2014 ANNUAL REPORT

FEBRUARY 27, 2015

CONSENT ADMINISTRATIVE ORDER

IN ACCORDANCE WITH
LIS NO. 06-037
DATED MARCH 9, 2006

Little Rock Wastewater

February 27, 2015

Ms. Ellen Carpenter
Water Division Enforcement Branch Manager
NPDES Water Enforcement Branch
Arkansas Department of Environmental Quality
P.O. Box 8913
Little Rock, AR 72219-8913

Re: 2014 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 Ms. Carpenter:

In a continuing effort to "Go Green," Little Rock Wastewater is pleased to submit in CD format the attached 2014 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. If you are unable to open any document, please do not hesitate to contact me, and LRW will be happy to provide you with a hard copy.

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

Enclosure

***NOTE:** The 2014 Annual Report is 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 Sanitary Sewer Committee
Greg Ramon, Chief Executive Officer, LRW
John Jarratt, Chief Administration Officer, LRW
Howell Anderson, P.E., Chief Operating Officer, LRW
Little Rock Wastewater Directors
City Manager Bruce Moore
City Attorney Tom Carpenter

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, the Little Rock Board of Directors granted LRW a rate adjustment that will support funding of a portion of the projects needed to comply with the CAO. The 2012 rate adjustment will support the study, design, and construction of projects through 2015. Additional rate adjustments will be needed to complete the projects needed to comply with the CAO.

In 2014, LRW continued its efforts by engaging with consultants for the study and design of major capital improvement projects outlined in the 2002 System Evaluation and Capacity Assurance Plan ("SECAP") and the 2010 SECAP Update. Specifically, LRW continued capacity-related facility projects by working with consultants to initiate the development of construction documents for the Scott Hamilton Dr. Peak Flow Facility (formerly known as the Mabelvale Pike Peak Flow Attenuation Facility) and initiated construction of the Cantrell Road Pump Station and Force Main Projects. Further, LRW worked with consultants to complete the preliminary engineering of the Rock Creek Storage Project. In early 2014, LRW procured the services of a consultant to study the Cantrell Area Storage Project. On the collection system side, LRW initiated and completed the construction of projects in the Allsopp/Country Club area, Leawood, and Lower Swaggerty. Also during 2014, 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) 2014 Non-Capacity Related Sanitary Sewer Overflows; and, (VI) 2014 Capacity Related Overflows and (VII) Project Schedule Update.

III. PROJECTS UPDATE

The System Evaluation Capacity Assurance Plan (SECAP) and subsequent updates are the capital improvement plan to mitigate overflows for the designated design storm. As an overview, LRW contracted with RJN Group to conduct the SECAP Update. RJN started the project in the fall of 2009. RJN provided the final report in November 2010. The SECAP was completed in 2002. The 2002 SECAP resulted in a Capital Improvement plan to mitigate overflows and bring the wastewater system into compliance with the Consent Administrative Order (CAO) and Sierra Club Settlement Agreement. Many of the projects contained in the original projects and the need for the remaining improvements and/or develop additional sanitary sewer system, update the existing hydraulic model, identify capacity wastewater treatment plants, develop improvement projects, budget estimates, recommend infiltration/inflow reduction, and provide a capital improvement plan. RJN provided LRW with the data and analysis previously mentioned in the objectives.

LRW has listed the projects in the 2015 budget and scheduled the projects accordingly. The report lists storage facilities, operation adjustments, capacity improvements, and other pertinent items to mitigate overflows. The four sites are the Rock Creek Storage, Cantrell Area Storage, Scott Hamilton Drive Peak Flow Facility (formerly referred to as the Mabelvale Pike Peak Flow Attenuation Facility), and the Adams Field Storage. The estimated storage for the four facilities is 63 million gallons. The existing AFWTF storage is estimated at 14 million gallons and Scott Hamilton Drive Peak Flow at 30 million gallons. The total amount of storage required is 107 million gallons. There are multiple projects listed in the SECAP update to increase the capacity of existing gravity mains. A large diameter main (42" & 48") proposed from 36th street to Mabelvale Pike is the largest line project required. The Grassy Flat main is requiring a capacity increase from an 18 inch main to a 30 inch mainline. Multiple projects such as manhole adjustments and upsizing of mains is included in the report. The SECAP Update assumed all previous collection system projects would be completed. The following list is projects already completed or currently included in the 2015 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. Scott Hamilton Drive Peak Flow Facility (formerly referred to as Mabelvale Pike Peak Flow Attenuation Facility)

The SECAP Update, dated November 2010, identified the need for additional storage to complement the existing storage facility at Scott Hamilton Road. The additional storage, along with a hydraulic upgrade at the Peak Flow Pump Station, will further reduce the surcharge of rainfall dependent inflow and infiltration within the North and South 60 Sewer Interceptors thereby mitigating sanitary sewer overflows within the service area for the identified design storm. LRW progressed towards completion of the preliminary design phase efforts for this project. The preliminary engineering report indentified the need for an additional 31 MG of storage. The Conditional Use Permit phase is completed.

D. Peak Flow Pump Station – Additional Pump

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 sanitary sewer overflows for the design storm event with additional 31 MG storage at the Scott Hamilton Peak Flow Facility.

E. Cantrell Road Pump Station and Force Main Upgrade

Essentially all sanitary sewerage from the area north of Cantrell Road and east of Pinnacle Valley Road flows through the Rebsamen Interceptor. This interceptor and an area of the city bounded by the Dillard's corporate headquarters to Central High School, to the University of Arkansas Medical Center, back to the Dillard's headquarters - which includes the State Capital Grounds - flows through the Rose Creek sewer basin pipes to the Cantrell Road Pump Station.

The Cantrell Road Pump Station was constructed in 1968 and was modified with bar screens and two dry pit submersible pumps in 1986. Two of the four pumps are original to the station while the other

two pumps are replacement pumps that were installed in 1986. A portion of the switch gear is original while some was replaced or added in 1986. In 2013, a preliminary engineering report was completed for the pump station, and identified that rehabilitation/upgrade of the existing pump station was required.

The 30-inch force main that conveys flow from the Cantrell Road Pump Station to the River Front Interceptor is a pre-stressed concrete cylinder force main that was installed and placed in service in 1968 and has been in service since. Design life for similar structures can be 50 years. An engineering study of the force main will be updated to assess its existing condition. This project calls for the installation of a new force main and the inspection and rehabilitation of the existing force main after the new main is placed in service. In 2013, a preliminary engineering report was completed for the new force main, and identified the most economical route for the replacement of the existing force main. Construction began at Cantrell Road Pump Station, April 2014, and November 2014 for the force main.

