30501
A	Active	2Q021	40703
A	Active	2R026	40703
A	Active	3D065	11501
A	Active	3D108	11501

A	Active	3I036	30700
A	Active	3K058	30700
A	Active	3K061	30700
A	Active	3N004	30501
A	Active	3N005	30501
A	Active	3N007	30501
A	Active	3N055	30400
A	Active	4B003	10090
A	Active	4B005	10090
A	Active	4L017	20030
A	Active	4L076	20030
A	Active	4N013	40030
A	Active	4N014	40030
A	Active	4N030	40702
A	Active	4N080	40702
A	Active	4N089	30501
A	Active	5C007	10070
A	Active	5L030	20030
A	Active	5L051	20030
A	Active	5L052	20030
A	Active	5L067	20030
A	Active	5L068	20030
A	Investigate	6C047	11400
A	Pending	6G012	21303
A	Active	6L011	20030
A	Active	6N009	40701

Storm Level	Status	Manholes	Area
A	Active	6N016	40701
A	Active	6N077	40701
A	Investigate	-7A065	60200
A	Investigate	7J065	21100
A	Active	-7K001	30502
A	Active	7K113	21200
A	Active	-8-A012	60200
A	Active	-8-A015	60200
A	Active	8E049	11101
A	Active	8E114	11101
B	Active	0D104	31700
B	Pending	2E085	31100
B	Active	6C006	10080
C	Active	0D034	31700
C	Investigate	0D113	31700
C	Active	0E011	31700
C	Active	0E053	31700
C	Active	0F146	31700
C	Active	11J053	20402
C	Investigate	1G008	30050
C	Investigate	1G010	30040
C	Active	2E066	31100
C	Active	2H004	30030
C	Active	2H017	30040
C	Active	2H018	30040
C	Active	2H064	30030
C	Active	2M028	30400
C	Investigate	2M034	30400
C	Investigate	2M060	30400
C	Active	2M085	30400
C	Active	2O002	30501
C	Active	2P025	40702
C	Investigate	3N006	30501
C	Investigate	4C090	11501
C	Active	4L013	30300
C	Active	4L015	30300
C	Active	4L019	20030
C	Active	4N016	30400
C	Active	4N019	40702
C	Investigate	5C003	10090
C	Pending	6D050	11102
C	Investigate	6G061	21303
C	Investigate	6H049	21200
C	Active	-6K010	30502
C	Active	-6K011	30502
C	Investigate	6N008	40701
C	Investigate	6N015	40701
C	Active	-7A053	60200
C	Investigate	7K012	20020
C	Active	-8-A006	60200
C	Active	8I006	20902

The "status" category provides an indication of the confidence level in the potential for this manhole to experience an SSO. "Active" means a confirmed SSO was experienced, "Investigate" means non-verified information has led to the inclusion on this listing and shall require field confirmation, while "Pending" indicates a rehabilitation effort has been conducted with field confirmation to follow to conclude positive mitigation. "Subbasin" and "Maintenance Crew Work Area (Maint. Area)" categories are for internal Engineering and Maintenance Department tracking and work area assignment.

H. An annual report will be prepared by Engineering, which shall include a review of all capacity related overflows, as well as determine updates to the two tables above for permanent signage and potential capacity related SSO manholes. These updated capacity related SSO lists shall be included for amendment to this SSORP.

APPENDIX B. SSO Action Plan

Dispatching Crews

Dispatchers receive notification of possible SSOs from two sources – public and internal crews.

Notification during working hours

Dispatchers receive notification of a possible SSO from the public at which time they collect all relevant information as outlined in Section III-A, which at this point they dispatch one of our area Response Crews or Emergency Crew to the site to verify if an SSO has occurred. The crew will report findings back to Dispatcher.

The Responding Crew determines if an SSO has occurred. The Responding Crew goes to site and takes photographs before clean-up is started and places warning signage at the site as well as at adjacent homes if required and available. The Dispatcher or Supervisor also verifies that the Responding Crew has filled out an Overflow Report Form and that the required information is on form. The Dispatcher can assist in determining if a red or black Overflow Report Form is the proper form to use when the fate involves a waterway by using the Arc Map database to determine if a drainage area is a named waterway.

Crews at this point start cleanup and sanitize the site. When complete, the crew is to verify that the cleanup is completed, take after photographs, and remove warning signs.

Notification after hours

The Emergency Crews receive notification of a possible SSO from the public at which time they collect all relevant information as outlined in Section III-A. and then proceed to the location. (Emergency Crew leader manages emergency phone after hours.)

The Emergency Crew determines if an SSO has occurred, attempts to resolve the problem, takes photographs before cleanup and places warning signs at the site as well as at adjacent homes if required. The crew is to fill out an Overflow Report Form which is submitted with their paper work at the beginning of the next workday.

The Emergency Crew then starts clean-up and sanitizes the site, which, when completed, the crew is to take after photographs and remove warning signs.

If the SSO occurred within a structure the Supervisor is to verify that cleanup has been completed and all policies were followed. A site visit is to be performed no later than the first

work day after the overflow occurrence. The Safety & Risk Administrator will be informed as well to handle any damage claims.

Internal Notification

Personnel in the field who find an SSO are to contact the Dispatcher and provide the relevant information as outlined in Section III-A. The same procedure as shown for public notification under working hours will be used.

Rain events that are one-inch or greater will trigger our crews to investigate possible recurring SSO sites to verify if an overflow has occurred. These crews will be furnished with a list of possible SSO sites (see Table A-2) which has been determined as being locations that have the potential to overflow. The crew will follow the same procedure as outlined under public notification during working hours. When a crew has gone through their list and an SSO was found, they will return to the site to conduct proper cleanup.

Crews will walk lines and open manholes to check for any blockage or surcharged lines before an SSO exists. These crews will use an activity code of **CIWALK** on their dailies for all segments that they walk. The crew will address all stoppages immediately to restore service and will fill out hand written work orders for additional follow-up investigation that will be turned in the following workday. A cleaning work order and a TV inspection are required on ALL main line sections where stoppages are found and where the work has not been performed during the initial investigation. If the crews find an SSO, they follow the same procedure as shown in the "public notification during working hours" section of this document.

Main line blockages will be cleaned within three (3) working days and a follow-up TV inspection is to be completed within an additional two (2) working days. After TV work has been completed, the Collection System Maintenance Supervisor will review the TV video to determine any subsequent appropriate action to prevent re-occurrence.

APPENDIX C. Detecting Potential Explosive or Toxic Conditions

Purpose

To ensure that all affected LRW employees are notified of potential health or safety hazards in the LRW collection system

Procedure

The following procedures must be followed when detecting potential health or safety hazards in the LRW collection system:

Step 1

The LRW employee(s) or crew discovering the potential health or safety hazard must notify Dispatch (by calling 223-1509) or the Safety & Risk Department (688-1468 or 688-1466) to report the potential problem.

A. Information included in the report:

1. Name of the employee making the report
2. Street address or location of potential hazard
3. Manhole number (if known)
4. Brief description of findings

B. If the health or safety hazard was reported to Dispatch: Dispatch should contact the Safety & Risk Department and report the above information.

Step 2

The Safety & Risk Department will then investigate the report.

Step 3

If the Safety & Risk Department confirms the report, the Safety & Risk Department will notify Dispatch to ALERT all affected field crews via cellphone that the reported area is "Off Limits" until further notified. The Safety & Risk Department will notify ALL other affected LRW & CAW department supervisors of the reported area.

Step 4

Dispatch will draft a notice with the location of the ALERTED areas and place a copy on all Safety News Bulletin Boards and backdoors at the LRW Clearwater Complex. Dispatch will also

forward a copy of the notice to Safety & Risk Department for placement on other Safety News BB's throughout the utility.

Step 5

The Safety & Risk Department will notify CAW dispatch of the Potential Hazardous Area.

Step 6

If the investigation suspects a Natural Gas Leak, the Safety & Risk Department will contact CenterPoint Energy to report the situation.

Step 7

The Safety & Risk Department will keep ALL affected LRW & CAW departments informed of the situation and monitor their (CenterPoint Energy) findings.

Step 8

Once the health or safety hazard has been corrected, the Safety & Risk Department will perform a follow- up investigation and when NO HAZARDOUS conditions exist, the Safety & Risk Department will remove the Safety ALERT and notify all affected departments.

Step 9

If gasoline, solvents, paint, or other foreign material is suspected and the hazardous area is located in an Industrial/Commercial Area, the Safety & Risk Department will contact the Environmental Assessment Department (EAD) at 501.688-1547 and transfer the report for further action.

