# CMOM ANNUAL REPORT
# CY2020

WATER UTILITY
ALBUQUERQUE
BERNALILLO COUNTY
AUTHORITY

# Contents

## Capacity, Management, Operations and Maintenance (CMOM) Plan Overview

In accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. NM0022250 (Permit), the Albuquerque Bernalillo County Water Utility Authority (Water Authority) prepared this Capacity, Management, Operations and Maintenance (CMOM) Plan. The Permit was renewed in CY2019 with an effective date of December 1, 2019.

The CMOM Plan consists of the following documents:

1. FOG Policy
2. CMOM Annual Report
3. CMOM Program Self-Assessment

The CY2020 CMOM Annual Report follows previous FY2013-17 and CY2017-19 reports. The previous reports, as well as the most recent, can be accessed at https://www.abcwua.org/sewer-system-overview/.

Appendix 4 provides a summary of goals established in this CY2020 CMOM Report.

### Report Purpose

As indicated by its name, the CMOM Annual Report will be reissued to describe CMOM activities in the previous calendar year (January 1 to December 31). The CMOM Annual Report provides summary descriptions of CMOM activities (past and planned) and is intended to be a communication tool. The report is intended for Water Authority staff, regulatory authorities, customers, and the general public.

## Permit Requirements

The Water Authority discharges to the Rio Grande under authority of NPDES Permit No. NM0022250 (Permit). Under this Permit, the Water Authority operates the Southside Water Reclamation Plant (SWRP) and the Collection System.

The Permit was renewed effective December 1, 2019. The following are the Permit requirements that impact the collection system.

1. The Water Authority shall report all overflows with a (monthly) Discharge Monitoring Report (DMR). (Part I, Paragraph D).
2. Overflow reporting requirements were unchanged for EPA and NMED. (Part I, Paragraph D).
3. Overflow reporting requirements were modified for spills impacting the Pueblo of Isleta (POI) were modified in accordance with the "Pueblo of Isleta Reporting Requirement" which were a subsection of the renewed Permit. (Part I, Paragraph D and "Pueblo of Isleta Reporting Requirement".)
4. The Water Authority shall continue to implement and update (if necessary) the CMOM plan. (Part II, Paragraph E.)

The full permit is available at
https://cloud.env.nm.gov/water/pages/view.php?ref=6881&k=fd428af5b1

## CMOM Program Self-Assessment

EPA states (see https://mwrd.org/sites/default/files/documents/USEPA_3-cmomselfreview.pdf): "An important component of a successful CMOM program is to periodically collect information on current systems and activities and develop a "snapshot-in-time" analysis. From this analysis, the utility establishes its performance goals and plans its CMOM program activities." The Water Authority developed Self-Assessments as a part of the FY2013 and FY2014 reports. Because the data provided in the Self-Assessment does not significantly change year-to-year, the Water Authority has set a goal of updating the Self-Assessment every five years.

Therefore, the CMOM Program Self-Assessment CY2018 has been prepared and posted to https://www.abcwua.org/sewer-system-overview/ along with the CMOM Reports. Rather than being an appendix to the CMOM Report, it is now a stand-alone document.

The next update will coincide with the CY2023 CMOM Report.

## FOG Policy

The Water Authority's FOG Policy is a separate document. The FOG Policy was developed as a requirement of the NPDES Permit effective on October 1, 2012 and subsequently approved by the United States Environmental Protection Agency (EPA). The policy was developed to work in conjunction with the Water Authority Sewer Use and Wastewater Control Ordinance (SUO) and Enforcement Response Plan (ERP) to reduce the rate of SSOs in the collection system and decrease FOG loading at the SWRP. The policy describes expectations for FOG dischargers such as Food Service Establishments (FSEs) and waste haulers, and the steps the Water Authority is taking to mitigate FOG.

The FOG Policy sets a Water Authority goal of inspecting every FSE at least once every three years. Details of what is expected of the FSE in terms of Grease Removal System (GRS) functionality, pumping schedule, maintenance, and recordkeeping are identified. The FOG policy explains the Water Authority use of the 25% solids and grease rule (25 Percent Rule) to determine if a GRS is filled to capacity. The policy also contains Best Management Practices (BMPs) such as scraping plates, using screens, and not using emulsifiers, etc.

Pumper requirements are also covered in the FOG Policy. Full evacuation of a GRS is required each time pumping occurs. The pumper must leave the FSE documentation in the form of manifests that contain pertinent information such as date, time, volume pumped, and the condition of the GRS. The FOG Policy lists the minimum service to be provided by the pumper.

Enforcement of FOG violations and hauled wastewater violations is described in the FOG Policy. The FOG Policy works in conjunction with the ERP to set administrative assessments for violations.

The FOG Policy also sets forth the process for identifying new sources of FOG. The Water Authority Pretreatment Program will update the FOG database on an annual basis. The FOG Policy sets a goal that the Water Authority will meet with the City of Albuquerque, Bernalillo County, the Village of Los Ranchos, the Village of Corrales, plumbers, and the New Mexico Restaurant Association on a periodic basis to discuss FOG issues.

In developing the FOG Policy, the Water Authority held a meeting with the hauled wastewater permit holders on July 22, 2013 and a public meeting on July 25, 2013 to discuss the proposed Policy. The final FOG Policy was submitted to the EPA on September 27, 2013 and updated in the Pretreatment Program modification documents sent to EPA on June 2, 2014. No comments from EPA were received regarding either submission, thus indicating approval.

## FOG Enforcement

In CY2020, the Water Authority Pretreatment Program had 1,725 compliant FSEs out of 2,151 FSE sites for a compliance rate of 80%. Seventy-three (73) FSE inspections were conducted with 46 passing, and 27 failing. Of the 27 failed inspections, 21 Notices of Violation were issued. Eight (8) of the 21 violations were resolved and the remainder are outstanding.

In response to SSOs, ten (10) FSE inspections were conducted with three (3) passing and seven (7) failing. Of the seven (7) failed inspections, three (3) Notice of Violations were issued and four (4) were corrected before issuance of violations.

In addition, Water Authority Pretreatment personnel distributed FOG brochures to FSEs, single-family residences and apartment complexes upstream of the SSOs.

Additionally, the Water Authority's Public Information Office advanced radio, print and television public outreach for the purpose of improving the Water Authority's FOG Policy.

## SSO Analyses

### Permit Requirements

The Permit requires a CMOM Plan. The Plan goal is to reduce SSOs. The FOG Policy states that the Pretreatment Program will investigate all SSOs related to large amounts of grease. The policy is to take enforcement actions for violations of FOG requirements with priority on FSEs causing repeat SSOs.

### SSO Study Team

To meet these requirements, the Water Authority created an SSO Study Team. The Team is comprised of:

1. Collection Section – Research Analyst (team lead), Gravity Superintendent, Assistant Superintendent and Closed Circuit Television (CCTV) Supervisor;
2. NPDES Pretreatment –Industrial Pretreatment Engineer and Pollution Prevention Specialist.

The Mission Statement for the Study Team is: *The SSO Study Team will work inter-divisionally to study, analyze and determine causes of previous SSOs to mitigate future SSOs in the Collection System.*

The Study Team procedure is:

1. Tabulate all 10-40s, 10-42s and 10-48s (see Table 1 for definitions).
2. Ensure all segments responsible for causing 10-42s and 10-48s are televised.
3. The Research Analyst will review and analyze all CCTV inspections to determine causes (if possible) and document findings.
4. To conduct meetings with the SSO Study Team to review and analyze CCTV that needs further investigation for resolution.
5. Recommend/implement and document mitigations (if possible) based on analysis.
6. Coordinate with NPDES Pretreatment concerning grease issues discovered during analysis.

## Table 1 Sewer Trouble Definitions

| Sewer Trouble Definitions | | |
|---|---|---|
| 10-40 | Sewer Backup | A gravity line blockage that does not result in a spill, or in the vacuum system, a low vacuum (low vac) that causes a customer service disruption. Does not result in an SSO Reportable (10-42) or a Property Damage (10-48). |
| 10-42 | SSO Reportable | An overflow of sewage from the system that may impact surface waters. These are reported to the EPA and other locally impacted stakeholders. |
| 10-48 | Property Damage | An overflow of sewage from the system that results in damage to private property. These are not reportable under current definitions. |

Appendix 1 identifies all 10-42s and 10-48s, and the overflows that resulted in both a 10-42 and a 10-48. When documenting the number of Sewer Troubles of different types, for example in Figure 1 and Figure 2, the 10-42 item includes all overflows that may impact surface waters, including those that also had property damage; the 10-48 item includes overflows that only resulted in property damage. This prevents double-counting the number of overflow occurrences.

All 10-40s, 42s and -48s were CCTV inspected, although only 10-42s are “reportable”, i.e., required to be reported to the EPA, et al. All 10-42s and -48s were then examined by the Study Team and a Cause and Mitigation were determined.

## Table 2 Types of Causes for SSOs

| **Cause(s) of SSO from DMR** | | **Causes determined from CCTV** |
|---|---|---|
| **CO** - Construction | **DB** - Debris | **SC** - Surcharged |
| **CU**-Cause Unknown | **RK**-Rocks | **SL** - Sag in Line |
| **EQ** - Equipment Failure | **GR** - Grease | **IT** - Intruding Tap |
| **SGG**-Sand, grit or gravel | **RT** - Roots | **MH** - Manhole |
| **LF** - Line Failure | **RN** - Rainfall | **OJ** - Offset Joint |
| **V** - Vandalism | **RGS**-Rags | |
| **RGR** - Roots / Grease | **BP**-Burped | |

## Causes & Mitigations

The Cause(s) were selected from Table 2 that identifies SSO causes from the DMR and CCTV. The monthly SSO DMR has a specific list of Causes that are based on system observations made by an Operator or Supervisor at the site of an SSO. The CCTV data provided to the Study Team often results in a different, more refined Cause or Causes. Table 3 provides the causes determined by the Study team for CY2020. (Note: Percentages may not add up to 100%, as they are rounded to the nearest percent.)

### Table 3 Summary of Causes from SSO Study

| 10-42, 10-48 Causes | Total | % of Total |
|---|---|---|
| Burp | 1 | 4% |
| Construction | 5 | 21% |
| Debris | 1 | 4% |
| Grease | 2 | 8% |
| Grease\Rags | 2 | 8% |
| Grease\Sag in Line | 1 | 4% |
| Line Failure | 4 | 17% |
| Roots\Grease | 1 | 4% |
| Roots | 3 | 13% |
| Sag in Line | 2 | 8% |
| Vandalism | 1 | 4% |
| Equipment Failure | 1 | 4% |
| **Grand Total** | **24** | **100%** |

