Goals
The goals of the City of Salinas Wastewater Division are to:

a) Properly manage, operate, and maintain the wastewater collection system;
b) Verify the wastewater collection system has adequate capacity to convey sewage during peak flows;
c) Minimize the frequency of sanitary sewer overflows;
d) Respond to sanitary sewer overflows quickly and mitigate the impact of the overflow;
e) Provide training on a regular basis for staff in collection maintenance and operations;
f) Maintain a Fats, Oil, and Grease (FOG) program to limit fats, oils, grease, and other debris that may cause blockages in the sewage collection system;
g) Identify and prioritize structural deficiencies and implement short-term and long-term maintenance and rehabilitation actions to address each deficiency;
h) Meet all applicable regulatory notification and reporting requirements; and
i) Provide excellent customer service.

Waste Discharge Requirements (WDR)
California State Water Resources Control Board Order 2006-0003 set forth Statewide Water Discharge Requirements (WDR) for Sanitary Sewer Systems. The City of Salinas must comply with these State regulations to monitor discharges that may cause sanitary sewer overflows and degrade receiving waters including channels, rivers, and beaches. Fats, Oils, and Grease (FOG) are one of the leading causes of sanitary sewer overflows, which occur when the sewer becomes clogged and sewage discharges into the street. Sanitary sewer overflows may result in violations of water quality standards, pose a threat to the public health, adversely affect aquatic life and impair the public recreational use and enjoyment of surface waters.

Sanitary Sewer Overflows (SSO’s)
A collection system’s greatest concern is a sanitary sewer overflow (SSO); this is where a pipe is plugged and raw sewage wastewater flows out of a manhole or facilities. SSOs are typically caused by buildup of grease in pipes and root intrusion. There are many other causes that can contribute to sanitary sewer overflows such as vandalism, lift station failures, pipe failures, and debris.
Sanitary Sewer Maintenance Program
The City maintains 274.77 miles of sanitary sewer collection system pipeline and 11 sanitary sewer lift stations. High priority and routine line cleaning, manhole inspections, and lift station inspections are completed each business day by dedicated sewer collections maintenance staff. Sewer collection staff also remain on-call 24 hours a day for any sanitary sewer related emergency. The City’s Wastewater Division of the Public Works Department, under the direction of the Public Works Director and the Environmental and Maintenance Services Superintendent, is responsible for operation and maintenance of the City’s sanitary sewer collection system. The City’s Wastewater Manager is the lead person to plan and implement these responsibilities. The Wastewater Division of the Public Works Department is in charge of developing and implementing the maintenance goals and the activities. The Engineering and Transportation Department provides engineering services for development and implementation of capital improvement projects and sets standards for design and construction specifications.

Effective management of a collection system includes
- Minimizing the number and impact of sanitary sewer overflows (SSOs)
- Providing adequate sewer capacity to convey peak flows, and
- Maintaining and improving the condition of the collection system infrastructure to provide reliable service into the future.

Sanitary Sewer Line Cleaning Program
Sanitary sewer line cleaning consists of pipe flushing and high-pressure jetting to remove grease, debris and roots. City Wastewater collections staff service sewer system pipes daily using a hydrojet vacuum truck which uses a high-pressure jetting system that uses water and an optional vacuum to remove debris. The Wastewater Division also utilizes its new HPRTV trucks which are hydrojetters equipped with CCTV to identify issues within the sanitary sewer system. This program removes grease buildup as well as minor roots and debris to enable the wastewater to flow freely through the pipes. Blocked wastewater sewer lines cause odors, SSOs, and damages pipes. The objective of sewer pipe cleaning is to prevent future blockages of the sewer system. The division focuses most of the cleaning operations in the high priority areas or line segments. These areas or line segments have been based on historical information such as repeated overflows or grease issues. Three days a week staff schedules high priority line cleaning and the remaining 2 days is dedicated to routine line cleaning. Wastewater Collections staff cleaned 129.98 miles of pipe in 2020 this is an increase from 2019 of 116.05 miles.