F. Cantrell Road Pump Station In-Line Storage

This four million gallon in-line storage facility will alleviate overflows up to the design storm event generated from wet weather flows in the Jimmerson and Cantrell areas of the City. In addition, this storage facility will allow the pumping capacity at the Cantrell Road Pump Station to remain the same, which is essential to prevent the upsizing of the Riverfront Interceptor from west of downtown to the Adams Field Treatment Facility. Procurement of engineering services for this project was performed in 2014, and the site selection process was started.

G. 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 to a minimum of 45 MGD. In 2008, LRW, with its consultant CDM, completed a 20-year capital improvement plan (CIP) to assess treatment processes, identify deficiencies, and plan for improvements to the plant 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 plant can hydraulically handle 45 MGD. The third phase will address headworks, bioreactor, and primary clarifier. Phase Four of FCWTF does not include any improvements pertaining to the SECAP. The five-year forecast allocates $11,072,806 for engineering, construction, administration expenses, contingencies, and plant process improvements.

H. Rock Creek Storage

An 8 million gallon in-line storage facility is essential to store wet weather flows generated along the Rock Creek and Grassy Flat Creek Interceptors and the western portion of the City, thereby alleviating overflows up to the design storm event. In 2013, procurement of engineering services was performed, and in 2014 the site selection process is still ongoing.

I. Adams Field Storage Basin

The SECAP Update, dated November 2010, identified the need for additional storage at the Adams Field Treatment Plant to complement existing and proposed storage facilities (Scott Hamilton Drive Peak Flow Facility). The additional storage will allow for extended hydraulic pass-through of rainfall dependent infiltration and inflow volume thereby mitigating sanitary sewer overflows within the service area for the identified design storm. In 2013, procurement of engineering services was performed.

J. Overflow Mitigation Projects

In the late 1980s, LRW was the first municipality in Arkansas to establish a program to address excessive infiltration and inflow (I/I) which leads to sanitary sewer overflows 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 (OMPs) funded by RLF XI:

a. Allsopp North/Country Club Rehabilitation **$8,445,500**

The Allsopp North/Country Club mainline CIPP rehabilitation project was completed. The second phase of rehabilitation, Pipe Burst and Open Cut Construction, is currently underway and completion is anticipated in July 2015. The Allsopp North/Country Club project is the largest overflow mitigation project the utility has designed to date. The difficulty of this project is further complicated by the housing density and extensive landscaping in the project area.

b. Allsopp Park/Country Club Outfall **$4,720,511.00**

These two outfall projects traverse 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 will perform construction administration. The construction efforts are nearing completion and are anticipated to be completed in February 2015.

c. Leawood OMP **$6,177,200**

The CIPP portion of this Overflow Mitigation Project has been completed. The second phase of rehabilitation, containing Pipe Burst and Open Cut Construction will be advertised for bids in early 2015 with completion anticipated by mid-2016.

d. Lower Swaggerty OMP **$5,791,300**

The CIPP portion of this Overflow Mitigation Project has been completed. The second phase of rehabilitation, containing Pipe Burst and Open Cut Construction has been awarded and construction is anticipated to begin in early 2015 with projected completion by mid-2016.

e. Pleasant Valley OMP **$3,665,700**

The CIPP portion of this Overflow Mitigation Project was combined with the rehabilitation, containing Pipe Burst and Open Cut Construction. This project was begun in November 2014 with an anticipated completion date by the end of 2015.

f. **Echo Valley OMP** **$3,819,800**

The CIPP portion of this Overflow Mitigation Project was combined with the rehabilitation, containing Pipe Burst and Open Cut Construction. This project was begun in September 2014 with an anticipated completion date by September 2015.

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, in order to help ensure the long-term integrity of this vital interceptor. The external stabilization phase was completed in November, 2014, and the internal rehabilitation phase will be completed within the 2015 calendar year.

h. **42" Force Main Inspection** **$2,000,000**

Since its installation in the early 1980's, the force main serving the Fourche Creek Facility 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 creates 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.

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

The manhole rehab shall address Infiltration and Inflow, as well as repair any structural deterioration within the Allsopp North/Country Club basins.

j. **Leawood Manhole Rehab** **$265,778**

The manhole rehab shall address Infiltration and Inflow, as well as repair any structural deterioration within the Leawood area.

k. **Echo Valley Manhole Rehab** **$283,446**

The manhole rehab shall address Infiltration and Inflow, as well as repair any structural deterioration within the Echo Valley area.

l. **Pleasant Valley Manhole Rehab** **$268,125**

The manhole rehab shall address Infiltration and Inflow, as well as repair any structural deterioration within the Pleasant Valley area.

m. **Springer Blvd – R1** **$712,397**

This project consists of the upsizing of the mainline and addresses any Infiltration and Inflow, as well as structural deterioration.

n. **West Markham Mainline – R6** **$484,164**

This project consists of the upsizing of the mainline and addresses any Infiltration and Inflow, as well as structural deterioration.

o. **Bishop Street Relay – R14** **$287,964**
This project consists of the upsizing of the mainline and addresses any Infiltration and Inflow, as well as structural deterioration.

p. **Grassy Flat Main – R27** **$1,005,369**
This project consists of the upsizing of the mainline and addresses any Infiltration and Inflow, as well as structural deterioration.

2. **Overflow Mitigation Projects (OMPs) Planned for RLF XII:**

RLF XII Projects	
Granite Mountain OMP	$ 1,335,200
Lower Swaggerty OMP Manhole Rehab	$ 151,900
Subbasin 30100 OMP	$ 1,354,400
Longfellow Subbasin 11400	$ 1,410,700
Rose Creek East OMP	$ 2,226,400
Rose Creek Central OMP	$ 2,824,400
Rose Creek West OMP	$ 3,293,400
Walnut Valley OMP	$ 2,791,600
University Avenue Relay - SECAP - R7	$ 583,800
Rose Creek East Relay - SECAP - R13	$ 505,400
Walton Heights Basin 11600 OMP	$ 1,649,300
River Ridge - SB 11200 OMP	$ 344,700
Sherrill Heights - SB 11000 OMP	$ 250,600
36th Street to Mabelvale Pike Outfall	$10,494,000
3L078 to 3I080 (42" to 60") R3	$ 25,300
Rebsamen Collector/Murray Park 10090	$ 339,000
Rebsamen Collector/Commercial 10500	$ 133,700
Rebsamen Collector/Harbor 10060	$ 453,800
Overlook/Pinnacle Point OMP 10070	$ 1,040,900
Rebsamen Collector/Golf Course OMP 10080	$ 194,000
Boyle Park Mainline - R24	$ 419,600
48" Cross Connection (16K) R29	$ 86,800
Rebsamen Collector/Alltel 10400	$ 488,000
17th Street Pipe Burst - R15	$ 156,600
Fairpark Relay –R12	$ 241,639
Jimmerson West OMP	$ 2,291,600
	$35,086,739

