

Sanitary Sewer Overflow Response and Reporting Program

Effective: November 2018

Review and Revision History

Review Date:

November 2018

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2-20-19

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2-20-19

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Revision Number	Page Number(s)	Description of Change	Date of Change
1	ii	Added tables and figures tables of contents	5/22/2018
2	1	Updated text in Section 1.2 on distribution of plan	11/26/2018
3	2	Added Section 1.4 on ADEM-mandated requirements	5/22/2018
4	2	Added Section 1.5 on plan review and update commitment	5/22/2018
5	3	Added Table 1 on SSORRP/NPDES Permit Crosswalk	5/22/2018
6	5	Updated Table 2	11/26/2018
7	6	Updated Table 3	11/26/2018
8	9	Added text and Figure 4 on ADEM's Sanitary Sewer Overflow Map	5/22/2018
9	19	Added text on coordination meetings	5/22/2018
10	Appendix D	Removed Tables for Estimated SSO Flow Out of 36" Manholes	5/22/2018

JCESD Sanitary Sewer Overflow Response and Reporting Program

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Acronyms

ADEM Alabama Department of Environmental Management

CMOM Capacity, Management, Operations, and Maintenance

DCNR Alabama Department of Conservation and Natural Resources

JCESD Jefferson County Environmental Services Department

JCDH Jefferson County Department of Health

N/A Not applicable

SCMS Sewer Construction Maintenance Supervisor

SSO Sanitary sewer overflow

SSORRP Sanitary Sewer Overflow Response and Reporting Program

TVI Television Inspection

USEPA United States Environmental Protection Agency

Sanitary Sewer Overflow Response and Reporting Program

Section 1 Introduction

1.1 Purpose

On October 21, 1996, Jefferson County (County) entered into a Consent Decree with the United States Environmental Protection Agency (USEPA). As part of the Consent Decree, the Jefferson County Environmental Services Department (JCESD) is required to report to the USEPA all Sanitary Sewer Overflows (SSOs) as defined in the Decree. The JCESD also reports all SSOs to the Alabama Department of Environmental Management (ADEM) and the Jefferson County Department of Health (JCDH).

The purpose of the Sanitary Sewer Overflow Response and Reporting Program (SSORRP) is to provide policies and procedures for the response to and reporting of SSOs in an effort to protect public health and the environment, and to meet applicable regulatory requirements.

1.2 Distribution of the SSORRP

This **SSORRP** will be made available to all individuals involved in responding to and reporting SSOs within the JCESD. Copies of this program will be distributed to the following JCESD personnel:

- Director
- Deputy Directors
- Engineering Staff
- Inspection Staff
- Line Maintenance Personnel
- Television Inspection (TVI) Personnel
- Pump Station Operations Personnel
- Sewer Line Construction Personnel

A copy of this plan is available for download at http://www.jeffcoes.org/Default.asp?ID=47&pg=PROGRAMS.

¹ As defined in JCESD's Consent Decree, Civil Action No. 93-G-2492-S, ""Sanitary Sewer Overflow," "SSO," and "Overflow" shall mean any discharge of wastewater from the County Collection System prior to treatment at a permitted treatment facility. SSO's include, but are not limited to, discharges from manholes, pipes, or pump stations."

1.3 Personnel Training

JCESD will provide training sessions upon the adoption of this program to all personnel involved in responding to and reporting of SSOs. New personnel will be trained as soon as practicable after hire. All JCESD operations and maintenance personnel listed in Section 1.2 will be provided training sessions as needed to refresh them of the adopted procedures. The training sessions and personnel trained will be documented for tracking purposes.

As this **SSORRP** is updated, additional training sessions will be conducted to retrain personnel on new and/or changed procedures.

1.4 ADEM-Mandated Sanitary Sewer Overflow Response Plan Requirements

ADEM's draft National Pollution Discharge Elimination System Permit for the Cahaba Wastewater Treatment Plant includes specific requirements for JCESD's Sanitary Sewer Overflow Response Plan. While this plan (Sanitary Sewer Overflow Response and Reporting Program) contains details on the majority of the required plan components, other JCESD Capacity, Management, Operations and Maintenance (CMOM) Program plans address other components. **Table 1** on the following page presents a "crosswalk" between the requirements and the corresponding JCESD's CMOM Program Plan(s) where relevant information can be found.

1.5 SSORRP Plan Review and Update Commitment

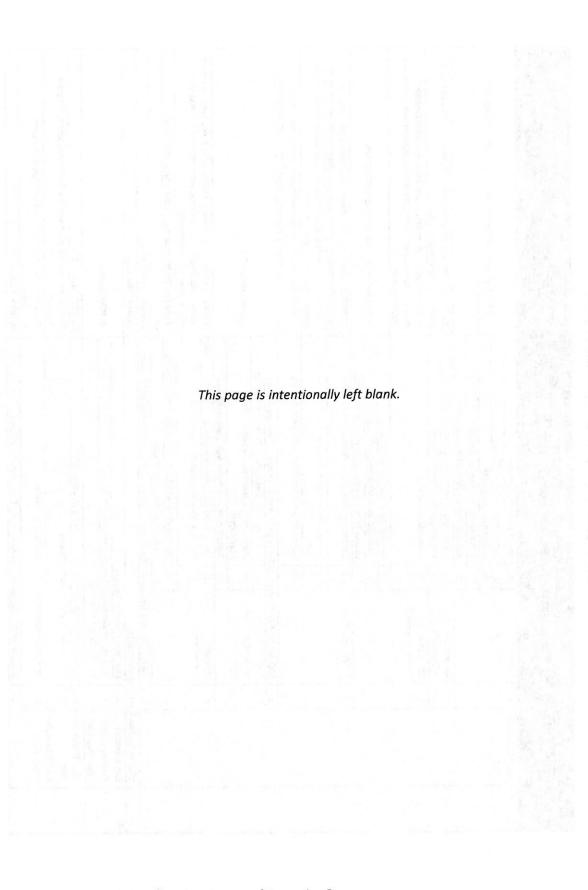
JCESD commits to reviewing and evaluating this SSORRP plan at least once every three years. The documented plan review and evaluation will be signed and dated by the responsible JCESD official or appointed designee.

In addition, when requested by the ADEM Director (or designee), JCESD will provide the SSORRP plan to ADEM. Within 30 days of receipt of notification from ADEM, JCESD will modify any noted plan deficiency, and certify to ADEM that the appropriate modifications have been made.

Table 1. SSORRP / NPDES Permit Requirement Crosswalk

	, ני י	haba	Cahaba WWIP NPDES Permi	rt No.	ES Permit No. AL0023027 Requirements	Jefferson County ESD CMOM Programs
	Y	art IV.	Specific Requirement G. Sanitary Sewer D	ots, Co	Part IV. Specific Requirements, Conditions, and Limitations G. Sanitary Sower Overflow, Resnonse Plan	
			C. Samuel y Seviel O		or neaponae i an	
Section				S	Issue	Program Plan, Section
1.	SSO Response	ri o	General	Ð	Population of City/Town	
	Plan		Information	(2)	Number of Customers Served	
				(3)	Designated Sub basins	LMOM Program Organization, Collection System Background
				€	Estimated Linear Feet of Sewers	Information
				(2)	Number of Pump/Lift Stations in System	
		ف	Responsibility	Ð	SSO Response Coordinators (Key Positions)	SSORRP, Section 2 and Customer Service Program, Responding to
			Information	(2)	SSO Responders (Key Positions)	Complaints/Service Requests
		ن	SSO and Surface	(1)	Likely SSO Locations	Overflow Tracking Program, Trend Analysis and Engineering
			Water Assessment			Program, Continuous Sewer System Assessment Program, Program Implementation
				(2)	General Collection System Map	
				3	Classified Swimming Surface Waterbodies	Water Quality Monitoring, Program Overview
				<u>4</u>	Locally Known Swimming Surface Waterbodies	
		·	Public Reporting of	(1)	Contact Information for Public to Report SSO	SSORRP, Section 2.1 and Customer Service Program, Service
			SSOs			Request Management, Service Request Program Implementation
				(2)	Information Requested from Person Reporting the	Customer Service Program, Service Request Management, Service
					280	Request Program Implementation
				(3)	Communication Procedures for Reported SSO	SSORRP, Section 2.3 and Customer Service Program, Service
		اه	SSO Notification Proc	edures	SSO Notification Procedures for Department, County, and Affected Entities	nequest Management, Service Nequest Flogram Implementation
		4.	SSO Notification	3	List of Feasible Methods for Public Notification	
		N	Methods for the	(2)	Minimum Required Information for Public	SSORRP, Section 2.3
			Public	Ì	Notification	
				3	Determination of Public Notification Method	
		où	Standard	(I)	General SSO Response Procedures	SSORRP, Section 2.3 and Standard Operating Procedures and Work
			Procedures	(2)	SSO Collection and Disposal Procedures	Process Documentation for Collection System Field Operations (SOP Handbook), SSORRP SOP
				(3)	Coordination of Instream Water Quality Monitoring	Water Quality Monitoring, Program Implementation
				(4)	Applicable Document References	n/a
		ج	Date, Titles, and Signa	tures	and Signatures of SSO Response Plan Author/Reviews/Modifications	SSORRP, Signature Page
2.	SSO Response Plan Implementation	lan Irr	plementation			SSORRP, Title Page
3.	Department	a.	Plan Availability for Review	eview		
	Review of SSO	þ.	Director Notification	of Requ	Director Notification of Required Plan Modifications	SSORRP, Section 1.5
	Response Plan	ť	Modification Timeframe	те		
4.	SSO Response	Э.	Availability of Plan Co	py At P	of Plan Copy At Permitted/Approved Facility	SSORRP, Section 1.2
	Plan	þ.	Plan Availability Upon Public Request	Public	Request	SSORRP, Section 1.2 and Overflow Tracking Program, Program Overview
	Procedures	ť	Personnel Training Required for Implementation	quired	for Implementation	SSORRP, Section 1.3 and Training Program, Program Implementation
		o.	Designated SSO Response	Inse Pla	SSO Response Plan Review and Evaluation Timeframe	SSORRP, Section 1.5