Step 10

Industrial investigations resulting from explosive or toxic conditions will be performed by EAD pretreatment staff members using procedures from the pretreatment procedures manual. Findings will be provided to the Safety & Risk Department upon completion of the investigation.

After Hours Reporting

If a hazardous atmosphere is detected after normal working hours, the employee must report the area the next working day prior to his/her normal working hours. After this report is made the process will begin with "Step 1".

APPENDIX D. SSO Flow and Volume Determination

As indicated previously in this SSORP, each SSO that is actively discharging during the investigation phase of this response plan's tasks shall be evaluated for flow and ultimate total volume discharged, each of which is to be included as part of the reporting requirements. The Engineering Department has defined a three tiered flow estimating system that is derived from the reaction of the manhole lid in relation to the flow exiting the collection system. This system is easily field estimated without the need for measuring devices, which in most instances, would fail to achieve a proper signal due to the lack of sufficient depth of flow.

It has been determined that the majority of actively discharging SSOs reported by a response crew would be non-capacity related. Therefore criteria for determining flow should concentrate on these conditions for gravity sewer collection systems. The three-category rating system is outlined below:

- **0 – 10 gpm** (gallons per minute)
  This rate covers the light discharge experienced in the upper reaches of the collection system, usually with a small number of residential connections. The visual indicator would be a light flow (about the rate of a standard faucet) from around the manhole lid with no visible release of debris or solids and no movement or lifting of the lid itself.

- **10 – 100 gpm**
  This rate covers the moderate discharge experienced in the lower reaches of the collection system, usually along the larger collector or outfall type sewer mains (typically 10" and larger mains) and in some capacity related SSOs. The visual indicator would be a noticeable flow from around the manhole lid, slight debris or solids release, and a rocking or slight lifting of the manhole lid.

- **100 gpm** (greater than 100 gpm)
  This rate covers the heavy discharge experienced along the major outfall sewers and larger capacity related SSOs. The visual indicator is the definite release of debris or solids, and the complete lifting or displacement of the manhole lid.

SSO volumes are derived from the above category multiplied by the duration of discharge. If the exact length of discharge is unknown, criteria for determining an estimated time have been established in the Section III-D, Overflow Report.

APPENDIX E. Signage for Overflows

Temporary Signage

The following language shall be used on signs located on existing SSO sites during cleanup and on notices attached to homes adjacent to SSO sites:

NOTICE OF SANITARY SEWER

OVERFLOW

Please avoid contact with this

sanitary sewer facility due to

the possibility of adverse health effects until cleanup can be completed

For Additional Information
Contact 688-1490

Permanent Signage

The following language shall be used on signs located on potential SSO sites that occur more than once in a twelve-month period:

NOTICE OF
SANITARY SEWER OVERFLOWS
WHICH MAY OCCUR
AT THIS LOCATION

Please avoid contact with this

sanitary sewer facility during an

overflow condition due to the

possibility of adverse health effects

until cleanup can be completed

For Additional Information
Contact 688-1490

SSO Reporting Flow Chart *(FOUND INTERNALLY)*

Step 1.

1. Dispatch is notified internally (*i.e.* by field crew personnel) of a confirmed overflow.
2. Dispatcher creates Service Request Number in the LRW Hansen database

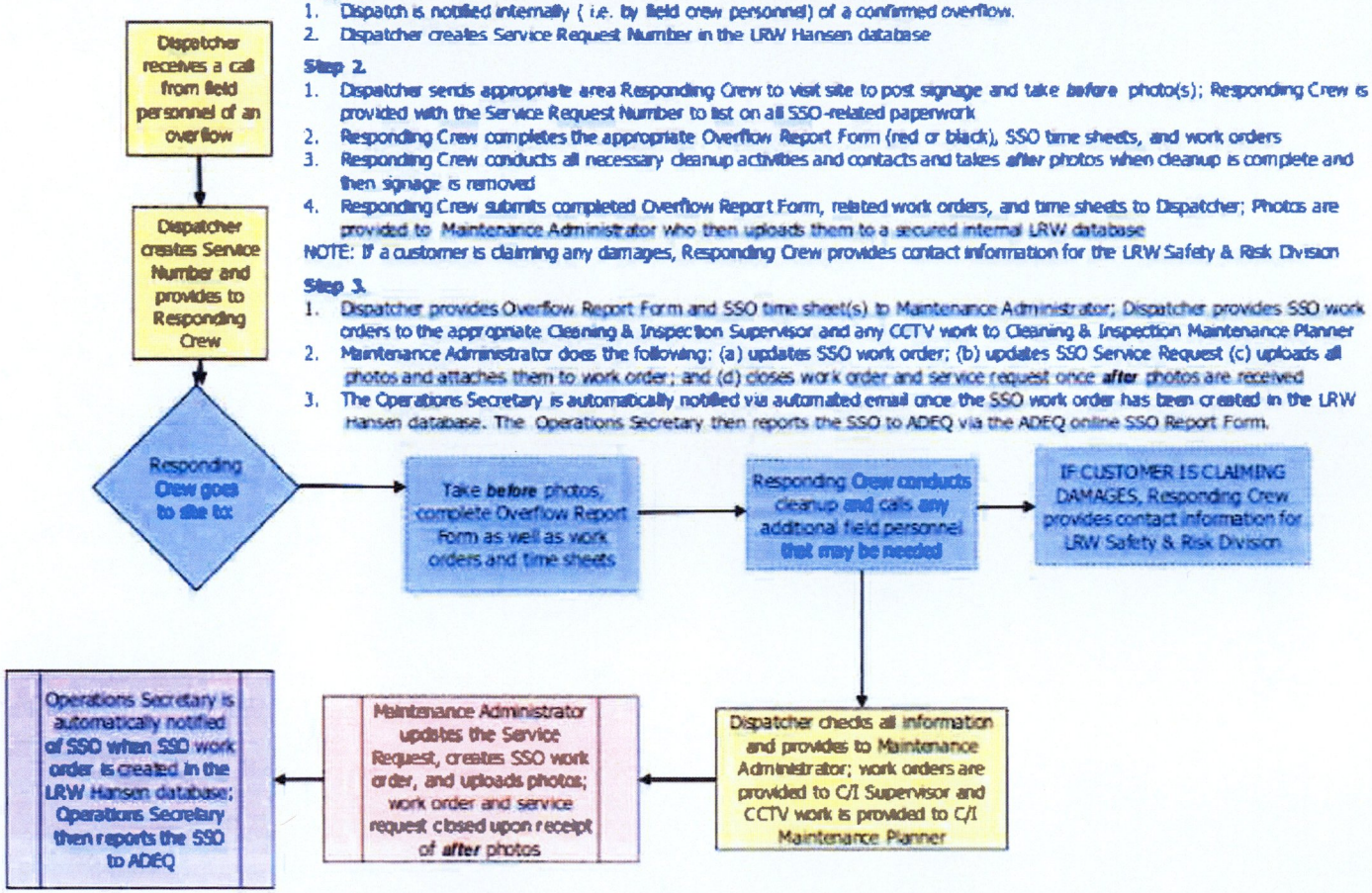
Step 2.

1. Dispatcher sends appropriate area Responding Crew to visit site to post signage and take *before* photo(s); Responding Crew is provided with the Service Request Number to list on all SSO-related paperwork
2. Responding Crew completes the appropriate Overflow Report Form (red or black), SSO time sheets, and work orders
3. Responding Crew conducts all necessary cleanup activities and contacts and takes *after* photos when cleanup is complete and then signage is removed
4. Responding Crew submits completed Overflow Report Form, related work orders, and time sheets to Dispatcher; Photos are provided to Maintenance Administrator who then uploads them to a secured internal LRW database

NOTE: If a customer is claiming any damages, Responding Crew provides contact information for the LRW Safety & Risk Division

Step 3.

1. Dispatcher provides Overflow Report Form and SSO time sheet(s) to Maintenance Administrator; Dispatcher provides SSO work orders to the appropriate Cleaning & Inspection Supervisor and any CCTV work to Cleaning & Inspection Maintenance Planner
2. Maintenance Administrator does the following: (a) updates SSO work order; (b) updates SSO Service Request (c) uploads all photos and attaches them to work order; and (d) closes work order and service request once ***after*** photos are received
3. The Operations Secretary is automatically notified via automated email once the SSO work order has been created in the LRW Hansen database. The Operations Secretary then reports the SSO to ADEQ via the ADEQ online SSO Report Form.



