SEWER SYSTEM MANAGEMENT PLAN

April 2024

Prepared For:

KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
33540 Loop Road
Kirkwood, CA 95646

209.258.4444

NV5

2525 Natomas Park Drive
Suite 300
Sacramento, CA 95833

KMUD-23-11901

SSMP CERTIFICATION

This technical report, which is required under General Waste Discharge Requirements Order No. 2022-0103-DWQ adopted by the State Water Resources Control Board, was prepared for Kirkwood Meadows Public Utility District by NV5, Inc. The report is based on information provided by the client that is believed to be reliable and was prepared in accordance with accepted engineering practices. No other warranty is implied or intended.

Matthew C. Moore
RCE 56780, Expires 6/30/2025

SSMP REVISION LOG

Version Date	Summary	Revisions by	Revision Description
April 2024	2022 Order updates	NV5	Updated SSMP document for compliance with 2022 General Order

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1.0 ELEMENT 1 – GOALS AND INTRODUCTION

This document is the Sewer System Management Plan (SSMP) for the Kirkwood Meadows Public Utility District (KMPUD) located in Alpine, Amador, and El Dorado Counties, California. This document describes the activities that KMPUD uses to manage its wastewater collection system effectively. The development of this SSMP was required when the State Water Resources Control Board (SWRCB) updated the previous Statewide General Waste Discharge Requirement (GWDR) and Monitoring and Reporting Program (MRP) with Order WQ 2022-0103-DWQ, the General Order for Sanitary Sewer Systems, on December 6, 2022 (2022 Order). The 2022 Order defines requirements for operating, maintaining, and managing wastewater collection systems. The Order applies to all public collection system agencies in California that own or operate collection systems comprised of more than one mile of pipe or sewer lines that convey untreated wastewater to a publicly owned treatment facility, and requires each agency to prepare an SSMP. This section fulfills the Element 1 – Goal and Introduction requirements of the 2022 Order. Regulatory Requirements

1.1 REGULATORY REQUIREMENTS

The summarized requirements (from the 2022 Order) for the Goals element of the SSMP are as follows:

"The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer (collection) system. This will help reduce and prevent Sewer System Spills, as well as mitigate any spills that do occur."

1.2 SYSTEM DESCRIPTION

The KMPUD wastewater collection system consists of approximately 8 miles of gravity collection mains, 3,250 linear feet of sewer force mains, and approximately 250 sewer manholes.

1.2.1 Gravity Mains and Manholes

The gravity pipelines are 6, 8 and 10 inches in diameter. The gravity collection system varies in age from newly constructed up to 50-years old. Pipe materials are typically plastic (PVC) or asbestos concrete. Sewer transitions (flow direction and/or pipe diameter changes) occur at manholes. All manholes within the system are precast or cast-in- place concrete with cast iron grade rings and covers.

1.2.2 Pump Stations and Force Mains

The District collection system includes a pump station (East Lift) near the northern end and a main pump station (Main Lift) centrally located near the Wastewater Treatment Plant(WWTP). All of the sewage collected in the District's service area flows to the main pump station and is pumped to the WWTP for treatment and disposal. The pump station force main is an 8-inch diameter PVC pipe. Pumped flows can be diverted to one flow equalization/storage basin prior to treatment.

1.2.3 Service Laterals

The term "service lateral" in this document refers to the sewer line beginning at the foundation wall of a building and terminating at (connecting to) the District's sewer main. Service laterals consist of mainly small diameter (3 and 4-inch) sewer lines that serve individual residences or commercial buildings. Most sewer laterals within the KMPUD service area were installed at the time the District's collection system was constructed and were funded by the developers of commercial and multi-family developments.

Residential and commercial sewer laterals are constructed by individual property owners and inspected by the District to adhere to the District's Design Standards. Service laterals are owned and maintained by the owners of the properties served by the lateral(s).

1.3 GOALS DISCUSSION

KMPUD's identified Goals for this SSMP are as follows:

1. To properly manage, operate and maintain all portions of the District's wastewater collection system.
2. To prevent public health hazards.
3. To use funds available for sewer operations in the most efficient manner.
4. To perform all operations in a safe manner to avoid personal injury and property damage.
5. To protect the large investment in collection systems by maintaining adequate capacities and extending useful life.
6. To convey wastewater to treatment facilities with a minimum of infiltration and inflow.
7. To provide adequate capacity to convey the peak wastewater flows.
8. To minimize inconveniences by responsibly handling interruptions in service.
9. To minimize the frequency of Sanitary Sewer Spills.
10. To mitigate the impacts that are associated with any spill that may occur.
11. To meet all applicable regulatory notification and reporting requirements.
12. To prevent Fats, Oils, and Grease (FOG) from entering collection system by regularly inspecting, repairing and pumping all Grease Interceptors within the District's service area.

The SSMP supplements and supports the District's existing operation and maintenance programs and SSMP goals by providing high level, consolidated guidelines, and procedures for all aspects of the District's sewer system management.

2.0 ELEMENT 2 - ORGANIZATION

This element of the SSMP identifies District staff responsible for implementing the SSMP, responding to spill events, and meeting the spill reporting requirements according to SWRCB order number 2022-0103-DWQ. This section also includes the designation of the Authorized Representative to meet the SWRCB requirements for completing and certifying monthly reports electronically.

2.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order for the Organization element of the SSMP are as follows:

"The Plan must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

- The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements;
- Organizational lines of authority; and
- Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. (For example, county health officer, county environmental health agency, and State Office of Emergency Services.)"

According to Section J of the Order, the Authorized Representative shall sign and certify all applications, reports, or information as follows:

1. All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal, or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph 2 of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online spill database procedures, meet this certification requirement.)

2. An individual is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in paragraph 1 of this provision; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.

2.2 ORGANIZATIONAL CONTACTS

Names and contact information for KMPUD personnel identified in Element 2 is included in Appendix A. This appendix includes the following information:

- Personnel names for designated titles/positions in the District's organizational chart (attributable to sewer systems)
- Contact information (e-mail and telephone numbers) for listed personnel

This information shall be actively updated as necessary, so as to remain current.

2.3 ORGANIZATIONAL DISCUSSION

This section outlines the KMPUD organizational structure, general and SSMP responsibilities of personnel, Authorized Representative, and chain of communication for spill response and reporting. Staff and personnel positions are listed by title, with specific responsibility descriptions attributed to the title/position. Staff names and contact information are included in Appendix A.

The Kirkwood Meadows Public Utility District is a relatively small sewer district with an operations and maintenance staff appropriately sized to serve its customers. As a result, the responsibilities for implementing the measures outlined in this SSMP are shared among the individuals which comprise the management, administrative, and O&M staff positions at the District.

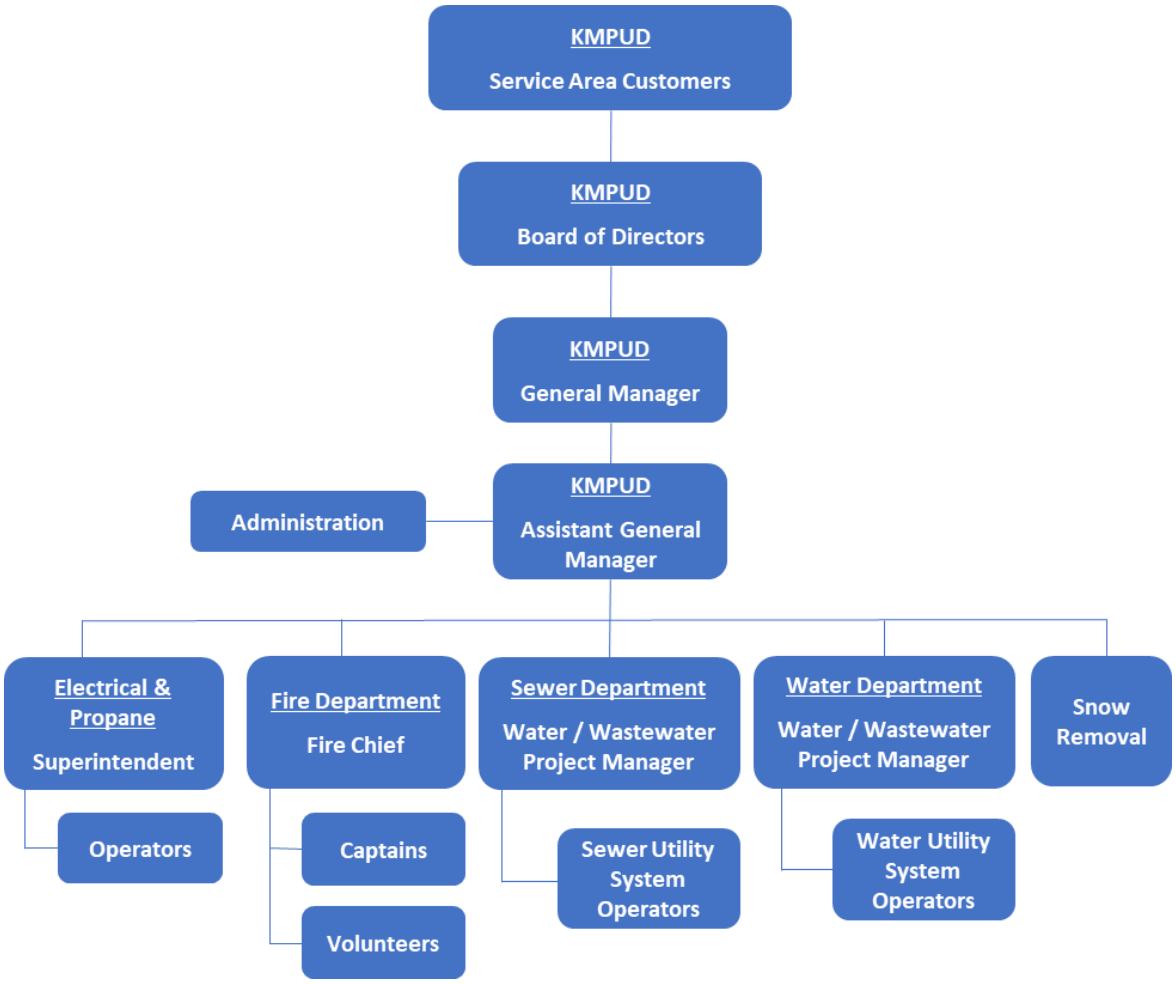
2.3.1 Authorized Representative

The District General Manager serves under the direction of the KMPUD Board of Directors and fulfills the requirements and responsibilities of the Authorized Representative as described in the 2022 Order. The General Manager is responsible for implementation of the SSMP and online registry and reporting through the California Integrated Water Quality System (CIWQS).

2.3.2 Organization Chart

The Organization Chart for the administration, management, operation, and maintenance of the District's collection system is illustrated in Figure 1. The names and contact information for individuals filling these positions are included in Appendix A.

Figure 2-1. KMPUD Organization Chart



2.4 DESCRIPTION OF GENERAL RESPONSIBILITIES

This section includes a brief description of the job title, authority, and representative responsibilities (related to the sewer collection system) associated with each position.

General Manager

Plans, organizes, and directs the activities of the District. Advises Board of Directors on utility matters including those related to the collection system. Prepares and controls District budget. Reviews project plans and specifications for residential and commercial development projects which pertain to water and wastewater service provided by the District. Directs engineering planning studies and capital improvements projects on behalf of the District. Confers with engineering consultants, contractors, and the general public on construction and maintenance problems and procedures. Corresponds with regulatory officials from local, state, and federal jurisdictional agencies. Oversees and manages sewer maintenance operations. Leads development of utility plans and programs, including SSMP.

Water / Wastewater Project Manager

Reports to the General Manager. Acts as Chief Plant Operator for wastewater treatment facility. Directs and participates in (with assistance of Utility Systems Operations staff) cleaning, repairing, inspection, and maintenance of District sewer collection system infrastructure. Investigates sewer related complaints or alerts from the general public. Maintains the District's online database reporting to CIWQS on behalf of the General Manager.

Utility Systems Operator (Sewer)

Reports to the Water / Wastewater Project Manager. Performs a variety of technical and field tasks involving the operation, enforcement, maintenance, and problem resolution in connection with the operation of the wastewater treatment plant and sewer collection system. Performs cleaning and repair of sewer mains and lines. Operates a variety of collection system maintenance equipment and tools. Performs collection system preventative maintenance and spill response. Performs skilled tasks in the treatment of wastewater; checks and records daily flow into treatment plant, maintains logs of daily operations, performs preventative maintenance, obtains wastewater samples, maintains pump and processing equipment, responds to service alarms and/or emergencies.

District Safety Officer (Fire Chief)

Reports to the General Manager. Oversees safety plans and procedures for the District on behalf of the General Manager. Coordinates or conducts safety training for District staff. Investigates workplace injury reports, near misses, and other reports of safety needs or alerts.

Administrative Assistants

Provides administrative support for the water and sewer utility operators and reports directly to the General Manager. This position performs secretarial, receptionist, and administrative tasks, some of which are complex and confidential in nature. The administrative assistants provide technical assistance to the general public, County, and jurisdictional agencies regarding District procedures.

2.5 CHAIN OF COMMUNICATION

Emergency or spill reports which come to District staff via alarms, notifications by the general public, or other reporting entities will be immediately directed to the Utility Systems Operator on duty or on-call for emergency response. The General Manager and Water/Wastewater Project Manager will then be notified of the emergency or spill for further investigation and tracking according to the Spill Emergency Response Program (Element 6 of the SSMP). The Water/Wastewater Project Manager will include information regarding the emergency or spill in the monthly spill report via the CIWQS reporting system.

3.0 LEGAL AUTHORITY

This element of the SSMP details the basis of the Kirkwood Meadows Public Utility District's authority to operate, inspect, maintain, repair, and/or replace its sewer collection system infrastructure within the KMPUD service area. This element lists the specific regulations and agreements which comprise the District's authority to manage the system and enforce its rules.

3.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Legal Authority element of the SSMP are as follows:

"The Plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewer system components and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable."

3.2 LEGAL AUTHORITY DOCUMENTS

Supporting information for Element 3 will be included in the appendix to this SSMP (Appendix D). The appendix shall include the following information:

- Complete copies of current regulations referenced in this Element
- Complete copies of service agreements pertaining to sewer service referenced in this Element
- This information shall be actively updated as necessary, so as to remain current.

3.3 KMPUD REGULATIONS

The KMPUD has developed regulations (adopted/ratified by District ordinances and resolutions) which establish the District's legal authority to maintain the sanitary sewer system as required by the 2022 Order. Table 3-1 lists the KMPUD Regulations (by number) that fulfill the requirements. The regulations are grouped by the 2022 Order's requirements (a) through (e) listed in Section 3.1 above.

Through the course of this SSMP development process, the District may need to adopt additional regulations to address a particular need or legal requirement of the Order. If new or amended regulations are necessary, they will be listed as such in this section. Once new regulations are adopted or amended which fulfill requirements listed herein, this section shall be revised to reflect the updated information.

Table 3-1. KMPUD Regulations that Fulfill Legal Authority Requirements

2022 Order Requirement	Description of Requirement	Relevant Documents
D-13-iii (a)	Prevent Illicit Discharges into Sanitary Sewer System	Regulation # 620.03 Conditions for Use of Public Sewers
D-13-iii (b)	Design and Construction Standards for Sewers and Connections	Regulation # 610.04 Capital Connection Fees - Sewer; Regulation # 620.05 Requirements for Constructing Private Gravity Sewer Systems; Regulation # 630.01 Extension or Betterment of Facilities; KMPUD Design and Construction Standards; and Policy Statement 230
D-13-iii (c)	Access for Maintenance, Inspection, or Repairs	Regulation # 620.06 Private Sewers and Connections – Conditions; and Regulation # 630.01 Extension or Betterment of Facilities
D-13-iii (d)	Fats, Oils, and Grease (FOG) and Other Debris Control	Ordinance # 99-02 Amending Grease Interceptor Maintenance Regulation; and Regulation # 620.03 Conditions for Use of Public Sewers
D-13-iii (e)	Enforcement	Regulation # 610.04 Capital Connection Fees – Sewer; Regulation # 620.03 Conditions for Use of Public Sewers; Regulation # 640.01 Discontinuance of Service; and Policy Statement 240

4.0 ELEMENT 4 – OPERATION AND MAINTENANCE PROGRAM

This element of the SSMP details the District's operation and maintenance (O&M) program and other related activities for its wastewater collection system that are required for the O&M Program element of the 2022 Order. The major items discussed in this element are as follows:

- Regulatory Requirements
- Map of Sewer System
- Routine Operation and Maintenance Activities
- Rehabilitation and Replacement Plan
- Staff Training in Sewer Operations
- Equipment and Replacement Inventories

4.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Operation and Maintenance Program element of the SSMP are below. The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system.

a) An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service.

b) A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors. The scheduling system must include:

   - Inspection and maintenance activities;
   - Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;
   - Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.

   The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.

c) In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

   - The requirements of this General Order;
   - The Enrollee's Spill Emergency Response Plan procedures and practice drills;

- Skilled estimation of spill volume for field operators; and
- Electronic CIWQS reporting procedures for staff submitting data.

d) An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

4.2 MAP OF SEWER SYSTEM

The current maps are a compilation of individual development plans, capital improvement projects, and as-built drawings of the original sewer system construction. The existing sewer system maps are retained in hard-copy format and portions of the sewer system maps are also available in electronic format.

The District's intent is to update the KMPUD sewer system maps into a comprehensive sewer collection system atlas. The updated maps will be available to district operations staff in electronic format and in a bound printed version for use. The maps will be actively updated based on information gathered in the field regarding physical features, condition assessments, and/or maintenance activities performed.

4.3 ROUTINE OPERATION AND MAINTENANCE ACTIVITIES

The KMPUD sewer collection system is broken into service areas in the sewer collection system atlas based on residential and commercial developments. Known problem areas are inspected and cleaned when necessary, as part of the overall operation and maintenance activities.

Video inspection of the KMPUD sewer collection system is performed by District staff using KMPUD owned video inspection equipment. One-fifth of the District's collection system is planned to be videoed on an annual basis. Every year, a new (one-fifth) portion of the sewer collection system will be scheduled for video inspection. Therefore a comprehensive inspection of the entire KMPUD sewer collection system will be completed every five years in compliance with the 2022 Order.

4.4 REHABILITATION AND REPLACEMENT PLAN

The KMPUD Capital Improvement Plan is updated regularly as part of the overall operation and maintenance program for the sanitary sewer collection system. The Plan addresses the current sanitary sewer system needs and future needs based on data collected during the course of staff inspections and historical records. The Sewer Master Plan informs the Capital Improvement Plan on priority updates and funding requirements. The Capital Improvement Plan is updated regularly and is prepared by the General Manager, Utility System Staff, and the District Engineer with input from the KMPUD Capital Projects Committee.

4.5 STAFF TRAINING IN SEWER OPERATIONS

KMPUD places a high level of importance on safety and technical training. The District budget includes a training budget to ensure that all Utility Systems Operation staff are properly trained. New staff receive on-the-job training specific to the collection system and maintenance equipment used. Staff also attend outside workshops whenever practical. Grade Certification in Collection System

Maintenance is encouraged as well as self-improvement training through applicable professional organizations and online courses.

All staff is trained on new equipment and facility operation by the contractor or manufacturer. Equipment manuals are reviewed by staff for maintenance and operational parameters.

The District provides much of the required safety training through outside training workshops. Staff receives training in confined space entry, hazardous materials management, and First Aid and CPR. Training includes on-line training, formal classroom training, informal "tailgate" training, and hands-on training. Utility Systems Operation staff is also being trained to respond to emergencies and disasters.

Proficiency is required for all job positions and promotions, and training records are maintained to monitor completed classes and schedule additional employee training. KMPUD staff will also be trained on the Spill Emergency Response Plan (SERP) and reporting procedures for spills.

4.6 EQUIPMENT AND REPLACEMENT INVENTORIES

KMPUD maintains an inventory of old and new (Pamtite) manholes. Manhole replacements are primarily completed by KMPUD staff. Replacement of underground pipelines is typically contracted out to licensed contractors who have the equipment, materials, and staff to complete the work. The District has permanent generators available for emergency use that are kept in a ready-state in case of emergency.

5.0 ELEMENT 5 – DESIGN AND PERFORMANCE PROVISIONS

This element of the SSMP details the design and performance provisions for construction and maintenance of sewer collection system infrastructure within the KMPUD service area. The District has adopted Design Standards (plans and specifications) to ensure that sanitary sewer lines and connections are properly designed and constructed. The purpose of the Design Standards is to provide minimum standards for the design, location, types, and uses of materials, the preparation of plans for construction, repair, or alteration of District facilities, and to provide sufficient basis for plan checking and inspection of facilities by District staff.

5.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Design and Performance Provisions element of the SSMP are below. The Plan must include the following items as appropriate and applicable to the District's system:

a) Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in section 8 (System Evaluation, Capacity Assurance and Capital Improvements), the procedures must include component-specific evaluation of the design criteria.

b) Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances. Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

5.2 DESIGN AND CONSTRUCTION STANDARDS

Installation of all new sanitary sewer systems, pump stations, manholes, wet wells, clean-outs, service laterals, and other appurtenances, as well as rehabilitation and repair of existing sanitary sewer systems, must adhere to the latest KMPUD Design Standards. The KMPUD Design Standards are available at the KMPUD District Office and on the District website. The General Manager and/or Operations Manager reviews plans for construction of new collection system infrastructure. Plan review includes verification that the proposed improvements adhere to the District's Design Standards.

5.3 INSPECTION STANDARDS

District staff or contract inspectors inspect all new (sewer) construction, repairs, and rehabilitation work within the KMPUD service area. Inspection staff verifies that construction meets District standards and requirements. All new and rehabilitated sewers are cleaned, pressure tested, and CCTV inspected before acceptance. Plastic pipe is also mandrel-tested to identify deflection defects. The District requires that all new and rehabilitated sewers be warranted for a period of one (1) year after acceptance by the District. Prior to the expiration of the warranty period, these facilities are visually inspected, CCTV inspected as required, and maintenance records are reviewed to ensure that the facilities are functioning properly.

6.0 ELEMENT 6 – SPILL EMERGENCY RESPONSE PROGRAM

This element of the SSMP details the District's Spill Emergency Response Program (SERP). The District's existing plans and practices are in place and will be modified and incorporated into this document to meet the new requirements.

6.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Spill Emergency Response Plan element of the SSMP are below. The Plan must include an up to date Spill Emergency Response Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring, and reporting requirements of this General
- Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency
- Response Plan and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed."

6.1.1 Spill Categories

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

Category 1 Spill

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility. A spill from District-owned and/or operated lateral that discharges to a surface water is a Category 1 spill.

The Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of the General Order.

Category 2 Spill

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

Category 3 Spill

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

Category 4 Spill

A Category 4 spill is a spill of **less than 50 gallons**, from or caused by a sanitary sewer system regulated under this General Order that **does not discharge to a surface water**.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

6.2 SPILL EMERGENCY RESPONSE PLAN DISCUSSION

The SERP is summarized below. The SERP addresses several issues such as spill notification, response, detection, mitigation, clean up, investigation, documentation, and reporting.

6.3 SPILL NOTIFICATION

The SERP covers spill detection including the procedures for dispatching the first responders to the site of a potential spill. The District receives telephone calls at one main telephone number (209) 258-4444 during business hours. The District publishes this number in the local directories and on the KMPUD web site. During non-business hours (evenings, weekends, and holidays) an emergency contact phone number is listed (209) 296-8668 which connects callers to the on-call utility systems operator.

If District staff members observe a spill during the course of their regular activities, they are instructed to notify the District Office and begin responding to the situation immediately, if applicable. The utility system operators are on-call on a rotational basis, which provides a First Responder twenty-four (24) hours per day, seven (7) days per week and are aware of areas that may have the highest risk of blockage or spill.

6.4 SPILL RESPONSE

The on-call utility system operator becomes the spill First Responder and is responsible for mitigation, calling for additional support staff and equipment, documentation, initial reporting, and follow-up. The District's policy is to respond to all spills from the collection & conveyance system within the KMPUD service area boundary and to take all steps possible to prevent the spills from reaching the storm drains, roadside ditches, flood control channels, swales, or waters of the State.

During regular business hours, District administrative staff notifies operations staff and operations staff is dispatched to respond to a potential spill. The District response to a spill during business hours is immediate from receipt of a call. Standby operations staff will respond to potential spills during non-business hours. The District's goal for response during non-business hours is 45 minutes from receipt of the call, until the first responder is on-site. Element 2 further addresses the organizational structure of the District and details the lines of authority along with the responsibilities of District personnel during an emergency.

In the event of a possible wastewater spill, or when staff is contacted concerning odors, standing water, or an overflowing manhole, the following steps shall be taken to verify the report and ensure public safety:

- District staff obtains any description of the problem and the name, address, and phone number of the caller for follow-up information.
- Operations staff proceeds to the location to verify report and the KMPUD Spill Response Report is initiated.
- Operations staff shall request appropriate support to assist in response mitigation. Operations staff will keep administrative staff informed of progress, as necessary.