- **Future rate increase needed for project** - Yes to support design and construction of projects (2016 rate adjustment)
- **Project purpose:** SECAP/CAO/Sierra Club - Protect Health, Environment

3. **Overflow Mitigation Projects (OMPs) Planned for RLF XIII:**

RLF XIII Projects	
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
Barrow OMP	$ 4,801,100
Quapaw North OMP	$ 1,995,600
Foreman Lake OMP	$ 1,252,100
Hall High South OMP	$ 3,987,400
Upper Country Club Outfall – R19	$ 452,300
Mainline Imp. for Modeled Overflow/Growth	$11,311,100
	$56,303,400

- **Future rate increase needed for project** - Yes to support design and construction of projects (2017 Rate Increase)
- **Project purpose:** SECAP/CAO/Sierra Club - Protect Health, Environment

4. **Overflow Mitigation Projects (OMPs) 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 (SECAP) Update (RLF VIII) –** Completed in 2010.

IV. OTHER COMPLIANCE ACTIONS

A. Signage/Public Notification/Public Information:

As required in the Settlement Agreement, LRW staff developed a Sanitary Sewer Overflow Response Plan (SSORP) which was authorized by the Little Rock Sanitary Sewer Committee on September 18, 2002. The SSO Response Plan, 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 of the SSO Notification Program requirements contained in the Settlement 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 (Attachment A).

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

V. 2014 NON-CAPACITY RELATED SANITARY SEWER OVERFLOWS

A. Compliance Standard: The Settlement Agreement limits the number of non-capacity related SSOs per 100 miles of sanitary sewer operated and maintained by LRW in LRSSC'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 LRSSC has reduced non-capacity related SSOs to 6 per 100 miles of sewer mains for two (2) consecutive calendar years, LRSSC shall be deemed to have complied with all provisions of this agreement related to non-capacity related SSOs.

B. Non-Capacity Related SSOs in 2014: There were 43 non-capacity related SSOs reported in 2014. Of the 43 total, seven (7) SSOs were related to construction and vandalism. The result was a total of 36 non-capacity related overflows attributed to the operation and maintenance of the LRW collection system. Of the 36 non-capacity related overflows, five (5) SSOs were attributed to debris; three (3) SSO were attributed to equipment failure; eight (8) SSOs were attributed to grease; seven (7) SSOs were attributed to line failures; thirteen (13) SSOs were attributed to roots.* A complete listing of non-capacity related SSOs is provided under Attachment E.

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 eleven (11) 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, and 2014 with a total of 36. 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 2014, LRW spent approximately $3,693,450.00 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 LRW's rehab dollars, LRW treated 17,690 feet of mainline in 2014 with a contracted chemical root removal company with a total cost of $24,220. Root removal is an important component of LRW's Plan 66 that targets SSO reduction.

* 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.

LRW personnel completed work on 329 line segments that were in need of point repairs as well as relocated or replaced 7,840 feet of sewer line.

21,486 feet of sewer line was rehabilitated under the 2014 maintenance contracts for pipe bursting and cured-in-place-pipe (CIPP), for a total cost of $2,065,000.00.

In 2014, the Cleaning and Inspection Department Televised 696,930 feet, Hand Cleaned 726,250 feet, Hydro Cleaned 2,096,998 feet, and Line Walked 2,768,600 feet of sewer lines.

VI. 2014 CAPACITY RELATED SANITARY SEWER OVERFLOWS

A. **Compliance Standard:** The Settlement Agreement requires that capacity related SSOs be eliminated, 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 2014:** There were 54 capacity related SSOs reported in 2014 at 28 locations. There were zero (0) rain events recorded in 2014 measuring above the Design Storm which resulted in zero (0) capacity related overflows. The remaining 54 capacity related overflows occurring in 2014, 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

In previous reports, this section presented a table that updated the anticipated completion dates of projects listed in the CAO. Since the Order was filed in 2006, LRW has worked diligently to comply with the terms set forth and the work has produced significant results. However, our work is not through and requires a renewed assessment of both approach and methodology to accomplish the terms of the Order. In early 2015, LRW staff met with ADEQ staff to show progress and the renewed effort LRW would like to take to assure success for the rate payers of Little Rock and the environment. ADEQ staff appeared amenable and, as of this writing, the two agencies are in the process of developing a new extension through the end of 2023. Within 2015, LRW will embark on a new sewer system assessment and begin developing a capital improvement plan that will enumerate new projects and establish new completion dates. Currently, LRW is involved in a rate study which will support capital improvements through the end of 2023. The new rates, when adopted, will support improvements to both treatment facilities and collection system.

LRW is proud of the progress to date and remains committed to the terms of order and amendments.

VIII. CONCLUSION

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 in improving the current system by rehabilitating and replacing existing infrastructure that is currently 50-75 years old. LRW is committed to protecting public health and being a good steward of the environment.

ATTACHMENT A

SANITARY SEWER OVERFLOW RESPONSE PLAN

Little Rock Wastewater
SANITARY SEWER OVERFLOW RESPONSE PLAN
(As Amended January 30, 2015)

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 sewage overflow is immediately dispatched to the appropriate crew so that the effects of the overflow can be minimized with respect to impacts to public health, beneficial use, 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," ("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, 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 all appurtenances; 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 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 Technical Service 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 an SSO

An SSO may be detected by LRW employees or by others. The Collection System Maintenance (Cleaning and Inspection Section) Dispatcher (or *"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 Cleaning and Inspection Crews.

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 Administration 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 Emergency 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 Emergency 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. If the SSO was reported as being in a 'Ditch', the Dispatcher consults the Arc Map database to determine if the drainage area is a named

waterway. Dispatcher informs Responding Crew if the result was a 'Ditch' or a named waterway so that the proper Overflow Report Form can be completed. Black Overflow Report Forms are to be used when the drainage area is an unnamed ditch and 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 Plants. 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 an Emergency 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 Table III-1).