SSO Internal Reporting Flowchart
Revised 01/2017

APPENDIX G. Flowchart for External SSO Reporting

SSO Reporting Flow Chart *(FOUND EXTERNALLY)*

Step 1.

1. Dispatcher is notified by an external source of a possible overflow; at this point the overflow is not a *confirmed* overflow.
2. Dispatcher creates a Service Request and obtains a Service Request Number in the LRW Hansen database
3. Dispatcher contacts area Responding Crew to visit the site and to confirm the overflow; Dispatcher provides Service Request Number to Responding Crew

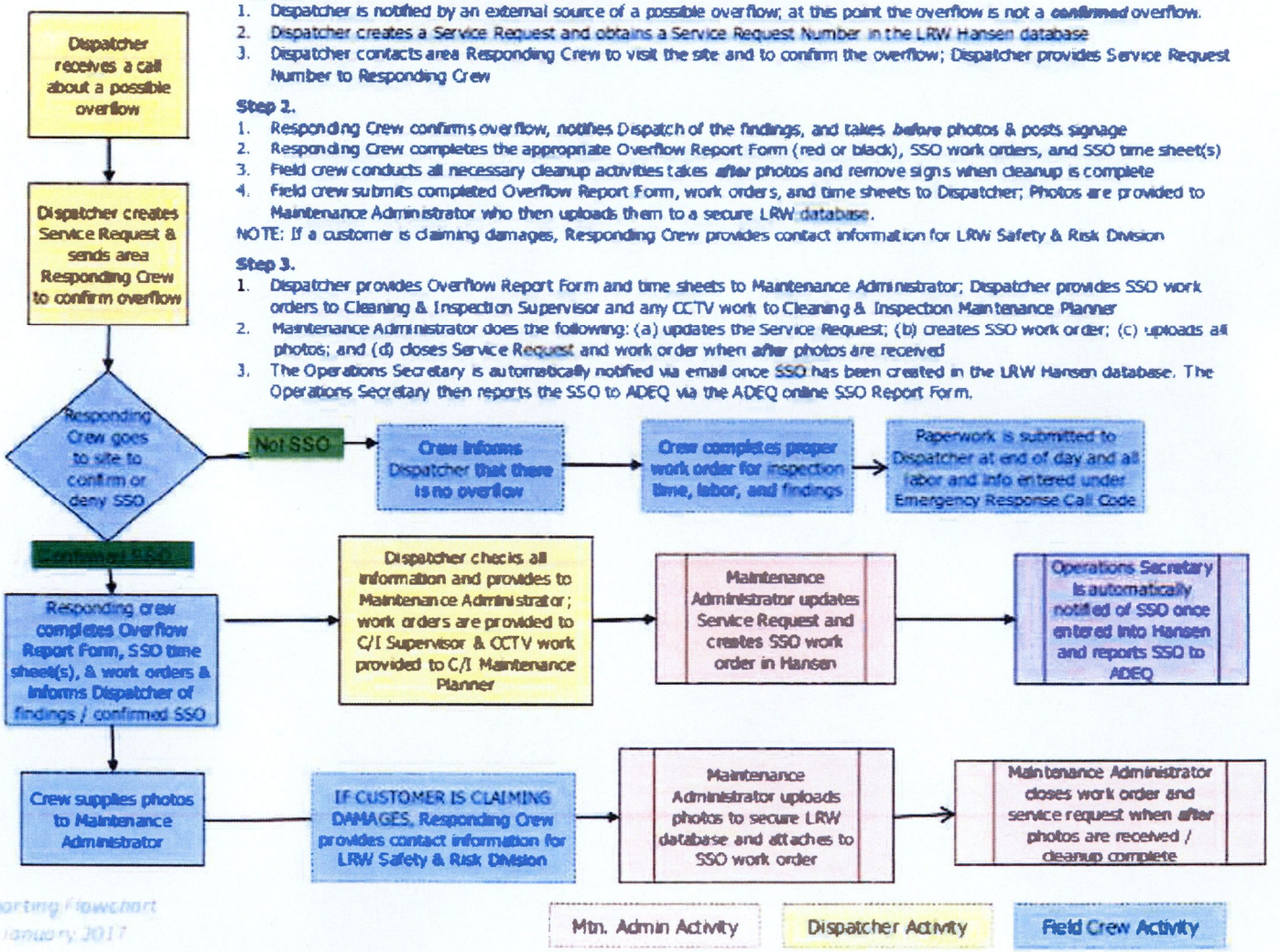
Step 2.

1. Responding Crew confirms overflow, notifies Dispatch of the findings, and takes *before* photos & posts signage
2. Responding Crew completes the appropriate Overflow Report Form (red or black), SSO work orders, and SSO time sheet(s)
3. Field crew conducts all necessary cleanup activities takes *after* photos and remove signs when cleanup is complete
4. Field crew submits completed Overflow Report Form, work orders, and time sheets to Dispatcher; Photos are provided to Maintenance Administrator who then uploads them to a secure LRW database.

NOTE: If a customer is claiming damages, Responding Crew provides contact information for LRW Safety & Risk Division

Step 3.

1. Dispatcher provides Overflow Report Form and time sheets to Maintenance Administrator; Dispatcher provides SSO work orders to Cleaning & Inspection Supervisor and any CCTV work to Cleaning & Inspection Maintenance Planner
2. Maintenance Administrator does the following: (a) updates the Service Request; (b) creates SSO work order; (c) uploads all photos; and (d) closes Service Request and work order when *after* photos are received
3. The Operations Secretary is automatically notified via email once SSO has been created in the LRW Hansen database. The Operations Secretary then reports the SSO to ADEQ via the ADEQ online SSO Report Form.



SSO Reporting Flowchart
Revised January 2017

ATTACHMENT B

NOTICE OF SSO/AVOID CONTACT UNTIL CLEANUP

Little Rock
Wastewater

NOTICE OF
SANITARY SEWER OVERFLOW

Please avoid contact with this sanitary sewer facility due to the possibility of adverse health effects until cleanup can be completed.

For Additional Information
Contact: 501-688-1490

ATTACHMENT C

DOOR HANDLE NOTICE OF SSO

NOTICE

Dear Customer:

In our increasing efforts to provide you with exceptional service, continue our preventive maintenance program, and eliminate sanitary sewer overflows, our crews are working in your area. We need to gain access to your property to:

- ☐ check an existing manhole
- ☐ perform routine inspection/maintenance on an existing line or manhole
- ☐ grease-related stoppage
- ☐ other: _____

SORRY WE MISSED YOU. PLEASE CONTACT US AT YOUR EARLIEST CONVENIENCE.

THANKS

Work Order#: _____ Today's Date: _____

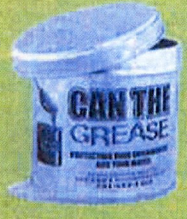
or

Line Segment: _____

Little Rock Wastewater

www.lrwu.com

YOU CAN ALSO HELP ...



Eliminate sanitary sewer overflows by enrolling in Little Rock Wastewater's *Can the Grease* program. This program allows you to receive one grease can and lid, heat-resistant liners, and lots of information — ALL AT NO CHARGE. Upon receiving the grease packet, all you have to do is:

1. Place the heat-resistant liner in the grease can;
2. Pour your leftover cooking grease into the bag and put the lid back on the can;
3. Once the bag is full, take it out and toss it in the trash. Place another liner in the can.

Signing up is easy, too. Just fill out the card below with your name, address, and telephone number, then return it to us.

Name _____

Address _____

Telephone number _____

Please return card to: Little Rock Wastewater
11 Clearwater Drive
Little Rock, AR 72204
501-688-1400
www.lrwu.com

ATTACHMENT D

NOTICE OF SSO WHICH MAY OCCUR AT THIS LOCATION


2-3-19
1500 W 65th Hindman PK
20-025
#63848 B

ATTACHMENT E

NON-CAPACITY RELATED SANITARY SEWER OVERFLOWS SUMMARY REPORT

LITTLE ROCK WASTEWATER UTILITY
NON-CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

CODE DESCRIPTIONS

NPDES PERMIT

FC - Fourche Creek Treatment Plant
NPDES Permit No. AR0040177

AF - Adams Field Treatment Plant
NPDES Permit No. AR0021806

LM - Little Maumelle Treatment Plant
NPDES Permit No. AR0050849

CAUSE(S) OF SSO

CO - Construction
D - Debris
E - Equipment Failure
G - Res. Grease
GC - Com. Grease
LF - Line Failure
RG - Roots & Grease
RO - Roots
VA - Vandalism
HC - Hydro-Clean

OBSERVED ENVIRONMENTAL IMPACT

NEAH - No Evidence of Adverse Health or Environmental Impacts
OEHC - Observed or Evidence of Human Contact
EFK - Evidence of Fish Kill

ACTION(S) TAKEN

WO - Work Order
EC - Environmental Cleanup
HC - Hydro Cleaned
HR - Hand Rodded
EN - Reporting to Engineering
PN Public Notification

ULTIMATE DISCHARGE LOC.