- The First Responder shall notify the General Manager and/or other District representatives, as necessary.
- The General Manager, or his/her designee, will notify all appropriate public or regulatory agencies as required by the severity of the spill.
- Upon mitigation, containment, and clean-up of the spill, the General Manager, or his designee, will use information entered in the KMPUD Spill Response Report to complete the final spill report(s) to the SWRCB California Integrated Water Quality System (CIWQS) database, the RWQCB, (Alpine/Amador/El Dorado) County Environmental Health Department, and/or Office of Emergency Services (OES) as needed. The General Manager shall certify all CIWQS spill reports.

KMPUD response procedure indicates that the first priority is to stop the flow or ongoing spill. However, personnel and public safety are of utmost importance. Therefore, traffic control and crowd control measures may initially take precedence over containment or work on the failing infrastructure. Secondary measures include clean-up, monitoring, and posting of warning signs for affected areas.

6.5 SPILL IMPACT MITIGATION

The District maintains several gas-powered and electric powered pumps with sufficient temporary (fire hose) piping for bypass pumping, should the need arise. The District takes all reasonable steps to contain sewage and prevent sewage discharges to surface waters and minimize or correct any adverse impact on the environment resulting from the spill, including such additional monitoring as may be necessary to determine the nature and impact of the discharge. The operations staff will use suitable materials to block entrances to storm-drains and will also vacuum up spills and provide wash-down water where appropriate. The District may use the storm drain system (pipes and roadside ditches) as a containment device if necessary. This would be accomplished by plugging the storm drain outlet downstream of the affected area, washing the area down with water and disinfectant, and then vacuuming the pipe or ditch until clean.

For mitigation purposes, the County Environmental Health Department is available to provide assistance in post-spill monitoring. In the event of a spill which affects an active waterway (drainage course or creek), the Environmental Health Department is notified immediately along with other applicable agencies. The District may then utilize the Environmental Health Department for the service of monitoring water quality post- spill. The District will also provide any necessary support, equipment, or staff as necessary to assist in the water quality monitoring.

6.6 TRAINING

The District has not experienced any large spills since implementation of the SSMP. The District recognizes the value of proper staff training for emergency purposes and intends to conduct annual training on spill mitigation and response procedures.

Sufficient training will include practicing implementation of the Field Guide measures. The District has not established specific responsibilities for utility operations staff, but rather chooses to train all members for all positions, including basic emergency response. Any District management,

administrative, or temporary staff called upon to respond will be required to have been trained to provide necessary support roles.

Additional resources outside District staff (neighboring agency staff, contractors, and other emergency response contacts), which have been identified in the emergency contact list, will be invited to participate in District training activities for spill response.

6.6.1 Field Guide

The District has developed an SERP field guide that provides spill response and operational guidelines. The SERP field guide includes forms, emergency contacts, and detailed response procedures directed at First Responders and/or response support personnel. These guidelines include procedures and forms for use during and after response to a sewer backup. These guidelines also include charts to determine the source of the backup, instructions on filling out appropriate forms, containment procedures, guidelines for estimating spill volume and flow, blockage clearing, posting of warning signs, and area clean up for a spill. The KMPUD Field Guide is included in Appendix B of this SSMP document.

6.6.2 Traffic Control

The SERP field guide includes procedures to address emergency operations such as traffic control, crowd control, and safety procedures during a spill response. District operations staff has basic traffic control equipment, including:

- Safety tape and cones
- Barricades
- Emergency flashers on vacuum truck

6.7 SANITARY SEWER SPILL REPORTING

The District's policy is to report all spills that occur in the District's service area that originated in the District's system regardless of size and whether or not the spill reaches a surface water.

The District's policy is to track all private lateral sewage spills that District staff responds to for mitigation and/or containment. However, the District is not required to report private lateral spills in the Spill Report submitted to the State.

6.8 SANITARY SEWER SPILL CHAIN OF COMMUNICATION

The District's Authorized Representative in wastewater collection system matters is the General Manager. The General Manager is the authorized individual at this time to certify electronic spill reports submitted via the State-wide database, CIWQS. The Utility Systems Operator(s) are authorized to submit spill reports and to initiate proper regulatory and government agency notifications as required by the nature of the spill. Tables 6-1 through 6-5 summarize the notification, monitoring, and reporting requirements for spills, depending on the spill category.

During business hours office administrative staff notifies operations staff of a sewer spill call and response to the spill is conducted. The General Manager is primarily responsible for reporting spills to the SWRCB, RWQCB, and other applicable agencies as required. Table 6-6 shows contact information for the agencies to be notified under a Category 1 spill.

The spill form documents the time of spill and any corrective actions that took place. The data collected by staff is then entered into the CIWQS system for regulatory compliance.

6.9 SUMMARY OF NOTIFICATION, MONITORING, AND REPORTING REQUIREMENTS

This section summarizes the notification, monitoring, and reporting requirements for the various spill categories. The District is registered with the SWRCB CIWQS electronic sewage spill reporting system and is actively utilizing these procedures. When the District enrolled in the spill Database, a "Collection System Questionnaire" was completed, which contains pertinent information regarding the District's collection system. The "Collection System Questionnaire" must be updated at least every 12 months according to the SWRCB Monitoring and Reporting Program.

A KMPUD Spill Report will be completed for all reportable spills. The information recorded on an KMPUD Spill Report is to be entered into CIWQS in accordance with the mandated reporting timelines. A copy of the KMPUD Spill Response Report Form is included in Appendix C of this SSMP document. Copies of the KMPUD Spill Response Report Form will be located in the District office in hard-copy and electronic formats.

When there are no spills during the calendar month, the District will provide, within 30 days after the end of each calendar month, a statement through the Online spill Database certifying that there were no spills for the designated month (in accordance with the SWRCB MRP).

At a minimum, the following mandatory information must be provided during notification:

a) Location of spill by entering GPS coordinates;
b) Identify that the spill occurred in Region 5b (Central Valley RWQCB);
c) Identify that the spill occurred in (Alpine/Amador/El Dorado) County;
d) Whether or not the spill entered a drainage channel and/or surface water;
e) Whether or not the spill was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
f) Estimated spill volume in gallons;
g) Spill source (manhole, cleanout, etc.);
h) Spill cause (mainline blockage, root intrusion, etc.);
i) Time of spill notification or discovery;
j) Estimated First Responder arrival time;
k) Spill destination;
l) Estimated spill end time;

m) Spill Certification;

and the following additional information is required for reporting

n) Estimated spill volume that reached surface water, drainage channel, or not recovered from a storm drain;

o) Estimated spill amount recovered

p) Response and corrective action taken;

q) If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, *NA* must be indicated;

r) Parameters that samples were analyzed for (if applicable);

s) Identification of whether or not health warnings were posted;

t) Whether or not there is an ongoing investigation;

u) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the spill and a schedule of major milestones for those steps;

v) OES control number (if applicable);

w) Date OES was called (if applicable);

x) Time OES was called (if applicable);

y) Identification of whether or not County Health Officers were called;

z) Date County Health Officer was called (if applicable); and

aa) Time County Health Officer was called (if applicable).

The District will also record the following information for internal tracking:

- Name and address of reporting party;
- Discussion of clean up and any public notices posted;
- Discussion of measures taken to prevent spills at this location;
- List of other public agencies notified; and
- List of customers/individuals notified.

Potential public notification measures may include temporary signage to indicate pollution of surface water or groundwater due to a spill and notification through media outlets. The General Manager will be the authorized contact person for media notification.

Table 6-1. Category 1 Spills

Category 1 Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the District's knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters: Notify the California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 Section 1 of Attachment E1
Monitoring	Conduct spill-specific monitoring; Conduct water quality sampling of the receiving water **within 18 hours** of initial knowledge of spill of 50,000 gallons or greater to surface waters.	Section 2 of Attachment E1
Reporting	Submit Draft Spill Report **within three (3) business days** of the District's knowledge of the spill; Submit Certified Spill Report **within 15 calendar days** of the spill end date; Submit Technical Report within **45 calendar days** after the spill end date for a Category 1 spill in **which 50,000 gallons or greater** discharged to surface waters; and Submit Amended Spill Report within **90 calendar days** after the spill end date.	Section 3.1 of Attachment E1

Table 6-2. Category 2 Spills

Category 2 Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the District's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 Section 1 of Attachment E1
Monitoring	Conduct spill-specific monitoring	Section 2 of Attachment E1
Reporting	• Submit Draft Spill Report **within three (3) business days** of the District's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	Section 3.2 of Attachment E1

Table 6-3. Category 3 Spills

Category 3 Spill Requirement	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	Section 2 of Attachment E1
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars days** after the end of the month in which the spills occur; and • Submit Amended Spill Reports **within 90 calendar days** after the Certified Spill Report due date.	Section 3.3 and 3.5 of Attachment E1

Table 6-4. Category 4 Spills

Spill Requirement	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	Section 2 of Attachment E1
Reporting	• If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.	Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1

Table 6-5. District owned and/or Operated Lateral Spills (no discharge to surface water)

Lateral Spill Requirement	Due	Method
Notification	Within two (2) hours of the Enrollee's knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number. *Not applicable to a spill of less than 1,000 gallons.*	California Office of Emergency Services at: (800) 852-7550 Section 1 of Attachment E1
Monitoring	Conduct visual monitoring.	Section 2 of Attachment E1
Reporting	• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.	Sections 3.6, 3.7 and 4.4 of Attachment E1

If a Private Lateral Sewage Discharge is recorded in the spill Database, the District must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the District) should be identified, if known.

Table 6-6. Outside Agency Contact Information for Spills

Organization	Contact Person	Phone Number
Central Valley Regional Water Quality Control Board – Region 5b (Contact within 24 hours, submit written report within 5 days)	Susan Kelly (CIWQS Database)	(916) 464-4734
County Environmental Health Department (Contact immediately if public contact)	Alpine County: Stacy Olson	(530) 694-2235 x233
	Director Health and Human Services	Fax: (530) 694-2252
	Amador County:	(209) 223-6439
	On Call Operator	Fax: (209) 223-6228
	El Dorado County:	(530) 573-3450
	On Call Operator	Fax: (530) 542-3364
County Office of Emergency Services (Contact within 24 hours if spill over 1,000 gallons)	Alpine County: Stacy Olson	(530) 694-2235 x233
	Director Health and Human Services	Fax: (530) 694-2252
	Amador County: John Silva	(209) 223-2684
	OES Coordinator	Fax: (209) 223-1609
	El Dorado County:	(530) 621-5655
	On Call Operator	Fax: (530) 626-8091
County Sheriff's Office	Alpine County:	(530) 694-2231
	On Call Operator	Fax: (530) 694-2956
	Amador County: John Silva	(209) 223-2684
	OES Coordinator	Fax: (209) 223-1609
	El Dorado County:	(530) 621-5655
	On Call Operator	Fax: (530) 626-8091
Cal-EMA Warning Center (Contact within 24 hours if spill over 1,000 gallons)	N/A	(800) 852-7550
California Department of Fish and Game (Contact within 24 hours if spill may affect fish and/or wildlife)	Kent Smith (Regional Manager)	(916) 358-2900

6.10 RECORD KEEPING

Individual spill records will be maintained by the District for a minimum of five years from the date of the spill. Additional information for use of spill records will be presented in Element 9 – Monitoring, Measurement, and Program Modifications.

7.0 ELEMENT 7 – SEWER PIPE BLOCKAGE CONTROL PROGRAM

This element of the SSMP details the Kirkwood Meadows Public Utility District's Sewer Pipe Blockage Control Program and other related activities for its wastewater collection system. The major items discussed in this element are as follows:

- Regulatory Requirements
- Public Outreach Program
- Sewer Pipe Blockage (FOG) Disposal Plan
- Legal Authorities
- Grease Removal Devices
- Best Management Practices (BMPs)
- Enforcement Staff
- Problem Areas
- Source Control

7.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Sewer Pipe Blockage Control Program element of the SSMP are provided below.

The Sewer System Management Plan must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags, and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed. The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;
- A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping, and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance;

- An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.

Each enrollee shall evaluate its service area to determine whether a sewer pipe blockage control program is needed. If an Enrollee determines that a sewer pipe blockage program is not needed, the Enrollee must provide justification for why it is not needed. If sewer pipe blockages are found to be a problem, the Enrollee must prepare and implement a sewer pipe blockage source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of sewer pipe blockages;

b) A plan and schedule for the disposal of sewer pipe blockages generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of sewer pipe blockages generated within a sanitary sewer system service area;

c) The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages caused by sewer pipe blockages;

d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping, and reporting requirements;

e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the sewer pipe blockage ordinance;

f) An identification of sanitary sewer system sections subject to sewer pipe blockages and establishment of a cleaning maintenance schedule for each section; and

g) Development and implementation of source control measures for all sources of sewer pipe blockage discharged to the sanitary sewer system for each section identified in (f) above.

7.2 PUBLIC OUTREACH PROGRAM

The KMPUD Sewer Pipe Blockage Control Program includes a public outreach program intended to inform and educate the District's customers on topics related to sewer system management and their ability to affect the long-term health and reliability of the sewer collection system. Outreach mechanisms may include newspaper articles, information on the District's web site, open-house tours of District facilities and equipment, pamphlets mailed to rate payers, and presentations at public workshops.

A record of previous and planned outreach events will be maintained in the Appendix of this document. (Appendix F).

7.3 SEWER PIPE BLOCKAGE DISPOSAL PLAN

The KMPUD wastewater treatment facility is not designed to accept sewer pipe blockages for treatment and/or disposal. Currently, and for the near future, a septage/sewer pipe blockage hauler

must remove sewer pipe blockages from grease interceptors, clogged sewer mains, and the District's lift station wet wells. Sewer pipe blockages are transported by the septage hauler(s) to an acceptable treatment/disposal facility.

7.4 LEGAL AUTHORITIES

KMPUD has the legal authority necessary to conduct its Sewer Pipe Blockage Control Program, as adopted by KMPUD Regulation Number 620.03 Conditions for Use of Public Sewers. SSMP Element 3 – Legal Authority also addresses this item.

7.5 GREASE REMOVAL DEVICES

The District requires installation and proper maintenance of grease removal devices in food service (and preparation) establishments by adopted ordinance. Sizing and installation of grease traps and grease interceptors shall conform to the current edition of the California Plumbing Code, according to the adopted ordinance. Grease traps or grease interceptors may also be required in non-cooking or cold dairy or frozen foodstuffs establishments and other commercial establishments when they are deemed necessary by the KMPUD for the proper handling of wastes containing fats, oils, or grease.

Grease traps and interceptors must be maintained and pumped out by an independent contractor on a quarterly schedule (or other schedule as deemed appropriate by the KMPUD), and records of the cleaning and maintenance activities shall be made available to the District upon request.

7.6 BEST MANAGEMENT PRACTICES

The District has adopted Best Management Practices (BMPs) for sewer pipe blockage control and handling in accordance with the requirements of the State Order. The BMPs for sewer pipe blockage control include the following:

- Source control
- Sewer pipe blockage removal from privately owned facilities
- Sewer pipe blockage removal from District facilities

Source Control

The source control BMPs are outlined in the District Ordinances and include requirements for installation, inspection, and maintenance of grease traps at commercial/industrial facilities which have the potential to generate sewer pipe blockages. The individual business or property owner is required to operate and maintain sewer pipe blockage control devices which are protective of District sewer collection system infrastructure; else they are subject to fines, penalties, and/or disconnection from the District's sewer service.

Sewer Pipe Blockage Removal from Privately Owned Facilities

Accumulated sewer pipe blockages in privately owned facilities (collection lines and grease traps) must be removed on an annual basis (minimum) or more frequently as required based on quarterly inspection reports. The owner must contract with a licensed sewer pipe blockage or septage hauler for removal and disposal at an appropriate facility.

Sewer Pipe Blockage Removal from District Facilities

Sewer pipe blockages which are discovered in the District's collection system during normal maintenance and inspection or as a result of a blockage is cleaned by KMPUD Utility Systems Operations staff. The District utilizes a video inspection and hydro-jetting contractor to clean accumulated sewer pipe blockages from collection system pipes, which breaks up debris for conveyance to the KMPUD wastewater treatment plant headworks. Sewer system blockages which cause a minor back-up and potential overflow are pumped out by a septage hauler (vacuum truck) for removal and disposal at an appropriate facility. KMUPD also owns a hydro-jetter and vacuum truck to be used for maintenance and pipe blockage removal.

Sewer pipe blockages which are conveyed to the KMPUD wastewater treatment plant headworks is removed from the waste stream via the Hycor primary solids screen. Screened solids are dewatered and collected in waste bins for disposal at an appropriate facility. Any residual sewer pipe blockages which collect in the District's lift station wet wells are cleaned on a routine basis during normal wash down and maintenance. Solids removed from lift stations (including sewer pipe blockages) are de-watered and collected in the waste bins for ultimate disposal at an appropriate facility.

7.7 ENFORCEMENT STAFF

The District has sufficient staff to inspect commercial/industrial waste dischargers' collection systems and grease interceptor devices, and to enforce the Sewer Pipe Blockage Control Program as required by the 2022 Order. Existing and proposed food preparation facilities and industrial water use facilities are required to install these devices, and all new commercial/industrial facilities are subject to installation of sewer pipe blockage removal devices. The Utility System Operators are qualified Pre-treatment Program Inspectors that will inspect grease removal devices and sewer pipe blockage disposal BMP execution. The operators will inspect all of the sewer pipe blockage removal devices within the District's service area on a monthly basis. Ad hoc inspections may also be conducted after a sewer pipe blockage problem has been detected. To aid in this type of inspection, a video inspection crew may be utilized to inspect the sewer main in which problems occur in order to help determine which service laterals are causing the problem.

For remodeling, expanding, and construction of new commercial/industrial sites within the KMPUD service area, the District has several stages of review and inspection to ensure that grease removal devices are designed and installed properly. The General Manager and Operations Manager review the design of facilities, and the Utility System Operators inspect the installation of grease removal devices and on-site sewer collection systems.

7.8 PROBLEM AREAS

The District has a list of known problem sewer areas that experience recurring sewer pipe blockage problems. As a result, these areas are inspected and cleaned on a more regular than the rest of the collection system. The District's mapping and cleaning schedule are discussed in Element 4 – Operation and Maintenance Program.

7.9 SOURCE CONTROL

KMPUD is updating and will be implementing source control measures for sewer pipe blockage sources (sewer pipe blockage dischargers to the collection system) tributary to the problem areas discussed above. Source control measures include the District's sewer pipe blockage disposal public outreach program, requirements for grease removal devices, inspections, and sewer pipe blockage disposal BMPs.

8.0 ELEMENT 8 – SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

This element of the SSMP details the system evaluation and capacity assurance procedures for the sewer collection system infrastructure within the KMPUD service area.

8.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the System Evaluation and Capacity Assurance Plan element of the SSMP are below. The Plan must include procedures and activities for:

a) Routine Evaluation and Condition Assessment: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to a spill discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from spills that escape from the system) associated with conditions similar to those causing spill events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with spill events. The assessment should prioritize system areas that:

- Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;
- Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;
- Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;

b) Capacity Assessment and Design Criteria: The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events;
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events;
- The capacity of key system components; and
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;
- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;

- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

c) Prioritization of Corrective Actions: The steps needed to establish a short- and long-term Capital Improvements Plan (CIP) to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding; and

d) Capital Improvement Plan: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Attachment D.

8.2 SEWER SYSTEM IMPROVEMENTS

The KMPUD requires that development projects fund expansion of the sewer collection system, treatment, and disposal systems necessary to provide additional capacity to serve the proposed development. The District's wastewater treatment facility includes two flow equalization basins, which provide detention storage capacity for high sewer flow events.

8.3 KMPUD CAPITAL IMPROVEMENTS PLAN

KMPUD performs an annual update of its 5-year A Capital Improvements Plan (CIP). Long-term KMPUD Water and Sewer Master CIP updates are included with water and sewer system master plan updates. The master plan updates and associated CIP will include the necessary system evaluation, capital improvement plan outlays, budget/funding recommendations, and a prioritization of improvements to meet current and future flow projections on a 35-year planning horizon.

8.4 DESIGN CRITERIA

KMPUD has adopted Design Standards as outlined in *Element 5 – Design and Performance Provisions*, which are sufficient to meet the needs of the District.

9.0 ELEMENT 9 – MONITORING, MEASUREMENTS, AND PROGRAM MODIFICATIONS

This element of the SSMP details the monitoring provisions Kirkwood Meadows Public Utility District will follow to measure the performance of the sanitary sewer collection system and the effectiveness of the SSMP. Where program modifications are necessary, the SSMP will be updated to meet the intent of the 2022 Order.

9.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Monitoring, Measurement, and Program Modifications element of the SSMP are below. The Plan must include an Adaptive Management section that addresses Plan-implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities;
- Monitoring the implementation and measuring the effectiveness of each Plan Element;
- Assessing the success of the preventive operation and maintenance activities;
- Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations, and estimated volumes.

9.2 MONITORING AND MEASUREMENT

If sewer plugging or a spill occurs within the KMPUD service area, the information collected during maintenance or emergency response will be documented and electronically reported to the SWRCB CIWQS database in accordance with the 2022 Order.

The information will also be tracked and used in planning activities, programs, and policies that will help eliminate future spills and their causes. Data tracking may include the following:

- Number of spills or blockages by cause (roots, grease, pipe failure, capacity, pump station failure, etc.)
- Spill volume (gallons)
- Percentage of spill volume recovered (e.g., via vacuum truck) compared to total volume spilled.
- Number (and total volume) of Category 1 spills
- Method of restoration of service (pipe repair, hydro-jetting, replacement, etc.)

9.3 IDENTIFYING TRENDS

The information gathered under Section 9.2 above will be evaluated bi-annually (every two years) according to the program outlined in Element 10 - SSMP Audits. This evaluation will be used to identify and illustrate any trends in the above performance measures and to identify "hot spots" in the District's collection system which require elevated monitoring and maintenance. This evaluation will be used to make any necessary adjustments to the District's preventative maintenance program.

9.4 PROGRAM MODIFICATIONS

The District shall update program elements, as appropriate, based on monitoring or performance evaluations. The SSMP and its elements will be updated in accordance with the results of the monitoring and staff recommendations.

10.0 ELEMENT 10 – INTERNAL AUDITS

This element outlines the steps KMPUD will take to conduct audits of the SSMP. This element also identifies requirements for updating the SSMP according to the schedule outlined in the 2022 Order.

10.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the SSMP Program Audits element of the SSMP are as follows:

"The Plan shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order."

10.2 SSMP PROGRAM AUDITS

Every three (3) years the General Manager, Operations Manager and Utility Systems Operators will audit the effectiveness of all elements of this SSMP. The audit process will identify findings from prior years' implementation of the plan and recommend changes to the SSMP in a written report to the General Manager. The audit reports will be made available to the public upon request.

These audit reports will be kept on file and will become part of the Appendix to this SSMP document. Minor changes to the SSMP, such as changes to the operation and maintenance element, contact information changes, and emergency response will be made at the staff level. Significant changes, such as changes to legal authority or updates to ordinances, must be reviewed and approved by the KMPUD Board of Directors.

10.3 SSMP UPDATES

The SSMP must be updated every six (6) years according to Attachment D of the 2022 Order. This update must include any significant program changes. Re-certification by the KMPUD Board of Directors is required when significant updates to the SSMP are made.

11.0 ELEMENT 11 – COMMUNICATION PROGRAM

This element of the SSMP details with the communication and public outreach programs of Kirkwood Meadows Public Utility District for functions related to the SSMP implementation and performance.

11.1 REGULATORY REQUIREMENTS

The summarized requirements from the 2022 Order, Attachment D for the Communication Program element of the SSMP are below. The Plan must include procedures for the Enrollee to communicate with:

- The public for:
  - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
  - The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.
- Owners/operators of systems that connect into the Enrollee's system, including satellite systems, for:
  - System operation, maintenance, and capital improvement-related activities.

11.2 COMMUNICATION PROGRAM

The KMPUD Board of Directors will consider approval of this SSMP document during a public Board Meeting. The meeting will be publicly noticed and the Draft SSMP will be available for public review prior to the meeting. The public will have the opportunity to comment on the SSMP prior to Board approval.

The final, adopted SSMP document will be available for public viewing at the District Office, and copies of the document (or portions of) will be made upon request, at the regular charge for copies. The final SSMP document will be posted on the District's web site for viewing by the general public.

Changes to the adopted SSMP suggested by the public at a Board Meeting or in regular communication with District Staff will be incorporated into the SSMP during the program audit process outlined in Element 10 – SSMP Audits.

11.3 TRIBUTARY AND SATELLITE SYSTEMS

The KMPUD sewer collection system does not have any tributary or satellite collection systems which contribute wastewater to District facilities.

APPENDIX A – NAMES AND CONTACT INFORMATION

Appendix A contains the personnel names and contact information for the designated positions/titles listed in Figure 2-1: KMPUD Organization Chart, attributable to the Kirkwood Meadows Public Utility District sewer system facilities.