CCTV Inspections
CCTV inspections are an essential part of a successful sanitary sewer rehabilitation program it identifies damages or causes of blockages. CCTV greatly enhances the planning of the maintenance and repair programs and we are always looking for better ways that are more efficient to accomplish the State WDR requirements. During 2020 the Wastewater Division completed 42,516 linear feet of CCTV inspections on sanitary sewer main lines. During 2020 staff worked with I.T to develop a file upload from the CCTV van once video was completed.
This program setup a Wi-Fi connection between the CCTV van and the City server to a one drive file so multiple departments could view and use completed CCTV video. This function was primarily setup for engineering to review and schedule rehabilitation work and CIP planning for repairs to the sanitary sewer system based on the category of the inspection. This video setup was completed during 2020. During year 2020 the Wastewater Division received two (2) new HPRTV Hydro-Jetter Camera Trucks. These trucks have helped with sewer mainline inspections because of their ability to do multiple functions cleaning and video work during the same service. These trucks are being utilized daily cleaning and performing video inspections of the sanitary sewer system.

**Manhole Inspections**

Manhole inspections are scheduled weekly to identify locations where blockages are common. Collections staff visually inspect these manhole locations on a regular basis to look for sluggish flows that can indicate an issue that can lead to overflows. High priority manhole checklists are used to inspect, and monitor locations based on historical information of overflow issues. During 2020 staff completed 2522 manhole inspections this is up from previous year totals of 1448 inspections. During 2018 staff initiated a manhole SCADA monitoring program identifying six (6) high priority manhole locations which proved to be a great success. With additional funding secured during 2019 the program was expanded considerably with the installation of an additional twenty-four (24) more manhole monitors. During 2020 staff continued its expansion of the SCADA manhole program adding (20) more monitors being the total to (50) locations. During 2020 due to the increase in monitoring locations throughout the City, staff seen a reduction of sanitary sewer overflows again. 2019 there were 2 main line SSO’s, which was the same number of overflows for 2020 reporting year meeting the divisions goals of less than 5 overflows. The manhole monitors alarmed staff 24 times during the 2020 reporting period indicating surcharged systems which were responded to without overflow from the sewer system. This manhole SCADA program has become a very successful component of the City’s overall operations and maintenance program. During 2021 staff will evaluate the need for additional monitoring locations if deemed necessary.

**Manhole Monitors (50) Locations**
**Lift Station inspections**
The Wastewater Pump Mechanic currently conducts regular maintenance of the City’s 11 sewer pump stations. The 4 highest flow sewer lift stations are inspected daily. All other sewer lift stations are inspected two to three times weekly depending on work schedule. Staff completed 1740 inspections for 2020 this was an increase of 124 inspections from the previous reporting year. During 2018 staff initiated a supervisory control and data acquisition (SCADA) program to monitor all eleven (11) sanitary sewer lift stations. During 2020 this program has continued to help with monitoring and continue the prior year’s successes. This SCADA program tracks flow, motor run time, and other essential data on lift station operations. One of the most critical monitoring components is the alarming system that calls staff directly if there are any operational issues at the lift stations. This program helps in reduce potential overflows related to lift station failures and helps staff better manage the system.

**Lift Station SCADA Map**

**Underground Service Alert Marking (USA’s)**
Wastewater staff mark City infrastructure utilities such as sanitary sewer lines and storm sewer drainage systems daily. On a daily average staff marks 10 tickets received through Dig Alert 811. Staff will mark out the proposed excavation site to show contractors where City utilities are
located so not to cause damage during excavation projects that could lead to an SSO. During 2020 staff completed 5011 underground service alert tickets.

**Prevention Program Fats, Oils, and Grease (FOG) Outreach**

**Background on City Grease Program**
The City of Salinas currently has 274.77 miles of sanitary sewer pipelines. The service area includes a variety of residential, commercial and industrial facilities. Primary focus of an effective grease program will include commercial food service/preparation facilities.

