CITY OF GRASS VALLEY

SEWER SYSTEM MANAGEMENT PLAN

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INTRODUCTION

The City of Grass Valley owns and operates a Sewer Collection System that collects wastewater from a total service population of approximately 12,500. The system is comprised of 1,385 manholes and approximately 98,300 feet of sewer collection system pipelines of varying sizes dependent upon the area dynamics of location and number of customers served. The system also has eight (8) lift stations that are maintained by utility operations personnel.

Organizationally, the Utilities Division and its labor allocation is part of the Department of Public Works and under the direction of the Public Works Director/City Engineer or designee.

The City has dedicated funds for both short- and long-term repair and replacement of critical mechanical and non-mechanical infrastructure elements of the Sewer Collection System contained both in annual operating budgets and within the City's Capital Improvement Plan (CIP). Two funding sources (user rates and impact fees) are reviewed annually during the budget process to ensure that program priorities are consistent with the needs of operating an effective utility.

I. SSMP GOALS

The goals of the City's Sanitary Sewer System Management Plan (SSMP) are:

1. To efficiently and effectively manage, operate, and maintain all parts of the City's Sewer Collection System.
2. To provide adequate capacity to convey peak wastewater flows. Adequate capacity, for the purposes of this SSMP, is defined as the capacity to convey peak wastewater flows per the City Improvement Standards.
3. To reduce the frequency of sanitary sewer overflows (SSOs) and, wherever possible, to prevent SSOs.
4. To mitigate the impacts that are associated with any SSO that may occur.
5. To meet all regulatory requirements.
6. To provide and make available comprehensive staff training on the proper operations and management of the Sewer Collection System, its infrastructure and equipment.
7. Following are changes and projects to prevent spills and/or improve SSO response (three [3] year plan):
   - Implement City Works for Sewer Collection System as Work Order tracking and asset management.
   - 2012 Purchase CCTV truck and implement program to camera systems per SSMP.
   - 2013 Purchase combination jet/vacuum to improve jetting program and provide a better response to SSOs.
   - Modify an existing pickup truck to become a dedicated standby truck.

- Install remote monitoring at least 6 of 8 lift stations (SCAD type system) to improve monitoring and maintenance of lift stations. (Used date to investigate I&I issues.)

II. PUBLIC WORKS DEPARTMENT ORGANIZATIONAL STRUCTURE

This section of the SSMP identifies City staff responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements.

The City's authorized representative (Legally Responsible Official [LRO]) in all sewer system matters is the Public Works Director/City Engineer or designee. The Chief Plant Operator and the Senior Engineer have designated authority to submit verbal, electronic, and written reports on behalf of the City to the Central Valley Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), Nevada County Department of Environmental Health, California Department of Fish and Game (CDFG), Nevada Irrigation District (NID), and California Emergency Management Agency (CAL-EMA). The Public Works Director/City Engineer, Senior Engineer, and the Chief Plant Operator are currently enrolled to certify electronic spill reports submitted to the State Water Board via its electronic reporting system, California Integrated Water Quality System (CIWQS). All management personnel mentioned in this section are authorized to submit CIWQS reports.

Ultimately, the Public Works Director/City Engineer is responsible for developing, implementing, and maintaining all elements of the SSMP. Emergency contact information for all personnel, including management staff is readily available to all department staff and on-call personnel.

A copy of the organizational structure is included as Exhibit "1". Further details on the chain of communication for reporting SSOs is provided in Section VI (Overflow Emergency Response Plan).

III. LEGAL AUTHORITY

The City of Grass Valley Municipal Code, Title 13, is the regulatory authority of the Sewer Service System. The City's Building Standards Code is also part of the Municipal Code, Title 13. The Municipal Code can be easily accessed on the City's website www.cityofgrassvalley.com in a searchable format.

Additionally, the City has authority for designing, constructing, installing, testing and inspecting all public improvements. The Design Standards, Construction Standards, and Standard Details, collectively referred to as "Improvement Standards" were approved by City Council Resolution 2009-13 in March 2009, and is updated annually. The Improvement Standards apply to, regulate, and guide the design and construction of all public improvements, and also set guidelines for certain private improvements within the City. The Improvement Standards are posted on the City's website at

www.cityofgrassvalley.com.

IV. OPERATIONS AND MAINTENANCE PROGRAM

Sewer Collection System Mapping

The Engineering Division maintains Sewer Collection System maps in AutoCAD and record drawings. Sewer system maps are available electronically to all field crews.

Field crews submit map change work orders to the City's Engineering Division, if they discover a discrepancy or need to add/remove an element of infrastructure onto the mapping system. The Engineering Division confirms the changes and incorporates the updates into the system through a third-party contractor. Goal would be complete critical revisions within three (3) months and minor revisions annually.

Operations & Maintenance Activities

Preventative maintenance is a key component in the proper operation of the Sewer Collection System. The City schedules approximately 30% of the Sewer Collection System for cleaning every year. Maintenance equipment includes a truck-mounted hydraulic sewer cleaner and television inspection equipment. While completely functional, increased maintenance priorities are given to those areas that have demonstrated an ability to potentially experience operational difficulties. The City schedules regular maintenance of certain sewer lines with a higher potential for blockages (such as those with a reduced slope or a history of fats, oils, and grease [FOG] or root problems, customer complaints, and odor issues) on a more frequent basis. There are currently 19 segments cleaned on a quarterly basis with another 5 segments being cleaned annually, for a total of approximately 1.5 miles of pipe on an increased cleaning frequency. Other areas are added onto this list as needed – based on field observations, SSO frequency, etc. Once a particular system segment is identified as a "Hot Spot", a reoccurring work order is developed, and field crews are assigned to perform required maintenance on an increased frequency.

The City continually looks to learn from deficiency events such as SSOs in order to redefine and possibly expand existing maintenance and frequency of service programs. At team meetings, staff regularly discusses "field findings" such as identification of problem areas requiring repair before potential failures, continued maintenance concerns, and development of future individual CIP program elements. These meetings also encourage continual improvement since staff discusses current maintenance methods and how or if they can be improved. The City is also planning to schedule cross-departmental meetings with engineering and maintenance staff (possibly retired staff, as well). Staff will be asked to highlight or make notes on a sewer system map regarding known or suspected problem areas (e.g., frequent SSOs/stoppages, root intrusion, high flows during storm events, etc.). Crews will also be asked to identify manholes that maintain a high flow at off hours (indication of I&I flows). The City is evaluating the purchase and installation of a small number of "smart covers" to be

initially installed on manholes identified with high flows or history of overflows, or located in proximity to creeks or storm drains. As capacity improvements are made in problem areas, the smart covers will be moved to other high-priority spots.

The City is in the process of converting its entire maintenance system to new work order and mapping software (Cityworks). In the interim, maintenance activities are tracked through a combination of the old work order and new work order systems. All the maintenance activity is being documented in the new software. Once Cityworks is operational, each asset (e.g., manhole to manhole gravity sewer segments, manholes, lift stations, force mains) will be assigned a unique identifier and all data associated with that unique asset (e.g., service calls, SSOs, repairs, condition assessment, I&I flows) will be recorded with the assets unique identifier. This will allow analysis of the performance and cost of each asset over time, which, in turn, would become the basis for maintenance as well as capital improvement decisions. The City is estimating by 2012 to complete implementation for Sewer Collection System and by 2013 have the WWTP operating off City Works

The City currently operates a closed circuit television (CCTV) inspection vehicle and plans to replace the vehicle with updated video inspection capabilities in 2012. Once the new camera vehicle is purchased, the City's goal is to CCTV approximately five (5) miles per year, plus all the segments with a reoccurring work order or where an SSO has recently been observed, ultimately having the CCTV equipment operators trained and certified under the NASSCO PACP program and all CCTV inspections will be conducted to PACP standards by 2015. The City also has a push cable camera system capable of inspecting segments of small pipe.

Mechanical elements of the system such as lift stations are checked for operational effectiveness at least two times per week; maintenance records are kept at each site and in the work order software system. Generators at these sites are also tested on a regular basis. The City is in the process of making operational changes at the lift stations to ensure their continued operational reliability:

- Eliminate equal pump run times and run one pump 70% to 80% of the time to prevent pumps from wearing and/or failing concurrently.
- Add a fuel heater just before the fuel filter to prevent fuel filter blinding during periods of below freezing temperatures.
- Track lift station efficiency by using monthly power usage. A loss in efficiency is a good indicator of developing problems. KWH per million gallons pumped will be tracked as a performance indicator on a month-to-month and year-to-year basis. For comparison between stations, the static lift will be added to the calculation so that the performance indicator would be the number of KWH required to pump one million gallons one foot in elevation (KWH/Million foot gallons pumped).
- Add emergency generator fuel polishing every two years to prevent bacterial growth in the fuel tank.