KMPUD Board of Directors

Board President	Bob Epstein	bepstein@kmpud.com
Board Vice President	Doug Mitarotonda	dmitarotonda@kmpud.com
Secretary:	Peter Dornbrook	pdornbrook@kmpud.com
Treasurer:	John Schroeder	jschroeder@kmpud.com
Assistant Secretary:	Chris Toucher	ctoucher@kmpud.com

KMPUD District Staff

General Manager:	Erik Christeson	echristeson@kmpud.com	209-256-0394
Assistant General Manager:	Rick Ansel	ransel@kmpud.com	775-781-2505
Operations Manager:	Brandi Benson	benson@kmpud.com	916-873-3747
Water/Wastewater Project Manager	Baron Birge	bbirge@kmpud.com	209-304-6889
Chief Plant Operator Wastewater Operations	Derek Dornbrook	ddornbrook@kmpud.com	775-881-8877
Administrative Manager	Tommy Baggett	tbaggett@kmpud.com	925-323-9499

APPENDIX B - KMPUD SSMP FIELD GUIDE

The KMPUD SSMP FIELD GUIDE is a tool used by the KMPUD Utility System Operators during an investigation of a sewer plug or spill within the District service area. This field guide contains the following information for reference and use:

- Spill Emergency Response Procedures
- Traffic Control
- Stop the Spill
- Spill Impact Mitigation
- Spill Documentation
- Reporting Tables for various Spill Categories
- Outside Agency Contact Information for Category 1 Spill
- Spill Categories and Reporting Procedures
- Emergency Contact List
- KMPUD Spill Response Report Forms

Spill Emergency Response Procedures

In the event of a possible wastewater spill, or when staff is contacted concerning odors, standing water, or an overflowing manhole, the following steps shall be taken to verify the report and ensure public safety:

- Obtain a description of the problem and the name, address, and phone number of the caller for follow-up information.
- Proceed to the location to verify report and initiate the KMPUD Spill Response Report.
- Request appropriate support to assist in response mitigation (additional man- power, equipment, safety/enforcement resources). Emergency Contacts are listed at the end of this Field Guide.
- The First Responder shall notify the General Manager and/or other District representatives, as necessary.
- The General Manager, or his/her designee, will notify all appropriate public or regulatory agencies as required by the severity of the spill (see Element 6 of SSMP Document).

Priority 1: Personnel and Public Safety

Priority 2: Stop the flow or ongoing Spill

Priority 3: Clean-up, monitoring, and post warning signs for affected areas

Priority 4: Investigate and Report (use form)

Traffic and Crowd Control

Follow proper traffic control safety procedures during a spill response including use of:

- Safety tape and cones
- Barricades
- Emergency flashing arrows on hydro-jetting trailer
- District vehicles with roof-mounted emergency (orange) flashers

Stop the Spill

If the spill is large and ongoing, containment may not be possible without first stopping the flow. Steps must be taken to stop the flow of sewage from the collection system. Prior to starting work with any large/powered equipment, call additional staff or emergency contacts for personnel support. Do not work alone. Possible methods (depending on the nature of the failure) may include:

- Utilize gas-powered (trash) pumps and lay-flat hose to bypass affected sewer main. Jump flow from upstream manhole to another manhole downstream of break/plug or to an adjacent branch of the collection system.
- If possible, determine the source of the flow and remove the source (water main break entering sewer system, pump station discharging into a plugged line, surface water entering the collection system, etc.)
- Utilize the District's Vacuum Trailer to temporarily remove sewage from affected collection system.
- Utilize the District's Hydro-Jetter to clear a blocked sewer pipe.
- Contact a commercial septic/vacuum tanker to conduct emergency bypass if anticipated volume is larger than District equipment can handle.

Spill Impact Mitigation

- Take all reasonable steps to contain sewage and prevent sewage discharges to surface waters.
- Utilize suitable (available) materials to block entrances to storm-drains, vacuum up spills, and provide wash-down water where appropriate.
- Use storm drain system (pipes and roadside ditches) as a containment device if necessary.
    - Plug storm drain outlet downstream of the affected area
    - Vacuum pipe or ditch to remove contained sewage
    - Wash the area down with water and disinfectant
    - Vacuum the pipe or ditch (again) until clean

Sanitary Sewer Spill Documentation

Priority 4 in the Spill Response Procedures is to investigate and document the spill. The KMPUD Spill Response Report Form (included in Appendix C of the SSMP) shall be used to document the information.

Spill Categories and Reporting Procedures

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

Category 1 Spill

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or,
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility. A spill from District-owned and/or operated lateral that discharges to a surface water is a Category 1 spill.

The Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of the General Order.

Category 2 Spill

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

Category 3 Spill

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

Category 4 Spill

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

Tables B-1 through B-5 summarize the notification, monitoring, and reporting requirements for the various spill categories.

Table B-1. Category 1 Spills

Category 1 Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the District's knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters: Notify the California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 Section 1 of Attachment E1
Monitoring	Conduct spill-specific monitoring; Conduct water quality sampling of the receiving water **within 18 hours** of initial knowledge of spill of 50,000 gallons or greater to surface waters.	Section 2 of Attachment E1
Reporting	Submit Draft Spill Report **within three (3) business days** of the District's knowledge of the spill; Submit Certified Spill Report **within 15 calendar days** of the spill end date; Submit Technical Report within **45 calendar days** after the spill end date for a Category 1 spill in **which 50,000 gallons or greater** discharged to surface waters; and Submit Amended Spill Report within **90 calendar days** after the spill end date.	Section 3.1 of Attachment E1

Table B-2. Category 2 Spills

Category 2 Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the District's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 Section 1 of Attachment E1
Monitoring	Conduct spill-specific monitoring	Section 2 of Attachment E1
Reporting	• Submit Draft Spill Report **within three (3) business days** of the District's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	Section 3.2 of Attachment E1

Table B-3. Category 3 Spills

Category 3 Spill Requirement	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	Section 2 of Attachment E1
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars days** after the end of the month in which the spills occur; and • Submit Amended Spill Reports **within 90 calendar days** after the Certified Spill Report due date.	Section 3.3 and 3.5 of Attachment E1

Table B-4. Category 4 Spills

Spill Requirement	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	Section 2 of Attachment E1
Reporting	• If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.	Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1

Table B-5. Lateral Spills

Lateral Spill Requirement	Due	Method
Notification	Within two (2) hours of the Enrollee's knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number. *Not applicable to a spill of less than 1,000 gallons.*	California Office of Emergency Services at: (800) 852-7550 Section 1 of Attachment E1
Monitoring	Conduct visual monitoring.	Section 2 of Attachment E1
Reporting	• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.	Sections 3.6, 3.7 and 4.4 of Attachment E1

Table B-6 shows contact information for the agencies to be notified under a Category 1 spill. The spill form documents the time of spill and any corrective actions that took place.

Table B-6. Outside Agency Contact Information for Spills

Organization	Contact Person	Phone Number
Central Valley Regional Water Quality Control Board – Region 5b (Contact within 24 hours, submit written report within 5 days)	Susan Kelly (CIWQS Database)	(916) 464-4734
County Environmental Health Department (Contact immediately if public contact)	Alpine County: Stacy Olson	(530) 694-2235 x233
	Director Health and Human Services	Fax: (530) 694-2252
	Amador County:	(209) 223-6439
	On Call Operator	Fax: (209) 223-6228
	El Dorado County:	(530) 573-3450
	On Call Operator	Fax: (530) 542-3364
County Office of Emergency Services (Contact within 24 hours if spill over 1,000 gallons)	Alpine County: Stacy Olson	(530) 694-2235 x233
	Director Health and Human Services	Fax: (530) 694-2252
	Amador County: John Silva	(209) 223-2684
	OES Coordinator	Fax: (209) 223-1609
	El Dorado County:	(530) 621-5655
	On Call Operator	Fax: (530) 626-8091
County Sheriff's Office	Alpine County:	(530) 694-2231
	On Call Operator	Fax: (530) 694-2956
	Amador County: John Silva	(209) 223-2684
	OES Coordinator	Fax: (209) 223-1609
	El Dorado County:	(530) 621-5655
	On Call Operator	Fax: (530) 626-8091
Cal-EMA Warning Center (Contact within 24 hours if spill over 1,000 gallons)	N/A	(800) 852-7550
California Department of Fish and Game (Contact within 24 hours if spill may affect fish and/or wildlife)	Kent Smith (Regional Manager)	(916) 358-2900

Emergency Contacts

The following is a priority list of contacts/resources for spill response:

On Call Emergency:	209-296-8668	
	209-258-4444 x104	
Baron Birge, Water/Wastewater Project Manager	209-304-6889	(cell)
Brandi Benson, Operations Manager	916-873-3747	(cell)
Erik Christeson, KMPUD General Manager	209-258-4444 x102	(office)
	209-256-0394	(cell)
Summit Plumbing, Hydro-jetter & Video Contractor	775-267-9987	
Mark Frederick Pump & Supply	209-223-3731	(office)
	209-256-0364	(cell)
Tesco Controls:	916-395-8800	
Aqua Sierra Controls	530-823-3241	
EDCO Enterprises, Vactor & Video Contractor	916-869-7271	

Record Keeping

Individual spill records must be maintained by the District for a minimum of five years from the date of the spill.

APPENDIX C - SPILL RESPONSE FORM

The Kirkwood Meadows Public Utility District Sanitary Sewer Spill Response Report Form is a tool used by the District's Utility System Operators during an investigation of a sewer plug or spill within the District service area. The Spill Response Report Form is also considered a part of the SSMP Field Guide.

Several blank copies of the Spill Response Report Form are included in this Appendix and shall be made available in the SSMP Field Guides contained in the Utility System Operators' vehicles for use during spill response and investigation.

Step-By-Step Spill Response Checklist

- Upon notification of spill location, gather report data on spill type, and volume from reporting party.
- Notify General Manager, Water/Wastewater Project Manager, and Operations Manager.
- Obtain and work from a copy of the SSMP Field Guide.
- Proceed to spill Location.
- Identify type and amount of spill.
- If spill is a category I, spilling into a waterway, must notify CAL OES as soon as possible or 2 hours after report of spill.
- If spill is ongoing notify administrative staff to begin calling customers and request that no water services be used.
- Assign Incident Commander (IC) duties to a staff member. Superintendent, if available, should be IC.
- Assign staff to spill response
- Transport Spill Kit and traffic control tools to spill Location.
- Isolate spill area from public.
- Determine if the blockage is in Manhole or similar feature, or if blockage is in collection line.
- Check upstream Manhole status. If upstream Manhole is backing up, check next upstream Manhole status. Assign staff for response to additional Manholes if needed.
- Contact Summit Septic for assistance if needed. 775-267-9987.
- Traffic control when needed.
- Transport Vac-Truck to site if available and sufficient staff is on-hand to operate.
- Transport Sewer Rods to site if sufficient staff is on-hand to assist.
- Control and stop spill.
- Investigate cause of spill.
- Report spill.
- Fill out KMPUD Spill Response Report Form located in Appendix C of SSMP.
- File Form in Appendix H of SSMP.
- Cleanup.

KMPUD SPILL RESPONSE REPORT FORM

Report I.D. _____

Staff Individual Completing Form: _____ Date: _____

Description of Problem or Call		
Date & Time of First Notification or Discovery	Reported Location of Problem (address, cross street, etc.)	
Nature of Call (spill, odor, etc.)		
Reporting Party / Individual (name)	Phone Number	Address

Spill Response		
First Responder - Name	First Responder Arrival Time & Date	
Location of Problem (address, cross street, etc.)	GPS Coordinates	Region: RWQCB Region 5b County in which spill occurred (circle): El Dorado / Alpine / Amador
Names of all Responders	Arrival Time	Departure Time
Name	Arrival Time	Departure Time
Name	Arrival Time	Departure Time
Name	Arrival Time	Departure Time
Name	Arrival Time	Departure Time
Name	Arrival Time	Departure Time
Time Spill Started and Description of Problem	Sketch	
Cause of Spill (narrative)		

KMPUD SPILL RESPONSE REPORT FORM

Report I.D. _____

Spill Mitigation	
Corrective Steps Taken	Sketch
Safety Measures Employed	

Time Spill was Contained	Time Spill Ended	Time Clean-Up was Completed

Actions Recommended / Taken to Prevent Future Spills

Spill Categorization (circle one after completing this section): Category 1 / 2 / 3 / 4 / Private Lateral Spill

Was there a sewage spill? Y / N	Source of spill (manhole, cleanout, etc.)
Was the spill / blockage on a privately owned sewer lateral? Y / N	If yes; Categorized as a "Private Lateral Spill"
Number of gallons spilled:	If > 1,000 gallons; then "Category 1 Spill"
Did spill enter storm drain pipe or roadside ditch? Y / N	
Was entire spill captured and returned to system? Y / N	If no; then "Category 1 Spill"
Did any portion of spill reach a drainage channel or surface water? Y / N	If yes; then "Category 1 Spill"

KMPUD SPILL RESPONSE REPORT FORM

Report I.D. _____

Number of gallons that reached surface water, or was not recovered from storm drain:			
Destination of spill (parcel, creek name, etc.)			
Water bodies impacted (names)			
Were health warnings posted? Y / N	Posted Locations		
Samples Collected (state N/A if none)			
Description (Sample 1a)	Location & Volume	Delivered to (Lab)	Analyzed for
Description (Sample 1b)	Location & Volume	Delivered to (Lab)	Analyzed for
Description (Sample 2)	Location & Volume	Delivered to (Lab)	Analyzed for
Reporting / Certification			
Included in online monthly Spill Report? Y / N	Date:		
Customers / Individuals Notified (names)			
Category 1 Spills			
Immediate Report to RWQCB: Y / N	Date / Time	Reporting Individual	
Report to Cal-EMA: Y / N	Date / Time	Reporting Individual	Control Number
[ ] Environmental Health Dept: Y / N County	Date / Time	Reporting Individual	
[ ] OES: Y / N County (if > 1,000 gallons)	Date / Time	Reporting Individual	Control Number
[ ] Sheriff: Y / N County	Date / Time	Reporting Individual	
Department of Fish & Game: Y / N (if wildlife affected)	Date / Time	Reporting Individual	
Other Agency (specify)	Date / Time	Reporting Individual	
Other Agency (specify)	Date / Time	Reporting Individual	
Other Agency (specify)	Date / Time	Reporting Individual	
Ongoing Investigation? Y / N			

APPENDIX D – KMPUD SEWER REGULATIONS

The following KMPUD sewer regulations are included in this Appendix for reference:

- Schedule of Connection Fees and Services
- Regulation **# 620.03** Conditions for Use of Public Sewers
- Regulation **# 620.05** Requirements for Constructing Private Gravity Sewer Systems
- Regulation **# 620.06** Private Sewers and Connections — Conditions Ordinance # 99-02 Amending Grease Interceptor Maintenance Regulation
- Regulation **# 630.01** Extension or Betterment of Facilities
- Regulation **# 640.01** Discontinuance of Service

KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT

~ Schedule of Connection Fees and Services ~

Concerning the Provision, Extension, and Continuation of Utility Service to New Development and Construction Projects

Water:

Connection Fees: Residential: $4,148 / EDU
Commercial: Estimated EDU ÷ 3-yr. avg. residential EDU.

Meters:

3/4" Ally:	$ 520
1" SRII Commercial	$ 520
1.5" Omni T2 Commercial	$ 1,070
2" Omni T2 Commercial:	$ 1,270

MXU Battery Pack (for remote reads): $ 250

Thermal Coil Meter Box (with insulation pad & lid):

3/4" Meter	$ 2,500
1.5" Meters:	$ 3,500
2" Meters:	$ 5,000

Wastewater:

Connection Fees: $2,231 / EDU (Members of CFD No. 98-01)
$7,227 / EDU (Non-Members of CFD No. 98-01)

Electric:

Connection Fees: Residential: $5,691 / EDU
Commercial: Estimated EDU ÷ 3-yr. avg. residential EDU.

Meters:		Type	Voltage	
	Single Family:	2S	120/240	$210
	Multi Family:	12S	120/208	$260
	Commercial:	9S/16S/36S/45S	120-480	$640

Propane:

Connection Fees: Residential: $ 980 / EDU
Commercial: Estimated EDU ÷ 3-yr. avg. residential EDU.

Meters:	Residential 3/4"	$ 390
	Commercial	$Varies

Residential Remote Read Index:	$145
Residential ¾" Regulator:	$145

Fire Impact Fee:

Alpine County:	$0.47 per combustible square foot (incl. decks)
Amador County:	$0.81 per combustible square foot (incl. decks)

Pricing Effective July 1, 2023

Drafted: 11/25/85
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REGULATION NO. 620.03
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
CONDITIONS FOR USE OF PUBLIC SEWERS

A. GENERAL

1. No person shall discharge or cause to be discharged any storm water, surface water, ground water, roof runoff, subsurface drainage, cooling water, garbage, or polluted industrial wastes to any sanitary sewer.

2. The owner of any parcel or lot who discharges, or causes to discharge, any storm water, surface water, ground water, or roof runoff into any sanitary sewer of the District shall pay an additional charge to the District in accordance with this paragraph. The amount of the charge shall equal the amount of drainage water, or portion thereof, in cubic feet per month, which is discharged, or caused to be discharged, into the District's sanitary sewer multiplied by the applicable sewer consumption rate for the particular use on the property (i.e., domestic, commercial/Timber Creek Lodge, commercial/Main Lodge, commercial/Inn and Ski Touring Center, or commercial/Whiskey Run Restaurant and Bar, see Regulation No. 610.01). The District Manager shall calculate the amount of drainage water, in cubic feet per month, that is discharged, or caused to be discharged, into the District sanitary sewer from a particular parcel or lot based on the size and slope of the parcel or lot and the roof or roofs, other impervious surfaces, and unimproved land, the amount of precipitation, and generally accepted engineering practices.

3. No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewer:
    a. Any liquid or vapor having a temperature higher than 150 degrees Fahrenheit.
    b. Any water or waste which may contain more than 100 parts per million by weight of fat, oil, or gas.
    c. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.
    d. Any garbage that has not been properly shredded.
    e. Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, or any other solid or viscous substance capable of causing

obstruction to the flow in the sewers, or other interference with the proper operation of the sewer works.

f. Any waters or wastes having a pH lower than 5.5 or higher than 9.0, or having any other corrosive properties capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
g. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process or constitute a hazard in the receiving waters of the sewage treatment plant.
h. Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant.
i. Any noxious or malodorous gas or substance capable of creating a public nuisance.

B. GREASE, OIL, AND SAND INTERCEPTORS

1. When in the opinion of the District Engineer, grease, oil, and sand interceptors are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand and other harmful ingredients, the same shall be installed. Grease, oil, and sand interceptors are required for garages, service stations, restaurants and day lodges. These interceptors shall not be required for family dwelling units or structures, unless designated by the District. All interceptors shall be of a type and capacity approved by the District Manager in accordance with the District Design Standards, and shall be constructed as follows:
    a. They shall be of impervious materials capable of withstanding abrupt and extreme changes in temperature.
    b. They shall be of substantial construction and watertight.
    c. They shall be located where readily accessible for cleaning and inspection in a location subject to approval by the District Manager.
    d. Except for cleaning by the District as provided in subsection B(2), an interceptor shall be maintained by the owner, or occupant of the premises, at his/her expense, in continuously efficient operation at all times.
    e. A reproducible as-built map shall be filed with the District office within 5 days after completion of construction of an interceptor.
    f. Interceptor to be so located and constructed as to permit intervening inspection by the District.
2. Interceptors shall be cleaned out by the District on at least a quarterly basis, or more frequently as determined to be necessary by the District Manager, subject to reimbursement of the District's costs by the owner or occupant. The District shall contract with an independent contractor to provide the interceptor cleaning and pump-

out service. The contractor shall bill the District on a per interceptor basis. After each cleaning, the District shall submit a billing to the customer of record for each interceptor requesting payment of the cleaning cost for the customer's interceptor, plus an additional sum not to exceed 10% to cover the District staff time in interceptor inspection and contract administration. The bill shall be due and payable within 30 days. The billing may be collected in the same manner as the regular sewer service charges. Failure to timely pay the billing shall be grounds to terminate water service to the subject premises.

Drafted: 11/25/85
Enacted: 3/20/86
Modified:
Deleted:

REGULATION NO. 620.05
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
REQUIREMENTS FOR CONSTRUCTING PRIVATE GRAVITY SEWER SYSTEMS

A. BUILDING SEWER MATERIALS

The building sewer, beginning two feet (2') from any building or structure, shall be:

Three inch (3") minimum asbestos cement pipe, class 1500;
Three inch (3") schedule 40 PVC pipe for single service; or
Four inch (4") asbestos cement pipe, class 1500 for double service.

ABS is acceptable for each of the above, or an equal grade of vitrified clay pipe or cast iron pipe may be substituted pending previous KMPUD written approval. The size of the one-way cleanout at the property line will be determined by the size of the KMPUD service from the main to the property line.

B. GRADE

Building sewers shall run in practical alignment and at a uniform slope of not less than one-fourth inch (¼") per foot toward the point of disposal provided that where it is impractical to obtain one-fourth inch (¼") per foot, any such pipe may have a slope of not less than one-eighth inch (1/8") per foot with prior approval by the District. Any trench over five feet (5') deep will require OSHA approved shoring for inspection of pipe as per California Construction Safety Orders Section.

C. CLEANOUTS

1. A two-way cleanout shall be provided at the beginning of the building sewer and shall not be closer than three feet (3') from any building sewer.
2. A cleanout shall be placed outside of, and adjacent to, the subscribed property line, where practicable.
3. Cleanouts shall be placed in every building sewer at intervals not to exceed one-hundred feet (100') in straight runs.
4. Every change in alignment or grade in excess of forty-five degrees (45°) in a building sewer shall be served by a cleanout, except that no cleanout shall be required for changes

in direction not to exceed one (1) forty-five degree (45°) change of direction or one (1) forty-five degree (45°) offset, and no ninety degree (90°) elbows shall be permitted.

5. Each cleanout shall be installed so that it opens in a direction opposite to the flow of the soil or waste, or at right angles thereto, and except in the case of "wye" branch and end-of-line cleanouts, vertically above the flow of the pipe.
6. All cleanouts shall be made accessible by boxes with covers marked "Sewer" exposed approximately two inches (2") above grade. Use Brooks Products, Inc. No. 36 or 1 RD box or equal, marked "Sewer".

D. TESTING OF SERVICE LINE FOR LEAKS

Prior to tying into the KMPUD system, the service line will be filled with water to grade to make sure the service line does not leak. This test is to be verified by the KMPUD inspector.

E. SEWER AND WATER PIPES

1. The bottom of the water piping at all points shall be at least twelve inches (12") above the top of the sewer piping.
2. The water piping shall rest on a solid shelf at least twelve inches (12") above and twelve inches (12") to one side of the common trench.

F. INSPECTION

It shall be the duty of the subscriber, to notify the KMPUD, orally or in writing, that said work is ready for inspection. Such notification shall be given not less than twenty-four (24) hours before the work is to be inspected. It shall be the duty of the persons doing the work to be on the job site with the KMPUD inspector. In no case will work be accepted that cannot be visually checked.

G. INSPECTION REQUIREMENTS

An inspection fee of $150 for each unit of service is payable at the time of application. Two (2) inspections must be made:

1. Before backfill from the house to the main;
2. After backfill and installation of cleanout boxes and lids.

Inspections are charged at $20 per trip until finalized. After final inspection, a refund, less charges, will be made. If the first inspection is not requested within eight (8) months from the application date, or if the final inspection is not requested within ninety (90) days from

the date of the first inspection, inspection fees shall be forfeited and water service shall be locked off. Water will not be turned on until final inspection is passed.

INSPECTION WILL BE MADE ON TWENTY-FOUR (24) HOUR NOTICE.
CALL (209) 258-4444

Drafted: 11/25/85
Enacted: 3/20/86
Modified:
Deleted:

REGULATION NO. 620.06
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
PRIVATE SEWERS AND CONNECTIONS - CONDITIONS

A. GENERAL

1. No person without previous written authorization from the District shall uncover, make any connection with or opening into, use, alter or disturb any public sewer or appurtenance thereof.

2. No connection shall be made of any kind to the public sewer without first having obtained a connection permit from the District and having paid inspection and/or connection fee. All connection permits must be obtained prior to construction.

B. FEES

1. The fees for any use not specifically covered shall be fixed and determined by the Board upon findings of the Engineer and/or agent.

2. Any later increase or addition in the use for which the original connection permit has been issued shall require the payment of an additional connection fee based upon the schedule.

3. All connection and inspection fees shall be paid in advance, subject to adjustments as in the foregoing paragraph. Any fee not paid shall be a lien upon the property to which the connection is made. The owner of the connected property shall be personally liable for payment of said fees. Sewer service may be refused to any property which is delinquent in the payment of any fees. In any legal action brought to enforce collection of delinquent fees, the prevailing party shall be entitled to all of its court costs and attorney's fees.

4. The District may require of any person who applies for any connection permit to file a statement or affidavit for the guidance of the Board in ascertaining the amount of the connection fee and the monthly charges, payable by such person under the ordinance.

Each statement or affidavit shall contain such information as may be required by the District. Failure by any person to file such statement or affidavit containing such required information shall constitute a violation of this ordinance and may result in refusal of sewer service to said property. No statement or affidavit shall be conclusive as to the matters therein set forth, nor shall the filing of any statement or affidavit preclude the District from collection from the person responsible for payment (as herein provided) by appropriate action such sum as is actually due and payable for inspection fees, connection fees, and monthly sewer charges under the provisions of this ordinance. Each statement or affidavit, and each of the several items therein contained, shall be subject to verification by the District or its Agent.