Commercial facilities may include but are not limited to restaurants, sandwich shops, delicatessens, bakeries, cafeterias, markets, caterers, retirement and nursing homes. Establishments that are identified as not participating in the preparation of food on premises or processing food in a manner so as to contribute grease to the sewer system will not be included in the source control program. The food service grease source control inspection list is derived from several sources including the City’s business license database, the Monterey One Water food service database, Monterey County Health Department food service database and a search of food service listing from the local telephone directory. The list currently identifies approximately 481 food service facilities which was updated during 2020. On July 1, 2019 Monterey One Water and the City of Salinas signed a Memorandum of Agreement to perform commercial facility inspection services. This agreement is good through June 30, 2024. Monterey One Water will inspect annually 50-150 commercial food facility for fats, oils, and grease. During 2020 (77) commercial food businesses were inspected. The City is working from this list to identify problem locations and the need for appropriate grease pretreatment equipment. Monterey One Water assists the City with pump out requirements when a problem is identified. The City determines the need and sizing of grease traps and interceptors based on the latest version of the Uniform Plumbing Code.

**Public Education Outreach**
During 2020 the City continued participating in the Southern Monterey Bay Dischargers Group with the goal of partnering with the Monterey One Water and other local agencies on a fats, oils and grease program (FOG) and continued participation in an effective public outreach program. The City of Salinas with the Southern Monterey Group work together to develop a regional public education program for users of the system for the purpose of reducing grease problems in the collection system.

The education campaign includes newspaper ads (three in English, one in Spanish), radio, and TV ads on two local stations along with ads in Salinas’s movie outlets. The Southern Monterey Bay Discharges Group directed resources to a multi-agency web site for fats, oils and grease information at http://www.clogbusters.org/. The regional program will be modified yearly as conditions warrant.
Southern Monterey Bay Dischargers FOG Outreach Partnership Distribution and Budget

### FY 20-21 Shared Budget for FY 20-21
Not to Exceed $16,000

<table>
<thead>
<tr>
<th>Entity</th>
<th>Population within area to be covered by regional WDR program</th>
<th>% of budget to be paid</th>
<th>Contribution not to exceed</th>
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</thead>
<tbody>
<tr>
<td>California American Water2</td>
<td>6,380</td>
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<td>$360.13</td>
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<tr>
<td>Carmel Area Wastewater District*</td>
<td>3,722</td>
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<td>Castroville Community Services District</td>
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<td>City of Pacific Grove</td>
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<td><strong>City of Salinas</strong></td>
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<td>Marina Coast Water District4</td>
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<td>Seaside County Sanitation District5</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>100%</strong></td>
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* PBCSD and CAWD contributions will increase no more than $693.00 each for additional Carmel Pine Cone ads in December 2020

### WDR FOG Public Education Program FY 20-21

**Program Goals**

- Educate our communities on the proper disposal of fats, oils, and grease through advertising and public resources
- Help members meet the issued Waste Discharge Requirements (WDR) by the California Regional Water Quality Board

**Program Timeframe**

November and December 2020 (holiday season), April 2021 (Earth Day)
Media Types
- Print
- Broadcast TV
- Streaming TV
- Digital
- Radio
- Social Media

Digital copies of all advertisements will be provided to entities to continue using beyond this campaign

Wastewater Division Outreach
The City of Salinas Wastewater Division distributes FOG door hangers in areas that have been identified with grease issues. The door hanger notifies residents and business that a problem has been identified in their area. Other FOG outreach consists of a similar post card mailer that is sent out through a generated mailing list to notify English and Spanish speaking residents and business that a FOG issue has been identified and how they can help reduce fats, oils, and grease from blocking sanitary sewer lines in their area that cause SSO’s.

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Reduce FOG & Stop Sewer Clog!

