NORTH TAHOE PUBLIC UTILITY DISTRICT

Risk-Based Sewer System Management Plan

LAKE TAHOE BASIN, CALIFORNIA

PUBLIC COPY

(Names & Numbers Removed)

Adopted: October 8, 2013 (Updated: September 29, 2016)

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ACRONYMS AND ABBREVIATIONS

ABS	Acrylonitrile-Butadiene-Styrene
ACP	Asbestos Cement Pipe
BMP	Best Management Practices
BWPC	Bureau of Water Pollution Control
BWQP	Bureau of Water Quality Planning
CCTV	Closed Circuit Television
CEO	Chief Executive Officer
CI	Cast Iron Pipe
CIP	Capital Improvement Program
CMMS	Computerized Maintenance Management System
CMOM	Federal Capacity, Management, Operation & Maintenance
Corps	U.S. Army Corps of Engineers
DCSID	Douglas County Sewer Improvement District, No. 1
DIP	Ductile Iron Pipe
Districts	Lake Tahoe Basin Wastewater Sewer Districts
EIP	Environmental Improvement Program
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oils and Grease
FSE	Food Service Establishments
GIS	Geographical Information System
GM	General Manager
IVGID	Incline Village General Improvement District
KGID	Kingsbury General Improvement District
KPI	Key Performance Indicators
MACP	Manhole Assessment and Certification Program
MOU	Memorandum of Understanding

MRP	Monitoring and Reporting Program
NAC	Nevada Administrative Code
NASSCO	National Association of Sewer Service Companies
NDEP	Nevada Department of Environmental Protection
NTPUD	North Tahoe Public Utility District
OERP	Overflow Emergency Response Plan
OES	Office of Emergency Services
Ordinance	Rules, Regulations, Rates and Charges Governing the Use, Operation, and Management of the District Sewer System Facilities
PACP	Pipeline Assessment and Certification Program
Partnership	Lake Tahoe Basin Wastewater Infrastructure Partnership
PVC	Polyvinyl Chloride Pipe
RHGID	Round Hill General Improvement District
RWQCB	Regional Water Quality Control Board
SECAP	System Evaluation and Capacity Assurance Plan
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
STPUD	South Tahoe Public Utility District
SWRCB	California State Water Resources Control Board
Tariff	District's Sewer Service Tariff
TCPUD	Tahoe City Public Utility District
TDD	Tahoe-Douglas District
TMDL	Total Maximum Daily Load
TRPA	Tahoe Regional Planning Agency
TTSA	Tahoe Truckee Sanitation Agency
WDR	Waste Discharge Requirement
WWTP	Wastewater Treatment Plant

INTRODUCTION

BACKGROUND

The Lake Tahoe region has experienced environmental degradation for the past 100 years, most notably in the lake's water clarity and the health of the Tahoe Basin's forest lands. The Lake's water clarity, used as an indicator of water quality, has become the primary measure of the Basin's environmental health. To reverse this degradation, the Environmental Improvement Program (EIP) was initiated in 1997. The EIP is a 20-year capital improvement program involving multiple federal, state, local, academic, and private entities. The objective of the EIP is to meet environmental standards (or thresholds) established for the Lake Tahoe region.

During the last decade, restoration of the Lake Tahoe Basin has progressed, in part, through implementation of the EIP. However, aging sewer infrastructure in the Tahoe Basin also poses potentially serious consequences from sewer overflows or facility failure. In the Lake Tahoe Basin, environmental contamination from sewer system or pipeline failure would have detrimental ecological, public health and economic impacts on Lake Tahoe and the surrounding community, and could compromise portions of the environmental gains achieved through EIP efforts to date.

The Tahoe Regional Planning Agency (TRPA) is the primary architect of the EIP with individual project funding provided by the federal government, the States of Nevada and California, local and regional agencies and private stakeholders.

REGULATORY SETTING, POLICY DEVELOPMENT, AND REQUIREMENTS

The Lake Tahoe Basin includes a complex permitting system, with multi-agency and overlapping agency jurisdictions, an active public, a limited project field execution season, and ultimately a limited program implementation horizon.

Background: In 2003, the Corps prepared the Lake Tahoe Basin Framework Study Wastewater Collection System Overflow/Release Reduction Evaluation (Overflow/Release Reduction Evaluation), which included a discussion of permitting requirements and regulatory framework at the Federal, State and local levels as they relate to the repair, rehabilitation and replacement of wastewater collection system facilities. The purpose of that discussion was to describe the regulatory changes that have occurred since 2003; specifically the departure from the Federal Capacity, Management, Operation & Maintenance (CMOM) regulation which was then being developed by the U.S. Environmental Protection Agency (EPA) toward possible State organized and enforced regulations.

Federal: Although the Federal CMOM regulation is now defunct, many states, including California, have begun developing their own CMOM-type regulations.

California: The California State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (WDR or 2006-WDR), Order No. 2006-0003-DWQ, on May 2, 2006 for all publicly owned sanitary sewer collection system utilities in California with more than one mile of sewer pipe. The 2006 WDR included Monitoring and Reporting Program (2006-MRP) defining spill categories and respective reporting requirements. The 2006 MRP was amended effective September 9, 2013 through Order No. WQ 2013-0058-EXEC (2013 MRP). The WDR is similar in content to the EPA's CMOM regulation whereby it contains requirements for developing and implementing a Sewer System Management Plans (SSMPs). The SSMP is established to be a usable planning, operations, and procedures document meeting State 2006-WDR and 2013-MRP requirements. The SSMP has been put together following the requirements as stated therein section D.13 of the 2006 WDR.

AUTHORITY

California: Regulations at the State of California level are addressed in the Lahontan Basin Plan. The Lahontan Basin Plan addresses the need for the Lahontan RWQCB to "fully utilize its regulatory authority" to ensure the quality of Lake Tahoe's sewer systems. The Lahontan RWQCB works to achieve these mandates through implementation of TMDL standards, waste discharge permit requirements and storm water management plans.

Lake Basin: At the regional level, the (February 9, 2013) TRPA Ordinance 60.1.6 requires: "Sewage collection, conveyance, and treatment districts shall have sewage spill contingency, prevention, and detection plans approved by the state agency of appropriate jurisdiction and submitted to TRPA for review and approval within three years of the effective date of the Regional Plan". Per TRPA ordinance 60.1.6.B the Sewage Spill Plan Criteria shall meet: "Sewage spill contingency, prevention, and detection plans shall comply with the criteria set forth by the state agencies of appropriate jurisdiction and TRPA. Such plans shall include provisions for detecting and eliminating sewage exfiltration and stormwater infiltration from sewer lines and facilities". The (February 9, 2013) TRPA Regional Plan (chapter 6 – Public Services) Policy PS-3.1 states: "The discharge of municipal or industrial wastewaters to the surface and groundwaters of the Tahoe region is prohibited, except for existing development discharging wastewaters under a state- or TRPA-approved disposal plan."

This risk based SSMP addresses the requirements of the TRPA Ordinances and Regional Plan through the development maintenance, monitoring and capital improvement measures necessary to meet said requirements, and serves as the TRPA plan required.

LAKE TAHOE WASTEWATER INFRASTRUCTURE PARTNERSHIP

The 2003 Overflow/Release Reduction Evaluation recommended that a Basin-wide approach to a comprehensive capital improvement program (CIP) be created for the replacement or

rehabilitation of the sewer facilities located in the Lake Tahoe Basin. In response, the eight sewer districts operating in the Tahoe basin, together with the Corps, formed the Wastewater Infrastructure Partnership (LTWIP or Partnership) to develop and implement tools and processes designed to support a programmatic approach to wastewater rehabilitation in the Basin.

The eight districts operating wastewater infrastructure within the Lake Tahoe Basin include:

- South Tahoe Public Utility District (STPUD)
- Tahoe City Public Utility District (TCPUD)
- North Tahoe Public Utility District (NTPUD)
- Incline Village General Improvement District (IVGID)
- Douglas County Sewer Improvement District No.1 (DCSID)
- Kingsbury General Improvement District (KGID)
- Tahoe-Douglas District (TDD)
- Round Hill General Improvement District (RHGID)

DEVELOPMENT OF RISK-BASED SSMPS (LTWIP AND NTPUD DISTRICT SPECIFIC)

Though each has its own distinct service area within the Basin, the LTWIP districts recognize that 1) individual actions by each district affect the Basin as a whole, and 2) there are benefits of collaboration among the districts to maintain the environmental quality of the whole Lake Tahoe Basin. As such, many of the Partnership districts worked collaboratively to prepare a *common framework* for development of individual Risk-Based SSMPs.

The Risk-Based SSMPs will generally be consistent with respective State- and federally-mandated plans and include a sewer cleaning program, a sewer inspection methodology and frequency, a capital replacement and rehabilitation program, and customer outreach and rate management in accordance with asset management principles and generally accepted industry practice.

The initial SSMP template, prepared through the LTWIP partnership, provided the basic template or *common framework* for the document. This effort was performed by HDR consultants through contract with the Corps. Using this template, the NTPUD (District) filled in and/or compiled necessary information to thereby create the District specific document. This first SSMP was adopted by the NTPUD Board of Directors on May 11, 2010.

The initial document however, not being wholly prepared by NTPUD, inherently created a disconnect whereby certain efficiencies, compiling of information, and/or comprehensions were

lacking. On May 31, 2012 the District was subjected to a SWRCB audit and inspection. On August 28, 2012, findings of the 5-31-12 inspection were reported to the District (letter provided in Appendix F.) Said findings resulted in a grouped single violation: "failing to develop and implement a SSMP." Thus action was required by the District, largely of which required revisions to the SSMP.

The revision process also triggered review of other District emergency response plans which were previously developed to meet other regulatory agency's requirements. These emergency response plans required review to appropriately dovetail and/or coordinate the various documents to ensure consistency as well as understand the multitude of agency requirements and ensure compliance is maintained. During review, it was recognized the District's Emergency Contingency Plan (ECP) is an outdated document serving the same purpose as the current 2006 WDR D.13 (vi) requirements. This original ECP document was initially developed in 1983 and updated once in 2003. Phone conversations with a past District employees note the original document resulted due to a spill incident in which it was recognized all the Lake Tahoe Basin District's would benefit from a developed "similar and accepted" plan, which at that time was not in place. The ECP was a well thought out document which: solidified the current Mutual Aid Agreement still in effect, compiled available equipment, contact lists, described District operations, etc. As noted however, this document was outdated and, by virtue of all Districts now being governed by the State's current 2006 WDR requirements the ECP no longer requires maintenance and up keep. Regardless of this fact, all information of value was gleaned out of the ECP, updated as applicable, and is currently provided in the District's Emergency Response Operating Procedure (see SSMP chapter 6). A copy of the ECP remains on file with the District for future reference if necessary.

During the revision process a more efficient approach and housing of information was identified in an effort to make the document a more user friendly operations document, as well as eliminate excessive, redundant, and/or potentially conflicting information. The SSMP revision effort was a combined effort performed wholly in-house to eliminate any disconnect as noted above. This task was longer than initially envisioned as the whole upper management, as well as some staff level employees, were actively engaged in the process.

The end result, and intent, is the revisions and requirements are rolled out with better understanding and clarity by all. The SSMP meets these goals as well as those stated therein the 2006-WDR.

1.0 SSMP GOALS

The District has made a commitment to properly fund, manage, operate, and maintain all parts of the sewage collection system owned and/or operated by the District. District staff and/or contractors responsible for the operation and maintenance of the sewage collection system will possess the appropriate level of knowledge, skills, and abilities.

The District's goals are to:

- Properly manage, operate, and maintain all parts of the wastewater collection system
- Provide adequate capacity to convey peak flows
- Minimize the frequency of SSOs
- Mitigate impacts of SSOs
- Justify appropriate funding levels to support the program objectives
- Meet all applicable regulatory notification and reporting requirements

2.0 SSMP ORGANIZATION

Requirements per section D.13 (ii) of the 2006 WDR are addressed as follows:

D.13 (ii) (a) - The NTPUD General Manager (GM)/Chief Executive Officer (CEO) has been designated as the individual with overall responsibility for implementation of the District's SSMP.

D.13 (ii) (b) - The management positions responsible for implementing specific measures of the SSMP are provided in Table 2-1.

Table 2-1. District SSMP Authorized Representatives:

District Title	SSMP Element
General Manager/CEO	All
Utility Operations Manager	All
Engineering & Operations Manager	All
GIS & SCADA Systems Engineer	Map Updates, SCADA
Utility Operations Supervisor	All
Construction Administrator	All

Exhibit 2-1 provides the current organization chart for NTPUD. The most up to date organization chart for NTPUD may be found at any time at www.ntpud.org. Names and contact information for District personnel is provided in Appendix A – SSO Emergency Response Operating Procedure" binder.

D.13 (ii) (c) - In an event of an SSO, the District will use the chain of communications shown and outlined in Chapter 6 to initiate response efforts and notify the appropriate agencies. All SSO response activities will be performed in accordance with Chapter 6 of this document.

List of Exhibits

Exhibit 2-1. NTPUD Organization Chart

EXHIBIT 2-1

ORGANIZATIONAL CHART

2016/2017 BUDGET

44 Full-Time Employees

- Management/Department
- Unclassified
- Union
- Temporary

Community

Board of Directors (5)

General Manager/ CEO

Chief Financial Officer
- General Ledger Accountant
- Accounting Technician I/II
- Purchasing Technician I/II

Administrative Services Liaison
- Customer Service Team Leader
- Customer Service Representative I/II
- Customer Service Representative I/II

Human Resources Manager

Tech & Public Information Administrator

Engineering & Operations Manager
- Utility Operations Coordinator
- Utility Operations Manager
  - Utility Operations Supervisor
    - Lead Water Quality Control Technician
      - Water Quality Control Technician I/II
    - Utility Operations Crew Chief
      - Equipment Operator I/II
      - Operations Maint. Worker I/II
      - Operations Maint. Worker I/II
      - Seasonal Operations Maint. Worker
    - Utility Operations Crew Chief
      - Equipment Operator I/II
      - Operations Maint. Worker I/II
      - Operations Maint. Worker I/II
      - Operations Maint. Worker I/II
      - Seasonal Operations Maint. Worker
    - Maint. Technician Crew Chief
      - Maintenance Technician I/II
      - Maintenance Technician I/II
      - Maintenance Technician I/II
      - Operations Maint. Worker I/II
      - Operations Maint. Worker I/II
- Fleet Coordinator/ Equipment Mechanic
- Project Engineer & Construction Manager
  - GIS & SCADA Systems Engineer
  - Contracts & Planning Coordinator
  - Seasonal Maintenance Technician

Water Crew

Service Crew

Construction Crew

Jet-Rod/CCTV Crew

Administrative Manager
- Lead Parks Maintenance Worker
  - Parks and Parking Seasonals
- Lead Facility & Beach Maintenance Worker
  - Facilities Seasonals
- Parks & Facilities Maintenance Worker I/II
- Parks & Facilities Supervisor
  - Unpaid Workers
- Event Center Coordinator I/II
- Event Center Maint. Worker I/II
- Event Center Seasonals

3.0 LEGAL AUTHORITY

Requirements per section D.13 (iii) of the 2006 WDR are addressed as follows:

Pursuant to the California Public Utilities Code Sections 16461-16489 and NTPUD ordinances, the District has the authority to implement the provisions of the SSMP to:

- D.13 (iii) (a) - Prevent illicit discharges into the sanitary sewer system. (section 3.2)
- D.13 (iii) (b) - Require proper design and construction of new and rehabilitated sewers and connections. (section 3.2)
- D.13 (iii) (c) - Ensure access for maintenance, inspection, or repairs for all portions of sewer connections owned by the District. (section 3.2)
- D.13 (iii) (d) - Limit the discharge of fats, oils, and grease and other debris that may cause blockages in the sanitary sewer system. (section 3.2)
- D.13 (iii) (e) - Enforce any violation of the District's sewer ordinances. (section 3.1)

3.1 RESPONSIBLE PARTY

Applicable ordinances pertinent to the sanitary sewer system for the District are outlined in the District Sewer Ordinance (Ordinance). According to the Ordinance, the GM/CEO is responsible for administering, implementing, and enforcing the provisions outlined in the Ordinance which are applicable to the sewer system.

3.2 PROVISIONS OF ORDINANCE

All of the requirements and/or prohibitions per WDR requirements are satisfactorily addressed in respective ordinance sections. Applicable ordinances pertinent to the sanitary sewer system are outlined in the "Customer Procedures and General Information for Sewer Customers". This document was developed as a handbook for customers, contractors, and consulting engineers. Available at www.ntpud.org/planning-and-engineering. This handbook summarizes specific sections of the Ordinance, along with some general rules and guidelines for the sewer system.

The following are descriptions of the sections of the Ordinance that are pertinent to the SSMP and WDR:

Section 3 – Materials and Manner of Construction [WDR D.13 (iii) (b)]

Section 4 – Testing and Inspection [WDR D.13 (iii) (b)]

Section 5 – Waste Pretreatment Requirements [WDR D.13 (iii) (a) & (d)]

Section 6 – Grease Traps and Interceptors [WDR D.13 (iii) (d)]

Section 10 – Responsibility for New/Existing Sewer Lines [WDR D.13 (iii) (c)]

Section 11 – Prohibitions [WDR D.13 (iii) (a)]

A complete copy of the Sewer Ordinance is available at www.ntpud.org/planning-and-engineering.

Ownership and Responsibility of Mainline Infrastructure:

Per District Ordinance section 10.01, the District shall own, operate, and maintain all sewer mains within District boundaries. All sewer main infrastructures are physically located in either public right of way, or District owned easements, thereby ensuring legal access for maintenance, inspection or repairs. The District has the authority to operate, inspect, repair, and clean District-owned sewer lines, and has the right to temporarily suspend sewer service in order to accomplish these tasks.

Ownership and Responsibility of Lateral Infrastructure:

Upper Lateral (footprint to property line) – Property owner

Lower Lateral (property line to main) – District

Per District Ordinance 10.01 D, the District will repair physically damaged sewer stubs (as defined in Ordinance as being from main to property line – i.e. lower lateral in County right of way). The District is not responsible for any portion of the lateral on private property (i.e. upper lateral). Per District Ordinance section 10.02, the service lateral (as defined in Ordinance as being from main to footprint of building – i.e. upper and lower lateral) shall be the responsibility of the owner to own and operate in a "free and flowing" condition. The District shall not be responsible for blockages (including root intrusion) in any part of the service lateral *unless* blockage is caused by a physical defect in the service stub.

Discharge Requirements:

The Ordinance specifically prohibits discharge of any garbage, fruit, vegetable, animal, or other solid material from any food-processing facility or food-preparing facility or retail grocery store. In addition, grease traps or grease interceptors are required for all establishments which handle, prepare, cook, or serve food.

Construction Requirements:

The materials and manner of construction, and inspection requirements for new and rehabilitated sewer lines are outlined in the Ordinance. The details of these specifications are covered in Chapter 5, Design and Performance Provisions of this document.

4.0 OPERATION AND MAINTENANCE PROGRAM

This element of the SSMP discusses the District's documented performance measures and activities associated with the preventative maintenance performed on its sanitary sewer system.

Per requirements of section D.13 (iv) of the 2006 WDR, and as part of its good management practices, the District:

- D.13 (iv) (a) - Maintains up-to-date maps of its wastewater collection system facilities, showing all gravity line segments and manholes, pumping facilities, and pressure pipes. (section 4.1)
- Allocates adequate resources for the operation, maintenance, and repair of its collection system. (section 4.2)
- Prioritizes its preventative maintenance activities and establish a routine preventative operation and maintenance schedule. (section 4.2)
- D.13 (iv) (b) - Describe routine preventative maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The preventative maintenance program has a system to document scheduled and conducted activities, such as work orders. (section 4.2)
- D.13 (iv) (c) - Identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them. The program includes regular visual and Closed-Circuit Television (CCTV) inspections of manholes and sewer pipes, and a system for ranking the conditions of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement is focused on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. The rehabilitation and replacement plan includes a capital improvement plan that addresses proper management and protection of the infrastructure assets. (section 4.3)
- D.13 (iv) (c) - Develop a schedule for implementing the short-and long-term plans plus a schedule for developing the funds needed for the capital improvement plan. (section 4.4)
- D.13 (iv) (d) - Provide training on a regular basis for its staff in collection system operation, maintenance and monitoring, and require contractors to be appropriately trained. (section 4.5)
- D.13 (iv) (e) - Maintain an inventory of contingency equipment to handle emergencies and spare/replacement parts intended to minimize equipment/facility downtime. (section 4.6)

4.1 DESCRIPTION OF EXISTING FACILITIES

The District's sanitary sewer collection system consists of approximately 73.10 miles of gravity sewer pipe, 7.48 miles of force main, 4102 lower laterals, 1789 manholes, 4 main pumping facilities, and 16 satellite pumping facilities. The predominant pipe material is asbestos cement, clay and PVC pipe. Information on the Districts pumping facilities can be found in chapter 8 (table 8.2) with more detailed information on each facility provided in the District's asset management software LUCITY (Log in and select; Sewer, Inventory, Pump stations, filter for information requested).

Field Maps: The District has schematic mapping of all the existing facilities with detailed "swing-tie" location mapping to field locate select facilities where necessary. The maps encompass the complete limits of the District service area. A "map correction" process is in place allowing maps to be continuously maintained and/or updated as information is generated in the field. Hardcopies of all field maps are located in all District vehicles for access at any time by crew members.

GIS: The District recently went through a migration of linework from AutoCAD to GIS. The District has abandoned doing any linework updates in AutoCAD and moving forward will continue to refine & add better accuracy in GIS. The District is currently working on producing field maps out of GIS as a near future goal. The District's GIS & SCADA systems engineer is responsible for the GIS linework and reflecting map corrections as noted in above paragraph.

With the GIS migration, the District has connected the GIS attribute (i.e. graphical illustration of infrastructure) with the Districts CMMS system (Lucity) to provide a usable visual interface connecting maintenance and/or work order activities on all assets.

As-Built Plans: "Sewer Assessment District" (SAD) maps provide construction plan quality plan sheets (plan/profile) for most of the sewer facilities. In addition to SAD maps, as-built plans of capital projects constructing the District's infrastructure are on file.

The District recently completed a scanning project of all hardcopy plans. All as-built plans the District has on file are now in electronic format (typically PDF) located on the District's computer network. Access to these files (plans) is available via an "access database" available to all District staff.

4.2 PREVENTATIVE OPERATIONS AND MAINTENANCE

Resources & Funding

As part of the annual budget process, the District's Engineer and Operations managers prioritize capitol purchases as necessary. The District's 5 year capital improvement plan is also reviewed and updated at this time. These processes are done in close coordination with the District's

Chief Financial Officer (CFO) to maintain alignment with resources. With purchases, improvements, and funding identified, staff recommends for Board approval adequate and/or appropriate amounts. Once authorized by the Board the funds are available for use as required.

Gravity Pipelines

The District's pipeline preventative operation and maintenance program consists of a system-wide cleaning/inspection program on a rotating basis, as well as a more frequent cleaning/inspecting program necessary to target known problem areas. These known problem areas are commonly referred to as the "holiday lines" as they are scheduled to be cleaned frequently, generally around major holidays.

The cleaning / inspection schedule is tracked and documented in the District's asset management software LUCITY. For each cleaning / inspection, crews are required to document their findings in a sewer cleaning log. The cleaning log is housed in the LUCITY asset management platform (Log in and select; Sewer, Inspection, PACP for pipe inspections and MACP for manhole inspection, filter for information requested). Crew findings are reviewed by the supervisor to determine whether the cleaning frequency should be modified for any given section.

Mains that are considered to be in good condition with no history of maintenance related issues are placed on the system-wide cleaning program. These pipes are scheduled to be cleaned once every four years, equating to approximately 18 miles per year.

Lower laterals, currently owned by the District, are also on a cleaning schedule. Lower laterals are prioritized by respective conditions and/or known problem areas. Factors considering conditions relate to age of neighborhood, type of construction, type of use, and existing vegetation.

Lift stations

Lift stations and force mains are regularly maintained by District staff. All maintenance activities and their associated schedules are maintained in LUCITY. The Standard Operating Procedures (SOPs) for routine maintenance of the District's lift stations are provided in Exhibit 4-1.

4.3 REHABILITATION AND REPLACEMENT PLAN

Condition Assessment and Inspection

Gravity Pipelines & Manholes

The District uses Closed Circuit Television (CCTV) to assess gravity sewer pipe deficiencies and has adopted the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) standards to perform these assessments and condition grading.

Inspections are scheduled in LUCITY and cover the inspection of all gravity mainline and manholes in the District over a four year period, equating to approximately 18 miles per year.

Lift Stations

As part of the preventative maintenance program, the District's crews visually assess the condition of assets within each lift station. Based on these assessments, crews will make recommendations for asset repair, rehabilitation, replacement, or a more formal condition assessment.

The District has prioritized full rehabilitation on all the sewer pump stations to a high level. These will be completed as funding allows. Over the past 5 years the District has fully rehabilitated two of the main stations (Secline and Dollar) and is currently out for proposal for design on a third (Carnelian). Once Carnelian is complete, National will be the only remaining main pumping facility to require rehabilitation. Once the main stations are completed, the District will focus on rehabilitation of all satellite stations.

Force Mains

The sewage export system, including the force mains throughout the District, was installed between 1968 and 1969. The force mains were installed with no real way of inspecting the inside of the pipe. With this in mind, the District takes every opportunity available to verify the internal condition of the force mains. In the past, the force main has been accidently damaged from contractors working around it. When repairs were made, the force main was found to be in good condition. The tar wrap and concrete lining showed little to no wear. It has also been necessary to tap the force main due to another project or for repairs. The coupon is recovered from each tap which allow the District to assess the condition. Coupons show little to no wear on the force main.

In the early 1980's, the District undertook the capitol project of installing emergency by-pass valves along the length of the National and Carnelian force mains. The by-pass valves provide an above ground emergency by-pass provision in the event of a failure or accident affecting the use of main. At the time these valves were cut in, the physical condition of the force mains was good.

Routine maintenance on the force mains consisting of exercising, rebuilding and/or replacing the emergency by-pass and the air release valves when needed. Scheduling of service on these assets is based on observed operation noted while making the rounds per the District's Preventative Maintenance (PM) program.

Repair and Replacement Decision Process

Minor repair and replacement decisions for pipes, manholes, and lift stations are made by the Operations group and are scheduled according to priority. Major Repair and replacement

projects are typically prioritized based on observed deficiencies, failure events, and/or amount of crew time delegated to the asset. Significant improvements, requiring capital funding, are reviewed with all District management and scheduled within the Capitol planning process as noted below.

4.4 CAPITAL PLAN

The District maintains a five year capital plan reviewed annually to reprioritize and/or adjust as necessary. Capital planning (and prioritizing) projects is done so in consideration of the many drivers as noted below:

- Regulatory Compliance
- Conflict with Right-of-Way Owner's Improvements
- Condition / Probability of Failure
- Consequences of Failure / Risk
- Capacity / System Operational Efficiencies
- Improved Operations and Maintenance (O&M) Costs
- Safety / Security
- Design Life / Best Replacement Practices
- Redundancy / Reliability
- Expected Standards for Public System
- Opportunity Projects
- Developer Extensions

Each year projects are reviewed, rated, and prioritized in coordination with the District's Development and Planning committee. A copy of the latest 5 year capital plan is available as an appendix to the annual budget.

4.5 WASTEWATER CREWS AND TRAINING

The District operates with a maintenance staff of approximately 25 people, including the Managerial staff. Typically staff spends about 60 percent of their time on the sewer collection system (remaining 40% on water infrastructure). Several of the District's Operations staff are NASSCO PACP certified to assure contestant grading of the gravity sewer system. A copy of the NASSCO PACP Condition Grading System Code matrix is included in Exhibit 4-2.

In addition, the District uses a combination of in-house classes and on the job training to train its wastewater collection system staff. Standard forms, ensuring consistent training topics/direction, have been developed to document on the job training sessions. Likewise the District's contracted trainer ensures the District maintains compliance with required training topics and intervals. Training topics include (but are not limited to): OSHA, equipment, PM, emergency response, operating documents, SSO response, etc.

All trainings are tracked and logged in the LUCITY management database.

4.6 EQUIPMENT AND REPLACEMENT PARTS

The District tracks spare parts in the accounting system "Springbrook - Accela". A system is in place whereby went parts are used, the materials are made part of the CMMS work order and this information is passed onto the purchasing technician to re-order. Parts are tracked and re-ordered on a consistent basis to assure needed parts for emergency repairs are always available.

In addition, the Districts within the Tahoe Basin have formed an emergency response partnership which allows them to better respond to emergencies by way of combining resources. This not only includes lending labor but also the contingency equipment necessary. As an emergency resource, the copy of the available contingency equipment in this multi-district pool is included the District's "SSO Emergency Response Operating Procedure" document as referenced in Chapter 6: "Overflow Emergency Response Plan". Appendix A provides a copy of the "SSO Emergency Response Operating Procedure".

List of Exhibits

Exhibit 4-1

Lift Station Routine Maintenance Standard Operating Procedures

Sewer Main Station: Daily

NMS/CMS/DMS	Inspect all Pumps for Leaks, Bleed Pumps, As Needed.
NMS/CMS/DMS	Visually Inspect Drywell/Wetwell For Abnormalities
NMS/CMS/DMS	Inspect Lead Motor - Heat, Bearing Noise, Amps (Log Lead Pump)
NMS/CMS/DMS	Check Sump Pump Operations
NMS/CMS/DMS	Check Q-Cell Vessel, Electrolyte, etc.
NMS/CMS/DMS	Check Generator Block Heater, Battery Charge (SCADA), etc.
NMS/CMS/DMS	Check/Replace All Non-Operational Lighting In/Out, As Needed
NMS/CMS/DMS	Check/Adjust Bubbler Pressure and Log
NMS/CMS/DMS	Check TVSS Equipment Lights
NMS/CMS/DMS/SMS	Check Pumps for Plugs, Replace As Needed
NMS/CMS/DMS/SMS	Log and Total Pump Run Hours
DMS	Take Sewer Cl2 Residual And Log
DMS	Check Surge Valve Tank Pressure and Operating Level
SMS	Log Operating Pump Flow
SMS	Check and Log Force Mainline Pressure During Pump Runs
SMS	Check Air Release Valve
NMS/CMS	Check/Adjust Hypo Output (Based On Residual Read At Dollar)
NMS/CMS	Confirm Hypo Pump Output - Use Calibration Tubes, If Needed
NMS/CMS	Inpect Air Pressure Supply System (Primary, Secondary)

Sewer Main Station: Weekly and Bi-Weekly

NMS/CMS/DMS/SMS	Check Generator Battery Electrolyte Levels
NMS/CMS/DMS/SMS	Check Generator Battery Charge - Use Meter & Log
NMS/CMS/DMS/SMS	Clean Station And Dry Well
NMS/CMS/DMS/SMS	Check Oil/Coolant Levels On Generator
NMS/CMS	Take Hypo Delivery

Sewer Main Station: Monthly, Quarterly, Semi-Annual

NMS/CMS/DMS/SMS	Check All Pump On/Off Levels
NMS/CMS/DMS/SMS	Perform Quarterly Preventative Maintenance Tasks
NMS/CMS/DMS/SMS	Check/Fill Oil/Coolant Levels On Generator And Compressor
NMS/CMS/DMS/SMS	Clean and Dress all Battery Terminals, As Needed
NMS/CMS/DMS/SMS	Meter Test SCADA/UES Batteries
NMS/CMS/DMS/SMS	Alarm Test Station - SCADA and UES
NMS/CMS/DMS/SMS	Check Diesel Tank Level And Inspect For Leaks
NMS/CMS/DMS/SMS	Test Generator (No Load)
DMS/NMS/CMS/SMS	Open Up/Clean All MCC9 & Cabinets (Semi-Annual)
NMS/CMS/DMS/SMS	Exercise All Operational Station Valves
DMS/NMS/CMS	Check/Adjust Cathodic Protection Output
DMS/CMS/NMS	Test Run And Check Control Voltage Of All Pump Q-Cells
DMS/NMS/CMS	Check All Cooling Fans - Operate
NMS/CMS	Calibrate Hypo Pumps Using Calibration Tubes
NMS/CMS	Replace/Rotate Hypo Pump Tubing
NMS/CMS	Check Generator Tank Pumps
NMS/CMS	Test Air Pressure Supply System (Primary, Secondary, Tertiary)

Sewer Main Station: Yearly

DMS/NMS/CMS	Check Bearing/Seal Temperature - Laser Temperature Reader
DMS/NMS/CMS	Check Operation Of All Shunt-Trip C/B
DMS/NMS/CMS	Check Operation Of Back Flow Devices
DMS/NMS/CMS	Inspect Check Valves For Proper Operation, Rebuild As Needed
DMS/NMS/CMS	Grease All Motor Bearings
DMS/NMS/CMS	Check Motor Connections At The Motor
DMS/NMS/CMS	Check Motor To Pump Alignment - Use Computer, As Needed
DMS/NMS/CMS	Strip And Paint Equipment (As Necessary)
NMS/CMS/DMS/SMS	Inspect And Test All Environmental Controls
NMS/CMS/DMS/SMS	Check All Station Electrical Connections
NMS/CMS/DMS/SMS	Perform Annual Preventative Maintenance Tasks
NMS/CMS/DMS/SMS	Test Generator (Under Load)
NMS/CMS/DMS/SMS	Mega-Ohm Test All Motors
DMS/NMS/CMS/SMS	Bi-Annual Wet Well Cleaning (Semi-Annual)
DMS/NMS/CMS/SMS	Load Test SCADA/UES Batteries
DMS/NMS/CMS/SMS	Remove And Replace Generator - Oil/Coolant (Fleet Mechanic)
DMS/NMS/CMS	Flush/Clean Hypo Tanks (As Needed)
DMS/NMS/CMS	Flush Heat Exchangers And Coolant Pumps On All Q-Cells
DMS/NMS/CMS	Check All Hypo Heat Tape Operations
DMS/NMS/CMS	Check/Clean/Replace Brushes on Q-Cell Motors

Exhibit 4-1

Lift Station Routine Maintenance Standard Operating Procedures

DMS/NMS/CMS	Check/Clean Hypo System Motorized Valves
NMS/CMS	Replace And Test All Q-Cell Electrolyte Solution
CMS	Change Oil On Chopper Pump #2
DMS	Pull Top Off Surge Tank - Clean Probe, As Needed

Misc Tasks - Non Station Items

Annual	Check/Operate SCADA UPS System
Annual	Check/Adjust A/C And Fan Back Up - IT Room
Bi-Annual (As Needed)	Check/Operate All Portable Generator Sets
Annual	Check/Clean UES Alarm Board
Annual	Check Batteries/Charger On UES Board
As Needed	Check/Replace Alarm Lamps On UES Board (If Possible)
Quarterly	Check Flowmeter Weir - Dollar Hill Flowmeter

Sewer Satellite Station

Monthly/Semi-Annual/Annual/Bi-Annual	Perform Preventative Maintenance Tasks
Semi-Annual	Clean All Sewer Satellite Wet Wells Vactor (Semi-Annual)
Monthly	Alarm Test All Satellites
Monthly	Odor Control Satellites (As Needed)

Pipe Ratings Index – This is an indicator of the distribution of defect severity. The Pipe Ratings Index is calculated by dividing the Pipe Rating by the number of defects. For example, the Structural Pipe Ratings Index would be the Structural Pipe Rating divided by the number of structural defects. Pipe Ratings Indexes are calculated for Structural, O&M, and Overall. A pipe segment with a Pipe Rating of zero (0) would have a Pipe Rating Index of zero (0).

Summary

The following procedures are used to calculate pipe segment ratings using the PACP Condition Grading System:

1. Determine the number of occurrences for each condition grade within the pipe segment. Calculate separately for Structural Defect Grades and O&M Defect Grades.
2. Calculate the Segment Grade Score by multiplying the number of occurrences by the respective grade 1 through 5. Calculate the Structural Segment Grade Score and the O&M Segment Grade Score separately, then add together for the Overall Segment Grade Score.
3. Calculate the Pipe Rating for the pipe segment by adding the Segment Grade Scores. Add all five Structural Segment Grade Scores for the Structural Pipe Rating, and add all five O&M Segment Grade Scores for the O&M Pipe Rating. Add all five Overall Segment Grade Scores for the Overall Pipe Rating.
4. Determine the PACP Quick Rating by calculating the number of occurrences of the two highest severity grades.
5. Calculate the Pipe Ratings Index by dividing the Pipe Rating by the number of defects. If the pipe has no defects, the Pipe Ratings Index is zero.

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
Structural	Crack (C) S - C	Circumferential (C)		CC	1	
		Longitudinal (L)		CL	2	
		Multiple (M)		CM	3	
		Spiral (S)		CS	2	
Structural	Fracture (F)	Circumferential (C)		FC	2	
		Longitudinal (L)		FL	3	
		Multiple (M)		FM	4	
		Spiral (S)		FS	3	
Structural	Pipe Failures (Silent)	Broken (B)		B	clock pos - 4, >=3 clock pos - 5	
		Broken (B)	Soil Visible (SV)	BSV	5	
		Broken (B)	Void Visible (V V)	BVV	5	
		Hole (H)		H	clock pos - 4, >= 3 clock pos - 5	
		Hole (H)	Soil Visible (SV)	HSV	5	
		Hole (H)	Void Visible (V V)	HVV	5	
Structural	Collapse (X)	Pipe (P)		XP	5	
		Brick (B)		XB	5	
Structural	Deformed (D)	(Pipe) (P)		D	<=10% - 4,>10% - 5	
		Brick (B)	Horizontally (H)	DH	5	
		Brick (B)	Vertically (V)	DV	5	
Structural	Joint (J)	Offset (displaced) (O)	Med (M)	JOM	1	
			Large (L)	JOL	2	
		Separated (open) (S)	Med (M)	JSM	1	
			Large (L)	JSL	2	
		Angular (A)	Med (M)	JAM	1	
			Large (L)	JAL	2	
	Surface Damage Chemical (S) SSD	Roughness Increased (RI)	C	SRIC	1	
	S-SO C	Surface Spalling (SS)	C	SSSC	2	
		Aggregate Visible (AV)	C	SAVC	3	
		Aggregate Projecting (AP)	C	SAPC	3	
		Aggregate Missing (AM)	C	SAMC	4	
		Reinforcement Visible (RV)	C	SRVC	5	
		Reinforcement Corroded (RC)	C	SRCC	5	

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
		Missing Wall (MW)	C	SMWC •	5	
		Other (Z)	C	SZC		
	Surface Damage Mechanical (M)	Roughness Increased (RI)	M	SRIM	1	
	S · SOM	Surface Spalling (SS)	M	SSSM •	2	
		Aggregate Visible (AV)	M	SAVM	3	
		Aggregate Projecting (AP)	M	SAPM	3	
		Aggregate Missing (AM)	M	SAMM	4	
		Reinforcement Visible (RV)	M	SRVM	5	
		Reinforcement Corroded (RC)	M	SRCM	5	
		Missing Wall (MW)	M	SMWM •	5	
		Other (Z)	M	SZM	N/A	
	Surface Damage Not Evident (Z)	Roughness Increased (RI)	Z	SRIZ	1	
	S · SO	Surface Spalling (SS)	Z	SSSZ	2	
		Aggregate Visible (AV)	Z	SAVZ	3	
		Aggregate Projecting (AP)	Z	SAPZ	3	
		Aggregate Missing (AM)	Z	SAMZ	4	
		Reinforcement Visible (RV)	Z	SRVZ	5	
		Reinforcement Corroded (RC)	Z	SRCZ	5	
		Missing Wall (MW)	Z	SMWZ	5	
		Other (Z)	Z	SZZ	N/A	
	Surface Damage (Metal Pipes)	Corrosion (CP)		SCP	3	
Structural	Lining Failure (LF)	Detached (D)		LFD	3	
		Defective End (DE)		LFDE	3	
		Blistered (B)		LFB	3	
		Service Cut Shifted (CS)		LFCS	3	
		Abandoned Connection (AC)		LFAC		
		Overcut Service (OC)		LFOC	3	
		Undercut Service (UC)		LFUC	3	
		Buckled (BK)		LFBK	3	
		Wrinkled (W)		LFW	3	
		Other (Z)		LFZ		
Structural	Weld Failure (WF)	Circumfrential (C)		WFC	2	
		Longitudinal (L)		WFL	2	
		Multiple (M)		WFM	3	
		Spiral (S)		WFS	2	
Structural	Point Repair (RP)	Localized Lining (L)		RPL		
		Localized Lining (L)	Defective (D)	RPLD	4	
		Patch Repair (P)		RPP		

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
		Patch Repair (P)	Defective (D)	RPPD	4	
		Pipe Replaced (R)		RPR		
		Pipe Replaced (R)	Defective (D)	RPRD	4	
		Other (Z)		RPRZ		
		Other (Z)		RPRZD		
Structural	Brickwork (Silent)	Displaced (DB)		DB	3	
		Missing (MB)		MB	4	
		Dropped Invert (DI)		DI	5	
		Missing Mortar	Slight	MMS	2	
			Medium	MMM	3	
			Large	MML	3	
O&M	Deposits Attached (DA)	Encrustation (E)		DAE		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Grease (G)		DAGS		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Ragging (R)		DAR		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		DAZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
	Deposits Settled (DS)	Hard/Compacted (C)		DSC		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Fine (F)		DSF		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Gravel (G)		DSGV		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		DSZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
	Deposits Ingress (DN)	Fines silt/sand (F)		DNF		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Gravel (GV)		DNGV		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
		Other (Z)		DNZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
O&M	Roots (R)	Fine (F)	Barrel (B)	RFB		2
			Lateral (L)	RFL		1
			Connecfion (C)	RFC		1
	Roots (R) at a Joint		N/A	RF		1
		Tap (T)	Barrel (B)	RTB		3
			Lateral (L)	RTL		2
			Connecfion (C)	RTC		2
	Roots (R) at a Joint		N/A	RT		2
		Medium (M)	Barrel (B)	RMB		4
			Lateral (L)	RML		3
			Connecfion (C)	RMC		3
	Roots (R) at a Joint		N/A	RM		3
		Ball (B)	Barrel (B)	RBB		5
			Lateral (L)	RBL		4
			Connecfion (C)	RBC		4
	Roots (R) at a Joint		N/A	RB		4
O&M	Infiltration (I)	Weeper (W)		IW		2
		Dripper (D)		ID		3
		Runner (R)		IR		4
		Gusher (G)		IG		5
O&M	Obstacles/Obstructions (OB)	Brick or Masonry (B)		OBB		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Pipe Material in Invert (M)		OBM		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Object Protruding Thru Wall (I)		OBI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Object Wedged in Joint (J)		OBJ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Object Thru Connection (C)		OBC		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
		External Pipe or Cable In Sewer (P)		OBP		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Built Into Structure (S)		OBS		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Construction Debris (N)		OBN		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Rocks (R)		OBR		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other Objects (Z)		OBZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
O&M	Vermin (V)	Rat (R)		VR		2
		Cockroach (C)		VC		1
		Other (Z)		VZ		1
Construction Features	Tap (T)	Factory Made (F)		TF		
			Capped (C)	TFC		
			Defective (D)	TFD		2
			Intruding (I)	TFI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Active (A)	TFA		
		Break-In/Hammer (B)		TB		
			Capped (C)	TBC		2
			Defective (D)	TBD		3
			Intruding (I)	TBI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Active (A)	TBA		
		Saddle (S)		TS		
			Capped (C)	TSC		
			Defective (D)	TSD		2
			Intruding (I)	TSI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Active (A)	TSA		

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
Construction Features	Intruding Seal Material (IS)			IS		
		Sealing Ring (SR)		ISSR		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Hanging	ISSRH		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Broken	ISSRB		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Grout (GT)		ISGT		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		ISZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
Construction Features	Line (L)	Left (L)		LL		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Left/UP (LU)		LLU		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Left/Down (LD)		LLD		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Right (R)		LR		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Right/Up (RU)		LRU		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Right/Down (RD)		LRD		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Up (U)		LU		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Down (D)		LD		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
Construction	Access Points (A)					
		Cleanout (CO)		ACO		

NASSCO PACP Condition Grading System
Code Matrix

Family	Group	Descriptor	Modifier	Code	Structural Grade	O&M Grade
			Mainline (M)	ACOM		
			Property (P)	ACOP		
			House (H)	ACOH		
		Discharge Point (DP)		ADP		
		Junction Box (JB)		AJB		
		Meter (M)		AM		
		Manhole (MH)		AMH		
		Other Special Chamber (OC)		AOC		
		Tee Connection (TC)		ATC		
		WW Access Device (WA)		AWA		
		Wet Well (WW)		AWW		
Other	Miscellaneous (M)	Camera Underwater (CU)		MCU		4
		Dimension/Diam/Shape Change (SC)		MSC		
		General Observation (GO)		MGO		
		General Photograph (GP)		MGP		
		Material Change (MC)		MMC		
		Lining Change (LC)		MLC		
		Joint Length Change (JL)		MJL		
		Survey Abandoned (SA)		MSA		
		Water Level (WL)		MWL		
		Water Level (WL)	(S)	MWLS		<=30% - 2, <=50% - 3, >50% - 4
		Water Mark (WM)		MWM		>=50% 4, >=75% 5
		Dye Test (Y)		MY		
			Visible (V)	MYV		5
			Not Visible (N)	MYN		3

5.0 DESIGN AND PERFORMANCE PROVISIONS

Proper design and installation of sewer system pipelines and appurtenances is one of the most important aspects in maintaining a functioning, long-lasting sewer system. A properly designed and installed sewer system can minimize system deficiencies that could cause or contribute to future overflows and reduce operation, maintenance, and renewal requirements.