ORDINANCE NO. 99-02

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT AMENDING GREASE INTERCEPTOR MAINTENANCE REGULATION

BE IT ENACTED by the Board of Directors of the Kirkwood Meadows Public Utility District as follows:

SECTION 1. Purpose and Authority. The purposes of this ordinance are to (a) provide for District cleaning of grease interceptors, and (b) impose a surcharge on customers with grease interceptors to finance the District's cleaning and related costs. This ordinance is adopted pursuant to Public Utilities Code sections 16072, 16461 and 16467, Government Code sections 54343, 54344 and 54350, Health and Safety Code section 5471, and other applicable law.

SECTION 2. Regulation Amended. Regulation No. 620.03, subsection B of the Kirkwood Meadows Public Utility District Policies and Regulations is hereby amended to read as follows:

B. GREASE, OIL, AND SAND INTERCEPTORS

1. When in the opinion of the District Engineer, grease, oil and sand interceptors are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand and other harmful ingredients, the same shall be installed. Grease, oil, and sand interceptors are required for garages, ~~and~~ service stations, restaurants and day lodges. These interceptors shall not be required for family dwelling units or structures, unless designated by the District. All interceptors shall be of a type and capacity approved by ~~Agent~~ the District Manager in accordance with the District Design Standards, and shall be constructed as follows:

   a. They shall be of impervious materials capable of withstanding abrupt and extreme changes in temperature.

   b. They shall be of substantial construction and watertight.

   c. They shall be located where readily accessible for cleaning and inspection in a location subject to approval by the District Manager.

   d. Except for cleaning by the District as provided in subsection B(2), an interceptor shall be maintained by the owner, or occupant of the premises, at his/her expense, in continuously efficient operation at all times.

   e. A reproducible as-built map shall be filed with the District office within 5 days after completion of construction of an interceptor.

   f. Interceptor to be so located and constructed as to permit intervening inspection by the District.

2. Interceptors shall be cleaned out by the District on at least a quarterly basis, or more frequently as determined to be necessary by the District Manager, subject to reimbursement of the District's costs by the owner or occupant. The District shall contract with an independent contractor to provide the interceptor cleaning and pump-out service. The contractor shall bill the District on a per interceptor basis. After each cleaning, the District shall submit a billing to the customer of record for each interceptor requesting payment of the cleaning cost for the customer's interceptor, plus an additional sum not to exceed 10% to cover the District staff time in interceptor inspection and contract administration. The bill shall be due and payable within 30 days. The billing may be collected in the same manner as the regular sewer service charges. Failure to timely pay the billing shall be grounds to terminate water service to the subject premises.

SECTION 3. Superseder. This ordinance supersedes any prior inconsistent District ordinance, resolution, policy, regulation or procedure.

SECTION 4. Effective Date. This ordinance shall take effect 30 days after its passage.

SECTION 5. Posting. Within 23 days from the date of passage of this ordinance, the District Clerk shall post a copy of the ordinance in three public places in the District.

PASSED AND ADOPTED by the Board of Directors of the Kirkwood Meadows Public Utility District on the 25th day of March, 1999, by the following vote:

AYES: Dornbrook, Smith, Lucey, Majors, Reuter
NOES: None
ABSTAIN: None
ABSENT: None

Patty A. Dornbrook
President

Attest:

Leo V. Smith
Secretary

Drafted: 11/25/85
Enacted: 3/20/86
Modified: 9/26/96
Deleted:

REGULATION NO. 630.01
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
EXTENSION OR BETTERMENT OF FACILITIES

A. SCOPE OF REGULATION

This Regulation No. 630.01 shall apply when water and/or sewer service is requested for property within the District that does not abut an adequate District water or sewer main or that requires other extension or betterment of District water or sewer facilities, including mains and other distribution and collection improvements, fire hydrants, water storage reservoirs, pumps, pressure reducing stations, lift stations, water wells, new or expansion of existing water or wastewater treatment facilities, or wastewater disposal facilities.

B. EXCEPTIONS

Private water and sewer services which meet all of the criteria listed below as well as variances to these criteria approved by the District's Board of Directors are exempted from the requirement for extension or betterment of facilities.

1. Criteria for private water service:
    a. An extension of facilities to the property would not provide any benefit to other parcels along the same access road or to potential parcels resulting from a division of land,
    b. Betterment is not required to provide a minimum level of service,
    c. There are not more than four (4) parcels (including the subject property) located along the same roadway access which is in need of water service.
    d. The property to be served is located no more than 1,500 feet along a roadway from a six-inch main capable of providing 500 gpm.
    e. The District's responsibility shall end at the meter.
2. Criteria for private sewer service:
    a. An extension of facilities to the property would not provide any benefit to other parcels resulting from a division of land.
    b. System betterment is not required to provide a minimum level of service.
    c. The private sewer line shall be constructed by the property owner in accordance with District standards and shall be inspected by the District.

Subsequent maintenance and repair shall be the responsibility of the property owner.

d. The District's responsibility shall end where the private line is connected to the cleanout at a public road right-of-way line or sewer easement line.

C. APPLICATION

An extension or betterment of facilities shall be initiated by completing and submitting to the District Manager an application for approval of an extension or betterment of facilities agreement, along with payment of the application fee. The application shall be in a form and content as determined by the Manager, and shall include the date of the application, name, address and telephone number of the property owner or developer; description of property proposed to be served, explanation of the proposed development project, including number and type of connections to be served; and any other information as the Manager may require. The application must be signed by the developer and, if different, the property owner.

D. PROJECT APPROVAL

1. Extension or betterment of facilities applications shall be reviewed by the District's Engineer and Manager. The District shall have no obligation to provide water or sewer service to any new development project subject to this regulation until the District and the developer have entered into an extension or betterment of facilities agreement. The agreement shall be in a form acceptable to the District and shall set forth each party's respective obligations, including: design, financing and construction of the water and sewer system improvements by the developer necessary for the project (including, but not necessarily limited to, mains and other distribution and collection improvements, fire hydrants, water storage reservoirs, pumps, pressure reducing stations, lift stations, water wells, or new expansion of existing water or wastewater treatment facilities, or wastewater disposal facilities); developer payment for District services and consultants provided to the project; dedication and transfer of necessary land and rights of way; performance and maintenance guarantees; District inspection, testing and acceptance of improvements; and other terms and conditions the District finds necessary or appropriate in the public interest. The agreement must be approved by the District Board of Directors. The developer and, if different, the property owner must sign the extension or betterment of facilities agreement.
2. Extension or betterment of facilities agreements and applications shall terminate and become null and void as follows:

a. Ann application shall terminate six months after the date of the application, unless an extension or betterment of facilities agreement has been approved and signed by both parties by that date.
b. An agreement shall terminate twelve months after the date of the District's signature on the agreement, unless construction has been started by that date.
c. An agreement shall terminate eighteen months after the date construction commenced, unless construction has been completed and accepted by that date.

An applicant, developer or property owner may request an extension of these deadlines by submitting a written request to the Manager prior to the applicable deadline and explaining the reasons for the request. The manager may extend these deadlines for good cause shown by the applicant, developer or property owner.

E. ENVIRONMENTAL DOCUMENTATION

The District may determine that an environmental impact report or other environmental documentation on the proposed extension or betterment is necessary. The applicant shall then either have the necessary documentation prepared by any organization experienced in such activities and acceptable to the District or request the District to prepare the documentation.

F. DESIGN, INSTALLATION AND OWNERSHIP OF EXTENSION OF FACILITIES

The character of the extension or betterment of facilities required to serve any parcel of land shall be determined solely by the District. The applicant may choose to have the facilities designed by the District or the facilities may be designed by a qualified registered civil engineer, who is not a District employee. Design of the facilities shall be in accordance with the District's Minimum Design Standards and Improvement plans and shall be approved by the District's Engineer. The facilities shall be installed in accordance with the approved plans and specifications and the District's Standard Plans and Specifications as they exist at the time of approval.

The applicant must have the facilities installed by the employment of an experienced, competent contractor, licensed to perform such work in the State of California.

All construction materials such as pipe, valves, fittings, concrete, sand, asphalt, etc., shall be supplied by the applicant in accordance with Standard District Specifications. The District reserves the right to construct, with its own personnel or by contract, taps on existing mains, extensions involving complicated connection to, or interference with the District's existing facilities or other unusual facilities. Upon completion, inspection and acceptance by the District, the facilities shall be owned and operated by the District as part of its water and/or sewer systems.

G. SIZING OF FACILITIES

Pipeline sizing shall be in accordance with the following:

1. The District's master planning.
2. If the Districts master planning does not define the size, the normal minimum pipeline size for water shall be six (6) inches and gravity sewer shall be six (6) inches except as provided below.
3. The District Engineer may require larger or allow smaller pipeline sizes, if in his opinion, a larger size is needed or a smaller pipeline size would be appropriate.

H. LOCATION OF FACILITIES

The extension or betterment of facilities shall be located only on land owned by the District in fee or in an exclusive easement granted to the District for water and sewer purposes. The location *is* subject to the Districts approval of alignment, accessibility and safety of the facilities. The facilities may be located in a Public Utility Easement (PUE) if a parcel map or other document acceptable to the District is recorded.

The applicant shall convey or grant to the District without cost such land and/or easements the District determines necessary for the facilities. Land shall be conveyed to the District, free and clear of liens or encumbrances except encumbrances of record that are acceptable to the District, Easements shall be granted in a form mutually satisfactory to the District and the applicant. Wherever possible, pipelines shall be extended to the furthest parcel to be served. The pipeline shall abut all parcels served, except for approved private water/sewer services as defined in Paragraph B of this document. An extension shall include at least 10 feet of pipeline along a boundary of the parcel to be served except in cul-de-sacs, dead-end roadways, or other situations where the District determines that the pipeline may terminate and remote service be provided. The District may require an easement for future extensions.

I. LAND RIGHTS SCHEDULE

The applicant shall provide all land, easements, and rights-of-way to the District as follows:

1. Non-subdivision and minor land divisions – prior to signing improvement plans.
2. Subdivision, offsite – prior to signing improvement plans.
3. Subdivision, onsite prior to recording final map or dedicated by the map.

J. PAYMENT OF COSTS

The applicant shall pay the District's actual costs including, but not limited to: engineering studies, designs, plan review, preparation of environmental impact documents, hearings, review or preparation of improvement plan, construction inspection, as-build drawings, project management, and usual overhead expenses allocated to such work. The applicant shall deposit the District's estimate of engineering review and project administrative costs after the District has signed the agreement and prior to performance of additional work. Prior to improvement plan approval by the District, the balance of the estimated cost of District services is due and payable. The deposit shall be in cash upon completion of the work. If the amount deposited with the District is less than actual cost, the difference shall be paid to the District prior to the commencement of service. Any amount deposited in excess of actual cost will be refunded.

K. INSPECTION AND NOTICE OF COMPLETION

The District Engineering Department shall inspect the construction of all facilities. The District will not accept or provide service through a facility which has not been inspected and accepted by the District Engineer.

L. ACCEPTANCE OF FACILITIES

Upon completion of the construction, final inspection by the District Engineer, submission of as-built drawings acceptable to the District and payment of any outstanding monies due, the project shall be accepted by the District Engineer. The facilities shall be owned, operated, and maintained by the District except as specified in Section M.

M. FIRST YEAR REPAIR RESPONSIBILITIES

For a period of one (1) year from the date of acceptance by title District the property owner shall be responsible for the repair of all defects, leaks, or failure occurring in the facilities, which are, as determined by the District, due to negligence in the manufacture and/or installation of the facilities exclusive of operation of the system by the District or its agents, acts of third party, or acts of God. Failure by the property owner to pay for any of the repairs described above after being billed by the District will result in a lien being placed against the property by the District.

When the facilities serve a subdivision, the applicant or applicant's contractor shall submit a one-year repair surety, a bond (in form acceptable to the District), certificate of deposit, or irrevocable letter or credit, in an amount not less than ten percent (10%) of the construction costs of the facilities.

A bond, certificate of deposit or letter of credit will not be required to be deposited with the District to the extent the applicant or applicant's contractor guarantees repair of the project by providing such surety to the City or County having jurisdiction for the project which satisfies the provisions of this section regarding amount, time, and scope.

N. REQUESTS FOR SERVICE

Applications for service may be accepted and County or City building permit signed upon acceptance of title facilities by the District Engineer when all of the following has been complied with:

1. Signing of the Extension of Facilities Agreement by all parties.
2. Payment of all District costs or estimated costs by the Applicant,
3. Submittal by the applicant or the applicant's contractor of the necessary surety for the construction. The surety to be as described in Section H of this document.

O. REIMBURSEMENT GENERAL

Property owners who extend or reinforce District water and/or sewer facilities may qualify for partial reimbursement of costs from the District and partial reimbursement from later users of the extended facilities as provided in sections S and T.

P. DOCUMENTATION OF PROJECT COSTS

For projects involving District reimbursement or reimbursement by other users, the applicant shall provide the District with copies of all invoices for materials, equipment, and labor for construction of the project marked "paid" and signed by the applicant or his authorized agent or an estimate shall be prepared at the applicant's expense either by the District or by a registered professional engineer establishing the best possible value of the project for accounting warranty, and other purposes.

Q. COSTS REIMBURSED BY THE DISTRICT

Reimbursement of costs to an applicant for extension of facilities required to be larger than facilities needed by the applicant for betterment will be made from the District reimbursement fund.

The following costs for extension or betterment of facilities (excluding costs of acquisition of lands and easement, and cost of temporary facilities) shall be eligible for District reimbursement payment:

1. A portion of the costs for treatment, storage, backup, and pumping facilities, allocated on a proportional use basis, to any capacity of said facilities greater than necessary to meet the ultimate requirements of the applicant's land (applicant's land includes all lands owned by the applicant or lands in which the applicant holds a financial interest which could benefit from the extension of the facilities).
2. The costs of all water and sewer mains eight (8) inch or greater in diameter which are of larger diameter than necessary to serve only applicant's land, less the District's estimate of cost of mains in the same location of the diameter necessary to serve the ultimate requirements of the applicant's land (the minimum size considered to serve the ultimate requirements of the applicant's land shall be six (6) inch diameter).

R. DISTRICT REIMBURSEMENT FUND

There is established in the District a Water and Sewer Capital Connection Reimbursement Fund. Monies collected the prior year are assigned to this fund by March 1 of each year the District credits to this fund a percentage of all the Water and Sewer Capital Connection Fees paid to the District the previous year. These credits are the sole source of income to this fund. Water Capital Connection Fees are used for water related projects. Sewer Capital Connection Fees are used for sewer related projects.

The District Finance Director shall make a recommendation to the Board of Directors each year to adjust the percentage of all water and sewer capital connection fees going into the reimbursement fund based on the previous year's experience.

S. DISTRICT REIMBURSEMENT

A property owner eligible for District reimbursement will receive the total amount of reimbursement due from the District upon the District's acceptance of the facilities providing sufficient funds are not available in the District Reimbursement Fund. Where sufficient funds are available from this fund, the amount in the fund shall be given to the property owner and payments shall be made to the property owner from the fund until the amount due has been paid off. In the case where more than one property owner is eligible for reimbursement, they shall be paid by the District, one at a time, in order of the date they became eligible.

T. REIMBURSEMENT BY OTHER USERS

When an extension of facilities is constructed (other than of a Subdivision) which has the potential to serve other properties or future divisions of the parcel's owner by parties constructing the extension, reimbursement shall be paid by each subsequent party connecting to the facility during a ten-year period beginning on the date of completion of the extension. Each time a new party requests service from the extension, they shall pay a pro-rata share of the original cost of the extension and shall become a participant. As a participant, the new party becomes eligible for future reimbursement along with the original applicants. A new party requesting service from an extension shall also pay any current District Administrative Costs.

Ten participants finance construction of an extension, when the 11th party requests service from the line; he/she would pay 1/11 of the total cost to be reimbursed equally to 10 original participants. The 11th party would also pay the District's current Administrative Costs involved. When the 12th party requests service, he/she would pay 1/12 of the total cost of the line to be equally reimbursed to the previous 11 participants. He or she would also pay the District's current Administrative Costs. Each subsequent party requesting service would be handled in this manner until 10 years has expired or all parties who can benefit from the extension have connected.

In the case where a new party requests to extend the main facility rather than make a service connection to it, no reimbursement shall be required.

The reimbursement due to an applicant or participant shall run with the title ownership of the land and shall be paid to a new owner should the applicant or participant sell the property while reimbursement is due. Each subsequent party desiring connection to the extended facilities during the reimbursement period shall first be required to pay reimbursement to the District and the District shall refund such reimbursement to the original applicant and participants or their successors in interest.

There shall be no reimbursement on extension of facilities constructed to serve subdivisions (a division of land into (5) or more parcels).

In unusual situations, the District may establish an area of service, participate in the cost and establish a local surcharge to be collected prior to establishment of new service to parcels within that area.

Drafted: 7/2/85
Enacted: 7/3/85
Modified: 2/27/97,
& 12/11/97
Deleted:

REGULATION NO. 640.01
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
DISCONTINUANCE OF SERVICE

A. GENERAL

This regulation governs discontinuance by "KMPUD" of water service, sewer service, garbage disposal service and refuse service (collectively referred to herein as "service") provided to customers of KMPUD. KMPUD may discontinue service on any account for which service charges have remained due and unpaid for 60 days or more after the billing date. KMPUD also may discontinue service under other circumstances, as deemed necessary by the Board of Directors pursuant to KMPUD's rules and regulations and applicable law. (Reference Policy 640).

B. NOTICE OF PROPOSED DISCONTINUANCE

1. Prohibitions and Limitations Concerning Discontinuance of Residential Service for Nonpayment of Service Charges.

    a. KMPUD shall not discontinue residential service for nonpayment of service charges in any of the following situations:

        1) During pendency of an investigation by KMPUD of a customer dispute or complaint involving the account.

        2) When KMPUD has granted the customer an extension of the period for payment on the account.

        3) When a licensed physician and surgeon has certified that discontinuance of service will be life-threatening to the customer, and the customer is financially unable to pay for service within the normal payment period and is willing to enter into an amortization agreement with KMPUD pursuant to section (B)(1)(b) of this regulation with respect to all charges that the customer is unable to pay before the delinquency.

4) When a customer is complying with an amortization agreement entered with KMPUD pursuant to section (B)(1)(b) or section (B)(1)(c) and is keeping the account current as charges accrue in each subsequent billing period.

b. Upon request, KMPUD shall permit any customer meeting the requirements described above in section (B)(1)(a)(3) of this regulation to amortize, over a period not to exceed 12 months, the unpaid balance of any bill asserted to be beyond the means of the customer to pay within the normal payment period.

c. Any residential customer who has initiated a complaint or requested an investigation regarding service or charges within 5 days of receiving the contested bill, or who has, within thirteen (13) days of mailing of the Notice of Delinquency and Proposed Discontinuance of Service described in section (B)(2)(a) made a request for extension of the payment period of a bill asserted to be beyond the means of the customer to pay in full during the normal payment period, shall be given an opportunity to have the complaint, investigation, or request reviewed by KMPUD's District Manager. The District Manager's review shall include consideration of whether the customer shall be permitted to amortize the unpaid balance of the account over a reasonable period of time, not to exceed 12 months.

d. Any residential customer whose complaint or request for an investigation regarding service or charges has resulted in any adverse determination by KMPUD's District Manager may appeal the determination to the Board of Directors. Any subsequent appeal of the complaint or dispute to the Board of Directors is not subject to the requirements of this section.

2. Notice Prior to Discontinuance of Residential Service for Nonpayment of Service Charges.

a. At least 15 days before any proposed discontinuance of residential service for nonpayment of service charges, KMPUD shall mail a Notice of Delinquent Account and Proposed Discontinuance of Service, in the form described below in section (B)(2)(c), postage pre-paid, to the customer to whom the service is billed.

b. In addition to the Notice of Delinquent Account and Proposed Discontinuance of Service required under section (B)(2)(a) KMPUD shall make a reasonable, good faith effort to contact an adult person residing at the premises of the customer by telephone or in person at least 48 hours before discontinuance of service. If contact cannot be made by telephone or in person, KMPUD shall, at least 48

hours before continuance of service, give notice of the proposed termination by personally serving a written Notice of Proposed Discontinuance of Service, containing the information described below in sections (B)(2)(c)(1) through (B)(2)(c)(5), on an adult person residing at the premises of the customer, or by posting the Notice of Proposed Discontinuance of Service in a conspicuous location on those premises.

c. Every Notice of Delinquent Account and Proposed Discontinuance of Service shall include all of the following information:

1) The name and address of the customer whose account is delinquent.

2) The amount of delinquent service charges on the account.

3) The date by which payment, or arrangements for payment, must be made in order to avoid discontinuance of service.

4) The procedure by which the customer may obtain information on the availability of financial assistance, including private, local, state, or federal sources, if applicable.

5) The telephone number of a representative of KMPUD who can provide additional information or make arrangements for payment.

6) The procedure by which the customer may initiate a complaint or request an investigation concerning his or her service or charges, unless KMPUD's bill for service already contains a description of that procedure.

7) The procedure by which the customer may request amortization of the unpaid service charges.

3. Additional Requirements for Notice Prior to Discontinuance of Residential Service to Multi-Unit Structures, Mobile Home Parks and Farm Labor Camps

a. Whenever KMPUD furnishes individually metered residential service to a multi-unit structure, mobile home park, or labor camp (as defined in Health & Safety Code section 17008), for which the owner, manager or operator is listed by KMPUD as the customer of record, KMPUD shall make every good faith effort to notify the residential occupants that their service will be discontinued due to the delinquent account, and that they have the right to become KMPUD

customers without being required to pay the amount due on the delinquent account.

b. KMPUD is not required to make service available to the residential occupants unless each residential occupant, or a representative of all the residential occupants, agrees to the terms and conditions of service and meets all KMPUD rules and regulations and other legal requirements. If one or more of the residential occupants or a representative of the residential occupants are willing and able to assume responsibility for subsequent charges to the account to the satisfaction of KMPUD, or if there is a physical means legally available to KMPUD of selectively terminating service to those residential occupants who have not met KMPUD's rules and regulations and other legal requirements and for whom a representative of the residential occupants is not responsible, KMPUD shall make service available to the residential occupants who have met those requirements or on whose behalf the requirements have been met.

c. Where KMPUD requires prior service for a specified period of time or some other demonstration of credit worthiness as a condition for establishing credit with KMPUD for purposes of a service account, residence and proof of prompt payment of rent and other credit obligations acceptable to KMPUD for that period of time shall be accepted as a satisfactory equivalent for purposes of service accounts opened under section (B)(3)(b) of this regulation.

d. Any residential occupant who becomes a customer of KMPUD pursuant to section (B)(3)(b) and whose rental payments include charges for residential service, which charges are not separately stated, may deduct from the rental payment for each payment period all reasonable charges paid to KMPUD for the service during the preceding payment period.

e. For residential service provided through a master meter to residential occupants in any of the premises described above in section (B)(3)(a), discontinuance of service is subject to the requirements:

    1.) The notice described in section (B)(3)(a) shall be given in writing as the Notice of Delinquent Account and Proposed Discontinuance of Service to Multi-Unit Premises, posted on the door of each residential unit on the premises at least 15 days before the proposed discontinuance of service. If it is unreasonable or impractical to post the notice on the door of each residential unit, KMPUD shall post two copies of the notice in each common area and at each point of access to the premises. The notice shall be typed in English and to the extent practical, any other language

that KMPUD determines is primarily spoken by a significant number of the residential occupants at the premises, and shall include all of the following information:

a.) Measures the residential occupants must take in order to prevent discontinuance of service, or to reestablish service.

b.) The estimated monthly cost of service to the residential units on the premises.

c.) The title, address, and telephone number of a representative of KMPUD who can assist the residential occupants in continuing service or reestablishing service.

d.) The address and telephone number of a legal services project, as defined in Business and Professions Code Section 6213, that has been recommended by the local county bar association.

2.) In addition to the situations described above in Section (B)(1)(a), KMPUD may not discontinue service in the following situations:

a.) For an indebtedness that the customer of record incurred with, or owes to, another public agency.

b.) For a delinquent account that related to another property owned, managed or operated by the customer of record.

c.) When a public health or building official certifies that discontinuance of service would result in a significant threat to the health or safety of the residential occupants or the public.

4. Notice Prior to Discontinuance of Service to MOU – Residential Customers, and to Residential Customers for Reasons Other Than Non Payment

a.) At least 10 days before any discontinuance of service other than a discontinuance of residential service for nonpayment of service charges, KMPUD shall provide the customer with a written notice specifying the reason for the proposed discontinuance. The notice also shall describe the opportunity and procedures for reviewing the basis for the proposed discontinuance with KMPUD's District Manager, or his or her designee, whose name and telephone number shall be included in the notice.

b.) KMPUD's District Manager, or his or her designee, shall be authorized to review and resolve any disputes regarding the proposed discontinuance of service.

C. TIMING OF DISCONTINUANCE OF SERVICE

No service to any customer or user shall be discontinued for nonpayment of service charges on any Saturday, Sunday, legal holiday, or at any time during which the business offices of KMPUD are not open to the public.