**Disminuya las gorduras, grasas y aceites y ayude a prevenir que se tapen las alcantarillas**

- Do not pour fats, oils and grease down the sink or garbage disposal.
- Do pour fats, oils and cooled grease into a sturdy container, such as an empty glass jar or coffee can. When the container is full, secure the lid and place it in the trash.
- Before washing your dishes, scrape and dry wipe pots, pans and dishes with paper towels. Place the soiled paper towels in the trash.
- Use sink strainers to catch food items, and empty the strainer in the trash.
- Use hot water and detergent to clean grease off dishes.
- Do not pour fat, oil or grease down the drain.

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Las gorduras, grasas y aceites son la causa de obstrucción de las alcantarillas de su vecindario. Usted puede ayudar a evitar futuras obstrucciones. Siguiendo estos sencillos pasos.

- Antes de lavar los trastes, límpie los residuos de comida de las ollas, sartenes y trastes con toallas de papel y ponga las toallas de papel sucias en la basura.
- Ponga coladores en el fregadero para atrapar los residuos de comida y aceite en la basura.
Sanitary Sewer Maintenance City Web Page
The sanitary sewer subpage of the Environmental Maintenance Services has continued to be updated during 2020 to inform the citizens and business of Salinas on the various programs such as maintenance, FOG outreach and sewer overflow reporting the Wastewater Division implements.

The web page has sewer related documents, information on fats, oil and grease outreach programs, sewer backup claim procedures, and helpful links in regard to contacting other agencies such as Monterey One Water for billing and Monterey County Health Department for sewer related health issues. https://www.cityofsalinas.org/our-city-services/public-works/water-waste-energy/environmental-maintenance-services/sanitary-sewer-maintenance.

GIS Web Design for Sanitary Sewer Systems
During 2020 collections staff continued working with GIS staff developing a computerized maintenance management system (CMMS). This web application development will update mapping, store data and produce work orders for inspections and maintenance. Staff will be able to accomplish documentation of work using hand held computers in the field utilizing the sanitary sewer web application. This is an important element for accurate data collection and management of the sanitary sewer. There will be many layers for inspection work such as line cleaning, manhole inspections, lift station inspections, repairs, CCTV inspections and SSO reporting. During 2020 GIS completed the manhole inspection layer and is being beta tested. During December of 2020 the City of Salinas retained the Wallace Group to update the Sanitary Sewer Master Plan. Wallace has started surveying manholes to start updating mapping and the sanitary sewer web application.
Sanitary Sewer Web Application

Sanitary Sewer Spill Estimation Application
Staff Training
Wastewater supervisory staff were provided additional training during 2020 as follows:
1. Data Submitter and Legally Responsible Official Training
2. State Database CIWIQS Training
3. SSO Documentation Training
4. Water Quality Monitoring Training
5. Overflow Emergency Response Plan Training
6. Sanitary System Management Training

Wastewater Collection Field staff training for 2020 focused on as follows:
1. OERP Training
2. Water Sampling Training
3. By Pass Pumping Training
4. Plugging Sewers Training
5. Hazmat Incident Training
6. Confined Space Training
7. Underground Utility Location Training
8. Spill & Flow Estimation
9. SSO Reporting
10. Water Quality Monitoring Plan
11. CCTV Training

Annual Sanitary Sewer Achievements for 2020

1. Purchased and installed Twenty (20) SCADA manhole overflow monitors to monitor high priority manholes for potential SSO’s.
2. Met maintenance goals for City main line overflows 5 or less spills for 2020.
3. Continued sanitary sewer web application design for better management of Sanitary Sewer Systems. Updating mapping and in field data processing.
4. Continued partnership with Southern Monterey Bay Dischargers Group on fats, oils and grease outreach.
5. MOU with Monterey One Water to perform Fats, Oils & Grease inspections started during 2020 with a total of 77 commercial food inspections.
6. Received two hydrojetter/ camera combination trucks for CCTV and sanitary sewer line maintenance.
7. Purchased and received one backup generator for lift stations emergencies.
8. Worked with I.T to setup upload process for video from CCTV van to OneDrive file on City server, for storage and viewing of video for rehabilitation and capital improvement projects. This process was completed during 2020.
Conclusions
It’s been another exciting year for the Wastewater Division with many achievements that met the City goals of properly managing, operating, and maintaining the wastewater collection system. The confidence of the staff has grown with more in-depth training expanding their knowledge and understanding of the collection system industry. Our maintenance, investigation and prevention programs are proving to be successful. Staff continues to strive for a more proactive and efficient program emphasizing the importance of minimizing City sanitary sewer overflows and meeting maintenance goals. Continued effort to respond quickly and mitigate the impact of overflows. Maintaining a fats, oil and grease program that reduces the potential of overflows. Continuing to meet all applicable regulatory notification and reporting requirements and providing excellent customer service. During 2020 the Wastewater Division seen some additions adding two new hydrojetter camera trucks, which have proven to be very valuable identifying issues and maintaining the sewer system. Along with the addition of twenty manhole monitors on the system to alert staff of surcharges.