JCESD Sanitary Sewer Overflow Response and Reporting Program



Section 2 - SSO Notification

2.1 SSO Call Center

JCESD operates a Call Center that is continually monitored twenty-four hours a day to receive calls regarding SSOs and backups. These calls may be received from other utilities, municipalities, JCESD staff, the public, or any individual that believes an SSO is occurring. Any JCESD employee that discovers an SSO or evidence of an SSO will call the Call Center to report the details of the event. The phone number to report an SSO is 205-942-0681.

The Call Center is physically manned by dispatchers 16 hours per day from 7:00 AM to 11:00 PM. Between the hours of 11:00 PM to 7:00 AM, an automated voice mail system plays a recorded message which instructs the caller to leave a detailed message of the problem. The automated system then notifies the Sewer Construction/Maintenance Supervisor and the on-call supervisor.

The Communication Operator IIs (referred to as "Dispatchers") on duty log information including, but not limited to: the complaint/service request address, caller's name, and service request details into Cityworks IMS, the JCESD's information management system.

2.2 Notification of JCESD Personnel

Crews are manned seven days per week from 7:00 AM to 7:30 PM, except for holidays that occur during the week (7:00 am to 3:30 pm). Following the receipt of a possible overflow call during business hours, the Dispatcher notifies a crew from the Shades Valley Line Maintenance facility or the Village Creek Line Maintenance facility and the crew responds to the call as appropriate.

During business hours, the managing supervisor of the responding crew or an inspector is also notified via two-way radio or cell phone. The Sewer Construction/Maintenance Supervisor and Principal Engineering Inspectors are also notified of any possible SSO occurrence via email to their cell phone. After hours, the on-call supervisor notifies the on-call maintenance crew for response. **Table 2** lists the JCESD personnel that are notified of potential SSO-related service requests.

2.3 Notification of Regulatory Agencies and the Public

If an SSO is determined to reach surface waters in accordance with Section 3.3, a *Sewer Overflow Advisory* (ESD Form RF4-1) is sent to the ADEM, the JCDH, local officials, JCESD employees, and media groups (see **Table 3**).

Table 2. JCESD Personnel Notified of Potential SSO-Related Service Requests

Position	Name	Phone Number	Email Address
Sewer Construction Maintenance Supervisor (SCMS)	Brian Champion	205-601-5054	championb@jccal.org
Principal Engineering Inspector	Jeff Melvin	205-215-4308	melvinj@jccal.org
Principal Engineering Inspector	Position Vacant	205-xxx-xxxx	name@jccal.org
Sewer Video Supervisor	Don Goodwin	205-296-2012	goodwind@jccal.org
SCMS	Josh Defnall	205-332-0760	defnallj@jccal.org
SCMS	Mel Vance	205-541-5871	vanceme@jccal.org
SCMS	Vacant	205-xxx-xxx	name@jccal.org
Public Works Supervisor	Todd Childers	205-369-3821	childerst@jccal.org
Public Works Supervisor	Wayne Smith	205-213-7266	smithwa@jccal.org
Sewer Service Inspector	Jason Ashley	205-601-5052	ashleyj@jccal.org
Sewer Service Inspector	Chris Cummings	205-368-3287	cummingsc@jccal.org

Table 3. Regulatory Agencies, Officials, and Media Outlets Notified if SSO Reaches Surface Water

Agency	Contact	Phone Number*	Email Address
ADEM – 24-HR Notification	ADEM SSO Hotline	334-274-4200(O)	N/A
ADEM – 24-HR Report	Nick Caraway	334-279-3051(F)	H2omail@adem.state.al.us
ADEM – 5-Day Report	Nick Caraway	334-279-3051(F)	H2omail@adem.state.al.us
ADEM – Birmingham Office	N/A	205-942-6168	N/A
JCDH – 24-HR Report	Jonathan Stanton	205-939-9019(F)	N/A
JCDH – 5-Day Report	Jonathan Stanton	205-939-9019(F)	N/A
JCESD Director	David Denard	205-325-5979(O)	denardd@jccal.org
JCESD Deputy Director	Daniel White	205-214-8610(O)	whited@jccal.org
JCESD Deputy Director	Margaret Tanner	205-215-7445	tannerma@jccal.org
JCESD Deputy Director	Steve Niemeyer	205-325-3063(O)	niemeyers@jccal.org
JCESD Chief Civil Engineer	Brian Rohling	205-521-7512(O)	rohlingb@jccal.org
SCMS	Brian Champion	205-601-5054(C)	championb@jccal.org
Principal Engineering	Jeff Melvin	205-383-5512	melvinj@jccal.org
Inspector County Manager	Tony Petelos	205-731-2880(O)	petelost@jccal.org
Deputy County Manager	Cal Markert	205-325-5850(O)	markertc@jccal.org
WABM	N/A	205-290-2115(F)	N/A
ABC 33/40	N/A	205-982-3942(F)	N/A
CBS 42	N/A	205-320-2722(F)	N/A
FOX 6	N/A	205-583-4356(F)	N/A
NBC 13	N/A	205-323-3314(F)	N/A

^{*}O – Office, F – Fax, C - Cell

As shown in Figure 1, Sewer Overflow Advisories are also listed on the JCESD website at

http://www.jeffcoes.org/Default.asp?ID=44&pg=SSO+DATABASEI

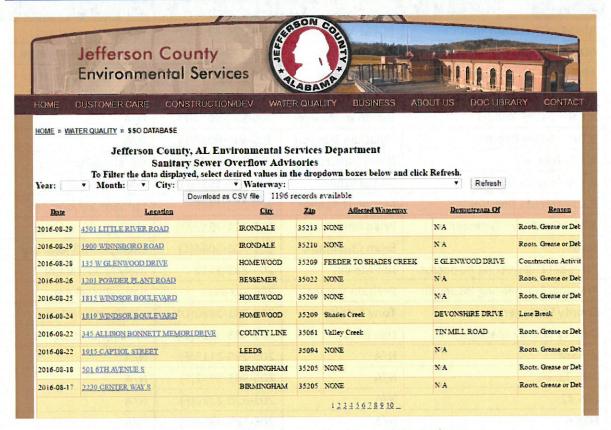


Figure 1. Sanitary Sewer Overflow Advisory Webpage

If it is determined that a significant danger to public health exists due to contact with affected surface waters, the portable sign shown in **Figure 2** will be placed in the immediate vicinity of the SSO. The portable sign shown in **Figure 3** will be placed at likely points of public access to the affected downstream surface waters. The signage will remain in the area until the SSO has ceased and sufficient time has elapsed to mitigate its effects.

The rationale for determining whether an SSO poses a significant danger to the public include, but are not limited to: the volume of the overflow, the size of the receiving stream, weather conditions, upstream and downstream fecal coliform testing results (if available), accessibility of the area near and downstream of the SSO, population density and the presence of sensitive or public facilities such as schools, parks, etc. If it is determined that there is a threat for exposure by a specific individual or group, JCESD will notify them directly.