D. RECONNECTION OF SERVICE

For service that is discontinued under this regulation for nonpayment of service charges, KMPUD will reinstate service after payment of the following amounts:

1. The delinquent charges, plus interest at the legal rate on past due accounts;

2. The monthly charges for the time the service is disconnected until starting date;

3. A reconnection fee of $50; and

4. The Customer shall also reimburse the District for any additional labor and equipment costs exceeding one (1) hour to discontinue and/or reinstate service resulting from winter weather conditions.

APPENDIX E – DEVELOPMENT PLAN AND SCHEDULE

The current SSMP Development Plan and Schedule including audits and updates, is included in this Appendix for reference.

Sewer System Management Plan & Audit Required Due Dates
Transition from General Order 2006-0003-DWQ to Reissued General Order

Search by Waste Discharge Identification (WDID) Number

Enter your Waste Discharge Identification (WDID) number in the search field to retrieve the required Sewer System Management Plan (SSMP) Update and Audit due dates for your system.

5SSO10975

Show Update/Audit Dates

Sewer System Management Plan & Subsequent Update Due Dates					
System Name	WDID Number	Original Plan Required Due Date	Required Plan Update Due Date	Required Plan Update Due Date	Required Plan Update Due Date*
Kirkwood Meadows CS	5SSO10975	5/2/2010	5/2/2015	5/2/2020	5/2/2026

Audit Due Dates								
System Name	WDID Number	Original Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	Required Plan Audit Due Date	End of Required 3-Year Audit Period**
Kirkwood Meadows CS	5SSO10975	5/2/2012	5/2/2014	5/2/2016	5/2/2018	5/2/2020	5/2/2022	5/2/2025

*** Per Section 5.5 and Attachment E1, Section 3.11 of the General Order, Plan updates are due within six years after the required due date of the Enrollee's last Plan Update.**

**** Per Section 5.4 and Attachment E1, Section 3.10 of the General Order, the Audit Report is due within six months after the end of the required 3-year audit period.**

APPENDIX F – PUBLIC EDUCATION AND OUTREACH

The KMPUD actively engages in public education and outreach activities within the District service area. Activities are intended to raise awareness among the community for sewer collection system and treatment issues, and how the behavior of community members and visitors can affect the District's systems

Additional outreach efforts are addressed by the District's monthly newsletter which often includes articles related to spill prevention measures that can be aided by public awareness and participation.

APPENDIX G – AUDIT REPORTS

Per the 2022 Order, KMPUD is required to conduct internal audits every three years of the District's SSMP, as detailed in Element 10 – SSMP Audits. Copies of SSMP Program Audit Reports are included in this Appendix in accordance with the regulatory requirements. Included reports (by date) are listed below:

- Self-Audit Report June 2014
- Self-Audit Report July 2016
- Self-Audit Report October 2018
- Self-Audit Report 2020
- Self-Audit Report 2022

Sewer System Management Plan Self-Audit Report

Name of agency	Kirkwood Meadows Public Utility District
Date of audit	06/26/14
Name of auditor	Matthew Wheeler, District Engineer
System Overview	
LF of gravity sewer mains	42,240 LF (8 mi)
LF of force mains	3,250 LF
Total LF of all sewer lines	45,490 LF (8.6 mi)
Number of pump stations	2
Population served	250-6,000
Number of connections	664
Current average monthly single family residential sewer rate	$55

I. GOALS

1. Are the goals stated in the SSMP still appropriate and accurate? (circle one) **(YES) / NO**

2. If you answered NO to question 1, or have made any changes/updates to this element in the SSMP, please describe in detail.

   The SSMP has been updated to reflect that it is based off the requirements of SWRCB order number 2006-0003-DWQ and also 2013-0058-EXEC (updated MRP).

II. ORGANIZATION

REFERENCE MATERIAL

- **Organization chart**
- **Phone list**

3. Is the SSMP up-to-date with District organization and staffing contact information? **(YES) / NO**

4. If you answered NO to question 3, or have made any changes/updates to this element in the SSMP, please describe in detail.

   Appendix A – Names and Contact Information is referenced in this element, and has been updated to current contact information as of June 10, 2014.

III. LEGAL AUTHORITY

REFERENCE MATERIAL

- **Ordinances**
- **Enforcement actions**

5. Does the SSMP contain up-to-date information about the District's legal authority? **(YES) / NO**

6. Does the District have sufficient legal authority to control sewer use and maintenance? **(YES) / NO**

7. If you answered NO to questions 5 and/or 6, or have made any changes/updates to this element in the SSMP, please describe in detail.

Appendix D – KMPUD Sewer Regulations is referenced in this element, and Regulation #610.04 has been updated accordingly. Regulation #610.01 has also been included for reference.

IV. OPERATION AND MAINTENANCE PROGRAM

a. COLLECTION SYSTEM MAPS

REFERENCE MATERIAL

- **Summary of information included in mapping system**

8. Does the SSMP contain up-to-date information about the District's maps? **(YES) / NO**

9. Are the District's collection system maps complete, up-to-date, and sufficiently detailed? **YES / (NO)**

10. If you answered NO to questions 8 and/or 9, or have made any changes/updates to this subsection in the SSMP, please describe in detail.

The District currently has basic sewer system maps. The intent is to create a comprehensive sewer collection system atlas that will be available to KMPUD operations staff in electronic format and in bound hard-copy version for use. The maps will be actively updated based on information gathered in the field regarding physical features, condition assessments, and/or maintenance activities.

However, there is currently no set timeline for producing a detailed sewer atlas.

b. RESOURCES AND BUDGET

REFERENCE MATERIAL

- **Current Capital Improvement Plan (CIP)**
- **Current operating budget**

11. Does the SSMP contain up-to-date information about the District's resources? (YES) / NO

12. Are the District's resources and budget sufficient to support effective sewer system management? (YES) / NO

13. Do the District's planning efforts support long-term goals? (YES) / NO

14. If you answered NO to questions 11, 12, and/or 13, or have made any changes/updates to this subsection in the SSMP, please describe in detail.

c. PRIORITIZED PREVENTATIVE MAINTENANCE

REFERENCE MATERIAL

- Cleaning schedules
- List or map of hotspots
- Work orders
- Service call data
- Customer feedback

Table 1. Annual Blockage Statistics and Preventative Maintenance Activities

	2012	2013	2014	2015	2016
Blockages in the past year	0	0	0		
Blockages due to:					
Roots	0	0	0		
Grease	0	0	0		
Debris	0	0	0		
Other	0	0	0		
Average response time	-	-	-		
Ratio of planned cleaning to unplanned cleaning (LF)	-	-	-		
Number of customer complaints in the last year	0	0	0		
Number of positive customer responses	0	0	0		

15. Does the SSMP contain up-to-date information about the District's preventative maintenance activities? (YES) / NO

16. Considering the information in Tables 1 – 3 (later in the form), are the District's preventative maintenance activities sufficient and effective in reducing and preventing SSOs and blockages? (YES) / NO

17. If you answered NO to questions 15 and/or 16, or have made any changes/updates to this subsection in the SSMP, please describe in detail.

d. SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT

REFERENCE MATERIAL

- **Inspection reports**
- **Infiltration and Inflow (I/I) monitoring studies and reports**
- **Pipe and manhole condition data**

18. Does the SSMP contain up-to-date information about the District's inspections and condition assessment? **(YES) / NO**

19. Are the District's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies? **(YES) / NO**

20. If you answered NO to questions 18 and/or 19, or have made any changes/updates to this subsection in the SSMP, please describe in detail.

Capital Improvement Plan includes I/I investigation and repairs for short term (5-year) outlay.

e. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

REFERENCE MATERIAL

- **Funds spent on equipment and materials**
- **Equipment and parts inventory**

21. Does the SSMP contain up-to-date information about equipment and replacement inventories? **(YES) / NO**

22. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? **(YES) / NO**

23. If you answered NO to questions 21 and/or 22, or have made any changes/updates to this subsection in the SSMP, please describe in detail.

Section 4.6 has been updated to include information about the District's spare parts for pump stations, and temporary bypass equipment.

f. TRAINING

REFERENCE MATERIAL

- **Employee training records**

24. Does the SSMP contain up-to-date information about the District's training expectations and programs? **(YES) / NO**

25. Do supervisors believe that their staff is sufficiently trained? **(YES) / NO**

26. Are staff satisfied with the training opportunities and support offered to them? (YES)/ NO

27. If you answered NO to questions 24, 25, and/or 26, or have made any changes/updates to this subsection in the SSMP, please describe in detail.

V. DESIGN AND PERFORMANCE PROVISIONS

REFERENCE MATERIAL

- **Design and construction standards**
- **Ordinances**

28. Does the SSMP contain up-to-date information about the District's design and construction standards? (YES)/ NO

29. Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date? YES / (NO)

30. If you answered NO to questions 28 and/or 29, or have made any changes/updates to this element in the SSMP, please describe in detail.

The 1990 standards to which the District is currently adhering are incomplete and outdated. The District is considering an update to Design and Construction Standards during the 2014-2015 fiscal year.

VI. OVERFLOW EMERGENCY RESPONSE PLAN

REFERENCE MATERIAL

- **Data submitted to CIWQS**
- **Service call data**

Table 2. Annual SSO Statistics

	2012	2013	2014	2015	2016
Number of dry weather SSOs	0	0	**2**		
Number of wet weather SSOs	0	0	0		
Total number of SSOs	0	0	**2**		
Category 1 SSOs	0	0	**1**		
Category 2 SSOs	0	0	0		
Category 3 SSOs	0	0	0		
Private Lateral SSOs	0	0	**1**		
Total volume of SSOs	0	0	**170**		
Total volume recovered	0	0	**20**		
Net volume of SSOs (total minus recovered)	0	0	**150**		
SSOs caused by:					
Roots	0	0	0		
Grease	0	0	0		
Debris	0	0	0		
Pipe failure	0	0	0		
Pump station failure	0	0	**2**		
Capacity-limited pipe segment (no debris)	0	0	0		
Other	0	0	0		
Number of locations with more than one SSO in the past year	0	0	0		
Average response time – during business hours	-	-	**0 min**		
Average response time - after business hours	-	-	**30 min**		

31. Does the SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan? **(YES) / NO**

32. Considering the information in Table 2, is the Overflow Emergency Response Plan effective in handling SSOs? **(YES) / NO**

33. If you answered NO to questions 31 and/or 32, or have made any changes/updates to this element in the SSMP, please describe in detail.

Section 6.4 – The District only needs to contact Cal OES, not all other agencies, for Categories 1 SSOs. Section 6.6 – Omit the sentence saying there have been no SSOs since the WDR. Figure 6-1, Table 6-1, and all of Section 6.9 (in regards to SSO categories) have been updated with information from the amendment order 2013-0058-EXEC. Referenced in Element 6, the two Appendices B and C have been updated from the same amendment order. Section 6.10 – Include a sentence stating that Appendix H has been created to hold all SSO records and documentation.

VII. FATS, OILS, AND GREASE (FOG) CONTROL PLAN

REFERENCE MATERIAL

- List or map of FOG sources in service area
- List or map of hotspots
- Cleaning schedules
- Restaurant inspection reports or summaries
- Data submitted to CIWQS
- Service call data

Table 3. FOG Control Statistics

	2012	2013	2014	2015	2016
Number of SSOs caused by FOG	0	0	0		
Planned cleaning (LF)	0	0	0		
Unplanned cleaning (LF)	0	0	0		
Ratio of planned to unplanned cleaning (LF)	0	0	0		
Number of FOG inspections completed	0	0	0		

34. Does the SSMP contain up-to-date information about the District's FOG control program? YES / NO

35. Considering the information in Table 3, is the current FOG program effective in documenting and controlling FOG sources? YES / NO

36. If you answered NO to questions 34 and/or 35, or have made any changes/updates to this element in the SSMP, please describe in detail.

District staff inspects commercial grease interceptors on a monthly basis, however documentation protocols should be updated and implemented.

VIII. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

REFERENCE MATERIAL

- Capacity assessment reports
- CIP
- SSO data

Table 4. SSOs Caused by Hydraulic Limitations

	2012	2013	2014	2015	2016
Number of SSOs caused by capacity limitations	0	0	0		

37. Does the SSMP contain up-to-date information about the District's capacity assessment? YES / NO

38. Has the District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system? YES / NO

39. If you answered NO to questions 37 and/or 38, or have made any changes/updates to this element in the SSMP, please describe in detail.
Includes updated information about the Capital Improvements Plan adopted May 10, 2014.

IX. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

40. Does the SSMP contain up-to-date information about the District's data collection and organization? **(YES) / NO**

41. Is the District's data collection and organization sufficient to evaluate the effectiveness of your SSMP? **(YES) / NO**

42. If you answered NO to questions 40 and/or 41, or have made any changes/updates to this element in the SSMP, please describe in detail.
Section 9.4 – added in sentence to state that all changes/updates to SSMP must be documented and attached to the SSMP. These changes are documented in the SSMP Audit Reports, found in Appendix G.

X. SSMP AUDITS

43. Will a copy of this SSMP Audit be included in the SSMP Document as an appendix? **(YES) / NO**

XI. COMMUNICATION PROGRAM

REFERENCE MATERIAL

- **Mailings and mailing lists**
- **Website**
- **Other communication records such as newspaper ads, site postings, or other outreach**
- **Customer feedback**

44. Does the SSMP contain up-to-date information about the District's public outreach activities? **(YES) / NO**

45. Does the SSMP contain up-to-date information about the District's communications with satellite and tributary agencies? **(YES) / NO**

46. Has the District effectively communicated with the public about the SSMP, and addressed feedback? **(YES) / NO**

47. If you answered NO to questions 44, 45, and/or 46, or have made any changes/updates to this element in the SSMP, please describe in detail.
Section 11.2 – Updated to state the dates of the board meeting for accepting the original SSMP document and for anticipated acceptance of the amended SSMP.

KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT

SANITARY SEWER MANAGEMENT PLAN 2016 AUDIT REPORT

Developed in compliance with Waste Discharge Requirement Water Quality Order No. 2006-003

This SSMP Audit Report was approved and adopted by the KMPUD Board of Directors during a public Board Meeting on June 10th, 2016.

Audit Report Completed By:

_____

Derek Dornbrook Date
Superintendent Water/Wastewater Operations

Approved By:

_____

Robert Epstein Date
KMPUD Board President

_____

Michael Sharp Date
KMPUD General Manager

Introduction

This report serves to comply with Order No. 2006-0003, issued by the State Water Resources Control Board in 2006. Order No. 2006-0003, hereinafter referred to as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR), requires that all public entities that own or operate one or more miles of sewer system comply with the contents of this order. The purpose of the WDR is to ensure that sanitary sewer overflows (SSOs) are mitigated through the implementation of system-wide operation, maintenance, and a Sanitary Sewer Management Plan (SSMP). Included in the details of the SSMP is a necessary self-audit corresponding to the size of the system with a minimum biannual frequency. This report outlines Kirkwood Meadows Public Utility District's (District) SSMP program audit and its corresponding tasks. The SSMP audit shall:

- Evaluate the effectiveness of the current SSMP
- Identify potential weaknesses of the current SSMP
- Determine Improvement opportunities for modifying the current SSMP

WDR Requirements for SSMP Element 10: SSMP Program Audits

As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection, including identification of any deficiencies in the SSMP and steps to correct them.

District Compliance Approach – As Stated in the SSMP

The District prepared and adopted an updated SSMP in June, 2014. The updated SSMP expanded and improved the scope of the existing SSMP, which had last been updated in 2008. Section 10.2 of the District's updated SSMP document states that Beginning in June 2014, and every two years thereafter, the District will audit the effectiveness of all elements of the SSMP. The program audit will include a final report reviewing the District's performance and identifying findings. The report will be made available to the public and will be kept on file.

District System Description and Performance

The District maintains approximately 8.6 miles of pipeline. The collection system pipeline consists of 6 and 8 inch diameter pipe constructed of both concrete asbestos and polyvinyl chloride materials. Approximately 1/2 mile of the collection system consists of a force main. Included in the system are two pump stations.

In the last 5 years, the system had two reported SSOs in the California Integrated Water Quality System (CIQWS) as detailed in **Table 1.** The WDR requires that SSO records be kept for the previous 5 years as a minimum.

Table 1: CIQWS Summary of District SSOs June 2014-2016

Number	Date	SSO Category	SSO Description	SSO Vol. Gallons	Volume Recovered Gal.	Volume Reached Surface Water gal.
1	4/14/2014	3	SSO occurred at privately owned pump station due to pump failure.	20	20	0
2	5/30/2014	1	Compressor governing pump controls at East Lift Pump Station failed. High level alarms failed. SSO occurred out of a nearby manhole. Small volume flowed into Kirkwood Creek.	150	140	10

Audit Tasks

The responsibility of this audit has been assigned to District Superintendent of Water and Wastewater Operations, Derek Dornbrook, a 14-year employee of the District, who is directly involved with the daily operations of the collection system. In addition to filling out the attached SSMP Audit Form, the following tasks are associated with the SSMP audits:

1. Review operation and maintenance philosophy/strategy with field staff including preventative maintenance.
2. Conduct interviews of operational staff and staff that respond to SSOs to verify familiarity with the SSMP and SSO response procedures.
3. Review condition assessment/rehabilitation philosophy/strategy. Ensure that there is a condition assessment/rehabilitation plan or strategy.
4. Review the past 2 years of District SSO data and verify if additional corrective action is needed.
5. Record all findings during the audit process on the attached SSMP Audit Form. This form will be the final audit report for the District's collection system performance and improvement opportunities. This report will be kept on file and made available to the public.

Conclusion

The SSMP has been determined to be functioning successfully and does not need substantial updates for its performance. During the review period, the District experienced no SSOs. Additionally, during the past two years, there have been no SSOs due to collection system insufficiencies or pump station failures.

As a summary of the attached SSMP Audit Form, the following improvement opportunities were identified in **Table 2** below.

Table 2: 2016 SSMP Audit Improvement Opportunities

SSMP Section	Improvement Opportunity	Target Date
Element 4. Operation and Maintenance Program. Maps	Map updates and a comprehensive atlas.	
Element 4. Operation and Maintenance Program. Training	CWEA Collection System Specialist certifications for operators.	
Element 5. Design and Performance Provisions.	Design and Construction Standards update	

ATTACHMENT 1

SSMP AUDIT FORM

(ADAPTED FROM FORMAT DEVELOPED BY BAY AREA CLEAN WATER AGENCIES)

2016

Table 3: Description of Sewer System Maintained by Kirkwood Meadows Public Utility District

Name of agency	Kirkwood Meadows Public Utility District
Date of audit	5/20/2016
Name of auditor	Derek Dornbrook, District Superintendent
	System Overview
LF of gravity sewer mains	42,240 LF (8 mi)
LF of force mains	3,250 LF
Total LF of all sewer lines	45,490 LF (8.6 mi)
Number of pump stations	2
Population served	250-6,000
Number of connections	664
Current average monthly single family sewer rate	$55

Audit Report – Elements 1-11

Element 1. Goals.

- Are the goals stated in the SSMP still appropriate and accurate?

Audit Findings

Yes, the goals stated in the SSMP have not changed and are still appropriate and accurate. The SSMP supplements and supports the District's existing operation and maintenance programs and SSMP goals by providing high-level, consolidated guidelines and procedures for all aspects of the District's sewer system management

Element 2. Organization

- Is the SSMP up-to-date with District organization and staffing contact information?

Audit Findings

Yes, the SSMP contains up-to-date versions of the Organizational Chart, Implementation and SSO Response Plan and the SSO Reporting Chain of Communications. Names and contact information are included in this element and have been updated to current contact information as of May 19, 2016.

Element 3. Legal Authority

Reference Material
Ordinances
Enforcement Actions

- Does the SSMP contain up-to-date information about your agency's legal authority?
- Does your agency have sufficient legal authority to control sewer use and maintenance?

Audit Findings

Yes, KMPUD Sewer Regulations are referenced in this element, and Regulation #610.04 has been updated accordingly. Regulation #610.01 has also been included for reference. All regulations, rates, connection fees, and ordinances can be referenced in Appendix D of the SSMP.

Element 4. Operations and Maintenance Program

A. Collection System Maps

Reference Material
Summary of information included in mapping system

- Does the SSMP contain up-to-date information about the District's maps?

- Are the District's collection system maps complete, up-to-date, and sufficiently detailed?

Audit Findings

Yes, the District currently has basic sewer system maps. However, the District's collection system maps are not complete, up-to-date, and sufficiently detailed. The intent is to create a comprehensive sewer collection system atlas that will be available to KMPUD operations staff in electronic format and in bound hard-copy version for use. The maps will be actively updated based on information gathered in the field regarding physical features, conditions assessments, and/or maintenance activities.

B. Resources and Budget

Reference Material
Current Capital Improvement Plan (CIP)
Current Operating budget
Wastewater Collection System Repairs and Maintenance 5-Year plan

- Does the SSMP contain up-to-date information about the District's resources?
- Are the District's resources and budget sufficient to support effective sewer system management?
- Do the District's planning efforts support long-term goals?

Audit Findings

Yes, the above cited reference materials contain up-to-date information about District resources, budget, and long-term goals. Significant improvements to the District's collection system are detailed in the 5-year plan.

C. Prioritized Preventative Maintenance

Reference Material
Cleaning schedules
Work Orders
Service call data
Inspection reports.
Infiltration and inflow (I/I) monitoring studies and reports
Pipe and manhole condition data

Table 4. Annual Blockage Statistics and Preventative Maintenance Activities

	2013	2014	2015	2016	2017
Blockages in the past year	0	0	0	0	
Blockages due to:					
Roots	0	0	0	0	
Grease	0	0	0	0	
Debris	0	0	0	0	
Other	0	0	0	0	
Average response time	N/A	N/A	N/A	N/A	
Ratio of planned cleaning to unplanned cleaning (LF)	N/A	N/A	N/A	N/A	
Number of customer complaints in last year	0	0	0	0	
Number of positive customer responses	0	0	0	0	

- Does the SSMP contain up-to-date information about your agency's preventative maintenance activities?
- Considering the information in Tables 4-6 (later in the form) are the District's preventative maintenance activities sufficient in reducing and preventing SSOs and blockages?
- Are the District's preventative maintenance activities sufficient and effective in reducing and preventing SSO's?
- Does the SSMP contain up-to-date information about the District's inspections and condition assessment
- Are the District's scheduled inspections and condition assessments effective in locating, identifying, and addressing deficiencies?

Audit Findings

Yes, the SSMP contains up-to-date information about the District's maintenance and inspection activities that remain sufficient and effective in reducing and preventing SSOs. The District's preventative maintenance activities have been exceptional in reducing and preventing SSOs and blockages as there have been no SSO incidents during the audit review period. Additionally, pump station alarm systems have been improved in response to a SSO in 2014 and all alarms systems are routinely inspected and tested. Improved documentation regarding FOG inspections has been implemented in addition to formalized documentation of said inspections and have served to prevent SSOs due to FOG and foster an improved relationship between the District and all Food Service Establishments (FSEs).

Video inspection of the District's sewer collection system is performed by an outside contractor on behalf of the District. Beginning in FY 2016-2017, one fifth of the District's collection system is planned to be videoed and hydro-jetted on an annual basis. Every year, a new (one-fifth) portion of the sewer collection system will be scheduled for video inspection and hydro-jetting. Based on these schedule maintenance activities, the entire District sewer collection system will be videoed and hydro-jetted every five years in compliance with the WDRs.

D. Equipment and Replacement Inventory

Reference Material
Funds spent on equipment and materials
Equipment and parts inventory

- Does the SSMP contain up-to-date information about equipment and replacement inventories?
- Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?

Audit Findings

Yes, the District maintains spare parts for pump stations in the event of failure, including rebuild kits and level indicators. The District also has temporary bypass pumps available to respond to line blockage. Additionally, the District either has permanent generators or portable backup generators available for emergency use that are kept in a ready-state in case of emergency.

E. Training

Reference Material
Employee training records
Interviews with staff

- Does the SSMP contain up-to-date information about your agency's training expectations and programs?
- Do supervisors believe that their staff is sufficiently trained?
- Are staff satisfied with the training opportunities and support offered?

Audit Findings

Yes, the District places a high level of importance on safety and technical training. The District budget includes a training budget to ensure that all Utility Systems Operations staff is properly trained. New staff receive on-the-job training specific to the collection system and maintenance equipment used.

Staff also attends outside workshops whenever practical. Opportunity for audit improvement exists in Collection System Grade Certification which is offered by the California Water Environment Association (CWEA). All operations staff is encouraged and will be given support to obtain these certifications.

Element 5. Design and Performance Provisions

Reference Material
Design and construction standards
Ordinances

- Does the SSMP contain up-to-date information about the District's design and construction standards?
- Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date?

Audit Findings

Yes, the SSMP contains up-to-date information about design and construction standards. The design and construction standards and the standards for inspection and testing of new and rehabilitated facilities are sufficiently comprehensive and up-to-date. The District has adopted Design Standards (plans and specifications) to ensure that sanitary sewer lines and connections are properly designed and constructed. The General Manager and/or District Engineer reviews plans for construction of new collection system infrastructure. Plan review includes verification that the proposed improvements adhere to the District's Design Standards. The KMPUD Design Standards are available at the KMPUD District Office for purchase.