Rehabilitation and Replacement Plan

Utility system personnel work closely with the City's Engineering Division to identify and prioritize structural deficiencies within the system as part of the CIP. Segments of pipe at risk of failure are treated with urgency and repaired or replaced either through the deployment of in-house maintenance crews or by external licensed contractors who have extensive experience with the type of system repair that is required. The CIP is re-evaluated as part of the preparation of the City's budget with priorities shifting as needed to reflect the urgency of particular system segment rates of deterioration. The City typically plans collection system improvements including manhole and sewer line rehabilitation, lift station upgrades, and improvements need on specific segments annually. The manhole and sewer line rehabilitation projects are mainly intended to reduce and/or eliminate SSO and inflow and infiltration (I&I) issues. Rehabilitation involves slip-lining, cured-in-place lining, and pipe bursting and replacement. See attachment of the City's 5-year CIP for the Sewer System, which is evaluated annually.

Training

The City implements an SSO training program for first responders that provide training for operation of sewer response equipment (Jet Truck, Vacuum Trailer, etc.). In 2012 the City added one additional standby staff person to its after-hour spill response personnel. Standby personnel are required at least 16 hours per year of actual operation of sewer response equipment to increase operational proficiency. Staff is also encouraged to attend trainings, certification seminars, and industry conferences such as those organized by California Water Environment Association (CWEA) on a wide variety of issues, including collection system maintenance and SSO prevention.

Equipment and Replacement Parts

The City owns two (2) Jetter trucks, vacuum trailer, lights, pumps, generators, backhoe, bobcat, dump trucks (4-yd and 7-yd), and miscellaneous service/utility trucks as well as other equipment needed for sewer line repair. The City also has a large inventory of miscellaneous parts that allow crews to handle emergencies. In addition, the City maintains a list of Contractors and Suppliers that are available in emergencies with equipment and personnel. This list is available in the Utility System trucks and at the Corporation Yard.

City staff periodically tests sewer-cleaning equipment (e.g., root cutter, hydro-pressure, etc.) in order to ensure its performance supports field crew effectiveness and productivity.

The equipment on the City's 'initial-response' truck is being upgraded to include traffic control and containment/cleanup equipment sufficient to respond to a 100-gal spill. The City is currently consulting with other agencies in the area as to what supplies are typically recommended for the 'initial-response' truck. The truck will be stocked at all times and a supply list will be kept on the truck for crews to re-stock any time supplies have been used.

The City is also considering making 2 additional purchases: a 5 cubic yard combination cleaner/vacuum truck and a covered trailer to store and quickly transport additional equipment for recovery and clean-up (including emergency bypass piping, pumps, generators, lights, generator, etc.).

V. DESIGN AND CONSTRUCTION STANDARDS

On March 10, 2009, the City Council adopted Resolution No. 2009-13 approving the most recent version of the City's Design Standards, Construction Standards, and Standard Details, collectively, the "Improvement Standards". The Improvement Standards apply to, regulate, and guide the design and construction of all public improvements, and also set guidelines for certain private improvements within the City.

The Improvement Standards contain inspection and testing methods and acceptance thresholds in order for improvements to achieve acceptance. The Engineering Division has both licensed professional engineers as well as competent construction field inspection staff available to ensure strict adherence to the stated design, construction, and testing standards.

Section 8 of the "Design Standards" and Section 5 of the "Construction Standards" apply specifically to the design and construction standards for the Collection Sewer System and reflect a collaborative effort between the Utilities Divisions to ensure competent design and construction of utility infrastructure.

The Design and Construction Standards are posted on the City's website at www.cityofgrassvalley.com.

VI. OVERFLOW EMERGENCY RESPONSE PLAN

The purpose of this Overflow Emergency Response Plan is to convey an orderly, consistent, efficient, and effective response to all SSO events.

Goals

The City's goals in responding to SSOs are to:

- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO and restore flow;
- Contain spilled wastewater to the maximum extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO;
- Meet the regulatory reporting requirements;
- Provide effective public notification when a threat to public health exists; and
- React to SSO events in a manner that instills confidence in the public that the system operators are capable of taking measures to protect public health.

Notification Process

The processes employed to notify the City of an SSO include: observation by the public, receipt of an alarm, or observation by City staff during the normal course of their work. The notification procedures for working hours and after-hours are presented in Flow Charts as Exhibit "3".

Public Observation

Public observation is one of the most common ways that the City is notified of blockages and spills. Contact information for reporting sewer spills and backups are available on the City's website: http://www.cityofgrassvalley.com . The business hours telephone number for reporting sewer problems is (530) 477-4625 although additional City personnel are trained to respond to these emergency calls and make appropriate staff notifications. The after-hours telephone number is (530) 265-7880 (Sheriff Dispatch).

Normal Work Hours Response Protocol

- The City's regular working hours for its sewer staff is Monday through Friday from 7:00 a.m. to 3:30 p.m., except holidays. When a report of a sewer spill or backup is made, City staff receives the call, takes the information from the caller, and communicates the information immediately to the field crew who reacts with an emergency prompt response to the site. Management staff shall also respond to SSO events to ensure protocols and reporting requirements are followed.

After-Hours Response Protocol

- Reports from the public are initially received by the City's Police Emergency Communications Center. Once a Police Dispatcher receives the call, and receives the pertinent information from the caller, the dispatcher communicates the information to the Public Works On-Call Standby Person. Public Works On-Call which is staffed 365 days per year at all hours outside of those identified as regular working hours. The dispatcher has both cell phone and pager contact information to allow for quick communication with the Public Works On-Call staff member(s). Management staff shall also respond to SSO events to ensure protocols and reporting requirements are followed.

Receipt of Alarm

If a lift station alarm is received, the appropriate City Staff or On-Call Duty Staff is notified via the Wastewater Treatment Plant main line, standby pagers, and/or standby cellular phones, of the lift station alarms and dispatched. If an alarm is not communicated with a formal response as received within a defined short period of time the phone tree adds additional calls to standby personnel including management staff. The Police Department Communication Center monitors lift station alarm conditions through a phone tree auto dialer system.

Staff Observations

City staff conducts periodic inspections of the sewer system facilities as part of their routine maintenance activities. Any issues, concerns or problems observed with the sewer system facilities are reported to appropriate City personnel who, in turn, respond to potentially emergency situations.

Safety

As a general statement, all department first responders are responsible for the job site safety and for following safety procedures and protocols at all times. In conjunction with our employee National Incident Management System (NIMS) Training, it shall be the responsibility of the first employee on site to be responsible for all safety concerns and considerations of the site until he/she is relieved of these responsibilities formally by a more senior employee or responding management personnel. It is realized and understood by all department staff that specialized and possibly extraordinary safety precautions must be observed when performing sewer system emergency as well as routine maintenance work. These safety precaution considerations include not only working with the potential contamination aspects of sewage but also the work unique environment hazards such as active traffic lanes, working with high pressure water such as that generated by a sewer jet, and other specialized and sometime excessively noisy equipment.

Particularly during non-regular work hours, it is critical that City personnel responding to a sewer system event become fully compliant and recognize potential safety hazards of sewer system work. All On-Call Primary Responders will be fully-versed and trained in proper sewer system maintenance protocols. In such cases, it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment and make duty assignments according to level and knowledge of assignments before beginning the tasks of the job.

SSO Response Procedures

Sewer service calls and lift station alarms are considered high priority events that require immediate response to the reported location of the event in an attempt to minimize or eliminate any SSOs. Crews must respond to the reporting party, lift station, or site of the problem immediately and visually check for potential sewer stoppages or overflows. The goal of each SSO response is to preserve and protect public health, environment, and property and to restore the affected area to normalcy as soon as possible.

Responding personnel will work to contain and control the discharge to the maximum extent possible. They will establish safe perimeters and control zones with traffic cones, barricades, vehicles, or terrain to ensure that spill material exposure is contained to as small an area as possible and to eliminate a potential expansion of contamination by outside forces such as vehicles or pedestrians. Every effort is made to prevent the discharge of sewage into waterways or conveyances to waterways both above and

below ground. Staff also strives to promptly identify cause and effect of the SSO event and/or the need for additional resources (e.g. people, equipment, etc.). The SSO Response Procedures are summarized in Flow Charts as Exhibit "4".