Figure 2. Portable Warning Sign Posted Near Discharge Source in Area that May Endanger Human Health



Figure 3. Portable Surface Water Warning Sign Posted Near Surface Waters

ADEM's Sanitary Sewer Overflow Map, as shown in Figure 4, is available through its e-Maps Portal at http://www.adem.state.al.us/emaps.cnt. This map allows users, including the general public, to see the locations of SSOs that have been reported to the Department for up to 10 days after the SSO has ceased. This platform serves as a dynamic communication method for parties interested in locating where SSOs have occurred.

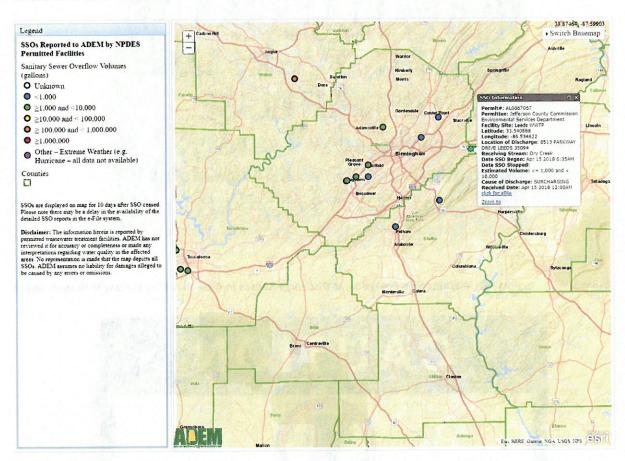


Figure 4. Screenshot of ADEM's Sanitary Sewer Overflow Map

Within 24 hours of any SSO, ADEM will be notified via their phone number, and the 24-Hour Report (ESD Form RF2-1) will be submitted to ADEM and the JCDH. A 5-Day Follow-up Report (ESD Form RF3-1) is prepared and sent to ADEM and JCDH within 5 days of the SSO occurrence. Each month, the JCESD submits a report and database of the SSOs from within the collection system to the USEPA in accordance with the requirements of the Consent Decree. In addition, copies of these reports are provided to the local ADEM office in Homewood, AL and the Government Documents Department at the Birmingham Public Library.

If an SSO is attributed to grease—related causes and not attributable to a food service facility, the personnel of the Grease Control Program will alert the nearby public of the overflow in an effort to limit the introduction of grease to the system and prevent future overflows.

The Grease Control Program Inspectors will place door hangers (see **Figure 5**) on the doors of the residences in the area neighboring the overflow following the event. This notification may occur significantly after the SSO has occurred and is not intended to serve as an immediate public health warning.

Where does the fat, oil and grease come from?

- Meat fats
- Food scraps
- Lard
- Baking goods
- Cooking oils
- Sauces
- · Shortening
- Dairy
- Butter
- products
- · Margarine
- Butter pro



... don't let this happen to your pipes !!



ATTENTION RESIDENT

We need your HELP!!

This area has experienced a sanitary sewer overflow and/or blockage in the sewer lines caused by the build up of fats, oils and grease. Excessive accumulation of fats, oils and grease in the line restricts the flow of wastewater and can result in sanitary sewer overflows and blockages.

By following the steps below, **you** can prevent blockages caused by fats, oils and grease and the occurrence of costly sewer overflows:

- NEVER pour fats, oils and grease down sink drains or toilets. Allow grease to cool and then pour into a container and put in the trash or recycle.
- Place leftover food, scraps and fat trimmings in the trash instead of the garbage disposal.
- Use paper towels to remove excess oils from pots and dishes before placing in wash water or dishwater.
- Use sink strainers to catch pieces of food and empty into trash can.

Jefferson County Commission Environmental Services Department Grease Control Program

To report an overflow call: 205-942-0681



Figure 5. Door Hanger Placed by Grease Control Inspectors Following a Grease-Related SSO

JCESD Sanitary Sewer Overflow Response and Reporting Program

Section 3 - SSO Determination

3.1 Cause of SSO

The Line Maintenance crew supervisor that responds to the call initially determines the primary cause of the SSO. In cases where the Line Maintenance crew supervisor is not able to make that determination, a Supervisor or Inspector will assist. Determination of the cause will include the following:

- 1.) In those instances where assistance is needed to investigate the SSO to determine the cause, a Supervisor or inspector will be contacted. This includes but is not limited to: Sewer Construction/Maintenance Supervisor, Principal Engineering Inspector, Public Works Supervisor, Sewer Video Operations Supervisor, or Sewer Service Inspector.
- 2.) The name of the Line Maintenance crew supervisor, Supervisor, or Inspector reviewing the call is to be put on the Service Request for that call.
 - Example of Wet Weather Event: "Name (Public Works Supervisor) verified that all proper
 procedures for investigating an overflow due to surcharge were met. The lines were traced
 all the way to the trunk line if surcharge is present. Name and Crew #number believe that
 the probable cause of this overflow is due to a surcharge."
 - Example of Dry Weather Event: "Name (Public Works Supervisor) verified that all proper
 procedures for investigating an overflow due to a blockage were met. Name and Crew
 #number believe that the probable cause of this overflow is due to a grease blockage."
- 3.) During a rain event, the investigation will include opening manholes and tracing the surcharged sewer flow to the trunk line and washing or rodding in an attempt to remove any potential blockage. Following the rain event, follow up inspections will be performed to determine whether the SSO was due to general surcharge from infiltration and inflow-induced flows or a blockage.
- 4.) During a non-rain event, every attempt should be made to determine the cause of the SSO based on visual inspection. If the SSO is caused by a blockage, the type of blockage should be determined based on the material removed during the cleaning process. If the SSO is caused by Construction Damage, Vandalism, a Line Break or other external cause, a picture should be made of the cause for documentation.
- 5.) If a manhole or cleanout is overflowing due to general surcharge, the code should be "Manhole Overflow Surcharge" or "Cleanout Overflow Surcharge" on the Service Request.
- 6.) If a manhole or cleanout is overflowing but not due to a surcharge, the code should be "Manhole Overflow cause" or "Cleanout Overflow cause" on the Service Request.
- 7.) Following an SSO, sewer lines in the area will be television inspected along with a Supervisor or Inspector to proof the cleaning of the pipe, find any sources of infiltration/inflow and to

determine if any other cause might have contributed to an SSO during a rain event or non-rain event.

- 8.) In cases where further investigation shows that the original attributed cause is not the actual cause of the SSO, the Service Request, any associated reports and database should be corrected in accordance with Section 7.
 - Example Correction Statement: "TV Crew #number inspected the overflow location along with Name (Public Works Supervisor) on January 1, 2018 and found that the overflow was not due to surcharging from rain but was due to a collapsed pipe".

3.2 Source of SSO

The Line Maintenance crew that responds to the call along with a Supervisor or Inspector determines the discharge source of the SSO and whether the contributing asset (service lateral, pipe, manhole, pump station, etc.) is privately or County maintained. All service laterals are privately maintained and are defined as any connection outside the tee at the County-maintained line. Privately-maintained collector lines shall be determined from Cityworks and other records. Upon the report of a discharge from a cleanout, purported service lateral or backup within a structure, the County-maintained line shall be inspected and, if the County main is not determined to be obstructed or surcharged, the contributing factor shall be determined to be private.

If the discharge source is maintained by the County and the factors contributing to the SSO are due to the County, the SSO is reported in accordance with Section 2 of the SSORRP. If the discharge source is not maintained by the County, but the contributing factors are due to the County, the SSO is reported in accordance with Section 2 of the SSORRP. If the discharge source is privately maintained and the factors contributing to the SSO are not due to the County, the SSO is not reported in accordance with Section 2 of the SSORRP, but it is documented on the Service Request within Cityworks, Form RF1-1 is completed, and the JCDH is notified. Backups that are contained within a structure are also recorded on a service request within Cityworks and Form RF1-1 is completed. If a backup exits the structure, it is classified as a SSO and is reported in accordance with Section 2 of the SSORRP.

The criteria listed in Table 4 is used in the decision-making process regarding the reporting of an SSO.

Table 4. SSO Reporting Requirements Based on SSO Source

Source	Maintained	Contributing Factors	Reportable by JCESD in Accordance with SSORRP Section 2
Manhole, service lateral, cleanout, pipe, pump station	County	County	Yes
Manhole, service lateral, cleanout, pipe, pump station	Privately	County	Yes
Manhole, service lateral, cleanout, pipe, pump station	Privately	Private	No. Documented on Service Request and Form RF1-1 completed. JCDH notified.