The District is considering an update to Design and Construction Standards which represents an audit improvement opportunity.

Element 6. Regulatory Requirements

Reference Material
Data submitted to CIQWS
Service call data

Table 5. Annual SSO Statistic

	2013	2014	2015	2016	2017
Number of dry weather SSOs	0	2	0	0	
Number of wet weather SSOs	0	0	0	0	
Total number of SSOs	0	2	0	0	
Category 1 SSOs	0	1	0	0	
Category 2 SSOs	0	0	0	0	
Category 3 SSOs	0	0	0	0	
Private Lateral SSOs	0	1	0	0	
Total volume of SSOs	0	170	0	0	
Total volume recovered	0	20	0	0	
Net volume of SSOs (total minus recovered)	0	150	0	0	
SSOs caused by:					
Roots	0	0	0	0	
Grease	0	0	0	0	
Debris	0	0	0	0	
Pipe failure	0	0	0	0	
Pump station failure	0	2	0	0	
Capacity-limited pipe segment (no debris)	0	0	0	0	
Other	0	0	0	0	
Number of locations with more than one SSO in the past year	0	0	0	0	
Average response time-during business hours	n/a	0	n/a	n/a	
Average response time-after business hours	n/a	30	n/a	n/a	

- Does the SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan

- Considering the information in Table 5, is the Overflow Emergency Response Plan effective in handling SSOs?

Audit findings

Yes, the SSMP contains an up-to-date version of the District's Overflow Emergency Response Plan and this plan has been very effective in handling SSOs. The District has experienced no SSOs since 2014.

Element 7. Fats, Oils, and Grease (FOG) Control Plan

Reference Material
Restaurant inspection reports
Data submitted to CIQWS
Service call data

Table 6. FOG Control Statistics

	2013	2014	2015	2016	2017
Number of SSOs caused by FOG	0	0	0	0	
Planned cleaning (LF)	0	0	0	0	
Unplanned cleaning (LF)	0	0	0	0	
Ratio of planned to unplanned cleaning (LF)	0	0	0	0	
Number of FOG inspections completed	0	0	12	12	

- Does the SSMP contain up-to-date information about the District's FOG control program?
- Considering the information in Table 6, is the current FOG program effective in documenting and controlling FOG sources?

Audit Findings

Yes, the SSMP contains up-to-date information about the District's FOG control program and this program is effective in documenting and controlling FOG sources. Documentation protocols were updated upon recommendation of the 2014 Audit Report and a highly formalized program has been instituted, wherein District staff works in cooperation with FSEs to ensure effective FOG control to prevent SSOs. District staff inspects all of the FOG removal devices within the District's service area on a monthly basis and documents all inspections and defects of FOG removal devices.

Element 8. System Evaluation and Capacity Assurance Plan

Reference Material
Capacity assessment reports
Capital improvement plan
SSO Data

Table 7. SSOs Caused by Hydraulic Limitations

	2013	2014	2015	2016	2017
Number of SSOs caused by capacity limitations	0	0	0	0	

- Does the SSMP contain up-to-date information about the District's capacity assessment?
- Has the District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?

Audit Findings

Yes, a Capital Improvements Plan (CIP) for the District was adopted on May 10, 2014 by the District Board of Directors. The KMPUD Water and Sewer Master CIP includes in the budget dedicated funds for the next 6 years to identify and mitigate infiltration and inflow. Additionally, the District has adopted Design Standards as outlined in Element 5 which are sufficient to meet the needs of the District.

Element 9. Monitoring, Measurement, and Program Modifications

- Does the SSMP contain up-to-date information about the District's data collection and organization?
- Is the District's data collection and organization sufficient to evaluate the effectiveness of your SSMP?

Audit Findings

Yes, the SSMP contains up-to-date information of data collection and organization that is sufficient to evaluate the effectiveness of the SSMP. Review of the SSO occurrences from the past two years supports that the SSMP is successful in maintaining minimal SSOs.

Element 10. SSMP Audits

- Discuss the effectiveness of this audit format and provide any suggestions for changes.
- Will a copy of this SSMP Audit be included in the SSMP document as an appendix?

Audit Findings

This 2016 SSMP Audit was conducted in a similar format to the 2014 Audit but with formatting changes required by the SWRCB which included narratives for Audit Findings replacing a simple Yes/No checklist. The current format was found to be effective in that it required a more thorough examination of the SSMP and included increased participation from operations staff. The effectiveness of the District's SSMP is evidenced by the absence of any SSOs or related incidents during the review period. A copy of this SSMP Audit will be included in the SSMP document as an appendix and will serve as a template for future Audits.

Element 11. Communication Program

Reference Material
Mailings and mailing list
Website
Other communication records such as newspaper ads, site postings, or other outreach
Customer feedback

- Does the SSMP contain up-to-date information about the District's public outreach activities?
- Does the SSMP contain up-to-date information about the District's communications with satellite and tributary agencies?
- Has the District effectively communicated with the public about the SSMP, and addressed feedback?

Audit Findings

Yes, the SSMP document is available for public viewing at the District Office, and copies of the document (or portions of) are available upon request, at the regular charge for copies. The final SSMP document is posted on the District's web site for viewing by the general public. The 2016 Audit Review will also be available by all aforementioned means. The District's sewer collection system does not have any tributary or satellite collection systems which contribute wastewater to District facilities. The District constantly strives to communicate with the public about the SSMP and addresses all feedback through public hearings or the District web site.

KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT

SEWER SYSTEM MANAGEMENT PLAN 2020 AUDIT REPORT

Developed in compliance with Waste Discharge Requirement Water Quality Order No. 2006-003

This SSMP Audit Report was approved and adopted by the KMPUD Board of Directors during a public Board Meeting on

Audit Report Prepared By:

6/4/21

Derek Dornbrook Date
Supervisor Water/Wastewater Operations

Approved By:

6/10/2021

Eric Richert Date
KMPUD Board President

6/11/2021

Erik M. Christeson Date
KMPUD General Manager

KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT

SEWER SYSTEM MANAGEMENT PLAN 2020 AUDIT REPORT

Developed in compliance with Waste Discharge Requirement Water Quality Order No. 2006-003

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Eric Richert Date
KMPUD Board President

Erik M. Christeson Date
KMPUD General Manager

Table 1: CIQWS Summary of District SSOs January 2015-2020

No.	Date	SSO Category	SSO Description	SSO Vol. Gallons	Volume Recovered Gallons	Volume Reached Surface Water Gallons
1	1/14/18	3	Collection system Manhole overflow due to debris blockage.	900	900	0
2	4/7/18	1	Collection system Manhole overflow due to extreme storm event which overwhelmed Influent Pump Station.	5000	4000	1000
3	8/23/18	3	Collection system Manhole overflow due to debris blockage.	400	400	0
4	8/13/20	3	Collection system Manhole overflow due to debris blockage.	20	20	0

Audit Tasks

The responsibility of this audit has been assigned to District Supervisor of Water and Wastewater Operations, Derek Dornbrook, an 18-year employee of the District, who is directly involved with the daily operations of the collection system. In addition to completing the attached SSMP Audit Form, the following tasks are associated with the SSMP audits:

1. Review operation and maintenance protocols with field staff including preventative maintenance.
2. Conduct interviews of operational staff and staff that respond to SSOs to verify familiarity with the SSMP and SSO response procedures.
3. Review condition assessment and rehabilitation protocols.
4. Review the past 2 years of District SSO data and determine if additional corrective action is needed.
5. Record all findings during the audit process on the attached SSMP Audit Form. This form will be the final audit report for the District's collection system performance and improvement opportunities. This report will be kept on file and made available to the public.

Conclusion

The SSMP is functioning successfully and does not need substantial updates for adequate performance. Several minor updates will be made to the SSMP which will be detailed in the Audit Report. During the review period, the District experienced 4 SSOs due to collection system blockages or major storm events.

As a summary of the attached SSMP Audit Form, the following improvement opportunities were identified in **Table 2** below.

ATTACHMENT 1

SSMP AUDIT FORM

(ADAPTED FROM FORMAT DEVELOPED BY BAY AREA CLEAN WATER AGENCIES)

2020

Element 3. Legal Authority

Reference Material
Ordinances
Enforcement Actions

- Does the SSMP contain up-to-date information about your agency's legal authority?
- Does your agency have sufficient legal authority to control sewer use and maintenance?

Audit Findings

Yes, KMPUD Sewer Regulations are referenced in this element, and Regulation #610.04 have been updated accordingly. Regulation #610.01 has also been included for reference. All regulations, rates, connection fees, and ordinances can be referenced in Appendix D of the SSMP.

Element 4. Operations and Maintenance Program

A. Collection System Maps

Reference Material
Summary of information included in mapping system

- Does the SSMP contain up-to-date information about the District's maps?
- Are the District's collection system maps complete, up-to-date, and sufficiently detailed?

Audit Findings

Yes, the District currently has basic sewer system maps. However, the District's collection system maps are not complete, up-to-date, and sufficiently detailed. The intent is to create a comprehensive sewer collection system atlas that will be available to KMPUD operations staff in electronic format and in bound hard-copy version for use. The maps will be actively updated based on information gathered in the field regarding physical features, conditions assessments, and/or maintenance activities.

B. Resources and Budget

Reference Material
Current Capital Improvement Plan (CIP)
Current Operating budget
Wastewater Collection System Repairs and Maintenance 5-Year plan

- Does the SSMP contain up-to-date information about the District's resources?
- Are the District's resources and budget sufficient to support effective sewer system management?
- Do the District's planning efforts support long-term goals?

Audit Findings

Yes, the above cited reference materials contain up-to-date information about District resources, and budget. However, the referenced 5-year plan has been augmented with a variety of short-term

workshops whenever practical. Opportunity for audit improvement exists in Collection System Grade Certification which is offered by the California Water Environment Association (CWEA). All operations staff is encouraged and will be given support to obtain these certifications. One operator received the Collections Systems Grade I Certification in 2019.

Element 5. Design and Performance Provisions

Reference Material
Design and construction standards
Ordinances

- Does the SSMP contain up-to-date information about the District's design and construction standards?
- Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date?

Audit Findings

Yes, the SSMP contains up-to-date information about design and construction standards. However, the design and construction standards and the standards for inspection and testing of new and rehabilitated facilities are currently being updated and awaiting Board approval. These updated Design Standards (plans and specifications) will ensure that sanitary sewer lines and connections are properly designed and constructed. The General Manager and/or District Engineer reviews plans for construction of new collection system infrastructure which includes verification that the proposed improvements adhere to the District's Design Standards. The current KMPUD Design Standards are available at the KMPUD District Office.

Element 6. Overflow Emergency Response Program

Reference Material
Data submitted to CIQWS
Service call data

Table 5. Annual SSO Statistic

	2016	2017	2018	2019	2020
Number of dry weather SSOs	0	0	2	0	1
Number of wet weather SSOs	0	0	1	0	0
Total number of SSOs	0	0	3	0	1
Category 1 SSOs	0	0	1	0	0
Category 2 SSOs	0	0	0	0	0
Category 3 SSOs	0	0	2	0	1
Private Lateral SSOs	0	0	N/A	0	0
Total volume of SSOs	0	0	6300	0	20
Total volume recovered	0	0	5300	0	20
Net volume of SSOs (total minus recovered)	0	0	1000	0	0
SSOs caused by:					
Roots	0	0	0	0	0
Grease	0	0	0	0	0
Debris	0	0	2	0	1
Pipe failure	0	0	0	0	0
Pump station failure	0	0	0	0	0
Capacity-limited pipe segment (no debris)	0	0	1	0	0
Other	0	0	0	0	0
Number of locations with more than one SSO in the past year	0	0	0	0	0
Average response time-during business hours	N/A	N/A	1/2 hr	N/A	N/A
Average response time-after business hours	N/A	N/A	N/A	N/A	N/A

- Does the SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan
- Considering the information in Table 5, is the Overflow Emergency Response Plan effective in handling SSOs?

Audit findings

Yes, the SSMP contains an up-to-date version of the District's Overflow Emergency Response Plan and this plan has been very effective in handling SSOs. The Response Plan was amended to include a detailed, step-by-step response guide for managers and field operators. Table 6-1: Outside Agency Contact Information was updated on June 30, 2020 and is included in Appendix B-KMPUD SSMP Field Guide.

Element 8. System Evaluation and Capacity Assurance Plan

Reference Material
Capacity assessment reports
Capital improvement plan
SSO Data

Table 7. SSOs Caused by Hydraulic Limitations

	2016	2017	2018	2019	2020
Number of SSOs caused by capacity limitations	0	0	1	0	0

- Does the SSMP contain up-to-date information about the District's capacity assessment?
- Has the District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?

Audit Findings

Yes, a Capital Improvements Plan (CIP) for the District was adopted on May 10, 2014 by the District. The KMPUD Water and Sewer Master CIP includes in the budget dedicated funds for the next 4 years to identify and mitigate infiltration and inflow. Additionally, the District has adopted Design Standards as outlined in Element 5 which are sufficient to meet the needs of the District.

Element 9. Monitoring, Measurement, and Program Modifications

- Does the SSMP contain up-to-date information about the District's data collection and organization?
- Is the District's data collection and organization sufficient to evaluate the effectiveness of your SSMP?

Audit Findings

Yes, the SSMP contains up-to-date information of data collection and organization that is sufficient to evaluate the effectiveness of the SSMP. Review of the SSO occurrences from the past two years supports that the SSMP is successful in maintaining minimal SSOs.

KIRKWOOD MEADOWS
PUBLIC UTILITY DISTRICT

BOARD OF DIRECTORS
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
33540 Loop Rd., P.O. Box 247, Kirkwood, CA 95646
Telephone (209) 258-4444

REGULAR MEETING OF THE BOARD OF DIRECTORS
Saturday, November 14, 2020 – 8:00 AM

BOARD MEETING MINUTES

	BOARD MEMBERS	
Robert Epstein, Vice President	Eric Richert, President	Standish O'Grady, Treasurer
Peter Dornbrook, Secretary		Bertrand Perroud, Assistant Secretary

Due to mandates by the Governor and the Alpine and Amador County Health Officers to shelter in place and guidance from the CDC to minimize the spread of COVID-19, this meeting took place via video/teleconference.

1. **CALL TO ORDER** *President Richert*

   Determining a quorum present, President Richert called the meeting to order at 8:00 am.

2. **ROLL CALL** *Secretary Dornbrook*

Board of Directors Present via Zoom:	President Richert, Directors Epstein, Dornbrook, Perroud, and O'Grady
Staff Present via Zoom:	General Manager Erik Christeson, Assistant General Manager Ansel, Administrative Manager Kelly McBride, Operations Manager Benson
Others Present via Zoom:	Terry Woodrow, Alpine County Supervisor District 4, Olga Darlington, Moss Adams LLP

3. **ANNOUNCEMENTS** *General Manager Christeson*

   General Manager Christeson welcomed members of the public to the November 14 Board meeting.

4. **CORRECTIONS TO THE AGENDA OR CONSENT CALENDAR**

   Director Perroud requested to discuss Item 7a. Regular Meeting Minutes of September 12, 2020.

5. **COMMENTS FROM THE AUDIENCE**

   None

6. **WRITTEN COMMENTS FROM THE PUBLIC**

   None

7. **ADOPTION OF CONSENT CALENDAR**

   a. **Regular Board Meeting Minutes: September 12, 2020**
      Approve September 12, 2020 Regular Board Meeting Minutes
   b. **Regular Board Minutes: October 10, 2020**
      Approve October 10, 2020 Regular Board Meeting Minutes
   c. **Current Consent for Claims**

Approve Current Consent for Claims

d. **Receivables / Shut Offs Report**
Review Receivables /Shut Offs Report

Director O'Grady motioned to adopt Consent Calendar Items 6b. Regular Board Meeting Minutes October 10, 2020, 6c. Current Consent for Claims, and 6d. Receivables/Shut Offs Report as presented. Director Epstein seconded the motion and it carried by the following roll call vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

8. CONSENT ITEMS BROUGHT FORWARD FOR SEPARATE DISCUSSION / ACTION:

Director Perroud proposed to amend draft Regular Board Meeting Minutes of September 12, 2020, Item 8k. Propane/Electric Meter Protection. Discussion ensued. President Richert asked Directors if they wish to accept Director Perroud's proposed amendment to draft Regular Board Meeting Minutes of September 12, 2020, Item 8k. Propane/Electric Meter Protection. A "Yes" vote would amend the September 12, 2020 Regular Board Meeting Minutes as proposed by Director Perroud and a "No" vote would adopt the draft Regular Board Meeting Minutes as presented.

AYES: Directors Epstein, and Perroud

NOES: President Richert, Directors O'Grady, and Dornbrook

ABSENT: None

ABSTAINING: None

Draft Regular Board Meeting Minutes of September 12, 2020 are adopted as presented.

9. ITEMS FOR BOARD ACTION

a. **Fiscal Year 2019/2020 Audit.** Discussion and possible action. *Olga Darlington (Moss Adams)*

Olga Darlington, Moss Adams LLP presented the Fiscal Year 2019/2020 Audit results, including the Auditor's Report, required communications and District responsibilities. Discussion ensued.

Director O'Grady motioned to adopt the Fiscal Year 2019/2020 Audit as presented. President Richert seconded the motion and it carried by the following voice vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

b. **Finances.** Discussion and possible action regarding the District's financials. *Administrative Manager McBride*

i. September Financials. Administrative Manager McBride presented the Consolidated Balance Sheet noting Total Operating Cash is better than plan. Combined Income Statement was presented noting Operating Revenues for September are down from plan and Year-to-Date Total Revenues are down from plan. Income Statements for each department were presented, highlighting the comparisons between residential and operating revenues for each department.

ii. October Preliminaries. October 2020 Preliminary Income Statement was presented noting Operating Revenues are down from plan.

iii. Cash Flow. Cash Flow for the month of October ended better than plan.

iv. Budget Variance Tracking. Known Budget Variances for Fiscal Year 2021 were updated.

c. **Resolution 20-13 RUS Certificate of Authority.** Discussion and possible action. *AM McBride*

Administrative Manager McBride detailed RUS (Rural Utilities Service) requirements to have designated staff submit annual reporting requirements. Resolution 20-13 RUS Certificate of Authority designates Thomas Baggett, Accounting Specialist 2 as administrator on behalf of the District who shall be responsible for submitting required RUS forms and designates Kelly McBride, Administration Manager as Security Administrator on behalf of the District.

Director Dornbrook motioned to adopt Resolution 20-13 RUS Certificate of Authority as presented. Director O'Grady seconded the motion and it carried by the following voice vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

d. **Biannual Customer Survey Results.** Update. *GM Christeson*

General Manager Christeson presented a comparison of the 2018 and 2020 Customer Satisfaction Survey results. Discussion ensued.

e. **Communications Policy 720.** Discussion and possible action. *GM Christeson*

General Manager Christeson presented revised Communications Policy 720. Discussion ensued. President Richert suggested an amendment to Written Communications section.

Director Epstein motioned to adopt Communications Policy 720 as amended. Director Perroud seconded the motion and it carried by the following roll call vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

f. **Resolution 20-14, Continuing Service Suspensions, Penalties, and Shutoffs During COVID-19.** Discussion and possible action. *GM Christeson*

General Manager Christeson presented Resolution 20-14, Continuing Service Suspension, Penalties, and Shutoffs During COVID-19. Resolution 20-14 updates and extends Resolution 20-03 Temporary Relief for Nonpayment of Utilities.

General Manager Christeson reported on:

- CMUA and ACWA Legislative and Regulatory Committee Meetings.
- Update on State Water Resources Control Board Notice of Violation on Wells 4 and 5 for exceeding Manganese limits.

11. OPERATIONS REPORT

Assistant General Manager Ansel reported on:

- Winter preparations.
- Fire Department Grant Application.
- Hazard Tree Removal along the Out Valley Electric Line.

12. STANDING COMMITTEE REPORT

a. Finance Committee

Director O'Grady reported on Committee discussions regarding:

- Wood Chipping.
- Alpine County Property Tax Allocations.
- Electric Rates.

b. Planning Committee

Did not meet in November.
It was noted the Planning Committee will be considering whether or not to offer propane to future subdivisions.

c. Operations Committee

All items were covered.

d. Communications Committee

Director Epstein reported on Committee discussions regarding:

- Addition to the Report Server of aggregate number of days per month that residential units were occupied.
- Renewable Electricity and Propane Offset Program.
- Future topics for the December Committee meeting.

e. Personnel Committee

Did not meet

13. TEMPORARY ADVISORY COMMITTEE REPORT

a) Playground

Did not meet.

President Richert noted that a temporary advisory committee is needed to address use of the Office of Grants and Local Services (OGALS) grant funds.

14. GENERAL DISCUSSION

Director O'Grady motioned to adopt Resolution 20-14, Continuing Service Suspension, Penalties, and Shutoffs During COVID-19 as presented. Director Perroud seconded the motion and it carried by the following roll call vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

g. **Performance Reporting & Aquifer Levels.** Update *OM Benson*

Operations Manager Benson presented Performance Reporting and Aquifer Levels for each department for the month of October. Discussion ensued.

h. **Sanitary Sewer Management Plan Audit.** Review & possible action. *OM Benson*

General Manger Christeson presented the Sanitary Sewer Management Plan 2020 Audit Report noting that the Management Plan and Audit are contained in the same document. The Operations Committee has reviewed and recommends adoption. Discussion ensued.

Director Dornbrook motioned to adopt the Kirkwood Meadows Public Utility District Sewer System Management Plan 2020 Audit Report as presented. Director O'Grady seconded the motion and it carried by the following roll call vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

i. **Termination of Emergency under Resolution 20-09 Authorizing Emergency Repair Work to the District Powerhouse to Remedy a Broken Pipe and/or Fitting and Other Work.** Discussion & possible action. *GM Christeson*

General Manager Christeson summarized repairs completed to the District Powerhouse authorized under Resolution 20-09 Authorizing Emergency Repair Work to the District Powerhouse to Remedy a Broken Pipe and/or Fitting and Other Work.

Director Dornbrook motioned to terminate Resolution 20-09 Authorizing Emergency Repair Work to the District Powerhouse to Remedy a Broken Pipe and/or Fitting and Other Work. Director O'Grady seconded the motion and it carried by the following roll call vote:

AYES: President Richert, Directors Epstein, Dornbrook, Perroud, and O' Grady

NOES: None

ABSENT: None

ABSTAINING: None

10. GENERAL MANAGER'S REPORT *General Manager Christeson*

Director Dornbrook noted that the unofficial Trick or Treaters record for Kirkwood was broken on Halloween 2020 with approximately sixteen Trick or Treaters visiting his house.

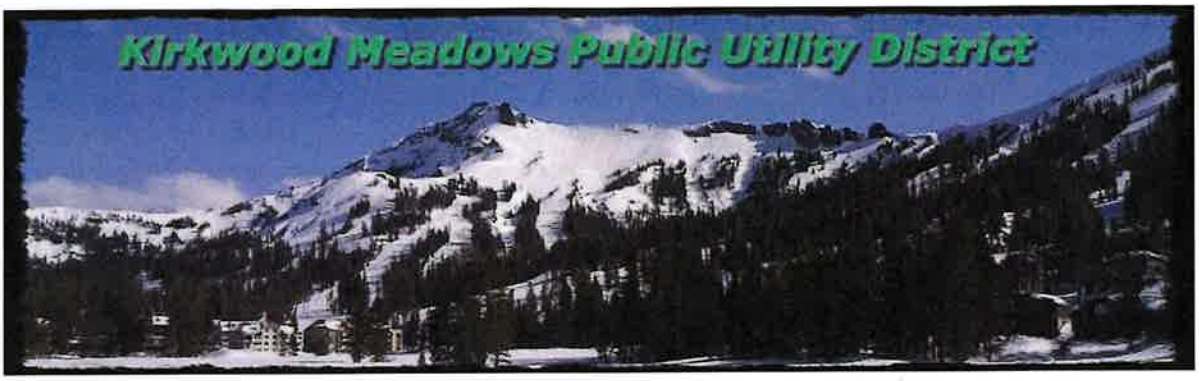
15. ADJOURNMENT

There being no further business, the meeting was adjourned at 9:38am.

(The next Regular Board Meeting is Saturday, December 12, 2020 at 8:00am)

_____
Peter Dornbrook, Board Secretary
Kirkwood Meadows Public Utility District

_____
Jessica Gillies, Clerk of the Board



KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT

SEWER SYSTEM MANAGEMENT PLAN 2022 AUDIT REPORT

Developed in compliance with Waste Discharge Requirement Water Quality Order No. 2006-003

This SSMP Audit Report was approved and adopted by the KMPUD Board of Directors during a public Board Meeting on

Audit Report Prepared By:

12/15/22

Derek Dornbrook Date
Wastewater Operator 3

Approved By:

Bob Epstein Date
KMPUD Board President

12/13/2022

Erik M. Christeson Date
KMPUD General Manager

Introduction

This report serves to comply with Order No. 2006-0003, issued by the State Water Resources Control Board in 2006. Order No. 2006-0003, hereinafter referred to as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR), requires that all public entities that own or operate one or more miles of sewer system comply with the contents of this order. The purpose of the WDR is to ensure that sanitary sewer overflows (SSOs) are mitigated through the implementation of system-wide operation, maintenance, and a Sanitary Sewer Management Plan (SSMP). Included in the details of the SSMP is a necessary self-audit corresponding to the size of the system with a minimum biannual frequency. This report outlines Kirkwood Meadows Public Utility District's (District) SSMP program audit and its corresponding tasks. The SSMP audit shall:

- Evaluate the effectiveness of the current SSMP
- Identify potential weaknesses of the current SSMP
- Determine improvement opportunities in the current SSMP

WDR Requirements for SSMP Element 10: SSMP Program Audits

As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection, including identification of any deficiencies in the SSMP and steps to correct them.