Dispatch and Initial Assessment of the Situation

- Receive a brief description of the nature of the problem from the person making the report. Fill out the SSO Spill Report Form (Exhibit "5").
- Determine appropriate response measures based on the circumstances and information provided by the caller (e.g. location, weather and traffic conditions, small back up vs. sewage flowing on the ground, etc.) and begin the emergency mobilization of manpower, equipment, and resources to the site.
- Verify the existence of an SSO or backup upon arrival at the reported location.
- Call the appropriate Public Works Management personnel (during working hours) or the Police Dispatcher or Public Works/Utility Management staff (after-hours) to request additional Public Works/Utility staff to assist in the SSO response as necessary.
- Take detailed job notes including notification and arrival time(s), conditions, and any other required information for purposes of external formal notification. Use the SSO Spill Report Form (Exhibit "5"). Take photos to document the incident.
- Take the necessary measures to contain and/or mitigate spilled sewage to the maximum extent feasible regardless of whether the SSO or backup is caused by a private lateral or another agency sewer system. City staff is relieved of this duty when representatives of the responsible third party arrive and take control of the site/event. Third party spills are considered as incidents and forms detailing the event are required to be completed.

Restore Flow

- In the event of a sewer system failure event, relieve the stoppage or restore the lift station operation as soon as possible through the use and application of the appropriate equipment.
- If addressing a main blockage, set up downstream of the blockage and hydro-clean or rod upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flow to ensure that the blockage does not recur or transition downstream.
- If the blockage cannot be cleared within a 15 minutes of arrival or the sewer requires construction repairs to restore flow, or if the lift station operation cannot be restored within the wet well holding time, initiate expanded containment efforts to the degree practical and/or bypass pumping. If assistance is required, immediately contact the Public Works Director/City Engineer, or designee (all hours) and other required employees.

Initiate Spill Containment Measures

The first responder(s) should attempt to the extent possible to contain as much of the spilled sewage as possible using the following steps:

- Keep sewage from entering the storm drain system to the maximum extent practicable by blocking storm drain inlets and catch basins, or by containing and diverting the sewage away from open channels and other storm drain facilities (using sandbags, inflatable dams, plastic mats, etc.). Sandbags and a spill containment kit shall be standard equipment in the On-Call Duty Vehicle at all times.
- Review sewer maps for possible temporary upstream flow diversion through bypassing.
- Pump around the blockage/pipe failure/lift station.
- Dike/dam (or sandbag) the spill by building a temporary berm to collect and control the spilled sewage.
- If overflowing sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging the nearest unaffected downstream storm drain.
- Modify these methods as needed to accommodate wet weather conditions where the feasibility of containment may be impacted by the quantity of stormwater runoff.
- If containing spilled sewage in storm system methods are used, thoroughly clean, vacuum, wash, and disinfect the storm drain facilities as part of the recovery and clean-up phase.

Clean-Up

The recovery and clean up phase begins immediately after the flow is restored and the spilled sewage has been contained to the extent possible. Depending on the situation, the SSO recovery and clean up may include:

Recovery of Spilled Sewage

To the extent practicable, crews will vacuum up or pump the spilled sewage and return it back into the sanitary sewer system.

Clean-up and Disinfection

When disinfecting a sewage-contaminated area, crews will take every effort to ensure that the disinfectant or sewage treated with the disinfectant is not discharged to the storm drain system or surface waters. Methods may include blocking storm drain inlets, containing and diverting disinfectant and sewage away from open channels and other storm drain fixtures, and removing the material with vacuum equipment.

The following clean-up and disinfection procedures should be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The following procedures described are for dry weather conditions and should be modified as required for wet weather conditions.

Hard Surface Areas

- Collect all sewage solids and sewage-related material either by gloved hand or with the use of various hand tools such as rakes, brooms, and/or shovels.
- Disinfect all areas that were contaminated from the overflow using the disinfectant solution of household bleach diluted 10:1 with water. Apply minimal amounts of the disinfectant solution using a hand sprayer.
- Flush wash any affected area with clean water until the water runs clear. Take all safe and reasonable steps to contain and vacuum up the wastewater.
- Repeat the process as often as necessary until it is obvious that additional cleaning is not required and the area is again safe.

Landscaped and Unimproved Natural Vegetation

- Collect all signs or examples of sewage solids and sewage-related material either by gloved hand or with the use of various hand tools such as rakes, brooms, and/or shovels.
- Wash down the affected area with clean water until the water runs clear. The flushing volume should be approximately three times the estimated volume of the spill.
- Either contain or vacuum up the wash water so that none is released.
- Allow the area to dry. Repeat the process if additional cleaning is required.
- Do not apply disinfectant solution to landscaped areas or unimproved natural vegetation.

Wet Weather Modifications

- Management staff may decide to omit flushing and or disinfection during heavy storm events with heavy runoff where spill area flushing is determined not to be required.

Follow-Up Activities

- In situations where sewage has reached the storm drain system, crews will vacuum/pump out the catch basin and any other portion of the storm drain that may have come in contact with sewage. All vacuumed /pumped material collected shall be deemed contaminated material and shall be returned to the Sewer Collection System.
- During nighttime overflow events, a re-inspection should be conducted at first adequate light the following day. The field crew should look for any signs of sewage solids and sewage-related material that may warrant additional clean-up activities. Staff shall always err on the side of caution and reinstitute clean-up activities when any doubt exists regarding public safety and overall public health.
- Conduct investigation to identify determine the probable cause leading to a SSO event and to identify proactive action(s) that will minimize or eliminate future potential for an SSO to reoccur. The investigation should include reviewing all relevant data to determine appropriate positive or corrective action(s), the investigation should include:

- Reviewing and completing the SSO Spill Report Form (Exhibit "5");
- Reviewing past maintenance records;
- Reviewing available photographs, where applicable;
- Conducting a CCTV inspection within the next two (2) business days after an event, where necessary to determine the line condition;
- Interviewing staff who responded to the spill.

Water Quality Sampling and Testing

To determine the extent of any impact of the SSO, the City makes every effort to conduct water quality sampling and testing whenever 1,000 gallons or more of untreated sewage enters a surface water. The water quality sampling procedures are as follows:

- The first responder collects samples as soon as practical after the discovery of the SSO event. Sampling kits are available in the Utility System trucks, standby trucks, and at the Corporation Yard.
    - For discharges into flowing water (e.g., rivers, creeks), water quality samples should be collected from as near as possible to 100 feet upstream of the spill, from the spill area, and at 100 feet downstream of the spill at determined intervals. (Coordinate with Nevada County Environmental Health.)
    - For discharges into stationary water (e.g., lakes, ponds), water quality samples should be collected from the spill area, at determined sample collection points on either side of the spill. (Coordinate with Nevada County Environmental Health.)
- A certified laboratory will analyze the samples to determine the nature and impact of the discharge. First responders are responsible for collecting the samples and contacting the contract lab to arrange timely pickup of the samples. Information on the contracted laboratory is kept on file at the Corporation Yard. Additional samples will be taken to determine when posting of warning signs can be discontinued. The basic analyses will include total coliform, fecal coliform, biochemical oxygen demand (BOD), dissolved oxygen, and ammonia nitrogen.

Public Notification

The public could become at risk and should be warned to avoid all contact with raw sewage and/or contaminated water resulting from an SSO or other hazardous material or chemical release which may cause a risk of illness. The extent of Public Notification shall be at the direction of the Public Works Director/City Engineer, or designee, in conjunction with Nevada County Environmental Health. The design of these procedures and the extent deemed necessarily deployed in order to preserve public health are unique to each event. Procedures may include:

- Local agencies and individuals may need to be contacted as soon as possible, depending on the situation, including:
    - Police Department may be called upon to assist with public notification

where determined practical.
    - Public Works staff levels will be determined as the situation demands for managing the SSO to close public areas such as parks and to communicate with local residents and/or businesses who may be impacted by the sewage spill.
- Posting of warning signs and control of all contaminated areas and or job site(s) with "Yellow Caution Tape" and barricades may be necessary to keep vehicles and pedestrians away from contact with spilled sewage.
- Warning signage, where deemed as a necessary or appropriate means of public notification shall not be removed until such time as directed by the Public Works Director/City Engineer, or designee. In situations where water sampling are required by environmental health authorities, warning sign posting shall remain in place until analytical results demonstrate that the area is safe for human contact and confirmation authority is received from the Nevada County Department of Environmental Health (A sample of the public notification warning sign is included as Exhibit "6").
- Property and creeks that have been contaminated as a result of an SSO or other hazardous material release should be posted at visible access locations until the risk of contamination has subsided to background levels. The warning signs, once posted, should be checked minimally on a daily basis to ensure that they are still in place.
- Major spills may warrant broader public notice and the possible use of local media. The Public Works Director/City Engineer or designee, in conjunction with Nevada County Environmental Health, will contact local media when deemed appropriate for the preservation of public health. As with any effective use of media as a public communication tool, it is important that there be a single point of contact to disseminate information and in these instances the Public Works Director/City Engineer or designee is the sole responsible person sanctioned for media contact. The Nevada County Department of Environmental Health may also issue media releases where deemed appropriate.