3.3 Destination of SSO

The Line Maintenance crew that responds to the call along with a Supervisor or Inspector determines the destination of the SSO and whether a Sewer Overflow Advisory (ESD Form RF4-1) is to be sent and the Portable SSO Signs (Figures 4 and 5) placed. As previously discussed, the Sewer Overflow Advisory is sent when a SSO reaches "surface waters." "Surface waters" for the purposes of this document are generally defined herein as flowing or standing waters of any river, stream, watercourse, pond or lake, natural or artificial. This does not include waters which are entirely confined and retained completely upon a single property and are not readily accessible to the public.

The following definitions and the criteria listed in Table 5 are used to aid in this decision-making process.

Creek or river: During wet or dry weather has continuous flowing water

Drainage ditch or storm drain: During wet weather has continuous flowing water, or

During dry weather does not have continuous flowing water

Ground absorbed: Contained within an area that does not reach a creek, river, drainage

ditch or storm drain as described above

Table 5. SSO Destination Criteria and Notification Actions

Event	Destination	Action
Any SSO that enters a creek or river	Surface waters	ESD Form RF4-1 sent to ADEM, JCDH, local officials and media. Surface Water Sign placed near receiving water.
Wet Weather SSO that enters a drainage ditch or storm drain	Surface waters	esd Form RF4-1 sent to ADEM, JCDH, local officials and media. Surface Water Sign placed near receiving water if receiving water can be determined and/or Warning Sign placed in an area that may endanger human health.
Dry weather SSO that is greater than 10,000 ¹ gallons and enters a drainage ditch or storm drain	Field determination ²	esd Form RF4-1 sent to ADEM, JCDH, local officials and media. Surface Water Sign placed near receiving water if receiving water can be determined and/or Warning Sign placed in an area that may endanger human health.
Dry weather SSO that is less than 10,000 ¹ gallons and enters a drainage ditch or storm drain	Field determination ²	If in an area that may endanger human health, Warning Sign placed.
Wet weather or Dry weather SSO that is ground absorbed	Non-surface waters	If in an area that may endanger human health, Warning Sign placed.

¹Based on an equivalent flow rate of 166 gallons per minute (gpm) for 60 minutes. 166 gpm equals an average flow height of 5" from a manhole with the cover in place or an average flow height of ½" from a manhole with the cover removed as seen in Appendix D.

²In cases of a field determination, the responding Supervisor or Inspector along with the line maintenance crew will visually inspect the surrounding area and trace downstream to determine whether the SSO reaches flowing water. In cases where the destination is indeterminate, it shall be assumed to have reached surface waters.

NOTE: ESD Form RF2-1 and ESD Form RF3-1 are sent to ADEM and JCDH for all Dry Weather and Wet Weather Events.

JCESD Sanitary Sewer Overflow Response and Reporting Program

Section 4 - SSO Volume Estimation

4.1 SSO Worksheets

JCESD has adopted procedures for estimating SSO volumes based on the type of overflow that has occurred. The Line Maintenance personnel utilize the SSO Volume Estimating Worksheet for Manholes (ESD Form WS1-1), the SSO Volume Estimating Worksheet for Service Cleanouts (ESD Form WS2-1), or the SSO Volume Estimating Worksheet for Pipes or Cleanouts (ESD Form WS3-1).

All worksheets require personnel to record the time the SSO was reported, the time they arrived, and the time that the SSO stopped. Following the SSO event, the estimated volume is calculated and inserted into the *Wastewater Discharge Reporting Form* (ESD Form RF1-1) that is completed by the ESD Line Maintenance personnel responding to the SSO. The *Wastewater Discharge Reporting Form* is then submitted to the dispatcher or On-call Supervisor.

4.2 SSO Field Data

When the JCESD Line Maintenance personnel first arrive on-site to the SSO, digital photographs of the overflow and the surrounding area will be taken in accordance with the SSO Picture Procedure (Appendix C) and inserted on the SSO Picture Form (Appendix C). If there is not an active SSO when the crew arrives, pictures will be taken of any evidence that will document the occurrence. The digital photographs aid in identifying the address where the SSO occurred, the correct manhole or cleanout, and provide evidence of the event. All Line Maintenance crews are supplied with the equipment needed to take digital images of the overflow occurrence. A measuring stick with highly visible marking is used by crews to measure and document the height of discharge from manholes and cleanouts, and ponded water depth.

The estimated height of the overflow shall be measured with the provided plastic measuring stick as accurately as possible; however, given the dynamic and transient nature of collection system hydraulics, steady-state height estimates may be difficult. Field personnel should, therefore, record the average, estimated height of the observed flow. In circumstances where the Line Maintenance personnel cannot safely access the SSO point to utilize the plastic measuring stick, a visual field estimate will be made.

All relevant field data shall be gathered on-site and recorded on the provided forms. Whenever possible, data should be recorded in the field as soon as possible after the event. Other field information should be provided as necessary as comments on or attached to the provided forms. Field crews are encouraged to gather and record any additional information.

4.3 SSO Volume Estimating Worksheet for Manholes

The SSO Volume Estimating Worksheet for Manholes (ESD Form WS1-1 and Appendix B) and the Tables for Estimated SSO Flow Out of Manholes (Appendix D) enable the Line Maintenance personnel to estimate the overflow volume. If the manhole is not overflowing when the personnel arrive, a ponding calculation is utilized to estimate the overflow volume.

4.4 SSO Volume Estimating Worksheet for Service Cleanouts

The SSO Volume Estimating Worksheet for Service Cleanouts (ESD Form WS2-1) enables the Line Maintenance personnel to estimate the overflow volume from cleanouts. If the cleanout is not overflowing when the personnel arrive, a ponding calculation is utilized to estimate the overflow volume and recorded on the SSO Volume Estimating Worksheet for Pipes or Cleanouts (ESD Form WS3-1).

4.5 SSO Volume Estimating Worksheet for Pipes or Cleanouts

The SSO Volume Estimating Worksheet for Pipes or Cleanouts (ESD Form WS3-1) allows the ESD personnel to estimate the overflow volume using the number of residential connections upstream of the overflow or the ponding calculation if the pipe is not overflowing upon arrival.

4.6 SSO Volume Estimating by Other Methods

While the methods provided in Sections 4.3 to 4.5 are to be the primary methods for estimation, there are occasions where other methods may be employed due to: insufficient field data to use standard methods, those standard methods produce results which are not reasonable or consistent with field observations, the nature of the overflow may be non-standard, or a more accurate estimation method may be available. These alternate estimation sources and methods may be used by JCESD engineering staff and include: Manning or other hydraulic flow equations, actual run times of a pump station and calculated pumping capacity, data collected by SCADA or other remote collection devices, and long-term flow monitor network data. Rationale for using non-standard estimation methods shall be based on the professional engineer's judgment and shall be sufficiently reviewed and documented.

Section 5 - Mitigation

Once the first Line Maintenance personnel arrives on-site and determines that there is an SSO, the process begins to identify and eliminate the root cause of the SSO. The JCESD Line Maintenance division can employ the use of hand and/or power rod turning machines, jet-washer trucks, and combination jet-washer/vacuum trucks to eliminate blockages in the sanitary sewer.

If there is a pipe break, the JCESD Sewer Line Construction division maintains a supply of pipe of varying sizes and materials, as well as manhole bases, risers, covers, and frames. Portable bypass pumps are available to bypass sanitary sewer flow from an upstream manhole to a downstream manhole when a blockage cannot be immediately eliminated, or a pipe repaired. If practical, the SSO will be contained with sand bags and/or a berm with the aid of the Sewer Line Construction division.

Utilizing the tools available to them, the personnel of the JCESD will make every effort to stop the SSO as expeditiously as possible. In circumstances where, in their judgment, the safety of JCESD personnel currently assigned to the SSO is threatened or a higher priority incident arises, as determined by an JCESD supervisor, JCESD personnel may suspend mitigation efforts until conditions allow a return to work. In the event an active SSO is left unattended, the site shall be secured by barricades or other means and a warning sign shall be placed at the site.

After the SSO has stopped and the cause remedied, clean-up of the impacted area begins. Hand tools including shovels, rakes, and brooms are carried on the Line Maintenance trucks and are used to collect any solids that remain for proper disposal. Combination trucks are utilized to vacuum up any liquids and/or solids that might remain following an event. Lime is also carried on the Line Maintenance trucks and applied to the area surrounding the SSO for disinfection. Follow-up visits to the impacted area may be required to return the location to pre-event conditions.