CR - Creek/Stream/River
DI - Ditch
DR - Drop Inlet
GR - Ground Surface
PA - Paved Area
CB - Contained in Building
GR/CB - Building and Ground

NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	711 N MONROE ST	6F171	02/12/2016	8:25 am	60	60	CO	NEAH	EC, PN	DR
AF	1401 BISCAYNE DR	2E080	03/02/2016	10:15 am	60	300	CO	NEAH	EC, PN, WO	GR
AF	12417 CANTRELL RD	-4A024	03/07/2016	3:45 pm	120	1,200	CO	NEAH,OEHC,EFI	EC, PN, WO	DI
AF	3721 FOXCROFT RD	1B023	04/05/2016	3:00 pm	15	75	CO	NEAH,OEHC	EC, EN, PN	CR
AF	2601 MILLBROOK RD	0D163	04/08/2016	2:30 pm	15	15	CO	NEAH	EC, PN	GR
AF	16115 SAINT VINCENT WAY	-9F052	05/05/2016	8:30 am	60	60	CO	NEAH	EC, PN	PA
AF	2301 CRISP DR	161050	07/01/2016	1:00 pm	60	60	CO	NEAH	EC, PN, WO	PA
AF	3604 E 37TH ST	17L074	08/03/2016	8:00 am	60	120	VA	NEAH	EC,WO	GR
AF	1701 N PIERCE ST	5E202	08/23/2016	10:00 am	60	60	CO	NEAH	EC, EN, PN, WO	GR
AF	1024 SHAMROCK DR	3F092	08/27/2016	12:40 pm	20	100	CO	NEAH	EC, EN, PN, WO	GR
AF	3009 HIDDEN VALLEY DR	-2C061	10/07/2016	8:30 am	60	60	CO	NEAH	EC, EN, PN, WO	PA
AF	2720 N FILLMORE ST	5D007	11/16/2016	6:20 pm	30	60	CO	NEAH	EC, PN, WO	DI
AF	212 SPRINGWOOD DR	-2G088	12/07/2016	9:00 am	480	24,000	CO	NEAH,OEHC	EC, PN, WO	CR
				COUNT of OTHER OVERFLOWS:			**13**			
AF	9/5/02 DOWNSTREAM MANHOLE	11H181	01/06/2016	3:00 pm	60	180	D	NEAH	EC, PN, WO	DR
AF	1016 SHAMROCK DR	3F091	01/20/2016	10:30 am	60	60	RO	NEAH	EC, EN, WO	PA
FC	10200 WOODBRIDGE DR	2T097	01/21/2016	8:40 am	60	300	G	NEAH	EC, PN, WO	GR
AF	484 RIDGEWAY DR	8G131	01/23/2016	12:20 pm	60	1,200	D	NEAH	EC, PN, WO	GR
AF	3200 S ELM ST	7K079	01/26/2016	12:35 pm	60	60	RO	NEAH	EC, PN, WO	GR
AF	6 ABBEY LN.	2D041	01/26/2016	2:15 pm	45	225	D	NEAH	EC, PN	GR
AF	29 GLENRIDGE RD	1B029	01/29/2016	9:30 am	60	120	RO	NEAH	EC, PN, WO	GR
FC	FC	FOURCHE	02/24/2016	4:45 am	300	24,000	E	NEAH	EC,WO	DR
FC	FC	FOURCHE	02/24/2016	4:45 am	300	24,000	E	NEAH	EC,WO	DR
AF	AF	ADAMS	02/24/2016	3:13 pm	1	150	E	NEAH	EC, PN	GR

LITTLE ROCK WASTEWATER UTILITY
NON-CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

CODE DESCRIPTIONS

NPDES PERMIT

FC - Fourche Creek Treatment Plant
NPDES Permit No. AR0040177

AF - Adams Field Treatment Plant
NPDES Permit No. AR0021806

LM - Little Maumelle Treatment Plant
NPDES Permit No. AR0050849

CAUSE(S) OF SSO

CO - Construction
D - Debris
E - Equipment Failure
G - Res. Grease
GC - Com. Grease
LF - Line Failure
RG - Roots & Grease
RO - Roots
VA - Vandalism
HC - Hydro-Clean

OBSERVED ENVIRONMENTAL IMPACT

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HC - Hydro Cleaned
HR - Hand Rodded
EN - Reporting to Engineering
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NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	501 N COOLIDGE ST	3F030	02/26/2016	9:45 am	60	120	RO	NEAH	EC, PN, WO	GR
AF	304 W 4TH ST	12H228	02/29/2016	8:30 am	60	60	RO	NEAH	EC	PA
FC	19 N MEADOWCLIFF DR	4N030	03/04/2016	6:15 pm	60	60	RO	NEAH	EC, PN, WO	GR
AF	610 E 6TH ST	13H086	03/08/2016	12:20 pm	60	180	G	NEAH	EC, PN, WO	DR
AF	1723 S SUMMIT ST	10I040	04/04/2016	1:15 pm	15	15	G	NEAH	EC, PN, WO	PA
AF	510 ROSE ST	7F046	04/06/2016	9:00 am	5	5	LF	NEAH	EC, EN	GR
AF	LM	LITTLE	04/12/2016	5:00 pm	60	1,800	LF	NEAH	EC, EN, WO	DI
AF	1600 E TWIN LAKES DR	0I040	04/13/2016	1:00 pm	30	150	RO	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	4N016	04/13/2016	3:30 pm	30	600	RO	NEAH	EC, PN	DI
AF	16211 COOPER ORBIT RD	-7J030	04/19/2016	1:20 pm	25	25	RO	NEAH	EC, PN	GR
AF	2601 MILLBROOK RD	0D018	04/23/2016	8:45 am	60	300	E	NEAH	EC, PN	GR
AF	6412 CANTRELL RD	4E019	04/26/2016	9:00 am	60	60	RO	NEAH	EC, EN, PN	PA
AF	8324 W 29TH ST	1K153	04/26/2016	5:30 pm	60	120	RO	NEAH	EC, PN, WO	DI
AF	400 N PALM ST	6G062	05/04/2016	10:00 am	180	180	D	NEAH	EC, PN, WO	DI
AF	2605 CHARTER OAK DR	0D104	05/06/2016	11:30 am	15	75	E	NEAH	EC, PN	GR
AF	1814 E 38TH ST	15L021	05/20/2016	9:30 am	30	150	D	NEAH	EC, PN	DI
FC	BACKWATER FLOW VALVE	3R079	05/30/2016	4:00 pm	60	60	G	NEAH	EC, PN, WO	GR
FC	8005 EDWINA DR	2Q040	06/09/2016	12:45 pm	15	15	RO	NEAH	EC, EN	GR
FC	5410 63RD AVE	4N032	07/06/2016	5:00 pm	60	120	RO	NEAH	EC, EN, PN	GR
FC	16 ROSEMOOR CT	6N009	07/11/2016	9:00 am	60	120	RO	NEAH	EC, PN	GR
AF	3100 SPRINGER BLVD	14K090	07/13/2016	4:00 pm	60	240	E	NEAH	EC, EN, PN	GR
AF	400 W 19TH ST	12J185	07/26/2016	1:30 pm	60	1,200	D	NEAH	EC, PN, WO	PA
AF	32ND ST. & WOLFE ST.	10K136	08/10/2016	2:30 pm	60	120	D	NEAH	EC, PN, WO	DR
AF	23 SHACKLEFORD DR	-2G054	08/11/2016	8:30 am	200	1,000	RO	NEAH	EC,WO	DI
AF	13810 MARINA DR	-5-A006	08/15/2016	10:45 am	300	600	E	NEAH	EC,WO	GR

LITTLE ROCK WASTEWATER UTILITY
NON-CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

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NPDES Permit No. AR0050849

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ULTIMATE DISCHARGE LOC.