Estimated Volume of Spilled Sewage

Crews will use standardized industry photograph materials or accepted mathematical calculation means to estimate the volume of the spilled sewage. Wherever possible, the volume estimate will be documented using photos of the SSO site before and during the recovery operation. Initial volume estimates will be recorded using the SSO Spill Report Form. Final spill volumes will be reviewed by a senior engineer or City Engineer.

SSO Categories

The State Water Board established guidelines for classifying and reporting SSOs. Reporting and documentation requirements vary based on the type of SSO. There are two categories of SSOs:

- Category 1 - All discharges of sewage that:

- Have a volume of 1,000 gallons or more; or
- Result in a discharge to a drainage channel and/or surface water; or
- Discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system.

- Category 2
  - All other discharges of sewage

Internal SSO Reporting Procedures

Flow Charts outlining internal SSO reporting procedures are presented in Exhibit "3".

- Category 1 SSOs
  - The first responder will immediately notify, as practical, the Public Works Director/City Engineer or designee.
  - Where deemed appropriate the Public Works Director/City Engineer or appropriate management staff on-call, or designee will meet with field crew(s) at the SSO site to assess the situation and document the conditions or potential hazards, possibly with photos.
  - The first senior management staff member shall be responsible for documenting the spill event using the SSO Spill Report Form (Exhibit "5") and turning it in to management staff. Another Management staff will review the form for completeness and accuracy and complete CIWQS on line form within the time limits required by the SWQCB.
  - In the event of a large overflow or one that has increased exposure to diminishing public health, management staff will notify the Public Works Director/City Engineer who may deem it necessary to notify the City Administrator and/or City Council.
- Category 2 SSOs
  - The first senior management staff member will complete the SSO Spill Report Form (Exhibit "5") and turn it in to the appropriate management staff and complete the CIWQS form within the time limits required by the SWQCB. Management staff will review the form for completeness and accuracy and will forward it to the Public Works Director/City Engineer or designee for further action where appropriate.

External SSO Reporting Procedures

CIWQS will be used for reporting SSO information to the State Water Board when required. The following section details the external reporting response requirements based on the type of SSO. Flow charts outlining external SSO reporting procedures are also presented in Exhibit "3".

If a **Category 1 SSO** results in a discharge to waters of the State (a drainage channel or surface water, if not fully recovered), the following reporting requirements apply:

- Within two (2) hours of being notified of the spill event, the responsible LRO will:
  - Notify CAL-EMA (and obtain spill number for use in other reports), (800)

852-7550
    - Notify the Nevada County Department of Environmental Health (County Health), (530) 265-1778 or after-hours (530) 265-1471
    - Begin the CIWQS Preliminary Report generation
    - Notify the Regional Water Board (916) 464-4660
    - Notify the California Department of Fish and Wildlife (916) 358-1300
- Within twenty-four (24) hours of being notified of the spill event, the LRO will certify to the Regional Water Board that CAL-EMA and the Nevada County Department of Environmental Health were notified of the SSO event.

Within three (3) business days of being notified of the spill event, the LRO or designee will update information and possibly certify the initial report using CIWQS. Within fifteen (15) calendar days of the conclusion of SSO response and remediation, the LRO or designee will certify the final report using CIWQS. The LRO or designee will update the certified report as new or changed information becomes available. The updates can be submitted at any time and must be certified.

For a **Category 2 SSOs**, the following reporting requirements apply:

- Within five (5) business days after the end of the calendar month in which the SSO occurs, the LRO, Chief Plant Operator, or designee will submit an electronic report using CIWQS, and the LRO will certify the report. The report will include the information to meet the SWQCB requirements.

For **private lateral SSOs**, the following reporting requirements apply:

- The LRO or designee may report private lateral SSOs using CIWQS, specifying that the sewage discharge occurred, and was caused by a private lateral and identifying the responsible party (other than the City), if known.

In the event that CIWQS is not available, the Public Works Director/City Engineer or designee will fax all required information to the Regional Water Board office in accordance with the time schedules identified above. In such event, the City will submit the appropriate reports using CIWQS as soon as practical.

The Chief Plant Operator shall report the existence of spill(s) in monthly reports, where applicable. If there are no SSOs during the calendar month, the Chief Plant Operator, Public Works Director/City Engineer or designee will submit an electronic report and the LRO will certify the report that the City did not have any SSOs within a calendar month after the end of reporting month.

SSO Documentation and Record Keeping Requirements

The first management responder will complete an electronic work order and make any final changes to the SSO Spill Report Form. A SSO file and report form should include the following information:

- Initial service call information;

- SSO Spill Report Form;
- Copies of the CIWQS report forms;
- Volume estimate; and
- Failure analysis investigation results.

Optional documentation for SSOs may include:

- Appropriate maps showing the spill location;
- Photographs of spill location; and
- Water quality sampling and test results, if applicable.

The Sanitary Sewer System Waste Discharge Requirements (SSS WDR) requires that individual SSO records be maintained by the City for a minimum of five (5) years from the date of the SSO. This period may be extended when requested by the Regional Water Board Executive Officer. All records shall be made available for review upon State or Regional Water Board staff request. Records shall be retained for all SSOs, including but not limited to the following when applicable:

- Copy of certified CIWQS report;
- All original recordings for continuous monitoring instrumentation;
- Service call records and complaint logs of calls received by the City;
- SSO records;
- Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps;
- Work orders, work completed, and any other maintenance records from the previous five (5) years which are associated with responses and investigations of system problems related to SSOs;
- A list and description of complaints from customers or others from the previous five years; and
- Documentation of performance and implementation measures for the previous five (5) years.

If water quality monitoring is conducted by the City or its agent(s), as a result of any SSO, records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical technique or method used; and
- The results of such analyses.

Post-SSO Event Debriefing/Training

Every SSO event is an opportunity to evaluate the response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume,

cause, location, terrain, and other parameters.

Monthly staff meetings will be conducted and include a detail discussion of past SSO events to discuss what worked and where improvements could be made in responding to and mitigating future SSO events. The meetings will identify corrective actions that could have prevented most recent SSOs from occurring. Participants will also review reports, investigation results, and status of corrective actions for most recent SSO events.

Training related to the Overflow Emergency Response Plan is scheduled annually. All employees are required to attend and a log of attendees is kept. Other informal training sessions take place throughout the year as needed. These informal sessions are not logged. Staff is also encouraged to attend trainings, certification seminars, and industry conferences such as those organized by CWEA on a wide variety of issues, including collection system maintenance, SSO prevention, and SSO emergency response.

VII. FATS, OILS AND GREASE (FOG) PROGRAM

Section 13.12.040 of the City's Municipal Code prohibits discharges of wastes which contain more than 200 mg/L of FOG materials. The City has the authority to require installation of grease interceptors at facilities with the potential to discharge FOG materials. The City maintains a list of potential grease-producing facilities and of businesses with grease traps and other grease capturing devices. The City inspects commercial user grease traps to ensure operability and monitors monthly grease hauler reports from grease producing facilities.

Collection system personnel are continually on alert during routine system maintenance activities for the existence of grease, identification of new areas of possible concern and additional maintenance requirement. A source control activity to identify the point of origination of grease is an ongoing component of the City's maintenance activities.

VIII. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

As previously noted, Utility System personnel work closely with the Engineering Division to identify and prioritize structural deficiencies within the system as part of the CIP. The CIP is updated at least annually with priorities shifting as needed to reflect the urgency of particular system segment rates of deterioration. The City typically budgets annually for collection system improvements including manhole and sewer line rehabilitation, lift station upgrades, and improvements need on specific segments. The manhole and sewer line rehabilitation projects are mainly intended to reduce and/or eliminate SSO and inflow and infiltration issues. Rehabilitation involves slip-lining, cured-in-place lining, and pipe bursting and replacement.