Per requirements of section D.13 (v) of the 2006 WDR, and as part of its good management practices, the District maintains:

- D.13 (v) (a) – Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems. (section 5.1)
- D.13 (v) (b) – Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects. (section 5.2)

5.1 DISTRICT'S DESIGN AND CONSTRUCTION STANDARDS

The District's design criteria for construction of new and rehabilitated sewer lines and appurtenances are outlined in chapter 2 of the District's Technical Specifications for Sanitary Sewer Construction, and the District's Standard Construction Details. These documents are available at the District Office and on the District's website (http://ntpud.org/planning-and-engineering).

The District's design and construction standards are used by the District staff and are likewise communicated to consulting engineers and/or developers at the start of a design process or proposed development.

The District's standard details have recently be updated and republished. The District's specifications are in need of updating to current Construction Specifications Institute (CSI) format. The District hopes to begin this update process in Winter of 2016/17.

The District has created a "Customer Procedures and General Information for Sewer Customers" handbook to summarize the sewer system design and use requirements which is available at the District's offices and on the District's website (http://ntpud.org/planning-and-engineering).

5.2 INSPECTION AND TESTING PROGRAM

The inspection and testing requirements are outlined in chapter 3 of the District's Technical Specification for Sanitary Sewer and in the Customer Procedures and General Information for Sewer Customers, both of which are available on the Districts website. Testing is required for all assets owned by the District, as well as those connected to the system. The complete details of test parameters and requirements are provided in the District's technical specifications. In some

cases the technical specifications do not address all asset types or tests required by the District as part of the Districts current requirements. In these cases, the bid documents providing project specific requirements incorporate the District's requirements. The following is a brief definition as to the type of testing required per asset type.

Service laterals: Air or Water test (per District ordinance, standard details, and tech. specs.), Bedding/Backfill inspection (per District ordinance)

Gravity mains: Air testing (per District tech. specs.), TV final (per District tech. specs.), Mandrel test (per District specs.), bedding & pipe zone inspection (per capital project bid specs.), and backfill (per county encroachment permit).

Manholes: Water or Vacuum test (per District tech. specs.)

Force mains: Pressure test (per District tech. specs.)

Pump Stations: Curve tests (factory and site) (per capital project bid specs.), Construction management and inspections (per District)

6.0 OVERFLOW EMERGENCY RESPONSE PLAN

This chapter describes the District's sanitary sewer Overflow Emergency Response Plan (OERP). Elements outlined in this plan note State requirements and how the District is meeting said criteria. As emergency response processes typically occur in the field, for the purposes of creating a user friendly document, the District has prepared a "SSO Emergency Response Operating Procedures" binder. In many cases, this document satisfies State requirements in regards to response activities and is therefore referenced as applicable below.

Appendix A provides a copy of the "SSO Emergency Response Operating Procedure".

Per requirements of section D.13 (vi) of the 2006 WDR, and as part of its good management practices, the District's OERP focuses on procedures which facilitate:

- D.13 (vi) (a) - Proper notification so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner. (section 6.1)
- D.13 (vi) (b) - Appropriate response to overflows. (section 6.2)
- D.13 (vi) (c) - Prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the monitoring and reporting program. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System permit requirements. (section 6.1)
- D.13 (vi) (d) - Appropriate Emergency Response Plan implementation training for applicable staff and contractor personnel. (section 6.3)
- D.13 (vi) (e) - Emergency operations implementation, such as traffic and crowd control and other necessary response activities. (section 6.2)
- D.13 (vi) (f) - A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge. (section 6.2)

Specifically, the OERP includes information on:

- Overflow Detection
- Initial Response
- Recovery and Clean-up (Mitigation)
- Public Access and Warning
- Water Quality Sampling and Analysis
- Investigation and Documentation

- Regulatory Notification
- Regulatory Reporting
- Equipment
- Training

6.1 CALIFORNIA-SPECIFIC NOTIFICATION AND REPORTING REQUIREMENTS

All SSOs that occur in California as a result of a failure within the District's sanitary sewer system are subject to applicable notification and reporting requirements as summarized below. Requirements for notification and reporting are as stated in SWRCB Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (or MRP). Notification and reporting is the responsibility of the District.

Notification requirements apply to more serious and/or environmentally detrimental events; as such, notification to applicable agencies occurs by way of phone. Reporting of other, not as serious and/or environmentally detrimental, SSO events occurs through the State Water Resources Control Board (SWRCB) Sanitary Sewer Overflow (SSO) eReporting Program (http://ciwqs.waterboards.ca.gov/). All of the District's "Duty Supervisors" have reporting authority and have been registered as a "Legally Responsible Official" (LRO) or "Date Submitters" for reporting on the State's SSO database (CIWQS). Reporting time frames vary based on the severity of the event.

Notification Requirements (via phone) per MRP:

1. For any discharges of sewage greater than 1,000 gallons to surface water or probable conveyance to surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services.

Reporting Requirements (via CIWQS) per MRP:

Category 1 SSOs (*any volume to surface water*) – 3 days (draft report), 15 days (final report)

Category 1 SSO (*over 50,000 gallons*) – 45 days (technical report)

Category 2 SSOs – 3 days (draft report), 15 days (final report)

Category 3 SSOs – 30 days after end of month in which SSO occurred

Private Spills – No reporting required, voluntarily reported.

If No Spill – file "no spill" report within 30 days after end of month in which no SSO's occurred.

Information requirements to be provided in either notification or reporting for all spill categories are provided in "SSO Emergency Response Operating Procedure" binder, provided in Appendix A.

As noted above, all of the District's "Duty Supervisors" are enrolled in CIWQS as an LRO or Data Submitter. All duty supervisors are upper management personnel responsible for implementing State requirements and maintaining compliance.

Compliance with MRP as outlined in "SSO Emergency Response Operating Procedure" binder, including documentation capabilities via "SSO Response – Field Checklist & Documentation – Duty Supervisor".

6.2 SSO STANDARD OPERATING PROCEDURE

The District's Standard Operating Procedure (SOP) is outlined in the District prepared "SSO Emergency Response Operating Procedure" binder (Appendix A). As any SSO event is different, and is always time critical, this binder is designed as a simple, indexed, to the point, outline to use during any SSO event scenario. Included in the binder is:

- Contact information
- Bullet point SOPs
- Flowchart SOPs
- Detailed SOPs
- Notification/Reporting Requirements
- Documentation forms
- Volume estimation
- Available equipment
- Emergency Maps
- Water Quality Monitoring
- Etc.

The combined product provides direction whereby if followed and using the appropriate forms meets all requirements in regards to correct response, reporting, and documentation of the event.

This binder will assist the District personnel in determining the type of SSO, safely stopping / rerouting the flow, cleaning up the SSO and collecting all need information for notification and/or reporting purposes.

Specific measures taken for clean-up response and sewer intrusion into a private residence are described in the following subsections.

Clean Up Response

Once District personnel are notified of the SSO, the following steps are completed:
1) Containment of flow; 2) Pump around blockage; 3) Cleanup spill; 4) Prepare report.

If further repair is required, additional steps will be taken as appropriate. These can include:

- Regulate upstream flows
- Install bypass pumps and piping (as required)
- Water shut off
- Tank or Vactor truck brigade

- Excavation
- Repairs
- Resume normal pumping
- Monitor system
- Determine cause
- Restore operation

Sewer Intrusion into a Private Residence

As discussed in Section 3 of this document, the District is neither responsible nor liable for private laterals. The District's response to a private residence spill is to verify that the sewer main is open and free-flowing and/or if the SSO is caused due to a problem within the District's responsibility. If District personnel confirms the spill is caused due to an issue outside District responsibilities, the District notifies Placer County Environmental Health that the situation exists and attempts to notify the property owner of the problem.

If the property owner cannot obtain appropriate service from a private sector provider, the District has a form that can be completed by the owner which authorizes the District to perform cleanup activities, with the expenses billed directly to the property owner. This form is provided in the "SSO Emergency Response Operating Procedure" binder (Appendix A). If the property owner cannot be reached for authorization of cleanup, a directive from the Placer County Environmental Health Department may be substituted, granted that the owner is still liable for the spill and cleanup activities. Without the aforementioned directive from Placer County, the District is not to provide plumbing or cleanup services. In all cases whereby there is an actively flowing spill, a water shutoff to the parcel will be performed immediately.

Per the California Statewide adoption of the 2013 MRP, private lateral spills may be voluntarily reported to the State, however are not required.

6.3 OERP TRAINING

The District uses a combination of: in-house classes, outside training exercises, outside instructors, on the job training, and State certified certifications to train its wastewater collection system staff. Standard forms, ensuring consistent training topics/direction, have been developed to document on the job training sessions. Training topics include (but are not limited to): OSHA, equipment use, infrastructure use, PM, emergency response, operating documents, etc.

SSMP, SSO response, SSO estimating, etc. are part of the District's scheduled training sessions.

All trainings are tracked and logged in the LUCITY management database.

7.0 FATS, OILS, AND GREASE CONTROL PROGRAM

Fats, Oils, and Grease (FOG) are discharged to sanitary sewer systems by residential users, food handling facilities, and other commercial and industrial establishments. Commonly, FOG can cause pipe blockages leading to SSOs. To control FOG, and meet requirements of section D.13 (vii) of the 2006 WDR, the District has established a FOG Control Program, which includes:

- D.13 (vii) (a) - An implementation plan for a public education outreach program that promotes proper disposal of FOG. (section 7.2)
- D.13 (vii) (b) - A plan for the disposal of FOG 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 FOG generated within a sanitary sewer system service area. (section 7.2)
- D.13 (vii) (c) - The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG. (section 7.2)
- D.13 (vii) (d) - Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, Best Management Practices (BMPs) requirements, record keeping and reporting requirements. (section 7.2)
- D.13 (vii) (e) - Authority to inspect grease producing facilities, enforcement authorities, and whether the District (District) has sufficient staff to inspect and enforce the FOG ordinance. (section 7.2)
- D.13 (vii) (f) - An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section. (section 7.2)
- D.13 (vii) (g) - Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified as a problem (section 7.2)

7.1 NATURE AND EXTENT OF FOG PROBLEM

The District currently has 39 active commercial sources of grease discharging into the sewer collection system. In 2006 the District implemented a FOG control program and the quantity of FOG that is introduced to the system has been significantly reduced. In the past few years, lift station wet well cleaning schedules have been reduced from monthly to quarterly. Staff contributes most of this FOG reduction to:

- Grease Trap/Interceptor requirements on all restaurant remodels or change of business licenses
- Grease Interceptor requirements on all new Food Service Establishments
- Proactive inspection program
- Public Outreach Program

7.2 FOG CONTROL PROGRAM

The District's FOG Control Program includes four elements: Legal Authority, Commercial FOG Source Control, Preventative Maintenance, and Public Outreach.

Legal Authority

The District has the responsibility to minimize the amount of FOG that enters the sanitary sewer systems from residential, commercial, and industrial sources. Sewer Ordinance No. 357, was adopted on February 14, 2006 and can be found at the Districts website (http://ntpud.org/planning-and-engineering). The ordinance requires all non-residential establishments which handle, prepare, cook, or serve foods or when in the opinion of the District's manager is necessary, shall adhere to the following requirements:

1. Defines the design, sizing, and construction standards for all pretreatment facilities (based on the 2007 California Plumbing Code).
2. Requires owners of these establishments to maintain a logbook on maintenance performed on grease removal equipment.
3. Allows for the inspection of grease removal equipment as necessary to assure compliance with this ordinance.

In addition, no mechanical or waste grinders may be connected to the wastewater collection system by Food Service Establishments (FSEs).

Commercial FOG Source Control

Identification and Education of Food Service Establishments: Currently there are 48 active Food Service Establishments (FSEs) in the District's service area. Nine of these FSEs are currently exempt from installing and maintaining a grease removal device as their facility is not FOG producing. A list of current FSEs, with details on establishment, is maintained in Appendix B.

The District has developed and distributed a binder to FSEs to encourage FSEs to follow best management practices to minimize grease entering the sewer system. This binder includes a quick guide for BMP's, pertinent section of the Districts sewer ordinance, local grease hauler and rendering companies information and example log forms. The District distributes this binder to each FSE when they are established and likewise provides additional copies if the original was misplaced by a previous owner or manager.

Inspection and Enforcement Program: The District conducts periodic inspections to ensure grease removal equipment is properly installed and maintained. The District aims to inspect each FSE once per year. The District is working on implementing the "FOG module" in the CMMS (Lucity) system to maintain accurate housing of information and inspection results. Inspections consist of both internal and external processes. Each are addressed below:

Internal: During inspections, District compliance personnel confirm FSE characteristics and fixtures, review maintenance documentation, measure grease and sludge accumulations, and fill out an inspection form detailing the inspection findings.

External: CCTV of FSE's sewer lateral.

If an FSE is not in compliance with the sewer ordinance the FSE owner is presented with the results of the above inspections thereby supporting a failed inspection. If this occurs, a surcharge for properties that do not conform to the District's FOG Policies may be enforced and shall be the greater of $1,100 or 100% of the current sewer service fees for the property, per year. Non-compliance may also result in the requirement to install a gravity grease interceptor, at the discretion of the District. To date, no FSE has been escaladed to the point of the non-compliance surcharge, and one FSE was required to install a gravity grease interceptor.

FOG Disposal: The District has identified three grease disposal sites for use by grease haulers doing business within the District. These sites are:

- Lockwood Landfill
- Reno Rendering Company
- Bentley Agro-Dynamics

The District has concluded that there is adequate local capacity to dispose of grease from commercial sources within the District at this time.

Preventative Maintenance

In addition to source control, the District also focuses sewer cleaning activities in areas of known FOG sources through the "holiday line" cleaning program. The goal of this effort is to prevent FOG accumulation from blocking the flow of wastewater and potentially cause a Sanitary Sewer Overflow.

The District also leverages maintenance findings from cleaning, CCTV, or pump station maintenance. If maintenance crews identify an abnormally fast FOG accumulation rate in the pipe or wet well, they will notify their manager of the condition. Through this information exchange an ad-hoc FOG source investigation may be conducted in an attempt to determine why increased FOG accumulation rates are occurring.

Public Outreach

The District has a FOG public education outreach program that promotes proper disposal of FOG. This program has the following primary components:

1. Public Education – The District believes that public education regarding the impacts of FOG on the collection system is one of the most important aspects of their FOG Control Program. To accomplish this, the District has distributed FOG pamphlets to residential and commercial customers, conducted power point presentation for FSE staff, and at times will devoted a portion of their quarterly newsletter to FOG education called the "FOG Corner". The District also distributes informational pamphlets during special events such as SnowFest and Earth Day.
2. Residential FOG Source Control - The District has developed a residential source control program called "Can the Grease". The goal of this program is to reduce the amount of residential FOG that enters the system. The District distributes free containers with

disposable lines where FOG can be disposed of and placed in the customer's standard trash receptacle.

8.0 SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The System Evaluation and Capacity Assurance Plan (SECAP) element is provided to ensure adequate capacity is available during extreme events. If adequate capacity is not available, design criteria shall be established to ensure capacity issues are addressed. If necessary, a capital improvement program and schedule shall be initiated to correct any deficient areas of the system. Per requirements of section D.13 (viii) of the 2006 WDR, and meeting above criteria, the SECAP section of the SSMP provides:

- Description of the existing Sewer service area, collection, and pumping systems. (section 8.1)
- Establishes anticipated wastewater flows. (section 8.2)
- D.13 (viii) - Evaluates effectiveness by way of addressing all SECAP plan elements as required by State Water Resources Control Board, Order No. 2006-0003, Section D.13 (viii). (section 8.3)

8.1 SERVICE AREA AND COLLECTION SYSTEM DESCRIPTION

The North Tahoe Public Utility District (NTPUD) is located on the northern shore of Lake Tahoe. The service area covers approximately 6.5 square miles and includes Kings Beach, Brockway, Tahoe Vista, and surrounding areas. NTPUD collects wastewater from within its service area and conveys it to a connection point with the Tahoe Truckee Sanitation Agency (TTSA). TTSA conveys the flow through an interceptor pipeline to a treatment plant in Truckee.

Chapter 4 of the SSMP provides an overall description of the system as well as references to detailed mapping.

The NTPUD collection system is summarized in Table 8-1.

Characteristics of the pump stations are summarized in Table 8-2.

Table 8-1. Collection System Characteristics

Infrastructure	Category	Extent
Collection System Pipeline	Gravity Mains	74.8 miles
	Force Mains	6.62 miles
	Diameter Range	6 – 36 inches
Wastewater Pump Stations	Mains, Satellites, Mashie, & Park	20

Table 8-2. Wastewater Pump Station Characteristics

Name	Location	Number of Pumps	Pump Capacity (gpm)	Pump TDH (ft)	Emergency Power	Wetwell Capacity (gallons)
S1	9890 Speed Boat Avenue	2	75	42	Port.Gen.	990
S2	9875 Pilot Circle	2	75	33	Port.Gen	2030
Mashie	7809 Mashie Avenue	2	50		Port.Gen	UNK
Secline	121 Secline Street	4	<1638	58	Sta.Gen.	1300
N1	7496 North Lake Boulevard (Moondune)	2	100	42	Sta.Gen.	UNK
Park Bathroom	North Tahoe Regional Park	2	50		Port.Gen.	UNK
N2	6542 North Lake Boulevard (Tahoe Sands)	2	250	23	Port.Gen.	1680
N3	6073 North Lake Boulevard	2	350	20	Sta.Gen.	9200
National	7010 North Lake Boulevard	2 1	2350 750	96/96/40	Sta.Gen.	UNK
C1	5464 North Lake Boulevard (Sahara)	2	100	34	Port.Gen.	UNK
C2	5000 North Lake Boulevard	2	300	34	Sta.Gen.	2789l
Carnelian	225 Onyx Street	2 1	2870 850	116/116/80	Sta.Gen.	UNK
D1 (Watson Creek)	4600 North Lake Boulevard	2	100	77	Port.Gen.	5700
D2	4360 North Lake Boulevard	2	100	81	Port.Gen.	4860
D3	4240 North Lake Boulevard	2	150	72	Port.Gen.	850
D4	4000 North Lake Boulevard	2	250	79	Port.Gen.	6900
D5 (Lake Forest)	3740 North Lake Boulevard	2	100	35	Port.Gen.	5450
D6	24 Chinquapin	2	200	50	Port.Gen.	UNK
D7 (Ridgewood)	280 Observation Court	2	100	50	Port.Gen.	3200
Dollar Point	3630 North Lake Boulevard	4	3000/2000/1000/3000	136/239/UNK	Duplex Sta.Gen.	25000

8.2 WASTEWATER FLOWS

This section summarizes information related to the amount of wastewater generated within the District and discharged to TTSA facilities. TTSA flow meter data is available at this connection point providing the ability to monitor and analyze both current and historical flows as well as provide information to aid in projecting potential future flows generated within the District.

The District completed a Main Sewer Pump Station Master Plan (MSPSMP) in 2009. One of the objectives of this study was to characterize the flow generation within the District and the potential for future increases. This study was very thorough in establishing applicable flow rates whereby significant flow monitoring throughout the District was performed as well as analysis of TTSA meter records. Flow characteristic from this study are summarized in Table 8-3 below:

Table 8-3. Design Flow Rates (units and information unedited per MSPSMP):

Flow Parameter	Average Daily Flow (MGD)	Peak Hour Flow (MGD)
2009 Dry Weather (1)	0.765	1.790
2009 Wet Weather (1)	0.830	1.929
2029 Dry Weather (2)	0.887	2.075
2029 Wet Weather (2)	0.989	2.331
Flood Flow (1)(2)	5.193	

(1) MSPSMP – Table I.5 (Tech Memo 2)
(2) MSPSMP – Table I.11 (Tech Memo 2)

For new development, the District has historically used Sanitary Sewer Flow Evaluation Guidelines. Based on NTPUD's guidance, the peak dry weather flow is 2 times the design dry weather flow. As shown in the above table, this approximate peaking factor historically used is validated through the 2009 MSPSMP. These guidelines include values for estimating design dry weather flow rate as shown in Table 8-4:

Table 8-4. Design Dry Weather Flow Factors

Type of Facility or Use	Design Dry Weather Flow Rate
Single family residence	300 gpd
Two family residence	600 gpd
Apartment to a single family unit (up to 400 sq. ft.)	150 gpd
Motels with kitchenettes, apartments, townhouses, mobile homes, trailers, co-ops, etc. up to 600 sq. ft. of gross floor area	150 gpd/unit

Type of Facility or Use	Design Dry Weather Flow Rate
Motels with kitchenettes, apartments, townhouses, mobile homes, trailers, co-ops, etc. 601-1200 sq. ft. of gross floor area	225 gpd/unit
Motels with kitchenettes, apartments, townhouses, mobile homes, trailers, co-ops, etc. greater than 1200 sq. ft. of gross floor area	300 gpd/unit
Motel unit less than 400 sq. ft.	100 gpd/unit
Motel unit greater than 400 sq. ft.	150 gpd/unit
Cafeteria (integral to an office or industrial building)	2.50 gpd/capita
Non-medical office space	0.06 gpd/sf gr. floor area
General industrial space	0.04 gpd/sf gr. floor area
Medical arts (doctor, dentist, urgent care)	0.10 gpd/sf gr. floor area
Restaurant (16 seat minimum or any size with dishwasher)	30 gpd/seat
Restaurant (fast food)	20 gpd/seat
Wet store-Food processing	0.15 gpd/sf gr. floor area
Wet store no food (barber shop, beauty salon, etc.)	0.10 gpd/sf gr. floor area
Dry store (no process water discharge)	0.03 gpd/sf gr. floor area
Market	0.05 gpd/sf gr. floor area
Bar, tavern, disco	15 gpd/occupant + food
Service stations	300 gpd/double hose pump
Laundry	425 gpd/laundry machine
Others	As Determined by Engineer

8.2.1 LIFT STATION CAPACITIES AND FLOWRATES

To ensure capacity at each pumping facility, expected flow rates for each facility vs. the pumping capacities available at each are examined. As part of the 2009 MSPSMP, wet well drawdown tests were performed at each main station which provided the current capacities for each pump. In addition, flow rates, including flood flows, were established for each main station. The 2009 MSPSMP also included information on the satellite pump stations. Although expected flood flows for each satellite was not examined, the numbers of connections was; this is utilized to establish an approximate expected domestic wastewater flow rate. From this, an applicable peaking factor (established through the main station analysis) is applied which provides a "worst case scenario" for each satellite station. The below two tables summarize the expected flows and relative capacities for all District pumping stations:

Table 8-5. Main Pump Station Flows and Pumping Capacities

Pump Station	Pump #	Capacity (gpm)	Required Capacity (Flood Flow) [1] (gpm)
Secline [2] (Rehab in 2011)	1 2 3 4	560 560 560 560	546 [2] 546 [2] 546 [2] n/a [2]
National [3][4]	1 2 3	2,434 1,754 770	2,359 (Total Station)
Carnelian [3][4]	1 2 3	2,233 708 2,051	2,870 (Total Station)
Dollar Main [5][6] (Rehab in 2013)	1 2 3	1,202 1,202 1,202	3,606 [5] (Total Station)
Dollar Addition [5][6]	1 (or #4 in total station)	1,202	n/a

(1) Total required station handling capacity per Stantec "Pump Station Master Plan"

(2) Per Secline Wastewater Pump Station Rehab. Tech. Memo. #1 (Harris & Assoc. 8/23/2010)

(2) Secline flood flow = 1,638 gpm (3 x's 546 gpm) 4th pump assumed down per design

(3) Measured flow rates (wet well drawdown tests) per Stantec MSPSMP (unless noted otherwise)

(4) Total existing station capacity not equal to sum of all pumps (will be less) however as shown if existing pumps were combined capacity is expected to exceed flood flow

(5) Per Dollar Pump Station Rehabilitation Project Preliminary Engineering Report (Harris & Assoc. 11/21/2011)

(6) Individual pump capacity shown assumes 3 pumps running at once with 4th assumed down per design. As shown 3 meets flood flow. Individual pump capacity is greater if only one is operating. Capacity of each pump equals 1,650 gpm.

Table 8-6. Satellite Pump Station Flows and Pumping Capacities

Pump Station	Design Flowrate [1] (gpm)	Services Served [1]	Flowrate per service [2] (gpd)	Flowrate (gpd)	Flowrate (gpm)	Peak (2 X's) (gpm)
S1	75	11	300	3300	2	5
S2	75	17	300	5100	4	7
N1	100/300	178 + 27 room lodge	300 + 225	53400 + 6075	37 + 4	74 + 8 83
N2	250	30 room lodge	225	6750	5	9
N3	350	353	300	105900	74	147
C1	100	196	300	58800	41	82
C2	300	103	300	30900	21	43
D1	100	31	300	9300	6	13
D2	100	49	300	14700	10	20
D3	150	73	300	21900	15	30
D4	250	204	300	61200	43	85
D5	100	17	300	5100	4	7
D6	200	190	300	57000	40	79
D7	100	15	300	4500	3	6
Mashie	80	2	300	600	0.4	1
Park		Rest Room (minor pump)				

(1) Per Stantec “Pump Station Master Plan”
(2) Per Table Above

8.2.2 Historical Flows:

As discussed above, TTSA flow data is available for use in analyzing historical flows. As part of the 2009 MSPSMP a thorough look at 10 years of data was reviewed in correlation with precipitation data. The summary of this analysis is quoted below:

"The T-TSA monthly flow volume data, calculated as the sum of the average daily flow rate values, is shown in Figure 1.1. It can be observed from Figure 1.1 that there is a consistent seasonal flow pattern to the T-TSA data. There is good correlation of the flow rates between wet years and drier years, and the impact of tourism on sewage production is evident on a seasonal basis. It can also be observed that the annual average daily flow rate has been decreasing since 1999, likely due to either a gradual reduction in primary residences in the District service area and a corresponding shift toward part-time occupied residences, or to a decrease in precipitation levels. In attempt to understand the decline in average daily flow rates, precipitation data were obtained from the California Data Exchange Center for Tahoe City for the previous 10 years. This information is also presented in Figure 1.1. The two months exhibiting the greatest flow rates in the available T-TSA data were April of 1999 and April of 2006. These time frames were preceded with high precipitation levels during the winter months, suggesting that substantial infiltration occurred due to melting snow pack and rising groundwater levels in the spring of 1999 and 2006."

MSPSMP Figure 1.1 is provided in SSMP exhibit 8.1.

8.3 SYSTEM EVALUATION

As required by the State Water Resources Control Board, Order No. 2006-000, Section D.13 (viii), the Enrollee shall prepare a System Evaluation and Capacity Assurance Plan. The below sections quote the specific Board Order requirements and immediately follow with the necessary plan element and/or information satisfying said requirement.

"The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

a. **Evaluation**

- Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency.
- The evaluation must provide estimates of peak flows (including flows from SSOs that escape the system) associated with conditions similar to those causing overflow 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 overflow events.

Plan element response:

Historically NTPUD has not experienced SSOs that were due to inadequate hydraulic capacity, and due to regional growth limitations enacted by the Tahoe Regional Planning Agency (TRPA), NTPUD forecasts that its collection system capacity will not be exceeded by the current or projected build-out flows. Historically the District has tracked SSOs since 1988 and maintains separate records for the times prior to SSO reporting via CIWQS as currently required. None of the SSOs on record have been identified as being caused by inadequate hydraulic capacity.

The 2009 MSPSMP addresses SSO risk and system characteristics. Technical Memo 1, section 5.4.1.2 quotes:

"The gravity system spills experienced by the District are generally not a result of under-sized pipelines. According to District staff, the existing collection system pipeline network has pipeline diameters large enough to convey the historic and future sewage loading based on potential growth. The pipeline system conveyance capacity is not exceeded even with the substantial collection system inflow and infiltration the District experiences. The most severe example of collection system inflow and infiltration occurred with the New Year's Day Flood of 1997. During this event, flow within the sewage export system is estimated to have reached the equivalent of five million gallons per day which is roughly five times greater than the current average day flow rate. It is believed that some property owners could have possibly alleviated flooding on their property by opening sanitary sewer cleanouts and allowing standing water to flow through the sewage collection system. In spite of this, the District's sewage collection and export systems were able to convey all flow. Holiday periods also result in higher than normal flow rates; however, even during periods such as the Fourth of July Holiday, the District's collection and export system pipelines are large enough to convey the resulting sewage flow."

Although SSO's have not occurred due to hydraulic limitations, sewer pipes are inspected periodically as described in Section 4 of this document. During these inspections, any evidence of surcharging, high water marks, or infiltration are noted in the database. District staff then follows up to investigate these areas and determines what or why this evidence exists and more importantly takes necessary steps to eliminate future occurrences.

b. **Design Criteria**

- Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria.

Plan element response:

As discussed above, the need for design criteria addressing hydraulic deficiencies is not applicable by virtue of the NTPUD system not experiencing hydraulic deficiencies. Regardless of a lack of historical deficiencies, the District has been proactive in establishing Sanitary Sewer Flow Evaluation Guidelines for new development. The criteria state that sanitary sewer connection will be allowed if and only if:

- Sanitary sewer trunks and laterals do not experience surcharging.
- Total of existing dry weather peak flow, wet weather flow, and proposed project peak dry weather flow is less than 50% of sewer pipe design capacity.
- There have been no historical reported backups for the sanitary sewer trunk system to which the proposed project will be connected. (Sanitary sewer trunk system includes trunk sewer and flow contributing laterals).

c. **Capacity Enhancement Measures**

  - Describe steps needed to establish a short-and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules.
  - The CIP may include increases in pipe size, I/I reduction, increases and redundancy in pumping capacity, and storage facilities.
  - The CIP shall include an implementation schedule and shall identify sources of funding.

Plan element response:

The District completed a Sewer Master Plan in 1991 as well as the MSPSMP in 2009 to provide an updated evaluation of the main pump stations that convey wastewater throughout the District. The hydraulic evaluation in both reports in turn focused on the potential for downsizing some force mains to reduce travel times through the system. The District currently sees and expects future flows significantly less than original design flows, leading to extended travel times in the larger force mains. It is proposed to downsize some of the existing force mains by inserting a smaller pipe inside the existing pipe. In this way the velocities could be increased, reducing travel times, allowing self-cleaning velocities, and reducing the potential for odor formation. Although this is identified as a need, funding toward other greater District priorities will push this project out a significant ways beyond the foreseeable near future.

Regardless of a lack of need for CIP projects necessary to increase hydraulic deficiencies, the District publishes a CIP each fiscal year. It includes the projects, timelines, and budgets for improvement projects identified by the District.

Although the District has not identified any collection system hydraulic capacity limitations, the CIP does include several improvements to the sewer system to improve reliability or improve

future operations. These projects will be funded from the District's Capitol Sewer Fund. A copy of the District's current CIP can be found on the District's website at www.ntpud.org.

d. **Schedule:**

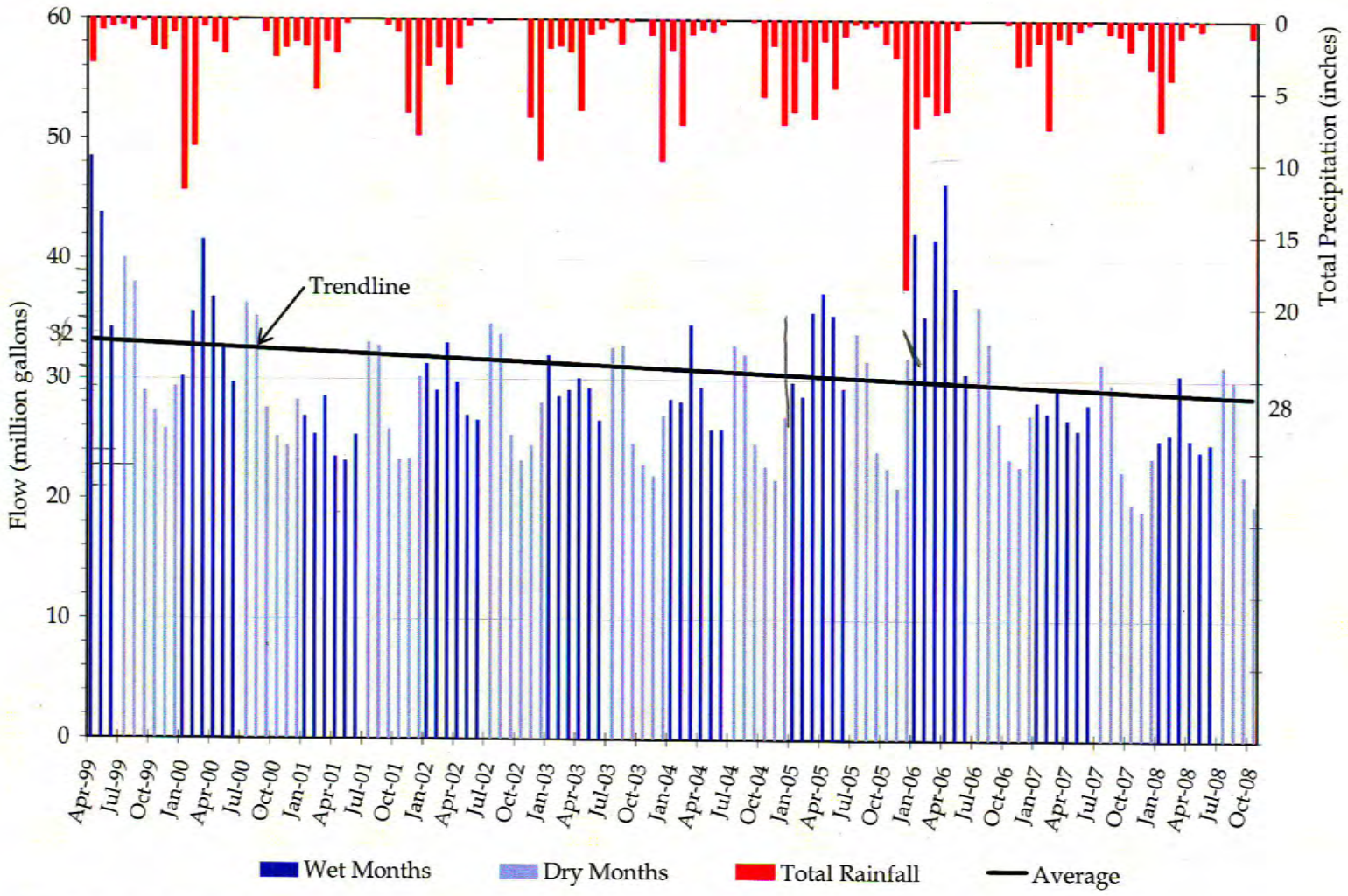
- The District will develop a schedule of completion dates for all portions of the capital improvement program developed in (a) - (c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements.

The CIP projects planned for the sewer fund are summarized in the District's 5 year CIP for purposes of near future planning. In addition the District maintains a list of identified capital projects for out (or currently unfunded) years.

List of Exhibits

Exhibit 8-1. Historical Sewer Flow Rates w/ Precipitation Data

FIGURE 1.1
Dollar Hill T-TSA Monthly Flow Rates and Tahoe City Monthly Precipitation, Years 1999-2008
Main Sewer Pump Station Master Plan



Source: Tahoe-Truckee Sanitation Agency and California Data Exchange Center

Exhibit 8-1: Historical Sewer Flow Rates with Precipitation Data

9.0 MONITORING, MEASUREMENTS, AND PROGRAM MODIFICATIONS

Per requirements of section D.13 (ix) of the 2006 WDR, and as part of maintaining a quality sewer system, the District:

- D.13 (ix) (a) – Maintains relevant information that can be used to establish and prioritize appropriate SSMP activities. (section 9.2)
- D.13 (ix) (b) – Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP. (section 9.2)
- D.13 (ix) (c) – Assess the success of the preventative maintenance program. (section 9.2)
- D.13 (ix) (d) – Update program elements, as appropriate, based on monitoring or performance evaluations. (section 9.2)
- D.13 (ix) (e) – Identify and illustrate SSO trends, including: frequency, location, and volume. (section 9.2)

9.1 INTRODUCTION

The District monitors the effectiveness of the Risk-Based SSMP on a regular basis, and will update and modify the Risk-Based SSMP elements as necessary to keep current, accurate, and available for audit. The following describes the District's procedure for monitoring the effectiveness of the Risk-Based SSMP and the procedures used to minimize SSOs.

9.2 MONITORING

The District tracks Key Performance Indicators (KPI) through District recorded information. LUCITY queried cleaning records and statistics gleaned from all SSO files. To monitor the effectiveness of the Risk-Based SSMP, the District selected a procedure to monitor & document specific parameters which are compared on an annual basis. These parameters provide quantitative, focused results intended to indicate the overall success of the Risk-Based SSMP, or conversely, the underlying problems that may then be further investigated. Table 9-1 lists each Risk-Based SSMP element, the overall purpose of the Risk-Based SSMP element, and the specific parameters that the District plans to track that will help in evaluating the effectiveness of the Risk-Based SSMP.

Table 9-1. Risk-Based SSMP Monitoring Parameters

Risk-Based SSMP Section	Summary of Element Purpose	KPI
1.0 Goals	Establish priorities of District and provide focus for District Staff	• As part of Element 10 – Program Audits, reconsider Goals and evaluate potential changes
2.0 Organization	Document organization of District staff and chain of communication for SSO response	• As part of Element 10 – Program Audits, update Organization Chart as staff changes or reorganizations occur
3.0 Legal Authority	Ensure the District has sufficient legal authority to properly maintain the system	• None needed
4.0 Operations and Maintenance Plan	Minimize blockages and SSOs by properly maintaining the system and keeping the system in good condition	• Total number and volume of SSOs • Causes of SSOs • Number of repeat SSOs (same location as any previous SSO, regardless of year of occurrence) • Length of pipe inspected with CCTV per year
5.0 Design & Construction Standards	Ensure new facilities are properly designed and constructed	• None needed
6.0 Overflow Emergency Response	Provide timely and effective response to SSO emergencies and comply with regulatory reporting requirements	• Average and maximum response time • Percent of total overflow volume contained or returned to sewer
7.0 Fats, Oil, and Grease Control	Minimize blockages and overflows due to FOG	• Number of overflows due to FOG (linked to SSO Identification Number) • Number of FOG producing facilities inspected (on schedule) • Percent of FOG producing facilities found to be in compliance
8.0 Capacity Management	Minimize SSOs due to insufficient capacity by evaluating the system capacity and implementing necessary projects	• Number of SSOs due to capacity limitations or wet weather (linked to SSO Identification Number)
9.0 Monitoring, Measurement, and Program Modifications	Evaluate effectiveness of SSMP, keep SSMP up-to-date, and identify necessary changes	• As part of Element 10 – Program Audits, evaluate tracking of KPI and effectiveness in determining effectiveness of SSMP
10.0 Program Audits	Formally identify SSMP effectiveness, limitations, and necessary changes on an annual basis	• Date of completion of last annual audit
11.0 Communication Plan	Communicate with the public and satellite agencies	• Number of written comments received from the public • Percentage of positive comments

The District uses these KPI to assist with completion of the annual Risk-Based SSMP program audit described in Chapter 10. The District also continues to track additional information, such

as customer complaints, length of pipe cleaned, length of pipe CCTV'd, etc. to assist with evaluation of its Risk-Based SSMP effectiveness.