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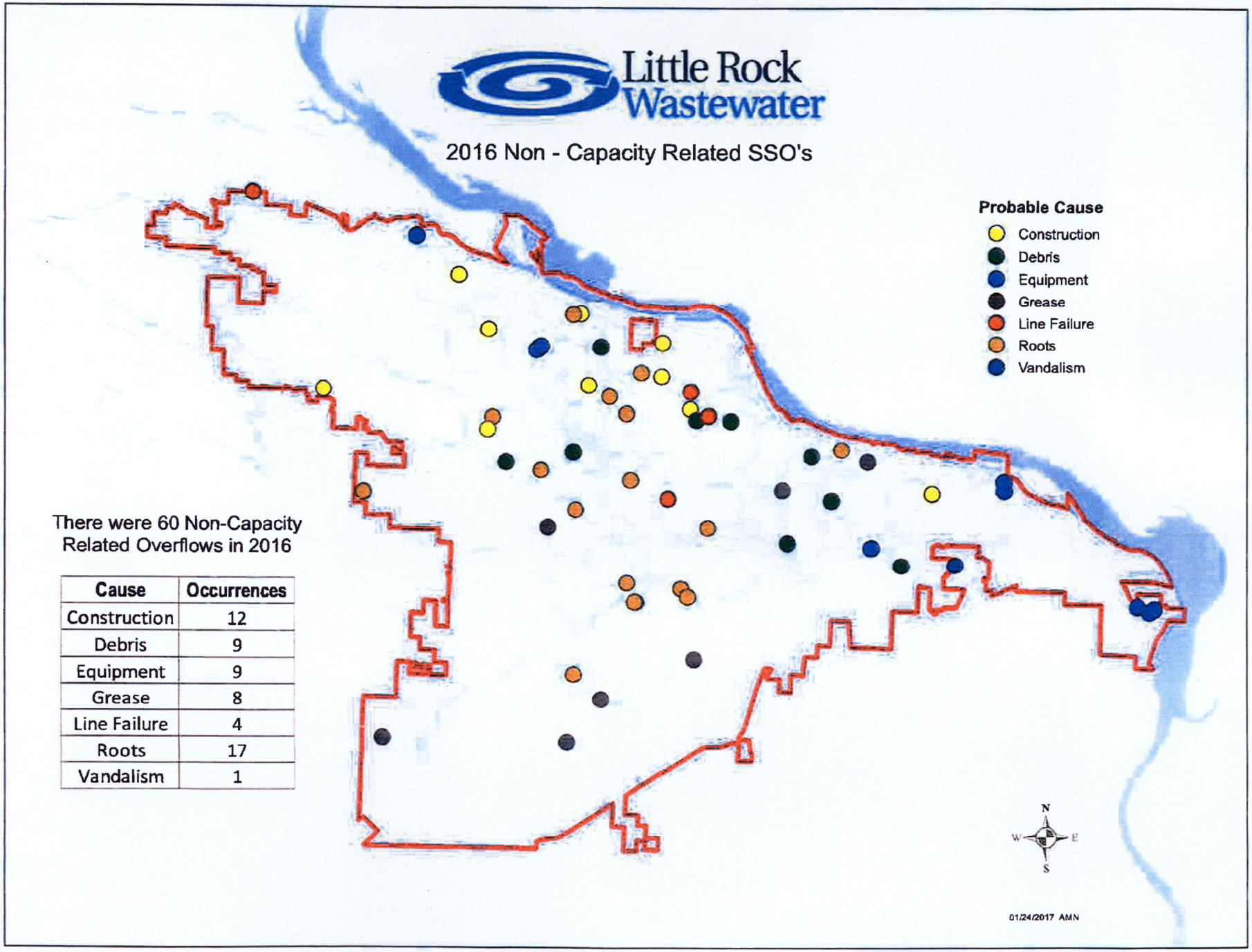
NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	1701 WESTPARK DR	4I032	08/17/2016	11:00 am	150	150	RO	NEAH	EC, PN, WO	DI
AF	1221 S SHACKLEFORD RD	-1I065	08/29/2016	12:15 pm	60	120	D	NEAH	EC, PN, WO	DR
AF	3802 KAVANAUGH BLVD	6E166	09/06/2016	10:45 am	60	60	LF	NEAH	EC, EN, PN, WO	PA
AF	801 JOHN BARROW RD	1H004	09/07/2016	11:00 am	25	500	D	NEAH	EC, PN	DI
AF	AF	ADAMS	09/30/2016	10:00 am	33	100	E	NEAH	EC	GR
FC	57 ROSEMOOR DR	6N018	10/24/2016	3:30 pm	60	120	RO	NEAH	EC, PN, WO	GR
AF	2211 S TAYLOR ST	5J039	11/03/2016	7:30 am	60	240	LF	NEAH	EC, EN, PN, WO	DR
FC	7307 E WAKEFIELD DR	6P041	11/13/2016	2:00 pm	20	20	G	NEAH	EC, PN, WO	PA
FC	FC	FOURCHE	11/18/2016	11:30 am	2	9,716	E	NEAH	EC	DR
FC	11020 DOGWOOD CV	-6T057	11/18/2016	7:00 pm	60	300	G	NEAH	EC, PN, WO	DI
AF	3403 LEHIGH DR	0K015	11/28/2016	11:35 am	60	180	G	NEAH	EC, PN, WO	DR
AF	2605 CHARTER OAK DR	0D104	12/05/2016	7:30 am	60	180	G	NEAH	EC, PN	GR

COUNT of MANHOLE OVERFLOWS: 47

COUNT of NON-CAPACITY OVERFLOWS : 60


Little Rock Wastewater
2016 Non - Capacity Related SSO's
Probable Cause
Construction
Debris
Equipment
Grease
Line Failure
Roots
Vandalism
There were 60 Non-Capacity Related Overflows in 2016
Cause | Occurrences
Construction | 12
Debris | 9
Equipment | 9
Grease | 8
Line Failure | 4
Roots | 17
Vandalism | 1
N
W
E
S
01/24/2017 AMN

ATTACHMENT F

CAPACITY RELATED SANITARY SEWER OVERFLOWS SUMMARY REPORT

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

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CAUSE(S) OF SSO

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FC	19 N MEADOWCLIFF DR	4N030	01/09/2016	5:00 pm	60	120	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	3N004	01/09/2016	5:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	3N005	01/09/2016	5:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
FC	5207 WESTERN HILLS AVE	4N013	01/09/2016	5:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	4N089	01/09/2016	5:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	7500 W 65TH ST	2O026	01/09/2016	5:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
FC	7909 MCDANIEL DR	2Q021	01/09/2016	5:00 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	810 PINE VALLEY RD	3D108	01/09/2016	5:00 pm	10	50	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C007	01/09/2016	5:00 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	3217 WHITFIELD ST	3K061	02/24/2016	8:00 am	30	150	R	NEAH,OEHC	EC, EN, PN	CR
AF	3501 WHITFIELD ST	3K058	02/24/2016	8:00 am	10	150	R	NEAH	EC, EN, PN	GR
AF	7500 W 65TH ST	2O025	02/24/2016	8:00 am	60	240	R	NEAH,OEHC	EC, EN, PN, WO	CR
AF	1420 REBSAMEN PARK RD	8E049	03/08/2016	11:00 pm	60	60	R	NEAH	EC, EN, PN	GR
AF	1420 REBSAMEN PARK RD	8E114	03/08/2016	11:00 pm	60	60	R	NEAH	EC, EN, PN	GR
FC	16 ROSEMOOR CT	6N009	03/08/2016	11:00 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	1601 WESTPARK DR	3I036	03/08/2016	11:00 pm	2,110	42,200	R	NEAH,OEHC	EC, EN, PN	CR
FC	19 N MEADOWCLIFF DR	4N030	03/08/2016	11:00 pm	60	240	R	NEAH	EC, EN, PN	GR
AF	3201 WHITFIELD ST	2K167	03/08/2016	11:00 pm	1,490	14,900	R	NEAH	EC, EN, PN	DI
AF	3317 WHITFIELD ST	3K061	03/08/2016	11:00 pm	1,995	9,975	R	NEAH,OEHC	EC, EN, PN	CR
AF	3417 WYNNE ST	2K143	03/08/2016	11:00 pm	1,470	14,700	R	NEAH	EC, EN, PN	DI
AF	3423 WHITFIELD ST	2K142	03/08/2016	11:00 pm	2,100	10,500	R	NEAH	EC, EN, PN	DI
AF	3501 WHITFIELD ST	3K058	03/08/2016	11:00 pm	2,010	40,200	R	NEAH,OEHC	EC, EN, PN	CR
AF	3611 MABELVALE PIKE	6L011	03/08/2016	11:00 pm	2,260	13,000	R	NEAH	EC, EN, PN	DI
AF	3807 FOXCROFT RD	1B012	03/08/2016	11:00 pm	15	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	3807 FOXCROFT RD	2B068	03/08/2016	11:00 pm	15	300	R	NEAH	EC, EN, PN	GR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