The City also has a 1995-2015 Sewer System Master Plan that includes the Collection System Master Plan (CSMP), which is detailed in Chapter 4. The objectives of the

CSMP was to (1) determine the capacity and limitations of the existing collection system, and (2) determine physical modifications, renovations and additions to the existing collection system necessary to meet current and future needs. In order to meet these objectives, the collection system was modeled for the years 1995, 2005, and 2015. Modeling accounted for existing and projected domestic, commercial and industrial flows including infiltration and inflow factors. The existing collection system was then analyzed to determine its ability to transport the generated flows to the treatment facilities. Results indicated that the majority of the sewer lines were adequately sized for the anticipated flows and identified sections of the system which needed to be upsized in order to meet future conditions. As a result of the CSMP recommendations, the City replaced some inadequately sized sections of pipe (e.g., Wolf Creek Interceptor, new lift stations, etc.) and, as noted earlier, is operating an ongoing inflow and infiltration program.

The City intends to update the Sewer System Master Plan before 2015 and use it to review collection system capacity, assess needed improvements, and as a general planning tool to ensure adequate wastewater collection and treatment for years to come.

IX. MONITORING, MEASUREMENT, AND PLAN MODIFICATIONS

As noted earlier in Section VI Overflow Emergency Response Plan, the City continually looks to learn from deficiency events such as SSOs in order to redefine and possibly expand existing maintenance and frequency of service programs. Additionally, at team meetings, staff regularly discuss "field findings" such as needs for repair, and increased attention discussions that are fruitful not only in identifying problem areas before potential failure but also for the continued maintenance as well as development of future individual CIP program elements. These meeting also have a component of continual improvement where staff discuss current maintenance methods and how or if they can be improved.

The City also tracks the effectiveness of the SSMP through performance indicators. The City keeps track of the number of SSOs over the past 12 months, volume distribution of SSOs, and SSOs causes (roots, grease, debris, etc.). Maintenance activities such as ratio of planned sewer cleaning to unplanned sewer cleaning and the backlog of repair, rehabilitation, and replacement projects are also closely monitored to inform any needed SSMP modifications. Once the new camera vehicle is purchased, the City will also keep track of the number of miles evaluated using CCTV on an annual basis. Based on this information, the Engineering/Public Works Director, in collaboration with the Chief Plant Operator and Senior Engineer, will assess and update the SSMP as appropriately.

X. SSMP AUDITS

The City plans to complete a review of the SSMP every two years or more often if

deficiencies are noticed. The audit will evaluate the SSMP effectiveness, and identify any deficiencies and steps to correct them. Audit reports will be prepared and kept on file.

XI. COMMUNICATION PROGRAM

The City maintains a website, www.cityofgrassvalley.com, to inform the public about City activities. The City's website is an effective communication channel for providing alerts and news to the public. The main page of the website provides important announcements, public hearings notices, links to agendas and minutes for City Council meetings, and other key information for City residents. The City plans to publish this SSMP on the Public Works Department page of the City website. The completed SSMP will be certified by the City Council during a public hearing. The SSMP will be updated and re-certified by City Council every five years, or more frequently, depending on the nature of any updates needed.

The City does not have any tributary or satellite collection systems; there is no need to establish communication protocols with any such agencies.

Exhibit "1"

Department of Public Works

Organization Chart

Public Works
Director/City Engineer

Engineering Division
Senior Civil Engineer/Deputy
Director

General Engineering
Capital Projects
Traffic Engineering
L&L Districts
Development Services
Engineering

Staffing
2 - Associate Civil Engineer
1 – Engineering Tech.

Administrative Support/
Utility Billing
1 -Admin. Clerk III
1 – Account Clerk III
1 – Account Clerk I/II
1 -Admin. Clerk I/II

Recreation

Recreation Pool
Pastor Water Museum
Staffing
2 – Part Attendants

Fleet
1 -Lead Mechanic
1 – Mechanic

Maintenance Divisions
1 – Senior Maintenance Worker

Streets/Parks/Facilities
Staffing
1 – Maintenance Worker III
1 - Maintenance Worker III (Under full with
Maintenance Assistant)
3 - Maintenance Worker II
1 – Street Sweeper Operator
1 – Maintenance Worker I
1 – Maintenance Assistant

Utilities Superintendent/Chief TP Operator

Utilities
Water Distribution
Wastewater Collection
Staffing
1 – Senior Maintenance Worker
2 – Utility Maintenance Worker II
2 – Maintenance Worker II (Under full with Maintenance
Worker I)
1 – Maintenance Worker I

Water & Wastewater Treatment
Plant, Lift Stations & Storage Facilities
Staffing
1 – Lead TP Operator (Under full TP Operator II)
2 – TP Operator II (Under full TP Operator I)
3 – TP Operator I
1 – Maintenance Assistant

Exhibit "2"

EMERGENCY CONTACT NUMBERS

GENERAL NUMBERS

Updated 1/1/13

EMERGENCY	911
SHERIFF DISPATCH	265-7880
FIRE DEPT.	911
EMERGENCY COMMAND CENTER	273-3347
GLOBAL WATER	1-866-306-4009
SBC	470-6846
COMCAST	800-824-2000 (select technical prompt)
PGE	800-743-5000
NID	273-6185 – after hours call 273-3346
FERGUSON/GROENIGER	916-455-3333 (Sacramento) Shawn – emergencies only at 916-997-9067
KNCO	272-3424
BEE – KEEPER HOTLINE	530-675-2924 Lynn Williams or 530-265-3756 Karla Hanson
ROBINSON ENTERPRISES	265-5844 after hours (Hazmat Issues) Don Hoffler cell – 913-2258
REPUBLIC ELECTRIC (Traffic Signals)	(800) 544-4876 - DISPATCH
MR. ROOTER - PLUMBING	274-4468

EMERGENCY CONTACT NUMBERS

PUMP TRUCKS

Urke Septic Systems

Douge Urke	O: 274-3902 C: 362-0836
Urke Leave Message	1: 274-3902 2: 362-0836 3: 274-9945 4: 362-0598 5: 362-0837
Bob Zollin	H: 274-9945 C: 362-7158

Quick Response

Office	O: 273-7538
Brian	C: 263-6091

Navo & Sons

24 HR.	O: 273-2964

EMERGENCY CONTACT NUMBERS

FUEL TRUCKS

JH Petroleum

Office	O: 273-6925
Dave Knappen	H: 432-1791
Dean Southerland	C: 320-4432

Hansen Brothers

Office	O: 273-3381
Orson Hansen	H: 265-5263
Jeff Hansen	H: 271-1456 C: 913-3935

Robinsons Enterprises

Office	O: 265-5844
Bob Noller	H: 273-3042 C: 559-1611
Don Hoffler	H: 265-4261 C: 913-2258

EMERGENCY CONTACT NUMBERS

RENTALS

Rain For Rent

Ken Roscoe
B: 662-1024
C: 867-0611

Unites Rentals

Barbara Brogdon
B: 916-624-0641
C: 916-496-0066

Baker Corp

Brendan Coyne
B: 925-252-2405
C: 925-303-8511

Gold & Green Rentals

John Olson
O: 273-0064
H: 478-1779

EMERGENCY CONTACT NUMBERS

CONTRACTORS

Hansen Brothers

Office 273-3381

C & D Contractors

Office 265-6938

Grenon & Sons

Office 274-0429

Mr. Rooter

Office 274-4468

Roto Rooter

Office 273-3714

Exhibit "3"

Notification Procedures For Spills After Hours & Weekends

Public / City Staff / Other Agency

Sheriff Dispatch
Call Center (530) 265-7880

Page DPW Stand-By
No response Contacts Incident Manager

DPW Stand-By

1st – Page Utility & Water Stand-By {470-8022} *(Respond to Corp.Yard/WWTP to pick up Jet Truck & Vacuum Trailer)* Type 5330 – Water Leak or Type 5420 – Sewer Spill or Type – 8888 Cancel Call

2nd – Page or Call Incident Manager

1. Public Works Director/City Engineer
   a. Office (530) 274-4351
   b. Internal Extension 4350
   c. Cell Phone (530) 263-6887
   d. Pager (530) 470-8020

If unable to reach in person...Call the following list until you reach someone:

2. Sr. Civil Engineer/Deputy Director
   a. Office (530) 274-4352
   b. Internal Extension 4351
   c. Cell Phone (530) 300-5408
   d. Pager (530) 470-8020

3. Chief TPO/Utilities Superintendent
   a. Office (530) 477-4625
   b. Internal Extension 4532
   c. Cell Phone (530) 362-0092
   d. Pager (530) 470-8021

DPW Stand-By & Other Stand-By Crews Respond

Contain Spill and Document/ Photograph, Fix Problem, & Clean-up
(If Type 1 Spill "flows reach Drainage system & not fully captured or waterway" – initiate water sampling; upstream, at spill, downstream (D.O., ammonia, 5x5 - coliform).