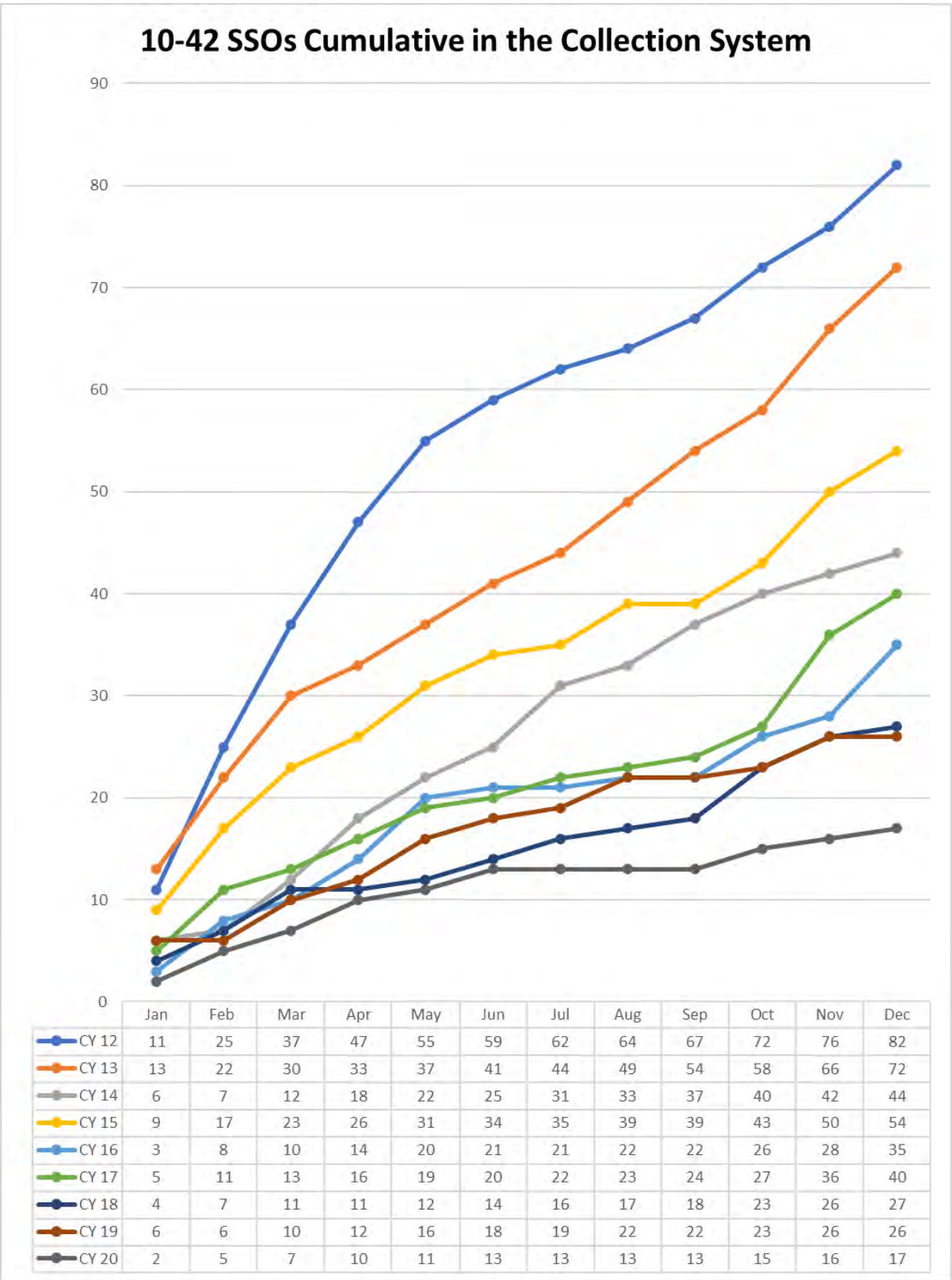
Mitigations are the steps that the Team identified to prevent a recurrence of an SSO, at least for the identified Cause. Specific Mitigations are very dependent on the conditions observed from the CCTV video and report. In CY2020, 33% of mitigations included performing rehab or replacement of the line, whereas in CY2019 more segments were added to the short interval cleaning program. This indicates the condition of infrastructure where SSOs are occurring. Table 4 provides a summary of the various Mitigations. The Mitigations are tracked through completion or implementation. (Note: Percentages may not add up to 100%, as they are rounded to the nearest percent.)

### Table 4 Summary Mitigations from SSO Study

| 10-42, 10-48 Mitigations | Total | % of Total |
|---|---|---|
| No Follow Up Needed | 4 | 17% |
| Pretreatment Notified | 1 | 4% |
| Pretreatment Notified/Special Instructions | 1 | 4% |
| Repaired | 2 | 8% |
| Rehab/Replace | 8 | 33% |
| Special Cleaning | 1 | 4% |
| Short Interval | 2 | 8% |
| Short Interval/Rehab/Replace | 1 | 4% |
| Short Interval/Special Instructions | 3 | 13% |
| Special Instructions | 1 | 4% |
| **Grand Total** | **24** | **100%** |

## SSO Tabulation & Analysis

Figure 1 shows the cumulative 10-42s by month for CY2012-20.




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CY 12 | 11 | 25 | 37 | 47 | 55 | 59 | 62 | 64 | 67 | 72 | 76 | 82 |
| CY 13 | 13 | 22 | 30 | 33 | 37 | 41 | 44 | 49 | 54 | 58 | 66 | 72 |
| CY 14 | 6 | 7 | 12 | 18 | 22 | 25 | 31 | 33 | 37 | 40 | 42 | 44 |
| CY 15 | 9 | 17 | 23 | 26 | 31 | 34 | 35 | 39 | 39 | 43 | 50 | 54 |
| CY 16 | 3 | 8 | 10 | 14 | 20 | 21 | 21 | 22 | 22 | 26 | 28 | 35 |
| CY 17 | 5 | 11 | 13 | 16 | 19 | 20 | 22 | 23 | 24 | 27 | 36 | 40 |
| CY 18 | 4 | 7 | 11 | 11 | 12 | 14 | 16 | 17 | 18 | 23 | 26 | 27 |
| CY 19 | 6 | 6 | 10 | 12 | 16 | 18 | 19 | 22 | 22 | 23 | 26 | 26 |
| CY 20 | 2 | 5 | 7 | 10 | 11 | 13 | 13 | 13 | 13 | 15 | 16 | 17 |

**Figure 1 Reportable SSOs**

Appendix 1 contains a list of every 10-42 and 10-48 event in CY2020. The table columns are grouped as follows:

1. The type, i.e., 10-42 or -48, is identified on the left. In one case a single event was both a 10-42 and a 10-48, as indicated.
2. Next to the right are the data included in the monthly SSO DMRs. It is noted that a "Reported Cause" is listed. This is typically based on the observations of the Operator that reported the SSO.
3. Next to the right is data determined by the Study Team:
    a. Cause
    b. Mitigation
    c. If Pretreatment follow-up is necessary
4. To the far right are follow-ups by NPDES Pretreatment
    a. FSEs visited
    b. Notice of Violation issued

The SSO Rate is defined as 100 times the number of SSOs in a year divided by the miles of sewer in the system. The Water Authority system has a total of approximately 2,414 miles of line (p. 8 of the Self-Assessment). The SSO rate is therefore 3.4, 3.0, 1.8, 2.2, 1.4, 1.7, 1.1, 1.1 and 0.7 for CY2012-20 respectively.

Figure 2 shows the total sewer troubles, i.e. 10-40s, -42s, and -48s by year for CY2012-20. This graph does not include 10-48s due to "burps" which are not due to a blockage or other failure resulting in the overflow of sewage. Instead, air displaced during the Vactor jetting cleaning can under certain circumstances force out the water in the home fixture P-traps, e.g. toilets and sinks. These sometimes result in claims and are therefore included in the Property Damage totals for completeness and consistency. There was only one burp during CY 2020. This burp is identified in Appendix 1.

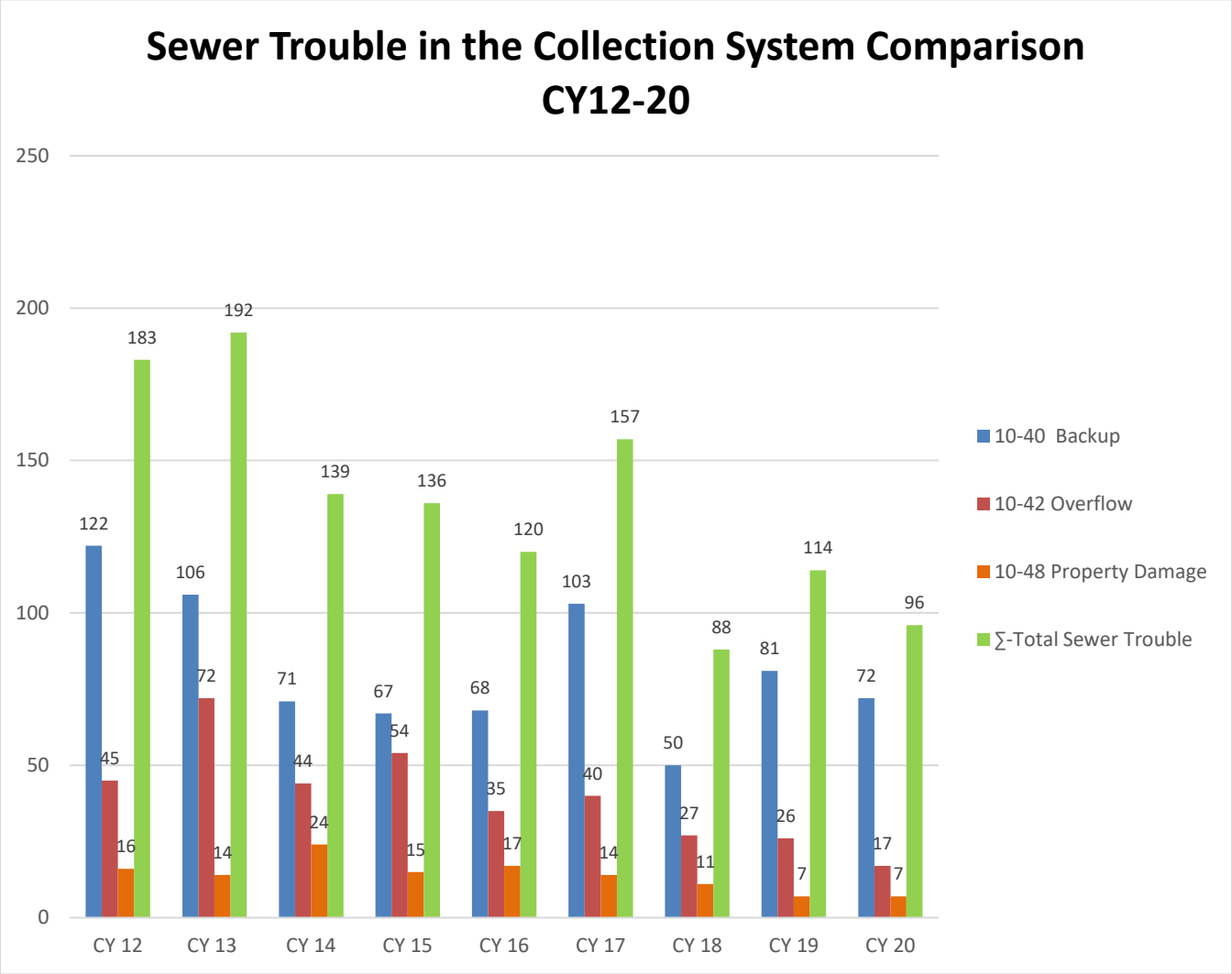



**Figure 2 Sewer Trouble Comparison**

## Volume Spilled and Recovered

Via the OERP, the Water Authority has implemented a policy of capturing spills and documenting actions. Appendix 1 provides the Ultimate Discharge Location for each reported SSO. Appendix 2 provides estimated spill volumes and volumes recovered for 17 reported SSOs for CY2020. Of the spill volume estimated not to be recovered, none was identified as directly reaching the Rio Grande. No spills reached a facility operated by the MRGCD. It was estimated that approximately 54% of the estimated spill volume was recovered in CY2020 as shown in Appendix 2.

# Actions Implemented and On-Going Programs

## General

Below are gaps that were identified in the CY2019 CMOM Report and were closed in CY2020, or are on-going programs, or both. In addition to the commitments made in the CMOM Report, in CY2020, the following additional actions were taken to expand the Water Authority's ability to operate and maintain the system.