If staff observe or it is reported that a SSO that reaches the Waters of the State may have resulted in a fish kill, in addition to notifying ADEM for the SSO, JCESD will notify ADEM's Birmingham Field Office as well as the Alabama Department of Conservation and Natural Resources (DCNR). DCNR will investigate the cause of the fish kill and provide responsible cleanup.

In the event that JCESD identifies an overflow or discharge that that reaches the Waters of the State but was not caused by JCESD's sanitary sewer system, JCESD shall immediately notify ADEM's Birmingham Field Office as well as the DCNR if there appears to be any adverse impacts on the fish and wildlife in the vicinity or downstream of the event.

JCESD Sanitary Sewer Overflow Response and Reporting Program

Section 6 - Safety

JCESD personnel are made aware of the potential hazards of contact with untreated wastewater and other, associated safety hazards in responding to an SSO. Among the equipment issued to the personnel are safety glasses, reflective vests, rubber gloves, boots, and rain suits. Hepatitis inoculations are also offered to the JCESD personnel that may come in contact with untreated wastewater.

Supervisors should use sound judgment in deciding when responding to an SSO places JCESD personnel in unreasonable danger or harm. For example, there may be times where an SSO is surrounded by swift flowing or deep water and the personnel are advised not to enter due to the risk of being swept away or drowning. Supervisors should document the unsafe conditions and report to their Manager if working conditions prevent the JCESD from responding and remain on-site until further instructions are received.

Section 7 - Quality Assurance/Quality Control

7.1 Line Maintenance

The JCESD has developed Check Lists (**Appendix E**) to be utilized by the JCESD personnel involved in the SSO reporting process to ensure accuracy of the data. When corrections are made to the data by JCESD personnel, the original data are struck through and the corrected data are noted, dated, and initialed on the reporting forms by the person making the revisions. An explanation for any data corrections and/or changes should be noted on the corrected form and/or an attachment if needed

Following the submission of the *Wastewater Discharge Reporting Form* (ESD Form RF1-1), the Dispatcher will use the *Service Request Check List* to verify that the form and Service Request are correct and complete. Any corrections are dated and initialed by the Dispatcher

The Public Works Supervisor or Sewer Video Operations Supervisor then completes their respective SSO Check List for Line Maintenance after receiving the Wastewater Discharge Reporting Form (ESD Form RF1-1) and SSO pictures from the Line Maintenance personnel. The Supervisors date and initial any corrections made on ESD Form RF1-1 and/or the SSO Volume Estimating Worksheet. The Public Works Supervisor or Sewer Video Operations Supervisor forwards ESD Form RF1-1, the SSO pictures, his completed check list and the Service Request Check List to the Principal Engineering Inspector.

The Sewer Construction/Maintenance Supervisor or Principal Engineering Inspector will review the previously completed check lists to see if corrections are needed prior to completing his respective 5 Day Check List for Line Maintenance and submitting the 5 Day Follow-up Report (ESD Form RF3-1). The Sewer Construction/Maintenance Supervisor/Principal Engineering Inspector dates and initials any remarks or corrections. If significant corrections and/or changes are required, the Line Maintenance crew supervisor responsible for completing the Wastewater Discharge Reporting Form will be contacted to review the form with the Sewer Construction/Maintenance Supervisor or Principal Engineering Inspector. At the end of the month, for each SSO, the Sewer Construction/Maintenance Supervisor or Principal Engineering Inspector packages copies of the Service Requests, check lists, and completed forms and forwards to the Chief Civil Engineer.

7.2 Engineering

The package of SSOs for the previous month is sent to the Chief Civil Engineer prior to submission to the USEPA the following month. The SSO package is first reviewed by a Senior Civil Engineer who completes the SSO Check List for Administration for each SSO, notes any corrections and signs and dates the check list.

After the review by a Senior Civil Engineer, the Chief Civil Engineer reviews the SSO Check List for Administration and enters the SSO data in the Access database for that specific month.

Once all data have been entered, the SSO data is printed from the Access database and compared to the SSO package and the SSO Check List for Administration for each SSO by an additional Senior Civil Engineer who notes any omissions and/or corrections prior to preparation and submission to the USEPA.

The two Senior Civil Engineers, and/or Chief Civil Engineer initial, date, and sign for any remarks or corrections made on the SSO Check List for Administration or 5 Day Follow-up Report.

The GIS Specialist receives the final Access database and imports the information into Cityworks to represent the data geographically and ensure that the SSO corresponds with the reported location and provides corrections to the Chief Civil Engineer, as appropriate.

Following the completion of the review process, the Sewer Construction/Maintenance Supervisor or Principal Engineering Inspector are provided the corrections/changes for their copy of the SSO reporting forms.

7.3 Coordination Meetings

Every other week, Line Maintenance and Engineering representatives meet to discuss recent SSO occurrences and follow up on actions taken to prevent future SSOs.

7.4 Records

All original and corrected forms related to an individual SSO are kept together in a file by month and year at the Shades Valley Administration Building for historical and reporting purposes. Copies can be requested by contacting the Sewer Construction/Maintenance Supervisor.

APPENDICES

JCESD Sanitary Sewer Overflow Response and Reporting Program

Jefferson County, AL **Environmental Services Department** Suite A-300

716 Richard Arrington Jr. Boulevard, N Birmingham, AL 35203

	JISCHARGE REPORTING FOR				
Reported Information		Request Number:			
Photos Taken: Yes No Number of P	Photos Taken:	ALLE SHE AS ASSESSMENT OF SHELL OF			
Date Reported: Time SSC	O Began	Fime SSO Stopped			
Caller Name:	Caller Phone No.:				
Location from Caller Street Address:	Marie and Marie and State of the State of				
Overflow Location Street Address:					
Collection System Permit #		nber: umber if overflow is from a cleanout			
Municipality	County Maintained	Privately Maintained			
Adamsville Graysville Mountain Brook Bessemer Homewood Midfield Birmingham Hoover Pleasant Grove Brighton Hueytown Tarrant Center Point Irondale Trussville Fairfield Leeds Vestavia Fultondale Lipscomb Warrior Gardendale	Cahaba Turkey Creek Five Mile Valley Leeds Village Prudes Warrior Trussville	Referred caller to municipality County Investigated Other Notification of Public Press Release Placement of Signs			
Field Observation (If County Investigated)		-Capaciti A			
Destination of Discharge: Ground absorbed Drainage Ditch Storm Drain	Creek or River Other Backup in Stru	cture Exit? Yes No			
Estimated Discharge Volume:	rminable Estima	ated Volume (Gallons)			
Discharge Source: Cleanout Manhole	Pipe Treatme	nt Plant Otherateral/ Line			
Known or Suspected Discharge Cause: (Check all that apply) Construction Dar Debris Infiltration/Inflow Force Main Bread Gravity Main Bread Comments	Power outage Power outage Power outage Rags	Roots Surcharge from rain Vandalism Other			
Recent Weather None Rain: Light	☐ Mod. ☐ Heavy Est	imated Duration:			
Conditions Contributing to the Discharge: Flooding from rain in overflow a Action Taken (If County Investigated)	area: Yes No	1 8 75 18 7			
Blockage Removed Manhole Repaired Ad	ditional Rehab Considered oject Planned to Replace/Repair Line	Pump Station Repaired			
SSO 24-Hour Notice FAXED? Project Planned to Replace/Repair Line Other Date:					
Remarks:	St. auto-Edites, N. C.S.				
Maintenance Supervisor's Signature:		Date			

I certify that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information. I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information.