CODE DESCRIPTIONS

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CAUSE(S) OF SSO

R - Rainfall

OBSERVED ENVIRONMENTAL IMPACT

NEAH - No Evidence of Adverse Health or Environmental Impacts
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ACTION(S) TAKEN

WO - Work Order
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AF	4111 S UNIVERSITY AVE	5L030	03/08/2016	11:00 pm	2,360	118,000	R	NEAH	EC, EN, PN	GR
AF	4400 S UNIVERSITY AVE	4L015	03/08/2016	11:00 pm	2,220	2,220	R	NEAH,OEHC	EC, EN, PN	CR
AF	4701 ASHER AVE	7K113	03/08/2016	11:00 pm	2,280	45,600	R	NEAH	EC, EN, PN	DI
AF	5207 WESTERN HILLS AVE	3N007	03/08/2016	11:00 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	3N055	03/08/2016	11:00 pm	2,320	23,200	R	NEAH	EC, EN, PN	GR
AF	5423 W 35TH ST	5L051	03/08/2016	11:00 pm	2,340	2,340	R	NEAH	EC, EN, PN	DI
AF	5423 W 35TH ST	5L052	03/08/2016	11:00 pm	2,370	59,250	R	NEAH	EC, EN, PN	DI
AF	6801 COLONEL GLENN RD	4L076	03/08/2016	11:00 pm	600	600	R	NEAH,OEHC	EC, EN, PN	CR
FC	7909 MCDANIEL DR	2Q021	03/08/2016	11:00 pm	60	240	R	NEAH	EC, EN, PN	DI
AF	9722 W MARKHAM ST	0G019	03/08/2016	11:00 pm	930	4,650	R	NEAH	EC, EN, PN	DI
AF	9722 W MARKHAM ST	0G025	03/08/2016	11:00 pm	935	4,675	R	NEAH	EC, EN, PN	DI
FC	BACKWATER FLOW VALVE	6N016	03/08/2016	11:00 pm	60	240	R	NEAH	EC, EN, PN	DR
AF	DOWNSTREAM MANHOLE NOT	~6G012	03/08/2016	11:00 pm	870	870	R	NEAH	EC, EN, PN	PA
FC	INTERSTATE 30	2R026	03/08/2016	11:00 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	KANIS PARK	2H017	03/08/2016	11:00 pm	10	10	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H019	03/08/2016	11:00 pm	980	24,500	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H074	03/08/2016	11:00 pm	970	19,400	R	NEAH	EC, EN, PN	GR
FC	N. CHICOT & MABELVALE PIKE	2P025	03/08/2016	11:00 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	REBSAMEN PARK	4B003	03/08/2016	11:00 pm	730	14,600	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	4B005	03/08/2016	11:00 pm	735	14,700	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C003	03/08/2016	11:00 pm	720	3,600	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C007	03/08/2016	11:00 pm	725	14,500	R	NEAH	EC, EN, PN	GR
AF	1301 W ROOSEVELT RD	11K107	03/13/2016	11:00 pm	60	120	R	NEAH	EC, EN, PN	GR
AF	3409 S BATTERY ST	10L013	03/13/2016	11:00 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	3N004	03/13/2016	11:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

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AF	5207 WESTERN HILLS AVE	3N005	03/13/2016	11:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
FC	5207 WESTERN HILLS AVE	4N013	03/13/2016	11:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	4N089	03/13/2016	11:00 pm	60	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	7500 W 65TH ST	2O025	03/13/2016	11:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	7500 W 65TH ST	2O026	03/13/2016	11:00 pm	60	120	R	NEAH,OEHC	EC, EN, PN	CR
AF	02/21/03 UNABLE TO OPEN LID ON	1B018	03/30/2016	7:00 pm	15	375	R	NEAH,OEHC	EC, EN, PN	CR
AF	1 WINDY OAKS CT	0G087	03/30/2016	7:00 pm	30	30	R	NEAH	EC, EN, PN	GR
AF	123 BROOKSIDE DR	1G087	03/30/2016	7:00 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	1301 W ROOSEVELT RD	11K107	03/30/2016	7:00 pm	60	180	R	NEAH	EC, EN, PN	GR
FC	16 ROSEMOOR CT	6N009	03/30/2016	7:00 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	1601 WESTPARK DR	3I036	03/30/2016	7:00 pm	30	750	R	NEAH,OEHC	EC, EN, PN	CR
AF	1715 BISCAYNE DR	2E066	03/30/2016	7:00 pm	30	300	R	NEAH	EC, EN, PN	GR
FC	19 N MEADOWCLIFF DR	4N030	03/30/2016	7:00 pm	60	240	R	NEAH	EC, EN, PN	GR
AF	2717 CHARTER OAK DR	0D113	03/30/2016	7:00 pm	50	50	R	NEAH	EC, EN, PN	DI
FC	28 DELLWOOD DR	6N077	03/30/2016	7:00 pm	60	240	R	NEAH	EC, EN, PN	DI
AF	3 BUCKLAND RD	-10-B008	03/30/2016	7:00 pm	30	300	R	NEAH	EC, EN, PN	DI
AF	3201 WHITFIELD ST	2K167	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	DI
AF	3317 WHITFIELD ST	3K061	03/30/2016	7:00 pm	15	750	R	NEAH,OEHC	EC, EN, PN	CR
AF	3409 S BATTERY ST	10L013	03/30/2016	7:00 pm	60	240	R	NEAH	EC, EN, PN	GR
AF	3417 WYNNE ST	2K143	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	3423 WHITFIELD ST	2K142	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	3501 WHITFIELD ST	3K058	03/30/2016	7:00 pm	10	750	R	NEAH	EC, EN, PN	GR
AF	3611 MABELVALE PIKE	6L011	03/30/2016	7:00 pm	10	500	R	NEAH	EC, EN, PN	DI
AF	3704 ASHER AVE	7J065	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	GR
AF	3807 FOXCROFT RD	1B012	03/30/2016	7:00 pm	15	300	R	NEAH,OEHC	EC, EN, PN	CR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

CODE DESCRIPTIONS

NPDES PERMIT

FC - Fourche Creek Treatment Plant
NPDES Permit No. AR0040177

AF - Adams Field Treatment Plant
NPDES Permit No. AR0021806

LM - Little Maumelle Treatment Plant
NPDES Permit No. AR0050849

CAUSE(S) OF SSO

R - Rainfall

OBSERVED ENVIRONMENTAL IMPACT

NEAH - No Evidence of Adverse Health or Environmental Impacts
OEHC - Observed or Evidence of Human Contact
EFK - Evidence of Fish Kill

ACTION(S) TAKEN

WO - Work Order
EC - Environmental Cleanup
HC - Hydro Cleaned
HR - Hand Rodded
EN - Reporting to Engineering
PN - Public Notification

ULTIMATE DISCHARGE LOC.

