



Sewer System Management (SSMP) Plan

Salt Lake City
Department of Public
Utilities

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SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

Sewer System Management Plan (SSMP)

Preface

This document constitutes the Sewer System Management Plan for Salt Lake City Department of Public Utilities (SLCDPU). The format of this Plan follows the basic outline of the State of Utah's "Utah Sanitary Sewer Management Program (USMP)" as stipulated in State Code R317-801, and the Environmental Protection Agency's Proposed Rule to Protect Communities from Overflowing Sewers, Paragraph 122.42 (2); Components of a CMOM Program, dated January 2001.

This SSMP has been established to provide a plan and schedule to properly manage, operate and maintain all parts of the sanitary sewer collection system to reduce and prevent SSO's, as well as minimize impacts of any SSO's that may occur. Within this plan are references to a variety of supporting items, such as City Ordinances, written procedures, equipment lists, report data, charts, and maps, which substantiate a particular section of the SSMP. These references are contained in the appendices attached to this document. A copy of this plan, along with supporting documents can be viewed at the SLCDPU Administrative Offices located at 1530 South West Temple in Salt Lake City, Utah or online at www.slcgov.com/utilities.

Salt Lake City Department of Public Utilities recognizes the responsibility it has to operate its sewer collection system in an environmentally and fiscally responsible

manner. As such this SSMP will cover aspects of the program necessary to provide such an operation.

This document is reviewed and updated on an annual basis.

SSMP Prepared by:

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Date: _____

Reviewed and Approved by Public Utilities Advisory Committee

Chair: _____

Date: _____

Goals

The Salt Lake City Department of Public Utilities currently operates and maintains approximately 653 miles of sanitary sewer, 13,200 manholes, 49,800+ service connections and 39 wastewater lift stations. Beginning with the first sewer line installed in 1889 in Salt Lake City and the formation of the City's first Sewer Department, the construction of the City's wastewater treatment plant in 1965, and the formation of the Wastewater Utility Enterprise fund in 1979, the City's wastewater system has grown and evolved over the past 130 years.

Continuing growth, urbanization, changing hydrologic conditions, and age contribute to strain on this infrastructure. In addition, new regulations may impose additional issues and constraints. The purpose of this document is to detail a Sewer System Maintenance Plan (SSMP) as required under State Code R317-801. The Plan is a guide and its elements outline and provide specific activities and reporting procedures. This SSMP is also patterned after other Capacity, Management, Operation and Maintenance (CMOM) programs found throughout the country.

This Plan is intended to be a guidance document. As such, failure to strictly comply with documentation requirements is, in and of itself, not a failure of the program's effectiveness. Documentation failures are intended to be identified during system self-audits and will be addressed as training opportunities. Significant system failures will be followed up with corrective action plans. This corrective action process will be implemented by all individuals involved in the SSMP program.

The Plan's main goals are:

- Properly manage, operate and maintain, at all times, all parts of the collection system.
- Provide adequate capacity to convey base flows and peak flows for all parts of the collection system.
- Take all feasible steps to stop and mitigate the impact of sanitary sewer overflows for all parts of the collection system.
- Provide notification to the public with a reasonable potential for exposure to pollutants associated with an overflow event.
- Provide appropriate notification of SSO's to regulatory agencies as required under the City's UPDES permit and State Code R317-801.
- Develop and maintain a written summary of the SLCDPU Sewer System Management Plan (SSMP) and make it available to any member of the public upon request.
- Post the Department's base SSMP on the Department's website.

Definitions

The following definitions are to be used in conjunction with those found in this SSMP:

- (1) "BMP" means "best management practice".
- (2) "CCTV" means "closed circuit television".
- (3) "CMMS" means Computerized Maintenance Management System.
- (4) "CIP" means a "Capital Improvement Plan".
- (5) "DWQ" means "the Utah Division of Water Quality".
- (6) "FOG" means "fats, oils and grease".
- (7) "I/I" means "infiltration and inflow".
- (8) "Permittee" means a federal or state agency, municipality, county, district, and other political subdivision [public entity] of the state that owns or operates a sewer collection system or who is in direct responsible charge for operation and maintenance of the sewer collection system. When two separate federal or state agencies, municipalities, counties, districts, and other political subdivisions of the state are interconnected, each shall be considered a separate Permittee.
- (9) "SECAP" means "System Evaluation and Capacity Assurance Plan".
- (10) "Sewer Collection System" means a system for the collection and conveyance of wastewaters or sewage from domestic, industrial and commercial sources. The Sewer Collection System does not include sewer laterals under the ownership and control of an owner of real property, private sewer systems owned and operated by an owner of real property, and systems that collect and convey stormwater exclusively.
- (11) "SORP" means "Sewer Overflow Response Plan".
- (12) "SSMP" means "Sewer System Management Plan".
- (13) "SSO" means "sanitary sewer overflow", the escape of wastewater or pollutants from, or beyond the intended or designed containment of a sewer collection system.
- (14) "Class 1 SSO" (Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that:

- (a) affects more than five private structures;
- (b) affects one or more public, commercial or industrial structure(s);
- (c) may result in a public health risk to the general public;
- (d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or
- (e) discharges to Waters of the State of Utah.

(15) "Class 2 SSO" (Non-Significant SSO) means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

(16) "USMP" means the "Utah Sewer Management Program".

General SSO Requirements

The following general requirements for SSO's are stipulated in R317-801 and are included here as general information:

- 1) The permittee shall take all feasible steps to eliminate SSOs to include:
 - (a) Properly managing, operating, and maintaining all parts of the sewer collection system
 - (b) training system operators
 - (c) allocating adequate resources for the operation, maintenance, and repair of its sewer collection system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures in accordance with generally acceptable accounting practices; and,
 - (d) providing adequate capacity to convey base flows and peak flows, including flows related to normal wet weather events. Capacity shall meet or exceed the design criteria of R317-3.
- (2) SSOs shall be reported in accordance with the requirements of R317-801-4.
- (3) When an SSO occurs, the permittee shall take all feasible steps to:
 - (a) control, contain, or limit the volume of untreated or partially treated wastewater discharged
 - (b) terminate the discharge
 - (c) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water; and,
 - (d) mitigate the impacts of the SSO.

Part 1 – Organization

1.1 SLCDPU Organization

Within the Salt Lake City Department of Public Utilities is the Operations and Maintenance Division which includes four major operating groups: Water Operations and Maintenance, Wastewater Collections Maintenance, Stormwater Maintenance, and Support Services. The operations and maintenance activities related to the sanitary sewer collections system are directly the responsibility of the WW Collections Maintenance group and are supported by the following groups:

- The Engineering Division provides system design and rehabilitation, infiltration/inflow reduction, and contractor procurement and inspection.
- The GIS/IT Division provides system mapping, GIS functions and maintains the Department's computerized work management system, known as Azteca Cityworks. The group also oversees the locators and surveyors.
- The Water Reclamation Plant, as all flows from the wastewater collections system ultimately ends up at the plant for treatment.
- The Support Services group is part of the O&M Division. They include the work order office, electricians, metal fabricators, fleet maintenance, SCADA and telemetry.
- The Finance Division provides all finance and accounting operations functions for the water, sewer and stormwater funds.
- The Warehouse group, which is also a part of the O&M Division. The group provide all tools and materials necessary to maintain the system.

Details of these group's functions are noted below. A organization chart and contact information can also be found in Appendix A.

Also within the O&M Division is the Operations Dispatch Center which operates 24 hours per day seven days per week, answering emergency phone calls and dispatching appropriate personnel to address the situation. This Center has a working relationship with and direct access to Fire, Police and Public Services emergency dispatch centers when needed.

1.1.1 Wastewater Collections Maintenance Group

The WW Collections Maintenance Group has the prime responsibility for the operation and maintenance of the sanitary sewer collections system. To perform this function, the Division is staffed with 28 fulltime positions. One manager oversees the entire Collections (Sewer) Maintenance group. The Wastewater Collections Manager is designated as the Direct Responsible Charge for the wastewater collections system and reports to the Operations and Maintenance

Superintendent. The Collections Maintenance group is divided into three areas: collections system maintenance, system inspection and lift station maintenance.

There are 20 employees assigned to the Collections Maintenance and Inspection groups; two field supervisors and 18 field personnel consisting of 6 collections system lead workers and 12 collection workers. They have broad responsibilities and have been trained to handle all aspects of operating, maintaining and inspecting a sewer collections system. This includes, but is not limited to: system maintenance, rodding and cleaning, video inspection, manhole inspection, spill response and remediation, line rehabilitation/repairs, response to any customer calls related to the collections system and other related functions.