Initiate sampling and coordinate continued sampling with Nevada County Environmental Health until advisory lifted

Incident Manager

1. Documents on Spill Report Form

Within 30 Minutes

2. Call Nevada County Environmental Health
   Normal Business Hours (530) 265-1778
   On-Call After Hours (530) 265-1471

Type 1 Spills Only Within 2 Hours

3. Call CAL-EMA (Formally OES)
   (800) 852-7550
   a. Secure Events Number for Reporting
   b. Have details regarding spill
4. Central Valley RWQCB - Lucio Orellana
   (916) 464-4660
5. CA Dept. of Fish & Game *(Spill enters into Waterway)*
   (916) 358-1300
6. Nevada Irrigation District *(Spill enters into Waterway)*
   Normal Business Hours (530) 273-6185
   On-Call After Hours (530) 273-3346

Reporting

- SSO Reports to State Water Board https://www.ciwqs.waterboards.ca.gov
  - Type 1 Spills Within 2 Hours prepared by responding Incident Manager
    - Certified by Legally Responsible Officer (LRO) Within 48 Hours *(Not Report Preparer)*
  - Type 2 Spills Within 5 Working Days
    - Certified by Legally Responsible Officer (LRO) Within 48 Hours *(Not Report Preparer)*
- Public Notification Coordinate with Nevada County Environmental Health
- Complete SSO Field Forms, and PDF all documents (notes, photographs, forms, etc.) into G:\DATA\PW - 2010\WASTEWATER\SSO\2012*(or current year as appropriate)* folder within 5 working days

Exhibit "3"

Notification Procedures For Spills Monday Through Thursday from 8 AM to 4 PM

Public / City Staff / Other Agency

Public Works
Call Center
(530) 274-4350

Administrative Staff

1st – Radio Senior Maintenance Worker to dispatch response crews

2nd – Call Incident Manager

1. Public Works Director/City Engineer
   a. Office (530) 274-4351
   b. Internal Extension 4350
   c. Cell Phone (530) 263-6887
   d. Pager (530) 470-8020

If unable to reach in person…Call the following list until you reach someone:

2. Sr Civil Engineer/Deputy Director
   a. Office (530) 274-4352
   b. Internal Extension 4351
   c. Cell Phone (530) 300-5408
   d. Pager (530) 470-8020

3. Chief TPO/Utilities Superintendent
   a. Office (530) 477-4625
   b. Internal Extension 4532
   c. Cell Phone (530) 362-0092
   d. Pager (530) 470-8021

Senior Maintenance Worker & Crews Respond

Contain Spill and Document, Fix Problem, & Clean-up

(If Type 1 Spill "flows reach Drainage system & not fully captured or waterway" – initiate water sampling; upstream, at spill, downstream (D.O., ammonia, 5x5 - coliform).

Initiate sampling and coordinate continued sampling with Nevada County Environmental Health until advisory lifted

Incident Manager

1. Documents on Spill Report Form

Within 30 Minutes

2. Call Nevada County Environmental Health
   Normal Business Hours (530) 265-1778
   On-Call After Hours (530) 265-1471

Type 1 Spills Only Within 2 Hours

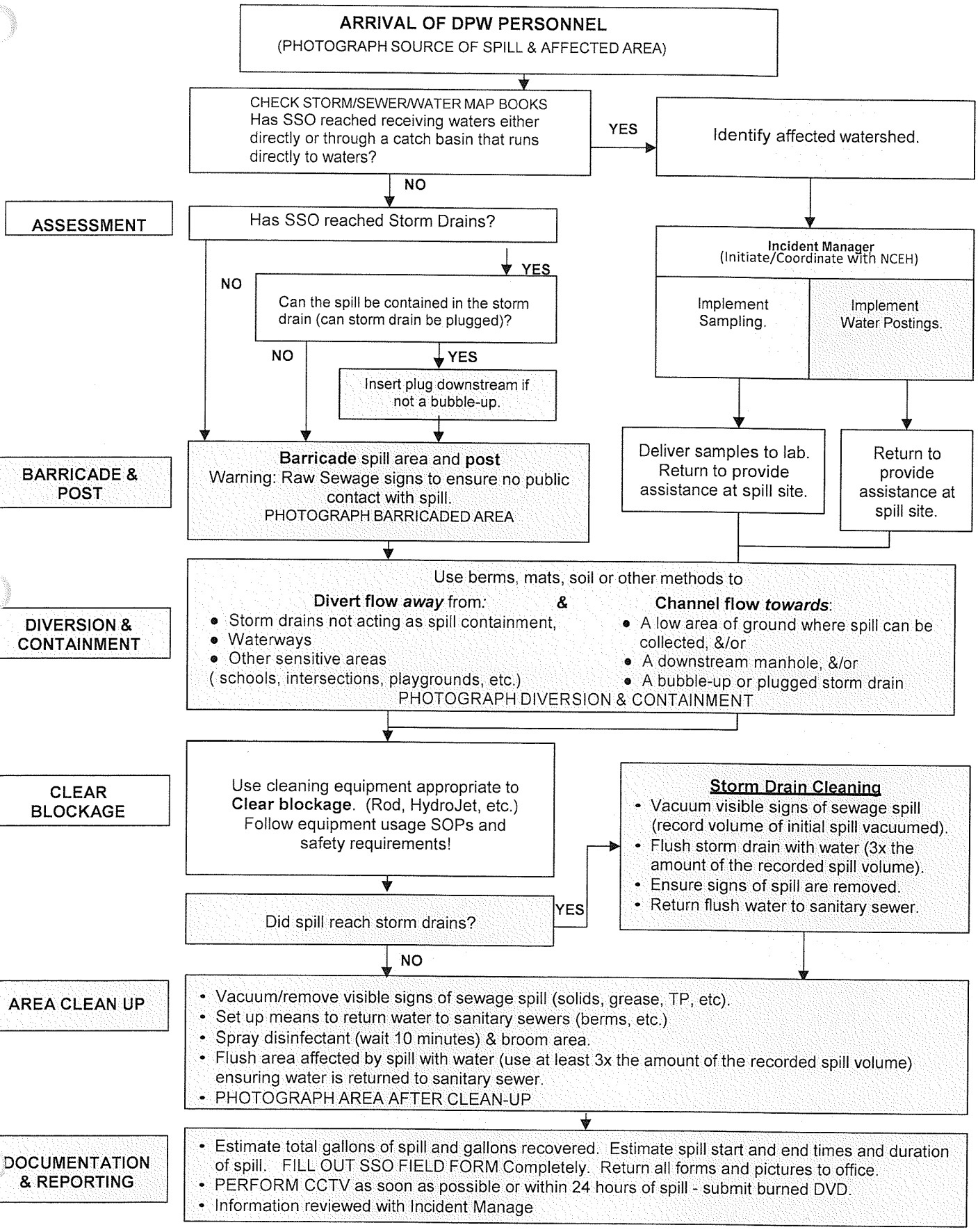
3. Call CAL-EMA (Formally OES)
   (800) 852-7550
   a. Secure Events Number for Reporting
   b. Have details regarding spill
4. Central Valley RWQCB - Lucio Orellana
   (916) 464-4660
5. CA Dept. of Fish & Game *(Spill enters into Waterway)*
   (916) 358-1300
6. Nevada Irrigation District *(Spill enters into Waterway)*
   Normal Business Hours (530) 273-6185
   On-Call After Hours (530) 273-3346

Reporting

- SSO Reports to State Water Board https://www.ciwqs.waterboards.ca.gov
  - Type 1 Spills Within 2 Hours prepared by responding Incident Manager
    - Certified by Legally Responsible Officer (LRO) Within 48 Hours *(Not Report Preparer)*
  - Type 2 Spills Within 5 Working Days
    - Certified by Legally Responsible Officer (LRO) Within 48 Hours *(Not Report Preparer)*
- Public Notification Coordinate with Nevada County Environmental Health
- Complete SSO Field Forms, and PDF all documents (notes, photographs, forms, etc.) into G:\DATA\PW - 2010\WASTEWATER\SSO\2012*(or current year as appropriate)* folder within 5 working days