9.3 RISK-BASED SSMP MODIFICATIONS

The District tracks parameters shown in Table 9-1, the result of which is included in the KPI checklist. As a checklist updated annually, the KPI list is provided in Appendix C. Checklist is not provided as part of this chapter as SSMP potentially will not require updating more so than the WDR 5 year timeframe (per WDR D.14). The District will review the success of and/or necessary improvements to its Risk-Based SSMP as part of the required two year Risk-Based SSMP program audit (see chapter 10). The District will update critical information, such as contact numbers, available emergency equipment, chain of communication, etc. as needed. Critical information such as this is provided in the appendix portion of the SSMP for ease in updating without formal Board of Directors re-adoption.

As required per WDR D.14, a comprehensive Risk-Based SSMP update will occur every five years. See Chapter 10 for program audits and tracking of SSMP revisions/updates.

10.0 PROGRAM AUDITS

This Risk-Based SSMP section serves to record the evolution of the Risk-Based SSMP Elements. The focus of the Program Audit will be to identify and correct program deficiencies in order to continually improve the program performance. As required per WDR D.13 (x), the District will audit its Risk-Based SSMP once every two years. These audits will identify any deficiencies in the current Risk-Based SSMP (based on number of SSOs experienced) and will describe the steps required to correct those deficiencies (if applicable).

10.1 AUDITS

The District's Engineer will lead the audit of the District's SSMP. The program audit will cover the period from the previous program audit to the current date.

Each of the major Elements of the Risk-Based SSMP will be addressed during the audit. An example of the Audit Checklist, provided in Exhibit 10-1, shows the categories to be evaluated. Where results of the evaluation indicate deficiencies, corrective measures will be developed. The results of the audit will be included in an Audit Report. The written report, summarizing the findings from the audit, will be kept on file with the Risk-Based SSMP, provided in Appendix D. The Audit Report is made available to applicable oversight agencies (i.e., the Regional Water Quality Control Board in California) in the event of an investigation.

10.2 RISK-BASED SSMP UPDATES

The District will determine the need to update its Risk-Based SSMP based on the results of the program audit and the performance of its wastewater collection system. The overall program effectiveness is measured by comparing the frequency and volume of SSOs since the previous audit period. If required, corrective measures will be developed for any, and all, Program deficiencies identified. Corrective actions, including a schedule for implementation of changes, will be documented in the Annual Audit Report.

The full Risk-Based SSMP is required to be updated at least every five years, per WDR D.14. Appendix E documents SSMP publications, and revisions/updates.

List of Exhibits

GENERAL DISTRICT INFORMATION

Item	General District Information Detail	Response
1.	Name of District	
2.	Date of Audit	
3.	Name of Auditor	
4.	System Overview	
5.	Linear Feet of Gravity Sewer Mains	
6.	Linear Feet of Force Mains	
7.	Total Linear Feet of All District Sewer Lines	
8.	Number of Pump Stations	
9.	Linear Feet of Private Sewer Mains (excluding laterals)	
10.	LF of Private Sewer Laterals	
11.	Total Population Served by District	
12.	Current Average Monthly Single Family Residential Sewer Rate	

GOALS

Item	Goals Detail	Response
13.	Are Goals Stated in the Risk-Based SSMP Still Appropriate and Accurate?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

ORGANIZATION

Item	Organization Detail	Response
14.	Reference Material: • Organizational Chart • Phone List	
15.	Is the Risk-Based SSMP up-to-date with agency organization and staffing contact information?	YES / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	

LEGAL AUTHORITY

Item	Legal Authority Detail	Response
16.	Reference Material • Municipal code(s) • Enforcement action(s)	
17.	Does the Risk-Based SSMP contain up-to-date information about the District's legal authority?	YES / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	
18.	Does District have sufficient legal authority to control sewer use and maintenance?	YES / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	

OPERATIONS AND MAINTENANCE

Item	Operations and Maintenance Detail	Response
19.	Reference Material • Collection system map	
20.	Does the Risk-Based SSMP contain up-to-date information about the District's maps?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
21.	Are District's collection system maps complete, up-to-date and sufficiently detailed?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

RESOURCES AND BUDGET

Item	Resources and Budget Detail	Response
22.	Reference Material • Current Capital Improvement Plan (CIP) • Current operating budget	
23.	Does Risk-Based SSMP contain up-to-date information about District's resources and budget?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
24.	Are District's resources and budget sufficient to support effective sewer system management?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
25.	Do District's planning efforts support long-term goals?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

PRIORITIZED PREVENTATIVE MAINTENANCE

Item	Prioritized Preventative Maintenance Detail	Response
26.	Reference Materials • Cleaning schedules • List or map of potential problem area • Work orders • Incident reports • Customer feedback • Annual Preventative Maintenance Activities	
27.	*Annual Preventative Maintenance Activities Summary*	

Maintenance Activities	Linear Feet/Year			
	2009	2010	2011	2012
CCTV				
Rodding				
Flushing				
Dye - Smoke testing				

28.	Does Risk-Based SSMP contain up-to-date information about District's preventative maintenance activities?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT

Item	Scheduled Inspections and Condition Assessment Detail	Response
29.	Reference Material • Inspection reports • Infiltration and Inflow (I/I) monitoring studies and reports • Pipe and manhole condition data	
30.	Does Risk-Based SSMP contain up-to-date information about District's inspection and condition assessment?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
31.	Are District's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

Item	Contingency Equipment and Replacement Inventories Detail	Response
32.	Reference Material • Funds spent on equipment and materials • Equipment and parts inventory	
33.	Does the Risk-Based SSMP contain up-to-date information about equipment and replacement inventories?	YES / NO
	If NO, describe content and schedule for necessary arrangements, or provide additional comments for YES response.	
34.	Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	YES / NO
	If NO, describe content and schedule for necessary arrangements, or provide additional comments for YES response.	

TRAINING

Item	Training Detail	Response
35.	Reference Material • Employee training records	
36.	Does the Risk-Based SSMP contain up-to-date information about the District's training expectations and programs?	YES / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	
37.	Do supervisors believe that their staff is sufficiently trained?	YES / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	
38.	Are staff satisfied with the training opportunities and support offered to them?	YES / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	

OUTREACH TO BUILDING CONTRACTORS

Item	Outreach to Building Contractors Detail	Response
39.	Reference Material • Fliers/mailings • Mailing lists	
40.	*Summary of Number of Permits Issued to Plumbers or Contractors* Year / Number of Permits* 2009 2010 2011 2012 2013 *Specifically permits that could impact District facilities	
41.	Does the Risk-Based SSMP contain up-to-date information about the District's outreach to plumbers and building contractors?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
42.	Has the District conducted or participated in any outreach activities to plumbers and building contractors?	YES / NO
	If NO, describe content and schedule for future activities, or provide additional comments for YES response.	

DESIGN AND CONSTRUCTION STANDARDS

Item	Design and Construction Standards Detail	Response
43.	Reference Material • Design and construction standards • Ordinances	
44.	Does the Risk-Based SSMP contain up-to-date information about the District's design and construction standards?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
45.	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
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

OVERFLOW EMERGENCY RESPONSE PLAN

Item	Overflow Emergency Response Plan Detail	Response
46.	Reference Material • Data submitted to CIWQS • Service call data	
47.	*Annual SSO Statistics Summary*	

Indicator	2009	2010	2011	2012	2013
Number of SSOs (total)					
Wet season SSOs					
Dry season SSOs					
Number of SSOs by volume (gallons)					
<10					
10 – 99					
100 – 999					
1000 – 9999					
>10,000					
Total SSO Volume					
Volume reaching waters of the State					
Volume not contained but not reaching waters of the State					
Volume recovered					
Net volume (total minus recovered)					
Number of SSOs per 100 mile of sewer per year					
Volume of SSOs per 100 mile of sewer per year					
Total Volume conveyed to the plant (million gal)					
Total volume SSO / Total volume conveyed (gal)					
Number of SSOs (by Cause)					
Blockages:					
Roots					
Grease					
Debris					
Debris from Laterals					
Animal Carcass					
Construction Debris					
Multiple causes					
Infrastructure Failure					
Inflow & Infiltration					
Electrical Power Failure					
Flow Capa District Deficiency					
Natural Disaster					
Bypass					
Cause Unknown					
Average Emergency Response Times, Minutes					
Business Hours					
Notification to arrival on site					
Notification to complete clearage					
Non-business hours					
Notification to complete clearage					
Number of locations with multiple SSOs					

Item	Overflow Emergency Response Plan Detail	Response
48.	Does the Risk-Based SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
49.	Considering the information in Item 47, is the Overflow Emergency Response Plan effective in handling SSOs?	YES / NO
	If NO, describe content and schedule for necessary revisions and implementation, or provide additional comments for YES response in the space below.	

FATS, OILS, AND GREASE (FOG) CONTROL PLAN

Item	Fats, Oils and Grease (FOG) Control Plan Detail	Response
50.	Reference Material • List or map of FOG sources in service area • List or map of potential problem areas • Cleaning schedules • Restaurant inspection reports or summaries • Data submitted to CIWQS • Service call data	
51.	FOG Control Statistics	

Statistic	2009	2010	2011	2012	2013
Number of SSOs caused by FOG					
Number of FOG inspections completed					

52.	Does the Risk-Based SSMP contain up-to-date information about the District's FOG program?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response.	
53.	Considering the information Item 51, is the FOG program effective in documenting and controlling FOG sources?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response.	

CAPACITY MANAGEMENT

Item	Capacity Management Detail	Response
54.	Reference Material • Capacity assessment reports • CIP • SSO data	
55.	Number of SSOs Caused by Hydraulic Limitations	

Year	Number
2009	
2010	
2011	
2012	
2013	

56.	Does Risk-Based SSMP contain up-to-date information about District's capacity assessment?	YES / NO
	If NO, describe content and schedule for necessary activities, or provide additional comments for YES response.	
57.	Has District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?	YES / NO
	If NO, describe content and schedule for necessary activities, or provide additional comments for YES response.	

MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

Item	Monitoring, Measurement and Program Modifications Detail	Response
58.	Does the Risk-Based SSMP contain up-to-date information about District's data collection and organization?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
59.	Is District's data collection and organization sufficient to evaluate the effectiveness of the Risk-Based SSMP?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

SSMP AUDITS

Item	SSMP Audits Detail	Response
60.	Will this Audit be completed annually and filed with the Risk-Based SSMP report?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

COMMUNICATION PROGRAM

Item	Communication Program Detail	Response
61.	Reference Material • Mailings and mailing lists • Website • Other communication records such as newspaper ads, site postings, or other outreach • Customer feedback	
62.	Does the Risk-Based SSMP contain up-to-date information about the District's public outreach activities?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
63.	Does the Risk-Based SSMP contain up-to-date information about the District's communications with satellite and tributary agencies?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
64.	Has the District effectively communicated with the public and other agencies about the Risk-Based SSMP, and addressed feedback?	YES / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

11.0 COMMUNICATION PROGRAM

11.1 PURPOSE

The District implemented a communication program to communicate, on a regular basis, with the public on the development, implementation, and performance of the Risk-Based SSMP, and sewer system in general. The communication system provides the public the opportunity to offer input to the District in regards to the SSMP. Input by the public may be made in regards to any portion of the SSMP, whether it be simple general questions/clarifications or the overall performance of the sewer system and plan.

This section of the Risk-Based SSMP outlines the process involved in the Communication Program as required per WDR D.13 (xi).

11.2 COMMUNICATION WITH PUBLIC ON THE RISK-BASED SSMP

Consistent with direction provided within the California Water Environment Association's "SSO-WDR Compliance Workshop Electronic Reporting: Reporting Requirements and Tip" binder, compliance with section WDR D.13 (xi) is provided by placing notices and information on the NTPUD website. This Communication Page provides the SSMP document, all appendices, contact information about where and how the public may comment and ask questions on the Risk-Based SSMP, and links to useful educational information. A copy of the final Risk-Based SSMP document will also be made available to interested parties for review and comment at the District's main office.

11.3 COMMUNICATING SEWER SYSTEM PERFORMANCE

The District continues to conduct public outreach and education for residents and businesses related to sanitary sewer system in general. Outreach primarily covers issues, which when left unaddressed, could be a leading cause of an SSO. The District will continually update the Communication Page on the District's website and will disseminate information, in meetings, quarterly newsletter, and/or by flyers to residences, land developers, consulting engineers, and plumbing contractors regarding the need and methods to reduce SSOs. Plumbers and sewer contractors will have access to all available District plans, specifications, and standard details to ensure that projects are properly designed and built to the District Standards.

11.4 EDUCATIONAL INFORMATION

Useful educational information regarding the prevention of SSOs can also be found on the following websites:

http://www.stoptheclog.com/fog.html

http://www.wef.org/AboutWater/ForThePublic/WastewaterTreatment/

http://www.calfog.org/

http://www.trpa.org/

Information on other Tahoe Basin sewer agencies' SSMPs can be found at their respective websites as listed in Table 11-1.

Table 11-1. Tahoe Basin Sewer District Websites

District	Website
Incline Village General Improvement District	www.ivgid.org
Kingsbury General Improvement District	www.kgid.org
North Tahoe Public Utility District	www.ntpud.org
Round Hill General Improvement District	www.rhgid.org
South Tahoe Public Utility District	www.stpud.us
Tahoe City Public Utility District	www.tcpud.com

Appendix A

SSO Emergency Response Operating Procedure

(update as reqd.)

COPY PROVIDED WITHIN THIS SSMP IS A NON-INDEXED (I.E. TABBED) VERSION. SEE SEPARATE "SSO EMERGENCY REPONSE OPERATING PROCEDURE" BINDER FOR TABBED FIELD COPY.

[SEE FOLDER IN R:ENGINEERING\SSMP] FOR EDITABLE ELECTRONIC DOCUMENTS AND COMPLETE COPIES OF INFORMATION]

SSO Emergency Response Operating Procedure

- THIS FIELD COPY SATISFIES REQUIREMENTS OF SANITARY SEWER MANAGEMENT PLAN (SSMP), CHAPTER 6. COPY ALSO PROVIDED IN APPENDIX A OF SSMP.

- A COMPLETE HARDCOPY OF SSMP MAY BE FOUND IN DISTRICT OFFICES (ENGINEERING, OPERATIONS, CREW ROOM, AND FRONT OFFICE), OR ELECTRONIC (PDF) VERSION ON DISTRICT'S EMPLOYEE INTRANET AND PUBLIC INTERNET.

Copy #_____

September 2016

1 – Contacts and Codes

- Emergency Spill Contact Information
- Contractor Aid Phone Numbers
- NTPUD Employee Directory
- Gate Codes

2 – Emergency Response Procedure

- "SSO Emergency Response Operating Procedure" (Generalized Response)
- Sewer Station Alarm Procedures (from Emergency Response Plan)
- Detailed Response Flow Chart (from Emergency Contingency Plan)
- Detailed Response Tasks (from Emergency Response Plan & Emergency Contingency Plan)

3 – Notification & Reporting

- Flow Chart
- SWRCB Order No. WQ 2013-0058-EXEC

(Provides Information Requested during Notification and/or Reporting for any SSO)

4 – Documentation Forms

- SSO Response – Field Checklist & Documentation – Field Crew
- SSO Response – Field Checklist & Documentation – Duty Supervisor
- Post-SSO Briefings, Findings & Review – Duty Supervisor
- Agreement for Emergency Repairs on Private Property

5 – Volume Estimation Methods and Reference Photos

- Compiled from various sources

6 – Available Equipment & Mutual Aid

- Emergency Equipment Available From Mutual Aid Districts
- Mutual Aid Agreement

7 – Emergency Dump MH Maps

8 – Water Quality Monitoring Program

- Plan
- Documentation Form

Tab 1

Contacts & Codes

Emergency Spill Contact Information

Contractor Aid Phone Numbers

NTPUD Employee Directory

Gate Codes

User Specific Names & Passcodes for:

- Remote Sites
- SCADA
- RACO (Auto-dialer)
- Etc.

(Information removed in Public Distribution copy due to confidentiality

and access control protocols established by NTPUD)

Tab 2

Emergency Response Procedure

"SSO Emergency Response Operating Procedure"
(Generalized Response)

Sewer Station Alarm Procedures
(Modified: Originally from Emergency Response Plan)

Detailed Response Flow Chart
(Modified: Originally from Emergency Contingency Plan)

Detailed Response Tasks
(Modified: Originally from Emergency Response Plan & Emergency Contingency Plan)

SSO Emergency Response Operating Procedure

(Generalized Response)

Motto: "CONTAIN – CONTROL – CORRECT"

(PHOTO and TIME documentation needed during all steps)

First (Initial) Response:

- **Determine Resources Required**: (personnel, equipment, etc.) contact help and gather equipment as required.

- **Determine if assistance is needed** from Mutual Aid Districts and/or Contractors, contact as required.
    1. See Emergency Spill Contact Information Sheet (Tab 1 this document)
    2. See Available Equipment (Tab 6 this document)

- **Determine SSO Category.**
    1. See Notification & Reporting section for flowchart (Tab 3 this document).

  If category **1** or **2** spill ***(any volume to Surface water and/or over 1,000 gallons)***

    1. Call Duty Supervisor
    2. Continue to **Response at SSO Scene** (next page)

  If category **3** spill ***(less than 1,000 gallons)***

    1. Continue to **Response at SSO Scene** (next page)

  If blockage or problem is on Private Property:

    1. Shut off water to residence or private development if required
    2. Continue to Private Property section of this document

Response at SSO Scene

Motto: "Contain – Control – Correct"

(Prioritize tasks as required, every event is unique)

(PHOTO and TIME documentation needed during all steps)

1. Safety First
    - Set up traffic control (if required) (See Contact Information, tab 1, this document)
    - Set up crowd control (as/if required)
    - Secure contaminated area
2. Regulate upstream flows when and if possible (BUY TIME!)
    - Isolate upstream pump station for storage if possible
    - Pump down SSO location if possible
    - Shut off water if required
3. Containment (Moto: "Lesser of all Evil's")
    - Eliminate and/or Minimize flow into Stormdrain, channel, or surface water
    - Sandbag barrier (bags ready behind Annex)
    - Berm or Excavation as required
    - Utilize any controlled storage possible (Vactor, Tankers, etc.)
    - Existing basins (for later extraction)
4. Install bypass pumps and piping (as/if required)
    - Godwin Pump
    - Bypass Hose System, etc.
5. Line up Tank or Vactor truck brigade
    - Emergency Dump MH maps provided in tab 7, this document
6. Clear blockage or Correct Problem
    - Rodding
    - Excavation & Repair
    - Troubleshoot Technical, etc.
    - If Power issue – Deploy generator's
7. Resume normal pumping and operations

8. Take samples if required (See Tab 8 this document)
9. Estimate total spill volume (See Tab 5 this document)
10. Monitor system & Clean-up (Site Restoration as best as possible)
    - Recover as much SSO volume as possible (pooled, intercepted, re-routed, etc.)
    - Rake up, bag and properly dispose of all accessible SSO affected areas
    - Disinfect and/or flush & extract all areas as required
    - Do Not Chlorinate areas next to or adjacent to the lake.
11. Fill out "SSO Response – Field Checklist & Documentation – Field Crew" form (Tab 4 this document)
    - Filled out as soon as time or available staff allows
12. Determine cause and review operations to eliminate SSO cause from occurring in future

(SEE "DETAILED RESPONSE TASKS" IF REQD.)
(FOLLOWING PAGES)

If Private Property

- Shut off water to residence or private development if required
- If Category 1 or 2 SSO – Contact Duty Supervisor
- If Category 3 SSO:
    - Contact property owner
        - Request that the property owner obtains appropriate service from a private sector provider
        - If private sector service cannot be obtained, the "Agreement for NTPUD to Perform work on Private Property" can be completed by the owner which authorizes the District to preform cleanup activities with the expenses billed directly to the property owner (See tab 4 this document)
    - Notify Placer County Environmental Health if required.
    - If the property owner cannot be contacted
        - The "Agreement for NTPUD to Perform work on Private Property" can be signed by Placer County Environmental Health directing the District to proceed with the cleanup activities at the owner's expense. (see tab 4)

Duty Supervisor

- Proceed to site immediately.
- Fill out and follow all steps on "SSO Response – Field Checklist & Documentation – Duty Supervisor" form (Tab 4 this document)
- If Category 1 or 2, contact GM immediately following any required notifications required (See tab 3 this document)
- Set up meeting within 48 hours with all District employees involved
    - Obtain all required information to be reported (See tab 3 this document)
    - Notify and/or Report (See tab 3 this document)
    - Fill out "Post-SSO Briefings, Findings & Review" form (See tab 4 this document)

SSO Documentation and Record Keeping

- A record of all events shall be maintained in:
    - R:Engineering/Sewer Spills & Water Leaks/Sewer – Category (1, 2, or 3) SSO's. (applicable SSO Category)
- Create a new folder in applicable SSO Category folder.
    - Naming convention of new folder shall follow "4 digit year-2 digit month-2 digit day_-_Brief location name"
- Include as much information on the event as possible. Create sub-folders if necessary for file organization. Information to be contained in SSO event folder may include (but not limited to):
    - Photo's
    - Scan of all completed documentation forms
    - Work Orders for repairs or corrective actions
    - Memo of event (if prepared)
- Each SSO will be of varying size and type. Depending on the severity of the event and actions taken, each will demand a varying level of documentation. In all cases provide enough documentation to provide an accurate representation of the event, conditions, and actions taken for future reference.

SEWER STATION ALARM PROCEDURES
(ALARM TYPE AND RESPONSE)

(ALL ALARM SITUATIONS ARE UNIQUE. RESPONSE ACTIONS BELOW PROVIDE GENERAL GUIDANCE)

(ACTIONS AT TIME OF ANY ALARM SHALL BE PERFORMED AND PRIORITIZED BY THE RESPONDING PARTY ACCORDING TO THEIR JUDGMENT. RESPONSE SHALL BE BASED ON TYPE OF ALARM, SITE & ENVIRONMENTAL CONDITION(S), AND FACILITY NEEDS AT TIME OF ALARM)

Station Alarms are generated via District's SCADA and Raco Auto-dialer systems. Alarms are routed to on-call technician.

Alarm Types and Procedures below address only the emergency condition alarms requiring urgent response. The system also has some pre warning alarms that will alert the tech on call to take preemptive actions to avoid critical problems.

Other informational alarms, which may occur, requiring less urgent responses are also incorporated into SCADA and Auto-dialer system. These informational alarms are not addressed in this emergency response procedures.

The below table provides a list of stations and emergency alarms available at each site.

				SCADA Alarms						Auto-dialer Alarms					
Station	Flow	Type of Station	Type of Level Indicator	Communications Fail	Drywell Flooded	Loss of Power	High Wet Well	Loss of Level Indicator / Control Fail	Help Needed	Communications Fail	Drywell Flooded	Loss of Power	High Wet Well	Help Needed	Emergency Power On
Secline	High	Main	Sonic	A	B	C	D	E	X	A/R	B	C	D	X	X
National	High	Main	Bubbler	A	B	C	D	E	X	A/R	B	C	D	X	X
Carnelian	High	Main	Bubbler	A	B	C	D	E	X	A/R	B	C	D	X	X
Dollar	High	Main	Sonic	A	B	C	D	E	X	A/R	B	C	D	X	X
S1	Low	15	Float	A	N/A	C	D	E	X	A/R	N/A	C	D	-	-
S2	Low	15	Float	A	N/A	C	D	E	X	No Auto-dialer					
N1	High	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	-
N2	Low	15	Float	A	N/A	C	D	E	X	A/R	N/A	C	D	-	-
N3	Low	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	X
C1	High	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	-
C2	High	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	X
D1	Low	16	Transducer	A	B	C	D	E	X	No Auto-dialer					
D2	High	15	Float	A	N/A	C	D	E	X	A/R	N/A	X	D	-	-
D3	High	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	-
D4	High	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	-
D5	Low	15	Float	A	N/A	C	D	E	X	Communications Fail					
D6	High	16	Transducer	A	B	C	D	E	X	A/R	B	C	D	X	-
D7	Low	16	Transducer	A	B	C	D	E	X	No Auto-dialer					
Mashie	Low	Residential		No SCADA						A/R	B	C	D	X	-
Park Restroom	Low	Residential		No SCADA						No Auto-dialer					

Alarm Type & Response:

After notification of alarm, from SCADA or Auto-dialer, respond to remote SCADA interface, base, or directly to site to determine the nature and/or location. Alarms generated from SCADA are documented with the SCADA historian. Alarms generated from the Raco Auto-dialer are documented with Raco Auto-dialer Alarm Agent service.

COMMUNICATION FAIL SCADA

Communication Failure Alarms generated from SCADA occur in the event a transfer of data (from remote site to SCADA server) does not occur within the time frame set. These time frames may vary, depending on nature of site. Typically they are set anywhere between 90 and 240 seconds. Communication Failure Alarms generated from Auto-dialer occur if the remote sites cell phone is not operational. This is automatically checked once a day by the RACO Alarm Agent system.

ACTION: A (See attached table from first page).

1) Initiate a station visitation schedule to verify that the station is operating properly.

2) Station visitation checks shall be performed per the following guideline.

   Main Stations: Stations should be checked in rotation as quickly as possible, aiming for a goal of each station once an hour. If a problem is found, continue to man station and call for assistance.

   High Flow Satellite Stations: High flow satellites as listed in above table should be checked in rotation as quickly as possible, aiming for every three (3) hours. If necessary, additional assistance may be called in to aid in station checks.

   Low Flow Satellite Stations: Low flow satellites as listed in above table should be checked every 12 hours.

3) Continue visitation schedule until full communication is restored.

4) May need to reboot main server and R.T.U. at Kings Wood Tank.

5) Confirm Raco Auto-dialer is functional.

COMMUNICATION FAIL RACO

ACTION: A/R (See attached table from first page).

1) Check signal strength and power at Station RTU press reset on front of Unit wait for any change of RTU status.

2) Log in to Raco.com with user log in and password and confirm fault status, call Raco 1-800-449-4539 to start repair Ticket # and have the confirm problem on their end not our problem.

DRYWELL FLOODED ALARM

Or also called Plant Flooded alarms are generated when float in drywell is tripped. Alarm goes to the tech.

ACTION: B (See attached table from first page).

1) Call out sewer crew (vacuum truck driver and standby sewer crew) to mobilize and man portable pumps as required to pump down the dry well and wet well. Turn off drywell power (shunt trip) or turn off drywell breaker located in station service panel before entering drywell. Pump dry well into wet well, or into vacuum truck or downstream manhole. Continue pumping until source of liquid entering drywell is controlled.

2) Make contact with the Duty Supervisor as soon as possible and inform them of alarm. If initial contact is not made, continue trying on a frequent basis until contact is made. Continue to station to verify condition. Notify contacted personnel of verification as applicable (false alarm, response activities, etc.)

3) After drywell is pumped down, isolate leak, you may have to close the suction and discharge valves of the pump that is leaking. This is a confined space entry. Air units and bio-system tester must be utilized.

4) All leakage should be stopped at this time.

5) Clean up station drywell, inspect and correct any damage to station electrical before placing equipment back in service

POWER OUTAGES

Commercial Power at site is out.

ACTION: C (See attached table from first page).

- **DOLLAR HILL**

1) Visually check to insure the generator is running and is loaded. If running, the site shall be monitored for continued performance as required.

2) Check for normal voltage (480) and some current on the generator control panel.

3) Check all circuit breakers for tripping and motor controls for overloads tripped.

4) Check fuel levels.

5) If no power and no generator won't start, contact the Duty Supervisor immediately.

6) If generator is not running and no power, use the generator control panel to read why it failed to start. It can be reset and will try to start three more times.

7) Visually check wet well level.

8) There is no maximum load at this station. The utility and the generator will run all four pumps with their normal VFD controllers.

9) Dollar Addition has the Kholer Generator on location and it can be hooked up and run the Dollar Addition on manual breaker control, or moved it to the back of control building and hook up to run main pump station.

- **CARNELIAN, NATIONAL, SECLINE** (Secline has a canon plug)

1) Visually check to insure auxiliary generator is running and is loaded. If running, the site shall be monitored for continued performance as required.

2) Check all circuit breakers for tripping and motor controls for overloads tripped.

3) Check fuel levels.

4) Check wet well level.

5) If no power and no generator won't start, contact the Duty Supervisor immediately.

AFTER RETURN OF POWER

1) All generators should shut off automatically after a 15 to 30-minute cool down (set point previously determined by District).

2) Generator run lights should then clear from SCADA.

- **SATELLITE STATIONS**

- STANDBY EMERGENCY GENERATORS: Call "On Call Sewer Ops". Emergency generators should be started and ready to respond to satellite stations as soon as possible. Before dispatching a generator to any satellite station check the mobile generator oil level and make certain that there is a full fuel tank. All generators should leave the yard running with beacon lights on and safety chain attached.

- Satellites **without stationary generators** are listed by flow priority:
  (Priority list established based on peak flow into station relative to volume of wet well, i.e. time to overflow): Dispatch will be based on SCADA monitoring.

1)	D3	6)	D2
2)	D4	7)	S2
3)	C1	8)	D1
4)	N2	9)	D5
5)	S1	10)	D7

- Satellites **with stationary generators** shall be checked and verified stationary site generation power is in operation, once verified power and pump operation is correct, continue to next station. Satellites with stationary power: N1, C2, N3, D6

- **TRANSFERRING EMERGENCY POWER TO STATION**
  1) Check to make sure main circuit breaker from generator is turned off.
  2) Plug cable into station receptacle.
  3) Turn station switch from commercial power to emergency power.
  4) Turn main circuit breaker from generator on.
  5) Check drywell to insure station is powered.
  6) Technician verify pump down.

- **RE-TRANSFER TO COMMERCIAL POWER**
  1) Turn main circuit breaker from generator off.
  2) Turn station switch from emergency power to commercial power.
  3) Unplug cable from station receptacle.
  4) Turn generator off upon returning to base.
  5) Gas unit up and check oil level.

STATION	LOCATION	PLUG LOCATION	SWITCH TYPE
S1 & S2	9890 Speedboat	Bottom Of Panel	Rotary
N1	7500 North Lake	Stationary Generator	Automatic
N2	6542 North Lake	Stationary Generator	Knife Switch
N3	6061 North Lake	Front Of Panel	Automatic
C1	5440 North Lake	Bottom Of Panel	Dual Breaker, Slide Bar
C2	5000 North Lake	Stationary Generator	Automatic
D1	4600 North Lake	Bottom Of Panel	Dual Breaker, Slide Bar
D2	4360 North Lake	Bottom Of Panel	Dual Breaker , Slide Bar
D3	4240 North Lake	Bottom Of Panel	Dual Breaker, Slide Bar
D4	4000 North Lake	Bottom Of Panel	Dual Breaker, Slide Bar
D5	3740 North Lake	Bottom Of Panel	Dual Breaker, Slide Bar
D6	24/25 Chinquapin	Rear Of $ Station, 480 Volt Gen Only	Dual Breaker, Slide Bar
D7	280 Observation	Power pedestal on road	Dual Breaker, Slide Bar

HIGH WET WELL

ACTION: D (See attached table from first page).

- **DOLLAR MAIN, DOLLAR ADDITION, CARNELIAN, NATIONAL**

  1) Visually check wet well level

  2) If pumps do not start in auto, turn H.O.A. switch to "Hand". Pumps should now start and variable speed pumps can be flow matched with the Q-cell bleed valves as necessary. (Q-cell and Manual speed control no longer applicable at Dollar)

3) Check the main circuit breaker and voltage meter to right of the breaker for a tripped condition and proper voltage. If voltage is more than 10% high or low, notify Liberty Energy.

4) Check station pump running lights. If they are dim or out, push resets on motor starter. Lights may be dim due to losing 1 leg of the three-phase. Check power on main feed for each leg)

5) Check and or reset all pump circuit breakers.

6) Check Q-cell high temperature reset. Check water level on Q-cell and temperature of Q-cells. Temperature should be between 90-120 degrees F.

7) Check bubbler air compressors, and SCFH rotameter in bubbler panel. The SCFH rotameter should be set at 2. If there is a small leak in compressor system then set to 3.

8) Make a visual check of fuses, circuit breakers and control cabinets for obvious damage.

- **SECLINE MAIN**

1) Visually check wet well level. Confirm pump will run in hand pump down if needed.

2) Check station main breaker and incoming power for proper voltage. If incoming power is more than 10% high or low, call Liberty Energy.

3) Check and reset pump breakers and push pump resets.

4) Call (Duty Supervisor) for emergency bypass and vacuum trucks.

- **MODEL 16 STATIONS – N1, N3, C1, C2, D1, D3, D4, D6, D7**

1) Visually confirm high wet well. Confirm pump will run in hand pump down if needed

2) Visually check for flooded drywell. If drywell flooded, refer to "Drywell Flooded Procedure".

3) Check circuit breakers and pump resets.

4) Turn H.O.A. switch to hand to pump wet well down. If necessary, operate station manually until problem is resolved and corrected.

5) Call (Duty Supervisor) for emergency bypass and vacuum trucks.

- **MODEL 15 STATIONS – S1, S2, N2, D2, D5**

  1) Visually confirm high wet well. Confirm pump will run in hand pump down if needed

  2) Check station circuit breakers and pump resets.

  3) Tip all three pump control floats (enable, lead, lag). Sonic start prime system will automatically keep pumps primed at all times.

  4) If vacuum pump fails to draw prime, close discharge plug valve and try again.

  5) If vacuum pump still fails to draw prime, close stop valve in vacuum system to check operation of vacuum pump. Replace if necessary.

  6) Call (Duty Supervisor) for emergency bypass and vacuum trucks.

LOSS OF LEVEL INDICATOR

- **Control Fail**

Control Fail alarm is a wet well level set point that can be changed on the plc. The level is normally set between lead pump and lag pump start, there are several factors that can trip this alarm, plugged pump, high flow, or level transmitting devices could be dirty and Plc failure.

Visually check for high wet well. Confirm pump will run in hand pump.

Level indicator not functioning or seen by SCADA.

ACTION: E (See attached table from first page).

- **BUBBLER SYSTEM**
  - (NOTE: Bubblers are currently at Carnelian and National main sewer only)

1) Visually check for high wet well.
2) If necessary, use HOA switch in hand to pump down wet well.
3) Upon entry into dry well, check circuit breakers and pump resets.
4) Exchange compressor plugs in receptacle. If no change, check voltage at receptacle; then, at its circuit breaker.
5) If compressor is running, check all bubbler fittings and tubing for leaks.
6) Operate station in hand until problem is resolved and corrected.

- **PRESSURE TRANSDUCER SYSTEM (All Model 16)**

    1) Visually check for high wet well. Confirm pump will run in hand pump down if needed
    2) Model 16 satellites P.L.C. may lock up, you can tell by the H.M.I. screen, if this happens you will need to rest power to whole system.
    3) Check voltage to Transducer then milliamp's from transducer. Replace if needed.
    4) National and Carnelian pump control are from Pressure transducer and pressure switch transducer is level monitoring only.
    5) Model 15 satellites pump control is from float system transducer is level monitoring only.
    6) **Note:** All systems have an all pumps run Float Bypass feature. Confirm pumps are operational replace transducer or repair system if parts available.

- **ULTRASONIC TRANSDUCER SYSTEM (Dollar Main, Secline Main)**

    1) Visually check for high wet well. Confirm pump will run in hand pump down if needed
    2) Check power to device 120 volts and 24 volt D.C. If ok check Manual for any alarm codes. Dollar Main has a backup device on the Dollar Addition wet well that can run the station, or you can run it on Float Bypass System. Secline will run on the Float Bypass system only.

- **FLOAT SYSTEM**

1) Visually check for high wet well. Confirm pump will run in hand, pump down if needed.
2) Make sure all floats are free, clear and operational, replace if needed.
3) Confirm all pumps are not plugged, if so clear.
4) P.L.C. may lock up, you can tell by the H.M.I. screen, if this happens you will need to rest power to whole system.
5) Confirm transducer or level transmitting devices are free, clear, clean, and reading properly.
6) Check set points and trending to confirm flow in to station.

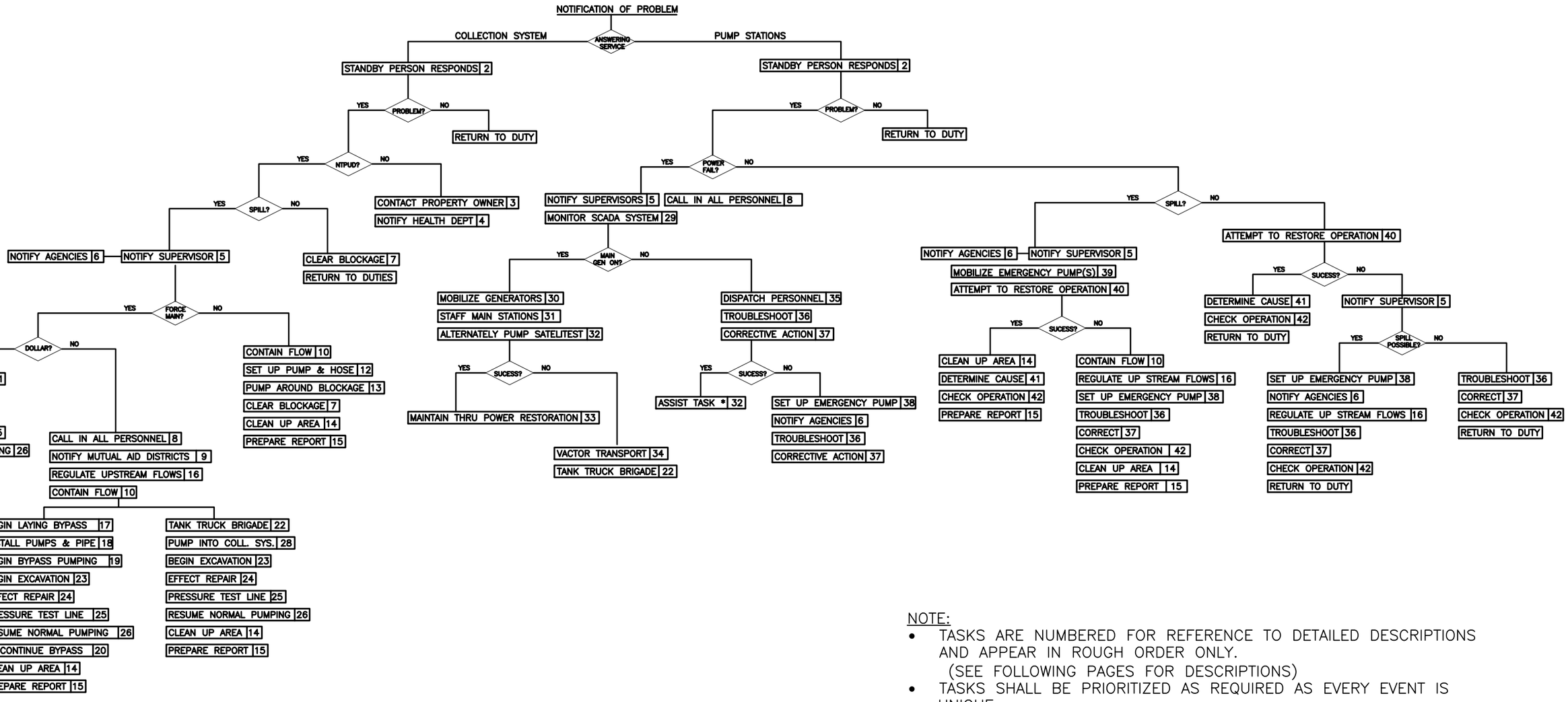
Detailed Tasks per 2005 NTPUD Emergency Response Plan (ERP). Tasks Modified to Meet Current Requirements.

(Originally published 1985 NTPUD "Tahoe Truckee Area Emergency Contingency Plan")

Following Pages:

- Detailed Response Flow Chart
- Detailed Response Tasks

DETAILED RESPONSE FLOW CHART



NOTE:

- TASKS ARE NUMBERED FOR REFERENCE TO DETAILED DESCRIPTIONS AND APPEAR IN ROUGH ORDER ONLY.
  (SEE FOLLOWING PAGES FOR DESCRIPTIONS)
- TASKS SHALL BE PRIORITIZED AS REQUIRED AS EVERY EVENT IS UNIQUE.

Detailed Response Tasks

See Flowchart for Categories Relating to Below Tasks and Generalized Order of Response.

(All Events are unique in nature. Flowchart and tasks provided are only a guide. Tasks shall be prioritized as required depending on the event and judgment of responding parties.)

TASK 1: Answering Service
Off Duty Hours: Anyone trying to reach the District to report a problem or an alarm condition occurring at any District facility (sewer or water) will initiate a response from the Answering Service. The answering service will initiate a call to the necessary standby personnel (either sewer or water). If a message is left and no response is received within Fifteen (15) minutes, the answering service will call the other on-call phone (either sewer or water) and call the duty supervisor. The answering service is also supplied with an up to date list of phone numbers for all District employees should planned initial notification plan fail.