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 Waterenfsso@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 _____ **EC** = Environmental Cleanup _____ **PN** = Public Notice

_____ **HR** = Hand Rodded _____ **EN** = Report to Engineering _____ **WO**= Work Order

SSO DATA:

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

LOCATION: _____ ADDRESS: _____

CAUSE: _____ **RO** = Root _____ **D** = Debris _____ **EF** = Equipment Failure

_____ **G** = Grease _____ **LF** = Line Failure

_____ **R** = **Rainfall** _____ **HC** = Hydrocleaning

_____ **CO** = Construction _____ **VA** = Vandalism

FATE: _____ **CR** = Creek/Stream/River _____ **DI** = Ditch _____ **DR** = Drop Inlet

_____ **GR** = Ground Surface _____ **PA** = Paved Area _____ **CB** = Contained in Building

_____ **GRCB** = Ground Surface & Building

If **CR**, provide name: _____

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 "**GRCB**" IS CHECKED, ESTIMATE GALLONS WITHIN BUILDING: _____

IMPACT: _____

_____ **OEHC** = Observed or Evidence of Human Contact and/or Environmental Impact

_____ **EFK** = Evidence of Fish Kill

Revision Date: January 30, 2015

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 _____ **EC** = Environmental Cleanup _____ **PN** = Public Notice

_____ **HR** = Hand Rodded _____ **EN** = Report to Engineering _____ **WO**= Work Order

SSO DATA:

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

LOCATION: _____ ADDRESS: _____

CAUSE: _____ **RO** = Root _____ **D** = Debris _____ **EF** = Equipment Failure

_____ **G** = Grease _____ **LF** = Line Failure

_____ **R = Rainfall** _____ **HC** = Hydrocleaning

_____ **CO** = Construction _____ **VA** = Vandalism

FATE: _____ **DI** = Ditch _____ **DR** = Drop Inlet

_____ **GR** = Ground Surface _____ **PA** = Paved Area _____

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.

IMPACT: _____ **NEAH** = No Evidence of Adverse Health or Environmental Impacts

_____

Revision Date: January 30, 2015

TABLE 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 waterenfsso@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 either a ditch or 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. If the fate is an unnamed ditch, the SSO shall be reported on a black Overflow Report Form.

   b) BLACK FORMS are used when there is no evidence of environmental impact.

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

3. Area Foreman (or Locating Crew) installs warning signs

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

5. Crew cleans and sanitizes

6. Area Foreman 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 Program and Events Administrator is provided if applicable (i.e. damage claims).

7. Area Foreman removes warning signs

8. Area Foreman takes photographs *after* cleanup

9. Area Foreman 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 an 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 Foreman as required.

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

2. Crew Instructions and Work Orders

   - Responding crews are dispatched by phone or radio. 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 Area Foreman or Supervisor immediately upon making their investigation, including possible damage to private and public property. If Area Foreman or Supervisor has not received findings from the field crew within 1 hour, Area Foreman or Supervisor contacts the response crew to determine the status of the investigation.

3. Additional Resources

- The Area Foreman or 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 Programs and Events 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 Programs and Events Administrator in damage assessment activities relating to the time-sensitive information in the case that the Programs and Events Administrator is unable to be on site at that time. In this case, the Collection System Maintenance Supervisor will provide the customer with the Program and Event Administrator's business card. All communication regarding damage claims will take place between the property owner and the Programs and Events Administrator. The crew shall also notify the Area Foreman to 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 Area Foreman of 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 Programs and Events Administrator. **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 Programs and Events Administrator 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, 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, e.g. storm drain, street curb gutter, body of water, creek bed, etc.; Dispatchers can use the Arc Map database to assist in determining if the destination of the SSO is a named watereway (creek/stream/river) or an unnamed waterway (ditch).

- 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 bleach. 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

- A Collection System Maintenance Supervisor will submit an after-the-fact Short Term Activity Authorization (STAA) after the work is completed for overflows in named creeks/streams/rivers.

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 into a storm drain, ditch, drop inlet, or catch basin. If the overflow was contained in a named creek/stream/river, the name of the waterway must be supplied or, if the waterway is not a named waterway, the fate should be logged as "ditch." Dispatchers can utilize the Arc Map database to help in determining if the SSO reached a named waterway (creek/stream/river) or an unnamed waterway (ditch).

- 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 Area Foremen/Walking Line Crews via email (and is also communicated to Dispatchers)

5. The determined TIME OF SSO is consistently used by all Area Foremen/Walking Line 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 Administration Department when all SSO information is entered into the database. The Administration 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 Administration Department informs the resident of LRW's damage claim process. When a "non-fishkill" SSO occurs, the Administration Department is notified and, if necessary, takes any follow up action required (i.e. notify media or residents affected).

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 CEO 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 Director of Engineering Services Division and provides relevant SSO information. a) SSO Location b) Remedial actions being taken
	3	Director of Engineering Services dispatches investigator to consult with Collection System Maintenance Division on remedial actions and need and extent of posting
	4	Dispatched Investigator notifies Director of Engineering & Collection System Maintenance Division of assessment and makes recommendation on posting
	5	Director of Engineering consults CEO for final decision on posting
	6	If CEO decides posting is required, CEO directs Collection System Maintenance Division to post warning sign(s) and notifies the Director of Administration 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	Director of the Division identifying potential SSO consults with CEO for final decision on posting
	3	If CEO decides posting is required, CEO directs Collection System Maintenance Division to post warning signs and notifies the Director of Administration of intent to post and location
	4	Warning sign(s) is/are posted by Collection System Maintenance Division

C. Other Public Notification

If the CEO determines additional public notification is needed, the Community Relations Department will make said notifications under the CEO'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 Plant 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 Community Relations Department will notify other federal, state, and local agencies, as well as other interested and possibly impacted parties as directed by the CEO.

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 EHS Department. The primary contact should be the

Programs and Events Administrator

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

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

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

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

1. Chief Executive Officer
2. Chief Administration Officer
3. Programs and Events Administrator

4. Director of Collection System Maintenance

Table VI-1

Little Rock Wastewater Media Contacts

Contact	Contact Name	Office	Mobile
Primary	John Jarratt, Chief Administration Officer	501.688.1410	501.352.0512
Backup	Michael Kline, Programs and Events Administrator	501.688.1468	501.352.0513

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:

Departments	Functional positions
Administration	C.E.O., Chief Administration Officer
Engineering	Director, Engineering
Maintenance	Director
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 the SSORP annually and amend 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 pocket 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

Table A-1
SSOs Eligible for Permanent Signage

SSO Manhole Number	Subbasin Number	Maintenance Crew Area
0D104	31700	HWST
-10-B008	60301	HWST
2H018	30040	HWST
2H019	30040	HWST
2O026	30501	HSTH
3K058	30700	HCNT
4B005	10090	HWST
5C007	10070	HWST
6E023	11102	HEST
6E024	11102	HEST
7E046	11102	HEST