Sewer System Overflows - Response and Reporting Procedures Flow Chart - Attachment A

Exhibit "4"



Sewer System Overflows - Response and Reporting
Spill Report Form - Attachment C

Exhibit "5"

PW - 2010\Wastewater\SSO\Year SSO Event Reports_____(street name/number)

OFFICE USE ONLY

☐ CAT 1 Cal-EMA# _____ LRO Signature: _____

☐ CAT 2 WO # _____ SSO Event ID: _____

☐ Private Lateral ☐ Public Line _____

Caller Summary

SSO ADDRESS: _____

Cross Street: _____

CALLER NAME: _____

CALLER CONTACT #: _____

DATE OF INITIAL CALL: _____

TIME OF INITIAL CALL: _____am pm

Desc. Of complaint:

EST. TIME SSO BEGAN:_____am pm

Work Summary Date: _____

REC'VD BY CREW (TIME):_____ am pm

ARRIVAL TIME:_____ am pm

TIME SSO ENDED:_____ am pm

TIME CLEAN-UP FINISHED:_____ am pm

EMPLOYEES: _____

VEHICLES: _____

MATERIALS: _____

Condition Encountered (Describe...):

Customer Cleanout was (circle): Full Empty Non-existent

- **ACTIONS TAKEN (circle): JET VAC CCTV HANDROD SNAKE OTHER: _____**

Order of Steps Taken:

1.	3.
2.	4.

Contained Spill (circle): ALL PORTION NONE

- Restored Flow?: Y N N/A
- SITE CLEANED-UP?: Y N N/A
- SITE DISINFECTED?: Y N N/A
- HEALTH WARNINGS POSTED?: Y N N/A
- BARRICADES PLACED? Y N N/A
- PHOTOS TAKEN? (Required!) Y N N/A

SSO Details

- SSO DURATION (Hrs/Min): _____
- EST. SSO VOLUME (gal): _____
- EST. VOL RECOVERED(gal): _____
- EST. VOL NOT RECOVERED(gal): _____
- ESTIMATED RATE (gal/min):_____
- FEET CLEANED: _____ main _____ lateral
- RAIN: Y N If Yes Size of Rain Event: _____
- PROPERTY TYPE?: Public Private
- PROPERTY DAMAGE?: Yes No
- SPILL APPEARANCE POINT:

☐ Inside Bldg/Struc (location)_____

☐ Cleanout on lateral

Lat type: ☐ Proper c-o ☐ Imp c-o ☐ No c_o

Lat loc: ☐ Front ☐ Back ☐ Side

☐ Manhole MH# _____

☐ Lampost Cleanout LP# _____

☐ Other: _____

PROBLEM FOUND IN: ☐ Lateral ☐ Mainline

UPSMH# _____ DWNMH#_____

DIA OF PIPE: _____" PIPE MATERIAL: _____

- PROBLEM (circle):

Blockage (If blockage)
Broken
Capacity Deficiency
I & I
Unknown

Further Details:

- BLOCKAGE FROM:

Roots
Construction Debris
Debris/Grit
Detergent
Grease/FOG
Solids
Other _____

- FINAL DESTINATION: Storm Drain System*
Inside Bldg/Structure
Unpaved Surface
Street/Curb/Gutter
Surface Water Impact
Other _____

*If Storm Drain System – Was stormpipe plugged downstream and vacuumed? Y N N/A

- REACH STATE WATER?: Y N UNK
- EST VOL REACHED STATE WATER: _____gal
- SAMPLES COLLECTED: Y N N/A

Exhibit "5"

SSO REQUIRED NOTIFICATIONS

ALL SPILLS WITHIN 30 MINUTES

NEVADA COUNTY ENVIRONMENTAL HEALTH: (530) 265-1778 **After Hours /On Call (530) 265-1471** PERSON CALLING:_____	Date & Time: _____ SPOKE TO: ☐ Wesley Nicks ☐ Other: _____

TYPE 1 SPILLS WITHIN TWO (2) HOURS

CAL -EMA (Formerly OFFICE OF EMERGENCY SERVICES)**: 800-852-7550** PERSON CALLING:_____ CAL EMA #: _____	Date & Time: _____ Spoke To: _____
REGIONAL WATER QUALITY CONTROL BOARD (RWQCB): check which apply: ☐ **Completed** https://www.ciwqs.waterboards.ca.gov Who Completed? _____ Date & Time: _____ ☐ Called: Lucio Orellana (916) 464-4660 Spoke To: _____ Date & Time: _____	
CA DEPT. OF FISH & GAME (If Waterway noticeably impacted)**:** 916-358-1300 Spoke To: _____	Who Completed? _____ Date & Time: _____
Nevada Irrigation District (If Waterway noticeably impacted)**:** ☐ Normal Business Hours (530) 273-6185 ☐ On-Call After Hours (530) 273-3346 Spoke To: _____	Who Completed? _____ Date & Time: _____

SAMPLING Call WWTP Operator Receiving Waters were: ☐ Noticeably Impacted ☐ NOT Noticeably Impacted

Samples taken for: ☐ D.O. ☐ Ammonia ☐ 5x5 Coliform

Samples taken By:_____ Date & Time: _____

Name of waterway where sewage entered water: _____

Waterway was a: ☐ Creek ☐ Channel ☐ Other

Waterway was : ☐ Dry ☐ Ponded ☐ Trickling ☐ Flowing ☐ Gushing

Samples taken: _____ ft upstream & _____ ft downstream of where sewage entered water

Conditions that may have influenced sample results:_____

Additional sample Location(s) requested by County Health: _____

RE-SAMPLING Sample Dates: _____ Date of "Clear" Sample: _____

Additional Notes:

ADDRESS HISTORY/ SSO FOLLOW-UP

Date of last Maintenance:_____ Frequency of Maintenance: _____

Dates/ WO#s of Previous Backup Calls:

Final Determinations of Cause: Spill
Corrective Action Taken:

☐ Adjust Maintenance Schedule / Method of Cleaning - - Describe: _____

☐ Line TV'd Date: _____ ☐ Replaced Line Date: _____

☐ Repair Scheduled for Date: _____ ☐ Other (Describe) _____

Exhibit "5"

SPILL LOCATION

Spill Latitude: _____ Spill Longitude: _____

Spill Location Description: _____

Notes: _____

Response Crew: _____ _____ _____

_____ _____ _____

Exhibit "5"

SPILL RATE NOTES

*** If Mainline blockage - inspect first **MANHOLE DOWNSTREAM** of blockage and note flow rate below ***

☐ No Flow in Channel ☐ Trickle flow in Channel ☐ Depth of flow in Channel _____ inches

*** If Mainline blockage - inspect first **MANHOLE UPSTREAM** of blockage and note flow rate below after blockage and backup has cleared ***

☐ No Flow in Channel ☐ Trickle flow in Channel ☐ Depth of flow in Channel _____ inches

Time: _____:_____ ☐AM ☐PM Describe how measurement was taken:

_____

_____

_____

Notes: _____

WARNING

SEWAGE POLLUTED WATER

AVOID CONTACT UNTIL THIS SIGN HAS BEEN REMOVED

For further information regarding this incident call
The City of Grass Valley Public Works (530) 274-4350

For information Regarding Health Concerns call
Nevada County Environmental Health Dept. (530) 265-1222

Exhibit "6"