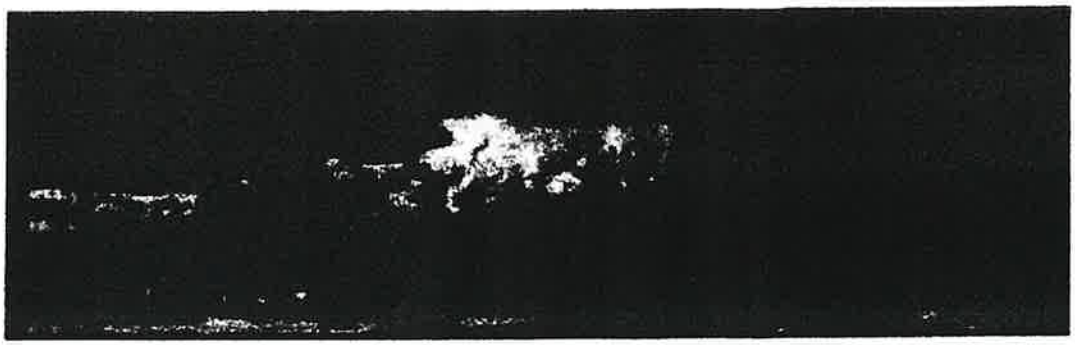
District Compliance Approach – As Stated in the SSMP

The District prepared and adopted an updated SSMP in June 2014. The updated SSMP expanded and improved the scope of the existing SSMP, which had last been updated in 2008. Section 10.2 of the District's updated SSMP document states that Beginning in June 2014, and every two years thereafter, the District will audit the effectiveness of all elements of the SSMP. The most recent SSMP self-audit was completed in October 2022. The program audit will include a final report reviewing the District's performance and identifying findings. The report will be made available to the public and will be kept on file.

District System Description and Performance

The District maintains approximately 8.6 miles of pipeline. The collection system pipeline consists of 6, 8, and 10-inch diameter pipe constructed of both concrete asbestos and polyvinyl chloride materials. Approximately 1/2 mile of the collection system consists of a force main. Included in the system are two pump stations.

In the last 5 years, the system had 4 reported SSOs in the California Integrated Water Quality System (CIQWS) as detailed in **Table 1.** The WDR requires that SSO records be kept for the previous 5 years as a minimum.



KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT

SEWER SYSTEM MANAGEMENT PLAN 2022 AUDIT REPORT

Developed in compliance with Waste Discharge Requirement Water Quality Order No. 2006-003

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Audit Report Prepared By:

Derek Dornbrook Date
Wastewater Operator 3

Approved By:

12/14/2022

Bob Epstein Date
KMPUD Board President

12/13/2022

Erik M. Christeson Date
KMPUD General Manager

Table 1: CIQWS Summary of District SSOs January 2017-2022

No.	Date	SSO Category	SSO Description	SSO Vol. Gallons	Volume Recovered Gallons	Volume Reached Surface Water Gallons
1	1/14/18	3	Collection system Manhole overflow due to debris blockage.	900	900	0
2	4/7/18	1	Collection system Manhole overflow due to extreme storm event which overwhelmed Influent Pump Station.	5000	4000	1000
3	8/23/18	3	Collection system Manhole overflow due to debris blockage.	400	400	0
4	8/13/20	3	Collection system Manhole overflow due to debris blockage.	20	20	0

Audit Tasks

The responsibility of this audit has been assigned to District Wastewater Operator 3, Derek Dornbrook who is directly involved with the daily operations of the collection system. In addition to completing the attached SSMP Audit Form, the following tasks are associated with the SSMP audits:

1. Review operation and maintenance protocols with field staff including preventative maintenance.
2. Conduct interviews of operational staff and staff that respond to SSOs to verify familiarity with the SSMP and SSO response procedures.
3. Review condition assessment and rehabilitation protocols.
4. Review the past 2 years of District SSO data and determine if additional corrective action is needed.
5. Record all findings during the audit process on the attached SSMP Audit Form. This form will be the final audit report for the District's collection system performance and improvement opportunities. This report will be kept on file and made available to the public.

Conclusion

The SSMP is functioning successfully however, it is now due for the 5-year update for adequate performance as indicated by the Statewide Sanitary Sewer Systems general Order (Order No. 2006-0003-DWQ.) During the review period, the District experienced no SSOs due to collection system blockages or major storm events.

As a summary of the attached SSMP Audit Form, the following improvement opportunities were identified in **Table 2** below.

Table 2: 2022 SSMP Audit Improvement Opportunities

SSMP Section	Improvement Opportunity	Target Date
Element 4. Operation and Maintenance Program. Maps.	Map updates and a comprehensive atlas.	December 2023.
Element 4. Operation and Maintenance Program. Training.	CWEA Collection System Specialist certifications for key operators.	Operator to be certified by December 2022.

ATTACHMENT 1

SSMP AUDIT FORM

(ADAPTED FROM FORMAT DEVELOPED BY BAY AREA CLEAN WATER AGENCIES)

2022

Table 3: Description of Sewer System Maintained by Kirkwood Meadows Public Utility District

Name of agency	Kirkwood Meadows Public Utility District
Date of audit	September 30th, 2022
Name of auditor	Derek Dornbrook, Wastewater Operator 3
System Overview	
LF of gravity sewer mains	42,240 LF (8 mi)
LF of force mains	3,250 LF
Total LF of all sewer lines	45,490 LF (8.6 mi)
Number of pump stations	2
Population served	250-6,000
Number of connections	664
Current average monthly single family sewer rate	$75

Audit Report – Elements 1-11

Element 1. Goals.

- Are the goals stated in the SSMP still appropriate and accurate?

Audit Findings

Yes, the goals stated in the SSMP are still appropriate and accurate. The SSMP supplements and supports the District's existing operation and maintenance programs and SSMP goals by providing high-level, consolidated guidelines and procedures for all aspects of the District's sewer system management

Element 2. Organization

- Is the SSMP up-to-date with District organization and staffing contact information?

Audit Findings

No, Organizational Chart will be included as part of the SSMP update effort. The SSO Response Plan and the SSO Reporting Chain of Communications are up-to-date. Names and contact information have been updated to current contact information as of September 30, 2022, and are included in Appendix A of the revised 2022 SSMP.

Element 3. Legal Authority

Reference Material
Ordinances
Enforcement Actions

- Does the SSMP contain up-to-date information about your agency's legal authority?
- Does your agency have sufficient legal authority to control sewer use and maintenance?

Audit Findings

No, the updated SSMP contains the formation document for KMPUD which is the basis of our legal authority.

Yes, the KMPUD Sewer Regulations are referenced in this element are current. All regulations, rates, connection fees, and ordinances can be referenced in Appendix D of the SSMP.

Element 4. Operations and Maintenance Program

A. Collection System Maps

Reference Material
Summary of information included in mapping system

- Does the SSMP contain up-to-date information about the District's maps?
- Are the District's collection system maps complete, up-to-date, and sufficiently detailed?

Audit Findings

Yes, the District currently has basic sewer system maps.

Yes, the District's collection system maps are up-to-date. However, the District's collection system maps are not complete and sufficiently detailed. The District will be retaining a consulting engineer to create a comprehensive sewer collection system map that will be available to KMPUD operations staff in electronic format and in bound hard-copy version for use. The maps will be actively updated based on information gathered in the field regarding physical features, conditions assessments, and/or maintenance activities.

B. Resources and Budget

Reference Material
Current Capital Improvement Plan (CIP)
Current Operating budget
Wastewater Collection System Repairs and Maintenance 5-Year plan

- Does the SSMP contain up-to-date information about the District's resources?
- Are the District's resources and budget sufficient to support effective sewer system management?
- Do the District's planning efforts support long-term goals?

Audit Findings

Yes, the above cited reference materials contain up-to-date information about District resources.
Yes, after the 2020 Wastewater Rate Study, the District has sufficient budget to support effective sewer system management.
The referenced 5-year plan has been augmented with a variety of planning efforts. Additionally, the District will be retaining a consulting engineer to develop a long-term master plan. The SSMP will be updated to reflect these changes and activities.

C. Prioritized Preventative Maintenance

Reference Material

Cleaning schedules
Work Orders
Service call data
Inspection reports.
Infiltration and inflow (I/I) monitoring studies and reports
Pipe and manhole condition data

Table 4. Annual Blockage Statistics and Preventative Maintenance Activities

	2018	2019	2020	2021	2022
Blockages in the past year	3	0	1	0	0
Blockages due to:					
Roots	0	0	0	0	0
Grease	0	0	0	0	0
Debris	3	0	1	0	0
Other	0	0	0	0	0
Average response time	1/2 hour	N/A	1/2 hour	N/A	N/A
Ratio of planned cleaning to unplanned cleaning (LF)	3 to 0	N/A	1 to 0	1 to 0	1 to 0
Number of customer complaints in last year	0	0	0	0	0
Number of positive customer responses	1	0	0	0	0

- Does the SSMP contain up-to-date information about your agency's preventative maintenance activities?
- Considering the information in Tables 4-6, are the District's preventative maintenance activities sufficient in reducing and preventing SSOs and blockages?
- Are the District's preventative maintenance activities sufficient and effective in reducing and preventing SSO's?
- Does the SSMP contain up-to-date information about the District's inspections and condition assessment
- Are the District's scheduled inspections and condition assessments effective in locating, identifying, and addressing deficiencies?

Audit Findings

Yes, the SSMP contains up-to-date information about the District's maintenance and inspection activities.
Yes, the sufficiency and effectiveness of these activities in reducing and preventing SSOs are reflective of the aforementioned tables. The District's preventative maintenance activities have been exceptional in reducing and preventing SSOs and blockages as there have been no SSO incidents during the audit review period. Recent activities have included televising, recording, and cleaning large sections of the collection system. Additionally, pump station alarm systems have been improved in response to an SSO in 2014 and all alarms systems are routinely inspected and tested. Improved documentation regarding FOG inspections has been implemented in addition to formalized documentation of said inspections and have served to prevent SSOs due to FOG.

D. Equipment and Replacement Inventory

Reference Material
Funds spent on equipment and materials
Equipment and parts inventory

- Does the SSMP contain up-to-date information about equipment and replacement inventories?
- Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?

Audit Findings

Yes, the District maintains spare parts for pump stations in the event of failure, including rebuild kits and level indicators. The District also has a vac-truck, jetter trailer, and temporary bypass pumps available to respond to line blockage. Additionally, the District has full redundancy generators that are kept in a ready-state in case of power loss.

E. Training

Reference Material
Employee training records
Interviews with staff

- Does the SSMP contain up-to-date information about your agency's training expectations and programs?
- Do supervisors believe that their staff is sufficiently trained?
- Are staff satisfied with the training opportunities and support offered?

Audit Findings

Yes, the District places a high level of importance on safety and technical training. The District budget includes a training budget to ensure that all staff is properly trained. New staff receive on-the-job training specific to the collection system and maintenance equipment used. Staff also attends outside

workshops whenever practical. Opportunity for audit improvement exists in Collection System Grade Certification which is offered by the California Water Environment Association (CWEA). All operations staff is encouraged and will be given support to obtain these certifications.

Element 5. Design and Performance Provisions

Reference Material
Design and construction standards
Ordinances

- Does the SSMP contain up-to-date information about the District's design and construction standards?
- Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date?

Audit Findings

Yes, the SSMP contains up-to-date information about design and construction standards. The District Engineer reviews plans for construction of new collection system infrastructure which includes verification that the proposed improvements adhere to the District's Design Standards. The current KMPUD Design Standards are available at www.kmpud.com .

Element 6. Overflow Emergency Response Program

Reference Material
Data submitted to CIQWS
Service call data

Table 5. Annual SSO Statistic

Number of wet weather SSOs	1	0	0	0	0
Total number of SSOs	3	0	1	0	0
Category 1 SSOs	1	0	0	0	0
Category 2 SSOs	0	0	0	0	0
Category 3 SSOs	2	0	1	0	0
Private Lateral SSOs	N/A	0	0	0	0
Total volume of SSOs	6300	0	20	0	0
Total volume recovered	5300	0	20	0	0
Net volume of SSOs (total minus recovered)	1000	0	0	0	0
SSOs caused by:					
Roots	0	0	0	0	0
Grease	0	0	0	0	0
Debris	2	0	1	0	0
Pipe failure	0	0	0	0	0
Pump station failure	0	0	0	0	0
Capacity-limited pipe segment (no debris)	1	0	0	0	0
Other	0	0	0	0	0
Number of locations with more than one SSO in the past year	0	0	0	0	0
Average response time-during business hours	1/2 hr	N/A	N/A	N/A	N/A
Average response time-after business hours	N/A	N/A	N/A	N/A	N/A

- Does the SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan?
- Considering the information in Table 5, is the Overflow Emergency Response Plan effective in handling SSOs?

Audit findings

Yes, the SSMP contains an up-to-date version of the District's Overflow Emergency Response Plan and this plan has been very effective in handling SSOs. The Response Plan was amended to include a detailed, step-by-step response guide for managers and field operators. Table 6-1: Outside Agency Contact Information was updated on September 30, 2022 and is included in Appendix B-KMPUD SSMP Field Guide.

Element 7. Fats, Oils, and Grease (FOG) Control Plan

Reference Material
Restaurant inspection reports
Data submitted to CIQWS
Service call data

Table 6. FOG Control Statistics

	2018	2019	2020	2021	2022
Number of SSOs caused by FOG	0	0	0	0	0
Planned cleaning (LF)	3	6	3	4	5
Unplanned cleaning (LF)	0	0	0	0	0
Ratio of planned to unplanned cleaning (LF)	N/A	N/A	N/A	N/A	N/A
Number of FOG inspections completed	6	12	12	12	9

- Does the SSMP contain up-to-date information about the District's FOG control program?
- Considering the information in Table 6, is the current FOG program effective in documenting and controlling FOG sources?

Audit Findings

Yes, the SSMP contains up-to-date information about the District's FOG control program and this program is effective in documenting and controlling FOG sources. Documentation protocols were updated upon recommendation of the 2014 Audit Report and a highly formalized program has been instituted, wherein District staff works in cooperation with FSEs to ensure effective FOG control to prevent SSOs. District staff inspects all of the FOG removal devices within the District's service area on a monthly basis and documents all inspections and defects of FOG removal devices.

Element 8. System Evaluation and Capacity Assurance Plan

Reference Material
Capacity assessment reports
Capital improvement plan
SSO Data

Table 7. SSOs Caused by Hydraulic Limitations

Number of SSOs Caused by capacity limitations	2018	2019	2020	2021	2022
	1	0	0	0	0

- Does the SSMP contain up-to-date information about the District's capacity assessment?
- Has the District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?

Audit Findings

Yes, a Capital Improvements Plan (CIP) for the District was adopted on May 10, 2014 by the District. The KMPUD Water and Sewer Master CIP includes in the budget dedicated funds to identify and mitigate infiltration and inflow. Additionally, the District has adopted Design Standards as outlined in Element 5 which are sufficient to meet the needs of the District.

Element 9. Monitoring, Measurement, and Program Modifications

- Does the SSMP contain up-to-date information about the District's data collection and organization?
- Is the District's data collection and organization sufficient to evaluate the effectiveness of your SSMP?

Audit Findings

Yes, the SSMP contains up-to-date information of data collection and organization that is sufficient to evaluate the effectiveness of the SSMP. Review of the lack of SSO occurrences from the past two years supports that the SSMP is successful in maintaining minimal SSOs.

Element 10. SSMP Audits

- Discuss the effectiveness of this audit format and provide any suggestions for changes.
- Will a copy of this SSMP Audit be included in the SSMP document as an appendix?

Audit Findings

This 2022 SSMP Audit was conducted in a similar format to the 2020 Audit. The current format was found to be effective in that it required a more thorough examination of the SSMP and included increased participation from operations staff. A copy of this SSMP Audit will be included in the SSMP document as an appendix and will serve as a template for future Audits.

Element 11. Communication Program

Reference Material
Mailings and mailing list
Website
Other communication records such as newspaper ads, site postings, or other outreach
Customer feedback

- Does the SSMP contain up-to-date information about the District's public outreach activities?
- Does the SSMP contain up-to-date information about the District's communications with satellite and tributary agencies?
- Has the District effectively communicated with the public about the SSMP, and addressed feedback?

Audit Findings

Yes, the SSMP document is available for public viewing at the District Office, and copies of the document (or portions of) are available upon request, at the regular charge for copies. The final SSMP document is posted on the District's web site for viewing by the general public. The 2020 Audit Review will also be available by all aforementioned means. The District's sewer collection system does not have any tributary or satellite collection systems which contribute wastewater to District facilities. The District constantly strives to communicate with the public about the SSMP and addresses all feedback through public hearings or the District web site. Additional outreach efforts are addressed by the District's monthly newsletter which often includes articles related to SSO prevention measures that can be aided by public awareness and participation.

APPENDIX H – SPILL RECORDS

In the event of a sanitary sewer spill, KMPUD will maintain records of each spill event for at least five years. Copies of field notes and CIWQS summaries for each spill are included in this Appendix.

SSO - General Information

SSO Event ID:	806252	**Regional Water Board:**	5S
Spill Location Name:	Kirkwood Inn / Cross Country Center	**Agency:**	Kirkwood Meadows PUD
WDID:	5SSO10975	**Sanitary Sewer System:**	Kirkwood Meadows CS

File Name	File Description	Date/Time Uploaded	Status
806252_Version_1.pdf	Certified spill pdf : 806252_Version_1.pdf	05/23/2014 - 15:17:22	OK

General Info

Glossary of Terms

Locate the spill on map

Certified by Derek Dornbrook on 2014-05-23 00:00:00.0

1 - Spill Type: Category 3

2 - Estimate Spill Volumes

a) Estimated spill volume that reached a separate storm drain that flows to a surface water body?	0
b) Estimated spill volume recovered from the separate storm drain that flows to a surface water body? (Do not include water used for clean-up)	0
c) Estimated spill volume that reached a drainage channel that flows to a surface water body?	0
d) Estimated spill volume recovered from a drainage channel that flows to a surface water body?	0
e) Estimated spill volume discharged directly to a surface water body?	0
f) Estimated spill volume recovered from surface water body?	0
g) Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location.)	20
h) Estimated spill volume recovered from the discharge to land? (Do not include water used for clean-up)	20

Estimated Total spill volume Reach Surface Water (a-b+c+e)	Estimated Total spill volume Reach Land (g)	Estimated Total spill volume Recovered (b+d+f+h)	Estimated Total spill volume (a+c+e+g)

0	20	20	20

3 - Did the spill discharge to a drainage channel and/or surface water?	No
4 - Did the spill reach a separate (i.e.,not combined) storm drainpipe?	No
5 - If spill reached to a separate storm drainpipe, was all of the wastewater fully captured from the separate storm drain and returned to the sanitary sewer system?	Not Applicable - Spill did not reach a separate storm drainpipe

Physical Location Details

6 - Spill location name:	Kirkwood Inn / Cross Country Center
7 - Latitude of spill location:	38.703061
8 - Longitude of spill location:	-120.073183
9 - County:	El Dorado
10 - Regional Water Quality Control Board:	5S
11 - Spill location description:	This was a private spill, on private land. The spill was caused by a blocked line that forced sewer water to escape from the clean out.

Spill Details

12 - Number Of appearance points:	1
13 - Spill appearance point:	Lateral Clean Out (Private)
14 - Spill appearance point explanation:	
15 - Final spill destination:	Unpaved surface
16 - Explanation of final spill destination:	Spill was observed in a 10x10 area above ground.
17 - Estimated spill start date/time:	2014-04-17 10:30:00.0
18 - Date and time sanitary sewer system agency was notified of or discovered spill:	2014-04-17 10:30:00.0

19 - Estimated Operator arrival date/time:	2014-04-17 11:00:00.0
20 - Estimated spill end date/time:	2014-04-17 10:30:00.0
21 - Spill cause:	Debris from Lateral
22 - Spill cause explanation:	
23 - Where did failure occur?	Other (specify below)
24 - Explanation of Where failure occured:	Private Lateral Cleanout
25 - Was this spill associcated with a storm event?	No
26 - Diameter of sewer pipe at the point of blockage or failure:	2
27 - Material of sewer pipe at the point of blockage or failure:	PVC
28 - Estimated age of sewer asset at the point of blockage or failure:	30
29 - Explanation of volume estimation method used:	Upon observing the debris and staining around the spill location I estimate the spill to be surface spill withing a 10' x10' area.

Notification Details

30(a) - Name and Tittle (Contact person who can answer specific questions about this SSO)	Derek Dornbrook
30(b) - Contact Person Phone Numner	209258444

SSO - General Information

SSO Event ID:	806579	**Regional Water Board:**	5S
Spill Location Name:	East Meadows Lift Station	**Agency:**	Kirkwood Meadows PUD
WDID:	5SSO10975	**Sanitary Sewer System:**	Kirkwood Meadows CS

File Name	File Description	Date/Time Uploaded	Status
806579_Version_1.4.pdf	Certified spill pdf : 806579_Version_1.4.pdf	06/03/2014 - 09:04:21	OK

General Info

Glossary of Terms

Locate the spill on map

Certified by Derek Dornbrook on 2014-06-03 00:00:00.0

1 - Spill Type:	Category 1

2 - Estimate Spill Volumes

a) Estimated spill volume that reached a separate storm drain that flows to a surface water body?	0
b) Estimated spill volume recovered from the separate storm drain that flows to a surface water body? (Do not include water used for clean-up)	0
c) Estimated spill volume that reached a drainage channel that flows to a surface water body?	0
d) Estimated spill volume recovered from a drainage channel that flows to a surface water body?	0
e) Estimated spill volume discharged directly to a surface water body?	30
f) Estimated spill volume recovered from surface water body?	0
g) Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location.)	120
h) Estimated spill volume recovered from the discharge to land? (Do not include water used for clean-up)	0

Estimated Total spill volume Reach Surface Water (a-b+c+e)	Estimated Total spill volume Reach Land (g)	Estimated Total spill volume Recovered (b+d+f+h)	Estimated Total spill volume (a+c+e+g)

30	120	0	150

3 - Did the spill discharge to a drainage channel and/or surface water?	Yes
4 - Did the spill reach a separate (i.e.,not combined) storm drainpipe?	No
5 - If spill reached to a separate storm drainpipe, was all of the wastewater fully captured from the separate storm drain and returned to the sanitary sewer system?	Not Applicable - Spill did not reach a separate storm drainpipe

Physical Location Details

6 - Spill location name:	East Meadows Lift Station
7 - Latitude of spill location:	38.697669
8 - Longitude of spill location:	-120.071683
9 - County:	Alpine
10 - Regional Water Quality Control Board:	5S
11 - Spill location description:	Overflow from a collection system manhole directly adjacent to the force main pump station and next to Kirkwood Creek.

Spill Details

12 - Number Of appearance points:	1
13 - Spill appearance point:	Manhole
14 - Spill appearance point explanation:	
15 - Final spill destination:	Surface Water
16 - Explanation of final spill destination:	
17 - Estimated spill start date/time:	2014-05-30 02:45:00.0

18 - Date and time sanitary sewer system agency was notified of or discovered spill:	2014-05-30 03:00:00.0
19 - Estimated Operator arrival date/time:	2014-05-30 03:15:00.0
20 - Estimated spill end date/time:	2014-05-30 03:15:00.0
21 - Spill cause:	Pump Station Failure-Controls
22 - Spill cause explanation:	Bubbler level system failed to operate due to failure of compressors.
23 - Where did failure occur?	Pump Station-Controls
24 - Explanation of Where failure occured:	
25 - Was this spill associcated with a storm event?	No
26 - Diameter of sewer pipe at the point of blockage or failure:	8
27 - Material of sewer pipe at the point of blockage or failure:	PVC
28 - Estimated age of sewer asset at the point of blockage or failure:	18
29 - Spill response activities:	Cleaned-Up
30 - Explanation of spill response activities:	KMPUD staff fenced off spill area, posted area, applied lime and cleaned up area. In process of removing and disposing of contaminated soil.
31 - Spill response completion date:	2014-06-03 02:00:00.0
	Repaired Facilities or Replaced Defect

32 - Spill corrective action taken:	
33 - Explanation of spill corrective action taken:	NA
34a - Is there an ongoing investigation?	No
34b - Reason for ongoing investigation?	
35 - Visual inspection results from impacted receiving water:	No visible nusisance or health impacts observed.
36 - Health warnings posted?	Yes
37 - Did the spill result in a beach closure (If YES, answer questions 38)?	No
38 - Name of impacted beach(es) (enter NA if not applicable):	
39 - Name of impacted surface water(s) (enter NA if not applicable):	Kirkwood Creek
40 - Water quality samples analyzed for:	Biological indicator(s) - specify below
41 - Explanation of water quality samples analyzed for:	Total Coliform sample taken to asses possbile impact to public health.
42 - Water quality sample results reported to:	Regional Water Quality Control Board
43 - Explanation of water quality sample results reported to:	

44 - Explanation of volume estimation method used:	Volume was estimated by determining gallon volume of pump station wet well, gallon volume of collection system piping upstream to affected manhole. SCADA readings were analyzed to determine the time that the event began and ended. Visual observations determined that the spill was 1-2 gallons per minute. Combining all of this data allowed KMPUD to determine approximate gallon volume of spill.