1. Two new Vactors were obtained and put into service.
2. Interceptor manhole inspection was performed using a panoramic camera on 100 manholes in CY2020. In CY2021, approximately 260 additional manholes will be inspected.
3. The Water Authority's Corrective Maintenance Report now includes the distance from the downstream manhole to a blockage.
4. The Water Authority's Public Affairs section continued to support SSO prevention efforts and the FOG Policy in CY2020 by reprising an advertising campaign aimed at discouraging disposal of improper materials in household drains and planting trees near sewer lines. A news release ran for the Thanksgiving Day holiday. Appendix 3 displays the news release. In addition to the holiday release, the media campaign is still in place with ads on television, radio, outdoor boards, social media, and water bill inserts.

## FOG Policy Implementation:

The FOG Policy is an on-going program and FOG Enforcement efforts are a part of this program. Both the FOG Policy and the FOG Enforcement efforts are described above. On-going efforts are described in the FOG Enforcement section and not reiterated here.

The Water Authority has long had an FSE flier in English. An FSE flier was developed and implemented in CY2019 and a goal was set to develop an FSE flier in Chinese. However, it was determined that a Vietnamese flier was more prudent and this was developed in CY2020. The Water Authority has a three-year plan to distribute these fliers to all FSEs and continue to improve FOG inspections.

## Overflow Emergency Response Plan (OERP)

This is an on-going program to update the OERP as required. In CY2020, no modifications were made were made to the OERP.

The Collection Section is the "owner" of the OERP. The Collection Section creates the components of the OERP, routes for internal review (specifically including the Compliance Division), and the completed portions are approved for posting to SharePoint by the Collection Section Manager. Appendix 4 provides the OERP which was in effect at the end of CY2019. The most current version of the OERP is posted to http://www.abcwua.org/Sewer_System.aspx

## Closed Circuit Television (CCTV)

This is an on-going program. The following recommendation is made in the FY2013 CMOM Report: "CCTV inspections of the collection system as follows: 1) Small diameter main lines less than 15": In four of five years, televise approximately 5% per year of the small diameter system. Televise high risk lines based on current Asset Management Plan and subsequent in-house analysis. 2) Large diameter lines 15" and larger: Every fifth year, televise as much as possible acknowledging access limitations of the unlined concrete lines 15" and larger. Anticipated schedule: 3) FY2014-17: 5% of the small diameter each year. 2) FY18: Large diameter unlined concrete pipe."

CMOM Report figures for cleaning and CCTV will continue showing fiscal year (FY) goals in accordance with funding and contracting cycles and actual metrics will reflect work through the end of the calendar year (CY). Figure 4 provides the CCTV goal for a ten-year basis and the actual CCTV inspection through CY2020. The CY2020 portion of this recommendation is complete. The CCTV program will continue. Anticipated schedule:

1. FY21: 5% of the small diameter.
2. FY22: 5% of the small diameter.
3. FY23: Large diameter unlined concrete pipe.
4. FY24: 5% of the small diameter.
5. FY25: 5% of the small diameter.
6. FY26: 5% of the small diameter.

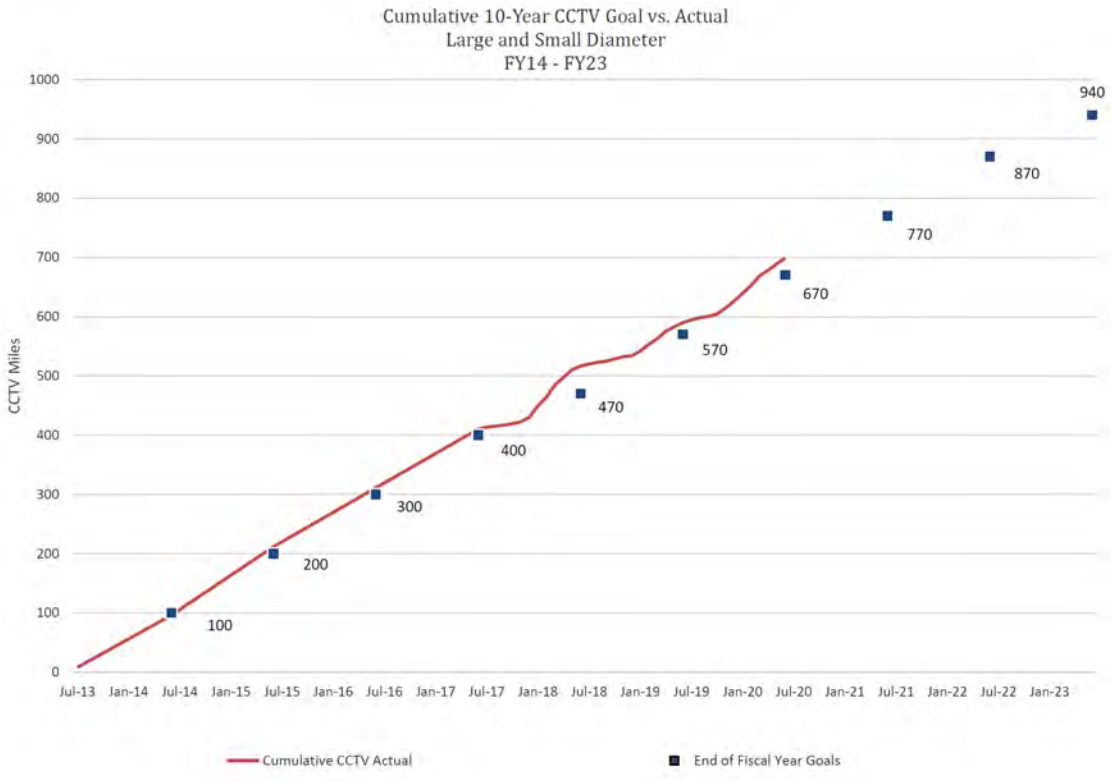



**Figure 3 Small Diameter Sewer CCTVed vs. Ten-Year Goal**

## Cleaning Program Goal

This is an on-going program. The following recommendation is made in the FY2013 CMOM Report: "The Water Authority will establish and monitor a goal of cleaning all gravity small diameter lines every ten years. (This will be accomplished through the existing Sub-Basin program.) The Water Authority will continue the program of high-frequency maintenance of known problem locations within the system. (This will be accomplished through the existing Short Interval program.) The frequency of Short Interval cleaning will vary in accordance with system performance and risk factors, maintenance history, and the latest maintenance findings."

CMOM Report figures for cleaning and CCTV will continue showing fiscal year (FY) goals in accordance with funding and contracting cycles and actual metrics will reflect work through the end of the calendar year (CY). As shown Figure 5, the Water Authority is ahead of its goal to clean then entire system once in ten years through the Sub-Basin program.

The Sub-Basin program and associated ten-year cleaning goal remain in place. While meeting this CMOM commitment for Sub-Basin cleaning, the Collection Section has increased Short Interval cleaning.

The Water Authority is studying SSO rates in the Short Interval and the non-Short Interval portions of the Collection System. These studies are on-going and not yet complete. A possible outcome is a determination that total SSOs may be reduced by increasing the Short Interval cleaning per year and therefore decreasing the Sub-Basin cleaning per year. If so, the Water Authority would establish and monitor a different cleaning goal. This new goal would be established in a subsequent CMOM Annual Report.


**Figure 4 Small Diameter Sewer Cleaned vs. Ten-Year Goal**

## Force Main Inspection Program

This is an on-going program in which the alignment is annually inspected for all force mains and valves found in field are compared to those in the GIS mapping and this information is stored in Maximo.

Lift Station 20 pumps westside flow to the Southside Water Reclamation Plant (SWRP) via twin 30" ductile iron force mains. Per the CY2019 CMOM report, an air pocket profile was completed using a smart ball on the north force main in CY2020. A report was received and from development of this air pocket profile, air release valves (ARVs) were identified for replacement or relocation in coordination with the SWRP. In CY2021, the Water Authority will install replacement ARVs and then perform additional smart ball tests on both force mains.

## Root Foaming

The following recommendation is made in the FY2013 CMOM Report: "Starting in FY15, implement a 3-year pilot program. Root foam selected lines that meet the root infested and / or inaccessibility criteria. Compare effectiveness to mechanical cleaning currently practiced and provide recommendation."

The Root Foaming Pilot Project is a three-year treatment program with follow-up study. The FY15 and FY16 groups were foamed in June 2015 and March 2016 respectively. Per vendor recommendations, the FY15 group was retreated in June 2017. This completed the foaming application portion of the Pilot Project. An interim inspection of the FY15 treated and control group was performed in FY2016 and was inconclusive. During FY2017, the FY15 and FY16 lines, both treated and control, were scheduled for CCTV inspection. In CY2018, this CCTV data was examined to compare treated and control pipes but was inconclusive. In CY2019, the review continued.

In CY2020, the final report for the Root Foaming Pilot project was completed. The report concluded that a root foaming program should not be implemented. Instead, efforts should be focused on existing cleaning programs specifically evaluating the effectiveness of the Short Interval program (frequency, selected lines, time of year, etc.).

## Odor Complaints

Odor complaints are tabulated and reported monthly. The Water Authority odor control program is described in the CMOM Self-Assessment Report in the Hydrogen Sulfide Monitoring and Control (HSMC) section in the current CMOM Program Self-Assessment. Portable odor control carbon units were implemented in CY2020.

## Identified Gaps in the Water Authority Processes with Recommendation to Close

In the process of continuous improvement, the Water Authority is committed to identifying and closing gaps. As discussed above, most of these recommendations are now considered On-Going programs.

### Prohibited Discharges, i.e., SSOs

The Water Authority acknowledges that prohibited discharges have occurred and that all discharges from the sanitary sewer system are prohibited.

Recommendation: The Water Authority will annually examine sewer system performance, set specific steps for decreasing SSOs and mitigating their impacts, and has a program of continuous improvement.