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	Subarea
A	Active	0G019	31300	HWST
A	Active	0G025	31300	HWST
A	Active	1G087	30060	HWST
A	Active	2E080	31100	HWST
A	Active	2H074	30030	HCNT
A	Active	2K142	30700	HCNT
A	Active	2K143	30700	HCNT
A	Active	2K167	31900	HCNT
A	Active	2O025	30501	HSTH
A	Active	2Q021	40703	HSTH
A	Active	3D108	11501	HWST
A	Active	3K058	30700	HCNT
A	Active	3K061	30700	HCNT
A	Active	3N004	30501	HSTH
A	Active	3N005	30501	HSTH
A	Active	4N013	40030	HSTH
A	Active	4N030	40702	HSTH
A	Active	4N089	30501	HSTH
A	Active	6N077	40701	HSTH
B	Active	0D104	31700	HWST
B	Active	1B012	11502	HWST
B	Active	2B068	11502	HWST
B	Active	2E085	31100	HWST
B	Active	2H019	30040	HWST
B	Active	3D065	11501	HWST
B	Active	3I036	30700	HCNT
B	Active	4B005	10090	HWST
B	Active	5C007	10070	HWST
B	Active	6C006	10080	HEST
B	Active	7D020	11102	HEST
B	Active	-8-A015	60200	HWST
C	Active	0D034	31700	HWST
C	Active	0E011	31700	HWST
C	Active	0G087	31300	HWST
C	Active	-10-B008	60301	HWST
C	Active	10I112	10902	HCNT

C	Active	10J009	20700	HEST
C	Active	11J053	20402	HEST
C	Active	11K107	20700	HEST
C	Active	1B018	11502	HWST

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 lead to the inclusion on this listing and shall require field conformation, while "Pending" indicates a rehabilitation effort has been conducted with field conformation 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 Emergency Crews or Area Foreman 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 and attempts to resolve the problem, then contacts the Area Foreman within 1-hour of being notified by dispatcher. 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 Area Foreman 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 or an unnamed waterway/ditch.

Crews at this point start cleanup and sanitize the site. When complete, the crew is to contact the Area Foreman, who will go back to the site and 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 and submit it 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 Programs and Events Administrator will be informed as well to handle any damage claims.

APPENDIX B. SSO ACTION PLAN (continued)

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

Procedures:

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 (via radio or by calling 223-1509) or the Environmental Health and Safety 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 EHS Department and report the above information.

Step 2

Environmental Health & Safety Department will then investigate the report.

Step 3

If the EHS Department confirms the report, EHS will notify dispatch to ALERT all affected field crews via RADIO that the reported area is "Off Limits" until further notified. EHS 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

APPENDIX C. DETECTING POTENTIAL EXPLOSIVE OR TOXIC CONDITIONS

(continued)

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

Step 5

Environmental Health and Safety will notify CAW dispatch of the Potential Hazardous Area.

Step 6

If the investigation suspects a Natural Gas Leak, EHS will contact Centerpoint Energy to report the situation.

Step 7

Environmental Health and Safety 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, EHS will perform a follow-up investigation and when NO HAZARDOUS conditions exist, EHS 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, EHS will contact the Environmental Assessment Department (EAD) and transfer the report for further action. 688-1547

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 Safety 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 one.

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 **(reduced the size)**

For Additional Information
Contact 688-1490

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: 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
- ☐ prevent sewer overflows
- ☐ other _____

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

THANKS!

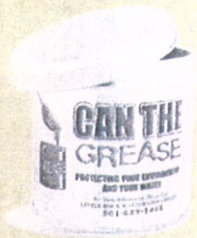
Work Order#: _____ Today's Date: _____

Line Segment: _____

Little Rock Wastewater

www.lrwa.com

YOU CAN ALSO HELP ...



1. Place the [illegible] over the grease can.
2. Pour your [illegible] grease into the bag and tie the bag shut.
3. Once the bag is full, throw it away and start a [illegible] another layer in the can.

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

Name: _____

Address: _____

Telephone number: _____

Please return card to: Little Rock Wastewater
[illegible]
Little Rock, AR 72203
501-[illegible]
www.lrwa.com

ATTACHMENT D

NOTICE OF SSO WHICH MAY OCCUR AT THIS LOCATION


2-3-14
1500 W 65th Hindman PK
20-025
#63848 B
SEWER
CANTIAH

ATTACHMENT E

NON-CAPACITY RELATED SANITARY SEWER OVERFLOWS SUMMARY REPORT

LITTLE ROCK WASTEWATER UTILITY
NON-CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2014 - 12/31/2014

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	11311 MARA LYNN RD	-2G068	02/28/2014	6:10 pm	120	360	VA	NEAH	EC, PN, WO	GR
AF	8021 KANIS PINES DR	2I011	06/16/2014	9:05 am	60	300	VA	NEAH	EC, PN, WO	GR
AF	ALLSOPP PARK	6E023	07/13/2014	11:30 am	240	2,400	VA	NEAH	PN, WO	DI
AF	3300 BROWN ST	8K017	07/26/2014	1:05 pm	120	1,800	VA	NEAH	EC, PN, WO	PA
AF	3200 BROWN ST	8K019	07/28/2014	6:45 am	60	600	VA	NEAH,OEHC	EC, PN, WO	GR/CB
AF	3300 BROWN ST	8K017	11/18/2014	5:40 pm	15	225	VA	NEAH	EC, PN, WO	PA
AF	3300 BROWN ST	8K076	11/18/2014	7:30 pm	5	75	VA	NEAH	EC, PN, WO	PA
					COUNT of OTHER OVERFLOWS:		**7**			
AF	1600 CANTRELL RD	10G144	01/08/2014	3:00 pm	60	120	D	NEAH	EC, PN, WO	PA
AF	11041 RIVERCREST DR	-2A018	01/23/2014	11:00 am	30	30	RO	NEAH	EC, PN	GR
AF	3801 SPRINGER BLVD	15L007	01/29/2014	8:45 am	60	180	G	NEAH	EC, PN, WO	DI
AF	LITTLE MAUMELLE PUMP STATION	-8-B015	02/02/2014	8:30 am	60	300	E	NEAH	EC, PN, WO	GR
FC	FC	FOURCHE	02/05/2014	3:00 pm	1	100	E	NEAH	EC	GR
AF	20900 CHENAL PKY	-11C008	02/17/2014	4:45 pm	60	60	RO	NEAH	EC, PN, WO	GR
AF	14 CHELLE CV	-14-A038	02/19/2014	4:00 pm	75	375	RO	NEAH	EC, PN, WO	DI
FC	7 FOXBORO CIR	5P016	02/23/2014	2:00 pm	120	120	G	NEAH	EC, PN, WO	DI
AF	2717 BISHOP ST	10K167	03/14/2014	3:05 pm	15	15	RO	NEAH	EC, PN, WO	GR
AF	112 GREENLAND CV	3L044	03/19/2014	2:40 pm	120	1,200	RO	NEAH	EC, PN, WO	DI
FC	6924 YARBERRY LN	3V023	03/29/2014	4:10 pm	60	180	D	NEAH,OEHC	EC, PN, WO	GR
AF	5208 W 24TH ST	6J138	04/01/2014	3:40 pm	50	50	RO	NEAH	EC, PN, WO	GR
AF	64 BELLEGARDE DR	-11C103	04/11/2014	6:45 pm	300	300	RO	NEAH,OEHC	EC, PN, WO	GR
AF	6101 COLONEL GLENN RD	4L053	04/16/2014	4:15 pm	210	2,100	LF	NEAH,OEHC	EC, EN, PN, WO	CR
AF	5001 WOODLAWN DR	6F169	04/21/2014	1:30 pm	60	60	LF	NEAH	EC, EN, PN	GR