Normal Work Hours: Problems or alarms will be handled by office personnel. At this stage the necessary personnel will be dispatched from the Sewer, Water and or Pump Station Crew.

TASK 2: Standby Personnel Responds
Standby personnel will receive a call from the answering service (plugged sewer line, water leak, manhole overflowing, etc.) or via direct alarms out of station(s) SCADA. The answering service is instructed to gather pertinent information to relay to standby personnel as required (sewer, water, or station technician). For SCADA alarms, the standby technician will immediately go to SCADA Control to determine the exact location and the type of alarm. After review of SCADA Control, the standby technician will respond as necessary to the reported problem area if required. If the facility sending the alarm is closer in vicinity to the standby technician, the site may be visited first.

It is the responsibility of the first person responding to the call or alarm to determine the validity of the problem. This person will confirm that sewage is backed up or that a water main is leaking as opposed to ground water surfacing or bubbling up from some other type of source. If a problem is determined to exist, that person's next responsibility is to establish whether or not the problem relates to the North Tahoe Public Utility District Facility.

The most common Non-District problem is that of a blocked house service lateral. The standby person will check the sewer collection lines to insure that they are flowing to help establish the responsibility of the problem. Another common Non-District problem is a report of a manhole overflowing when it is in fact a telephone company vault surcharged with groundwater. In all cases, the total effect of any problem should be thoroughly investigated as it may or may not relate to and/or affect other parts of the system. **Example**: As in the case of a power outage, or a flat collection line surcharge with lower manhole rim elevations upstream.

In all cases, standby personnel shall be actively engaged in response activity within 10 minutes of being notified. Actual site arrival will depend on location and other factors outside personnel's control (weather, traffic, etc.). All on call personnel are required to be within ½ hour response time to NTPUD Base facilities under normal conditions.

TASK 3: Contact Property Owner
Following the determination that a Non-District problem does exist, the standby person shall make contact with person or party responsible for the problem. Example: such as the property owner in the case of a property line cleanout overflowing or the appropriate utility in the case of ground water surfacing from their facility.

To avoid unnecessary calls regarding the same incident, the Answering Service or NTPUD Office should be notified of the exact location and the nature of the problem.

If the property owner or other responsible party cannot be reached then the standby person shall initiate a work order for the Office Staff to contact the Owner during normal business hours.

TASK 4: Notify Health Department
Non-District Spill: If sewage or other hazardous materials are spilling or have spilled from facilities other than the Districts, the Placer County Environmental Health Department shall be notified if necessary. Notification is only required when responsible party is nonresponsive in correction/cleanup activity and/or if quantity and/or spill location is of a nature to warrant engaging the County to enforce corrective action. See tab 1 for contact information.

In all cases, if the quantity and/or spill location is of significant nature, the County Environmental Health Department as well as other agencies shall be notified as required. See Task 6 below, and Tab 3 of this document.

TASK 5: Notify Supervisor
The Duty Supervisor shall be notified that a spill is in progress or is imminent. In coordination and cooperation with the responding personnel, the Duty Supervisor and responding personnel shall assemble manpower, contact mutual aid districts, gather equipment, etc. as necessary to clear problem, stop and/or prevent a spill. All events are different; however in all cases it is the Duty Supervisor's position to alleviate coordination, notification, and/or logistical demands (phone calls, etc.) from the responding operations and/or technician crew personnel. The responding crew members can therefore focus on fixing the problem at hand without losing time on the phone, etc. Although this is the goal, responding crew personnel will know in greater detail the exact equipment and/or manpower needed to handle the event, therefor close coordination between all parties is paramount.

TASK 6: Notify Agencies
Per State Monitoring and Reporting Program (MRP) requirements, the Duty Supervisor shall notify or report as required per Tab 3 in this SSO Emergency Response Operating Procedures Binder. If Category 1 spill, the California Office of Emergency Services (Cal OES) will notify other affected agencies as necessary. To ensure adequate notification, and as a courtesy (although not required per State MRP) Duty Supervisor shall also notify **Lahontan Water**

Quality Control Board, the Placer County Environmental Health Department, and TRPA using same timeframe guidelines as outlined in Tab 3 of this document. See Tab 1 for contact information. The Duty Supervisor may then return to organizational duties.

TASK 7: Clear Blockages
If a blockage occurs within a street the first course of action is to set up the proper traffic controls to insure the safety of NTPUD workers and the public.

The primary piece of equipment used initially on a sewer line blockage is the hydraulic flusher. The District maintains two (2) flushers, both have vacuum capabilities. Setting up at the manhole immediately downstream of the blockage, the flusher will usually dislodge with penetrating or Wort Hog nozzle. Failure of all attempts to clear the line will necessitate the excavation of the sewer line at the location of the blockage. If equipment other than the vacuum/flusher is used to clear the blockage then the lines immediately downstream of the blockage shall be flushed to avoid the reformation of a blockage.

TASK 8: Call in All Personnel
The Duty Supervisor shall cause all District personnel to be called in to fill projected manpower requirements. The Duty Supervisor shall also be empowered to substitute manpower from **Mutual Aid Districts** if a sufficient number of District personnel are not available.

TASK 9: Notify Mutual Aid Districts
The Duty Supervisor, or other authorized employee from NTPUD, shall notify appropriate **Mutual Aid Districts** that an emergency exists. The responding agency will be informed of resources needed (personnel, equipment, supplies, etc.) and inform the requesting District of the timeframe it will take to assemble those resources. The Duty Supervisor is required to keep a log of all persons contacted, what resources are available, and note any equipment from the Aid agreement which may not be in service at that time. **See Tab 1 for contact information and/or Tab 6 for available equipment**

TASK 10: Containment (and/or diversion) of Flow
In any spill situation, containment of the spill can simplify and expedite the clean up process, prevent siltation, limit public exposure and related health hazards, and avoid costly property damage. While not all spills can be contained, the procedures to be used will provide some mitigation of the effects. NTPUD maintains a stock of **straw waddle (fiber rolls) (2 pallets), filled and unfilled sandbags, and about 20 tons of sand.** Immediately below the spill, workers will deploy all containment and/or diversion measures as applicable to best contain and/or handle the flow.

An impermeable dam to hold back as much flow as possible shall be constructed using sandbags overlapping joints. The height should be kept to a maximum of three feet with a spillway provided to relieve pressure on the structure should it become completely filled.
If the flow is too great or the topography is too flat to accommodate a dam structure, a backhoe can be used to form a retention basin. Extreme caution should be used since there will probably be no time available for location of underground facilities. A deeper hole is preferable to a shallow large hole because some percolation will lessen the volume to handle. High ground

water, evident at the commencement of digging will necessitate a holding facility with a greater surface area for an equivalent volume.

TASK 11: Switch Force Mains (Dollar Only)
Dollar Force Main system is comprised of two parallel force mains (16" DIP installed in 1993 & and 18" (O.D.) HDPE slip-lined inside 22" mortar lined steel in 2015). A valve cluster in the pump station asphalt area allows ultimate flexibility to operate under any pumping scenario relative to both pump stations (Dollar Main and/or Dollar Addition). Either or both force mains may be operated with either or both pump stations.

A schematic of the valve cluster, with valves numbered, is maintained at the station taped to the inside of the control building door. This may be referenced to operation either or both force mains depending on desired condition. Together with this schematic is a table referencing valve number and position (open or closed) clarifying which force main is in operation depending on desired condition.

TASK 12: Set Up Pumps and Hoses
The District has a number of portable pumps and hoses with capacities ranging from a 40 gpm trash pump (with 1.5" discharge) to 2,000 gpm dri-prime (with 6" discharge). The applicable pump(s), hoses and fittings shall be deployed to location(s) as required to handle flows.

If blocked gravity line or overflow at manhole, the pump should be parked as close to the manhole above the blockage as possible. The hose should then be run either down the shoulder or centerline of the street to the first free running manhole.

If the manhole is in a location inaccessible by truck, gas driven pumps will have to be hand carried to remote manholes and setup in a similar manner to that described above (i.e. to the next free running manhole.

If blocked force main, employ use of existing bypass valves on National or Carnelian force mains. District Operations crew personnel are trained in the location of bypass valves and maps are available in District vehicles.

TASK 13: Pump Around the Blockage
Pumping shall be started immediately upon completion of the installation of pumps and discharge hoses. The pumps, hoses and manhole levels shall be continually monitored for satisfactory operation with particular attention being paid to changing conditions and the safety of the public. If blocked force main, employ use of existing bypass valves on National or Carnelian force mains. District personnel are trained in the location of bypass valves and maps are available in District vehicles.

TASK 14: Clean Up the Area
Subsequent to a spill of hazardous materials, the affected area may have to be quarantined and will have to be cleaned up. For all but sewage or chemicals used within the sewer or water system the cleanup will be handled by individuals trained to respond to these types of spills. The District shall insure that materials detrimental to the sewer system or treatment processes are not indiscriminately disposed of into the sewer system.

For sewage spills the affected area will be disinfected by the use of a chlorine compound and or caustic soda to kill ant pathogenic bacteria that maybe present. If the spill site is near a water course or Lake Tahoe, the use of disinfectants shall only be permitted when there is a possibility of direct sewage contamination of a public water, contact area, or domestic water source. Monitoring of disinfectant dosage amounts released into the environment is very important such that wildlife will not be needlessly impacted. All physical evidence and/or impacts of a sewage spill shall be removed such as water tracks, solids and pond areas.

If the spill area is a public beach, District is responsible for printing and posting signs to prevent any human contact with the contaminated water. Signs shall be left in place until the appropriate Health Agencies have approved their removal.

TASK 15: Prepare Report
The report shall be factual using a format stressing what, when, where and why. The report shall contain the cause(s) of the problem and what measures will be taken in the future to prevent a reoccurrence, if any are applicable. If the procedures contained herein require modification, the conclusions should address the necessary changes. The Report shall be coordinated with the General Manager and District Engineer. The appropriate managers will then receive a report from the Duty Supervisor on the emergency activities.

Tab 3 provides reporting requirements with information, directly out of State Monitoring and Reporting Program requirements (MRP), to be contained in report depending on severity and/or category of SSO.

TASK 16: Regulate Upstream Flows
Two (2) methods of regulating the upstream sewage flow are available. Either the stations can be set to flow match or manually operated. Flow matching provides for steadier flow rates and results in less surges. The manual operation allows for temporary interruptions in the flow but may cause surges in the piping system and the need for more pumps running at downstream stations to evacuate their wet wells. If the stations are run manually, each main station should be physically monitored and controlled. Two way radio communications should be made with repair personnel to coordinate flows with repair activities.

Applicable to main sewage pump stations, this procedure will allow for slow steady flows or temporary flow interruptions at downstream locations. Utilizing radios, each of the upstream main pumping stations are manned and operated in the manual mode. With upstream monitoring of the incoming flow and well levels, and coordinating pumping needs/times with repair of bypass activities downstream, manual pumping at the stations can proceed without a spill.

Personnel knowledgeable in the operation of pump stations must be used in these emergency situations.

TASK 17: Begin Laying Bypass
Lay the bypass hose and place along/parallel to the damaged/plugged section of the force main or gravity main. Employ bypass valves or pumps as required.

Lay-flat pressure rated hose: 3,835' - 10" (150 psi working pressure) (250 psi burst pressure)
600 ' - 8" (225 psi working pressure) (450 psi burst pressure)

Deliver proper equipment on pallets to appropriate sites. Hardware, elbows, and fittings (Victaulic couplings on each end) for use of the bypass hose is stored at the District on pallets for ease of loading and handling. The hose is stored on two hydraulically powered reels with dividers between each hose section. The reels are on a trailer mounted A-frame for deployment and retrieval. Trailer is tandem axle with engine and hydraulic power for use in operating the reel system.

A ramp is available for vehicle crossing if necessary. Multiple crossings require "leapfrogging" the ramp as required. Hose shall be monitored to ensure no erroneous crossings are made by the general public and hose remains in operational condition.

Traffic Controls are to be established along the section to be bypassed in accordance with Cal Trans Protection for Workers.

TASK 18: Install Pumps and Pipe
Install appropriate pumping, charging and discharge appurtenances.

Pressurize the bypass piping with fresh water to seat the gaskets. If the severity of the force main leak dictates, the bypass piping shall be charged directly from the force main to avoid an excessive loss of sewage.

Prime and check pump by circulating wastewater to wet well.

Repair any leaks in joints or pipe.

TASK 19: Begin Bypass Pumping
Operate pumps or pump stations in flow match mode to avoid on/off pressure surges. Manual operation of the Districts or others portable pumps is necessary. As noted in Task 16, steady flow is preferential to on/off flow fluctuations and surges. Radio communications will be necessary if upstream pump stations are run in the on/off mode.

If force main failure on National or Carnelian mains, open the appropriate 12 inch bypass valves to allow the wastewater to flow in parallel through the bypass piping and past the damaged section of force main.

Always continue to check for leaks.

Close the main in line bypass valves. The damaged section is now isolated.

Drain the isolated section through secondary 12 inch bypass valves to tank trucks or to a gravity sewer system.

TASK 20: Discontinue Bypass
Close the upstream 12 inch bypass valve and flush the bypass piping with fresh water.

Charge the bypass piping with 50ppm of chlorine and hold for three (3) hours.
Flush the bypass piping to tank trucks or a gravity sewer.

Release pressure and allow fresh water to drain from piping into a wet well or a manhole.

Pick up the piping and clean up.

TASK 21: Shut Off Water (If necessary)
If possible and/or applicable to eliminate or restrict source water, a large contributor or residence may be shut down or restricted. If restriction is necessary, flows shall be reduced to a point without causing potential damage or contamination issues in the potable water system which would otherwise not be a threat with a full system.

Large scale shutdown of District supply, storage, and distribution system will only occur in the most extreme of circumstances and would require the notification of California State Department of Public Health and the Placer County Environmental Health Services. Due to other detrimental effects associated with potable water systems, such as vacuum conditions, cross contamination, and bacterial exposure concerns, shut down and emptying of the water distribution system will only be initiated in an extreme event. Any spill event of this magnitude will, by default, require notification to Cal OES (see Tab 3) at which point they will likely step in and dictate proper response.

The realities of a large scale shut down and draining of the District's distribution system are it would likely do more harm than good, for reasons stated above. In addition, this task could only be done by personnel knowledgeable in the dynamics of the systems components and operations. The manpower and experienced personnel it would take to perform such a feat would be best utilized responding to and implementing corrective actions to the actual spill event.

If this most extreme of events were necessary and dictated by Cal OES, the District's systems would be shut down by shutting off lake intakes and closing source valves, then opening hydrants immediately below the water tanks and the slowly shutting off the discharge valves of the tanks. To speed the draining process, hydrants along State Highway 28 would be opened. Extreme care must be taken to prevent collapse of water mains due to vacuum condition**s**. Only those personnel knowledgeable in the operation of domestic water systems shall be assigned these duties.

Since great volumes of lightly chlorinated water would be discharged into the environment, hydrants draining directly into water courses should be avoided.

TASK 22: Tank Truck Brigade
The Onsite Coordinator shall initiate a tank truck brigade. The District will locate two (2) truck filler assemblies at the spill locations based on ease of operation. Vactor trucks can be used prior to tank trucks for transport of sewage. When the trucks arrive they must be staggered to get the

best efficiency. A few extra minutes spent in setting the pace of operations will result in more sewage transported more efficiently.

One or more manholes downstream of the spill location will be designated for dumping of the tankers. Personnel will be assigned to standby at the dump site if it is a hazardous situation or has a potential for a public health hazard. Manhole Dump maps providing appropriate dump sites (easy access, avoids surcharging of adjacent properties, etc) are provided in tab 7.

This procedure will remain in place until normal pumping operations resume.

TASK 23: Begin Excavation
The first action will be to establish siltation control down gradient of all areas where repair activities or material stockpiling will take place. The District maintains a stock of erosion fencing designed for this purpose.

Traffic controls must be established in accordance with **Cal Trans or Placer County Standards**, per **Cal Trans Protection of Workers.** The work area, designated by erosion protection measures and traffic control devices, must be of sufficient size to allow the necessary service vehicles, pumps and excavation equipment safe working room around the repair. Consideration must be given to additional room required for portable generators and light sets that may be needed for night work.

If the site does not have an established perimeter by implementing the above activities, additional efforts should be made to cordon off the work site to prevent curious onlookers from endangering themselves or the operation.

The conditions at the particular location will dictate what procedures are used for trench safety. Presumably some areas will be totally saturated. This material must be removed. If the area of saturation is limited, shoring may be used in accordance with the Districts Standards. Hydraulic quick shores with a maximum depth of 12′ and width of 72″ are in the Districts equipment.

It is likely that the soil will be saturated to such an extent that the shoring will be impossible or risky at best. A larger excavation will therefore be required with side slopes cut back to 1:1 (45 degrees) minimum dimensions. A minimum of two (2) ladders shall be provided for ingress and egress to the pipeline.

The excavation will be subject to the discharge from the leaks or breach and may be subject to groundwater inflow into the excavation. Over excavation in portions of the total excavation provide a sump for pump suction hoses. Drain rock backfill over the suction hose strainers will help to prevent clogging. More than one suction hose or strainer should be available to allow pumping to continue unabated should an intake clog.

In virtually all locations there are gravity sewer mains which may handle the dewatering. The system maps, copies which are located in District vehicles, must be reviewed to determine the direction and the length of pipes and hoses to dispose of the sewage/groundwater. Gravity sections so used will be subject to high volumes of silt and earthen materials which may clog

the lines, wet wells and suction pipes of pump stations. Periodic inspection must be made of the system to prevent additional system failures.

TASK 24: Effect Repairs
The exact nature of the repair will be dependent on the nature of the break. It may take the form of a patch or of a full circle clamp.

The initial action will be to cease the discharge of sewage by plugging or covering the hole. The second action will be to insure the longevity of the repair by welding or use of compression fittings to permanently seal the repair.

TASK 25: Pressure Test Line
Due to the critical nature and operating pressures of the Dollar Force Main, the repair and entire force main should be subjected to a pressure test prior to reestablishing service. The test shall be accomplished by filling the force main and pressurizing the line through the plug. A test pressure of 25psi at the upstream end will test the entire line at 125% of working pressure. (Plug will have to be braced to withstand 9500 lbs. of force). After test remove the plug.

TASK 26: Resume Normal Pumping
Set the pumps to automatic and observe through several pump cycles. Leave emergency equipment in place until satisfactory performance is assured.

TASK 27: Restore Water Service (If required per Task 21)
Because of the age and condition of the water system, extreme caution must be used in refilling the lines. First, the hydrants at the lower end of the system along Hwy 28 should be closed and the lake pump stations turned on. The hydrants at the top of the system should remain open to let air in the system escape. When the level of reaches these hydrants the tank valves may be opened and the hydrants closed slowly**.** Office personnel will have to be alerted to the complaints that will result from turbid and brackish water.

TASK 28: Pump Into Collection System
It may be necessary to dewater the repair excavation both because of groundwater entering the hole and the sewage. Sufficient redundancy of pump capability should be maintained on site to avoid pumping interruptions and possible disruption of repair activities.

A 6" gravity sewer at 2% slope will theoretically accommodate the discharge of one typical District hydraulic pump. A flatter slope or significant existing flow in the line will result in a discharge of the manhole. Constant monitoring of the collection system will be required.

TASK 29: Monitor SCADA System
In the case of a power outage which affects more than a single station or location, SCADA will be monitored. The function of the person monitoring SCADA is to relay by radio any change of status to field personnel who may then establish priorities to prevent any spills.

TASK 30: Mobilize Satellite Generators
The District maintains rolling stock portable generators to supply emergency power to the satellite sewage stations. Generators are stationed at various locations throughout the District.

Generally speaking, locations and generator size/type are chosen as applicable to minimize response time to facilities in potential need of power generation. As mobile units, and dependent on the District's fleet and/or needs at any given time, the locations and unit may vary. District personnel knowledgeable of generator's locations and types shall be engaged as required. In all cases generators are kept fueled at all times and checked periodically by the fleet manager to insure operation.

TASK 31: Staff Main Stations
Staff will man each sewer main pump station until normal operations are verified and/or generator power is verified as smoothly operating. Staff will continue to others areas in need of emergency response to ensure operation if required. Constant communication is maintained with Onsite Coordinator to maintain site response priorities and best use of personnel and equipment resources.

TASK 32: Alternately Pump Satellites
Certain satellite pump stations have high flows and therefore require quick and frequent pumping cycles to avoid spills or property damage. The **flow** priority relying on emergency power at satellites is as follows: **N-1, C-2, D-3, D-4, C-1, D-6, D-2, S-1, S-2, D-5, D-1, D-7, N-2, and N-3.** A small house system on Mashie Avenue may be pumped by the Vactor Truck during a prolonged power outage.

Satellite stations **N-1, C-2, N-3, and D-6 have stationary generators** at the respective sites. SCADA shall be monitored, and sites quickly visited (if required), to ensure proper operation of stationary generators at these sites. Assuming operation of stationary generator, portable generation will not be required for these sites.

Applicable rolling stock generators capable of alternating the satellites will be dispatched to the applicable sites in need of power generation. Sites will be leapfrogged as required depending on flow priority.

TASK 33: Maintain Through Power Restoration
The alternate visitation of satellites by the standby generators shall continue through the restoration of commercial power. Additionally, personnel from **Mutual Aid Districts** not affected by the power outage will have to be brought in to relieve crews. Back up power is available at base.

TASK 34: Vactor Transport
A failure to maintain pumping at all satellites will be readily apparent on the SCADA Monitors. There is sufficient reaction time built into the system by the conservative location of the high wet well alarms to allow the vactor truck to suck out a wet well or for portable pumps to be carried to the site to pump into the vactor truck. The vactor truck will then take the sewage to the nearest portion of the system not relying on a satellite pumping system.

Vactor transport will only be required in the event all other emergency approaches (stationary power, portable power, portable pumps, etc.) fail. For high flow stations and/or in high flow conditions, it may be difficult for a single vactor to keep up with station. In these cases additional help shall be called upon. Tanker and/or vactor truck brigade shall be implemented.

TASK 35: Dispatch Personnel
Should one or more station of the station generators fail to start upon **loss** of power, technicians capable of troubleshooting the system will be dispatched by the Duty Supervisor. While there is always at least one technician on call, multiple problems requiring electrical system troubleshooting may require outside assistance. The firm of **Sandel-Avery** is available to respond and are familiar with the District's systems and could provide assistance if necessary and available. If a personnel shortage still occurs, electricians from other Utility Districts should be called in to troubleshoot and assist.

TASK 36: Troubleshoot

A. Power Outage (generator):

- Check fuel supply and filter.
- Check Oil Level.
- Check temperature.
- Attempt to manually start.
- Observe Fuel Pressure.
- Check battery and jump start if necessary.

B. Station Malfunction:

- Circuit breakers (Technicians only)
- Pump operation and Control circuitry (Technicians only)
- Bubbler or Transducer reading properly.
- Relays energized (Technicians only).
- Protective circuit status.
- Terminals tight (Technicians only)**.**

TASK 37: Corrective Action
Based on what causes are found as a result of troubleshooting, either a temporary or permanent repair may be attempted. The repair technique employed should not come with the risk of major damage to the facility. It this is the case, more serious problems may occur thereby resulting in greater spill amounts.

If the problem cannot be corrected to the extent of restoring automatic control, then the manual controls will have to be utilized.

TASK 38: Set Up Emergency Pump
Upon a failure to restore pumping capability at a Main Station, emergency pumps will have to be set up to bypass the pump station entirely and pump from the wet well into the force main.

The District's 6" discharge Godwin pump can be set up at Secline, National, and Carnelian Main Stations to draw from the wet well and discharge into the existing force main through a Kamlock fitting. Check valves in the station will prevent backflow through the station's pumps, however if the check valves fail to properly seat, the discharge valves may be closed.

All portable pumps should be placed on jack stands to avoid unnecessary walking or vibration. As a minimum the wheels should be chocked to prevent movement. Pressure piping must be kept as short as possible to limit liability. Upon initiation of pumping the pump shall be manned constantly.

TASK 39: Mobilize Emergency Pump (s)
Main Station: Upon notification of a spill. The District's 6" discharge pump with suction and discharge hoses will be dispatched to the affected station and call in additional pumps as needed.

Satellite: Upon notification of a spill, portable pumps and the Vactor Truck and or hydraulic truck with pumps will be dispatched to the station.

TASK 40: Attempt to Restore Operation

A. Secline:

- Check wet well level
- Check breakers for trippage and reset if necessary.
- Check line power (will sometimes clarify problem by determining supply power is the cause (i.e. single phasing))
- Reset motor thermal overloads.
- Check pump control circuitry
- Go to manual operation.

B. National and Carnelian Bay:

- Check wet well level.
- Check disconnect switch for trip, reset if necessary.
- Check circuit breakers in main circuit and starter circuit, reset if necessary.
- Check line power (will sometimes clarify problem by determining supply power is the cause (i.e. single phasing)
- Reset motor thermal overloads.
- Check pump control circuitry
- If motor fails to start, place H.O.A. switch on "MANUAL".
- Check Q cell high temp resets on Q cells in control room. Check Q cell water levels.

C. Dollar Hill:

- Check wet well level.
- Check pump running light for station. If they are dim or out, push resets.
- Check station circuit breakers for pump power.
- If pumps do not start, turn H.O.A. switch to **"HAND".**
- Check bubbler compressors, and CO2 level gauge on flowmatcher panel
- Check main disconnect switch and voltage meter to the right of the main breaker.
- Make visual check of circuit breakers for obvious damage

TASK 41: Determine Cause
In the case of failure(s), the cause shall be determined. Once the cause is known, the maintenance procedures shall be adjusted to eliminate or anticipate a reoccurrence, or a permanent fix/solution shall be implemented/installed. If a redundant system can lower the probability of future failures, a work order for such a system will be issued.

Intermittent component failures may be extremely hard to diagnose after the fact. It is extremely important that someone familiar with the equipment carefully and methodically determine the reason for the failure.

TASK 42: Check Operation
Upon restoring automatic control of the pumping system, several complete on/off cycles shall be observed (monitored). The station shall not be left unattended until there is reasonable assurance of continued successful operation or an alternate control system is successfully operating.

Tab 3

Notification & Reporting

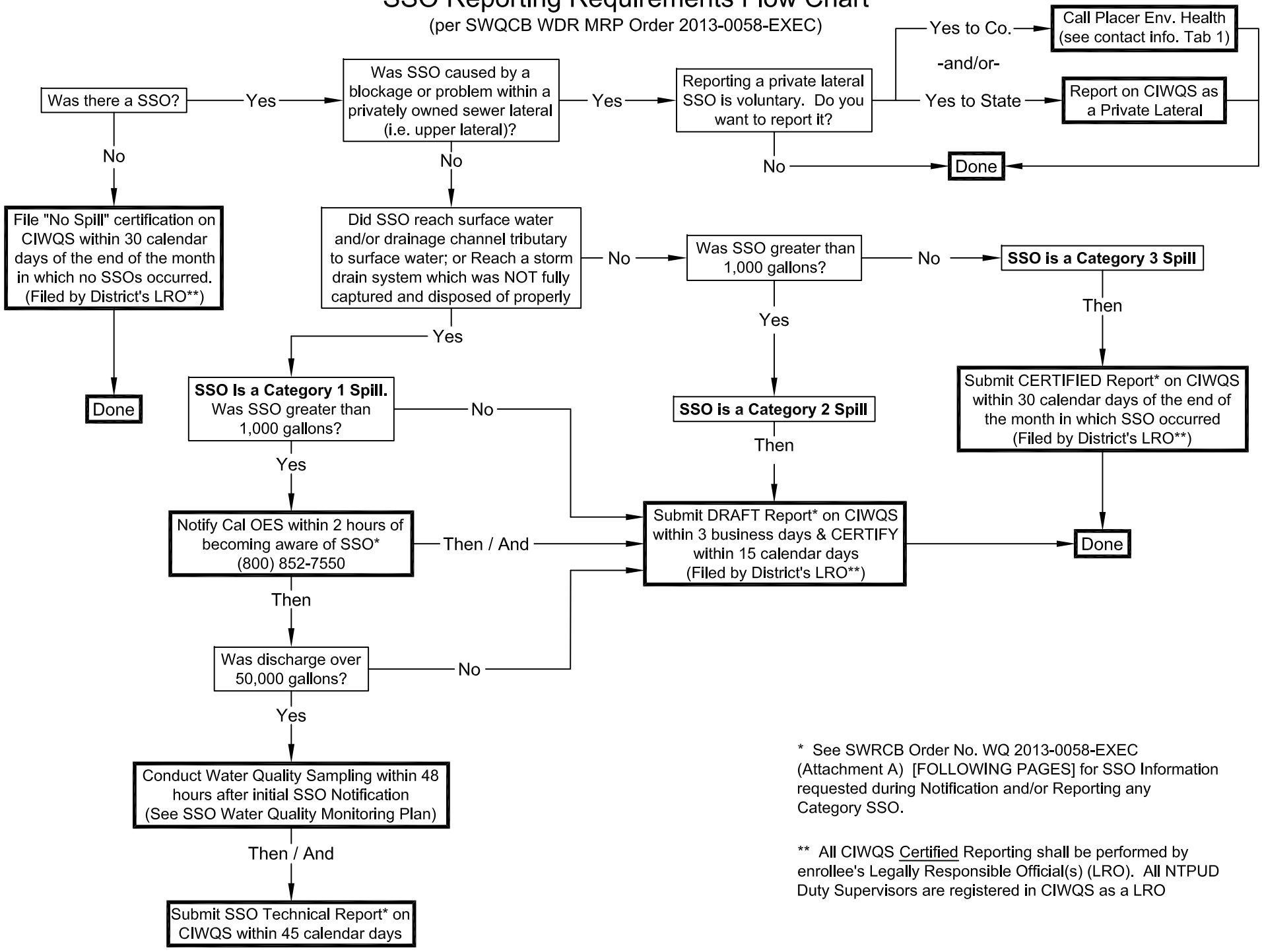
Flow Chart

SWRCB Order No. WQ 2013-0058-EXEC

(Provides Information Requested during Notification and/or Reporting for any SSO)

SSO Reporting Requirements Flow Chart

(per SWQCB WDR MRP Order 2013-0058-EXEC)



* See SWRCB Order No. WQ 2013-0058-EXEC (Attachment A) [FOLLOWING PAGES] for SSO Information requested during Notification and/or Reporting any Category SSO.

** All CIWQS Certified Reporting shall be performed by enrollee's Legally Responsible Official(s) (LRO). All NTPUD Duty Supervisors are registered in CIWQS as a LRO

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems" (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to $5,000 a day per violation pursuant to Water Code section 13350; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

CATEGORIES	DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
CATEGORY 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION **(see section B of MRP)**	• Within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water**, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING **(see section C of MRP)**	• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. • Collection System Questionnaire: Update and certify every 12 months.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by enrollee's Legally Responsible Official(s).
WATER QUALITY MONITORING **(see section D of MRP)**	• Conduct water quality sampling **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING **(see section E of MRP)**	• SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

    i. Name of person notifying Cal OES and direct return phone number.
    ii. Estimated SSO volume discharged (gallons).
    iii. If ongoing, estimated SSO discharge rate (gallons per minute).
    iv. SSO Incident Description:
        a. Brief narrative.
        b. On-scene point of contact for additional information (name and cell phone number).
        c. Date and time enrollee became aware of the SSO.
        d. Name of sanitary sewer system agency causing the SSO.
        e. SSO cause (if known).
    v. Indication of whether the SSO has been contained.
    vi. Indication of whether surface water is impacted.
    vii. Name of surface water impacted by the SSO, if applicable.
    viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
    ix. Any other known SSO impacts.
    x. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

C. REPORTING REQUIREMENTS

1. **CIWQS Online SSO Database Account:** All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. **SSO Categories**

   i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

      a. Reach surface water and/or reach a drainage channel tributary to a surface water; or

      b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

   ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

   iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**

   i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

      a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.

      b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.

iii. **"No Spill" Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, "No Spill" certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a "No Spill" certification statement for that month.

iv. **Amended SSO Reports** – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

i. **Causes and Circumstances of the SSO:**

a. Complete and detailed explanation of how and when the SSO was discovered.

b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

d. Detailed description of the cause(s) of the SSO.

e. Copies of original field crew records used to document the SSO.

f. Historical maintenance records for the failure location.

ii. **Enrollee's Response to SSO:**

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.

b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.

c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**

a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.

ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of spill response activities.
8. Spill response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.

10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. **Draft Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.

d. **Certified Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.

e. **Certified Category 3 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.

ii. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee's sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**

The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:

a. Submit an **electronic** copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. WATER QUALITY MONITORING REQUIREMENTS:

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.

2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).

3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
   i. Ammonia
   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS:

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).

2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
   i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not

result in SSOs. Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.

b. Date and time the complainant or informant first noticed the SSO.

c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.

d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

e. Final resolution of the complaint.

ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.

iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:

i. Supervisory Control and Data Acquisition (SCADA) systems

ii. Alarm system(s)

iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.

2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.

5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Resources Control Board.

7/30/13
Date

Jeanine Townsend
Clerk to the Board

Tab 4

Documentation Forms

SSO Response – Field Checklist & Documentation – Field Crew

SSO Response – Field Checklist & Documentation – Duty Supervisor

Post-SSO Briefings, Findings & Review – Duty Supervisor

Agreement for Emergency Repairs on Private Property

SSO Response - Field Checklist & Documentation - Field Crew

Initial Reporting & Response

Reporting Party (Callers Name & Phone #):_____

Call Received (Date/Time):_____ Received by (District Personnel):_____

District On-Site Arrival (Date/Time):_____ Responding District Employee(s):_____

Spill Discovery, Time Notes, Information & Response

(Best Available Information based on Site interviews, District Investigations, Etc. - note: document all attempts)

SSO Discovery (by NTPUD) (If Different than Arrival Time) (Date/Time):_____

Time SSO Began (Date/Time/comments):_____

Is Sewer Currently Spilling: (YES / NO)

Spill Address/Location:_____

Spill Appearance Point: Building-C/O P/L C/O MH Gravity Sewer Force main Lift Station

Other and/or Comments:_____

Final Spill Destination: Beach Building Hillside adjacent to hwy Street/curb/gutter

Storm/DI Surface water Unpaved surface Other paved surface

Other and/or Comments:_____

Cause of SSO Identified at (Date/Time):_____

Failed at: Mainline Lower lateral Upper lateral Force main Lift station

Other and/or Comments:_____

Spill Cause: Roots Grease Debris Vandalism Capacity Design Mechanical failure

Other and/or Comments:_____

SSO Volume (see 2nd sheet of this form for more detail on Spill Volume and/or Flow Rate) (gallons):_____

SSO Category (see Response Procedures (tab 2), and/or Notification Flowchart (tab 3) for Cat. determination): **1 2 3**

Duty Supervisor Notified (ASAP for all Cat. 1 & 2) (max. next day for Cat 3.) (Date/Time):_____

SSO End Time (Date/Time):_____

Cause of SSO Eliminated at (Date/Time):_____

Description of Response Measures Taken and SSO Comments:_____

_____

_____

Containment, Clean up & Response:

Volume of Spill Recovered (Do Not Count Wash Down Water):_____

Containment and/or Clean Up Began (Date/Time):_____

Clean up & Response Ended/Completed (Date/Time):_____

Description of Containment & Clean up Measures Taken and Comments (as applicable):_____

_____

(write on back if necessary)

Spill & Flow Rate (If Active Spill):

- **REFERENCE PICTURES, TABLES, AND CHARTS:**

  *SEE TAB 5 (EMERGENCY RESPONSE BINDER) FOR FLOW ESTIMATION PICTURES & TABLES

  Flow Rate (gal / min) = _____

- **CALCULATION:**

  1 - Cross Sectional Area of Flow (avg. depth x avg. width) (sq. ft.) = _____

  2 - Speed of Flow (use improvised float and measure time of travel) (ft./sec.) = _____

  CALCULATION = **1** x **2** x 7.48 x 60 = (gal./min.) = _____

Spill Volume (If Not Active Spill):

(USE MOST APPLICABLE METHOD -OR- ALL AS APPLICABLE)

- **EYEBALL ESTIMATE** (Imagine a Known Volume Amount Tipped Over)

  (1 Gallon Jug - 5 Gallon Bucket - 32 Gallon Trash Can - 55 Gallon Drum)

  VOLUME = (Known amount) x (how many) = (gal) = _____

- **MEASURED VOLUME ESTIMATE** (Field Measurments)

  [Draw Sketch of Spill Area Below]

  1 - Area (Divide Wetted Areas Up and Add Together *if Necessary*) (sq. ft.) = _____

  2 - Apply % Wet or % Soil Moisture Content *if Necessary*) (%) = _____

  3 - Average Depth (inches) = _____

  CALCULATION = **1** x **2 x 3** x 7.48 ÷ 12 = (gal) = _____

Sketch and/or Diagrams of SSO Area(s):

SSO Personnel:

Responding Party (NTPUD):_____

Duty Supervisor (NTPUD):_____

Additional Support (NTPUD):_____

Other:_____

_____

_____

SSO Response - Field Checklist & Documentation - Duty Supervisor

Initial Reporting & Response

SSO Reported by (District Personnel & Date/Time):_____

Duty Supervisor Arrival (Location & Date/Time):_____

Spill Information & Discovery (Information Re-cap)

SSO Spill Location Name:_____

Spill Appearance Point: Building P/L C/O MH Gravity Sewer Force main Lift Station
Other and/or Comments:_____

Final Spill Destination: Beach Building Hillside adjacent to hwy Street/curb/gutter
Surface water Unpaved surface Other paved surface
Other and/or Comments:_____

Spill Category

Volume of SSO (Gallons): _____ **Time SSO Discovered** (Date/Time)_____

SSO Category Determination (see flowchart in Emergency Response Procedure Binder): **1** **2** **3**

If Cat. 1: Volume *to* Surface water (Gallons): _____ Time determined Cat. 1 (Date/Time):_____

If Cat. 2 or 3: Time of SSO (Date/Time):_____

*** SEE FLOWCHART IN EMERGENCY RESPONSE PROCEDURE BINDER (TAB 3)
FOR SPILL CATEGORY AS VARIES PER EVENT DESCRIPTION***

Sampling (If Required by OES, Co. Health, NTPUD Duty Sup, or Other as applicable)

*** SEE WATER QUALITY MONITORING PROGRAM (TAB 8) FOR SAMPLING IF REQUIRED

Reporting Requirements & Notifications (with Time frames):

SEE "EMERGENCY SPILL CONTACT INFORMATION" CALL LIST FOR NAMES/NUMBERS (TAB 1)

- **For Category 1 over 1,000 gallons:**
  - <Call> **Cal OES** (ASAP, <2 hrs.): Time Called:_____
    Name of Person Contacted:_____ Control #:_____
  - <Courtesy Call> **Placer Co. Environmental Health** (ASAP, <2 hrs.): Time Called:_____
    Name of Person Contacted:_____
  - <Courtesy Call> **Lahontan RWQCB** (ASAP, <2 hrs.): Time Called:_____
    Name of Person Contacted:_____
  - <Call> **TRPA** (ASAP, <2 hrs.): Time Called:_____
    Name of Person Contacted:_____

- **For Category 1 under 1,000 gallons & all Category 2:**
  - <CIWQS> **Draft Report** (<3 business days) Time Filed:_____
  - <CIWQS> **Final Certified Report** (<15 Calendar days) Time Filed:_____

- **For All Category 3**
  - <CIWQS> **Certified Report** (30 days after end of Month SSO Occurred) Time Filed:_____

*** SEE FLOWCHART IN EMERGENCY RESPONSE PROCEDURE BINDER (TAB 3)
FOR REPORTING INFORMATION REQUIRED AS VARIES PER EVENT DESCRIPTION***

Post-SSO Briefings, Findings & Review - Duty Supervisor

SSO Spill Location Name:_____

SSO Date:_____ SSO Event ID (CIWQS):_____

Spill Appearance Point: Building Cleanout Manhole Force main Gravity Sewer Pump station
(circle applicable) Other:_____

Final Spill Destination: Beach Building Hillside adjacent to highway Street/curb & gutter
(circle applicable) Surface water Unpaved surface Other paved surface
Other:_____

Estimated Spill Volume (reported in CIWQS):_____

Cause of Spill (recap of information):

Failed at: Mainline Lower lateral Upper lateral Force main Lift station
(circle applicable) Other:_____

Spill Cause: Roots Grease Debris Vandalism Capacity Design Mechanical failure
(circle applicable) Other:_____

Final Cause Determination:

_____

_____

Follow-up or Corrective Action Taken:

_____

_____

Briefings & Discussions with District Personnel

Operations Crew Meeting Date (crew meeting held each morning):_____
Staff Member Leading Discussion:_____
Summary/Conclusion from Meeting: _____
_____

Technicians Crew Meeting Date (eng. & tech meetings each Wednesday afternoon):_____
Staff Member Leading Discussion:_____
Summary/Conclusion from Meeting: _____
_____

Management Team Meeting Date (management meeting each Tuesday morning):_____
Staff Member Leading Discussion:_____
Summary/Conclusion from Meeting: _____
_____

Sanitary Sewer Management Plan (SSMP) Monitoring & Review

Affected and/or Applicable SSMP Section(s) and/or Element(s):_____
_____

Is SSMP effective in addressing, preventing and/or minimizing this type of SSO (YES / NO)

Does SSMP require review/modification(s) to eliminate/reduce this type of SSO from occurring again (YES / NO)
If YES, which section(s) and/or element(s): _____
_____

Schedule and/or Date for SSMP review/modification:_____

* Attach additional sheets/pages or write on back if additional explanation and/or information is necessary

AGREEMENT FOR NORTH TAHOE PUBLIC UTILITY DISTRICT TO PERFORM EMERGENCY WASTEWATER REPAIRS ON PRIVATE PROPERTY

This Agreement is made on those dates set forth below by and between _____, herein called "Owner," and the North Tahoe Public Utility District, herein called "NTPUD."