# Appendices

## Appendix 1 Sanitary Sewer Overflow Analysis Table

| Type | | | DMR | | | | | | | | | | | | | | SSO Team Study | | Enforcement | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10-42 | 10-48 | 10-42 &10-48 | Maximo WO # | Diameter | Repeat | Repeat within 1 year | Date of SSO | Time of SSO | Duration (HH:MM) | Location | Estimated Volume (gallons) | Reported Cause of Overflow | Observed Environment Impacts | Action Taken | Ultimate Discharge Location | Volume Recovered (gallons) | Cause | Mitigation | Pretreatment Follow Up Requested | FSEs Visited | Notice of Violation |
| | X | | 732025 | 8 | N | N | 1/6/2020 | 12:01 PM | 3:14 | 5010 ALAMEDA BLVD NE | NA | LF | NA | CC | NA | NA | LF | RH | | | |
| | X | | 732110 | 10 | Y | N | 1/6/2020 | 4:00 PM | 4:30 | 3401 SMITH AVE SE | NA | GR/RGS | NA | CC | NA | NA | SL | SI/SP | | | |
| X | | | 741697 | 8 | N | N | 1/12/2020 | 11:28 AM | 1:52 | 5601 JEFFERSON ST NE | 5,600 | GR/RGS | NEAH | CC/HTH/CWW/RCS/WD | SD | 5,600 | GR | PT/SI | x | 7 | 1 |
| X | | | 749443 | 8 | N | N | 1/17/2020 | 11:00 AM | :35 | 4825 ISLETA BLVD SW | 4,326 | CO | NEAH | HTH/CWW/RP/WD | YD | 1,200 | CO | NF | | | |
| | X | | 776513 | 8 | N | N | 2/6/2020 | 11:53 AM | :30 | 701 DON CIPRIANO CT NE | NA | RGS | NA | CC | NA | NA | SL | SI | | | |
| | | X | 784233 | 8 | Y | N | 2/12/2020 | 6:11 PM | :34 | 1209 RICHMOND DE SE | 3,400 | GR | NEAH | CC/HTH/PO/CWW/WD | SD | 1,000 | LF | RH | | | |
| X | | | 810255 | 8 | N | N | 2/27/2020 | 3:31 PM | :34 | 2501 PHOENIX AVE NE | 1,700 | RGS | NEAH | CC/HTH/CWW/RP/WD | PST | 700 | DB | SC | | | |
| X | | | 813434 | 36 | N | N | 2/29/2020 | 3:14 PM | 2:10 | 227 JOHN ST SE | 3,250 | GR | NEAH | CC/HTH/ CWW/WD | PST | 1,000 | CO | RH | | | |
| | X | | 834267 | 8 | Y | N | 3/10/2020 | 6:26 PM | :41 | 312 WELLESLEY DE SE | NA | RGS/ RT | NA | CC | NA | NA | RT | SI/SP | | | |
| X | | | 837705 | 8 | N | N | 3/12/2020 | 9:47 AM | :48 | 8716 RANCHER RD SW | 48 | CU | NEAH | CC/HTH/IN/PO/CWW/WD | PST | 30 | CO | NF | | | |
| X | | | 856480 | 8 | N | N | 3/24/2020 | 2:24 PM | :36 | 1300 CUATRO CERROS TRL SE | 60 | RGS/RT | NEAH | CC/HTH/RS/WD | PST | 50 | RT | SI/SP | | | |
| | X | | 865633 | 8 | Y | N | 3/30/2020 | 7:05 AM | 2:30 | 1418 CENTRAL AVE SE | NA | GR | NA | CC | NA | NA | GR/SL | RH | | | |
| X | | | 869146 | 8 | N | N | 4/1/2020 | 11:51 AM | :29 | 1700 LOMAS BLVD NE | 725 | GR/RGS | NEAH | CC/HTH/CWW/WD | PST | 725 | GR/RGS | PT | x | 2 | 2 |
| X | | | 902511 | 24 | N | N | 4/18/2020 | 4:30 PM | 1:10 | 1025 BROADWAY BLVD SE | 350 | GR/RGS | NEAH | CC/HTH/CWW/RP/RS/WD | PST | 350 | GR/RGS | SI/RH | | | |
| X | | | 921719 | 8 | Y | Y | 4/30/2020 | 8:10 AM | :30 | 4501 JUAN TABO BLVD NE | 300 | RGR | NEAH | CC/HTH/RP/WD | PST | 300 | LF | RH | | | |
| X | | | 923989 | 8 | Y | N | 5/1/2020 | 1:39 PM | :36 | 700 SAGEWOOD CT SE | 900 | RGS/RT | NEAH | CC/HTH/BR/RP/WD | PST | 800 | RT | RH | | | |
| X | | | 1013555 | 8 | N | N | 6/16/2020 | 10:19 AM | :41 | 2101 LOUISIANA BLVD NE | 75 | GR | NEAH | CC/HTH/RP/RS/WD | PL | 50 | GR | RH | x | 4 | 4 |
| | X | | 1073425 | 8 | N | N | 6/24/2020 | 11:26 AM | 1:00 | 1233 COLUMBIA DR NE | NA | BP | NA | IN | NA | NA | BP | SP | | | |
| X | | | 1041311 | 8 | N | N | 6/27/2020 | 11:23 PM | 3:07 | RUNNING BEAR AVE SE & WHITE DOVE ST SE | 935 | V | NEAH | CC/HTH | PST | - | V | NF | | | |
| X | | | 1259702 | 8 | N | N | 10/6/2020 | 12:31 PM | :59 | 5022 ARROYO CHAMISA RD NE | 1,475 | GR | NEAH | CC/HTH/CWW/RS/WD | AC | 1,475 | RGR | SI | | | |
| X | | | 1274518 | 30 | N | N | 10/12/2020 | 11:28 AM | :02 | 4300 PROSPECT AVE NE | 100 | CO | NEAH | HTH/RP/RS/WD | AC | 100 | CO | NF | | | |
| X | | | 1373373 | 12 | N | N | 11/26/2020 | 3:29 PM | 1:21 | 425 LOUISIANA BLVD SE | 25 | RGS | NEAH | CC/HTH/CWW/WD | PST | 25 | CO | RH | | | |
| | X | | 1376051 | 3 | N | N | 11/29/2020 | 11:00 AM | 4:15 | 1026 WESTERN MEADOWS CT NW | NA | EQ | NA | ET/T | NA | NA | EQ | REP | | | |
| X | | | 1394696 | 2 | N | N | 12/16/2020 | 11:53 AM | 1:07 | 5551 MIDWAY PARK PL NE | 100 | LF | NEAH | HTH/RP/WD | PST | 100 | LF | REP | | | |

## Appendix 2 Sanitary Sewer Overflow Volume Captured Analysis Table

| CY2020 10-42 SPILL VOLUME AND VOLUME RECOVERED | | | | | | |
|---|---|---|---|---|---|---|
| **Maximo WO #** | **Date of SSO** | **Location** | **Estimated Volume (gallons)** | **Volume Recovered (gallons)** | **Volume Not Recovered** | **% Recovered** |
| 741697 | 1/12/2020 | 5601 JEFFERSON ST NE | 5,600 | 5,600 | - | 100% |
| 749443 | 1/17/2020 | 4825 ISLETA BLVD SW | 4,326 | 1,200 | 3,126 | 28% |
| 7844233 | 2/12/2020 | 1209 RICHMOND DE SE | 3,400 | 1,000 | 2,400 | 29% |
| 810255 | 2/27/2020 | 2501 PHOENIX AVE NE | 1,700 | 700 | 1,000 | 41% |
| 813434 | 2/29/2020 | 227 JOHN ST SE | 3,250 | 1,000 | 2,250 | 31% |
| 837705 | 3/12/2020 | 8716 RANCHER RD SW | 48 | 30 | 18 | 63% |
| 856480 | 3/24/2020 | 1300 CUATRO CERROS TRL SE | 60 | 50 | 10 | 83% |
| 869146 | 4/1/2020 | 1700 LOMAS BLVD NE | 725 | 725 | - | 100% |
| 902511 | 4/18/2020 | 1025 BROADWAY BLVD SE | 350 | 350 | - | 100% |
| 921719 | 4/30/2020 | 4501 JUAN TABO BLVD NE | 300 | 300 | - | 100% |
| 923989 | 5/1/2020 | 700 SAGEWOOD CT SE | 900 | 800 | 100 | 89% |
| 1013555 | 6/16/2020 | 2101 LOUISIANA BLVD NE | 75 | 50 | 25 | 67% |
| 1041311 | 6/27/2020 | RUNNING BEAR AVE SE & WHITE DOVE ST SE | 935 | - | 935 | 0% |
| 1259702 | 10/6/2020 | 5022 ARROYO CHAMISA RD NE | 1475 | 1475 | - | 100% |
| 1274518 | 10/12/2020 | 4300 PROSPECT AVE NE | 100 | 100 | - | 100% |
| 1373373 | 11/26/2020 | 425 LOUISIANA BLVD SE | 25 | 25 | - | 100% |
| 1394696 | 12/16/2020 | 5551 MIDWAY PARK PL NE | 100 | 100 | - | 100% |
| **Grand Total** | | | **21,594** | **11,755** | **9,864** | **54%** |

## Appendix 3 Thanksgiving Day News Release

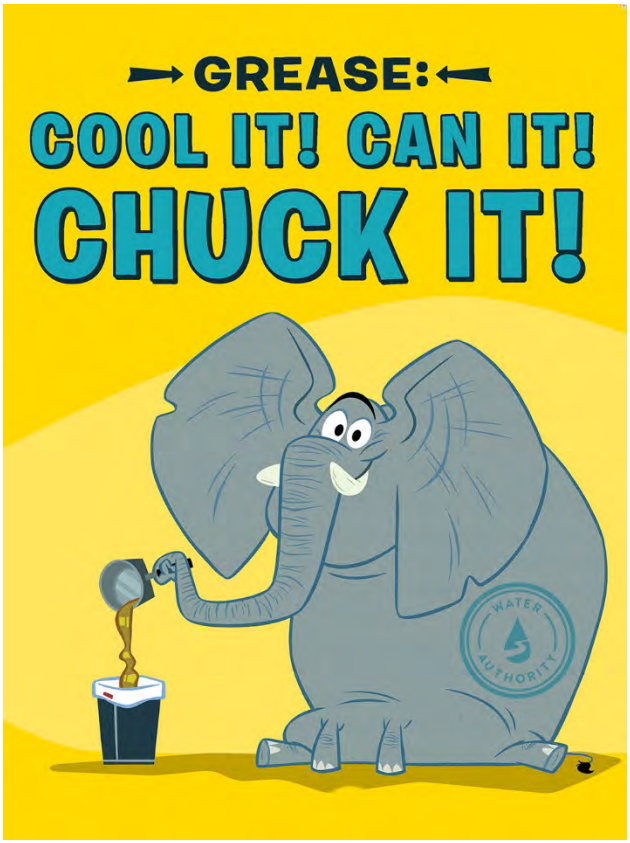
Albuquerque Bernalillo County
Water Utility Authority

**NEWS RELEASE**

# In Time for Thanksgiving: Water Authority Resumes its War on Grease

***Contact: David Morris, 264-5691***

**ALBUQUERQUE, November 17** – Just in time for Thanksgiving, the Water Authority has re-launched its PSA campaign to remind customers not to dispose of cooking grease in the sewer system. Billboards and TV and radio spots resurrect last year's "spokes-elephant," who points out that it makes as much sense to put a pachyderm down the sink as it does to pour grease down the drain.




FOG – Fats, Oils, and Grease – is a leading cause of sewer overflows, which in turn can cause thousands of dollars in property damage and create a public health threat. Water Authority customers are asked to do their part to prevent costly and hazardous sewer overflows:

**1) Dispose of cooking grease in the trash, not the sink**. Kitchen grease should be poured into a can or milk carton or soaked up with a paper towel and thrown into the garbage for disposal at the landfill. Otherwise it can collect and harden in the sewer system. For the same reason, greasy food scraps should be thrown away, not put in the garbage disposer. Remember: Cool it, Can it, Chuck it!

**2) Don't put rags or disposable wipes down the sink or toilet.** Rags of any sort—even ones advertising themselves as "flushable"—can cause sewer blockages, especially if they get caught on tree roots. Rags and disposable wipes should be thrown into the garbage for disposal at the landfill.