LITTLE ROCK WASTEWATER UTILITY
NON-CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2014 - 12/31/2014

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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

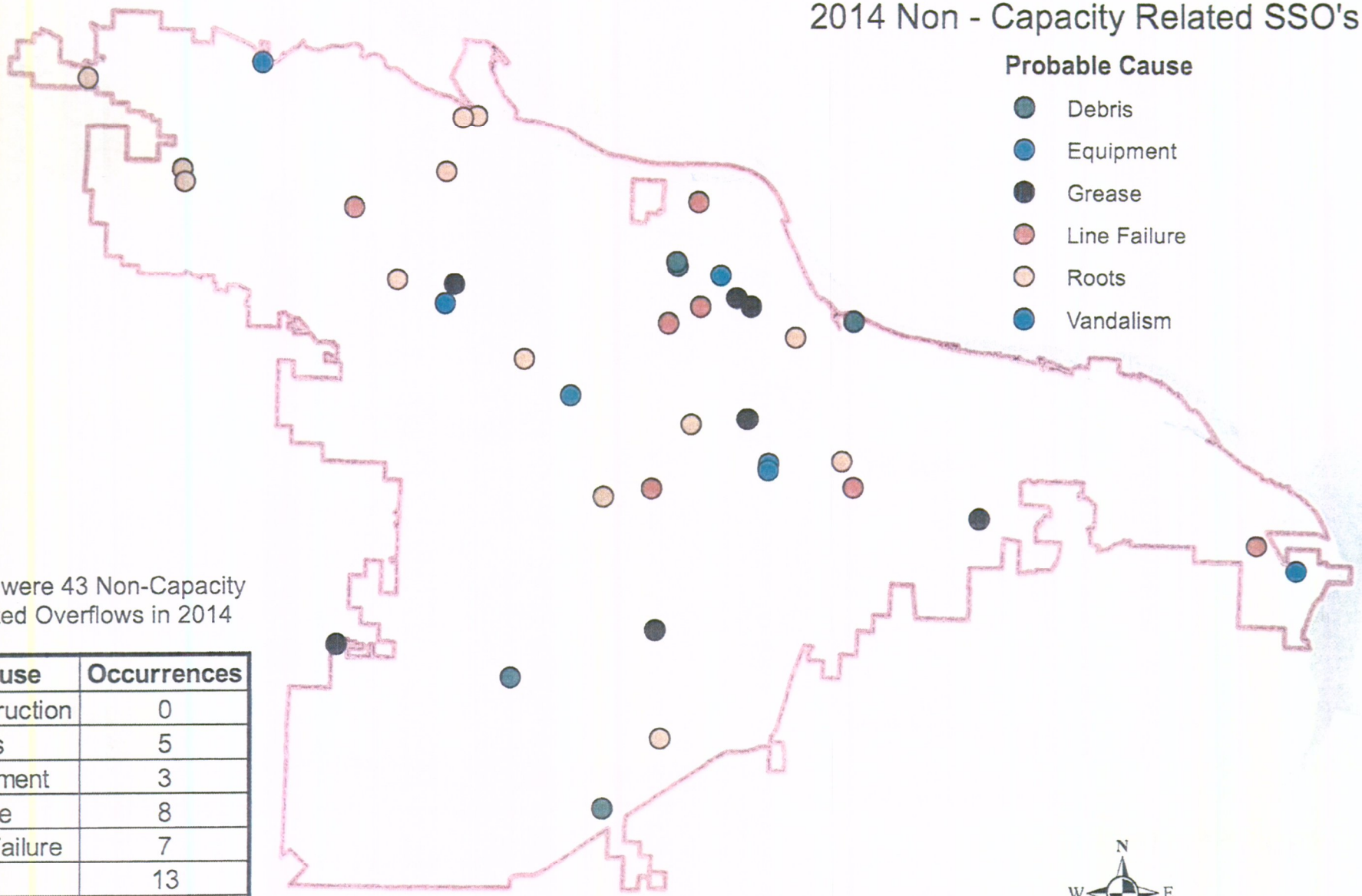
NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	2100 KAVANAUGH BLVD	7F092	05/01/2014	8:00 am	60	600	G	NEAH	EC, PN	PA
AF	ALLSOPP PARK	7F122	05/02/2014	8:30 pm	180	360	G	NEAH	EC, PN, WO	GR
AF	1600 N TAYLOR ST	5E072	05/07/2014	3:50 pm	60	120	D	NEAH	EC, PN	DI
AF	8 WILDWOOD RD	5E081	05/08/2014	2:00 pm	60	600	D	NEAH	EC, PN	DI
AF	10/03/2001 DOWNSTREAM	-1A002	05/21/2014	10:30 am	60	300	RO	NEAH	EC, PN, WO	GR
AF	119 VERNON AVE	9G127	05/22/2014	5:30 pm	60	60	RO	NEAH	EC, PN	GR
FC	5 FALCON CT	-5Q009	06/11/2014	8:00 pm	10	10	G	NEAH	EC, PN, WO	GR
AF	11420 ROCKY VALLEY DR	-2C005	06/28/2014	4:08 pm	180	180	RO	NEAH,OEHC	EC, PN, WO	GR
AF	12600 SAINT CHARLES BLVD	-4F058	07/24/2014	11:25 am	60	60	RO	NEAH	EC, PN, WO	DR
FC	PRIMARY PUMP STATION	FOURCHE	08/15/2014	2:30 pm	1	5	E	NEAH	EC	DR
AF	38 SCENIC BLVD	6C023	08/19/2014	10:30 am	30	30	LF	NEAH	EC, EN, WO	GR
AF	7 LA SCALA CT	-5D005	08/23/2014	11:30 am	15	15	LF	NEAH	EC, PN, WO	DI
AF	11103 WEST POINT CT	-2F115	10/07/2014	9:00 am	60	60	G	NEAH	EC, PN, WO	DI
AF	2119 S PINE ST	7J222	10/20/2014	1:20 pm	5	5	G	NEAH	EC, PN, WO	GR
AF	BACKFLOW PREVENTER	7J221	10/20/2014	1:30 pm	5	5	G	NEAH	EC, PN, WO	GR
AF	1003 W 33RD ST	11L071	10/27/2014	9:00 am	60	60	LF	NEAH	EC, EN, WO	DR
AF	201 N PIERCE ST	5G205	11/05/2014	11:30 am	60	60	LF	NEAH	EC, EN, PN	PA
FC	8900 MABELVALE PIKE	0R006	11/11/2014	11:45 am	30	300	D	NEAH	EC, PN	GR
FC	9500 BIRDWOOD DR	24M007	11/18/2014	5:00 pm	5	5	LF	NEAH	EC, EN	GR
FC	9908 INDEPENDENCE LN	5T040	11/26/2014	11:30 am	30	150	RO	NEAH	EC, PN, WO	GR
AF	9601 BAPTIST HEALTH DR	0H010	12/29/2014	1:30 pm	60	600	RO	NEAH	EC, PN, WO	PA