WHEREAS, Property owner is the owner of certain real property, herein called the "Property," located at _____, within the sewer service area of the NTPUD; and

WHEREAS, the Property is served by the NTPUD sanitary sewer collection system; and

WHEREAS, the duly adopted rules, regulations and ordinances of the NTPUD require that the Owner maintain the service lateral between the NTPUD main sewer line and improvements located on the Property in a serviceable condition in order to prevent discharge of sewage outside of the sewer collection system and to prevent foreign materials from entering the NTPUD sewer collection system and damaging said system; and

WHEREAS, the Owner has experienced an emergency line leak or break on the service lateral serving the Property which threatens the integrity of the NTPUD sewer system, which emergency is continuing; and

WHEREAS, the Owner is unable to remedy said emergency in a timely fashion, has requested NTPUD emergency assistance and has agreed to pay NTPUD costs for rendering said emergency assistance; and

WHEREAS, while the NTPUD normally does not render assistance on private property, because of the unusual circumstances herein, the NTPUD is prepared to render said emergency assistance under the terms and conditions set forth in this Agreement.

NOW, THEREFORE, it is hereby agreed by and between the Owner and the NTPUD as follows:

1. AUTHORIZATION AND REQUEST BY OWNER

Owner hereby authorizes and requests the NTPUD to enter onto the Property to perform the following work:

_____

_____

_____.

Owner represents that it has the legal right to grant such access. Owner holds the NTPUD harmless as set forth herein and agrees to pay for the services as set forth herein.

In making such request, Owner understands and agrees that the NTPUD's charges and costs for

performing the work may be substantially higher than the cost of having said work performed by others, that the costs of materials and supplies provided by the NTPUD may be higher than the cost of obtaining said materials and supplies from others, and that, even though the NTPUD may conduct activities during normal work hours, work will be charged at overtime rates because NTPUD personnel will have to be diverted from other scheduled activities which will then have to be completed during overtime conditions.

Owner shall be solely responsible for all required permits and for the costs of any compliance with the provisions of the California Environmental Quality Act associated with any and all NTPUD activity, including costs of defending any challenges to such compliance, including attorney's fees.

2. SCOPE AND METHOD OF WORK TO BE PERFORMED BY NTPUD

The NTPUD shall have full discretion and authority to determine the appropriate means and methods for resolving the repair in its sole discretion. Owner agrees to pay all NTPUD personnel and equipment costs that are necessary to resolve the repair, including any environmental clean-up if necessary. Notwithstanding the above, Owner understands and agrees that all work and services provided by the NTPUD are provided on an "as-is" basis without any warranty of fitness for any particular purpose or any other warranty.

3. PAYMENT BY OWNER

All work performed by the NTPUD performed pursuant to this Agreement shall be on a time and material basis at such hourly rates, material costs, and surcharges as NTPUD shall in its sole discretion determine. NTPUD shall provide Owner with an itemized invoice outlining the repair costs. Owner agrees to promptly pay such repair invoice within thirty (30) days. Owner understands and agrees that said repair costs shall be considered a service charge in the same manner that a sewer monthly service charge is considered a service charge, shall be subject to the same late fees and penalties applicable to monthly sewer service charges, and shall be subject to being collected with property taxes if delinquent.

4. INDEMNIFICATION, WAIVER OF LIABILITY/CLAIMS AND HOLD HARMLESS

A. Owner agrees to hold harmless from and to defend and indemnify and pay to the North Tahoe Public Utility District ("NTPUD"), its directors, officers, agents, employees and independent consultants (the "Indemnified Parties") any and all damages, costs or expenses of any nature or kind which may be suffered or incurred by the Indemnified Parties as a result of the action or inaction of Owner, its tenants, agents, employees, representatives or independent contractors, successors or by any third party as a direct or indirect result of any and all efforts put forth by the NTPUD to mitigate sewage discharging from property or properties of the Owner. This agreement to Indemnify and Hold Harmless shall extend to and include: (i) attorney's fees, expert witness fees and reasonable costs incurred in defending the Indemnified Parties; (ii) claims that the Indemnified Parties have acted negligently or unreasonably failed to act; and (iii) any fines or civil penalties assessed against the Indemnified Parties by the State of California or any agency thereof.

B. Owner on behalf of itself, and on behalf of its successors in interest and occupants of the Property agrees that it (a) waives any and all known and unknown claims for damages or injury to the Property or to the person or health of Owner or its tenants, agents, employees, representatives or independent contractors, successors or by any third party to the extent the claims arise out of the

actions or inaction by the NTPUD to mitigate sewage discharge from Owner's Property, and (b) assumes all risk of damage, destruction, flooding, impairment of value or reduction of value arising from aforementioned mitigation, including but not limited to overflows, leaks, failures or any other condition relating to NTPUD's mitigation activities. Owner agrees to defend the NTPUD and other Indemnified Parties from any claim arising from any above-described causes or events.

C. Owner in electing to request the NTPUD to work on the Property has been provided with a full opportunity to independently investigate the likelihood of damage, injury to persons, or expense arising from NTPUD's activities, whether such damage or injury should occur due to negligence or unreasonable failure to act by the NTPUD or the Indemnified Parties and assumes the full risk thereof. In making such investigation, Owner has not relied upon any representations of the NTPUD or its directors, officers, agents, employees and independent consultants.

5. This Agreement shall be governed by and construed in accordance with the laws of the State of California. Venue shall be within the Tahoe Judicial District of the County of Placer.

6. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. No representations and agreements modifying or supplementing the terms of this agreement will be valid unless in writing, signed by persons authorized to sign agreements on behalf of both parties.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in duplicate by their respective officials thereunto duly authorized.

NORTH TAHOE PUBLIC UTILITY DISTRICT

Dated: _____

_____

OWNER

Dated: _____

_____

Tab 5

Volume Estimation Methods and Reference Photos

Compiled from various sources

SSO Flow Estimation Methods

Volume of the SSO can be determined using a variety of approaches. The following sections will discuss two methods that are often employed. The person preparing the estimate shall use the method most appropriate to the SSO in question. Every effort shall be made to make the best possible estimate of the volume.

Method 1 Measured Volume

This method can be used on small spills if it is not raining.

Step 1: Sketch the shape of the spill that is contained.
Step 2: Measure the length and width.
Step 3: Measure the depth in several locations.
Step 4: Convert all dimensions to feet.
Feet = inches/12
Step 5: Calculate the area using the following formulas.

Rectangle Area = Length x Width

Circle Area = Diameter x Diameter x 0.785

Triangle = Base x Height x 0.5

Step 6: Multiply the area times the depth to get the volume.
Volume ft^3= Area x Depth
Step 7: Multiply the volume by 7.5 gallons/ft^3 to convert it to gallons.
Gallons = Volume x 7.5 gallons/ft^3

Method 2 Duration and Flow Rate

Duration: The duration is the total elapsed time from when the SSO started until it stops.

Flow Rate: The rate at which the SSO is flowing. Usually expressed as gallons per second (GPS) or gallons per minute (GPM) or gallons per hour (GPH).

Open channel flow: Often overflows run into nearby dry ditches or street gutters. Total volume, gallons, of flow can be quantified by measuring the cross-sectional area and speed of the flow. Measure a set distance paralleling the SSO flow route. Measure, in inches, the midway width and depth of the flow over this distance. Then measure the time, in seconds, it takes a float to travel the set distance. Record total time of the SSO flow.

Calculate the total SSO volume of the following example:

Example: After measuring off a set distance of 20 feet, it was determined that the float took 20 seconds to travel this 20 feet. The width and depth at the midway point of the flow was 28 inches and 3 inches, respectfully. The total time of the SSO flow was 20 minutes. What is the total volume, gallons, of this SSO event?

Total Volume (gal) = Velocity (ft/sec) x Area (ft^2) x total time (seconds) x 7.5 gal/ ft^3
= 20ft/20sec. x (28 x 3)/144) ft^2 x (20min. x 60sec. /min.) x 7.5 gal/ ft^3
= 1 x 0.58 x 1200 x 7.5gal
= 5,220 gallons

Pump Stations: SCADA systems can provide flow or pump run time data for sewer and storm water pump stations. Pump curves may need to be obtained to determine flow rates. The flow rates can be used to determine flow volumes. Contact the city's Treatment Plant Mechanics to obtain SCADA data.

SSO Flow Estimation Pictures (see next page): Provides pictures of sewage flowing from a manhole cover at a variety of flow rates. Observations by the responding utility maintenance crew are used to select the appropriate flow rate from the chart.

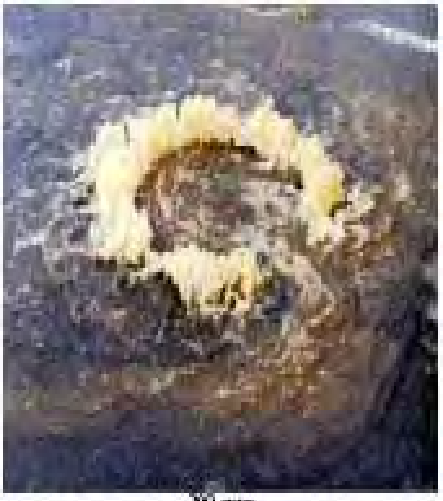
5 gpm

25 gpm

50 gpm

100 gpm

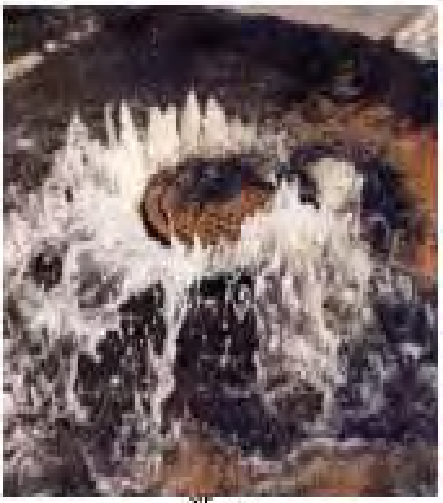
150 gpm



200 gpm

225 gpm

250 gpm



275 gpm

SSO Flow Estimation Methods

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. This appendix documents four methods that are most often employed. 'Other methods are also possible. The person preparing the estimate shall use the method most appropriate to the SSO in question using their judgment. In any event, every effort shall be made to make the best possible estimate of the volume.

Method 1 Measured Volume

The volume of some small spills can be estimated using this method if it is not raining. In addition, the shape, dimensions, and depth of the spilled wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Step 1 Sketch the shape of the contained sewage

Step 2 Measure or pace off the dimensions.

Step 3 Measure the depth in several locations

Step 4 Calculate an average depth for the entire area by adding all measured depths together and dividing by the number of measurements taken.

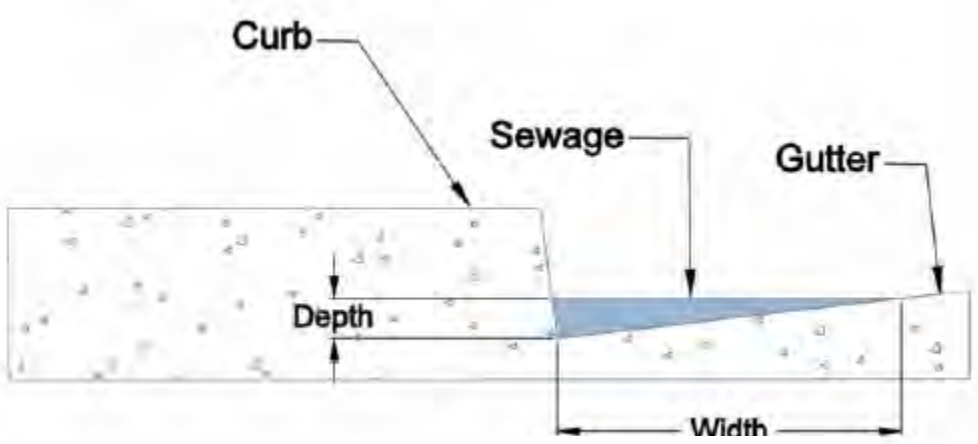
Step 5 Convert the dimensions, including depth to feet.

Step 6 Calculate the area using the following formulas:

Rectangle Area = length x width

Circle Area = diameter x diameter x 0.785

Triangle Area = base x height x 0.5 (for a gutter see figure below)



Step 7 Multiply the area times the depth

Step 8 Multiply the volume by 7.5 to convert it from cubic feet to gallons

Method 2 Duration and Flow Rate

Calculating the volume of spills where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: The duration is the elapsed time from the start time to the time the spill stopped.

Start time is sometimes difficult to establish. Here are two approaches:

For very large overflows, changes in flow on a downstream flow meter can be used to establish the start time. Typically the daily flow peaks are "cut off' or flattened by the loss of flow. This can be identified by comparing hourly flow data.

Conditions at the spill site change with time. Initially there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In both cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information.

Sometimes it is simply not possible to estimate the start time.

End time is usually much easier to establish. Field crews on-site observe the "blow down" that occurs when the blockage has been removed. The "blow down" can also be observed in downstream flow meters.

Flow Rate: The flow rate is the average flow left in the sewer system during the time the spill stopped. There are three ways to estimate the flow rate:

Open Channel Flow: Often overflows run into nearby ditches, channels, gutters etc. Flow can be quantified by measuring the cross-sectional area and velocity of the flow. Measure the depth of water and dimensions the channel. Then measure the velocity by dropping a tennis ball or other floating object and measuring the time it takes to travel a set distance. The resulting velocity measurement will be in feet per second. Several measurements should be taken during the duration of the overflow as conditions are likely change. Calculate the formula using the following formula:

Flow (Q), ft^3/sec = Velocity (V), ft/sec X Area (A), ft^2

Pump Stations: Stormwater and sewer pump stations often have flow or pump run time data available through a SCADA system. Pump curves may need to be obtained to determine the flow rates. The flow rates can be used to determine flow volumes.

SSO Flow Estimation Pictures: Pictures presented in this appendix show the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rate from the chart.

Flow meter: Changes in flows in the downstream flow meters can be used to estimate the flow rate during the spill (better for large SSOs),

Estimate based on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from the field books. Multiply the number of connection by 200 to 250 gallons per day per connection or 8-10 gallons per hour per connection, or other flow rates that are consistent with an agency's data for its connections.

The volume of small spills can be estimated by visualizing the amount of water in a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. Observe the spill area and then estimate the total volume. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons.

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours or days times the flow rate in gallons per hour or gallons per day.

Tab 6

Available Equipment from Mutual Aid Districts

Emergency Equipment Available from Mutual Aid Districts

Mutual Aid Agreement

(Information removed in Public Distribution copy due to confidentiality

and access control protocols established by NTPUD)

Tab 7

Emergency Dump MH Maps

DUMP PLAN

FOR OUTSIDE TANKERS and/or VACTOR STYLE HAULERS TO FIND THEIR DUMP SITE LOCATION

EACH SITE WILL BE MARKED WITH BARRICADES AND DELINEATORS BEFORE YOU ARRIVE.

MAPS ATTACHED WILL IDENTIFY MH LOCATIONS WITH EASY ACCESS

THANK YOU FOR YOUR HELP

<u>EMERGENCY #'S</u>

BOB ORR (OPERATIONS SUPERVISOR)

(number removed in public copy)

JASON DICEY (CREW CHIEF)

(number removed in public copy)

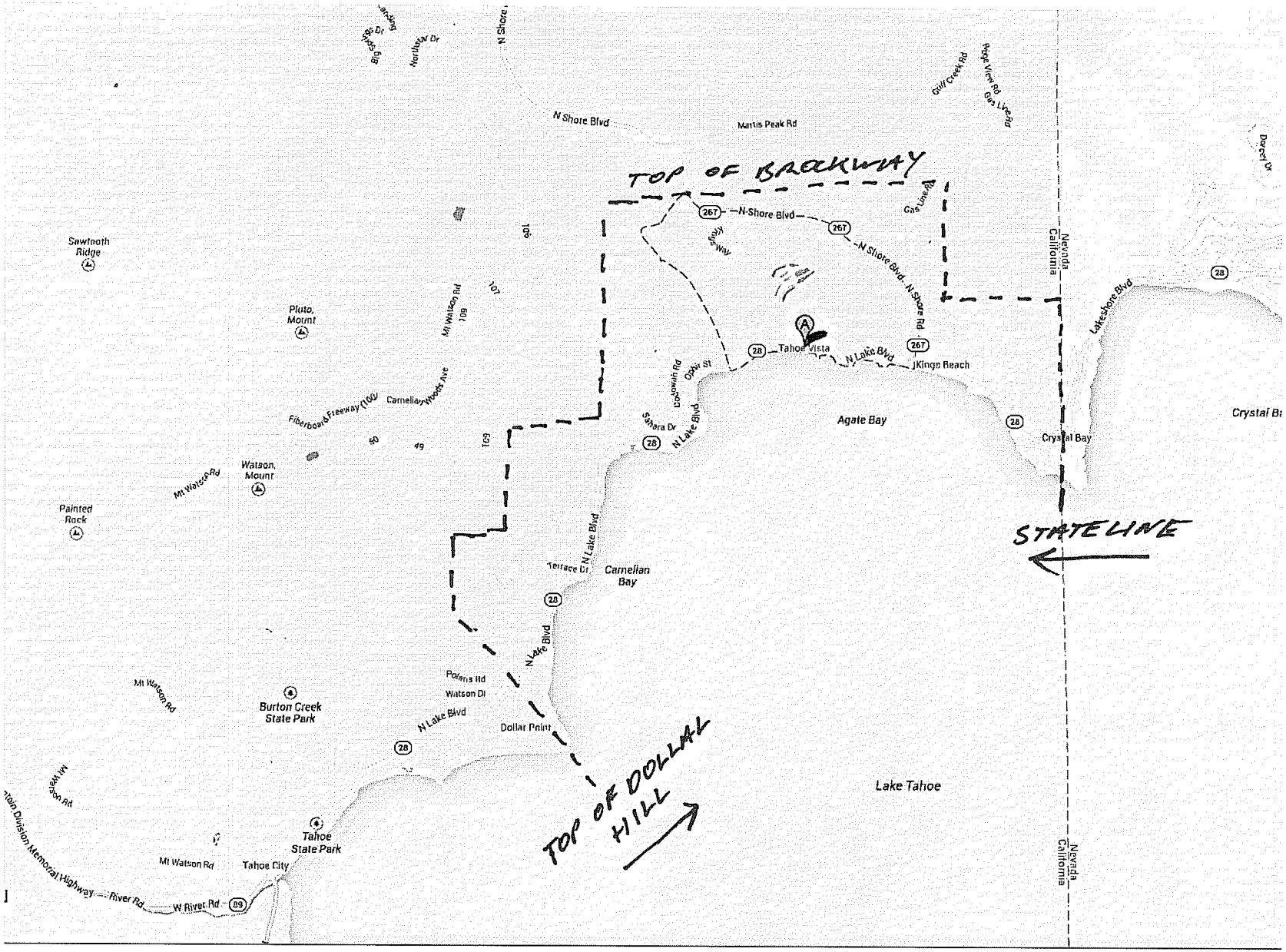
PAUL SANDHOFNER (CREW CHIEF)

(number removed in public copy)

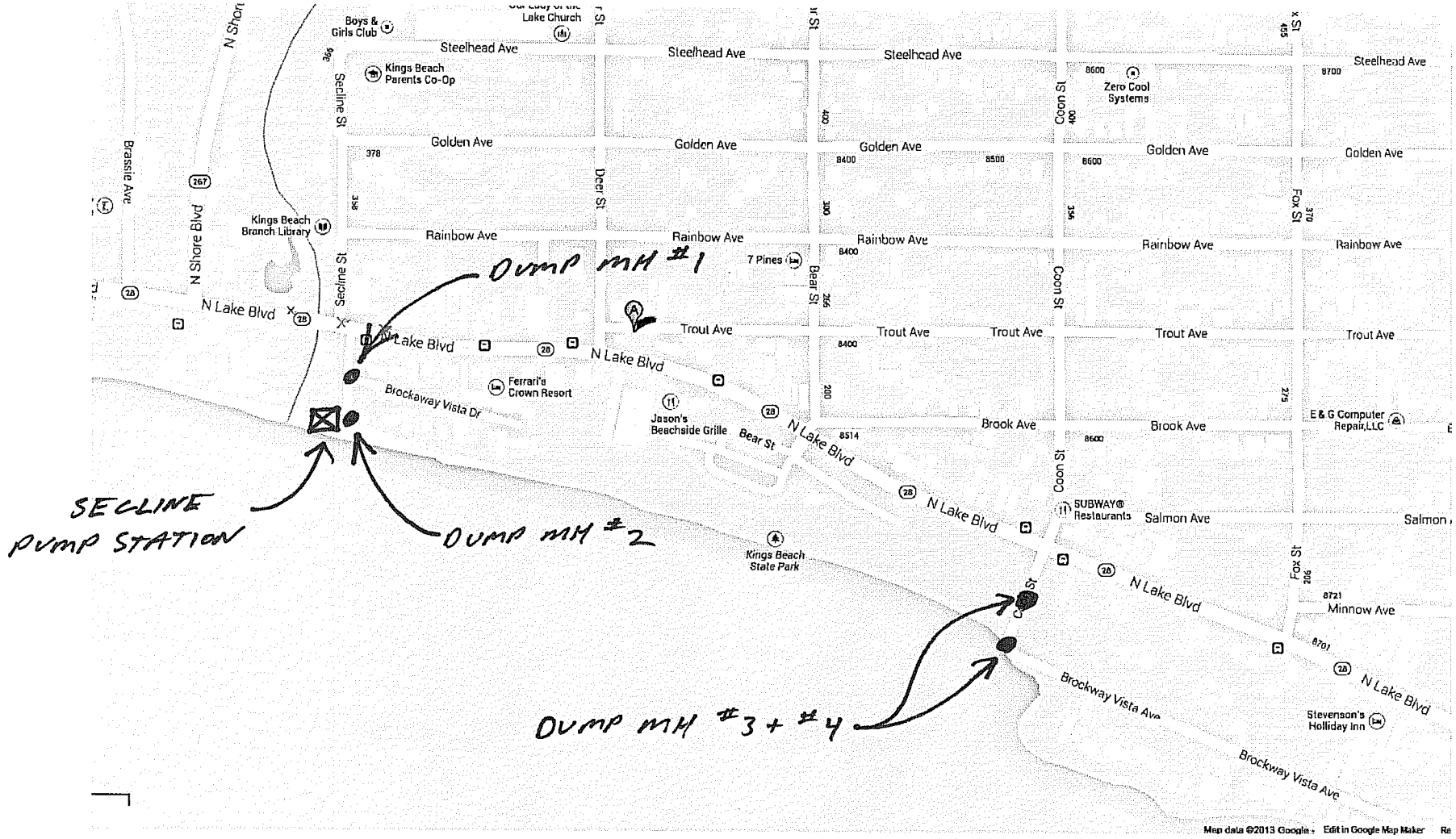
KEN FISCHER (OPERATIONS MANAGER)

(number removed in public copy)

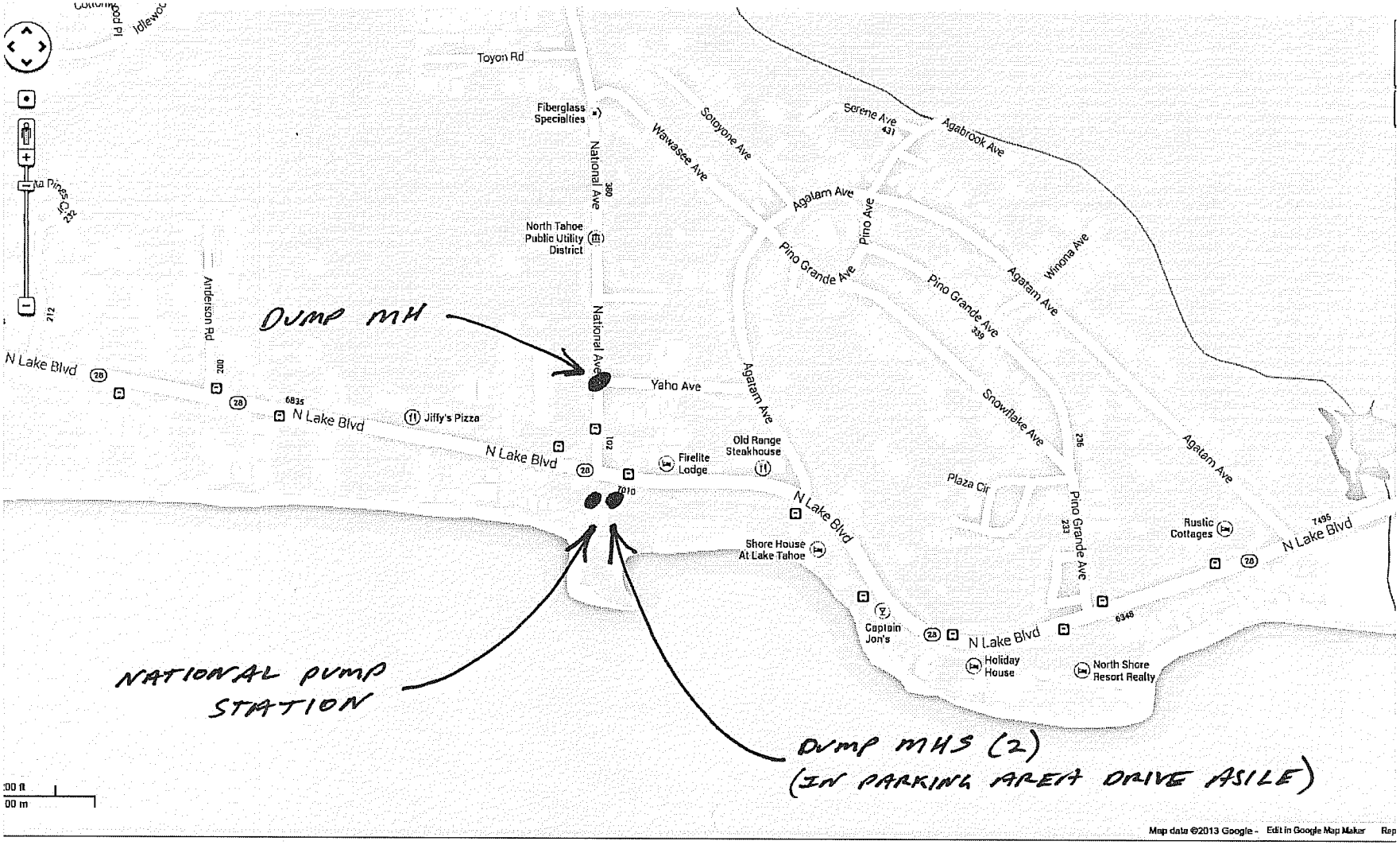
NTPUD DISTRICT BOUNDARY



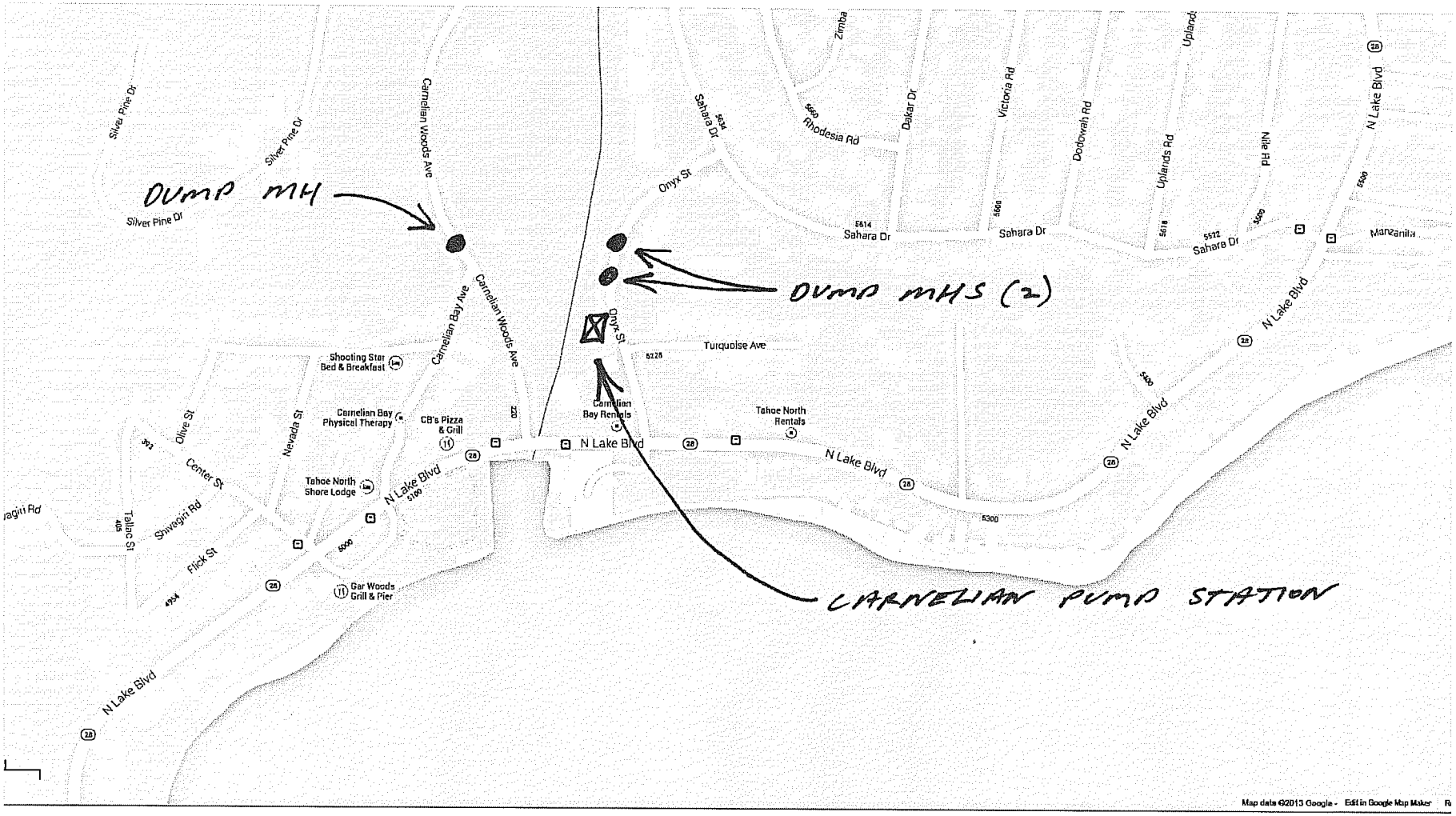
SECLINE & COON DUMP MAHHOLES



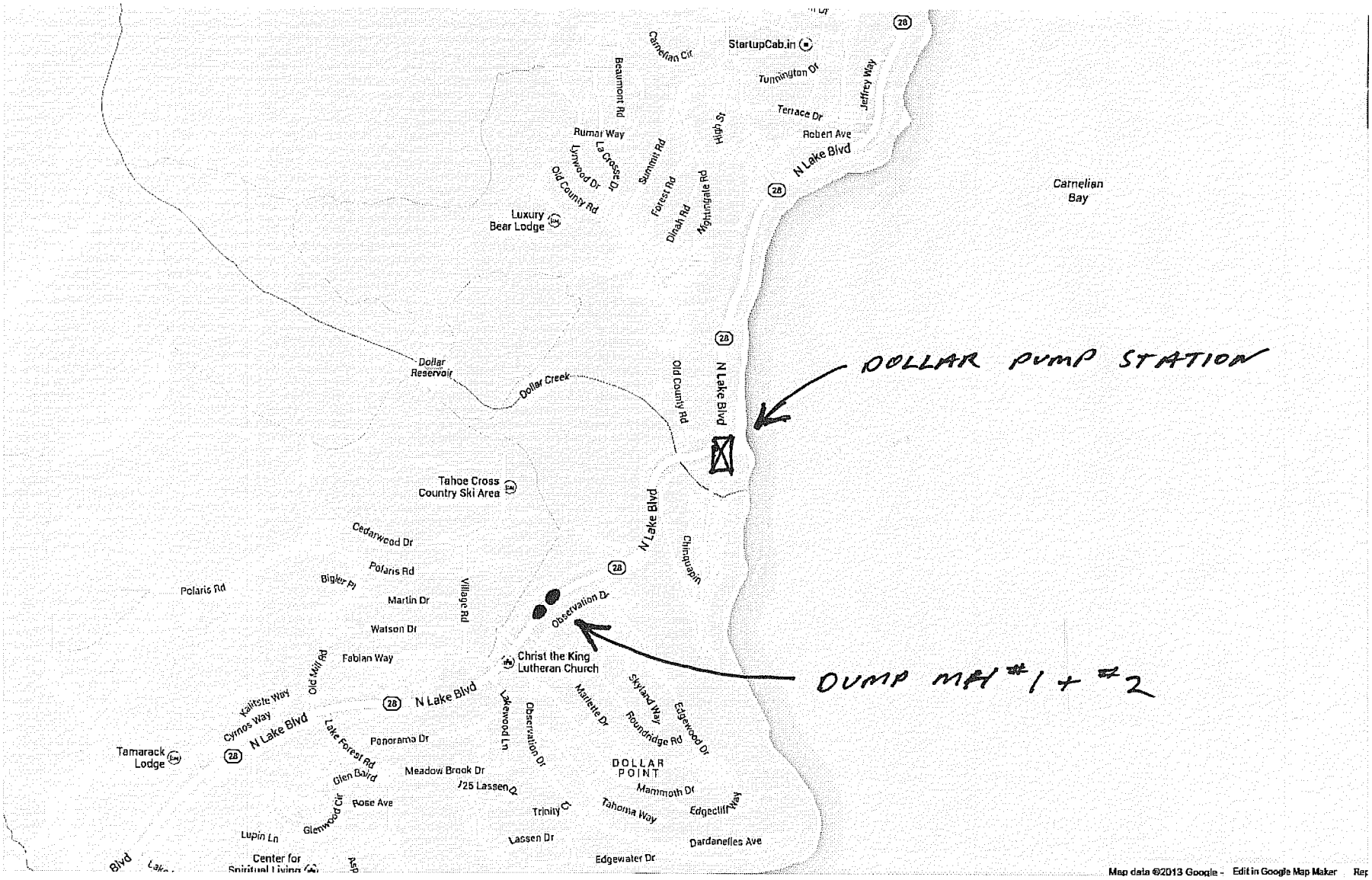
NATIONAL DUMP MAHHOLES



CARNELIAN DUMP MANHOLES



TOP OF DOLLAR HILL DUMP MANHOLE



Tab 8

Water Quality Monitoring Program

Plan

Documentation Form

SSO Water Quality Monitoring Plan (i.e. Program)

(per SWQCB WDR MRP Order 2013-0058-EXEC)

** Required for Sewer Spills in which **50,000 gallons or more** are spilled into Surface Waters.**

** Implement Plan a **minimum of 48 hours** after becoming aware of SSO **

** All instruments and devices used shall be properly maintained and calibrated (with supporting documentation) **

Protocols, Procedures, Analysis, and Lab Information:

- **Safety first:** Personal Protective Equipment as Required
- **Gather Equipment:** Sterile Sample Containers/Bottles, Labels, etc.
  - ◊ (Use same as for potable water quality sampling - 1 Qt. Jugs)
- **Take Samples at Locations as Required:** 3 per Time taken:
  (In all cases account for spill travel time and scenarios where monitoring may not be possible due to: safety, access restrictions, or other)
  1. Background Sample (non-tainted upstream or outside plume limits)
  2. Entrance Area/Zone
  3. Downstream (as applicable to capture dilution – 100' to 300' downstream or near outer limits of plume)
- **Sample Collection:** Avoid skewing of conditions
  - ◊ Collect 6"+/- below surface
  - ◊ Avoid Scum layer
  - ◊ Take near middle of creek (if applicable)
  - ◊ Etc.
- **Sample Handling:**
  - ◊ Secure and Label ID Each Sample
  - ◊ Cooler and Transport to Lab ASAP
  - ◊ Chain of custody form if applicable
- **Sample Forms & Sample ID**
  - ◊ Fill out NTPUD "SSO Response – Sample Collection, Procedures & Information" Form for each sample taken
  - ◊ Check off applicable constituents to test for (Ammonia always required)
  - ◊ Maintain Form for each sample
  - ◊ Lab will have their in-house forms, maintain both with each sample
  - ◊ (Provide NTPUD form to Lab to remain with samples –or- responsible NTPUD individual shall maintain per sample ID)
- **Sampling Constituents (For Lab):**
  (Lab shall be accredited or certified)
  - ◊ Ammonia (always required)
  - ◊ Other as Directed by Regional Board or other regulatory agency (see NTPUD form)
- **Sample Location Mapping:** Accurately map all locations
  - ◊ Google Earth
  - ◊ USGS Topo
  - ◊ Other as applicable and/or available (i.e. use best available)
  - ◊ (Measure or pace off distances if required)

**** Above all else, use common sense in order to provide accurate documentation capturing the event and conditions as varying with time lapse. Samples, Locations and Timeframes will all be assessed for accuracy and value of sampling performed.**

SSO Response - Sampling Collection, Procedures & Informaton - Field Crew or Duty Supervisor

Samples required if SSO to Surface Water greater than 50,000 gallons
or if required by other regulatory agency with juristiction

Sampling Instructions (For Affected Waterbody):

- **Equipment As Required:** Personal Protective Equipment & Sterile Sample Containers/Bottles
- **Sub-Surface Grab Sample Requirements:** Obtain Accurate Representation of Area and Contamination

  3 samples (min) each time taken:
  1) Background Sample (100' +/- Upstream)
  2) Entry Point Area
  3) Downstream (100' - 300' +/-)

- **Collect Samples To Represent True Condition of Areas**
  Collect at 6" below the surface
  Avoid debris or scum layer from surface
  Obtain from Middle of Creek or other as applicable

- **Protect and Handle Samples as Required To Represent True Condition of Areas**
  Secure and Label as necessary
  Cooler and Transport to Lab as necessary (6 hrs max. elapse time)
  Chain of custody forms if applicable

SSO & Sample Information

SSO Spill Location Name:_____
Location Sample Taken:_____
Sample ID:_____
Date & Time Sample Taken:_____
Individual(s) & Organization who performed the Sampling:_____
_____

Sample & Water Quality Analysis

Parameter	Date/Time of Analysis	Technique (ASTM or Other)	Results	Individual Performing Analysis
□ Ammonia (required)				
□ Total & Fecal Coliform				
□ Enterococcus				
□ E Coli				
□ BOD				
□ pH				
□ Other:_____				

Agency Results Reported to:

□ County Health
□ Regional Water Quality Control Board
□ Other (as applicable):_____

Sketch and/or Diagrams of Sampling Area(s) & Location(s)

Appendix B

Current FOG Contributors

(update as reqd.)