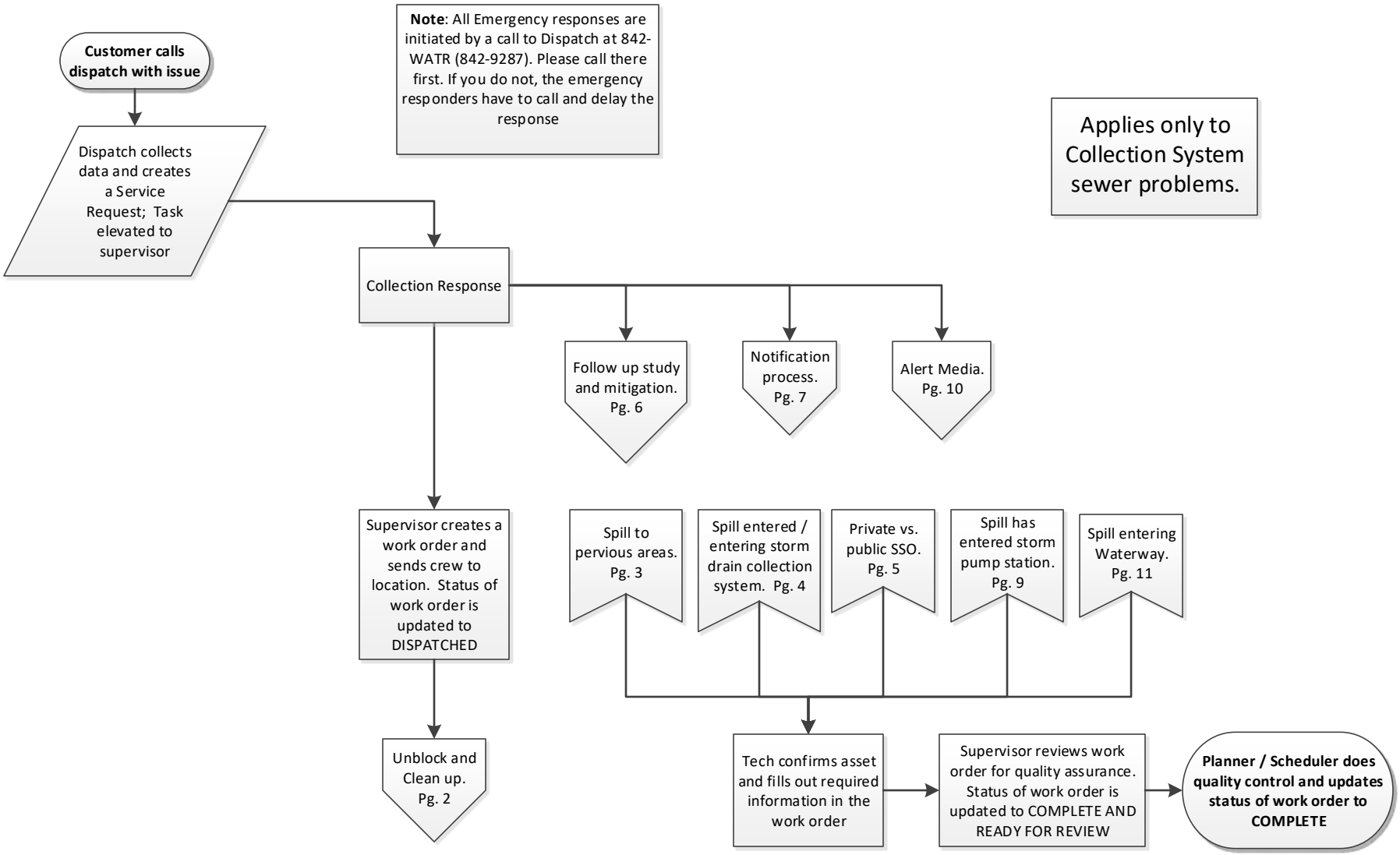
**3) Plant trees well away from sewer lines.** Roots grow toward breaks and cracks in sewer lines in search of water. Once they've penetrated a pipe, the roots can cause blockages leading to sewer overflows.

## Appendix 4 Overflow Emergency Response Plan (OERP)

# Overflow Emergency Response Plan

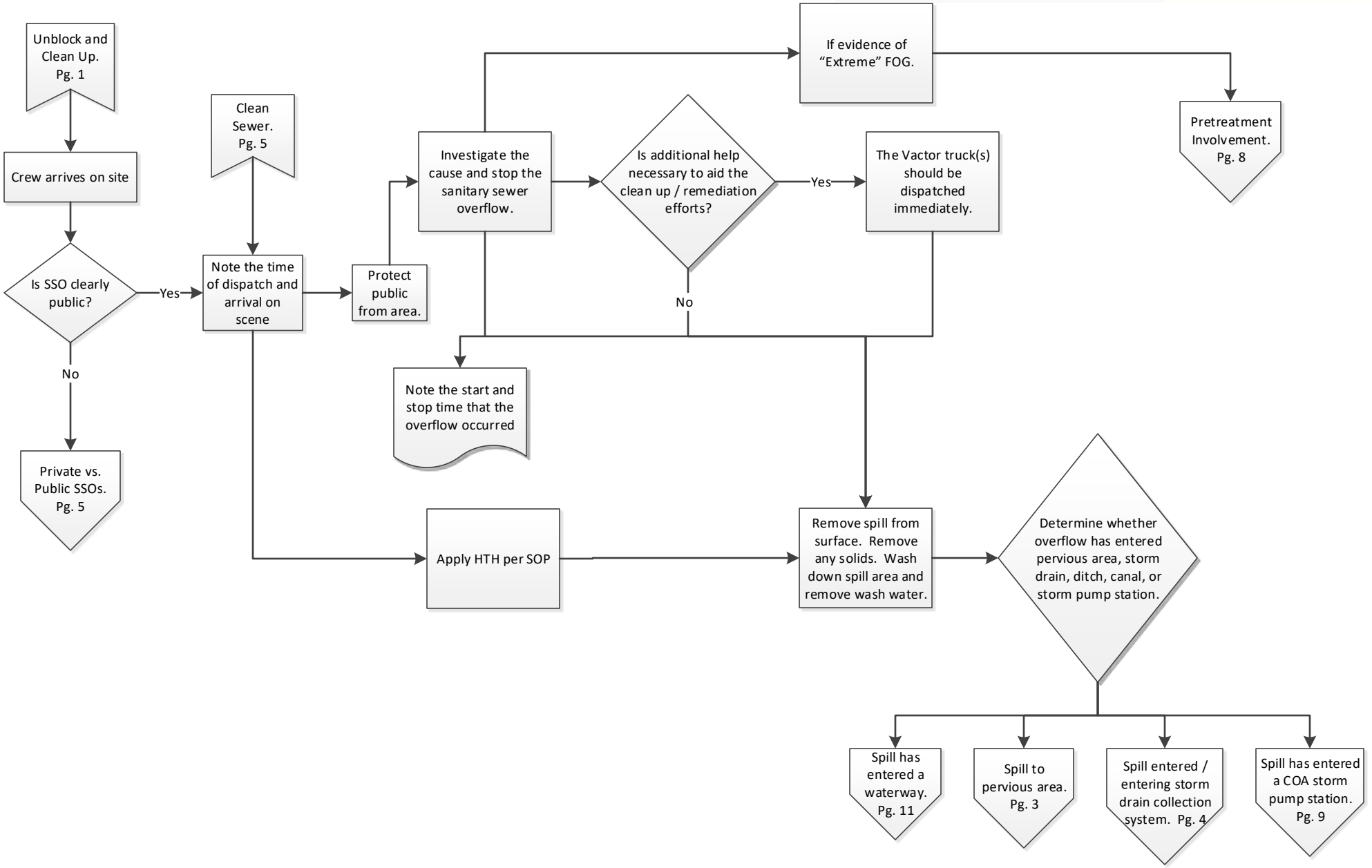
12-1-2019

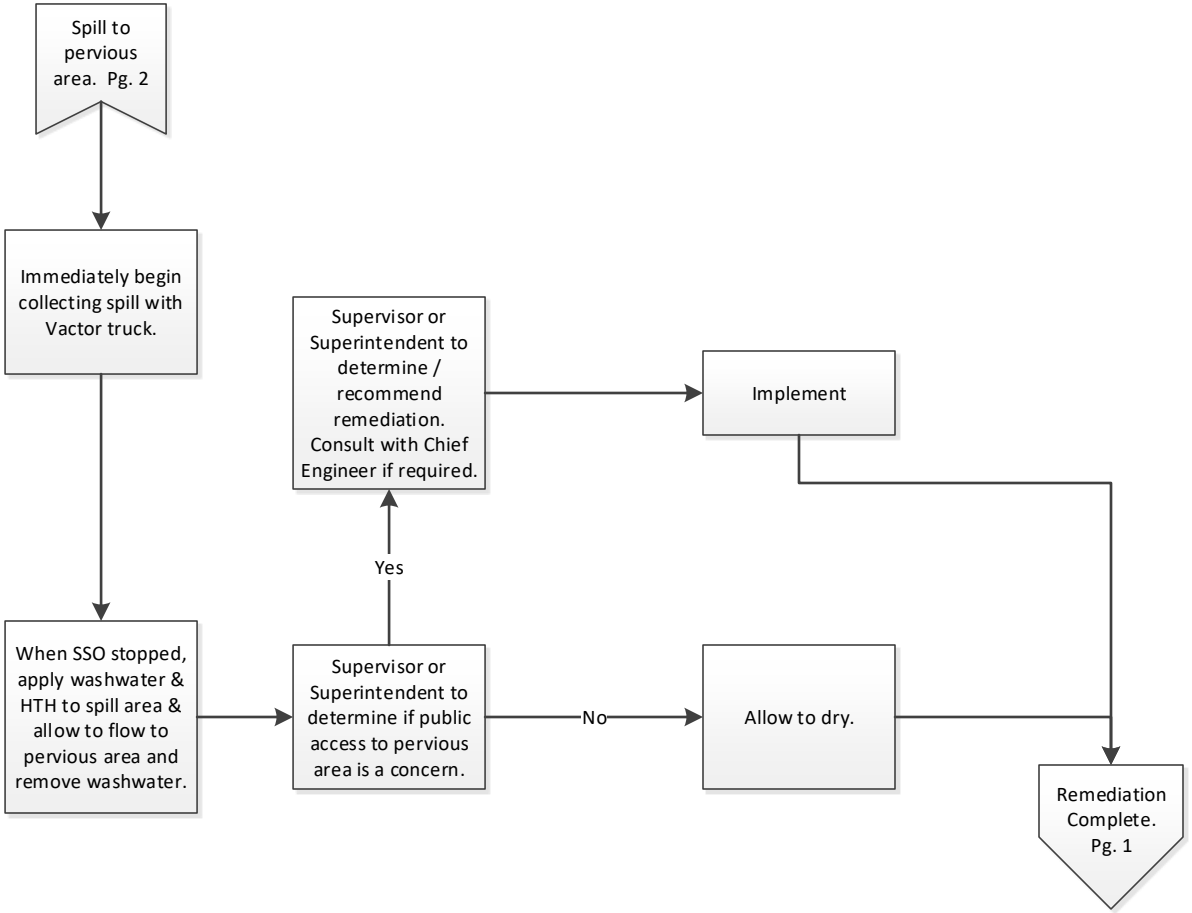
Albuquerque Bernalillo County Water Utility Authority