JEFFERSON COUNTY, AL ENVIRONMENTAL SERVICES DEPARTMENT SUITE A - 300 716 RICHARD ARRINGTON JR. BOULEVARD, N BIRMINGHAM, AL 35203



TO:

Alabama Department of Environmental Management - Montgomery Office

Fax Number: (334) 279 - 3051 Attention: Kimberly Minton

SANITARY SEWER OVERFLOW (SSO) 24 - HOUR REPORT

m	at 205-942-0681. The	e SSO started on	at _		at the following
Manual Sales		10 1000	(date)	(time)	
cation:		engle district and all a			
	(Street A	Address)		(C	City, Zip)
he <u>estimated</u> volume	of the SSO was:	Des	ination of Flow:		
	late of the late o	(Gallons)		(Basin)	(Permit Number)
ength of Occurrence:		Cause of the	SSO due to:		
	(Minutes)		The same of the same of	(Bloc	kage Type)
orrective action taker	1:		The Marie Control		
			ent University		
	water if any was: Additional information w	vill be provided in a Foll	ow-up Report withi	n five (5) days.	
	water if any was: Additional information w		******	******	
	water if any was: Additional information was:	FERSON COUNTY ESD	******	******	
	water if any was: Additional information w	FERSON COUNTY ESD	******	*****	
The receiving	water if any was: Additional information was:	FERSON COUNTY ESD	PERSONNEL ONLY	**************************************	
**	water if any was: Additional information was:	FERSON COUNTY ESD	PERSONNEL ONLY Date F	**************************************	

If this page does not transmit clearly, please contact Sewer Line Maintenance @ 205-942-0681

Sewer Line Maintenance 1295 Oak Grove Road, Homewood, AL 35209 205 - 942 - 0681

Jefferson County, AL Environmental Services Department

Suite A-300

716 Richard Arrington Jr. Boulevard, N Birmingham, AL 35203

WASTEWATER DISCHARGE REPORTING FORM SSO - 5 - DAY FOLLOW - UP REPORT

Reported Information	\$			Service	Request Number:
Photos Taken:	✓ Yes	Number of F	Photos Taken:		
Date Reported:		Time SS0	O Began	1	ime SSO Stopped
Caller Name:	olet .	91	c	aller Phone No.:	With an about the land
Reported Location	Street Add	lress:			
Overflow Location	Nearest Add	ress:			
Collection System	Permit#	24	Overflo	owing Manhole Nur	nber:
Latitude/Longitude of [Report co	discharge (REQUIRE pordinated in decima		ecision indicated Latitude Longitude		n number if overflow is from a cleanout
10.000	Municipality	10	✓ County	Maintained	☐ Notification of Public
Adamsville Bessemer Birmingham Brighton Center Point Fairfield Fultondale Gardendale	Graysville Homewood Hoover Hueytown Irondale Leeds Lipscomb	Mountain Brook Midfield Pleasant Grove Tarrant Trussville Vestavia Warrior Unincorporated	Cahaba Five Mile Leeds Prudes Trussville	☐ Turkey Creek ☐ Valley ☐ Village ☐ Warrior	Press Release Placement of Signs Other (Describe)
Field Observation (If	County Investigate	d)			
Destination of Disch Did the discharge re-	[Ground absorbed Drainage Ditch Storm Drain wimming water?	☐ Yes	Creek or River Complete Unkno	Monitoring of the receiving water is: Ongoing
Estimated Discharge	Volume:	Volume not deterr	minable	Estimat	red Volume (Gallons)
Discharge Source:	[Cleanout Manhole	Pipe Pump Stat	ion [Treatment Plant Other
Known or Suspected Discharge Cause: (Check all that apply	,	Construction Dam Debris Infiltration/Inflow Force Main Break Gravity Main Brea	Power P.S.	er outage Equipment Failure	Roots Surcharge from rain Vandalism Other
Recent Weather	None	Comments Rain:	☐ Mod. ☐ He	avy Estimated Du	ration
Was the SSO caused			Yes No	. Estimated Dui	the nature of the extreme weather event:
Conditions Contribu		ge: Flooding from	m rain in overflow a	rea: Yes	☐ No
Action Taken (If Cou	The state of the s	anaired Tad	litional Dahah Cons	danad	Duran Chaking Days in 1
☐ Blockage Removed ☐ Line Repaired	☐ Manhole R☐ Power Res		litional Rehab Consi ject Planned to Rep		Pump Station Repaired Other

Was the affected area: Cleaned? Ye	s No	Disinfected?	Yes No	
Are you aware of any other potential health or environment	ental impacts?	☐ No ☐ Yes	If Yes, Please Describe	A SCHOOL THE
ELEVE LEVEND		7.00/12/1/2012/10/2012	D. /	
SSO 24-Hour Notice FAXED?	es	☐ No	Date:	
Were any public water supply intake locations affected?	☐ No ☐ Y	'es		
Remarks:	And the second		" NUMBER OF STREET	
22,000			en han be a fair	
Maintenance Supervisor's Signature:			Date	i form A
Wallterfalloc oupervisor o olgitatare.	Brian Cha	ampion		
I certify that I have personally examined and am familiar with immediately responsible for obtaining the information. I belie significant penalties for knowingly submitting false information	n the information sul eve the submitted in	bmitted herein; and based		
Significant perialics for knowingly submitting false information			ENVIRONMENTAL SER	VICES - 477

Service Request Number:

Sewer Overflow Advisory

Issued By

Jefferson County Commission Environmental Services Department A-300 716 Richard Arrington, Jr. Blvd. North Birmingham, AL 35203



Date Issued	Time
Overflow Location	
Waterway(s) Affected	
Downstream Of	

Advisory

A Jefferson County sanitary sewer line at the location listed above has experienced an overflow. Overflow was due to

Additional advisories will be issued as information becomes available.

JCESD Sanitary Sewer Overflow Response and Reporting Program

JCESD Sanitary Sewer Overflow Response and Reporting Program

JEFFERSON COUNTY, AL

ENVIRONMENTAL SERVICES DEPARTMENT

Suite A-300 716 Richard Arrington Jr. Boulevard, N Birmingham, AL 35203

	Date:	Sewer	Service Request Nu	mber:	
	E is overflowing or not overflowing cedure. The Jefferson County SSC				ordance with the SS
Determir	ne Duration				
Time SS	O Reported:		Time SSO Stop	ped:	
(Dis	patcher)				
Time	of Arrival:		* Duration of	sso:	Minutes
(minutes).	er) shown above. The duration ne Volume	TOT THE 330 WIII DE T	ie unierence between	Time 330 Reported and 1	ime 330 Stoppe
0	SSO Digital Photo Measuremen	t - to be used when MH i	s overflowing upon crew	arrival.	
0	Average measu	red height from meas	uring stick.		
	Cover On or Of		Table Used	GPM	
	Volume from Table -				
	Duration of SSO -	Minutes			
	Estimated Volume =	Gallons	(est. rate in GPM)	(est. duration in minutes)	
0	Ponding Calculation - to be	used when SSO origin	nated from MH, is not	overflowing upon crew	
O	arrival, but is contained in ar	n area			
	Volume of Sewage = length	(ft) X width (ft) X dep	th (ft) X 7.48*	length	(ft)
	+ 7 40 II	4 63		width	(ft)
	* 7.48 gallons =	4		depth	(ft)
	Volume =f	×	7.48 =	Gallons	
0	Not Determinable - when an SS	O from a MH is not overf	lowing upon crew arrival	and rate can not be determined.	
0					
	Explain:				
	a service residence		na transport		
	Crew # :		Signed:		

I certify that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information. I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information.

JEFFERSON COUNTY, AL ENVIRONMENTAL SERVICES DEPARTMENT

Suite A-300

716 Richard Arrington Jr. Boulevard, N Birmingham, AL 35203

2	2 Estimate h	eight (h) of flow	service cleanout. from service clear		= inches inches
			rate (Q) from char	s below.	=gpm = minutes
		ime (t) of discha ep 3 & 4 to obta	n estimated volum	e.	= Gallons
	4" Di	ameter	6" Di	ameter	
	Clea	anout	Cle	anout	
	h (in)	Q (gpm)	h (in)	Q (gpm)	
	0.25	6	0.25	9	Time SSO Reported:
	0.5	14	0.5	23	(Dispatcher)
	0.75	24	0.75	40	
	1	35	1	58	
	1.5	60	1.5	100	
	2	86	2	150	
	2.5	108	2.5	205	
	3	128	3	250	
	3.5	145	3.5	293	Time of Arrival:
	4	160	4	330	
	4.5	173	4.5	365	
	5	184	5	395	
	6	205	6	445	
	7	223	7	485	
	8	239	8	520	Time SSO Stopped
	9	254	9	550	of the state of the state of
	10	268	10	585	
	11	282	11	631	
	12	295	12	650	
	14	320	14	705	
	16	345	16	755	
	18	367	18	800	* Duration of SSO
	20	388	20	850	486 A. C.
			V		Minutes
oorted (dis	SSO: If the copatcher) show	vn above. The d	wing when crews arr uration of SSO will b	ive, then the SS be the difference	O start time will be the time S between time SSO reported
ew #:			Signed:		

Disclaimer:

This table was developed by the Jefferson County ESD utilizing Chapter 14-Measurements in Pressure Conduits, Section 13-Trajectory Methods of the U.S. Department of the Interior Bureau of Reclamation Water Measurement Manual. This table is provided as an example. Other Agencies may want to develop their own estimating tables.

those individuals immediately responsible for obtaining the information. I believe the submitted information is true, accurate,

and complete. I am aware that there are significant penalties for knowingly submitting false information.