Sanitary Sewer Data

Sanitary Sewer Overflows
The Waste Water Division met its goal of 5 or less overflows per year. The Division has met these goals for the last 13 years. There was a total of two (2) City main line overflows responded to during 2020.
SSO Volumes Spilled & Contained 2020

Volumes Spilled & Contained Reached Waterbody 2020

City SSO Trend Causes 2020
**Private Sanitary Sewer Responses**

City Sanitary Sewer Collections staff responded to 11 private sanitary sewer overflows during 2020. In every case staff responded in a timely manner and captured and contained SSO’s that discharged from private sewer line laterals.

![Private Sanitary Sewer Responses 2020](image)

**Sanitary Sewer Line Cleaning**

Annual sanitary sewer line cleaning totaled 686,289 linear feet or 129.98 miles for 2020. Cleaning consisted of high priority line cleaning and routine cleaning. This is an increase in previous totals of 612,759 linear feet or 116.05 miles for 2019.

![Sanitary Sewer Line Cleaning 2020](image)
**Manhole Inspections**
Annual monthly manhole inspections are completed to detect sluggish moving flow and other issues that may contribute to SSO’s. There was a total of 2522 manhole inspections completed for 2020. These totals were an increase from previous year’s totals of 1074 manhole inspections in 2019.

![Manhole Inspections 2020](image1)

**Lift Station Inspections**
Lift station inspections are completed on a daily basis. A dedicated Pump Mechanic is assigned to these duties. Lift station maintenance and inspections have stayed consist for the last 6 years. During 2020 there was 1753 lift station inspections completed.

![Lift Station Inspections 2020](image2)
CCTV Inspections
Collections staff videoed 8.05 miles of pipe during 2020. These totals were down from previous year, but CCTV miles will increase with the two new HPRTV jetter/camera trucks added to the fleet in 2020.

Under Ground Service Alert Markings
Collections staff completed a total of 5011 USA marking tickets. These totals are up from previous totals of 3840 markings.
Fats Oils & Grease Commercial Food Inspections
Environmental Compliance staff completed a total of 77 Fats Oils & Grease inspections during 2020. These totals are up from previous totals of 36 inspections in 2019.

Sewer System Performance Review 2020

<table>
<thead>
<tr>
<th>Sewer System Performance</th>
<th>Performance Year 2020</th>
<th>Previous Year Comparison 2019</th>
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<tr>
<td>City Main SSO’s Totals</td>
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<td>2</td>
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<tr>
<td><strong>Main SSO Causes</strong></td>
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<tr>
<td>Grease</td>
<td>50%</td>
<td>50%</td>
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<tr>
<td>Debris</td>
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<tr>
<td>Other/Vandalism/Roots</td>
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<tr>
<td>Private SSO’s City Response Totals</td>
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<td>11</td>
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<tr>
<td>Pipe Cleaning Linear Feet</td>
<td>686,289 = 129.98 Miles</td>
<td>612,759 = 116.05 Miles</td>
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<tr>
<td>Manhole Inspections</td>
<td>2522</td>
<td>1074</td>
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<tr>
<td>Lift Station Inspections</td>
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<td>1616</td>
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<td>CCTV Inspections Lin. Feet</td>
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