COUNT of MANHOLE OVERFLOWS: 36

COUNT of NON-CAPACITY OVERFLOWS : 43

Little Rock Wastewater

2014 Non - Capacity Related SSO's



There were 43 Non-Capacity Related Overflows in 2014

Cause	Occurrences
Construction	0
Debris	5
Equipment	3
Grease	8
Line Failure	7
Roots	13
Vandalism	7

Map Printed 02/09/2015 AMN

ATTACHMENT F

CAPACITY RELATED SANITARY SEWER OVERFLOWS SUMMARY REPORT

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2014 - 12/31/2014

CODE DESCRIPTIONS

NPDES PERMIT

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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
FC	19 S MEADOWCLIFF DR	4N030	02/02/2014	8:00 pm	60	120	R	NEAH,OEHC	EC, EN, PN	CR
FC	7909 MCDANIEL DR	2Q021	02/02/2014	8:00 pm	60	120	R	NEAH	EC, EN, PN	DI
AF	123 BROOKSIDE DR	1G087	02/04/2014	5:00 pm	10	50	R	NEAH	EC, EN, PN, WO	GR
AF	1401 BISCAYNE DR	2E080	02/04/2014	5:00 pm	30	150	R	NEAH	EC, EN, PN, WO	GR
FC	28 DELLWOOD DR	6N077	02/04/2014	5:00 pm	60	60	R	NEAH	EC, EN, PN	GR
AF	3201 WHITFIELD ST	2K167	02/04/2014	5:00 pm	30	150	R	NEAH	EC, EN, PN, WO	DI
AF	3437 WYNNE ST	2K143	02/04/2014	5:00 pm	30	150	R	NEAH,OEHC	EC, EN, PN	CR
AF	3501 WHITFIELD ST	2K142	02/04/2014	5:00 pm	30	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	3501 WHITFIELD ST	3K058	02/04/2014	5:00 pm	30	300	R	NEAH,OEHC	EC, EN, PN	CR
AF	4820 W MARKHAM ST	0G019	02/04/2014	5:00 pm	30	150	R	NEAH	EC, EN, PN, WO	DI
AF	7500 W 65TH ST	2O025	02/04/2014	5:00 pm	60	180	R	NEAH,OEHC	EC, EN, PN	CR
AF	9820 W MARKHAM ST	0G025	02/04/2014	5:00 pm	30	150	R	NEAH	EC, EN, PN, WO	DI
AF	WESTERN HILLS	3N004	02/04/2014	5:00 pm	60	60	R	NEAH,OEHC	EC, EN, PN	CR
AF	WESTERN HILLS	3N005	02/04/2014	5:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
FC	WESTERN HILLS	4N013	02/04/2014	5:00 pm	60	120	R	NEAH,OEHC	EC, EN, PN	CR
AF	WESTERN HILLS	4N089	02/04/2014	5:00 pm	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	7500 W 65TH ST	2O025	03/03/2014	1:00 am	60	120	R	NEAH,OEHC	EC, EN, PN	CR
AF	KANIS PARK	2H074	03/03/2014	1:00 am	30	600	R	NEAH	EC, EN, PN	GR
AF	3317 WHITFIELD ST	3K061	03/29/2014	2:00 am	30	150	R	NEAH,OEHC	EC, EN, PN, WO	CR
AF	3501 WHITFIELD ST	3K058	03/29/2014	2:00 am	30	150	R	NEAH,OEHC	EC, EN, PN, WO	CR
AF	5301 WESTERN HILLS AVE	3N004	03/29/2014	2:00 am	60	120	R	NEAH,OEHC	EC, EN, PN	CR
AF	5301 WESTERN HILLS AVE	3N005	03/29/2014	2:00 am	60	120	R	NEAH,OEHC	EC, EN, PN	CR
FC	5301 WESTERN HILLS AVE	4N013	03/29/2014	2:00 am	60	120	R	NEAH,OEHC	EC, EN, PN	CR
AF	5301 WESTERN HILLS AVE	4N089	03/29/2014	2:00 am	60	120	R	NEAH,OEHC	EC, EN, PN	CR

LITTLE ROCK WASTEWATER UTILITY
CAPACITY SANITARY SEWER OVERFLOW REPORT
1/1/2014 - 12/31/2014

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	7500 W 65TH ST	2O025	03/29/2014	2:00 am	60	300	R	NEAH,OEHC	EC, EN, PN	CR
FC	7909 MCDANIEL DR	2Q021	03/29/2014	2:00 am	60	60	R	NEAH	EC, EN, PN	DI
AF	123 BROOKSIDE DR	1G087	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN, WO	GR
AF	1404 BISCAYNE DR	2E080	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN, WO	GR
AF	1601 WESTPARK DR	3I036	04/14/2014	7:00 am	30	900	R	NEAH,OEHC	EC, EN, PN	CR
AF	2605 CHARTER OAK DR	0D104	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN, WO	GR
AF	3201 WHITFIELD ST	2K167	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN	GR
AF	3317 WHITFIELD ST	3K061	04/14/2014	7:00 am	30	900	R	NEAH,OEHC	EC, EN, PN	CR
AF	3437 WYNNE ST	2K143	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN	GR
AF	3501 WHITFIELD ST	3K058	04/14/2014	7:00 am	30	900	R	NEAH,OEHC	EC, EN, PN	CR
AF	3807 FOXCROFT RD	2B068	04/14/2014	7:00 am	60	300	R	NEAH	EC, EN, PN, WO	GR
AF	4 COFFEE POT LN	7D020	04/14/2014	7:00 am	60	240	R	NEAH	EC, EN, PN	DI
AF	5207 WESTERN HILLS AVE	3N005	04/14/2014	7:00 am	60	180	R	NEAH,OEHC	EC, EN, PN	CR
FC	5207 WESTERN HILLS AVE	4N013	04/14/2014	7:00 am	60	180	R	NEAH,OEHC	EC, EN, PN	CR
AF	5207 WESTERN HILLS AVE	4N089	04/14/2014	7:00 am	60	240	R	NEAH,OEHC	EC, EN, PN	CR
AF	718 PINE VALLEY RD	3D065	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN. WO	GR
AF	7500 W 65TH ST	2O025	04/14/2014	7:00 am	60	240	R	NEAH,OEHC	EC, PN	CR
FC	7909 MCDANIEL DR	2Q021	04/14/2014	7:00 am	60	120	R	NEAH	EC, EN, PN	DI
AF	810 PINE VALLEY RD	3D108	04/14/2014	7:00 am	30	600	R	NEAH	EC, EN, PN, WO	GR
AF	9820 W MARKHAM ST	0G019	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN	DI
AF	9820 W MARKHAM ST	0G025	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN	DI
AF	D/S MH NOT FOUND	-8-A015	04/14/2014	7:00 am	30	150	R	NEAH	EC, EN, PN, WO	GR
AF	KANIS PARK	2H019	04/14/2014	7:00 am	30	300	R	NEAH	EC, EN, PN	GR
AF	KANIS PARK	2H074	04/14/2014	7:00 am	30	300	R	NEAH	EC, EN, PN	GR