JEFFERSON COUNTY, AL

ENVIRONMENTAL SERVICES DEPARTMENT

Suite A-300

716 Richard Arrington Jr. Boulevard, N Birmingham, AL 35203

	SSO VOLUME	ESTIMATING	WORKSHE	ET FOR PIPES	OR CLEANOUTS	
	Date:		Sewer	Service Request I	Number:	
accordanc	OUT is overflowing or not be with the SSO Picture Pr ated flow rate.	overflowing at the ocedure. The Jef	ne time the cre ferson County S	w arrives at the rep SSO Volume Estimat	orted location, picture ing Procedure will be i	s will be taken ir used to determine
Determin	ne Duration					
	SO Reported: spatcher)			Time SSO Sto	opped:	
Time	of Arrival:		_	* Duration of	of SSO:	Minutes
Time SS0	(dispatcher) shown abo O Stopped (minutes). ne Volume	ve. The duratio	n of the SSO	will be the differend	ce between Time SS	O Reported and
0	Determine number of re	sidential connecti	ions upstream o	f overflow. Each res	idence contributes	
	approximately 250 gal/	day-res (100 gal/d	ау-сар Х 2.5 са	p/res), or 10.5 gal/hr	res (0.175 gal/min-res)).
	Res. Connections -		X 0.175 =			
	Duration of SSO -		Minutes			
	Estimated Volume =		Gallons	(est. rate in GPM	1 X est. duration in m	inutes)
0	Ponding Calculation		en SSO is not	overflowing upon o	rew arrival,	
	but is contained in ar					
	Volume of Sewage =	length (ft) X wid	dth (ft) X depth	(ft) X 7.48*		length (ft)
	* 7 40 ~	allons = 1 ft ³				width (ft)
		ft ³				depth (ft)
	Volume =		X	7.48 =	Gallons	
0	Volume computed by					
	Attach copy of suppo	rting documenta	ation and Engii	neer's name.		
	Comments:					
	Crew#:			Signed:		
	O16W # .			Signed.		

I certify that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information. I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information.

JCESD Sanitary Sewer Overflow Response and Reporting Program

ppendix C	SSO Picture	Procedure	and SSO	Picture F	orm		

JCESD Sanitary Sewer Overflow Response and Reporting Program

ARBON COLLAR

SSO PICTURE PROCEDURE

Please follow all steps to ensure that SSO pictures comply with requirements.

- 1) Verify that camera time and date are correct prior to taking pictures.
- 2) Verify that the time and date stamp is set to be active within the camera.
- 3) First picture should be taken from the side of the manhole or cleanout to show the height of the discharge on the measuring stick.
- 4) Second picture should be taken from a distance and angle so that a landmark (i.e., house, street sign, mailbox) is visible in the picture.
- 5) If the SSO has ceased upon arrival, pictures are to be taken of the area surrounding the overflow.
- 6) The minimum number of pictures taken should be two. Additional pictures should be taken if necessary.
- 7) Please note the address of the closest structure or building to the manhole or cleanout. (Reported Location)
- 8) The pictures should be submitted to the Public Works Supervisor or Sewer Video Operations Supervisor along with the **Reported Location** the same day.
- 9) The Public Works Supervisor or Sewer Video Operations Supervisor will then forward the pictures along with the signed **SSO Check List for Line Maintenance** to the Principle Engineering Inspector.
- 10) The Principal Engineering Inspector should insert the pictures on the SSO Picture Form and insert the required information. (Service Request Number, Address of Reported Location, Manhole number for overflowing manhole, Mini-system number for overflowing cleanout)
- 11) The Principal Engineering Inspector will save an electronic copy of the SSO Picture Form with a file name of the Service Request Number.



SSO PICTURE FORM

SERVICE REQUEST NUMBER

MANHOLE OR MINI SYSTEM NUMBER

ADDRESS



JCESD Sanitary Sewer Overflow Response and Reporting Plan

Tables for Estimated SSO Flow Rates Out of Manholes and Cleanouts

Appendix D

JCESD Sanitary Sewer Overflow Response and Reporting Program

TABLES FOR ESTIMATED SSO FLOW OUT OF MANHOLES

TABLE 'A'
ESTIMATED SSO FLOW OUT OF M/H WITH COVER IN PLACE
24" COVER

	Height of			Min. Sewer
	spout above	SSO	FLOW	size in which
	M/H rim	Q		these flows
	H in inches	in gpm	in MGD	are possible
	1/4	1	0.001	4
	1/2	3	0.004	11-119-11
	3/4	6	0.008	
	1	9	0.013	
	1 1/4	12	0.018	
	1 1/2	16	0.024	
	1 3/4	21	0.030	
	2	25	0.037	
	2 1/4	31	0.045	
	2 1/2	38	0.054	
	2 3/4	45	0.065	
	3	54	0.077	Le tui Hirat I
	3 1/4	64	0.092	
	3 1/2	75	0.107	
	3 3/4	87	0.125	
	4	100	0.145	
	4 1/4	115	0.166	
	4 1/2	131	0.189	1111111111111
	4 3/4	148	0.214	
	5	166	0.240	
	5 1/4	185	0.266	
	5 1/2	204	0.294	
	5 3/4	224	0.322	6"
	6	244	0.352	
	6 1/4	265	0.382	
	6 1/2	286	0.412	
	6 3/4	308	0.444	1-1-1-1
	7	331	0.476	
	7 1/4	354	0.509	
	7 1/2	377	0.543	ATT ATTE
-	7 3/4	401	0.578	8"
	8	426	0.613	
	8 1/4	451	0.649	
	8 1/2	476	0.686	
	8 3/4	502	0.723	
	9	529	0.761	

Disclaimer:

This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.

The formula used to develop Table A measures the maximum height of the water coming out of the maintenance hole above the rim. The formula was taken from hydraulics and its application by A.H. Gibson (Constable & Co. Limited).

Example Overflow Estimation:

The maintenance hole cover is unseated and slightly elevated on a 24" casting. The maximum height of the discharge above the rim is $5 \frac{1}{4}$ inches. According to Table A, these conditions would yield an SSO of 185 gallons per minute.

Height to be measured Height to be measured

This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.

TABLE 'B'
ESTIMATED SSO FLOW OUT OF M/H WITH COVER REMOVED

24" FRAME

Water			Min. Sewer
Height above	SSO	FLOW	size in which
M/H frame	Q	102 THE WAS 2 STORY	these flows
H in inches	in gpm	in MGD	are possible
1/8	28	0.04	
1/4	62	0.09	
3/8	111	0.16	
1/2	160	0.23	
5/8	215	0.31	6"
3/4	354	0.51	8"
7/8	569	0.82	10"
1	799	1.15	12"
1 1/8	1,035	1.49	
1 1/4	1,340	1.93	15"
1 3/8	1,660	2.39	
1 1/2	1,986	2.86	
1 5/8	2,396	3.45	18"
1 3/4	2,799	4.03	
1 7/8	3,132	4.51	
2	3,444	4.96	21"
2 1/8	3,750	5.4	
2 1/4	3,986	5.74	
2 3/8	4,215	6.07	
2 1/2	4,437	6.39	
2 5/8	4,569	6.58	24"
2 3/4	4,687	6.75	
2 7/8	4,799	6.91	
3	4,910	7.07	

Disclaimer:

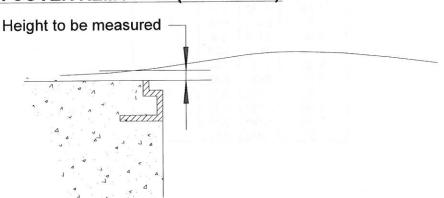
This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.

The formula used to develop Table B for estimating SSO's out of maintenance holes without covers is based on discharge over curved weir -- bell mouth spillways for 2" to 12" diameter pipes. The formula was taken from hydraulics and its application by A.H. Gibson (Constable & Co. Limited).

Example Overflow Estimation:

The maintenance hole cover is off and the flow coming out of a 24" frame maintenance hole at one inch (1") height will be approximately 799 gallons per minute.

FLOW OUT OF M/H WITH COVER REMOVED (TABLE "B")



This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.