Restaurant	APN	Physical Address	Contact	Business Phone	Owner	Mailing Address	Mailing Address #2	City	State	Zip	Type of Grease Removal Device	STATUS
Kings Beach Elementary	090-062-002	8125 Steelhead	Tony Rivera	308-1187	Tahoe Truckee Unified School District	11603 Donner Pass Rd		Truckee	CA	96161	Gravity Interceptor	Active
Hiro Sushi	090-071-019	8159 North Lake Blvd	Lisa Hayakawa	546-4476	Kayo & Brandon LTD	PO Box 1695		Kings Beach	CA	96143-1695	Gravity Interceptor	Active
Peluso's	090-072-024	8160 North Lake Blvd	Jeffrey Moss	546-2301	Jeffrey Moss	184 Esmeyer Drive		San Rafael	CA	94903	Gravity Interceptor	Active
Java Hut	090-072-029	8268 North Lake Blvd	Bryant La Ferriere	546-0602	Bryant La Ferriere	PO Box 1365		Kings Beach	CA	96143-1365	NONE	Active
Steamer's Beach Side Bar & Grill	090-072-030	8290 North Lake Blvd	Greg Greene	546-2218	Bryant La Ferriere	PO Box 1365		Kings Beach	CA	96143-1365	Gravity Interceptor	Active
99 Cent & More Store (ice cream shop)	090-075-014	8393 North Lake Blvd	John Evans	546-2777	Brockway Lakes LLC	PO Box 1201		Kings Beach	CA	96143	Hydromechanical Interceptor	Active
Las Panchitas	090-075-018	8345 North Lake Blvd	Alex Brambila	546-4539	Alex Brambila	PO Box 2358		Kings Beach	CA	96143-0296	Hydromechanical Interceptor	Active
Jason's Bar & Grill	090-080-001	8338 North Lake Blvd	Monty Webb	546-3315		20604 WARDELL RD		Saratoga	CA	95070	Gravity Interceptor	Active
North Tahoe Event Center	090-080-018	8318 North Lake Blvd	Loren Holt	546-7249	NTPUD	PO Box 139		Tahoe Vista	CA	96148	Gravity Interceptor	Active
La Mexicana	090-122-038	8515 BROOK	Anna	546-0310	ARE Property Holdings - La Mexicana Investments	PO Box 137858945		Sioux Falls	SD	57186	NONE	Active
The Grid Bar & Grill	090-123-006	8545 North Lake Blvd	Gary Hayes	546-0300	Hayes McColgan LLC	PO Box 33928		Reno	NV	89533	Hydromechanical Interceptor	Active
Tahoe Central Market	090-123-026-001	8487 North Lake Blvd	David Breuning	546-5161	Breuning Associates	PO Box 1855		Kings Beach	CA	96143	Gravity Interceptor	Active
Taco Bell	090-123-027	8491 North Lake Blvd	David Bruening	5465161	David Bruening	PO Box 1855		Kings Beach	CA	96143-1855	Gravity Interceptor	Active
7-Eleven	090-123-028	8599 North Lake Blvd		546-2002	C/O Advantage IQ - MS 1937	Store #15183, Market #22	PO Box 2440	Spokane	WA	99210	Exempt	Active
King Café	090-123-031	8401 North Lake Blvd	Steven Griggs	546-9009	King Building LLC	316 California Ave		Reno	NV	89509	NONE	Active
Sweet Tahoe Time	090-134-005	8636 North Lake Blvd	Beth Moxley	530-546-9998	Robert Pocissi	PO Box 2746		Kings Beach	CA	96143	Hydromechanical Interceptor	Active
Brockway Bakery	090-134-011	8710 North Lake Blvd	John & Julie Wainscoat	546-2431	John & Julie Wainscoat	PO Box 486		Kings Beach	CA	96143-0486	Hydromechanical Interceptor	Active
Subway	090-134-029	8700 North Lake Blvd	Kevin & Debra Wightman	546-8258	V&K Foods		PO Box 339	Kings Beach	CA	96143	Exempt	Active
Log Cabin	090-134-039	8692 North Lake Blvd	Carmine Bove	546-7109	Log Cabin, Inc.	PO Box 2420		Kings Beach	CA	96143-2420	Hydromechanical Interceptor	Active
Char Pit	090-142-025	8732 North Lake Blvd		546-3171	KF Carillo	PO Box 270		Tahoma	CA	96142	NONE	Active
Taco's Jalisco	090-192-004	8717 North Lake Blvd		546-3256	Pardini Family, LLC	11088 Rough and Ready Hwy		Grass Valley	CA	95945	None	Active
Caliente Restaurant	090-192-056	8791 North Lake Blvd	Tom Turner	546-1000	Tom Turner	PO Box 2240		Kings Beach	CA	96143	Gravity Interceptor	Active
Soule Domain	090-294-008	9983 Cove	Charlie Soule	546-7529	Charlie Soule	PO Box 1645		Kings Beach	CA	96143-1645	Hydromechanical Interceptor	Active
Mello Fello	090-306-001	9980 North Lake Blvd	Ryan Eller	214-914-9155	Cynthia Sheridan	PO Box 4149		Incline Village	NV	89450	Hydromechanical Interceptor	Active
Old Post Office	115-030-026	5245 North Lake Blvd	Frank Jansen	546-3205		PO Box 1621		Carnelian Bay	CA	96140-1621	Hydromechanical Interceptor	Active
Watermans Landing Café	115-030-052	5166 North Lake Blvd	Phil Caterino	542-5580	State of California, Tahoe Conservancy						Gravity Interceptor	Active
CB's Pizza	115-030-058	5075 North Lake Blvd	Lisa Hill	546-4738	Lisa Hill	PO Box 374		Carnelian Bay	CA	96140-0374	Hydromechanical Interceptor	Active
7-Eleven	115-030-058-001	5075 North Lake Blvd		546-5711	C/O Advantage IQ - MS 1937	Store #17525, Market #22	PO Box 2440	Spokane	WA	99210	Exempt	Active
Gar Woods	115-050-029	5000 North Lake Blvd	Tom Turner	546-3366	Tom Turner	PO Box 1133		Carnelian Bay	CA	96140-1133	Gravity Interceptor	Active
Cedar Glen Lodge	117-071-006	6589 North Lake Blvd	Martha Bryan	546-4281	Cedar Glen Lodge, LLC	PO Box 188		Tahoe Vista	CA	96148	Gravity Interceptor	Active
Jiffy's Pizza	117-071-030-001	6883 North Lake Blvd	Timothy McGowan	546-3244	Timothy McGowan	PO Box 193		Tahoe Vista	CA	96145-7347	Hydromechanical Interceptor	Active
Global Café	117-100-022	7019 North Lake Blvd	Peter & Beata Przybyslawski	546-7771	Peter & Beata Przybyslawski	PO Box 135		Tahoe Vista	CA	96148	Hydromechanical Interceptor	Active
Old Range Steakhouse	117-100-026	7081 North Lake Blvd	George Booras	546-4800		PO Box 32		Tahoe Vista	CA	96148-0032	Hydromechanical Interceptor	Active
North Tahoe Hebrew Congregation	117-100-086	7000 Latone		546-0895	North Tahoe Hebrew Congregation	PO Box 201		Tahoe Vista	CA	96148	None	Active
Captain Jon's	117-110-070	7220 North Lake Blvd	Bob (caretaker)	546-4435	Big Water View LLC	PO Box 157		Tahoe Vista	CA	96148	Hydromechanical Interceptor	Active
Lanza's Restaurant	117-150-039	7739 North Lake Blvd	Justin Garcia	546-2434	Joe Lanza	PO Box 1016		Kings Beach	CA	96143-1016	Gravity Interceptor	Active
Safeway	117-160-002	7815 North Lake Blvd		546-0170	Safeway #1592	5918 Stoneridge Mall Rd		Pleasanton	CA	94588	Interceptor (2)	Active
North Tahoe Fire District	117-180-003	288 North Shore				PO Box 5879		Tahoe City	CA	96145-5879	None	Active
Spindleshanks	117-200-054	400 Brassie		546-7476	Lane Lewis	PO Box 17		Tahoe Vista	CA	96148	Gravity Interceptor	Active
Kings Beach Liquor	090-123-016	8499 North Lake Blvd			Teresa Ferrari	1334 McAllister St		San Francisco	CA	94115	Exempt	Inactive
China Express	090-123-018	8501 North Lake Blvd	Lydia	546-7788	Robert Johnson	PO Box 188		Kings Beach	CA	96143-0188	Hydromechanical Interceptor	Inactive
Spirits of Tahoe	090-133-005	8645 North Lake Blvd	Placer County	745-3150	Placer County	11476 C Ave		Auburn	CA	95603	Exempt	Inactive
Agate Bay Swim Club	116-050-039	453 AGATE	Trina McAndrews	546-4251	Agate Pier/Swim Club Inc.	PO Box 1705		Carnelian Bay	CA	96140-1705	Exempt	Inactive
Boulevard Café	117-071-015	6731 North Lake Blvd	Brian Sizer	775-721-6903	6731 Tahoe LLC	201 Spear St	Suite 1750	San Francisco	CA	94105	Exempt	Inactive
La Petit Pier	117-110-015	7238 North Lake Blvd	Cliff & Ava Schwartz	775-741-5394	Anthony Brown	PO Box 2674		Kings Beach	CA	96143	Exempt	Inactive
Wild Goose	117-110-060	7320 North Lake Blvd			Walsh Family, LLC	PO Box 189		Tahoe Vista	CA	96148	Gravity Interceptor	Inactive
Ritz Lakeside	117-110-008	7170 North Lake Blvd	Jennifer Wilkin		K.W. Northstar Ventures, LLC	13031 Ritz-Carlton Highlands Court		Truckee	CA	96161	Gravity Interceptor	Inactive (under construction)
Mourelatos Ice Cream Shop	117-071-028	6835 North Lake Blvd	Alex Mourelatos	546-2744	Mourelatos Lakeshore Resort	PO Box 77		Tahoe Vista	CA	96148-0077	Exempt	Seasonal

Appendix C

Key Performance Indicators (KPI) checklist

(update annually)

Appendix C - Key Performance Indicator (KPI) Checklist

KPI	2012	2013	2014	2015	2016
Total number of SSOs	6	6	10	6	
Total volume of SSOs (gal)	1293	217	1218	1346	
Total number of SSOs in main lines	5	3	3	2	
Total number of SSOs in lower laterals	1	3	7	4	
Number of repeat SSOs (same location as any previous SSO, regardless of year of occurrence)	0	1	0	0	
Total number of SSOs within the Shorezone	0	0	0	0	
Total volume of SSOs within the Shorezone	0	0	0	0	
Number of pump station failures	0	0	0	0	
Number of pipe failures/roots intrusion	5	6	6	6	
Number of human caused pipe failures	1	0	0	0	
Length of pipe CCTVd (miles)	9.52	3.7	3.8	19.14	
Percentage of total overflow volume contained or returned to sewer	90%	50%	6%	3%	
Number of overflows due to FOG	0	0	1	0	
Number of FOG facilities inspected (internal)	0	0	0	0	
Number of FOG facilities inspected (external)	0	39	0	39	
Percent of FOG producing facilities found to be in compliance	N/A	N/A	N/A	N/A	
Number of SSOs due to capacity limitations or wet weather	0	0	0	0	

Appendix D

Program Audits

(update biannually at a minimum)

- September 29, 2016
- May 1, 2012

GENERAL DISTRICT INFORMATION

Item	General District Information Detail	Response
1.	Name of District	North Tahoe Public Utility District
2.	Date of Audit	September 29, 2016
3.	Name of Auditor	Will Stelter
4.	System Overview	Gravity Collection system & Export via pumps / force mains.
5.	Linear Feet of Gravity Sewer Mains	≈ 393,677
6.	Linear Feet of Force Mains	≈ 35,534
7.	Total Linear Feet of All District Sewer Lines	≈ 429,211
8.	Number of Pump Stations	20
9.	Linear Feet of Private Sewer Mains (excluding laterals)	≈ 5,300
10.	LF of Private Sewer Laterals	≈ 108,240
11.	Total Population Served by District	6,620 full time residents
12.	Current Average Monthly Single Family Residential Sewer Rate	$22.60

GOALS

Item	Goals Detail	Response
13.	Are Goals Stated in the Risk-Based SSMP Still Appropriate and Accurate?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

ORGANIZATION

Item	Organization Detail	Response
14.	Reference Material: • Organizational Chart • Phone List (in Appendix A – Emergency Response Binder)	
15.	Is the Risk-Based SSMP up-to-date with agency organization and staffing contact information?	(YES) / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	

LEGAL AUTHORITY

Item	Legal Authority Detail	Response
16.	Reference Material • Municipal code(s) • Enforcement action(s)	
17.	Does the Risk-Based SSMP contain up-to-date information about the District's legal authority?	(YES) / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	
18.	Does District have sufficient legal authority to control sewer use and maintenance?	(YES) / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	

OPERATIONS AND MAINTENANCE

Item	Operations and Maintenance Detail	Response
19.	Reference Material • Collection system map	
20.	Does the Risk-Based SSMP contain up-to-date information about the District's maps?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
21.	Are District's collection system maps complete, up-to-date and sufficiently detailed?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

RESOURCES AND BUDGET

Item	Resources and Budget Detail	Response
22.	Reference Material • Current Capital Improvement Plan (CIP) • Current operating budget	
23.	Does Risk-Based SSMP contain up-to-date information about District's resources and budget?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
24.	Are District's resources and budget sufficient to support effective sewer system management?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
25.	Do District's planning efforts support long-term goals?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

PRIORITIZED PREVENTATIVE MAINTENANCE

Item	Prioritized Preventative Maintenance Detail	Response
26.	Reference Materials • Cleaning schedules • List or map of potential problem area • Work orders • Incident reports • Customer feedback • Annual Preventative Maintenance Activities	
27.	*Annual Preventative Maintenance Activities Summary:*	

Maintenance Activities	Linear Feet/Year			
	2012	2013	2014	2015
CCTV	xxx	xxx	xxx	xxx
Jet Rod – Hydro flush	xxx	xxx	xxx	xxx

28.	Does Risk-Based SSMP contain up-to-date information about District's preventative maintenance activities?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT

Item	Scheduled Inspections and Condition Assessment Detail	Response
29.	Reference Material • Inspection reports • Infiltration and Inflow (I/I) monitoring studies and reports • Pipe and manhole condition data	
30.	Does Risk-Based SSMP contain up-to-date information about District's inspection and condition assessment?	YES / (NO)
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *All inspection information is in our CMMS System. This information is up to date and readily available.*	
31.	Are District's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

Item	Contingency Equipment and Replacement Inventories Detail	Response
32.	Reference Material • Funds spent on equipment and materials • Equipment and parts inventory	
33.	Does the Risk-Based SSMP contain up-to-date information about equipment and replacement inventories?	(YES) / NO
	If NO, describe content and schedule for necessary arrangements, or provide additional comments for YES response.	
34.	Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	(YES) / NO
	If NO, describe content and schedule for necessary arrangements, or provide additional comments for YES response.	

TRAINING

Item	Training Detail	Response
35.	Reference Material • Employee training records	
36.	Does the Risk-Based SSMP contain up-to-date information about the District's training expectations and programs?	(YES) / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	
37.	Do supervisors believe that their staff is sufficiently trained?	(YES) / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	
38.	Are staff satisfied with the training opportunities and support offered to them?	(YES) / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	

OUTREACH TO BUILDING CONTRACTORS

Item	Outreach to Building Contractors Detail	Response
39.	Reference Material • Fliers/mailings • Mailing lists	
40.	*Summary of Number of Permits Issued to Plumbers or Contractors* Year | Number of Permits* 2011 | 44 Plan Checks (note: the district does not issue permits) 2012 | 38 Plan Checks 2013 | 57 Plan Checks 2014 | 84 Plan Checks 2015 | 83 Plan Checks *Specifically permits that could impact District facilities	
41.	Does the Risk-Based SSMP contain up-to-date information about the District's outreach to plumbers and building contractors?	YES / (NO)
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *We attempt to inform contractors of major district policy changes but all detailed requirements are given to them during plan checks.*	
42.	Has the District conducted or participated in any outreach activities to plumbers and building contractors?	YES / (NO)
	If NO, describe content and schedule for future activities, or provide additional comments for YES response. *Plumbing and contractors working within the District come from a large geographical area. Detailed information on District requirements are given to new contractors performing work within the District during the plan review process. District Ordinances, Technical Specification, Standard Details, and general information are accessible on the District's website.*	

DESIGN AND CONSTRUCTION STANDARDS

Item	Design and Construction Standards Detail	Response
43.	Reference Material • Design and construction standards • Ordinances	
44.	Does the Risk-Based SSMP contain up-to-date information about the District's design and construction standards?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
45.	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
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

OVERFLOW EMERGENCY RESPONSE PLAN

Item	Overflow Emergency Response Plan Detail	Response
46.	Reference Material • Data submitted to CIWQS • Service call data	
47.	*Annual SSO Statistics Summary* (See Key Performance Indicators – Appendix C)	
48.	Does the Risk-Based SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *The SSMP Appendix A provides the Emergency Overflow Response Plan. This plan is maintained as a separate binder issued to all Operations Employees.*	
49.	Considering the information in Item 47, is the Overflow Emergency Response Plan effective in handling SSOs?	(YES) / NO
	If NO, describe content and schedule for necessary revisions and implementation, or provide additional comments for YES response in the space below.	

FATS, OILS, AND GREASE (FOG) CONTROL PLAN

Item	Fats, Oils and Grease (FOG) Control Plan Detail	Response
50.	Reference Material • List or map of FOG sources in service area • List or map of potential problem areas • Cleaning schedules • Restaurant inspection reports or summaries • Data submitted to CIWQS • Service call data	
51.	FOG Control Statistics (See Key Performance Indicators – Appendix C)	
52.	Does the Risk-Based SSMP contain up-to-date information about the District's FOG program?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response. *The District historically has not experienced SSOs attributable solely to FOG. As such the District FOG program has not received the attention it should. Likewise coordinating the FOG program with the District's CMMS FOG module has not commenced due to outstanding IT issues still un-resolved as well as past staffing challenges. The above noted, and with new staff now on-board, the District plans to re-vamp the FOG program coordinating Operations and Engineering staff with a solidified program, policies, procedures, and expectations. FOG program re-vamp is scheduled for winter of 16/17*	
53.	Considering the information Item 51, is the FOG program effective in documenting and controlling FOG sources?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response.	

CAPACITY MANAGEMENT

Item	Capacity Management Detail	Response
54.	Reference Material • Capacity assessment reports • CIP • SSO data	
55.	Number of SSOs Caused by Hydraulic Limitations	

Year	Number
2011	0
2012	0
2013	0
2014	0
2015	0

56.	Does Risk-Based SSMP contain up-to-date information about District's capacity assessment?	(YES) / NO
	If NO, describe content and schedule for necessary activities, or provide additional comments for YES response.	
57.	Has District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?	(YES) / NO
	If NO, describe content and schedule for necessary activities, or provide additional comments for YES response.	

MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

Item	Monitoring, Measurement and Program Modifications Detail	Response
58.	Does the Risk-Based SSMP contain up-to-date information about District's data collection and organization?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
59.	Is District's data collection and organization sufficient to evaluate the effectiveness of the Risk-Based SSMP?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

SSMP AUDITS

Item	SSMP Audits Detail	Response
60.	Will this Audit be completed biennially (once every two years) and filed with the Risk-Based SSMP report?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

COMMUNICATION PROGRAM

Item	Communication Program Detail	Response
61.	Reference Material • Mailings and mailing lists • Website • Other communication records such as newspaper ads, site postings, or other outreach • Customer feedback	
62.	Does the Risk-Based SSMP contain up-to-date information about the District's public outreach activities?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
63.	Does the Risk-Based SSMP contain up-to-date information about the District's communications with satellite and tributary agencies?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
64.	Has the District effectively communicated with the public and other agencies about the Risk-Based SSMP, and addressed feedback?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

INTEROFFICE MEMORANDUM

DATE: May 1, 2012

TO: Paul A. Schultz, General Manager

FROM: Will Stelter, Planning and Engineering Manager

SUBJECT: 2012 Sewer System Management Plan Audit

Staff has conducted the 2012 Sewer System Management Plan (SSMP) Audit as required by the California State Water Resources Control Board General Waste Discharge Requirement (WDR), Order No. 2006-0003-DWQ. Overall, the audit results show the District is in compliance with the SSMP, with only some minor updates required. The following are comments to the questions in the checklist with "No" responses:

- **Question #20: Operations and Maintenance – Does the Risk-Based SSMP contain up-to-date information about the District's maps?**

  Answer: No. A basic District map is included in the SSMP. A full set of District sewer maps will be added with this audit. All Operations employees have a complete set of the most up-to-date maps in their vehicles.

- **Question #30: Scheduled Inspections and Condition Assessment – Does Risk-Based SSMP contain up-to-date information about District's inspection and condition assessment?**

  Answer: No. All inspection information is in the District's CMMS system. This information is update and readily available. The SSMP does contain the process and procedures for the District's inspection and condition assessment programs.

- **Question #41: Outreach to Building Contractors – Does the Risk-Based SSMP contain up-to-date information about the District's outreach to plumbers and building contractors?**

  Answer: No. The District attempts to inform the local plumbing and excavating contractors of major District policy and Ordinance changes as applicable. Detailed information on District requirements are given to new contractors performing work within the District during the plan review process. District Ordinances, Technical Specification, Standard Details, and general information are accessible on the District's website.

- **Question #42: Outreach to Building Contractors – Has the District conducted or participated in any outreach activities to plumbers and building contractors?**

  Answer: No. Plumbing and contractors working within the District come from a large geographical area. Detailed information on District requirements are given to new contractors performing work within the District during the plan review process. District Ordinances, Technical Specification, Standard Details, and general information are accessible on the District's website.

- **Question #48: Overflow Emergency Response Plan – Does the Risk-Based SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan?**

  Answer: No. The SSMP describes the District's Overflow Emergency Response Plan and contains flow charts for spill response and notification requirements. Each Operations Department employee is given a full copy of the Emergency Response Plan upon being employed by the District. The plans are kept in the vehicles for use during SSOs. This plan is updated as needed.

Attached is the complete 2012 Audit Checklist for your review. Please let me know if you wish to discuss any aspects of the audit further.

WS/sg

cc: Utility Operations Manager

Attachment: 2012 Audit Checklist

GENERAL DISTRICT INFORMATION

Item	General District Information Detail	Response
1.	Name of District	North Tahoe Public Utility District
2.	Date of Audit	May 1st 2012
3.	Name of Auditor	Jared Butterworth / Suzi Gibbons
4.	System Overview	Export system via gravity and force mains.
5.	Linear Feet of Gravity Sewer Mains	≈ 393,677
6.	Linear Feet of Force Mains	≈ 35,534
7.	Total Linear Feet of All District Sewer Lines	≈ 429,211
8.	Number of Pump Stations	20
9.	Linear Feet of Private Sewer Mains (excluding laterals)	≈ 5,301
10.	LF of Private Sewer Laterals	≈ 108,240
11.	Total Population Served by District	6,620 full time residents
12.	Current Average Monthly Single Family Residential Sewer Rate	$22.60

GOALS

Item	Goals Detail	Response
13.	Are Goals Stated in the Risk-Based SSMP Still Appropriate and Accurate?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

ORGANIZATION

Item	Organization Detail	Response
14.	Reference Material: • Organizational Chart • Phone List	
15.	Is the Risk-Based SSMP up-to-date with agency organization and staffing contact information?	(YES) / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	

LEGAL AUTHORITY

Item	Legal Authority Detail	Response
16.	Reference Material • Municipal code(s) • Enforcement action(s)	
17.	Does the Risk-Based SSMP contain up-to-date information about the District's legal authority?	(YES) / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	
18.	Does District have sufficient legal authority to control sewer use and maintenance?	(YES) / NO
	If NO, describe content and schedule for necessary changes, or provide additional comments for YES response.	

OPERATIONS AND MAINTENANCE

Item	Operations and Maintenance Detail	Response
19.	Reference Material • Collection system map	
20.	Does the Risk-Based SSMP contain up-to-date information about the District's maps?	YES / (NO)
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *A basic District map is included in this SSMP. A full set of District Maps will be added with this audit on May 1st, 2012. All employees have a copy of the most up to date maps with them in their vehicles.*	
21.	Are District's collection system maps complete, up-to-date and sufficiently detailed?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

RESOURCES AND BUDGET

Item	Resources and Budget Detail	Response
22.	Reference Material • Current Capital Improvement Plan (CIP) • Current operating budget	
23.	Does Risk-Based SSMP contain up-to-date information about District's resources and budget?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
24.	Are District's resources and budget sufficient to support effective sewer system management?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
25.	Do District's planning efforts support long-term goals?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

PRIORITIZED PREVENTATIVE MAINTENANCE

Item	Prioritized Preventative Maintenance Detail	Response
26.	Reference Materials • Cleaning schedules • List or map of potential problem area • Work orders • Incident reports • Customer feedback • Annual Preventative Maintenance Activities	
27.	*Annual Preventative Maintenance Activities Summary*	

Maintenance Activities	Linear Feet/Year			
	2009	2010	2011	2012
CCTV	51,404	21,023	24,243	
Rodding	143,086	83,530	141,877	
Flushing	143,086	83,530	141,877	
Dye - Smoke testing	N/A	N/A	N/A	N/A

28.	Does Risk-Based SSMP contain up-to-date information about District's preventative maintenance activities?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT

Item	Scheduled Inspections and Condition Assessment Detail	Response
29.	Reference Material • Inspection reports • Infiltration and Inflow (I/I) monitoring studies and reports • Pipe and manhole condition data	
30.	Does Risk-Based SSMP contain up-to-date information about District's inspection and condition assessment?	YES / (NO)
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *All inspection information is in our CMMS System. This information is up to date and readily available.*	
31.	Are District's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

Item	Contingency Equipment and Replacement Inventories Detail	Response
32.	Reference Material • Funds spent on equipment and materials • Equipment and parts inventory	
33.	Does the Risk-Based SSMP contain up-to-date information about equipment and replacement inventories?	(YES) / NO
	If NO, describe content and schedule for necessary arrangements, or provide additional comments for YES response.	
34.	Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	(YES) / NO
	If NO, describe content and schedule for necessary arrangements, or provide additional comments for YES response.	

TRAINING

Item	Training Detail	Response
35.	Reference Material • Employee training records	
36.	Does the Risk-Based SSMP contain up-to-date information about the District's training expectations and programs?	(YES) / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	
37.	Do supervisors believe that their staff is sufficiently trained?	(YES) / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	
38.	Are staff satisfied with the training opportunities and support offered to them?	(YES) / NO
	If NO, describe content and schedule for improvements, or provide additional comments for YES response.	

OUTREACH TO BUILDING CONTRACTORS

Item	Outreach to Building Contractors Detail	Response
39.	Reference Material • Fliers/mailings • Mailing lists	
40.	*Summary of Number of Permits Issued to Plumbers or Contractors* Year / Number of Permits* 2009 / 38 Plan Checks / The district does not issue permits. 2010 / 35 Plan Checks / The district does not issue permits. 2011 / 44 Plan Checks / The district does not issue permits. 2012 / 2013 / *Specifically permits that could impact District facilities	
41.	Does the Risk-Based SSMP contain up-to-date information about the District's outreach to plumbers and building contractors?	YES / (NO)
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *We attempt to inform contractors of major district policy changes but all detailed requirements are given to them during plan checks.*	
42.	Has the District conducted or participated in any outreach activities to plumbers and building contractors?	YES / (NO)
	If NO, describe content and schedule for future activities, or provide additional comments for YES response. *Plumbing and contractors working within the District come from a large geographical area. Detailed information on District requirements are given to new contractors performing work within the District during the plan review process. District Ordinances, Technical Specification, Standard Details, and general information are accessible on the District's website.*	

DESIGN AND CONSTRUCTION STANDARDS

Item	Design and Construction Standards Detail	Response
43.	Reference Material • Design and construction standards • Ordinances	
44.	Does the Risk-Based SSMP contain up-to-date information about the District's design and construction standards?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
45.	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
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

OVERFLOW EMERGENCY RESPONSE PLAN

Item	Overflow Emergency Response Plan Detail	Response
46.	Reference Material • Data submitted to CIWQS • Service call data	
47.	*Annual SSO Statistics Summary*	

Indicator	2009	2010	2011	2012	2013
Number of SSOs (total)	1	1	2		
Wet season SSOs	0	1	1		
Dry season SSOs	1	0	1		
Number of SSOs by volume (gallons)					
<10	0	0	2		
10 – 99	0	0	40		
100 – 999	100	0	0		
1000 – 9999	0	0	0		
>10,000	0	130,000	0		
Total SSO Volume	100	130,000	42		
Volume reaching waters of the State	0	129,000	0		
Volume not contained but not reaching waters of the State	0	500	5		
Volume recovered	100	500	37		
Net volume (total minus recovered)	0	129,500	5		
Number of SSOs per 100 mile of sewer per year	1	1	2		
Volume of SSOs per 100 mile of sewer per year	100	130,000	42		
Total Volume conveyed to the plant (million gal) per year	283.84	302.06	372.39		
Total volume SSO / Total volume conveyed (gal) per year	0	.00043	0		
Number of SSOs (by Cause)					
Blockages:					
Roots			2		
Grease					
Debris					
Debris from Laterals					
Animal Carcass					
Construction Debris					
Multiple causes					
Infrastructure Failure					
Inflow & Infiltration					
Electrical Power Failure		1			
Flow Capa District Deficiency					
Natural Disaster					
Bypass					
Contractor Puncture	1				
Average Emergency Response Times, Minutes	15	10	30		
Business Hours					
Notification to arrival on site	15		30		
Notification to complete clearage	34		90		
Non-business hours					
Notification to complete clearage		173	60		
Number of locations with multiple SSOs	0	0	0		

Item	Overflow Emergency Response Plan Detail	Response
48.	Does the Risk-Based SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan?	YES / (NO)
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below. *The SSMP describes the District's Overflow Emergency Response Plan and contains flow charts for spill response and notification requirements. Each employee is given a full copy of the Overflow Emergency Response Plan upon being employed by the District. This plan is updated as needed*	
49.	Considering the information in Item 47, is the Overflow Emergency Response Plan effective in handling SSOs?	(YES) / NO
	If NO, describe content and schedule for necessary revisions and implementation, or provide additional comments for YES response in the space below.	

FATS, OILS, AND GREASE (FOG) CONTROL PLAN

Item	Fats, Oils and Grease (FOG) Control Plan Detail	Response
50.	Reference Material • List or map of FOG sources in service area • List or map of potential problem areas • Cleaning schedules • Restaurant inspection reports or summaries • Data submitted to CIWQS • Service call data	
51.	FOG Control Statistics	

Statistic	2009	2010	2011	2012	2013
Number of SSOs caused by FOG	0	0	0		
Number of FOG inspections completed	23	13	0		

52.	Does the Risk-Based SSMP contain up-to-date information about the District's FOG program?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response.	
53.	Considering the information Item 51, is the FOG program effective in documenting and controlling FOG sources?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response.	

CAPACITY MANAGEMENT

Item	Capacity Management Detail	Response
54.	Reference Material • Capacity assessment reports • CIP • SSO data	
55.	Number of SSOs Caused by Hydraulic Limitations	

Year	Number
2009	0
2010	0
2011	0
2012	
2013	

56.	Does Risk-Based SSMP contain up-to-date information about District's capacity assessment?	(YES) / NO
	If NO, describe content and schedule for necessary activities, or provide additional comments for YES response.	
57.	Has District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system?	(YES) / NO
	If NO, describe content and schedule for necessary activities, or provide additional comments for YES response.	

MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

Item	Monitoring, Measurement and Program Modifications Detail	Response
58.	Does the Risk-Based SSMP contain up-to-date information about District's data collection and organization?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
59.	Is District's data collection and organization sufficient to evaluate the effectiveness of the Risk-Based SSMP?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

SSMP AUDITS

Item	SSMP Audits Detail	Response
60.	Will this Audit be completed annually and filed with the Risk-Based SSMP report?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

COMMUNICATION PROGRAM

Item	Communication Program Detail	Response
61.	Reference Material • Mailings and mailing lists • Website • Other communication records such as newspaper ads, site postings, or other outreach • Customer feedback	
62.	Does the Risk-Based SSMP contain up-to-date information about the District's public outreach activities?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
63.	Does the Risk-Based SSMP contain up-to-date information about the District's communications with satellite and tributary agencies?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	
64.	Has the District effectively communicated with the public and other agencies about the Risk-Based SSMP, and addressed feedback?	(YES) / NO
	If NO, describe content and schedule for updates, or provide additional comments for YES response in the space below.	

Appendix E

SSMP Revision Tracking

(once every 5 years at a minimum, more so if required)

- May 11, 2010 (Initial Adoption)
- October 8, 2013 (1st Revision)
- September 29, 2016 (2nd Revision)

Appendix E - SSMP Revision Tracking

Adoption Date	SSMP Version	Reason for Publication
11-May-10	1st. (Initial Document)	Per State WRCB Order No. 2006-0003-DWQ Permit Requirements (i.e. WDR)
8-Oct-13	2nd (Revision #1)	Per 8-28-12 State WRCB Violation letter, 9-26-12 NTPUD Response to Violation letter, & 9-9-13 Amended MRP (Order 2013-0058-EXEC)
9/29/2016	3rd	Updated all Appendix and some edits to body of document. [Note: these edits were not "significant updates" and as such did not require "re-certification" by the governing body (per SWRCB Order No. 2006-0003-DWQ, section D.14)]

Appendix F

State Water Resources Control Board Permits, MRP, and Correspondences'

(for compliance tracking information only)

- **Order No. WQ 2006-0003-DWQ** – Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- **Regional Board Letter** (August 28, 2012) – "Inspection Report for the NTPUD and Notification of Non-Compliance with the Requirements in the Sanitary Sewer Collection System Order, Placer Co. (WDID 6SSO11110)"
- **NTPUD Letter** (September 26, 2012) – Response to "Inspection Report for the NTPUD and Notification of Non-Compliance with the Requirements in the Sanitary Sewer Collection System Order, Placer Co. (WDID 6SSO11110)"
- **Regional Board Letter (w/ Fact Sheet)** (July 26, 2013) – "Amendment of Statewide Monitoring and Reporting Program (MRP) Requirements for Sanitary Sewer Overflows; MRP Order 2006-0003-DWQ"
- **Order No. WQ 2013-0058-EXEC** – Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006-0003-DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

The State Water Resources Control Board, hereinafter referred to as "State Water Board", finds that:

1. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to comply with the terms of this Order. Such entities are hereinafter referred to as "Enrollees".

2. Sanitary sewer overflows (SSOs) are overflows from sanitary sewer systems of domestic wastewater, as well as industrial and commercial wastewater, depending on the pattern of land uses in the area served by the sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. SSOs may cause a public nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

3. Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.

4. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

SEWER SYSTEM MANAGEMENT PLANS

5. To facilitate proper funding and management of sanitary sewer systems, each Enrollee must develop and implement a system-specific Sewer System Management Plan (SSMP). To be effective, SSMPs must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.

6. Many local public agencies in California have already developed SSMPs and implemented measures to reduce SSOs. These entities can build upon their existing efforts to establish a comprehensive SSMP consistent with this Order. Others, however, still require technical assistance and, in some cases, funding to improve sanitary sewer system operation and maintenance in order to reduce SSOs.

7. SSMP certification by technically qualified and experienced persons can provide a useful and cost-effective means for ensuring that SSMPs are developed and implemented appropriately.

8. It is the State Water Board's intent to gather additional information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and consequent public health and/or environmental impacts occurring in the State.

9. Both uniform SSO reporting and a centralized statewide electronic database are needed to collect information to allow the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) to effectively analyze the extent of SSOs statewide and their potential impacts on beneficial uses and public health. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. 2006-0003-DWQ, are necessary to assure compliance with these waste discharge requirements (WDRs).

10. Information regarding SSOs must be provided to Regional Water Boards and other regulatory agencies in a timely manner and be made available to the public in a complete, concise, and timely fashion.

11. Some Regional Water Boards have issued WDRs or WDRs that serve as National Pollution Discharge Elimination System (NPDES) permits to sanitary sewer system owners/operators within their jurisdictions. This Order establishes minimum requirements to prevent SSOs. Although it is the State Water Board's intent that this Order be the primary regulatory mechanism for sanitary sewer systems statewide, Regional Water Boards may issue more stringent or more

prescriptive WDRs for sanitary sewer systems. Upon issuance or reissuance of a Regional Water Board's WDRs for a system subject to this Order, the Regional Water Board shall coordinate its requirements with stated requirements within this Order, to identify requirements that are more stringent, to remove requirements that are less stringent than this Order, and to provide consistency in reporting.

REGULATORY CONSIDERATIONS

12. California Water Code section 13263 provides that the State Water Board may prescribe general WDRs for a category of discharges if the State Water Board finds or determines that:

    - The discharges are produced by the same or similar operations;
    - The discharges involve the same or similar types of waste;
    - The discharges require the same or similar treatment standards; and
    - The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

    This Order establishes requirements for a class of operations, facilities, and discharges that are similar throughout the state.

13. The issuance of general WDRs to the Enrollees will:
    a) Reduce the administrative burden of issuing individual WDRs to each Enrollee;
    b) Provide for a unified statewide approach for the reporting and database tracking of SSOs;
    c) Establish consistent and uniform requirements for SSMP development and implementation;
    d) Provide statewide consistency in reporting; and
    e) Facilitate consistent enforcement for violations.

14. The beneficial uses of surface waters that can be impaired by SSOs include, but are not limited to, aquatic life, drinking water supply, body contact and non-contact recreation, and aesthetics. The beneficial uses of ground water that can be impaired include, but are not limited to, drinking water and agricultural supply. Surface and ground waters throughout the state support these uses to varying degrees.

15. The implementation of requirements set forth in this Order will ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each region and take into account the environmental characteristics of hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect

water quality in the area, costs associated with compliance with these requirements, the need for developing housing within California, and the need to develop and use recycled water.

16. The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. In addition, many Basin Plans adopted by the Regional Water Boards contain discharge prohibitions that apply to the discharge of untreated or partially treated wastewater. Finally, the California Water Code generally prohibits the discharge of waste to land prior to the filing of any required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs.

17. California Water Code section 13263 requires a water board to, after any necessary hearing, prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge. The requirements shall, among other things, take into consideration the need to prevent nuisance.

18. California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
    a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
    b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
    c. Occurs during, or as a result of, the treatment or disposal of wastes.

19. This Order is consistent with State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) in that the Order imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than prescribed in State Water Board or Regional Water Board plans and policies.

20. The action to adopt this General Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt

this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

21. The Fact Sheet, which is incorporated by reference in the Order, contains supplemental information that was also considered in establishing these requirements.

22. The State Water Board has notified all affected public agencies and all known interested persons of the intent to prescribe general WDRs that require Enrollees to develop SSMPs and to report all SSOs.

23. The State Water Board conducted a public hearing on February 8, 2006, to receive oral and written comments on the draft order. The State Water Board received and considered, at its May 2, 2006, meeting, additional public comments on substantial changes made to the proposed general WDRs following the February 8, 2006, public hearing. The State Water Board has considered all comments pertaining to the proposed general WDRs.

IT IS HEREBY ORDERED, that pursuant to California Water Code section 13263, the Enrollees, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

A. DEFINITIONS

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:
   (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
   (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
   (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

2. **Sanitary sewer system** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

For purposes of this Order, sanitary sewer systems include only those systems owned by public agencies that are comprised of more than one mile of pipes or sewer lines.

3. **Enrollee** - A federal or state agency, municipality, county, district, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order.

4. **SSO Reporting System** – Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is http://ciwqs.waterboards.ca.gov. This online database is maintained on a secure site and is controlled by unique usernames and passwords.

5. **Untreated or partially treated wastewater** – Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

6. **Satellite collection system** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

7. **Nuisance** - California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
   a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
   b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
   c. Occurs during, or as a result of, the treatment or disposal of wastes.

B. APPLICATION REQUIREMENTS

1. Deadlines for Application – All public agencies that currently own or operate sanitary sewer systems within the State of California must apply for coverage under the general WDRs within six (6) months of the date of adoption of the general WDRs. Additionally, public agencies that acquire or assume responsibility for operating sanitary sewer systems after the date of adoption of this Order must apply for coverage under the general WDRs at least three (3) months prior to operation of those facilities.

2. Applications under the general WDRs – In order to apply for coverage pursuant to the general WDRs, a legally authorized representative for each agency must submit a complete application package. Within sixty (60) days of adoption of the general WDRs, State Water Board staff will send specific instructions on how to

apply for coverage under the general WDRs to all known public agencies that own sanitary sewer systems. Agencies that do not receive notice may obtain applications and instructions online on the Water Board's website.

3. Coverage under the general WDRs – Permit coverage will be in effect once a complete application package has been submitted and approved by the State Water Board's Division of Water Quality.

C. PROHIBITIONS

1. Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

2. Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

D. PROVISIONS

1. The Enrollee must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for enforcement action.

2. It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with the general WDRs. Nothing in the general WDRs shall be:

   (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
   (ii) Interpreted or applied to authorize an SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
   (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual NPDES permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
   (iv) Interpreted or applied to supersede any more specific or more stringent WDRs or enforcement order issued by a Regional Water Board.

3. The Enrollee shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO.

4. In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into

flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

5. All SSOs must be reported in accordance with Section G of the general WDRs.

6. In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether:

   (i) The Enrollee has complied with the requirements of this Order, including requirements for reporting and developing and implementing a SSMP;

   (ii) The Enrollee can identify the cause or likely cause of the discharge event;

   (iii) There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems.

   (iv) The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee;

   (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:
   - Proper management, operation and maintenance;
   - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);
   - Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);
   - Installation of adequate backup equipment; and
   - Inflow and infiltration prevention and control to the extent practicable.

   (vi) The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.

(vii) The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.

7. When a sanitary sewer overflow occurs, the Enrollee shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

   The Enrollee shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:

   (i) Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure;
   (ii) Vacuum truck recovery of sanitary sewer overflows and wash down water;
   (iii) Cleanup of debris at the overflow site;
   (iv) System modifications to prevent another SSO at the same location;
   (v) Adequate sampling to determine the nature and impact of the release; and
   (vi) Adequate public notification to protect the public from exposure to the SSO.

8. The Enrollee shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Enrollee, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.

9. The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.

10. The Enrollee shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the Enrollee.

11. The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.

12. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals, and shall bear the professional(s)' signature and stamp.

13. The mandatory elements of the SSMP are specified below. However, if the Enrollee believes that any element of this section is not appropriate or applicable to the Enrollee's sanitary sewer system, the SSMP program does not need to address that element. The Enrollee must justify why that element is not applicable. The SSMP must be approved by the deadlines listed in the SSMP Time Schedule below.

Sewer System Management Plan (SSMP)

(i) **Goal**: The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

(ii) **Organization**: The SSMP must identify:

(a) The name of the responsible or authorized representative as described in Section J of this Order.

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and

(c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

(iii) **Legal Authority:** Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

(a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

(b) Require that sewers and connections be properly designed and constructed;

(c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;

(d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and

(e) Enforce any violation of its sewer ordinances.

(iv) **Operation and Maintenance Program**. The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;

(b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

(c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

(d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

(e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

(v) **Design and Performance Provisions**:

(a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

(b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

(vi) **Overflow Emergency Response Plan** - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;

(b) A program to ensure an appropriate response to all overflows;

(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;

(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;

(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

(f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

(vii) **FOG Control Program:** Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG 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 FOG;

(b) A plan and schedule for the disposal of FOG 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 FOG generated within a sanitary sewer system service area;

(c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

(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 FOG ordinance;

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

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

(viii) **System Evaluation and Capacity Assurance Plan**: The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

(a) **Evaluation**: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs

that escape from the system) associated with conditions similar to those causing overflow 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 overflow events;

(b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and

(c) **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term 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.

(d) **Schedule:** 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 Section D. 14.

(ix) **Monitoring, Measurement, and Program Modifications:** The Enrollee shall:

(a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;

(b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;

(c) Assess the success of the preventative maintenance program;

(d) Update program elements, as appropriate, based on monitoring or performance evaluations; and

(e) Identify and illustrate SSO trends, including: frequency, location, and volume.

(x) **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 (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

(xi) **Communication Program** – The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

14. Both the SSMP and the Enrollee's program to implement the SSMP must be certified by the Enrollee to be in compliance with the requirements set forth above and must be presented to the Enrollee's governing board for approval at a public meeting. The Enrollee shall certify that the SSMP, and subparts thereof, are in compliance with the general WDRs within the time frames identified in the time schedule provided in subsection D.15, below.

    In order to complete this certification, the Enrollee's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

    State Water Resources Control Board
    Division of Water Quality
    Attn: SSO Program Manager
    P.O. Box 100
    Sacramento, CA 95812

    The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification by the governing board of the Enrollee is required in accordance with D.14 when significant updates to the SSMP are made. To complete the re-certification process, the Enrollee shall enter the data in the Online SSO Database and mail the form to the State Water Board, as described above.

15. The Enrollee shall comply with these requirements according to the following schedule. This time schedule does not supersede existing requirements or time schedules associated with other permits or regulatory requirements.