Capital Improvement Project Program Summary - Sewer

Updated May 1, 2012***

PROJECT DESCRIPTION	PRIOR YEAR EXPENDITURES	12/13	13/14	14/15	15/16	16/17	17/18 THRU 2020	GRAND TOTAL	USER RATE PORTION	IMPACT AMOUNT
Collection System Improvements										
Sewer System Master Plan Update 2005	$1,091.00	$200,000.00					$9,739.00	$210,830.00	$0.00	$210,830.00
Sewer System Master Plan Update 2015**	$0.00							$0.00	$0.00	$0.00
Sewer System Evaluation	$0.00						$11,060.00	$11,060.00	$11,060.00	$0.00
Annual Manhole & Sewer Line Rehabilitation	$111,952.24	$465,000.00	$150,000.00	$150,000.00	$150,000.00	$150,000.00	$423,047.76	$1,600,000.00	$1,600,000.00	$0.00
French Avenue - Brighton to Mill	$0.00						$702,373.00	$702,373.00	$702,373.00	$0.00
Park Avenue to Ocean Avenue	$0.00						$417,212.00	$417,212.00	$417,212.00	$0.00
Brighton Street - Penstock to French	$0.00		$217,976.00					$217,976.00	$217,976.00	$0.00
Hughes Road/E. Main Street Intersection	$0.00						$265,512.00	$265,512.00	$132,756.00	$132,756.00
Clark Street - Florence to Colfax	$0.00			$219,396.00				$219,396.00	$219,396.00	$0.00
Maryland Drive - Valley View to NE End	$0.00					$156,461.00		$156,461.00	$156,461.00	
St. Patricks to Brighton Street	$15,961.51							$15,961.51	$15,961.51	$0.00
W. Main Street - Mill to South Auburn	$0.00						$200,520.00	$200,520.00	$100,260.00	$100,260.00
E. Main Street - Stewart to South Auburn	$0.00						$259,975.00	$259,975.00	$259,975.00	$0.00
Infiltration/Inflow Improvements	$0.00	$120,000.00	$150,000.00	$150,000.00	$150,000.00	$150,000.00	$566,895.00	$1,286,895.00	$1,286,895.00	
Lidster Avenue	$0.00						$999,567.00	$999,567.00	$999,567.00	$0.00
Kate Hayes Street - Race to north of Empire	$0.00	$713,000.00						$713,000.00	$713,000.00	$0.00
S. Auburn Street - Main to Hwy 20/49	$0.00						$518,414.64	$518,414.64	$259,207.32	$259,207.32
Taylorville Road Extension/Joyce Drive Bypass	$0.00					$173,246.00		$173,246.00	$86,623.00	$86,623.00
Miners Trail - 300' east of Kate Hayes to Kate Hayes	$0.00				$186,372.00			$186,372.00	$186,372.00	$0.00
North School to North Church	$0.00				$219,829.00			$219,829.00	$219,829.00	$0.00
North Church to Richardson	$0.00				$248,079.00			$248,079.00	$248,079.00	$0.00
Kate Hayes Street - Behind Penaluna	$0.00		$89,890.00					$89,890.00	$89,890.00	$0.00
W. Main Street to Carpenter Street	$0.00						$107,391.00	$107,391.00	$107,391.00	$0.00
Ophir Street	$0.00						$199,895.00	$199,895.00	$111,941.20	$87,953.80
Packard Drive	$93,773.86							$93,773.86	$93,773.86	$0.00
Empire Court	$0.00		$210,623.00					$210,623.00	$210,623.00	$0.00
Quartz Drive to E. Main Street	$0.00			$81,595.00				$81,595.00	$81,595.00	$0.00
Slate Creek & Morgan Ranch Lift Stations	$906,705.02							$906,705.02	$106,604.83	$800,100.19
Richardson St. / S. Auburn Sewer Project	$0.00						$344,742.00	$344,742.00	$193,055.52	$151,686.48
Colfax Ave. Sewer Project	$0.00						$1,157,840.00	$1,157,840.00	$509,449.60	$648,390.40
Upper Idaho-Maryland Road Sewer Project	$0.00						$560,900.00	$560,900.00	$342,149.00	$218,751.00
Loma Rica Sewer Project	$0.00						$945,298.00	$945,298.00	$652,255.62	$293,042.38
Butler Street Sewer Project	$0.00						$2,772,766.00	$2,772,766.00	$915,012.78	$1,857,753.22
South Auburn 2 Sewer Project	$0.00						$187,471.00	$187,471.00	$46,867.75	$140,603.25
Condon Park Sewer Project	$0.00						$199,111.00	$199,111.00	$127,431.04	$71,679.96
City Standards Update	$27,650.00						$0.00	$27,650.00	$0.00	$27,650.00
Sewer Lift Station Upgrades/Maintenance	$224,881.66	$200,000.00	$265,000.00	$250,000.00	$250,000.00	$250,000.00	$1,560,118.34	$3,000,000.00	$3,000,000.00	$0.00
SUBTOTAL	$1,382,015.29	$1,698,000.00	$1,083,489.00	$850,991.00	$1,204,280.00	$879,707.00	$12,409,847.74	$19,508,330.03	$14,421,043.03	$5,087,287.00
Treatment, Storage & General Improvements										
UV & BNR Treatment Plant Improvements	$168,347.07							$168,347.07	$154,275.45	$14,071.62
Sewer System Evaluation (NPDES Permit Comp)	$265,387.00	$100,000.00	$100,000.00	$100,000.00	$100,000.00	$100,000.00	$300,000.00	$1,065,387.00	$1,065,387.00	$0.00
WWTP Primary Clarifier Modifications	$0.00	$12,500.00					$50,000.00	$62,500.00	$50,000.00	$12,500.00
WWTP Treatment Analysis	$0.00			$200,000.00	$100,000.00	$250,000.00	$600,000.00	$1,150,000.00	$1,150,000.00	$0.00
WWTP Treatment Improvements (NPDES)	$20,000.00	$250,000.00				$5,000,000.00	$7,452,819.90	$12,722,819.90	$12,722,819.90	$0.00
SUBTOTAL	$453,734.07	$362,500.00	$100,000.00	$300,000.00	$200,000.00	$5,350,000.00	$8,402,819.90	$15,169,053.97	$15,142,482.35	$26,571.62
TOTAL								$34,677,384.00	$29,563,525.38	$5,113,858.62
								FUND AMOUNTS*	$29,563,525.38	$5,113,858.62

* Individual project analysis including evaluation of user rates and water capacity charge update from "City of Grass Valley Water & Sewer Capacity Charge Update" dated September 2007 by Bartle Wells Associates

** Added to Sewer System Master Plan Update 2005

*** Table reflects costs through February 2012.

Development related improvements.

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Exhibit "7"

PUBLIC WORKS DEPARTMENT

POLICIES AND PROCEDURES

SUBJECT: Sewage / Water Damage – Loss Management

EFFECTIVE DATE: 02/07/13 **REVISED: 02/20/2013**

DIVISION: All Divisions within Public Works

I. **Purpose:** To establish guidelines for sewage or water damage loss to private property after an event.

II. **Guidelines/ Procedure:**

1. When loss occurs, call Sierra Pacific Loss Management (SPLM) - 888-752-5525.
   a. SPLM will collect the necessary information from City personnel.
   b. Hand private property contact card with SPLM's information.
   c. Once SPLM has been notified, if City is contacted concerning the issue, refer caller to SPLM.
2. SPLM will contact remediation company and arrange for the initial clean up.
   a. SPLM will then contact the on call City employee and confirm that the remediation contractor is en route.
   b. Photographs of loss will be collected.
   c. Remediation company will only clean up and sanitize the affected area and, if necessary, remove carpet and pad.
   d. No other demo is allowed at this time.
   e. A determination will also be made as to whether of not occupants need to be relocated.
3. SPLM will then review the project with the remediation contractor either on-site or via the telephone (with use of photographs). A determination of materials to be removed (drywall, flooring, etc.) will be made at that time. Contractor will proceed with the agreed upon scope and within the agreed upon schedule.
   a. If asbestos sampling is necessary (flooring, drywall, etc.), samples will be collected and analyzed prior to any demolition activity.
4. SPLM will communicate with the claimant (as well as with the City, if requested) as to the process, procedures, timing, etc.
5. SPLM will track the progress of remediation contractor as compared to the established schedule.
6. Once remediation contractor is completed, SPLM will coordinate post remediation sampling with a designated hygienist.
7. When area has been "cleared" by hygienist, if necessary, SPLM will coordinate with a designated rebuild contractor for repairs.
8. SPLM will establish a budget and schedule with the rebuild contractor and will track the contractor's progress to completion.

9. SPLM will then submit the following to the City or designated recipient:
   a. Adjuster's report,
   b. Statement of loss,
   c. Remediation contractor's invoice,
   d. Hygienist's invoice and report,
   e. Rebuild contractor's estimate and invoice,
   f. Rebuild contractor's work authorization (signed by claimant),
   g. List of non-salvageable items (if necessary),
   h. Release (if necessary).

The above information is also available (24/7) on a server accessible only to SPLM clientele.

III. **Authorization:** Article I, Section 1.4 (a) of the City's Civil Service Rules and Regulations, authorizes the Department Head to adopt supplemental work rules governing unique aspects of the functioning of personnel in their Departments, pursuant to the authority granted in Article VIII, Section 3: Department Rules, of the City Charter.

Timothy M. Kiser, PE
Public Works Director/City Engineer

C: Sewer System Management Plan