CR - Creek/Stream/River
DI - Ditch
DR - Drop Inlet
GR - Ground Surface
PA - Paved Area
CB - Contained in Building
GR/CB - Building and Ground

NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	3807 FOXCROFT RD	2B068	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	401 N PALM ST	6G061	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	PA
AF	4111 S UNIVERSITY AVE	5L030	03/30/2016	7:00 pm	30	1,500	R	NEAH	EC, EN, PN	GR
AF	4400 S UNIVERSITY AVE	4L013	03/30/2016	7:00 pm	15	300	R	NEAH	EC, EN, PN	DI
AF	4400 S UNIVERSITY AVE	4L015	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	DI
AF	4701 ASHER AVE	7K113	03/30/2016	7:00 pm	10	250	R	NEAH	EC, EN, PN	GR
AF	4716 EASTWOOD ST	2M028	03/30/2016	7:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	4717 ELMWOOD DR	2M034	03/30/2016	7:00 pm	5	5	R	NEAH	EC, EN, PN	GR
FC	49 ROSEMOOR DR	6N015	03/30/2016	7:00 pm	60	120	R	NEAH	EC, EN, PN	GR
AF	5000 STONEWALL RD	6D050	03/30/2016	7:00 pm	10	100	R	NEAH	EC, EN, PN, WO	GR
AF	5207 WESTERN HILLS AVE	3N004	03/30/2016	7:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	3N005	03/30/2016	7:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	3N007	03/30/2016	7:00 pm	60	240	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	3N055	03/30/2016	7:00 pm	30	750	R	NEAH	EC, EN, PN	GR
FC	5207 WESTERN HILLS AVE	4N013	03/30/2016	7:00 pm	60	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	4N089	03/30/2016	7:00 pm	60	600	R	NEAH,OEHC	EC, EN, PN	CR
AF	5423 W 35TH ST	5L051	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	GR
AF	5423 W 35TH ST	5L052	03/30/2016	7:00 pm	30	300	R	NEAH,OEHC	EC, EN, PN	GR
AF	5423 W 35TH ST	5L067	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	GR
AF	5423 W 35TH ST	5L068	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	GR
AF	5512 TULLEY CV	-8-A012	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	GR
AF	56 COACHLIGHT DR	0F146	03/30/2016	7:00 pm	15	300	R	NEAH	EC, EN, PN	DI
AF	6401 COLONEL GLENN RD	4L017	03/30/2016	7:00 pm	30	300	R	NEAH	EC, EN, PN	GR
AF	6801 COLONEL GLENN RD	4L076	03/30/2016	7:00 pm	30	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	6801 GREENWOOD RD	4C090	03/30/2016	7:00 pm	30	90	R	NEAH	EC, EN, PN, WO	GR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

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NPDES Permit No. AR0040177

AF - Adams Field Treatment Plant
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LM - Little Maumelle Treatment Plant
NPDES Permit No. AR0050849

CAUSE(S) OF SSO

R - Rainfall

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HC - Hydro Cleaned
HR - Hand Rodded
EN - Reporting to Engineering
PN - Public Notification

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DR - Drop Inlet
GR - Ground Surface
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NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	708 PINE VALLEY RD	3D065	03/30/2016	7:00 pm	15	75	R	NEAH	EC, EN, PN	DI
AF	7500 W 65TH ST	2O002	03/30/2016	7:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
AF	7500 W 65TH ST	2O025	03/30/2016	7:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
FC	7909 MCDANIEL DR	2Q021	03/30/2016	7:00 pm	60	180	R	NEAH	EC, EN, PN	DI
AF	8001 ASCENSION RD	2M085	03/30/2016	7:00 pm	30	300	R	NEAH	EC, EN, PN	GR
AF	810 PINE VALLEY RD	3D108	03/30/2016	7:00 pm	10	200	R	NEAH	EC, EN, PN	GR
AF	8120 E MELLWOOD RD	2M060	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	8600 CUNNINGHAM LAKE RD	1G008	03/30/2016	7:00 pm	15	750	R	NEAH	EC, EN, PN	PA
AF	8600 CUNNINGHAM LAKE RD	1G010	03/30/2016	7:00 pm	10	50	R	NEAH	EC, EN, PN	PA
AF	9722 W MARKHAM ST	0G015	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	DI
AF	9722 W MARKHAM ST	0G019	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	DI
AF	9722 W MARKHAM ST	0G025	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	DI
FC	BACKWATER FLOW VALVE	6N016	03/30/2016	7:00 pm	60	180	R	NEAH	EC, EN, PN	DR
FC	CHICOT RD. & MABELVALE PK.	2P025	03/30/2016	7:00 pm	60	120	R	NEAH	EC, EN, PN	GR
FC	I-30	2R026	03/30/2016	7:00 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	KANIS PARK	2H004	03/30/2016	7:00 pm	15	150	R	NEAH,OEHC	EC, EN, PN	CR
AF	KANIS PARK	2H017	03/30/2016	7:00 pm	30	150	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H018	03/30/2016	7:00 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H019	03/30/2016	7:00 pm	30	750	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H064	03/30/2016	7:00 pm	10	50	R	NEAH,OEHC	EC, EN, PN	CR
AF	KANIS PARK	2H074	03/30/2016	7:00 pm	15	375	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	4B003	03/30/2016	7:00 pm	30	300	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	4B005	03/30/2016	7:00 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C003	03/30/2016	7:00 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C007	03/30/2016	7:00 pm	15	300	R	NEAH	EC, EN, PN	GR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

CODE DESCRIPTIONS

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NPDES Permit No. AR0040177

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NPDES Permit No. AR0021806

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R - Rainfall

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AF	REBSAMEN PARK	6C006	03/30/2016	7:00 pm	60	120	R	NEAH	EC, EN, PN	GR
AF	W. CHESTER ST. & W. 21ST ST.	11J053	03/30/2016	7:00 pm	60	120	R	NEAH	EC, EN, PN	PA
AF	WAR MEMORIAL PARK	6H049	03/30/2016	7:00 pm	10	10	R	NEAH	EC, EN, PN	GR
AF	02/21/03 UNABLE TO OPEN LID ON	1B018	04/29/2016	1:30 pm	15	375	R	NEAH,OEHC	EC, EN, PN	CR
AF	1 WINDY OAKS CT	0G087	04/29/2016	1:30 pm	30	30	R	NEAH	EC, EN, PN	GR
AF	123 BROOKSIDE DR	1G087	04/29/2016	1:30 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	1420 REBSAMEN PARK RD	8E049	04/29/2016	1:30 pm	60	60	R	NEAH	EC, EN, PN	PA
AF	1421 MAPLE ST	81006	04/29/2016	1:30 pm	15	15	R	NEAH	EC, EN, PN	DR
FC	16 ROSEMOOR CT	6N009	04/29/2016	1:30 pm	60	60	R	NEAH	EC, EN, PN	GR
AF	1601 WESTPARK DR	31036	04/29/2016	1:30 pm	60	180	R	NEAH	EC, EN, PN	DI
AF	1700 BISHOP ST	10I112	04/29/2016	1:30 pm	180	2,700	R	NEAH	EC, EN, PN	DR
FC	19 N MEADOWCLIFF DR	4N030	04/29/2016	1:30 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	2100 S IZARD ST	11J053	04/29/2016	1:30 pm	60	240	R	NEAH	EC, EN, PN, WO	DR
AF	2717 CHARTER OAK DR	0D113	04/29/2016	1:30 pm	10	10	R	NEAH	EC, EN, PN	GR
AF	3 BUCKLAND RD	-10-B008	04/29/2016	1:30 pm	10	150	R	NEAH	EC, EN, PN	DI
AF	3201 WHITFIELD ST	2K167	04/29/2016	1:30 pm	60	180	R	NEAH	EC, EN, PN	DI
AF	3317 WHITFIELD ST	3K061	04/29/2016	1:30 pm	60	240	R	NEAH	EC, EN, PN	DI
AF	3409 S BATTERY ST	10L013	04/29/2016	1:30 pm	60	240	R	NEAH	EC, EN, PN	GR
AF	3423 WHITFIELD ST	2K142	04/29/2016	1:30 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	3437 WYNNE ST	2K143	04/29/2016	1:30 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	3501 WHITFIELD ST	3K058	04/29/2016	1:30 pm	60	240	R	NEAH	EC, EN, PN	DI
AF	3611 MABELVALE PIKE	6L011	04/29/2016	1:30 pm	180	3,600	R	NEAH,OEHC	EC, EN, PN	CR
AF	3704 ASHER AVE	7J065	04/29/2016	1:30 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	3807 FOXCROFT RD	1B012	04/29/2016	1:30 pm	15	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	3807 FOXCROFT RD	2B068	04/29/2016	1:30 pm	15	150	R	NEAH	EC, EN, PN	GR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2016 - 12/31/2016