TABLE 'C'
ESTIMATED SSO FLOW OUT OF M/H PICK HOLE

Height of	SSO		Height of	SSO	
spout above	FLOW		spout above	FLOW	
M/H cover	Q		M/H cover	Q	
H in inches	in gpm		H in inches	in gpm	1
1/8	1.0		5 1/8	6.2	1
1/4	1.4		5 1/4	6.3	Н
3/8	1.7		5 3/8	6.3	1
1/2	1.9		5 1/2	6.4	ı
5/8	2.2		5 5/8	6.5	ı
3/4	2.4		5 3/4	6.6	ı
7/8	2.6		5 7/8	6.6	ı
1	2.7		6	6.7	ı
1 1/8	2.9		6 1/8	6.8	ı
1 1/4	3.1		6 1/4	6.8	ı
1 3/8	3.2		6 3/8	6.9	ı
1 1/2	3.4		6 1/2	7.0	L
1 5/8	3.5	becelling to the e	6 5/8	7.0	
1 3/4	3.6		6 3/4	7.1	ı
1 7/8	3.7		6 7/8	7.2	ı
2	3.9		7	7.2	ı
2 1/8	4.0		7 1/8	7.3	ı
2 1/4	4.1		7 1/4	7.4	ı
2 3/8	4.2		7 3/8	7.4	ı
2 1/2	4.3		7 1/2	7.5	1
2 5/8	4.4		7 5/8	7.6	ı
2 3/4	4.5		7 3/4	7.6	١
2 7/8	4.6		7 7/8	7.7	ı
3	4.7		8	7.7	L
3 1/8	4.8		8 1/8	7.8	ı
3 1/4	4.9		8 1/4	7.9	
3 3/8	5.0		8 3/8	7.9	
3 1/2	5.1		8 1/2	8.0	1
3 5/8	5.2		8 5/8	8.0	1
3 3/4	5.3		8 3/4	8.1	1
3 7/8	5.4		8 7/8	8.1	1
4	5.5		9	8.2	1
4 1/8	5.6		9 1/8	8.3	1
4 1/4	5.6	11.	9 1/4	8.3	1
4 3/8	5.7		9 3/8	8.4	1
4 1/2	5.8		9 1/2	8.4	1
4 5/8	5.9		9 5/8	8.5	
4 3/4	6.0		9 3/4	8.5	1
4 7/8	6.0		9 7/8	8.6	
5	6.1		10	8.7	1

Note: This chart is based on a 7/8 inch diameter pick hole

<u>Disclaimer</u>: This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.



SERVICE REQUEST CHECK LIST

YES	NO	N/A	
			Customer's Name
			Customer's Complete Address (No Abbreviations, Except in Directional)
		eties de la company	Problem Address (If different than caller address)
			City
			Zip Code
			Customer's Phone Number(s)
		15 (241) per lige	Complete Customer Comments on problem having
		**************************************	Sewer Basin (proper format - located on wall behind both computers)
		Degat no.	Map Page (Proper Format 46-Z13)
		- In-rectar	Crew Dispatched to call
	5.1		Mini System Number
			Crew Arrival Time noted on request
	Auto	Jerly Str	Complete Crew Comments
			Proper Code from Crew's Comments
			Closed Call (unless waiting for another crew)
			Did Crew talk with Homeowner/Business Owner?
		Bac	kup in Home/Business
		10/01/2	Were Pictures Taken? If so by whom?
			Was SERVPRO called? Who did you speak with? Time?
			Broken Sewer Line
	780	12 1/2:11	Who is handling repair?

Cleanout Overflow
Overflow stopped at (time)?
Called into ADEM (Date & Time) *** Note these two
are separate do not join together *** Faxed ADEM & Health Department (Date & Time) *** Note (see above)***
WWTP Permit Number (located on wall behind computer monitor)
Called Wrong Utility
Company called? Who did you speak with?
GCP
Did crew discover grease or other debris/roots in line? Was Code changed? MH Overflow
Overflow stopped at (time)?
Overflowing Manhole Number(s)?
Called into ADEM (Date & Time) *** Note these two are separate do not join together *** Faxed ADEM & Health Department (Date & Time) *** Note (see above)*** WWTP Permit Number (located on wall behind computer monitor) If line was Surcharging was it checked every 2 hours?
Date & Times Surcharge was checked
Overflow~BSL
Overflow stopped at (time)?
Overflowing Manhole Number(s)?
Called into ADEM (Date & Time) *** Note these two
are separate do not join together *** Faxed ADEM & Health Department (Date & Time) *** Note (see above)*** WWTP Permit Number (located on wall behind computer monitor)
TV Inspection Codes
Locate Manhole - Was Manhole Number listed?



SSO CHECK LIST FOR LINE MAINTENANCE PUBLIC WORKS SUPERVISOR/ SEWER VIDEO OPERATIONS SUPERVISOR

Please verify that information is correct by placing a check in the box prior to each statement. If information is not

correct make a note at the bottom of the next page and follow procedures as outlined in the SSORRP.

YES	NO	N/A	
			Service Request Number
			Date Reported
			Time SSO Began
			Time SSO Stopped
			Caller's Name
			Caller's Phone Number
			Reported Location (Make sure that the reported location is not the caller's location unless they are the same.)
			Street Address
			City
			Zip Code
			Collection System Permit
			Overflowing Manhole Number (If overflow is from a cleanout, mini-system should be recorded.)
			Municipality
			Basin
			Notification of Public
			Destination of Discharge
			Estimated Volume
			Discharge Source
			Discharge Cause
			Recent Weather

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			Service Request Number
YES	NO	N/A	
	W V	3.00 ACA (3.00)	Conditions Contributing to the Discharge
			Action Taken
	11.7.5	30000	24 Hour Notice Faxed
			Date & Time
			Health Department/ Other
CORRECT	TIONS		
		-	
	J. A. KOTO	95	
			Late Colors Francis
	-		
I certify that I individuals im unless noted	mediately resp	ly examined and a consible for obtaini	am familiar with the information submitted herein; and based on my inquiry of those ing the information. I believe the submitted information is true, accurate, and complete
Signatu	re		Date

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5 DAY CHECK LIST FOR LINE MAINTENANCE PRINCIPAL ENGINEERING INSPECTOR

Please verify that information is correct by placing a check in the box prior to each statement. If information is not correct make a note at the bottom of the next page. If a correction is required, the 5 day report should be corrected prior to submitting and procedures followed as outlined in the SSORRP.

YES	NO	N/A	
			Service Request Number
			Date Reported
			Time SSO Began
			Time SSO Stopped
			Caller's Name
			Caller's Phone Number
			Reported Location (Make sure that the reported location is not the caller's location unless they are the same.)
			Street Address
			City
Later St.			Zip Code
			Collection System Permit
			Overflowing Manhole Number (If overflow is from a cleanout, mini-system should be recorded.)
			Municipality
			Basin
			Notification of Public
			Destination of Discharge
			Estimated Volume
			Discharge Source
			Discharge Cause
			Recent Weather

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Conditions Contributing to the Discharge
Action Taken
24 Hour Notice Faxed
Date & Time
Health Department/ Other
amiliar with the information submitted herein; and based on my inquiry of those the information. I believe the submitted information is true, accurate, and complete
Date

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SSO CHECK LIST FOR ADMINISTRATION

Please verify that information is correct by placing a check in the box prior to each statement. If information is not correct make a note at the bottom of the next page and follow procedures as outlined in the SSORRP.

YES	NO	N/A	
			Service Request Number
			Date Reported
			Time SSO Began
			Time SSO Stopped
			Caller's Name
			Caller's Phone Number
			Reported Location (Make sure that the reported location is not the caller's location unless they are the same.)
			Street Address
			City
	randara.		Zip Code
			Collection System Permit
			Overflowing Manhole Number (If overflow is from a cleanout, mini-system should be recorded.)
			Municipality
			Basin (Village - East or West) (Five Mile - Up or Down) CIRCLE SELECTION
			Notification of Public
			Destination of Discharge
			Estimated Volume
			Discharge Source
			Discharge Cause
			Recent Weather

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			Service Request Number
YES	NO	N/A	
			Conditions Contributing to the Discharge
			Action Taken
			24 Hour Notice Faxed
	10		Date & Time
		-7-1	Health Department/ Other
CORREC	TIONS		
			· IM SOURCE SHOP TO THE STATE OF THE STATE O
			The second of the state of the second of the
-			
I certify that individuals in unless noted	nmediately resp	y examined and an onsible for obtainin	n familiar with the information submitted herein; and based on my inquiry of those ng the information. I believe the submitted information is true, accurate, and complete
Signatu	ire _		Date
	range in		

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