Sewer System Management Plan Time Schedule

Task and Associated Section	Completion Date			
	Population > 100,000	Population between 100,000 and 10,000	Population between 10,000 and 2,500	Population < 2,500
Application for Permit Coverage ***Section C***	6 months after WDRs Adoption			
Reporting Program ***Section G***	6 months after WDRs Adoption[1]			
SSMP Development Plan and Schedule ***No specific Section***	9 months after WDRs Adoption[2]	12 months after WDRs Adoption[2]	15 months after WDRs Adoption[2]	18 months after WDRs Adoption[2]
Goals and Organization Structure ***Section D 13 (i) & (ii)***	12 months after WDRs Adoption[2]		18 months after WDRs Adoption[2]	
Overflow Emergency Response Program ***Section D 13 (vi)***	24 months after WDRs Adoption[2]	30 months after WDRs Adoption[2]	36 months after WDRs Adoption[2]	39 months after WDRs Adoption[2]
Legal Authority ***Section D 13 (iii)***				
Operation and Maintenance Program ***Section D 13 (iv)***				
Grease Control Program ***Section D 13 (vii)***				
Design and Performance ***Section D 13 (v)***	36 months after WDRs Adoption	39 months after WDRs Adoption	48 months after WDRs Adoption	51 months after WDRs Adoption
System Evaluation and Capacity Assurance Plan ***Section D 13 (viii)***				
Final SSMP, incorporating all of the SSMP requirements ***Section D 13***				

1. In the event that by July 1, 2006 the Executive Director is able to execute a memorandum of agreement (MOA) with the California Water Environment Association (CWEA) or discharger representatives outlining a strategy and time schedule for CWEA or another entity to provide statewide training on the adopted monitoring program, SSO database electronic reporting, and SSMP development, consistent with this Order, then the schedule of Reporting Program Section G shall be replaced with the following schedule:

Reporting Program ***Section G***	
Regional Boards 4, 8, and 9	8 months after WDRs Adoption
Regional Boards 1, 2, and 3	12 months after WDRs Adoption
Regional Boards 5, 6, and 7	16 months after WDRs Adoption

If this MOU is not executed by July 1, 2006, the reporting program time schedule will remain six (6) months for all regions and agency size categories.

2. In the event that the Executive Director executes the MOA identified in note 1 by July 1, 2006, then the deadline for this task shall be extended by six (6) months. The time schedule identified in the MOA must be consistent with the extended time schedule provided by this note. If the MOA is not executed by July 1, 2006, the six (6) month time extension will not be granted.

E. WDRs and SSMP AVAILABILITY

1. A copy of the general WDRs and the certified SSMP shall be maintained at appropriate locations (such as the Enrollee's offices, facilities, and/or Internet homepage) and shall be available to sanitary sewer system operating and maintenance personnel at all times.

F. ENTRY AND INSPECTION

1. The Enrollee shall allow the State or Regional Water Boards or their authorized representative, upon presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

G. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The Enrollee shall furnish to the State or Regional Water Board, within a reasonable time, any information that the State or Regional Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Enrollee shall also furnish to the Executive Director of the State Water Board or Executive Officer of the applicable Regional Water Board, upon request, copies of records required to be kept by this Order.

2. The Enrollee shall comply with the attached Monitoring and Reporting Program No. 2006-0003 and future revisions thereto, as specified by the Executive Director. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2006-0003. Unless superseded by a specific enforcement Order for a specific Enrollee, these reporting requirements are intended to replace other mandatory routine written reports associated with SSOs.

3. All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within 30days of receiving an account and prior to recording spills into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding a Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

4. Pursuant to Health and Safety Code section 5411.5, any person who, without regard to intent or negligence, causes or permits any untreated wastewater or other waste to be discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State, as soon as that person has knowledge of the discharge, shall immediately notify the local health officer of the discharge. Discharges of untreated or partially treated wastewater to storm drains and drainage channels, whether man-made or natural or concrete-lined, shall be reported as required above.

   Any SSO greater than 1,000 gallons discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State shall also be reported to the Office of Emergency Services pursuant to California Water Code section 13271.

H. CHANGE IN OWNERSHIP

1. This Order is not transferable to any person or party, except after notice to the Executive Director. The Enrollee shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Enrollee containing a specific date for the transfer of this Order's responsibility and coverage between the existing Enrollee and the new Enrollee. This agreement shall include an acknowledgement that the existing Enrollee is liable for violations up to the transfer date and that the new Enrollee is liable from the transfer date forward.

I. INCOMPLETE REPORTS

1. If an Enrollee becomes aware that it failed to submit any relevant facts in any report required under this Order, the Enrollee shall promptly submit such facts or information by formally amending the report in the Online SSO Database.

J. REPORT DECLARATION

1. All applications, reports, or information shall be signed and certified as follows:

    (i) 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 (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)

    (ii) An individual is a duly authorized representative only if:

        (a) The authorization is made in writing by a person described in paragraph (i) 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.

K. CIVIL MONETARY REMEDIES FOR DISCHARGE VIOLATIONS

1. The California Water Code provides various enforcement options, including civil monetary remedies, for violations of this Order.

2. The California Water Code also provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or

falsifying any information provided in the technical or monitoring reports is subject to civil monetary penalties.

L. SEVERABILITY

1. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

2. This order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Enrollee from liability under federal, state or local laws, nor create a vested right for the Enrollee to continue the waste discharge.

CERTIFICATION

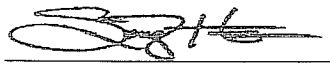
The undersigned Clerk to the State Water Board does hereby certify that the foregoing is a full, true, and correct copy of general WDRs duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 2, 2006.

AYE: Tam M. Doduc
Gerald D. Secundy

NO: Arthur G. Baggett

ABSENT: None

ABSTAIN: None



Song Her
Clerk to the Board

STATE WATER RESOURCES CONTROL BOARD

MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
   A. Equal or exceed 1000 gallons, or
   B. Result in a discharge to a drainage channel and/or surface water; or
   C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

2. Category 2 – All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.

3. Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

4. Category 1 SSOs – All SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.

   The above reporting requirements do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local

County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

5. Category 2 SSOs – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).

6. Private Lateral Sewage Discharges – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.

7. If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.

8. In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. Category 2 SSOs:

   A. Location of SSO by entering GPS coordinates;
   B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
   C. County where SSO occurred;
   D. Whether or not the SSO entered a drainage channel and/or surface water;
   E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;

F. Estimated SSO volume in gallons;
G. SSO source (manhole, cleanout, etc.);
H. SSO cause (mainline blockage, roots, etc.);
I. Time of SSO notification or discovery;
J. Estimated operator arrival time;
K. SSO destination;
L. Estimated SSO end time; and
M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

A. All information listed above (if applicable and known), as well as;
B. Identification of sewage discharge as a private lateral sewage discharge; and
C. Responsible party contact information (if known).

11. Category 1 SSOs:

A. All information listed for Category 2 SSOs, as well as;
B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
C. Estimated SSO amount recovered;
D. Response and corrective action taken;
E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
F. Parameters that samples were analyzed for (if applicable);
G. Identification of whether or not health warnings were posted;
H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
I. Whether or not there is an ongoing investigation;
J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
K. OES control number (if applicable);
L. Date OES was called (if applicable);
M. Time OES was called (if applicable);
N. Identification of whether or not County Health Officers were called;
O. Date County Health Officer was called (if applicable); and
P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant to California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.

3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

3. All records shall be made available for review upon State or Regional Water Board staff's request.

4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;

5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:

   a. Record of Certified report, as submitted to the online SSO database;
   b. All original recordings for continuous monitoring instrumentation;
   c. Service call records and complaint logs of calls received by the Enrollee;
   d. SSO calls;
   e. SSO records;
   f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
   g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
   h. A list and description of complaints from customers or others from the previous 5 years; and
   i. Documentation of performance and implementation measures for the previous 5 years.

6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:

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

C. Certification

1. All final reports must be certified by an authorized person as required by Provision J of the Order.
2. Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on May 2, 2006.

Song Her
Clerk to the Board

California Water Boards

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for
Environmental Protection

Lahontan Regional Water Quality Control Board

August 28, 2012

Paul A. Schultz
General Manager
North Tahoe Public Utility District
P.O. Box 139
Tahoe Vista, CA 96148

INSPECTION REPORT FOR THE NORTH TAHOE PUBLIC UTILITY DISTRICT AND NOTIFICATION OF NON-COMPLIANCE WITH THE REQUIREMENTS IN THE SANITARY SEWER COLLECTION SYSTEM ORDER, PLACER COUNTY (WDID 6SSO11110)

The California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) reviewed the Sanitary Sewer Collection System Inspection Report produced by Craig Blett with PG Environmental. On May 31, 2012 Mr. Blett conducted an inspection on the North Tahoe Public Utility District (District) and reviewed compliance with the State Water Resources Control Board's (State Water Board) Sanitary Sewer Overflow General Waste Discharge Requirements (SSO Order). Rob Tucker (with the Lahontan Water Board) and Russel Norman (with State Water Board) assisted in conducting the inspection. The Inspection Report produced by Mr. Blett is attached.

Non-compliance with SSO Order - Unsatisfactory Conditions

The Inspection Report lists a number of unsatisfactory conditions. We have collectively grouped the unsatisfactory conditions in the inspection report as a single violation in our online database for failing to develop and implement a Sanitary Sewer Management Plan (SSMP). The SSO Order requires, under provision D.11., the following:

D.11. The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) . . .

Example of Unsatisfactory Condition Reported

The following example demonstrates that the SSMP is not being implemented. In the inspection report, page 15, item number 10, states the following:

> ". . . operations and maintenance training is not regularly provided or documented. This was confirmed during the inspection by conducting a review of training records. . . "

SSO Order Provision D.13.(iv)(d), requires the Discharger to include in the SSMP to provide training on a regular basis for staff in the sanitary sewer system operation and maintenance.

The District's SSMP, section 6.3, indicates that collection system staff will receive annual training on emergency response plans. Additionally, Exhibit 4-11 of the SSMP was supposed to contain a training schedule, but no training schedule was found. There was no documentation of any annual training scheduled or conducted on emergency response plans.

While the SSMP partially satisfied the requirement D.13.(iv)(d) to include regular training for collection system staff, because the District failed to describe the training in the SSMP and could not provide documents that annual training was being implemented, the District is in violation for not implementing the SSMP.

Corrective Actions Needed

The Inspection Report cites a number of unsatisfactory conditions and most of those unsatisfactory conditions are in violation of requirements to either develop or implement an SSMP. In addition, unsatisfactory conditions that are not direct violations could result in a possible violation in the future; therefore we are requesting the District prepare a written response on what it will do to resolve the unsatisfactory conditions, prevent spills, and improve spill response training.

By October 1, 2012 provide to the Lahontan Water Board a written response on actions that will be taken to resolve all of the unsatisfactory conditions described in the Inspection Report and a time schedule for implementation. We understand some actions may require the District changing the SSMP and presenting those changes to your Board, and that is among reasons for why we request a time schedule for implementation.

If you have any questions regarding this matter, please feel free to call me at 530-542-5467, or Alan Miller, Chief, North Basin Regulatory Unit, 530-542-5430.

Robert Tucker
Water Resource Control Engineer

Enclosure: Sanitary Sewer Collection System Inspection Report

CC: William Stelter/NTPUD (w/enclosures)
Ameila Whitson/U.S. EPA Region IX/NPDES Permits Office (w/enclosures)
Max Kuker/PG Environmental, LLC

RTT/adw/T: ntpud cover

EPA Region IX and California Water Resources Control Board

Sanitary Sewer Collection System Inspection Report

Collection System Name and Location	Entry Date	Permit Effective Date
North Tahoe Public Utility District Collection System 875 National Avenue Tahoe Vista, California 96148	5/31/2012 **Entry Time** 7:30 AM	8/17/2006

Order Number	WDID Number	Permit Expiration Date
2006-0003-DWQ & 2008-0002-EXEC	6SSO11110	

Name(s) & Title(s) of On-Site Representative(s)	Contact Information	Notified of Inspection?
Will Stelter (Planning and Engineering Manager) Mark Begin (District Engineer) Jared Butterworth (Construction Administrator)	Phone: (530) 546-4212 Fax: (530) 546-2652 E-mail: wstelter@ntpud.org	☒ Yes ☐ No

Name, Title & Address of Responsible Official	Contact Information	Official Contacted?
Paul Schultz (General Manager) 875 National Avenue Tahoe Vista, California 96148	Phone: (530) 546-4212 Fax: (530) 546-2652 E-mail: pschultz@ntpud.org	☐ Yes ☒ No

Inspector(s)	Presented Credentials?
Primary: Craig Blett (PG Environmental, LLC) **Other(s):** Robert Tucker (Lahontan Water Board), Russel Norman (State Water Board)	☒ Yes ☐ No

Weather Conditions at the Time of the Inspection:	Receiving WWTP Information
Sunny; no recent precipitation	**Name:** Tahoe-Truckee Water Reclamation Plant **NPDES No.:** N/A

Overview of Areas Evaluated During Inspection

S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated

SSO History:	U	Operations & Maintenance:	U
SSO Reporting & Documentation:	U	Overflow Emergency Response Plan:	U
Legal Authority:	S	FOG Control Program:	M
Sewer System Mapping:	S	Program Self-Assessment:	N

Prepared By: Craig Blett (PG Environmental, LLC) on 6/4/2012

Reviewed By: Max Kuker (PG Environmental, LLC) on 6/25/2012

Narrative

On May 31, 2012 a USEPA contractor inspected the North Tahoe Public Utility District (NTPUD) – North Tahoe Public Utility District Collection System in Tahoe Vista, CA. Discharges from the NTPUD's collection system are regulated by the Sanitary Sewer System Waste Discharge Requirements (SSSWDR) 2006-0003-DWQ, and its accompanying Amended Monitoring Plan Order No. 2008-0002-EXEC (hereafter Amended MRP). The primary on-site representative was Will Stelter (Planning and Engineering Manager). Additional representatives included Mark Begin (District Engineer) and Jared Butterworth (Construction Administrator).

The primary goals of this inspection were to gather necessary information for compliance and enforcement purposes as stated in the Compliance and Enforcement Plan for the Sanitary Sewer Overflow Reduction Program posted on the Sanitary Sewer Overflow Reduction Program website and to evaluate the effectiveness of controls used by the City to prevent discharges as prohibited by the Clean Water Act (CWA). The inspection encompassed onsite inspections and subsequent review of pertinent sewer system information, including review of Sewer System Management Plans (SSMPs); maintenance, operations, and management activities; Sewer Use Ordinance; financial information; and other areas needed to verify the Discharger's compliance with all requirement of the SSSWDR, including efforts to eliminate, reduce and/or mitigate sanitary sewer overflows (SSOs).

The State Water Resources Control Board (State Water Board), Office of Enforcement and participating Regional Water Quality Control Board (Lahontan Water Board) are conducting Compliance Inspections (Inspections) of sewer collection systems as part of the combined Water Boards' enforcement response to verify compliance with "Waste Discharge Requirements for Sanitary Sewer Systems," Water Quality Order No. 2006-0003-DWQ, and its incorporated amended Monitoring and Reporting Program (hereafter referred to as SSSWDR (the acronym for the term Sanitary Sewer Systems Waste Discharge Requirements in Water Board vernacular), and Amended MRP).

The collection system is regulated under the SSSWDR (2006-0003-DWQ) and associated amended MRP (2008-0002-EXEC), which requires all public agencies that own or operate a sanitary sewer system comprised of more than one mile of pipes that convey wastewater to a publicly owned treatment facility to apply to the State Water Board for coverage under the SSSWDR. Applicable public agencies were required to file a Notice of Intent (NOI) for each individual sanitary sewer collection system owned or operated by the public agency by November 2, 2006. State Water Board records show that the NTPUD filed an NOI with the State Water Board to enroll "North Tahoe Public Utility District – North Tahoe Public Utility District Collection System," which was assigned WDID #6SSO11110 by the State Water Board, effective on January 1, 2007.

No prior inspection of the Collection System has been conducted by either the State Water Board, or the Lahontan Water Board.

System Overview

The NTPUD owns and operates the NTPUD Collection System, a small-sized sanitary sewer collection system that serves the areas of Kings Beach, Brockway Hill, Kings Wood, Tahoe Vista, Carnelian Bay, Cedar Flats, and Dollar Point (Placer County), California. Sewage conveyed by the collection system is discharged to the Tahoe City Public Utility District and ultimately treated at the Tahoe-Truckee Water Reclamation Plant which is owned and operated by the Tahoe-Truckee Sanitation Agency.

According to the NTPUD "Collection System Questionnaire" (Questionnaire) required by the SSSWDR, last updated by NTPUD on April 4, 2012, and confirmed during the inspection, the collection system serves an estimated population of approximately 6,620 residents, and contains approximately 75 miles of gravity sewers, 6.7 miles of force mains (pressurized sewers), and 5,524 lateral sewer service connections. NTPUD has responsibility for the lower portion of sewer service laterals (i.e., from the property line to the sewer main). NTPUD's Collection System has reportedly experienced historic and periodic SSOs, some of which are violations of the SSSWDR, where untreated or partially treated sewage reached surface waters, based on information certified by NTPUD in the California Integrated Water Quality System (CIWQS). This inspection focused on a period of review from May 31, 2008 through May 31, 2012. During that period, the NTPUD reported a total of five Category 1 and 2 SSOs. Refer to Attachment 1 (SSO Public Report Detail Page) for a summary of reported SSOs during the period of review. One Category 2 SSO occurred on May 16, 2012 and had not been reported in CIWQS at the time of the inspection and is not included in the reported count of five SSOs above.

Inspection Timeline

Time	Inspection Activity/Task
7:40	Introduction
8:00	Opening Meeting at the NTPUD Office
8:30	Office Discussion (system assets, operations and maintenance activities) and Review of Questionnaire
10:30	Documentation Review
1:30	Field Activity 1 - Dollar Hill Pump Station
2:15	Field Activity 2 - Beaumont Ave SSO
3:00	Field Activity 3 - Dolly Varden St SSO
3:30	Continued Office Discussion
4:45	Closing Meeting
5:30	Exited the Inspection

Major Findings

SSO History

1. State Water Board Order 2006-0003-DWQ, Part C.2 prohibits the discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m). Based on a review of the SSO Public Report generated from the CIWQS online reporting system, on four occasions between May 31, 2008 and May 31, 2012, untreated wastewater was discharged by the NTPUD from the collection system creating a nuisance such as to be potentially injurious to health and to be offensive to the senses. Refer to Attachment 1 for the CIWQS Violations Report which gives summaries of the SSO discharges.

   A large Category 1 SSO occurred on December 19, 2010 reported as 136,000 gallons. The December 19, 2010 SSO is the subject of an ongoing inquiry by the Lahontan Water Board and was not reviewed as a component of this inspection. There were no other Category 1 SSOs reported during the period reviewed during the inspection.

2. State Water Board Order 2006-0003-DWQ, Part D.11 states that the Enrollee shall develop and implement a written SSMP. The Enrollee has developed a written SSMP which includes a section titled Chapter 9 – Monitoring, Measurement, and Program Modifications. Under that chapter, Section 9.1 states that the District (NTPUD) will monitor the effectiveness of the Risk-Based SSMP on a regular basis, and will update and modify the Risk-Based SSMP elements to

keep them current, accurate, and available for audit, as appropriate. According to the primary on-site representative, there is no program to hold post-SSO briefings with the collections staff and management to evaluate the root cause of the SSOs and document service changes necessary to prevent the recurrence of the SSOs.

SSO Reporting & Documentation

1. State Water Board Order 2006-0003-DWQ, Amended MRP, Part A.5 requires that all SSOs that meet the criteria for Category 2 SSOs be reported to the Online Database within 30 days after the end of the calendar month in which the SSO occurs. According to a printout of the NTPUD's computerized maintenance management system (CMMS) for sewer complaints, a call was received on June 12, 2010 for a potential SSO at 1154 Oxford (refer to Attachment 2). The call log notes state that a blockage was cleared due to heavy roots from the property line to the manhole (PL to MH). The notes also state that the area was cleaned. According to the District Engineer and a field crew member present at the inspection, a Category 2 SSO did occur on that date as stated in the call log but was not reported as required due to an oversight.

2. State Water Board Order 2006-0003-DWQ, Amended MRP, Parts A.9, A.10, and A.11 requires the Enrollee to record and report mandatory information associated with an SSO event. The NTPUD does not have standard procedures or field recording forms for use in recording or reporting the mandatory information required and no form was found in the SSMP. According to the District Engineer and based on discussions with a field crew member, information is written down in various formats including note paper and personal day planners or relayed to duty supervisors verbally. During review of SSO files by the inspector, the field recorded SSO event information was not filed in any of the SSO files which were reviewed as a component of the inspection. During a field activity, a field crew member was asked to produce the recording device used by him to record SSO event information, and he responded that it was not currently in his possession. Below are two examples where SSO event information was not accurately recorded.

   On September 4, 2011, a Category 2 spill occurred at 4388 Beaumont Rd. The after-hours (i.e., weekend) call service received a call reporting an overflowing manhole at 12:36 PM. The NTPUD stated in the CIWQS online reporting form that the spill started at 12:00 PM (refer to Attachment 3). The primary on-site representative stated that there was no basis for reporting the spill starting time at 12:00 PM other than to be conservative in his estimate. He also stated that he was concerned that if the spill notification time and the spill start time were reported as identical, then this could create a 'red flag' in the online reporting database.

   On December 31, 2011, a Category 2 spill occurred at 8841 Dolly Varden Dr. The after-hours (i.e., holiday) call service received a call reporting a sewer spilling at 4:02 PM. NTPUD responded and found the lower lateral from the residence was blocked. The NTPUD stated in the CIWQS online reporting form that the spill started at 7:00 AM (refer to Attachment 4). The primary on-site representative stated that reporting a spill starting time at 7:00 AM seemed reasonable because residents likely starting using water in the home at about that time. He did not indicate whether he had attempted to verify his assumption with the residents at 8841 Dolly Varden Dr.

3. State Water Board Order 2006-0003-DWQ, Amended MRP, Part B.1 requires the Enrollee to maintain individual SSO records for a minimum of five years from the date of the SSO. As per the CIWQS Violation Report, a Category 2 SSO occurred at 1432 Cheshire Court on September 21, 2008. According to the CIWQS Violation Report, 500 gallons of wastewater were spilled due to grease deposition in the sewer mainline. The SSO file was reviewed as a component of the

inspection and it was found that none of the original details of the spill such as the cause of the spill and the actions taken to terminate the spill, or original notes or forms which record the timeline of the spill or the determination of the spill volume were contained in the file. The printed CIWQS detailed spill report was contained in the file.

According to the primary on-site representative, the SSO files which were presented for review were created on May 30, 2012, the day prior to the inspection and that prior to May 30, 2012, there was no single location where SSO event information was maintained. The information in the SSO files presented during the inspection was pulled from various archived locations at NTPUD including the CMMS system.

Operations & Maintenance

1. State Water Board Order 2006-0003-DWQ, Section E.1 requires a copy of the general WDRs and the certified SSMP be made available to sanitary sewer system operating and maintenance personnel at all times. Field crews were asked whether they were familiar with the SSMP and its contents and they responded that they were not familiar with the SSMP or its contents. Further, interviews with field crew members identified a general lack of training regarding the SSMP. The NTPUD's SSMP includes training requirements in Section 4.6; however, the training specified in the SSMP concentrates on safety and does not address normal operation and maintenance of the sanitary sewer system. Refer to Attachment 5 for documentation of recent training activities.

Overflow Emergency Response Plan

1. State Water Board Order 2006-0003-DWQ, Section D.13, Part vi states that each Enrollee must develop and implement an Overflow Emergency Response Plan. Part vi.d requires procedures that ensure appropriate staff and contractor personnel are aware of and follow the Overflow Emergency Response Plan and are appropriately trained. NTPUD's SSMP, Section 6.3, states that collection system personnel will complete annual training sessions to maintain familiarity with the NTPUD's Emergency Response Plan. According to the primary on-site representative, regular emergency response training had not been conducted nor was any training regularly scheduled. Additionally, according to the District Engineer, contractors do not receive any specific training on SSOs or emergency response procedures. Contractors are prequalified to perform bypass pumping operations.

Areas of Concern

SSO History

1. State Water Board Order 2006-0003-DWQ, Part D.11 states that the Enrollee shall develop and implement a written SSMP. The Enrollee has developed a written SSMP which includes a section titled Chapter 9 – Monitoring, Measurement, and Program Modifications. Under that chapter, Section 9.1 states that the District (NTPUD) will monitor the effectiveness of the Risk-Based SSMP on a regular basis, and will update and modify the Risk-Based SSMP elements to keep them current, accurate, and available for audit, as appropriate. According to the primary on-site representative, there is no program to hold post-SSO briefings with the collections staff and management to evaluate the root cause of the SSOs and document service changes necessary to prevent the recurrence of the SSOs.

Operations & Maintenance

1. The NTPUD has developed a SSMP which identifies preventative maintenance activities and sewer system inspection frequencies. According to SSMP Sections *4.2 Gravity Pipelines* and

4.3 Condition Assessment and Inspection, pipeline cleaning and inspections of the entire sewer system are scheduled in the NTPUD's CMMS to be completed every three years. According to the Pre-inspection Questionnaire and verified during the inspection, the NTPUD has a goal of cleaning 20 miles of sewer pipe in the coming year and inspecting via CCTV, 15 miles of sewer pipe in the coming year. As per the pre-inspection questionnaire, the NTPUD cleaned 23 miles of sewer and CCTV'd 4 miles (approximately 5%) of collection system in the past 12 months. According to the primary on-site representative, there is only one field crew qualified to conduct CCTV inspections and that crew was frequently needed to perform other maintenance duties.

FOG Control Program

1. The SSMP, Section *7.1 Nature and Extent of FOG Program*, states that FOG discharges to the sewer system have been significantly reduced due in part to a proactive inspection program. Currently, the NTPUD does not conduct inspections of grease traps or interceptors because they do not currently employ a FOG inspector. According to Suzi Gibbons, the Planning Coordinator, a new employee will be hired in the next fiscal year and assigned partial duties of inspecting Food Service Establishments (FSEs) with grease traps and interceptors.

Attachments:

1. SSO Public Report Detail Page – Category 1 and 2 SSOs (May 31, 2008 through May 31, 2012)
2. Excerpt from of CMMS Call Log
3. Record of Call to After Hours Call Service for SSO at 4388 Beaumont Rd. and Excerpt from CIWQS Online Database for SSO at 4388 Beaumont Rd.
4. Record of Call to After Hours Call Service for SSO at 8841 Dolly Varden Dr. and Excerpt from CIWQS Online Database for SSO at 8841 Dolly Varden Dr.
5. NTPUD 2012 Schedule of Safety Meetings as of 5/3/2012

COLLECTION SYSTEM INFORMATION:

INSPECTED ITEM	RESPONSE
1. Sanitary Sewer System Category	**Municipal**
2. Population served by agency's sanitary sewer system ***The area is a tourist destination with flows increasing during tourist seasons.***	***6,620***
3. Approximate size of the service area served by the sewer collection system	***6.5 square miles***
4. Miles of sanitary sewer in the collection system a. Gravity b. Force main	 ***74.56 miles*** ***6.73 miles***
5. Number of pump stations in the collection system	***20***
6. Average monthly household user fee for sewage collection only	***$22.60***
7. Budget for operation and maintenance sanitary sewer system facilities a. Last fiscal year b. Current fiscal year c. Following fiscal year	 ***$4,110,777*** ***$5,796,780*** ***N/A***
8. Number of staff (FTEs) that conduct sewer operation and maintenance tasks	***13***
9. Collection system maintenance equipment owned by the agency a. Combination vactor truck(s) (hydro flush/vacuum) b. Mechanical rodder(s) c. Closed-circuit television (CCTV) inspection trucks d. Standalone CCTV camera units	 ***2*** ***1*** ***1*** ***1***
10. Method for assigning and tracking work orders for sewer system maintenance ***NTPUD uses a commercial CMMS from Lucity.***	***Lucity - CMMS***
11. Budget for capital expenditures for sanitary sewer system facilities a. Last fiscal year b. Current fiscal year c. Following fiscal year	 ***$595,907*** ***$3,664,014*** ***N/A***
12. Portion of sewer service laterals that agency is responsible for ***The NTPUD is responsible for the lower lateral from the property line to the sewer main.***	***Lower Lateral***
13. Number of sewer service lateral connections	***5,524***
14. Number of wastewater treatment plants (WWTPs) that ultimately receive wastewater	***1***

COLLECTION SYSTEM INFORMATION:

INSPECTED ITEM	RESPONSE
from this collection system: WWTP Name(s): ***Truckee-Tahoe Water Reclamation Plant*** WDID No(s): ***6A290011000***	
15. Does this collection system discharge into any other collection systems? Collection System Name: ***Tahoe City Public Utility District*** WDID No: ***6SSO11118***	***Yes***
16. Do any upstream collection systems greater than 25,000 gallons/day (gpd) discharge into this collection system? Collection System Name: ***N/A*** WDID No: ***N/A***	***No***
17. Percentage of flow in the collection system from the following sources: a. Residential b. Commercial c. Industrial d. Institutional	 ***96%*** ***4%*** ***0*** ***0***
18. Has the agency developed standard and emergency operating procedures for each asset (e.g., pump stations, WWTP process units, and collection system force mains) in the event of a power and/or pumping failure? ***According to the District Engineer, the NTPUD maintains permenant generators at four large pump stations and has seven portable generators stationed at various convenient locations throughout the Collection System.***	***Yes***
19. Are pump stations in the collection system connected to a supervisory control and data acquisition (SCADA) system or an auto dialer system to detect pump failures or high/low wet well levels? If yes, how many? ***18 of 20 pump stations are connected to a supervisory control and data acquisition (SCADA) system. The remaining two pump stations have a minimum of two days storage and are checked daily.***	***Yes***
20. Other:	***N/A***
Notes:	

SSO HISTORY: **OVERALL RATING: U**

INSPECTED ITEM	EVALUATION
1. Number of SSOs that occurred during the past twelve months that: a. Discharged to waters of the United States: ***0*** b. Entered a storm sewer system and discharged to waters of the United States: ***0*** c. Entered a storm sewer system but were contained prior to discharge to waters of the United States: ***0*** d. Discharged to private residences/buildings: ***0*** ***According to the online report in CIWQS, during the twelve months prior to the inspection, the NTPUD reported a total of two Category 2 SSOs. Of the two SSOs reported, the NTPUD reported that neither of the two overflows resulted in a discharge to a surface water. Refer to the 'Major Findings - SSO History' section of this report for details.***	
2. Does the agency hold post-SSO briefings with collections staff, management and others involved, to evaluate root cause of SSOs and document service changes necessary to prevent the reoccurrence of the SSO and be prepared in responding to SSOs in the future? ***According to the primary on-site representative, the NTPUD does not hold post-SSO briefings or make service changes necessary to prevent the recurrence of SSOs. Refer to the 'Areas of Concern - SSO History' section of this report for details.***	No
3. Provide a description of steps taken by the agency to mitigate largest (by volume) SSO event which occurred during previous 12 months : ***A 40 gallon Category 2 SSO occurred on December 31, 2011 reportedly as a result of roots in a lower lateral. According to the primary on-site representative, the NTPUD CCTV'd the line to determine the exact cause and added the segment of line to their frequent root control preventative maintenance program. Further as per the CIWQS Violation Report, NTPUD captured all of the spilled wastewater and provided full cleanup.***	S
4. Other:	N

Notes:
This section was rated "unsatisfactory" due to checklist items 1.

SSO REPORTING & DOCUMENTATION: OVERALL RATING: U

INSPECTED ITEM	EVAL
1. Has the Enrollee obtained an SSO Database account by registering through the California Integrated Water Quality System (CIWQS) [Part G.3]?	Yes
2. Has the Enrollee updated the "Collection System Questionnaire" in the SSO Database at least every 12 months [Part G.3]? a. When was the questionnaire last updated? ***November 2, 2011***	S
3. Have all Category 1 SSOs been reported in the Online SSO Database within 3 days of the Enrollee becoming aware of the SSO [Part A.4]?	N
4. Have all Category 2 SSOs been reported in the Online SSO Database within 30 days of the Enrollee becoming aware of the SSO [Part A.5]? ***On June 6, 2010, a Category 2 spill occurred at 1154 Oxford. The SSO was not reported in the CIWQS online reporting system. 'Refer to the 'Major Findings - SSO Reporting & Documentation' section of this report for details.***	U
5. What is the Enrollee's policy on reporting private lateral sewage discharges in the Online SSO Database [Part A.6]? ***The NTPUD has chosen not to report private lateral sewage discharges.***	S
6. Do field forms/processes used by the Enrollee to document the occurrence of SSOs ensure that all information identified in Part A.9, A.10, and A.11 is recorded and able to be reported in the Online SSO Database? ***The NTPUD does not have standard procedures or field forms for recording or documenting information about SSOs. Refer to the 'Major Findings - SSO Reporting & Documentation' section of this report for details.***	U
7. Has the Enrollee maintained individual SSO records for a period of at least five years from the date of the SSO occurrences [Part B.1]? ***The NTPUD has not maintained individual SSO records for at least five years. Refer to the 'Major Findings - SSO Reporting & Documentation' section of this report for details.***	U
8. Does the agency require crews to take photographs of SSOs? ***The NTPUD takes photographs of SSOs but the NTPUD does not have a written policy or procedure for taking photographs of SSOs. Photographs are stored in electronic format and were not reviewed during the inspection.***	M
9. Does the SSMP identify the chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable [Part D.13(ii)(c)]?	S
10. Provide description of program/process used by the Enrollee for receiving, documenting, addressing, and tracking sanitary sewer complaints: ***The NTPUD uses the CMMS system for handling sanitary sewer complaints. During normal business hours, the NTPUD's operations coordinator receives complaints and initiate a work order in the CMMS. Work is assigned to a field crew. Work is tracked and closed in the CMMS system. After hours, complaints are handled in a similar manner. After hours, sewer complaints are routed to the on-call field crew through a 24-hour answering service. Work orders are then initiated and completed at the beginning of the next business day.***	S

SSO REPORTING & DOCUMENTATION: OVERALL RATING: U

INSPECTED ITEM	EVAL
11. Other:	N
Notes: ***This section was rated "unsatisfactory" due to checklist items 4., 6., and 7.***	

LEGAL AUTHORITY: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. Does the SSMP identify the name of the responsible or authorized representative [Part D.13(ii)(a)]? a. If so, is the current information up-to-date?	S
2. Does the SSMP identify the names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program [Part D.13(ii)(b)]? a. If so, is the current information up-to-date? ***Yes*** ***The SSMP was last updated on March 22, 2012.***	S
3. Has the Enrollee adopted a sewer use ordinance? a. If so, when was it adopted and last updated? ***N/A***	S
4. Has the Enrollee established the necessary legal authority to [Part D.13(iii)]:	
a. Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.) [Part D.13(iii)(a)]	S
b. Require that sewers and connections be properly designed and constructed [Part D.13(iii)(b)]	S
c. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency [Part D.13(iii)(c)]	S
d. Limit the discharge of fats, oils, and grease and other debris that may cause blockages [Part D.13(iii)(d)]	S
e. Enforce any violation of its sewer ordinances [Part D.13(iii)(e)]	S
5. Other:	N

Notes:
This section was rated "satisfactory" because all checklist items reviewed were rated satisfactory.

SEWER SYSTEM MAPPING: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. Has the Enrollee developed and maintained an up-to-date **map** of the sanitary sewer system [Part D.13(iv)(a)]? a. When was the map last updated? ***N/A*** b. Does the Enrollee have a program or policy for maintaining its sewer system map up-to-date? If so, provide brief description. ***According to the District Engineer, map change forms are prepared by field crews when updates are needed. The forms are given to the NTPUD GIS Department for updating.***	S
2. Does the map identify all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities [Part D.13(iv)(a)]?	N
3. What format is the map maintained in? Provide brief description.	N
4. Other:	N

Notes:
This section was rated "satisfactory" because all checklist items reviewed were rated satisfactory.

OPERATIONS & MAINTENANCE: **OVERALL RATING: U**

INSPECTED ITEM	EVAL
1. Does the SSMP describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas [Part D.13(iv)(b)]? If so, how often is it adjusted to reflect the changing needs of the system? ***The SSMP states that the entire sanitary sewer system will receive routine cleaning every three years. According to the primary on-site representative, the NTPUD has recently not meet this goal. Refer to the 'Areas of Concern - Operations and Maintenance' section of this report for details.***	M
2. Does the Enrollee have a system to document scheduled and conducted activities, such as work orders [Part D.13(iv)(b)]? If so, provide brief description of system.	S
3. Has the Enrollee established performance standards or sewer system cleaning/inspection goals? If so, provide brief description. ***According to the primary on-site representative, actual planned performance goals for cleaning the sewer system are below those listed in the SSMP. This was accounted for in checklist item 1. of this section.*** ***The SSMP states that the entire sanitary sewer system will be inspected via CCTV every three years. The NTPUD only CCTV'd four miles (approximately five percent) of the gravity portion of the collection system during the previous 12 months. Refer to the 'Areas of Concern - Operations and Maintenance' section of this report for details.***	M
4. Sewer cleaning and inspection activities: a. Total gravity sewer collection system cleaning production (hydro flushing, mechanical and hand rodding) over the past 12 months (miles): ***23*** b. Total gravity sewer collection system cleaning production scheduled (hydro flushing, mechanical and hand rodding) for the next 12 months (miles): ***20*** c. Total CCTV Inspection production in the past 12 months (miles): ***4*** d. Total CCTV inspection production scheduled for the next 12 months (miles): ***15*** ***Note: The Enrollee's collection system comprises 74.6 miles of sewer.*** ***4c. This item was accounted for in check list item 3. of this section.***	M
5. Does the agency retain contract service(s) for sewer collection system maintenance, operations, and/or management? a. If collection system cleaning activities are performed by outside contractors, does the agency require video (CCTV) inspections before and after cleaning to measure the effectiveness of these activities? ***N/A***	S
6. Does the agency inspect pipes with CCTV video after all SSO(s)?	S
7. Has the Enrollee identified focused problem areas ("SSO hot spots") located throughout the collection system? 1. Total number of identified hotspots: ***76 cleaning hot spots and 46 root cutting hot spots.***	S
8. Does the SSMP include a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency [Part D.13(iv)(c)]?	S

OPERATIONS & MAINTENANCE: **OVERALL RATING: U**

INSPECTED ITEM	EVAL
9. Does the agency have a program in place to identify areas with inflow & infiltration (I/I)? a. Total number of sewer miles identified by this program: ***N/A*** b. Are there plans in place for eliminating the identified I/I issues? ***N/A***	N
10. Does the SSMP include information for providing training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained [Part D.13(iv)(d)]? ***According to the District Engineer, regular safety training is provided and documented; however, operations and maintenance training is not regularly provided or documented. This was confirmed during the inspection by conducting a review of training records. Refer to the 'Major Findings - Operations and Maintenance' section of this report for details.***	U
11. Does the SSMP include design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances, and for the rehabilitation and repair of existing sanitary sewer systems [Part D.13(v)(a)]?	N
12. Does the SSMP include procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects [Part D.13(v)(b)]?	N
13. Has the Enrollee prepared and implemented a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather events [Part D.13(viii)]? a. When was the CIP last updated?	N
14. Other: ***Force Mains*** ***The NTPUD does not have a program to inspect the condition of force mains. Refer to the 'Areas of Concern - Operations and Maintenance' section of this report for details.***	M
Notes: ***This section was rated "unsatisfactory" due to checklist item 10.***	

OVERFLOW EMERGENCY RESPONSE PLAN: OVERALL RATING: U

INSPECTED ITEM	EVAL
1. Has the Enrollee developed and implemented an Overflow Emergency Response Plan that identifies measures to protect public health and the environment [Part D.13(vi)]?	S
2. Does the agency provide initial and recurrent training to appropriate staff [including outside contractor(s)] regarding your agency's SSO Emergency Response Plan and O&M programs? a. What percentage of applicable staff was trained during the past 12 months? ***0*** ***There was no evidence that recurrent training was conducted for NTPUD staff members. Further, according to the District Engineer, outside contractors are pre-qualified to conduct bypass pumping, but are not given training on the response to an SSO. Refer to the 'Major Findings - Overflow Emergency Response Plan' section of this report for details.***	U
3. For contracted sewer services, do the contracting specifications contain specific language requiring initial and recurrent training of contractor staff regarding your agency's SSO Emergency Response Plan and O&M programs?	N
4. Does the Overflow Emergency Response Plan include the following [Part D.13(vi)]: a. Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner [Part D.13(vi)(a)] b. Program to ensure an appropriate response to all overflows [Part D.13(vi)(b)] c. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP [Part D.13(vi)(c)] d. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained [Part D.13(vi)(d)] e. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities [Part D.13(vi)(e)] f. A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge [Part D.13(vi)(f)] ***4d. This checklist item was accounted for in checklist item 2. of this section.***	S S S U N S
5. Other:	N
Notes: ***This section was rated "unsatisfactory" due to checklist items 2. and 4.***	

FOG CONTROL PROGRAM: **OVERALL RATING: M**

INSPECTED ITEM	EVAL
1. Has the Enrollee evaluated its service area to determine whether a FOG control program is needed [Part D.13(vii)]: a. If so, what was the result of the evaluation? ***The NTPUD has a FOG control program.***	S
2. If the Enrollee has determined that a FOG control program is necessary, has the Enrollee developed and implemented the FOG control program? a. What sources of FOG does the program address? ***FSEs and residential FOG*** b. Approximately how many commercial food service establishments (FSEs) are subject to FOG control? ***47***	S
3. Does the FOG Control Program Plan include the following [Part D.13(vii)]:	
b. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG [Part D.13(vii)(a)]	S
c. A plan and schedule for the disposal of FOG 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 FOG generated within a sanitary sewer system service area [Part D.13(vii)(b)]	S
d. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG [Part D.13(vii)(c)]	S
e. 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 [Part D.13(vii)(d)]	S
f. Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance [Part D.13(vii)(e)]	M
g. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section [Part D.13(vii)(f)]	S
h. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above [Part D.13(vii)(f)]	S
3f. According to the primary on-site representative, the NTPUD does not currently have any staff dedicated to inspections of FSEs. Refer to the 'Areas of Concern - FOG Control Program' section of this report for details.	
4. Other:	N

Notes:

This section was rated "marginal" due to checklist item 3f.