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CAUSE(S) OF SSO

R - Rainfall

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AF	4111 S UNIVERSITY AVE	5L030	04/29/2016	1:30 pm	30	1,500	R	NEAH	EC, EN, PN	GR
AF	4400 S UNIVERSITY AVE	4L013	04/29/2016	1:30 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	4400 S UNIVERSITY AVE	4L015	04/29/2016	1:30 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	4701 ASHER AVE	7K012	04/29/2016	1:30 pm	240	7,200	R	NEAH	EC, EN, PN	DI
AF	4701 ASHER AVE	7K087	04/29/2016	1:30 pm	240	7,200	R	NEAH	EC, EN, PN, WO	DI
AF	4701 ASHER AVE	7K113	04/29/2016	1:30 pm	210	5,250	R	NEAH	EC, EN, PN	DI
FC	49 ROSEMOOR DR	6N015	04/29/2016	1:30 pm	60	60	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	3N004	04/29/2016	1:30 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	3N005	04/29/2016	1:30 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	3N007	04/29/2016	1:30 pm	60	180	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	3N055	04/29/2016	1:30 pm	60	240	R	NEAH	EC, EN, PN	GR
FC	5207 WESTERN HILLS AVE	4N013	04/29/2016	1:30 pm	60	120	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	4N016	04/29/2016	1:30 pm	60	1,500	R	NEAH	EC, EN, PN	GR
AF	5207 WESTERN HILLS AVE	4N089	04/29/2016	1:30 pm	60	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	5423 W 35TH ST	5L051	04/29/2016	1:30 pm	30	300	R	NEAH	EC, EN, PN	GR
AF	5423 W 35TH ST	5L052	04/29/2016	1:30 pm	30	300	R	NEAH	EC, EN, PN	GR
AF	5423 W 35TH ST	5L068	04/29/2016	1:30 pm	30	1,500	R	NEAH	EC, EN, PN	GR
AF	5512 TULLEY CV	-8-A006	04/29/2016	1:30 pm	30	150	R	NEAH,OEHC	EC, EN, PN	CR
AF	5512 TULLEY CV	-8-A012	04/29/2016	1:30 pm	10	50	R	NEAH	EC, EN, PN	GR
FC	5601 MABELVALE PIKE	4N080	04/29/2016	1:30 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	6401 COLONEL GLENN RD	4L017	04/29/2016	1:30 pm	180	3,600	R	NEAH	EC, EN, PN	GR
AF	6801 COLONEL GLENN RD	4L076	04/29/2016	1:30 pm	180	3,600	R	NEAH,OEHC	EC, EN, PN	CR
FC	7909 MCDANIEL DR	2Q021	04/29/2016	1:30 pm	60	180	R	NEAH	EC, EN, PN	DI
AF	8001 ASCENSION RD	2M085	04/29/2016	1:30 pm	30	150	R	NEAH	EC, EN, PN	GR
AF	810 PINE VALLEY RD	3D108	04/29/2016	1:30 pm	30	300	R	NEAH	EC, EN, PN	GR

LITTLE ROCK WASTEWATER UTILITY
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1/1/2016 - 12/31/2016

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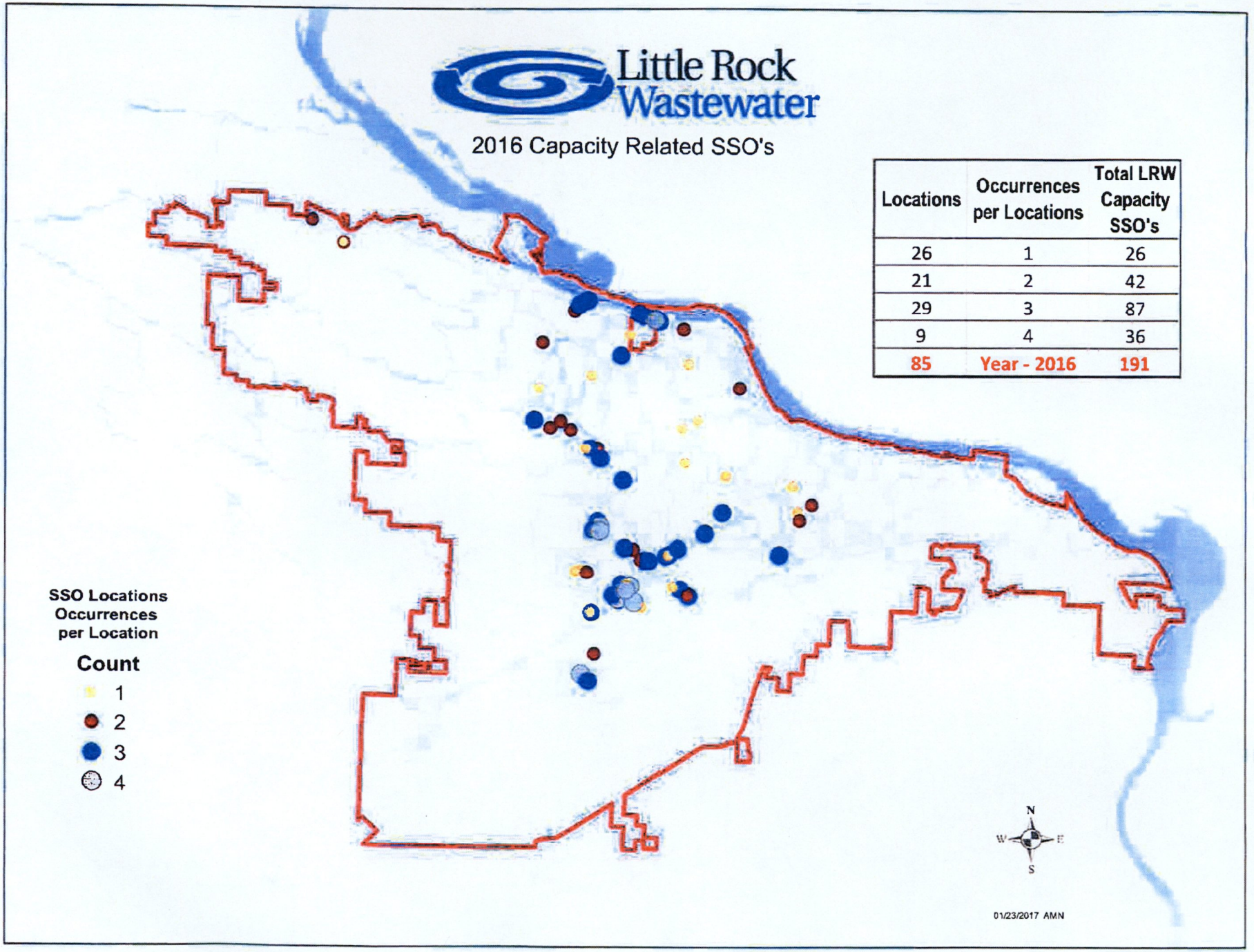
AF	8600 CUNNINGHAM LAKE RD	1G008	04/29/2016	1:30 pm	30	150	R	NEAH	EC, EN, PN	PA
AF	8600 CUNNINGHAM LAKE RD	1G010	04/29/2016	1:30 pm	30	150	R	NEAH	EC, EN, PN	PA
AF	9722 W MARKHAM ST	0G015	04/29/2016	1:30 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	9722 W MARKHAM ST	0G019	04/29/2016	1:30 pm	15	150	R	NEAH	EC, EN, PN	DI
AF	9722 W MARKHAM ST	0G025	04/29/2016	1:30 pm	15	150	R	NEAH	EC, EN, PN	DI
FC	BACKWATER FLOW VALVE	6N016	04/29/2016	1:30 pm	60	60	R	NEAH	EC, EN, PN	DR
FC	INTERSTATE-30	2R026	04/29/2016	1:30 pm	60	120	R	NEAH	EC, EN	DI
AF	KANIS PARK	2H019	04/29/2016	1:30 pm	30	750	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H074	04/29/2016	1:30 pm	15	375	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	4B003	04/29/2016	1:30 pm	30	300	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	4B005	04/29/2016	1:30 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C003	04/29/2016	1:30 pm	15	150	R	NEAH	EC, EN, PN	GR
AF	REBSAMEN PARK	5C007	04/29/2016	1:30 pm	15	300	R	NEAH	EC, EN, PN	GR
AF	3704 ASHER AVE	7J065	07/10/2016	7:00 pm	30	150	R	NEAH	EC, EN, PN	GR
AF	1317 W 23RD ST	10J009	08/07/2016	10:00 pm	60	180	R	NEAH	EC, EN, PN, WO	DI
AF	REBSAMEN PARK RD.	6C006	08/16/2016	2:20 pm	60	60	R	NEAH	EC, EN, PN, WO	GR

COUNT of CAPACITY OVERFLOWS : 191


Little Rock Wastewater
2016 Capacity Related SSO's
Locations | Occurrences per Locations | Total LRW Capacity SSO's
26 | 1 | 26
21 | 2 | 42
29 | 3 | 87
9 | 4 | 36
85 | Year - 2016 | 191
SSO Locations
Occurrences per Location
Count
1
2
3
4
N
W
E
S
01/23/2017 AMN