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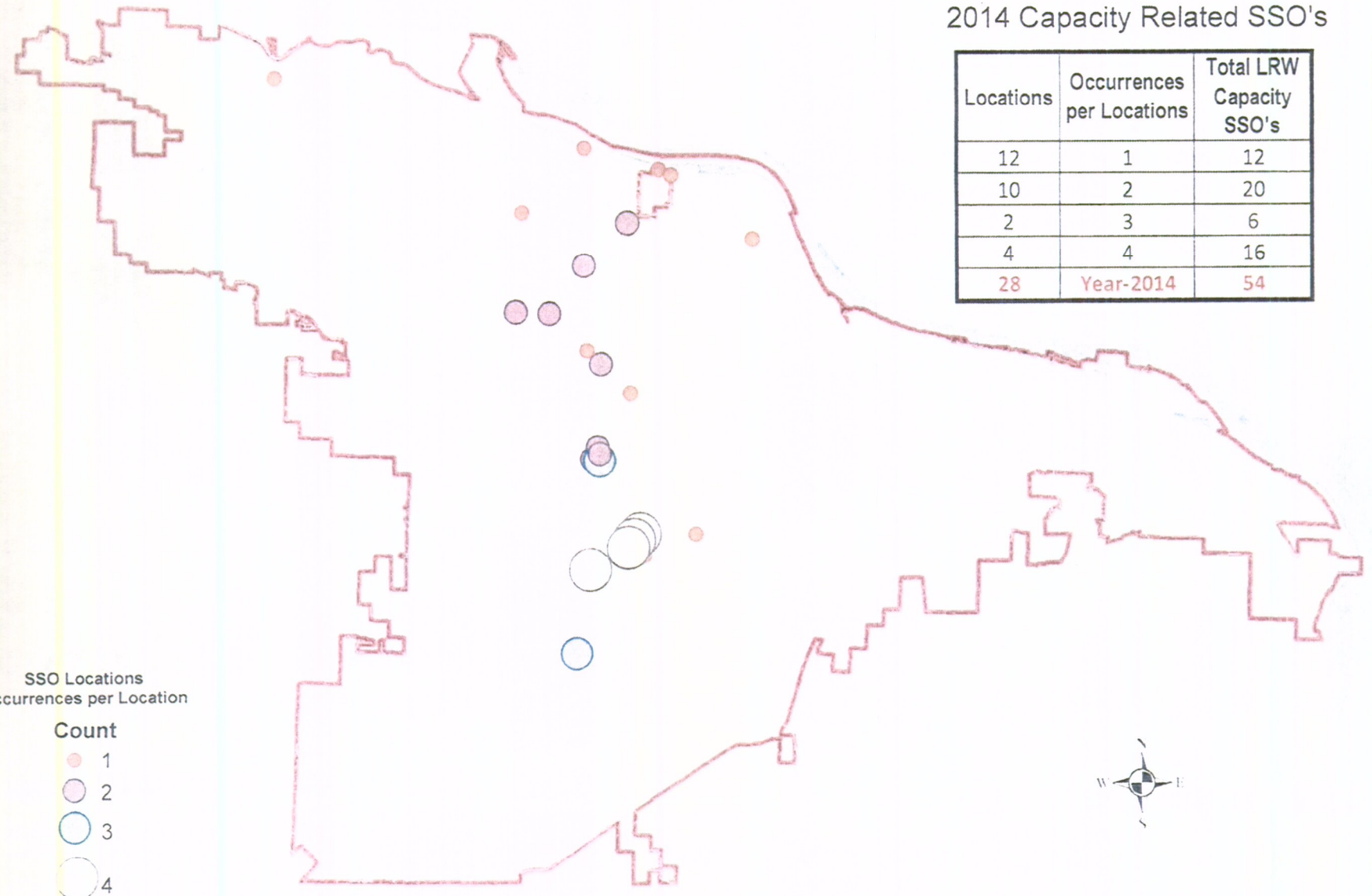
NPDES PERMIT	LOCATION	MANHOLE NO.	DATE OF SSO	TIME OF SSO	ESTIMATED DURATION, MIN	ESTIMATED VOLUME, GAL	CAUSE OF SSO	OBSERVED ENVIRON. IMPACT	ACTION(S) TAKEN TO ADDRESS SSO	ULTIMATE DISCHARGE LOCATION
AF	REBSAMEN PARK	4B005	04/14/2014	7:00 am	30	600	R	NEAH	EC, EN, PN, WO	GR
AF	REBSAMEN PARK	5C007	04/14/2014	7:00 am	30	600	R	NEAH	EC, EN, PN, WO	GR
AF	5207 WESTERN HILLS AVE	3N005	06/28/2014	7:30 pm	60	120	R	NEAH	EC, EN, PN, WO	CR
FC	5207 WESTERN HILLS AVE	4N013	06/28/2014	7:30 pm	60	180	R	NEAH	EC, EN, PN, WO	CR
AF	5207 WESTERN HILLS AVE	4N089	06/28/2014	7:30 pm	60	120	R	NEAH	EC, EN, PN, WO	CR
AF	810 PINE VALLEY RD	3D108	06/28/2014	7:30 pm	30	750	R	NEAH	EC, EN, PN	GR

COUNT of CAPACITY OVERFLOWS : 54

Little Rock Wastewater

2014 Capacity Related SSO's

Locations	Occurrences per Locations	Total LRW Capacity SSO's
12	1	12
10	2	20
2	3	6
4	4	16
28	Year-2014	54



Map Printed 01.22.2015 AMN