# Overflow Emergency Response Plan

Albuquerque Bernalillo County Water Utility Authority



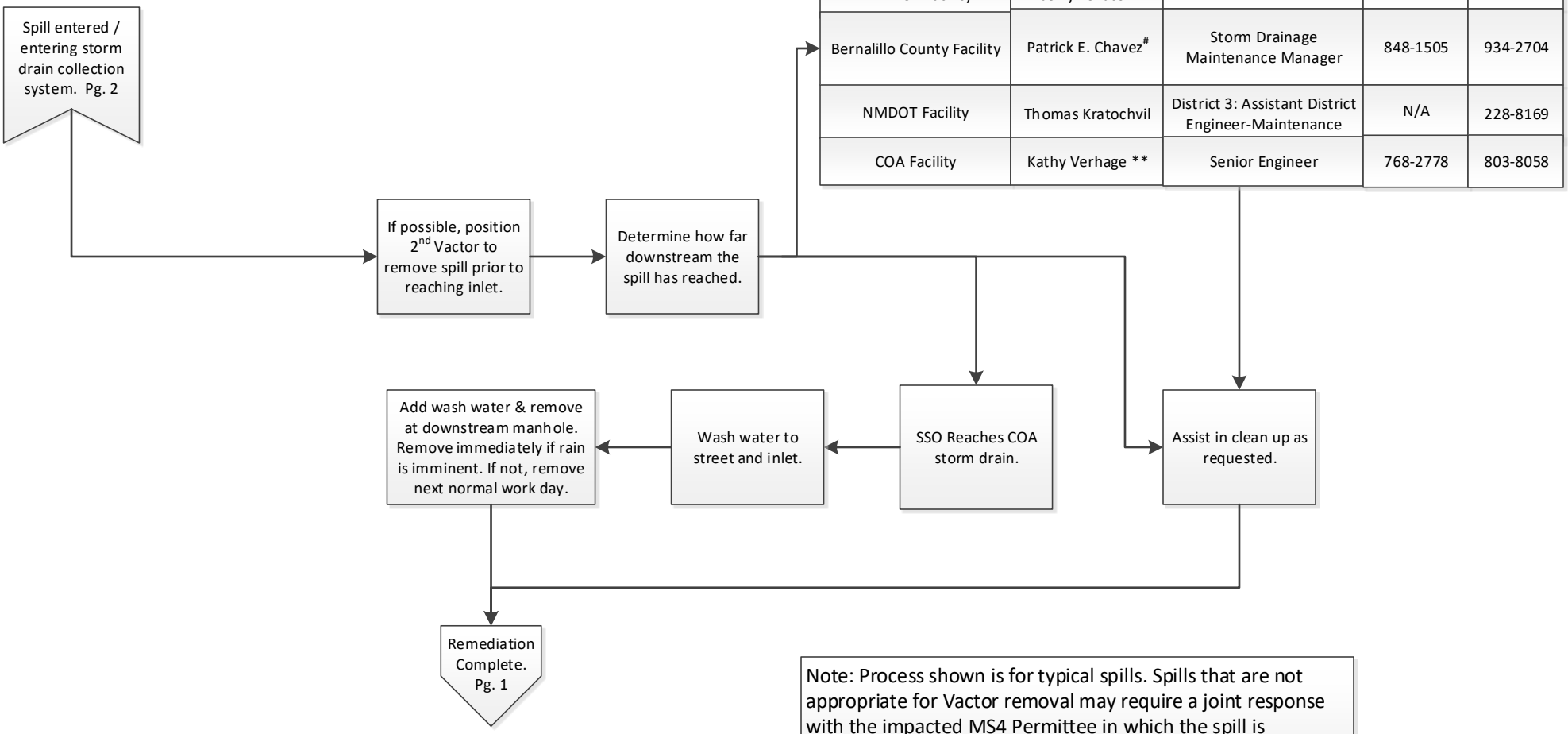

Spill to pervious area. Pg. 2
Immediately begin collecting spill with Vactor truck.
When SSO stopped, apply washwater & HTH to spill area & allow to flow to pervious area and remove washwater.
Supervisor or Superintendent to determine if public access to pervious area is a concern.
Yes
Supervisor or Superintendent to determine / recommend remediation. Consult with Chief Engineer if required.
No
Implement
Allow to dry.
Remediation Complete. Pg. 1

# Overflow Emergency Response Plan

12-1-2019

Albuquerque Bernalillo County Water Utility Authority

| SSO Reaches | Contact | | | |
|---|---|---|---|---|
| | Name | Position | Office | Cell |
| AMAFCA Facility | Jerry Lovato* | Executive Engineer | 884-2215 | 362-0020 |
| Bernalillo County Facility | Patrick E. Chavez# | Storm Drainage Maintenance Manager | 848-1505 | 934-2704 |
| NMDOT Facility | Thomas Kratochvil | District 3: Assistant District Engineer-Maintenance | N/A | 228-8169 |
| COA Facility | Kathy Verhage ** | Senior Engineer | 768-2778 | 803-8058 |




Note: Process shown is for typical spills. Spills that are not appropriate for Vactor removal may require a joint response with the impacted MS4 Permittee in which the spill is captured, treated, and determined appropriate for release.

*If Jerry Lovato is not immediately available, call:

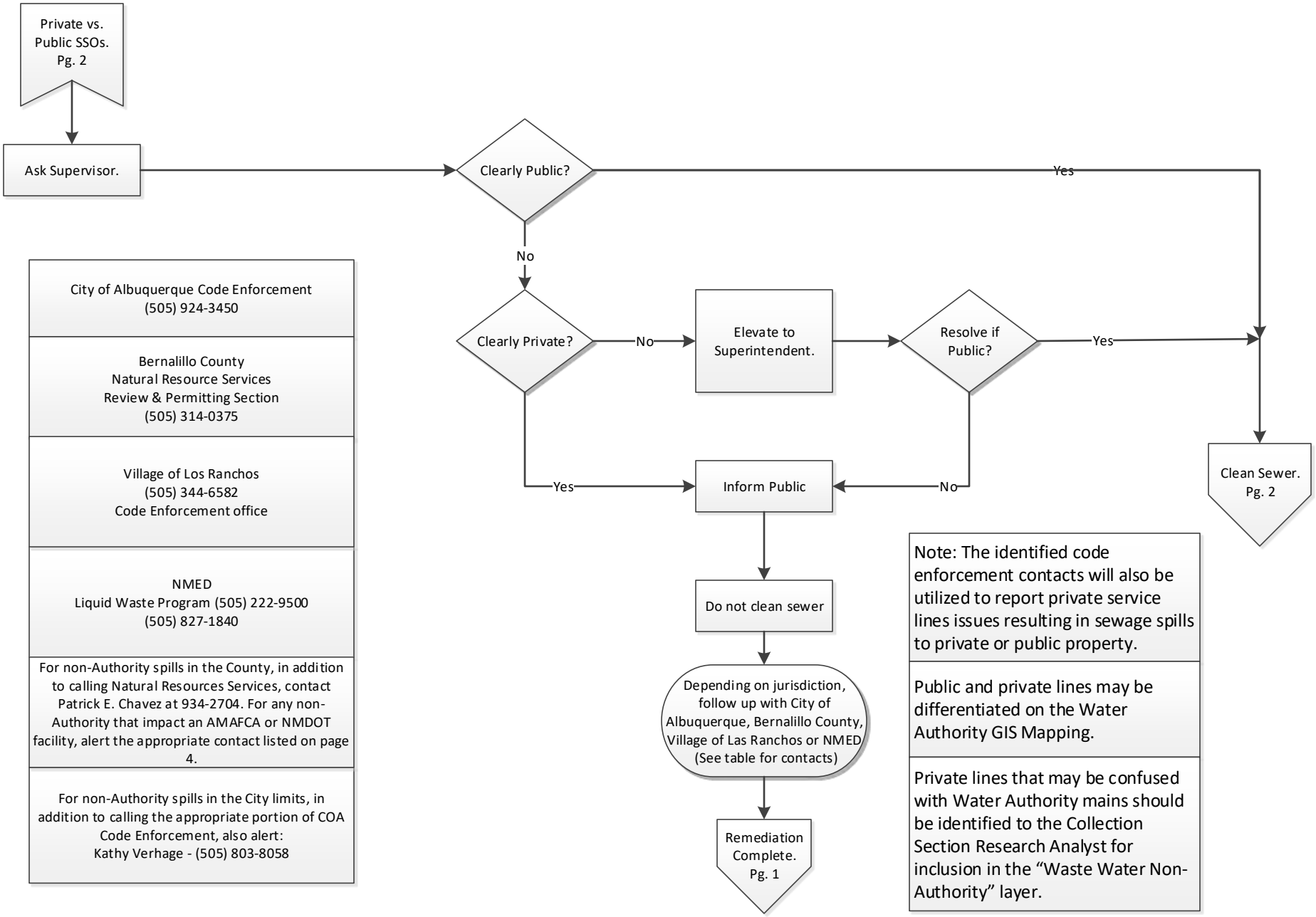
Nolan Bennett: Field Engineer (505) 301-6941
Sal Hernandez: Superintendent (505) 366-8209

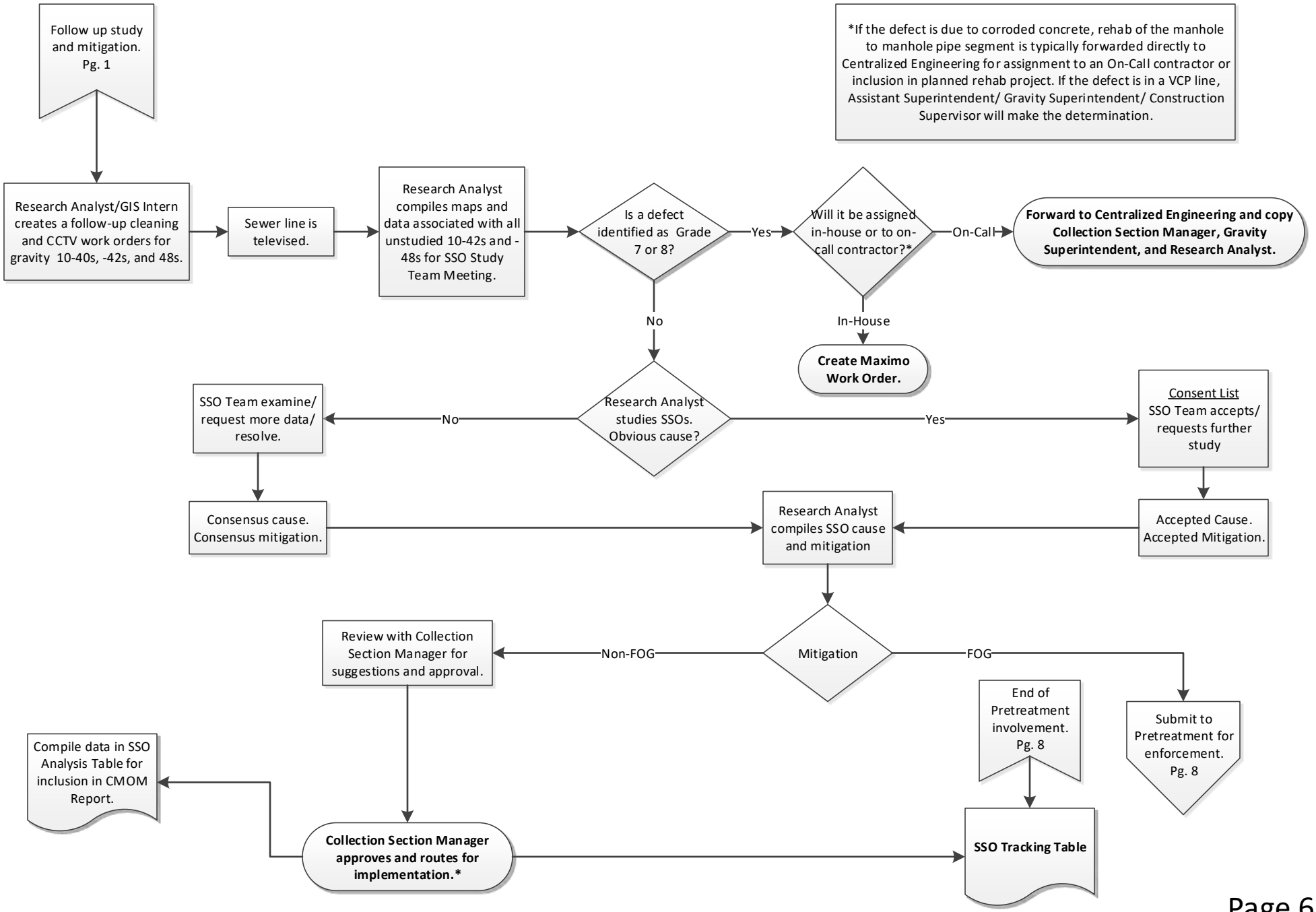
**If Kathy Verhage is not immediately available, call:

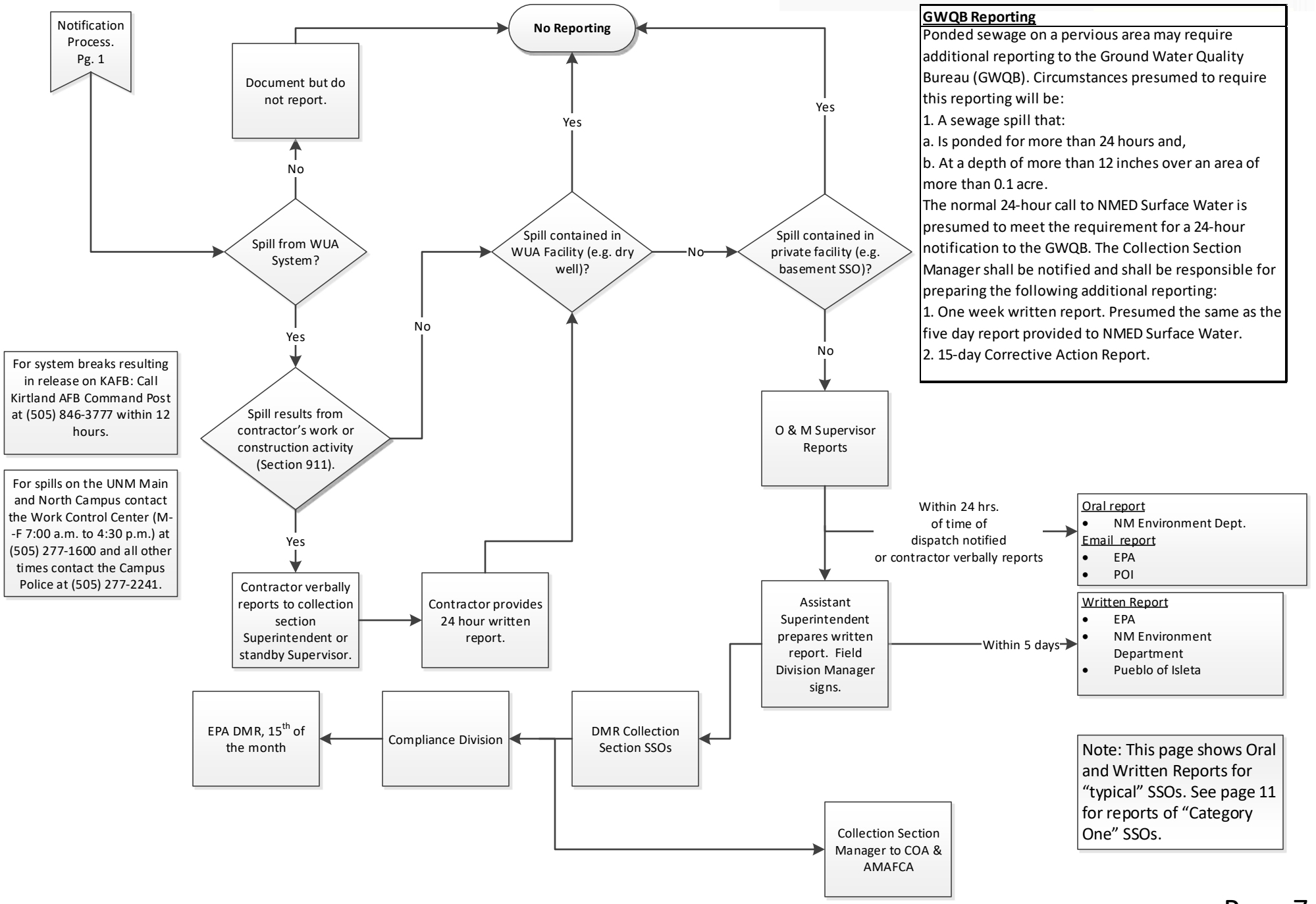
David Harrison: Engr. Div. Manager (505) 238-4158
Carl Rinkenberger: O&M Manager (505) 250-4334
Daniel Tapia: O&M Supt (505) 228-6874

#If Patrick E. Chavez is not immediately available, call:

Kali Bronson: Stormwater Program Compliance Manager (505) 401-1779


Private vs. Public SSOs. Pg. 2
Ask Supervisor.
Clearly Public?
Yes
No
Clearly Private?
No
Elevate to Superintendent.
Resolve if Public?
Yes
Yes
Inform Public
No
Clean Sewer. Pg. 2
Do not clean sewer
Depending on jurisdiction, follow up with City of Albuquerque, Bernalillo County, Village of Las Ranchos or NMED (See table for contacts)
Remediation Complete. Pg. 1
City of Albuquerque Code Enforcement (505) 924-3450
Bernalillo County Natural Resource Services Review & Permitting Section (505) 314-0375
Village of Los Ranchos (505) 344-6582 Code Enforcement office
NMED Liquid Waste Program (505) 222-9500 (505) 827-1840
For non-Authority spills in the County, in addition to calling Natural Resources Services, contact Patrick E. Chavez at 934-2704. For any non-Authority that impact an AMAFCA or NMDOT facility, alert the appropriate contact listed on page 4.
For non-Authority spills in the City limits, in addition to calling the appropriate portion of COA Code Enforcement, also alert: Kathy Verhage - (505) 803-8058
Note: The identified code enforcement contacts will also be utilized to report private service lines issues resulting in sewage spills to private or public property.
Public and private lines may be differentiated on the Water Authority GIS Mapping.
Private lines that may be confused with Water Authority mains should be identified to the Collection Section Research Analyst for inclusion in the "Waste Water Non-Authority" layer.


Follow up study and mitigation. Pg. 1
*If the defect is due to corroded concrete, rehab of the manhole to manhole pipe segment is typically forwarded directly to Centralized Engineering for assignment to an On-Call contractor or inclusion in planned rehab project. If the defect is in a VCP line, Assistant Superintendent/ Gravity Superintendent/ Construction Supervisor will make the determination.
Research Analyst/GIS Intern creates a follow-up cleaning and CCTV work orders for gravity 10-40s, -42s, and 48s.
Sewer line is televised.
Research Analyst compiles maps and data associated with all unstudied 10-42s and -48s for SSO Study Team Meeting.
Is a defect identified as Grade 7 or 8?
Yes
Will it be assigned in-house or to on-call contractor?*
On-Call
Forward to Centralized Engineering and copy Collection Section Manager, Gravity Superintendent, and Research Analyst.
No
In-House
Create Maximo Work Order.
SSO Team examine/ request more data/ resolve.
No
Research Analyst studies SSOs. Obvious cause?
Yes
Consent List
SSO Team accepts/ requests further study
Consensus cause. Consensus mitigation.
Research Analyst compiles SSO cause and mitigation
Accepted Cause. Accepted Mitigation.
Review with Collection Section Manager for suggestions and approval.
Non-FOG
Mitigation
FOG
End of Pretreatment involvement. Pg. 8
Submit to Pretreatment for enforcement. Pg. 8
Compile data in SSO Analysis Table for inclusion in CMOM Report.
Collection Section Manager approves and routes for implementation.*
SSO Tracking Table




**GWQB Reporting**

Ponded sewage on a pervious area may require additional reporting to the Ground Water Quality Bureau (GWQB). Circumstances presumed to require this reporting will be:

1. A sewage spill that:

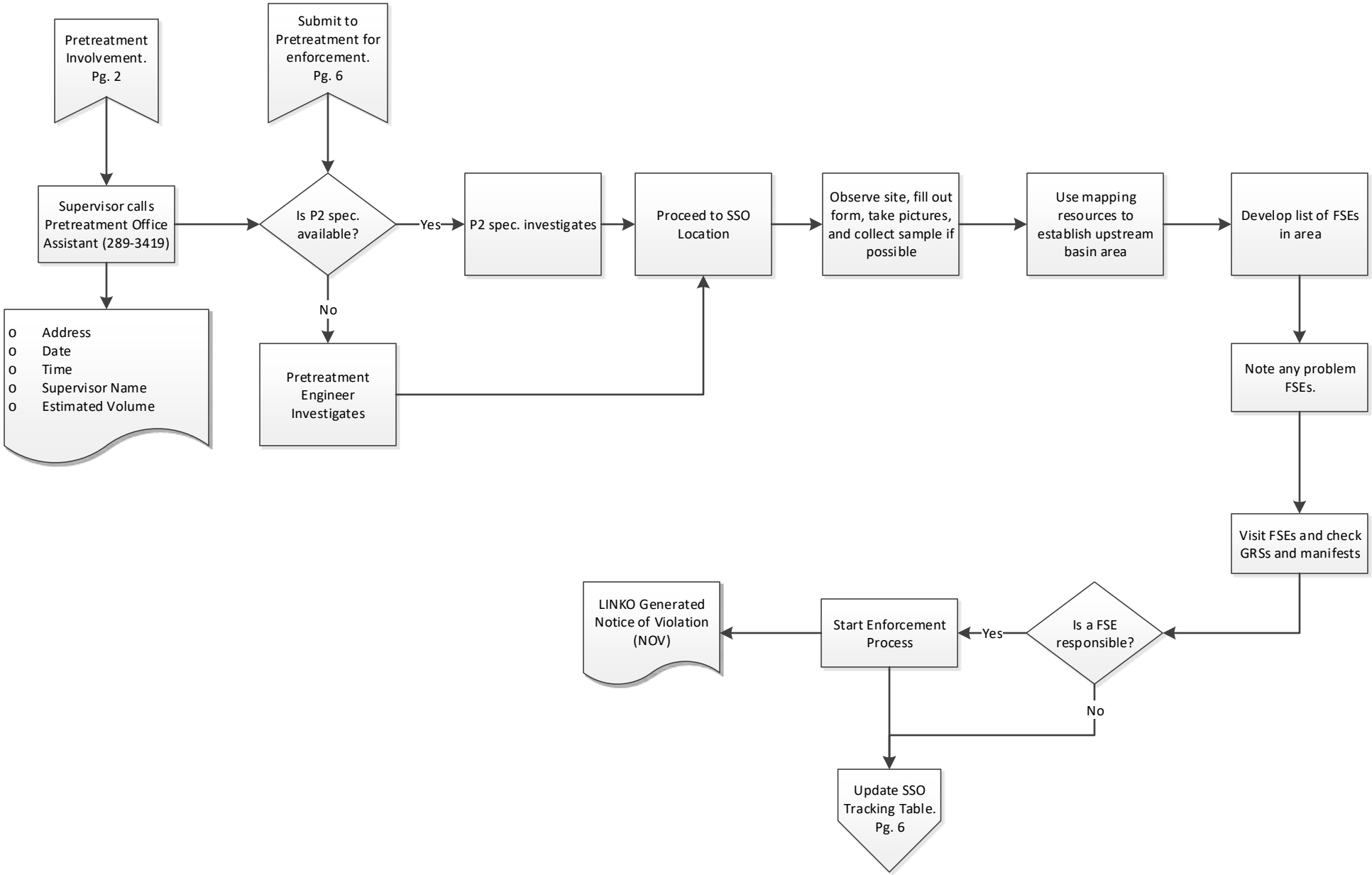
a. Is ponded for more than 24 hours and,

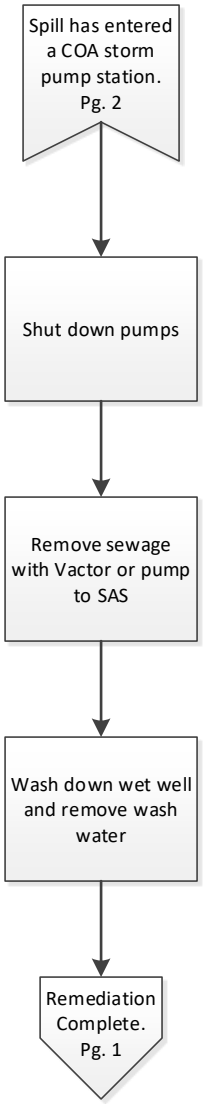
b. At a depth of more than 12 inches over an area of more than 0.1 acre.