Attachment 1

SSO Public Report Detail Page

Category 1 and 2 SSOs

May 31, 2008 through May 31, 2012

SSO Public Report - Detail Page

Here is the detail page of your SSO public report search for the selected region, responsible agency, or collection system. These results correspond to the following search criteria:

SEARCH CRITERIA: [REFINE SEARCH]

- Agency (North Tahoe pud)
- Region (6A)
- Spill Type (sso_cat1_2)
- Start Date (5/31/2008)
- End Date (5/31/2012)

The table below presents important details for all sewage discharge locations, as submitted through individual SSO reports, which meet the search criteria selected. If data is not shown for a particular field, it means the Enrollee did not provide the information and was not required to do so. To view the entire SSO report for a specific sewage discharge location, please select the corresponding EVENT ID.

DRILLDOWN HISTORY:

REGION: 6A

EVENT ID	Region	Responsible Agency	Collection System	SSO Category	Start Date	SSO Address	SSO City	SSO Vol	Vol of SSO Recovered	Vol of SSO Reached Surface Water	SSO Failure Point	WDID
726618	6A	North Tahoe PUD	North Tahoe Public Utility Dst CS	Category 2	2008-09-21 12:29:00.0	1432 Cheshire Court	Kings Beach	500	0	0	Main	6SSO11110
745253	6A	North Tahoe PUD	North Tahoe Public Utility Dst CS	Category 2	2009-09-30 11:15:00.0	5146 North Lake Boulevard Highway	Carnelian Bay	100	100	0	Main	6SSO11110
759676	6A	North Tahoe PUD	North Tahoe Public Utility Dst CS	Category 1	2010-12-19 00:00:00.0	3730 North Lake Blvd. / Highway 28 Highway		136,000	0	136,000	Dollar Main Sewer Export Station fuel supply feed system between Bulk Fuel Tank and Generator Day-Tank located in Generator Room .	6SSO11110
771977	6A	North Tahoe PUD	North Tahoe Public Utility Dst CS	Category 2	2011-09-04 12:00:00.0	4388 Beaumont Rd. Road	Carnelian Bay	2	2	0	Main	6SSO11110
776226	6A	North Tahoe PUD	North Tahoe Public Utility Dst CS	Category 2	2011-12-31 07:00:00.0	8841 Dolly Varden	Kings Beach	40	35	0	Lower Lateral	6SSO11110
781790	6A	North Tahoe PUD	North Tahoe Public Utility Dst CS	Category 2	2012-05-16 10:15:00.0	3280 State Hwy 28 (North Shord Blvd.) Highway	Dollar Hill	500	240	0	22" (inactive) forcemain	6SSO11110

The current report was generated with data as of: Tuesday, June 05, 2012

Attachment 2

Excerpt from CMMS Call Log

CB
5-31-12

Hansen Records May 30, 2007 to January 03, 2011

LOG #	HWO #		Initiated Date	Address - Unit #	BGTNO	PRI	COND	Completed Date
00	42489	1	6/14/07	9934 WHITE CAP SSL 090-315-09	SSL	HSB	FI MB	8/15/07

BSR Heating & Plumbing phoned in "main-line" breakage on private property??????
No # recorded .
Dale would like to have the lateral b/d from PLCO to main to check for blockage, roots, and/or grease.

010326	52801	1	6/12/10	1154 OXFORD SSL 111-110-69	SSL	HSB	RR	6/14/10

No probem in main TV done. Jet rod main line and flush lateral from p/t to main. No roots only debris from customer.
2000 GRADY CLEARED STOPPAGE, TV'D, ROD HVY ROOTS PL TO MH, COPPER SULFATE & CLEANUP AREA 5 GAL
Brought hydro Cleaner out and cleaned the line, TVed again, found crack where roots came in. Line needs replacement.

010479	53070	1	7/27/10	8820 RAINBOW SSL 090-181-69	SSL	HSB	CK	7/27/10

For CLRD/PAUL From:| DAVID DONALDSON |Phone :| (530)546-6045 |Location | 8820 RAINBOW ||regarding:| SEWAGE COMING UP FROMIPE |Dispatch Hist : 07/27/2010 07:58P

010486	53099	1	8/3/10	1154 OXFORD SSL 111-110-69	SSL	HSB	SLR	8/10/10

Line needs replacement.
~10' from c/o, hammered out road for dig and replace sewer lat section. Dig out c/o and ~ 16' of 4" clay. Bed with sand and side. c/o installed to grade and backfill with sewer, location tape. Cold mix and clean up work site, done.

010487	53106	1	8/4/10	1141 OXFORD SSL 111-110-50	SSL	HSB	CK	8/12/10

CHECK Sewer Service Line for roots and/or defects.
Start dig from c/o box in dirt. Dig out 4" service to street and plywood for nite. Vactor out service near gas-old water main and new water main. Sand trench install new 4" SDR and new Wye at property line. Sand. Useable fill in dirt area and base rock and cold mix in street to grade. New c/o car done.

010525	53142	1	8/10/10	461 BEAVER SSL 090-201-05		HSB	CK	8/10/10

461 Beaver ssl is out the back. Check property line cleanout. Bruce Gordon, 530 546-3822

070778	42606	1	9/13/07	8681 GOLDEN SSL 090-115-59	TM	HSB	CK	9/13/07

Check on sewer at 8681 Golden. Placer County Environmental Health request we check about sewer spill.
Wet dirt on side of 8681 Golden near c/o at building. Checked MH's for flow and notfied owner of problem on his side.

080232	44897	1	4/29/08	240 FOX SSL 090-182-01	TM	HSB	CK CAN	4/29/08

Wed 30-Apr-08 08:01 First/Last|LINDSAY CUNNINGHAM Tel-1-530-320-8506 Regarding:|RAW SEWAGE SPILL AT 240 FOX ST IN KING BEACH.PLACER CTY ENVIRONMENTAL HEALTH.04/29/2008 09:49P DB CELL-RT/CHRIS HE WILL ALSO CALL TOM READ Below Before Clearing within a Business/Res Private-Prop clr to Sewer O/C. Dispatched To Sewer O/C:CHRIS Dispatched To Duty Supervisor
Lindsay Cunnigham, 305-9338 cell requesting field assistance to locate main. ABSOLUTELY NO WORK BY NTPUD! Owner's responsibility!
Checked all MHs, no blockage.

080293	44975	1	5/14/08	8666 LOCH LEVON SSL 090-114-05	SS	HSB	CK	5/14/08

Tenant Katherine Waranoff is reporting sewage coming from clean out into her yard. Has been on / off past few weeks now coming out again. Plumber who was out for owner believes the problem is coming from the MAIN.??? Please determine whose problem. Clean out inside fence, their are dogs. Tenant Cell: 386-6575 when you arrive call her!
Checked clean out and main, advised tenant to call plumber(owner). Ed had cutomer flush toilet while cap off cleanout - blockage not district problem. Gave report to Placer County Environmental Health "Justin" to info to report to Marty Goodman.

080693	48726	1	10/12/08	8096 BROCKWAY VISTA SSL 090-073-16	TM	HSB	CSS	

Taken: Sun 12-Oct-2008 10:19a CL,First/Last|DOUG ANDERSON,
Tel-530-546-3153 Regarding:|8096 VISTA HAS SEWAGE BACK
Problem is on customer's side

080775	48808	1	11/18/08	590 NIGHTINGALE SSL 092-075-03	SMN	HSB	CK	11/18/08

Cust. reptd a sewage backup into his house yesterday 11/17. Craig Fox, his plumber (Fulton)hit a blockage about 30' out. Cust. wants us to TV line for blockage. I informed him we would check main to see if our problem or his and inform his plumber. 530-362-0620
Mr. Schleicher cell 626 278-3246, wife cell 951 312-2537, work 310 316-9500
Checked the main, it was free and flowing so I told Craig that it is the customer's responsibility to keep it flowing to the main.

090011	49318	1	1/7/09	5701 VICTORIA SSL 116-110-50	SSL	HSB	FTVSSL	1/7/09

John, 5701 Victoria reports sewer back up
Sewer main is OK, it is the customer's problems.

090017	49323	1	1/10/09	583 BRASSIE SSL 117-190-03	TM	HSB	FTVSSL	1/16/09

Back up in bathtub.
Checked MHs, 55A to 55, flowing good (need to TV P/L c/o to main) TVed the service, it looked new and in good condition, problem is on his side some where.

090233	50625	1	5/25/09	216 CHIPMUNK SSL 090-222-47	TM	HSB	CK	5/25/09

First/Last|JOHN BERSINGER, Tel-530-546-4214, 216 CHIPMUNK,
SEWER BACKED UP/ MARCO ZAMORA/OWNER
Check MH and Sewer Cleanout. MH and Cleanout are bothfine. This is the customer's problem. Cell 546-4075.

Attachment 3

Record of Call to After Hours Call Service for SSO at 4388 Beaumont Rd.

and

Excerpt from CIWQS Online Database for SSO at 4388 Beaumont Rd.

CB
5-31-12

Janine Dougan

From: messages@answerwest.com
Sent: Monday, September 05, 2011 8:01 AM
To: Janine Dougan
Subject: Your Messages

```
==========0000052041==========
Mon 05-Sep-11 08:00a
------------------------------
For          : CLRD/CHRIS CARRILLO
>From        :| MANUEL EZQUERRO |
Phone        :| (530)583-9013 |
Location     :| 4388 BEAUMONT |
City/St/Zip:| CARNELIAN BAY CA 96140 |
Regarding    :| MAN HOLD NUMBER 5 IS
RUNNING OVER THE TOP. IT IS MARKED
SEWER, PLEASE CALL |
Disp Hist    : 09/04/2011 12:36P DBA CLD
CHRIS ON O/C CELL N/A LWTCX RC15
09/04/2011 12:45P DBA CHRIS CI CLRD
------------------------------
Message History  Account: 52041
Taken:  Sun 04-Sep-2011 12:36p DBA
Given:  Sun 04-Sep-2011 12:45p DBA
Serial#: 1
------------------------------
Msg Dispatch History  Acct: 52041
#01:  Sun 04-Sep-2011 12:35p DBA
Dialout 15303920526
==========0000052041==========
```

5-30-12

26 - Explanation of final spill destination: (Required if final spill destination is "Other")	
*27 - Estimated spill volume:	2.0 gallons (View History)
28 - Estimated volume of spill recovered:	2.0 gallons (View History)
29 - Estimated current spill rate (if applicable):	0.01 gallons per minute
*30 - Estimated spill start date/time:	09/04/2011 Hrs 12 : 00 Date Format: MM/DD/YYYY
*31 - Date and time sanitary sewer system agency was notified of or discovered spill:	09/04/2011 Hrs 13 : 00 Date Format: MM/DD/YYYY
*32 - Estimated Operator arrival date/time:	09/04/2011 Hrs 13 : 30 Date Format: MM/DD/YYYY
*33 - Estimated spill end date/time:	09/04/2011 Hrs 15 : 00 Date Format: MM/DD/YYYY
*34 - Spill cause:	Root Intrusion
35 - Spill cause explanation: (Required if spill Cause is "Other")	
*36 - Where did failure occur?	Main
37 - Explanation of Where Failure Occurred: (Required if Where Failure Occurred is "Other")	
38 - If spill caused by wet weather, choose size of storm:	
39 - Diameter of sewer pipe at the point of blockage or spill cause (if applicable):	8 inches
40 - Material of sewer pipe at the point of blockage or spill cause (if applicable):	ACP
41 - Estimated age of sewer pipe at the point of blockage or spill cause (if applicable):	35
42 - Description of terrain surrounding the point of blockage or spill cause (if applicable):	Mixed
*43 - Spill response activities: (Hold Ctrl key to Select Multiple answers from the list)	Restricted flow
44 - Explanation of spill response activities: (Required if spill response activities is "Other", use attachment if the text is more than 1700 character(s)	Returned all or portion of spill to sanitary sewer system Other (specify below)
45 - Visual inspection results from impacted receiving water:	
46a - Name of impacted beach(es):	
*46b - Name of impacted surface water(s):	None - In Tahoe Basin
Notification Details	
47 - OES Control Number (Required for Category 1 - see SSO Monitoring and Reporting Program Requirements)	115264
48 - OES Called Date/Time (Required for Category 1 - see SSO Monitoring and Reporting Program Requirements):	09/04/2011 Hrs 14 : 00 Date Format: MM/DD/YYYY
49 - Regional Water Quality Control Board notified date/time:	09/04/2011 Hrs 14 : 15 Date Format: MM/DD/YYYY
50 - Method Notification	Phone
51 - Name of Staff Contacted	Chuck ?
52 - Phone Number of Staff Contacted	(530) 852-7550
53 - Other Agency Notified:	Placer Co. Sheriff, Place

Attachment 4

Record of Call to After Hours Call Service for SSO at 8841 Dolly Varden Dr.

and

Excerpt from CIWQS Online Database for SSO at 8841 Dolly Varden Dr.

CB
5-31-12

Janine Dougan

From: messages@answerwest.com
Sent: Monday, January 02, 2012 8:01 AM
To: Janine Dougan
Subject: Your Messages

==========0000052041==========
Mon 02-Jan-12 08:00a
==========

For : CLRD/BOB
>From :| KATHY BERVID |
Phone :| (530)546-8114 |
Location :| 8041 DOLLY VARDEN DR |
City/St/Zip:| KINGS BEACH CA 96143 |
Regarding :| SEWER SPILLING OVER INTO
THE STREET AT CLEAN OUT BOX |
Disp Hist : 12/31/2011 04:01P IP CLD
BOB ORR RES GAVE MSG CLRD

Message History Records: 52041
Taken: Sat 31-Dec-2011 4:02p IP
Given: Sat 31-Dec-2011 4:02p IP
Serial#: 1

Msg Dispatch History Acct: 52041
#01: Sat 31-Dec-2011 4:01p IP
Dialout 17758526672

==========0000052041==========

CB 5-31-12

26 - Explanation of final spill destination: (Required if final spill destination is "Other")	Pooled up and froze on ground next to Property line C/O
*27 - Estimated spill volume:	40.0 gallons (Max/Historic)
28 - Estimated volume of spill recovered:	35.0 gallons (Max/Historic)
29 - Estimated current spill rate (if applicable):	0.0 gallons per minute
*30 - Estimated spill start date/time:	12/31/2011 07 : 00 Date Format: MM/DD/YYYY
*31 - Date and time sanitary sewer system agency was notified of or discovered spill:	12/31/2011 16 : 00 Date Format: MM/DD/YYYY
*32 - Estimated Operator arrival date/time:	12/31/2011 17 : 00 Date Format: MM/DD/YYYY
*33 - Estimated spill end date/time:	12/31/2011 16 : 00 Date Format: MM/DD/YYYY
*34 - Spill cause:	Root intrusion
35 - Spill cause explanation: (Required if spill Cause is "Other")	
*36 - Where did failure occur?	Lower Lateral
37 - Explanation of Where Failure Occurred: (Required if Where Failure Occurred is "Other")	Root intrusion between Property line C/O and Main
38 - If spill caused by wet weather, choose size of storm:	
39 - Diameter of sewer pipe at the point of blockage or spill cause (if applicable):	4 inches
40 - Material of sewer pipe at the point of blockage or spill cause (if applicable):	
41 - Estimated age of sewer pipe at the point of blockage or spill cause (if applicable):	
42 - Description of terrain surrounding the point of blockage or spill cause (if applicable):	Flat
*43 - Spill response activities: (Hold Ctrl key to Select Multiple answers from the list)	Restored flow
44 - Explanation of spill response activities: (Required if spill response activities is "Other", use attachment if the text is more than 1700 characters)	Other (specify below)
45 - Visual inspection results from impacted receiving water:	
46a - Name of impacted beach(es) :	
*46b - Name of impacted surface water(s):	Lake Tahoe
Notification Details	
47 - OES Control Number (Required for Category 1 - see SSO Monitoring and Reporting Program Requirements):	
48 - OES Called Date/Time (Required for Category 1 - see SSO Monitoring and Reporting Program Requirements):	09 : 00 Date Format: MM/DD/YYYY
49 - Regional Water Quality Control Board notified date/time:	00 : 00 Date Format: MM/DD/YYYY
50 - Method Notification	
51 - Name of Staff Contacted	
52 - Phone Number of Staff Contacted	
53 - Other Agency Notified:	

Attachment 5

NTPUD 2012 Schedule of Safety Meetings as of 5/3/2012

(Documents provided by NTPUD to show recent sanitary sewer personnel training records)

NORTH TAHOE PUBLIC UTILITY DISTRICT
2012 SCHEDULE OF SAFETY MEETINGS as of 5/3/2012

D
5-31-12

Day	Date	Time	Donuts	Ops Safety Mtg	Parks Safety Mtg	Admin/Event Center Safety Mtg	Safety Committee @ NTEC	Quarterly Employee's Mtg @ NTEC
Friday	Jan-13	7:30	Michael Warren	First Responder Refresher				
Wednesday	Jan-18	8:15	NTPUD	EAP & drill	EAP & drill	EAP & drill		✓
Thursday	Jan-26	7:30	Chris Avery	no meeting				
Thursday	Jan-26	9:00			no meeting			
Thursday	Jan-26	1:15	NTEC				✓	
Thursday	Feb-9	7:30	Bob Orr	Hazard Communication				
Thursday	Feb-9	9:00			Incident Reporting			
Thursday	Feb-9	10:15				Ergonomics at NTEC		
Thursday	Feb-9	1:15	Secline Inspection				✓	
Friday	Feb-24	7:30	Jason Dicey	Respirator Fit Tests				
Friday	Feb-24	1:15	NACC				no meeting	
Wednesday	Mar-7	7:30	Ian Wright	General PPE/Fall Protection				
Wednesday	Mar-7	9:00			General PPE			
Wednesday	Mar-7	10:15				Ergonomics at NACC		
Wednesday	Mar-7	1:15	Carnelian inspection				✓	
Thursday	Mar-22	7:30	Pam Murcell	Bloodborne Pathogens				
Thursday	Mar-22	9:00			Bloodborne Pathogens			
Thursday	Mar-22	11:00	NTEC				✓	
Thursday	Apr-12	7:30	Joe Steck	Electrical Safety				
Wednesday	Apr-25	8:15	NTPUD					✓
Thursday	Apr-19	7:30	Mark Begin	Back Safety				
Thursday	Apr-19	9:00			Power Tools			
Thursday	Apr-19	1:15	NTEC				✓	
Wedenesday	May-2	8:00	CWEA	Annual Safety Day				
Thursday	May-3	7:30	John Greybeck	Construction Hazards Part 1				
Thursday	May-3	10:30				Office Safety		
Thursday	May-17	7:30	Ken Fischer	Confined Space Review				
Thursday	May-17	10:00				Office Safety		
Thursday	May-17	1:15	NTEC				✓	
Thursday	May-24	9:00	NACC	Forklift Operation (see sign up sheet)	Forklift Operation (see sign up sheet)			
Thursday	May-31	7:30	Paul Sandhofner	Construction Hazards Part 2				
Thursday	May-31	9:00			HazCom & MSDSs			

CB
5-3-12

NORTH TAHOE PUBLIC UTILITY DISTRICT
2012 SCHEDULE OF SAFETY MEETINGS as of 5/3/2012

Day	Date	Time	Donuts	Ops Safety Mtg	Parks Safety Mtg	Admin/Event Center Safety Mtg	Safety Committee @ NTEC	Quarterly Employee's Mtg @ NTEC
Thursday	Oct-4	7:30	Jim Schneider	TBD				
Thursday	Oct-4	9:00			TBD			
Thursday	Oct-4	1:15	inspection location?				inspection	
Wednesday	Oct-17	8:15	NTPUD					✓
Thursday	Oct-18	8:00	Mike Thornton	Fire Extinguishers	Fire Extinguishers	Fire Extinguishers		
Thursday	Oct-18	1:15	NTEC				✓	
Thursday	Nov-1	7:30	Janine Dougan	TBD				
Thursday	Nov-1	1:15	inspection location?				inspection	
Thursday	Nov-15	7:30	Pam Murcell	Lockout/Tagout				
Thursday	Nov-15	9:00			Back Safety & Proper Lifting			
Thursday	Nov-15	10:15				Back Safety & Proper Lifting		
Thursday	Nov-15	1:15	NTEC				✓	
Thursday	Nov-29	7:30	Toby Robinson	Respirator Training				
Thursday	Dec-13	7:30	Chris Carrillo	AC Pipe 2-hour Refresher				
Thursday	Dec-13	9:45			TBD			
Thursday	Dec-13	11:00				Back Safety & Proper Lifting		
Thursday	Dec-13	1:15	NTEC				✓	
Thursday	Dec-27	7:30	Pam Murcell	First Responder Refresher				
Thursday	Dec-27	9:00						

CB
5-30-12

NORTH TAHOE PUBLIC UTILITY DISTRICT
2012 SCHEDULE OF SAFETY MEETINGS as of 5/3/2012

Day	Date	Time	Donuts	Ops Safety Mtg	Parks Safety Mtg	Admin/Event Center Safety Mtg	Safety Committee @ NTEC	Quarterly Employee's Mtg @ NTEC
Thursday	Jun-14	7:30	Pamela Murcell	Hearing Conservation				
Thursday	Jun-14	1:15	NTEC				✓	
Thursday	Jun-21	7:30	Robin Runyon	TBD				
Thursday	Jun-21	9:00			Groundskeeping			
Thursday	Jul-12	7:30	Norm Moore	Heat Stress				
Thursday	Jul-12	9:00			Heat Stress			
Thursday	Jul-12	10:15				Hazard Communication		
Thursday	Jul-12	1:15	NTEC				✓	
Wednesday	Jul-18	8:15	NTPUD					✓
Thursday	Jul-26	7:30	Chris Cannizzaro	TBD				
Thursday	Jul-26	10:15				Hazard Communication		
Thursday	Aug-9	7:30	Sebastian Ramirez	TBD				
Thursday	Aug-9	9:00			TBD			
Thursday	Aug-9	1:15	Inspection location?				Inspection	
Thursday	Aug-23	7:30	Pam Murcell	TBD				
Thursday	Aug-23	1:15	NTEC				✓	
Thursday	Sep-6	7:30	Mark Begin	Confined Space Equipment Inspection				
Thursday	Sep-6	9:00			Hepatitis Viruses			
Wednesday	Sep-19	9:00		First Aid/CPR (see sign up sheet)	First Aid/CPR (see sign up sheet)	First Aid/CPR (see sign up sheet)		
Thursday	Sep-20	9:00		First Aid/CPR (see sign up sheet)	First Aid/CPR (see sign up sheet)	First Aid/CPR (see sign up sheet)		
Thursday	Sep-20	1:15	NTEC				✓	

PUBLIC UTILITY DISTRICT

September 26, 2012

State Water Quality Control Board – Lahontan Region
Attn: Robert Tucker
2501 Lake Tahoe Blvd
South Lake Tahoe, CA 96150

RE: RESPONSE TO "INSPECTION REPORT FOR THE NORTH TAHOE PUBLIC UTILITY DISTRICT (NTPUD) AND NOTIFICATION OF NON-COMPLIANCE WITH THE REQUIREMENTS IN THE SANITARY SEWER COLLECTION SYSTEM ORDER, PLACER COUNTY (WDID 6SSO11110)"

Dear Mr. Tucker,

As a result of the May 31, 2012 site inspection, on August 30, 2012, we received the above referenced notice of non-compliance cover letter and inspection report. The findings were collectively grouped into a single violation: "failing to develop and implement a Sanitary Sewer Management Plan (SSMP)." In response to the above referenced notification and report, we are providing the following requested corrective action and schedule for implementation to bring us into compliance with the SSMP, SSO Order, and operating permit.

The inspection triggered modifications to our SSMP and as a combined effort, we will also be updating our Emergency Response Plan (ERP) thereby appropriately dovetailing these two important documents. As noted below, a number of additional forms and/or documentation will also be required as part of these updates, some of which (i.e. those currently prepared) have been included (attached) in this response. These documents are currently in DRAFT form and will be finalized upon presentation to the NTPUD Board of Directors. Formal Board adoption and staff training will immediately follow as described in the following project schedule.

Modified SSMP & Redbook:	December 31, 2012
Presentation to Board of Directors:	January 8, 2013
Adopted by Board of Directors:	February 12, 2013
Staff Training (ERP & SSMP):	February 14, 2013

Our responses to unsatisfactory conditions, consistent with the inspection report sections, are presented below:

SSO History: Overall Rating: U (Unsatisfactory)

Checklist item 1:

Description of non-compliance: SSMP Section 9.1 – no documented program to hold post-SSO briefings with the collections staff and management to evaluate the root cause of the SSOs

PO Box 139, Tahoe Vista, CA 96148 • (530) 546-4212 • FAX (530) 546-2652 • 875 National Ave

e-mail: ntpud@ntpud.org • website: www.ntpud.org

and document service changes necessary to prevent the recurrence of the SSO.

Corrective action:

- Prepare "Post-SSO Briefings, Findings & Review – Duty Supervisor" form for documentation and recordation of changes necessary to prevent the recurrence of the SSO.
- Incorporate form into modified SSMP.

Schedule for implementation:

"Post-SSO Briefings, Findings & Review – Duty Supervisor" form: Draft completed (see attached)

SSMP/ERP Modifications & Staff Training: Per schedule above

SSO Reporting & Documentation **Overall Rating: U (Unsatisfactory)**

Checklist item 4:

Description of non-compliance: Unreported category 2 SSO from lower lateral (1154 Oxford, June 6, 2010)

Corrective action:

- Report SSO's per Order 2006-003-DWQ & Amended MRP.

Schedule for implementation:

Effective immediately (currently complying with SSO Order).

Checklist item 6:

Description of non-compliance: "The NTPUD does not have standard procedures or field recording forms for use in recording or reporting the mandatory information required and no form was found in the SSMP".

Corrective action:

- Prepare forms for documentation and recordation of SSO events:
  "SSO Response – Field Checklist & Documentation – Field Crew"
  "SSO Response – Field Checklist & Documentation – Duty Supervisor"
  "SPILL RATE / VOLUME WORKSHEET"
  "SSO SAMPLING COLLECTION & PROCEDURES"
- Incorporate forms and SOPs into modified SSMP and ERP documents as applicable.
- Train staff

Schedule for implementation:

"SSO Response – Field Checklist & Documentation – Field Crew" form: Draft completed (see attached)

"SSO Response – Field Checklist & Documentation – Duty Supervisor" form: Draft completed (see attached)

Additional forms, SSMP/ERP Modifications & Staff Training: Per schedule above

Checklist item 7:

Description of non-compliance: Unsatisfactory record keeping for a period of 5 years.

Corrective action:

- Prepare single location file system for all SSOs.

Schedule for implementation:

Effective immediately (currently in place and complying with SSO Order)

Operations & Maintenance **Overall Rating: U (Unsatisfactory)**

Checklist item 10:

Description of non-compliance: Unsatisfactory training for staff on SSMP. Unsatisfactory focus in SSMP on O&M training

Corrective action:

- Train Staff on SSMP. Provide additional focus on O&M training in SSMP.

Schedule for implementation:

Per schedule above.

Overflow Emergency Response Plan **Overall Rating: U (Unsatisfactory)**

Checklist item 2 & 4d:

Description of non-compliance: Unsatisfactory training for staff (and District contractors) on SSO Emergency Response Plan

Corrective action:

- Train staff on SSO Emergency Response Plan.

Schedule for implementation: Per schedule above for staff. Contractors will be trained once contracted with NTPUD. "Contractors Training Verification" sheet will be included in ERP modifications for contractors to sign & verify adequate training has been received.

We hope the above responses, information and schedule for implementation are to your satisfaction. Please call if we can be of any further assistance or if you require further information and/or clarification.

Sincerely,

William Stelter, P.E.
Planning and Engineering Manager
NORTH TAHOE PUBLIC UTILITY DISTRICT

Attachments: "Post-SSO Briefings, Findings & Review" form
"SSO Response – Field Checklist & Documentation – Field Crew" form
"SSO Response – Field Checklist & Documentation – Duty Supervisor" form

Cc: Paul Schultz, P.E. – NTPUD, General Manager/CEO
Mark Begin – NTPUD, Operations Manager
Marianne Potts - NTPUD - Board and Records Secretary
Suzi Gibbons – NTPUD – Contracts and Planning Coordinator
Neil Eskind – NTPUD – Legal Counsel

July 26, 2013

All Enrollees Subject to the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

Dear Enrollees:

AMENDMENT OF STATEWIDE MONITORING AND REPORTING PROGRAM (MRP) REQUIREMENTS FOR SANITARY SEWER OVERFLOWS; MRP ORDER 2006-0003-DWQ

Effective September 9, 2013, the MRP for the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order 2006-0003-DWQ) are amended. The amendments to the MRP set forth in Order 2013-0058-EXEC address compliance and enforceability in the existing MRP. The amendments additionally address stakeholder concern regarding cost of compliance issues. A copy of the amending Order and corresponding Fact Sheet describing my Executive Officer action, are enclosed.

Monitoring and reporting requirements in MRP Order 2008-0002-EXEC that have been effective since 2008 are superseded by the amended requirements set forth in Order 2013-0058-EXEC. If you have any questions regarding these amendments, please contact Russell Norman, Water Resource Control Engineer at (916) 323-5598 or rnorman@waterboards.ca.gov.

Sincerely,

Thomas Howard

Thomas Howard
Executive Director

Enclosures

cc: Regional Water Quality Control Board Executive Officers

Water Boards

Fact Sheet

STATE WATER RESOURCES CONTROL BOARD | 1001 I Street, Sacramento, CA 95814 | Mailing Address: P. O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

AMENDED MONITORING AND REPORTING PROGRAM FOR THE STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

BACKGROUND

Water Code section 13193 (2001, A.B. 285) requires the State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (collectively Water Boards) to gather comprehensive and specific Sanitary Sewer Overflow (SSO) information. Water Code section 13193 also requires the Water Boards to make available to the public information including but not limited to the cause, estimated volume, location, date, time, and duration of the SSO; whether the SSO reached or may have reached surface waters; the response and corrective action taken by the collection system owner or operator (hereafter, Enrollee) for each SSO event; and the contact information for each Enrollee.

On May 2, 2006 the State Water Board adopted Water Quality Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems" (hereafter, SSS WDRs) to address Water Code section 13193 requirements and develop the framework for the statewide Sanitary Sewer Overflow Reduction Program. The SSS WDRs' Monitoring and Reporting Program (MRP) includes specific SSO notification and reporting and record keeping requirements to meet SSO reporting requirements in the Water Code and facilitate compliance monitoring and enforcement for violations.

The State Water Board Executive Officer issued a revised MRP for the SSS WDRs on February 20, 2008 to rectify notification deficiencies that occurred early in program implementation and to ensure that first responders (e.g., Water Boards, California Office of Emergency Services, and County Health Departments) are notified in a timely manner for SSOs discharged to surface waters. Based on over six years of implementation of the SSS WDRs, the State Water Board concluded that the February 20, 2008 revised MRP is no longer adequate to advance the Sanitary Sewer Overflow Reduction Program objectives, assess compliance, and enforce the requirements of the SSS WDRs.

Following its January 24, 2012 workshop with stakeholders for the review and update of the SSS WDRs, the State Water Board directed staff to review and evaluate the existing monitoring and reporting requirements and prepare an amended MRP for the Executive Director's issuance. Staff worked with the key stakeholders (e.g., California Association of Sanitation Agencies) to revise the monitoring and reporting requirements. State Water Board staff distributed the draft versions of the MRP to all stakeholders registered on the Lyris e-mail list for the Sanitary Sewer Overflow Reduction Program, solicited comments on the draft versions of the MRP in January and March 2013, and considered all comments received in developing the final revised MRP.

INSPECTION AND AUDIT FINDINGS

Since January 2007, numerous violations of the SSS WDRs have been documented by the Water Boards through data review, compliance monitoring, and onsite inspections. The most common violations related to the MRP that the Water Boards have documented are:

- Failure to properly estimate and report SSO volumes discharged and recovered [violation of section G of the SSS WDRs]
- Failure of the Enrollee to comply with all minimum MRP record keeping requirements [violation of section G of the SSS WDRs]
- Failure of the Enrollee to implement feasible alternatives and actions necessary to identify and correct problems causing SSOs [violation of subsection D.6 of the SSS WDRs]
- Unauthorized use of legally responsible official's SSO Online Database login password and electronic signature; [violation of section J of the SSS WDRs]
- Failure of the Enrollee to develop and/or implement an Overflow Emergency Response Plan to ensure all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including accelerated or additional monitoring necessary to determine the nature and impact of the SSO [violation of subsection D.13(vi) of the SSS WDRs]
- Failure of the Enrollee to implement required training for sewer system operators and contractors [violation of subsections D.13(iv) and D.13(vi) of the SSS WDRs]

Amendments made to the MRP in Order 2013-0058-EXEC address these and other issues that have become apparent in the implementation of the SSS WDRs in over six years.

MONITORING AND REPORTING PROGRAM AMENDMENTS

State Water Board staff and other members of the Data Review Committee reviewed the current SSS WDRs reporting requirements as part of the SSS WDRs review and update process. The Data Review Committee is open to all stakeholders. Consequently, enrollees, non-governmental organizations, and other agencies have participated. As a result of this process, new reporting requirements have been developed that address the compliance and enforcement issues noted above and improve the quality and usefulness of SSO data collected.

While the proposed changes streamline the reporting process overall, some fields have been added to the reports. These additions address critical information gaps in the current reporting that have been identified both internally and by stakeholders.

For example, many enrollees have noted that we need to be able to separate sewer lateral spills from spills occurring in other asset types like main lines or pump stations. The "where did the failure occur" question on the electronic spill report form was not a required field in the original or revised 2008 MRP. Many SSO reports do not have this information, thus, we cannot differentiate lateral spills from main line, pump station, or other types of spills. This is one example of the additions in the required data entry that have been addressed in the 2013 MRP revisions.

The following is a summary of major changes made to the existing MRP (Order 2008-0002-EXEC) and incorporated in the final revised MRP (Order 2013-0058-EXEC):

1. Change in Notification Requirement for spills that reach surface water:

    - Three notification calls were required (California Office of Emergency Services, Regional Water Quality Control Boards, and local Health Departments). Required notification has been changed to call California Office of Emergency Services (Cal OES) only since Cal OES notifies the Regional Water Quality Control Boards and local Health Departments when a spill notification is received.

    - Elimination of requirement to submit a certification to Regional Water Quality Control Boards within 24 hours of making notification calls.

    - Alignment of notification requirement with California Code of Regulations section 2250, Reportable Quantity of Sewage, by requiring notification calls for only spills of 1,000 gallons or more. Notification of Cal OES was required for all spills to surface water.

    - Addition of requirement to update Cal OES when there are substantial changes to previously reported spill volume estimates or impacts.

2. Defined new spill categories and refined spill report fields:

    - Replacement of spill Categories 1 and 2 with Categories 1, 2, and 3. Spills are now classified as follows:

        - Category 1 – Spills of any volume that reach surface water

        - Category 2 – Spills greater than or equal to 1,000 gallons that do not reach surface water

        - Category 3 (formerly Category 2) – Spills less than 1,000 gallons that do not reach surface water

    All spills to surface water will be in a distinct category with this change. Spill reporting fields were refined and streamlined with stakeholder input.

3. Addition of requirement to submit a technical report within 45 days of the end date for spills to surface water over 50,000 gallons.

4. Addition of requirement for all Permit enrollees to develop a Water Quality Monitoring plan to be implemented within 48 hours after initial notification for spills where 50,000 gallons or more reach surface water.

5. Addition of requirement for Permit enrollees to submit an electronic copy of their Sewer System Management Plan (SSMP) or provide the web address where their SSMP is posted.

6. Addition of enhanced record keeping requirements.

7. Elimination of requirement to certify Private Lateral Sewer Discharge reports.

8. Addition of a 120-day time limit for amending and re-certifying spill reports.

STATE OF CALIFORNIA
WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

The State of California, Water Resources Control Board (hereafter State Water Board) finds:

1. The State Water Board is authorized to prescribe statewide general Waste Discharge Requirements (WDRs) for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code section 13263(i).

2. Water Code section 13193 *et seq.* requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) to gather Sanitary Sewer Overflow (SSO) information and make this information available to the public, including but not limited to, SSO cause, estimated volume, location, date, time, duration, whether or not the SSO reached or may have reached waters of the state, response and corrective action taken, and an enrollee's contact information for each SSO event. An enrollee is defined as the public entity having legal authority over the operation and maintenance of, or capital improvements to, a sanitary sewer system greater than one mile in length.

3. Water Code section 13271, *et seq.* requires notification to the California Office of Emergency Services (Cal OES), formerly the California Emergency Management Agency, for certain unauthorized discharges, including SSOs.

4. On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems"[1] (hereafter SSS WDRs) to comply with Water Code section 13193 and to establish the framework for the statewide SSO Reduction Program.

5. Subsection G.2 of the SSS WDRs and the Monitoring and Reporting Program (MRP) provide that the Executive Director may modify the terms of the MRP at any time.

6. On February 20, 2008, the State Water Board Executive Director adopted a revised MRP for the SSS WDRs to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state.

7. When notified of an SSO that reaches a drainage channel or surface water of the state, Cal OES, pursuant to Water Code section 13271(a)(3), forwards the SSO notification information[2] to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter

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[1] Available for download at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf

[2] Cal OES Hazardous Materials Spill Reports available Online at:
http://w3.calema.ca.gov/operational/malhaz.nsf/$defaultview and http://w3.calema.ca.gov/operational/malhaz.nsf

and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.

8. In the February 28, 2008 Memorandum of Agreement between the State Water Board and the California Water and Environment Association (CWEA), the State Water Board committed to re-designing the CIWQS[3] Online SSO Database to allow "event" based SSO reporting versus the original "location" based reporting. Revisions to this MRP and accompanying changes to the CIWQS Online SSO Database will implement this change by allowing for multiple SSO appearance points to be associated with each SSO event caused by a single asset failure.

9. Based on stakeholder input and Water Board staff experience implementing the SSO Reduction Program, SSO categories have been revised in this MRP. In the prior version of the MRP, SSOs have been categorized as Category 1 or Category 2. This MRP implements changes to SSO categories by adding a Category 3 SSO type. This change will improve data management to further assist Water Board staff with evaluation of high threat and low threat SSOs by placing them in unique categories (i.e., Category 1 and Category 3, respectively). This change will also assist enrollees in identifying SSOs that require Cal OES notification.

10. Based on over six years of implementation of the SSS WDRs, the State Water Board concludes that the February 20, 2008 MRP must be updated to better advance the SSO Reduction Program[4] objectives, assess compliance, and enforce the requirements of the SSS WDRs.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on September 9, 2013.

8/6/13
Date

Thomas Howard
Executive Director

[3] California Integrated Water Quality System (CIWQS) publicly available at http://www.waterboards.ca.gov/ciwqs/publicreports.shtml

[4] Statewide Sanitary Sewer Overflow Reduction Program information is available at: http://www.waterboards.ca.gov/water_issues/programs/sso/

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems" (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to $5,000 a day per violation pursuant to Water Code section 13350; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

CATEGORIES	DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
CATEGORY 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION **(see section B of MRP)**	• Within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water**, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING **(see section C of MRP)**	• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. • Collection System Questionnaire: Update and certify every 12 months.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by enrollee's Legally Responsible Official(s).
WATER QUALITY MONITORING **(see section D of MRP)**	• Conduct water quality sampling **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING **(see section E of MRP)**	• SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

    i. Name of person notifying Cal OES and direct return phone number.
    ii. Estimated SSO volume discharged (gallons).
    iii. If ongoing, estimated SSO discharge rate (gallons per minute).
    iv. SSO Incident Description:
        a. Brief narrative.
        b. On-scene point of contact for additional information (name and cell phone number).
        c. Date and time enrollee became aware of the SSO.
        d. Name of sanitary sewer system agency causing the SSO.
        e. SSO cause (if known).
    v. Indication of whether the SSO has been contained.
    vi. Indication of whether surface water is impacted.
    vii. Name of surface water impacted by the SSO, if applicable.
    viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
    ix. Any other known SSO impacts.
    x. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

C. REPORTING REQUIREMENTS

1. **CIWQS Online SSO Database Account:** All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. **SSO Categories**

   i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

      a. Reach surface water and/or reach a drainage channel tributary to a surface water; or

      b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

   ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

   iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**

   i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

      a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.

      b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.

iii. **"No Spill" Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, "No Spill" certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a "No Spill" certification statement for that month.

iv. **Amended SSO Reports** – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

i. **Causes and Circumstances of the SSO:**

a. Complete and detailed explanation of how and when the SSO was discovered.

b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

d. Detailed description of the cause(s) of the SSO.

e. Copies of original field crew records used to document the SSO.

f. Historical maintenance records for the failure location.

ii. **Enrollee's Response to SSO:**

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.

b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.

c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**

a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.

ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.
13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of spill response activities.
8. Spill response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.

10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. **Draft Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.

d. **Certified Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.

e. **Certified Category 3 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:

1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.

ii. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee's sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**

The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:

a. Submit an **electronic** copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. WATER QUALITY MONITORING REQUIREMENTS:

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.

2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).

3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
   i. Ammonia
   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. RECORD KEEPING REQUIREMENTS:

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).

2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
   i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not

result in SSOs. Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.

b. Date and time the complainant or informant first noticed the SSO.

c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.

d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

e. Final resolution of the complaint.

ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.

iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:

i. Supervisory Control and Data Acquisition (SCADA) systems

ii. Alarm system(s)

iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.

2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.

5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Resources Control Board.

7/30/13
Date

Jeanine Townsend
Clerk to the Board