Notification Details

45 - Cal OES Control Number	140365
46 - Cal OES Called Date/Time	2014-05-30 06:15:00.0
47(a) - Name and Tittle (Contact person who can answer specific questions about this SSO)	Derek Dornbrook
47(b) - Contact Person Phone Numner	2092584444

You are logged-in as: PUBLIC.

SSO - General Information

SSO Event ID:	844512	**Regional Water Board:**	5S
Spill Location Name:	Fremont and Dangburg Intersection	**Agency:**	Kirkwood Meadows PUD
WDID:	5SSO10975	**Sanitary Sewer System:**	Kirkwood Meadows CS

File Name	File Description	Date/Time Uploaded	Status
844512_Version_1.1.pdf	Certified spill pdf : 844512_Version_1.1.pdf	08/21/2018 - 08:59:07	OK

General Info

Glossary of Terms

Locate the spill on map

Certified by Derek Dornbrook on 2018-08-21 00:00:00.0

1 - Spill Type: Category 3

2 - Estimate Spill Volumes

a) Estimated spill volume that reached a separate storm drain that flows to a surface water body?	0
b) Estimated spill volume recovered from the separate storm drain that flows to a surface water body? (Do not include water used for clean-up)	0
c) Estimated spill volume that reached a drainage channel that flows to a surface water body?	0
d) Estimated spill volume recovered from a drainage channel that flows to a surface water body?	0
e) Estimated spill volume discharged directly to a surface water body?	0
f) Estimated spill volume recovered from surface water body?	0
g) Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location.)	900
h) Estimated spill volume recovered from the discharge to land? (Do not include water used for clean-up)	900

Estimated Total spill volume Reach Surface Water (a-b+c+e)	Estimated Total spill volume Reach Land (g)	Estimated Total spill volume Recovered (b+d+f+h)	Estimated Total spill volume (a+c+e+g)

01/2018

0	900	900	900

3 - Did the spill discharge to a drainage channel and/or surface water?	No
4 - Did the spill reach a separate (i.e.,not combined) storm drainpipe?	No
5 - If spill reached to a separate storm drainpipe, was all of the wastewater fully captured from the separate storm drain and returned to the sanitary sewer system?	Not Applicable - Spill did not reach a separate storm drainpipe

Physical Location Details

6 - Spill location name:	Fremont and Dangburg Intersection
7 - Latitude of spill location:	38.69353
8 - Longitude of spill location:	-120.07618
9 - County:	Amador
10 - Regional Water Quality Control Board:	5S
11 - Spill location description:	

Spill Details

12 - Number Of appearance points:	1
13 - Spill appearance point:	Manhole
14 - Spill appearance point explanation:	
15 - Final spill destination:	Paved Surface
16 - Explanation of final spill destination:	
17 - Estimated spill start date/time:	2018-01-14 08:00:00.0
18 - Date and time sanitary sewer system agency was notified of or discovered spill:	2018-01-14 09:00:00.0
19 - Estimated Operator arrival date/time:	2018-01-14 09:30:00.0

20 - Estimated spill end date/time:	2018-01-14 10:30:00.0
21 - Spill cause:	Debris from Lateral
22 - Spill cause explanation:	
23 - Where did failure occur?	Gravity Mainline
24 - Explanation of Where failure occured:	
25 - Was this spill associcated with a storm event?	No
26 - Diameter of sewer pipe at the point of blockage or failure:	6
27 - Material of sewer pipe at the point of blockage or failure:	Asbestos Concrete
28 - Estimated age of sewer asset at the point of blockage or failure:	35
29 - Explanation of volume estimation method used:	Area of spill with volume of manhole and main.

Notification Details

30(a) - Name and Tittle (Contact person who can answer specific questions about this SSO)	Derek Dornbrook
30(b) - Contact Person Phone Numner	2092584444

You are logged-in as: PUBLIC.

SSO - General Information

SSO Event ID:	846352	**Regional Water Board:**	5S
Spill Location Name:	Kirkwood Meadows PUD Wastewater Treatment Plant	**Agency:**	Kirkwood Meadows PUD
WDID:	5SSO10975	**Sanitary Sewer System:**	Kirkwood Meadows CS

File Name	File Description	Date/Time Uploaded	Status
846352_Version_1.3.pdf	Certified spill pdf : 846352_Version_1.3.pdf	04/18/2018 - 12:47:53	OK

General Info

Glossary of Terms

Locate the spill on map

Certified by Derek on 2018-04-18 00:00:00.0

1 - Spill Type: Category 1

2 - Estimate Spill Volumes

a) Estimated spill volume that reached a separate storm drain that flows to a surface water body?	0
b) Estimated spill volume recovered from the separate storm drain that flows to a surface water body? (Do not include water used for clean-up)	0
c) Estimated spill volume that reached a drainage channel that flows to a surface water body?	10000
d) Estimated spill volume recovered from a drainage channel that flows to a surface water body?	0
e) Estimated spill volume discharged directly to a surface water body?	0
f) Estimated spill volume recovered from surface water body?	0
g) Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location.)	40000
h) Estimated spill volume recovered from the discharge to land? (Do not include water used for clean-up)	40000

Estimated Total spill volume Reach Surface Water (a-b+c+e)	Estimated Total spill volume Reach Land (g)	Estimated Total spill volume Recovered (b+d+f+h)	Estimated Total spill volume (a+c+e+g)

100	40000	40000	50000

3 - Did the spill discharge to a drainage channel and/or surface water?	Yes
4 - Did the spill reach a separate (i.e.,not combined) storm drainpipe?	No
5 - If spill reached to a separate storm drainpipe, was all of the wastewater fully captured from the separate storm drain and returned to the sanitary sewer system?	Not Applicable - Spill did not reach a separate storm drainpipe

Physical Location Details

6 - Spill location name:	Kirkwood Meadows PUD Wastewater Treatment Plant
7 - Latitude of spill location:	38.6906
8 - Longitude of spill location:	-120.07104
9 - County:	Alpine
10 - Regional Water Quality Control Board:	5S
11 - Spill location description:	Spilled out of a manhole directly adjacent to the wastewater treatment plant.

Spill Details

12 - Number Of appearance points:	1
13 - Spill appearance point:	Manhole
14 - Spill appearance point explanation:	
15 - Final spill destination:	Other (specify below)
16 - Explanation of final spill destination:	Most of the spill was absorbed by a snow bank that was removed and placed within the wastewater treatment plant.
17 - Estimated spill start date/time:	2018-04-07 08:30:00.0
18 - Date and time sanitary sewer system agency was notified of or discovered spill:	2018-04-07 09:00:00.0

19 - Estimated Operator arrival date/time:	2018-04-07 09:00:00.0
20 - Estimated spill end date/time:	2018-04-07 13:00:00.0
21 - Spill cause:	Rainfall Exceeded Design, I and I (Separate CS Only)
22 - Spill cause explanation:	
23 - Where did failure occur?	Pump Station-Mechanical
24 - Explanation of Where failure occured:	
25 - Was this spill associcated with a storm event?	Yes
26 - Diameter of sewer pipe at the point of blockage or failure:	6
27 - Material of sewer pipe at the point of blockage or failure:	Concrete Asbestos
28 - Estimated age of sewer asset at the point of blockage or failure:	40
29 - Spill response activities:	Cleaned-Up;Mitigated Effects of Spill;Returned Portion of Spill to Sanitary Sewer System;Other Enforcement Agency Notified
30 - Explanation of spill response activities:	
31 - Spill response completion date:	2018-04-18 13:46:00.0
32 - Spill corrective action taken:	Added sewer to preventive maintenance program
33 - Explanation of spill corrective action taken:	Attempted to contain spill. Barricaded area off from public. Swept up debris. Washed down area. Removed contaminated snow.
34a - Is there an ongoing investigation?	Yes
34b - Reason for ongoing investigation?	To determine impact of spill on Kirkwood Creek
35 - Visual inspection results from impacted receiving water:	None
36 - Health warnings posted?	Yes
37 - Did the spill result in a beach closure (If YES, answer questions 38)?	No

38 - Name ıpacted beach(es) (enter NA if not applicable):	None
39 - Name of impacted surface water(s) (enter NA if not applicable):	Kirkwood Creek
40 - Water quality samples analyzed for:	Biological indicator(s) - specify below
41 - Explanation of water quality samples analyzed for:	Total Coliform
42 - Water quality sample results reported to:	Other (specify below)
43 - Explanation of water quality sample results reported to:	County Health Agency and Regional Water Quality Control Board will receive results
44 - Explanation of volume estimation method used:	Amount of Influent metered minus amount of Effluent metered to determine gallons spilled.

Notification Details

45 - Cal OES Control Number	182285
46 - Cal OES Called Date/Time	2018-04-07 13:00:00.0
47(a) - Name and Tittle (Contact person who can answer specific questions about this SSO)	Derek Dornbrook
47(b) - Contact Person Phone Numner	2092584444

SSO - General Information

SSO Event ID:	850623	**Regional Water Board:**	5S
Spill Location Name:	Wintergreen Meadow	**Agency:**	Kirkwood Meadows PUD
WDID:	5SSO10975	**Sanitary Sewer System:**	Kirkwood Meadows CS

File Name	File Description	Date/Time Uploaded	Status
850623_Version_1.1.pdf	Certified spill pdf : 850623_Version_1.1.pdf	08/29/2018 - 11:12:07	OK

General Info

Glossary of Terms

Locate the spill on map

Certified by Derek Dornbrook on 2018-08-29 00:00:00.0

1 - Spill Type:	Category 3

2 - Estimate Spill Volumes

a) Estimated spill volume that reached a separate storm drain that flows to a surface water body?	0
b) Estimated spill volume recovered from the separate storm drain that flows to a surface water body? (Do not include water used for clean-up)	0
c) Estimated spill volume that reached a drainage channel that flows to a surface water body?	0
d) Estimated spill volume recovered from a drainage channel that flows to a surface water body?	0
e) Estimated spill volume discharged directly to a surface water body?	0
f) Estimated spill volume recovered from surface water body?	0
g) Estimated spill volume discharged to land? (Includes discharges directly to land, and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location.)	400
h) Estimated spill volume recovered from the discharge to land? (Do not include water used for clean-up)	400

Estimated Total spill volume Reach Surface Water (a-b+c+e)	Estimated Total spill volume Reach Land (g)	Estimated Total spill volume Recovered (b+d+f+h)	Estimated Total spill volume (a+c+e+g)

0	400	400	400

3 - Did the spill discharge to a drainage channel and/or surface water?	No
4 - Did the spill reach a separate (i.e.,not combined) storm drainpipe?	No
5 - If spill reached to a separate storm drainpipe, was all of the wastewater fully captured from the separate storm drain and returned to the sanitary sewer system?	Not Applicable - Spill did not reach a separate storm drainpipe

Physical Location Details

6 - Spill location name:	Wintergreen Meadow
7 - Latitude of spill location:	38.6985
8 - Longitude of spill location:	-120.07577
9 - County:	Amador
10 - Regional Water Quality Control Board:	5S
11 - Spill location description:	Collection system Manhole overflowed. Manhole is located in the meadow.

Spill Details

12 - Number Of appearance points:	1
13 - Spill appearance point:	Manhole
14 - Spill appearance point explanation:	
15 - Final spill destination:	Unpaved surface
16 - Explanation of final spill destination:	
17 - Estimated spill start date/time:	2018-08-23 10:00:00.0
18 - Date and time sanitary sewer system agency was notified of or discovered spill:	2018-08-23 13:00:00.0

19 - Estimated Operator arrival date/time:	8-08-23 13:15:00.0
20 - Estimated spill end date/time:	2018-08-23 14:30:00.0
21 - Spill cause:	Debris-Wipes/Non-Dispersables
22 - Spill cause explanation:	
23 - Where did failure occur?	Gravity Mainline
24 - Explanation of Where failure occured:	
25 - Was this spill associcated with a storm event?	No
26 - Diameter of sewer pipe at the point of blockage or failure:	8
27 - Material of sewer pipe at the point of blockage or failure:	Asbestos Concrete
28 - Estimated age of sewer asset at the point of blockage or failure:	40
29 - Explanation of volume estimation method used:	Determined gallons per minute spilling and multiplied by length of time of spill.

Notification Details

30(a) - Name and Tittle (Contact person who can answer specific questions about this SSO)	Derek Dornbrook
30(b) - Contact Person Phone Numner	2092584444

KMPUD SSO RESPONSE REPORT FORM

Report I.D. _____

Staff Individual Completing Form: Derek Dornbrook Date: 8/14/20

Description of Problem or Call

Date & Time of First Notification or Discovery	Reported Location of Problem (address, cross street, etc.)
8/13/20 4:10 PM	Manhole #34 near Wintergreen Wy.

Nature of Call (spill, odor, etc.)
Sewage spilling out of top of Manhole.

Reporting Party / Individual (name)	Phone Number	Address
Peter Catalano	831-247-2036	50977 Wintergreen Way

Spill Response

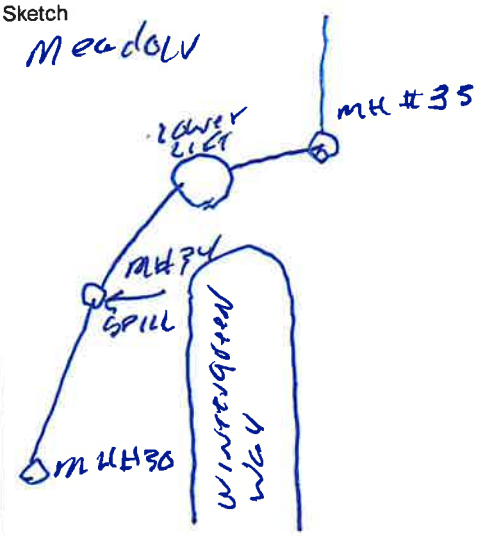
First Responder - Name	First Responder Arrival Time & Date
Derek Dornbrook	4:30 pm 8/13/20

Location of Problem (address, cross street, etc.)	GPS Coordinates	Region: RWQCB Region 5b County in which spill occurred (circle): El Dorado / Alpine / Amador
Manhole #34 near 50977 Wintergreen Way		

Names of all Responders	Arrival Time	Departure Time
	4:30 PM	11:04 PM
Name: Erik Christeson	Arrival Time: 4:30 pm	Departure Time: 6:30 PM
Name: Brandi Benson	Arrival Time: 4:30PM	Departure Time: 11:00PM
Name: Derek Dornbrook	Arrival Time: 4:30 PM	Departure Time: 11:04 PM
Name: David Wadello	Arrival Time: 4:30 pm	Departure Time: 11:00 PM
Name:	Arrival Time:	Departure Time:

Time Spill Started and Description of Problem
Spill started around 4:00 pm. Sewage spilling out of Manhole Very small spill radius near Manhole.

Sketch



Cause of Spill (narrative)
Debris, rocks, and asphalt grindings blocked flow channel between "Lower Lift" Manhole and Manhole #35, caused sewage to back up and flow out @ Manhole #34.

KMPUD SSO RESPONSE REPORT FORM

Report I.D. _____

Spill Mitigation

Corrective Steps Taken

Jetter Trailer Mobilized to clear blockage. Did not clear but opened flow sufficient to stop spill. Summit Septic vactor/jetter truck deployed to clear blockage and remove debris.

Sketch

Safety Measures Employed

Caution Tape deployed around spill area. Spill kit and lime employed to neutralize and clean spill.

Time Spill was Contained	Time Spill Ended	Time Clean-Up was Completed
4:45 PM	5:00 PM	3:00 PM 8/14/20

Actions Recommended / Taken to Prevent Future Spills

Flush and vac these lines regularly to remove asphalt grindings. Video inspection of lines for possible breaks. Smoke test for main breaks, lateral breaks, or broken cleanouts.

Spill Categorization (circle one after completing this section):

Category 1 / Category 2 / (Category 3) / Private Lateral Spill

Source of spill (manhole, cleanout, etc.)

Was the spill / blockage on a privately owned sewer lateral? Y / (N) — If yes; categorized as a "Private Lateral Spill"

Did spill enter storm drain pipe or roadside ditch? Y / (N) — If yes; then "Category 1 Spill"

Was entire spill captured and returned to system? (Y) / N — If no; then "Category 1 Spill"

Did any portion of spill reach a drainage channel or surface water? Y / (N) — If yes; then "Category 1 Spill"

If not a Category 1 Spill, as defined above, and the SSO ≥ 1,000 gallons: Then "Category 2 Spill"

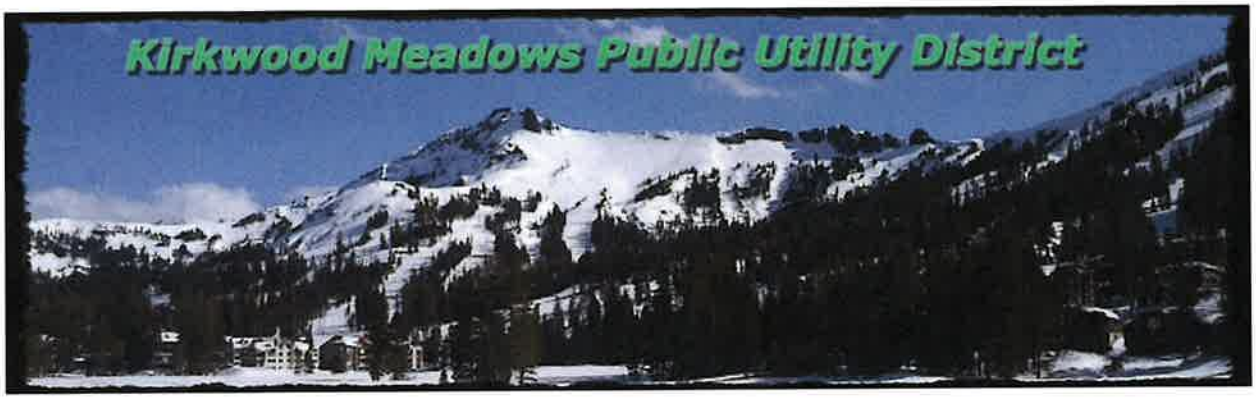
If not a Category 1 Spill, as defined above, and the SSO < 1,000 gallons: Then "Category 3 Spill"

KMPUD SSO RESPONSE REPORT FORM

Report I.D. _____

Number of gallons that reached surface water, or was not recovered from storm drain (if any): NONE			
Destination of spill (parcel, creek name, etc.) Kirkwood Meadows			
Water bodies impacted (names) NONE			
Were health warnings posted? (Y) / N	Posted Locations EMAIL NOTIFICATIONS SENT TO CUSTOMERS.		
Samples Collected (state N/A if none) NA			
Description (Sample 1a)	Location & Volume	Delivered to (Lab)	Analyzed for
Description (Sample 1b)	Location & Volume	Delivered to (Lab)	Analyzed for
Description (Sample 2)	Location & Volume	Delivered to (Lab)	Analyzed for
Reporting / Certification			
Included in online monthly SSO Report? (Y) / N	Date: 9/1/20		
Customers / Individuals Notified (names)			
Report to Cal OES: Y / (N)	Date / Time	Reporting Individual	Control Number
Other Agency (specify)	Date / Time	Reporting Individual	
Other Agency (specify)	Date / Time	Reporting Individual	
Other Agency (specify)	Date / Time	Reporting Individual	
Ongoing Investigation? (Y) / N			
Notes: SPILL WAS VERY SMALL AT LESS THAN 20 GALLONS.			

N:\14600-Kirkwood Meadows PUD-District Engineer\14600-03 SSMP Update\SSMP 2014\SSO Response Report Form.docx



MANAGEMENT PLAN

LEACHFIELD MONITORING PORTS

Add this to E 6

Kirkwood Meadows Public Utility District

P.O. Box 247

Kirkwood, CA 95646

February 2018

Prepared By:

Derek Dornbrook

KMPUD Superintendent Water/Wastewater

Management Plan

Management Plan

Subject: Leachfield Monitoring Ports

Date: February 22, 2018

The Central Valley Regional Water Quality Control Board (Board), Notice of Violation (NOV) of December 30, 2017 mandated that the Kirkwood Meadows Public Utility District (District) complete a Management Plan, no later than February 28, 2017 to address deficiencies associated with the District's leachfield monitoring ports that were noted on the October 11, 2017 site inspection conducted by Board staff.

Section 3. of the NOV mandated that a Management Plan be submitted to the Board to:

a. Seal all leachfield monitoring ports to prevent surface water infiltration.
b. In the event that wastewater is observed within one foot of the ground surface, protocols to:
    1. collect samples;
    2. pump out riser pipes and fields in a timely manner, and;
    3. dispose of excess effluent while the plant has reduced capacity.

The District sealed all leachfield monitoring ports by utilizing mechanical gripper pipe plugs; ranging in size from 4" to 6" in diameter. This task was completed during January and February of 2018. An itemized list of plugs and potential issues for each monitoring port is as follows:

1. Leachfield #1: Accessible. Sealed with 6" plug.
2. Leachfield #2: Accessible. Sealed with 6" plug.
3. Leachfield #3: Accessible. Sealed with 4" plug
4. Leachfield #4: Accessible. Sealed with 4" plug. Monitoring port vault needs to be improved.
5. Leachfield #7a: Covered by asphalt grindings and compacted by Vail in 2015 in agreement with District. Sealed with 4" plug.
6. Leachfield #7b: Accessible. Sealed with 4" plug.
7. Leachfield #8a: Accessible. Replaced duct tape seal with 4" plug.
8. Leachfield #8b: Accessible. Sealed with 4" plug.
9. Leachfield #9a: Accessible. Confirmed 4" cap in place.
10. Leachfield #9b: Capped and buried in 2013. High traffic area for Vehicle Maintenance Shop. Covered by asphalt grindings and compacted by Vail in 2015 in agreement with District.
11. Leachfield #10: Accessible. Sealed with 4" plug.
12. Leachfield #10a: Accessible. Sealed with 4" plug.

In the event that wastewater is observed within one foot of the ground surface of leachfield monitoring port(s), violating Discharge Specification B.1. of the WDRs, the following protocols will be implemented:

1. Remove violating leachfield(s) from service.
2. Notify District's outside testing laboratory, WETlabs at 775-355-0202 to schedule pick up of samples taken from field(s) not in compliance with Discharge Specification B.1. of the WDRs.
3. Collect samples and test for total coliform organisms and total dissolved solids.
4. Contact District's waste pumping contractor, Summit Septic at 775-267-9987 to pump out riser pipe(s) not in compliance with Discharge Specification B.1. of the WDRs.
5. Dispose of excess effluent while the plant has reduced capacity to off-site disposal facility via Summit Septic.
6. Return to service at time that staff observes wastewater is one foot or more below ground surface of monitoring port.

MANHOLE INSPECTION FORM

INSPECTOR _____

MANHOLE NUMBER _____

DATE _____

	COMMENTS
SURFACE CONDITIONS	
PONDING	
CONDITION OF COVER & GASKET	
CONDITION OF CHIMNEY & RINGS	
CONDITION OF CONE	
CONDITION OF JOINT SEALS	
CONDITION OF BASE	
CONDITION OF FLOW CHANNEL	
CONDITION OF PIPE SEALS	
CONDITION OF STEPS	
CONSTRUCTION MATERIAL	
EVIDENCE OF LEAKAGE INTO MANHOLE	
AMOUNT & NATURE OF DEPOSITS IN CHANNEL	
INCOMIMG & OUTGOING PIPE SIZE	
INCOMIMG & OUTGOING PIPE MATERIAL	
INCOMIMG & OUTGOING PIPE CONDITION	
INCOMIMG & OUTGOING PIPE DEPOSITS	
INCOMIMG & OUTGOING PIPE FLOW (GPM)	
INCOMIMG & OUTGOING PIPE VELOCITY	
INCOMIMG & OUTGOING PIPE CORROSION	
FLOW TEMP	

APPENDIX I – CERTIFICATION PAGE

CERTIFICATION PAGE

The Kirkwood Meadows Public Utility District (KMPUD / District) Sewer System Management Plan (SSMP) document has been prepared by the KMPUD District Engineer in conjunction with District Administrative and Operations Staff.

This Document was recommended for approval to the KMPUD Board of Directors on _____, 2024, in compliance with the State Water Resources Control Board Order Number 2022-0103-DWQ.

_____ _____

KMPUD District Engineer Date

This SSMP document was approved and adopted by the KMPUD Board of Directors during a public Board Meeting on _____, 2024.

ATTEST:

_____ _____

KMPUD General Manager Date

NV5