The normal 24-hour call to NMED Surface Water is presumed to meet the requirement for a 24-hour notification to the GWQB. The Collection Section Manager shall be notified and shall be responsible for preparing the following additional reporting:

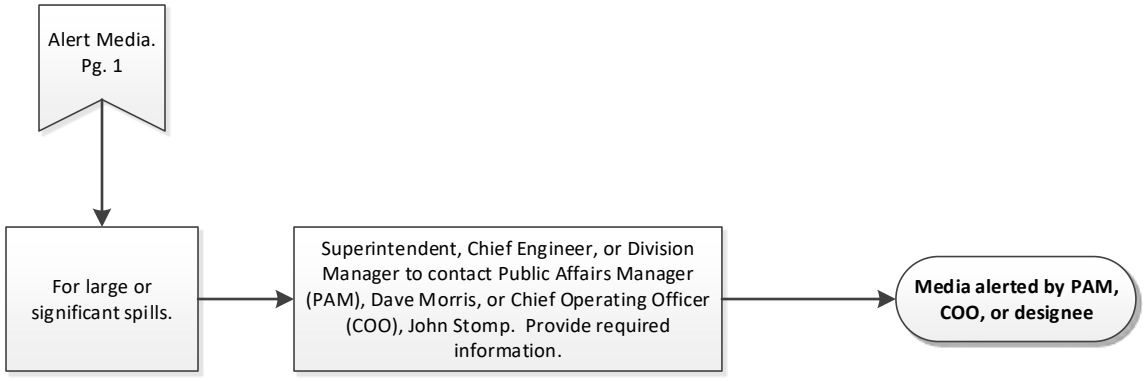
1. One week written report. Presumed the same as the five day report provided to NMED Surface Water.
2. 15-day Corrective Action Report.

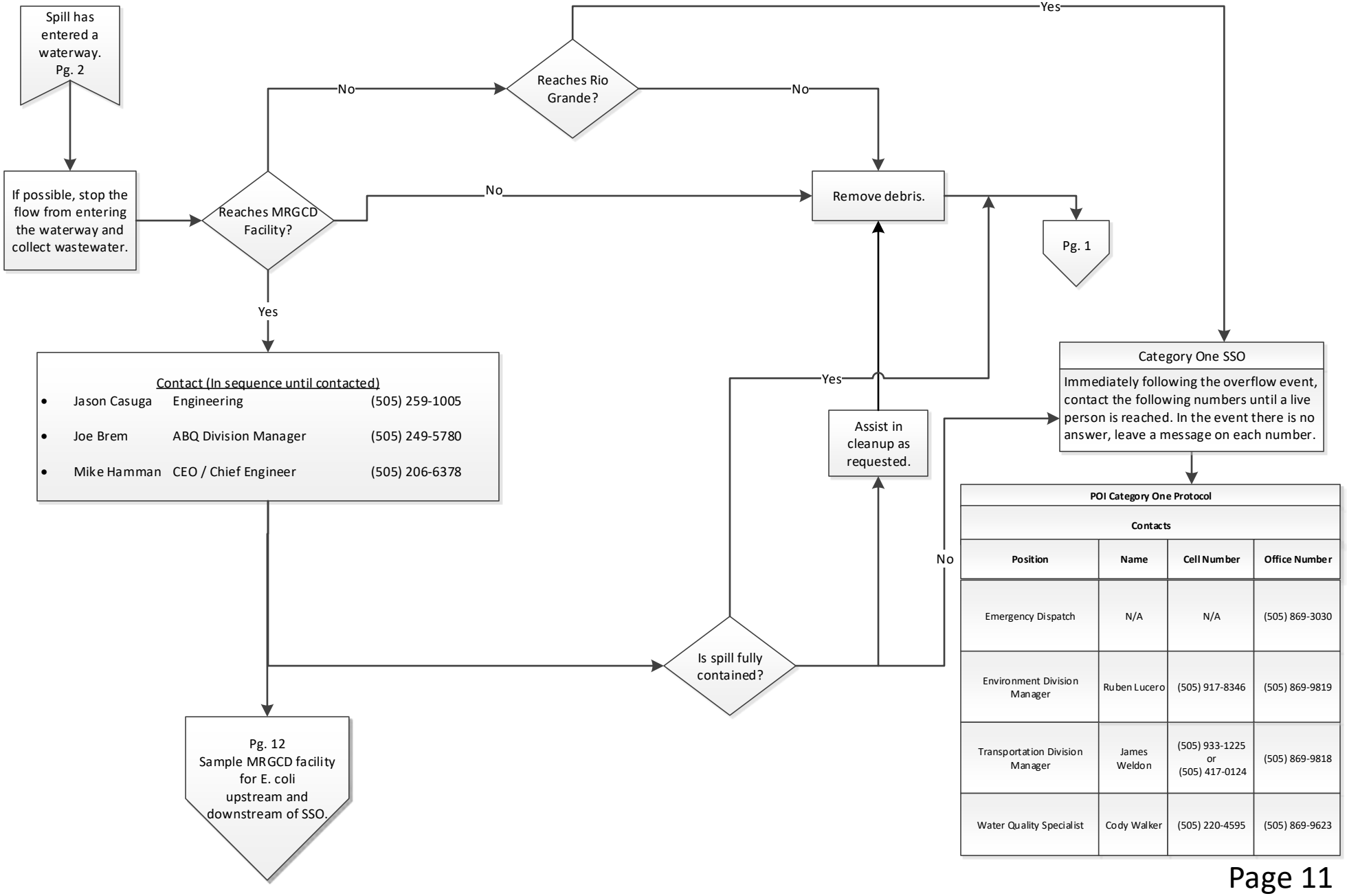
Note: This page shows Oral and Written Reports for "typical" SSOs. See page 11 for reports of "Category One" SSOs.


Pretreatment Involvement. Pg. 2
Submit to Pretreatment for enforcement. Pg. 6
Supervisor calls Pretreatment Office Assistant (289-3419)
Is P2 spec. available?
Yes
P2 spec. investigates
Proceed to SSO Location
Observe site, fill out form, take pictures, and collect sample if possible
Use mapping resources to establish upstream basin area
Develop list of FSEs in area
o Address
o Date
o Time
o Supervisor Name
o Estimated Volume
No
Pretreatment Engineer Investigates
Note any problem FSEs.
Visit FSEs and check GRSs and manifests
LINKO Generated Notice of Violation (NOV)
Start Enforcement Process
Yes
Is a FSE responsible?
No
Update SSO Tracking Table. Pg. 6




Note: Process shown is for typical spills. Some spills may require a joint response with the City of Albuquerque in which the spill is captured, treated, and determined appropriate for release.

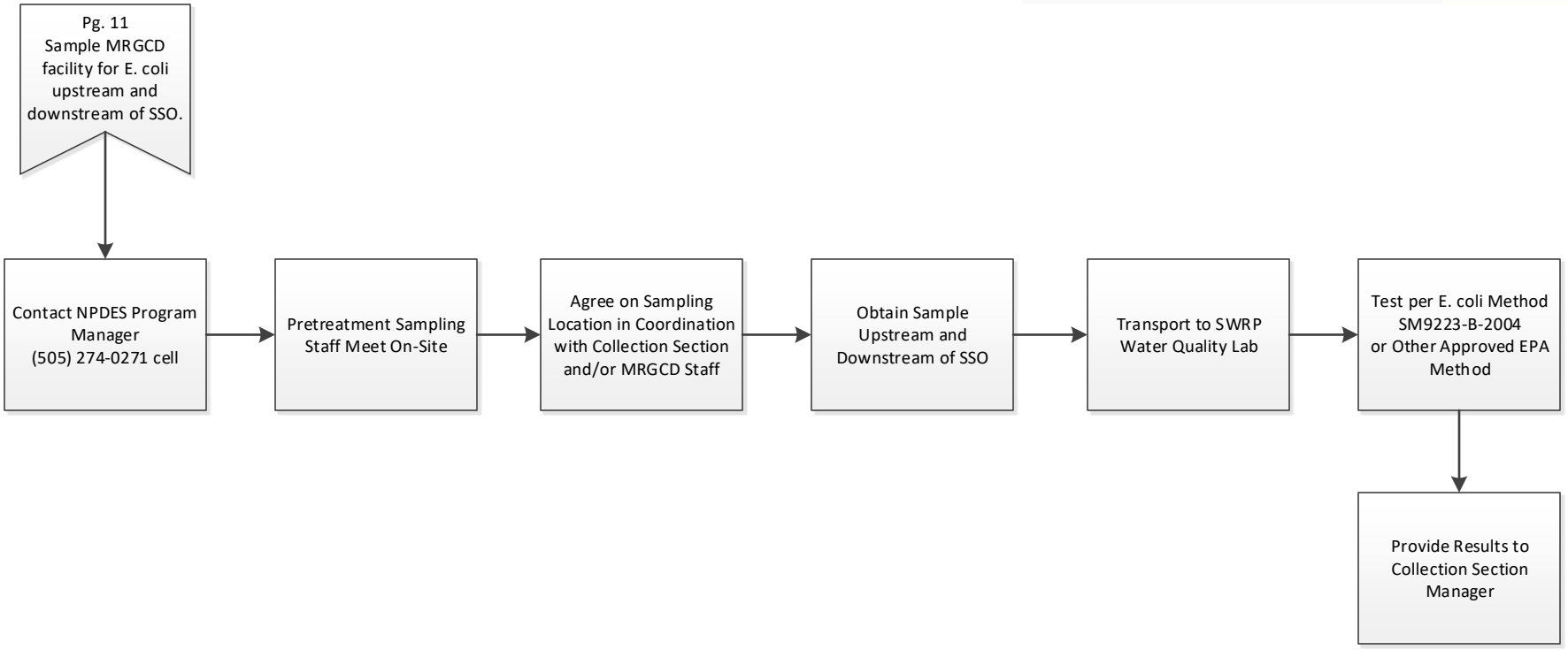

Alert Media. Pg. 1
For large or significant spills.
Superintendent, Chief Engineer, or Division Manager to contact Public Affairs Manager (PAM), Dave Morris, or Chief Operating Officer (COO), John Stomp. Provide required information.
Media alerted by PAM, COO, or designee




**POI Category One Protocol**

**Contacts**

| Position | Name | Cell Number | Office Number |
|---|---|---|---|
| Emergency Dispatch | N/A | N/A | (505) 869-3030 |
| Environment Division Manager | Ruben Lucero | (505) 917-8346 | (505) 869-9819 |
| Transportation Division Manager | James Weldon | (505) 933-1225 or (505) 417-0124 | (505) 869-9818 |
| Water Quality Specialist | Cody Walker | (505) 220-4595 | (505) 869-9623 |


Pg. 11
Sample MRGCD facility for E. coli upstream and downstream of SSO.
Contact NPDES Program Manager (505) 274-0271 cell
Pretreatment Sampling Staff Meet On-Site
Agree on Sampling Location in Coordination with Collection Section and/or MRGCD Staff
Obtain Sample Upstream and Downstream of SSO
Transport to SWRP Water Quality Lab
Test per E. coli Method SM9223-B-2004 or Other Approved EPA Method
Provide Results to Collection Section Manager

## Appendix 5 Goal Summary - CY2020 Report

| Goal Summary - CY2020 CMOM Report | | |
|---|---|---|
| **Goal** | **Timing** | **Page # for Discussion** |
| CCTV all gravity pipes suffering a blockage. For all SSOs, determine a cause and mitigation and report in the next CMOM report | Annually | 6 |
| Interceptor manhole inspection for an additional 260 manholes | CY2021 | 11 |
| Public advertising | On-Going | 11 |
| Distribute FSE fliers in all languages and improve FOG inspections | CY2023 | 11 |
| Update OERP | As required | 12 |
| CCTV a portion of system | Ten Year goal. Report annually. | 13 |
| Clean a portion of the system | Ten Year goal. Report annually. | 14 |
| Force main inspection program | Annually | 15 |
| Perform an air pocket profile, utilizing a smart ball, of Lift Station 20's north and south force main. Install replacement ARVs on north and south force main. | CY2021 | 15 |
| SSOs: Decrease number and mitigate impact | On-Going | 16 |