The Lift Station Maintenance group consists of one field supervisor, three lead workers and three maintenance workers. They are responsible for all daily operations and maintenance of the Department's 39 sewer lift stations, along with 26 stormwater lift stations.

They also maintain the facilities and grounds of the stations.

A more detailed explanation of these stations and their maintenance are explained in Section 3.5.3 of this document.

1.1.2 Engineering Division

The Engineering Division includes the Division's Chief Engineer, who oversees the Division, 10 staff engineers and 12 other staff members, including designers, inspectors and a contracts coordinator. Six of the Division's staff are assigned directly to sewer related work. There are two other engineers and one inspector from the Development Review team that also support the Engineering Division. The Division also has several outside engineering firms under contract to perform design and misc. consulting work. The responsibilities of the various sections within the Division have been established to integrate effectively with each other and with the remaining SLCDPU Divisions to provide an efficient and comprehensive organization.

Specific responsibilities of Engineering Division include:

- Long-term technical planning for water, wastewater and stormwater facilities.
- Development and implementation of the Capital Improvement Program (CIP).
- Development and maintenance of design and construction standards.
- Procurement of consultant and contractor services as needed.
- Design and construction of required facilities.
- Implementation of sewer system rehabilitation projects.
- Technical assistance to other groups within the organization.

The Development Review team is responsible for:

- Evaluation of zoning requests with respect to water, wastewater and stormwater issues.
- Review of development plans for proposed construction to ensure compliance with SLCDPU requirements.
- Review of all submitted development plans for consistency with SLCDPU requirements and practicality considering existing field conditions.
- Inspection of developer water, wastewater and stormwater infrastructure to be accepted by SLCDPU as it is installed.
- Final inspection and acceptance of dedicated infrastructure in new developments.
- Coordination of fire flow tests and related investigations.
- Flow monitoring.
- Infiltration/Inflow Studies.
- Development and review of the Wastewater Master Plan.
- Performance of special studies as may become necessary.

1.1.3 GIS/IT Division

Responsibilities of the GIS/IT Division include:

- Collection and maintenance of records important to management of water and wastewater infrastructure.
- Collection and distribution system modeling.
- Updating and manipulation of the GIS water and wastewater elements.
- Interaction with customers needing resolution of issues related to infrastructure mapping or location.
- Generation of appropriate maps for use by other sections.
- Acquisition of GPS coordinates for all SLCDPU facilities.
- All survey work for the SLCDPU.
- Utility Locators, water leak location and Blue Stake location requirements.
- See Sections 3.2 and 3.3 also.

1.1.4 Water Reclamation Plant

Operation and maintenance of the wastewater reclamation facilities, including the main treatment plant and pump plant is the responsibility of the Water Reclamation Plant Division. The main plant is a 56 MGD rated trickling filter plant with anaerobic solids digestion. This Division includes 65 fulltime positions, organized generally into six sections supporting the reclamation facilities: Administration, Operations, Maintenance, Laboratory services, Pre-treatment, and Data communications. Pretreatment activities, which include the FOG program, are discussed in some detail in Part 4 of this document.

The Operations group is typically divided into four person crews, all certified operators, which operate all plant functions 24/7. Sludge management is included in this group.

The Maintenance group consists of maintenance crews that keep the plant operational. They consist of HVAC, fabrication, electrical, and other specialists that provide scheduled maintenance and repairs on plant equipment. The data communication technicians provide electronics, operations systems, and communications technical support to all reclamation facilities within the plant site. They support associated communication efforts via voice, data and the SCADA telemetry system.

Laboratory Services consists of four chemist/analysts and work in two essential areas: analytical and environmental compliance.

The Pre-treatment Section was developed to implement and enforce regulations to protect the citizens of Salt Lake City, including enforcement of City's ordinances regarding the City's FOG program, including grease traps, interceptors, industrial pretreatment and permitting.

1.1.5 Support Services Group

This group is part of the O&M Division and supports the collection system effort through several groups: Work Order (CMMS) office staff, Fleet Maintenance, Electrical, SCADA and Metal Fabrication. The Support Services Group is staffed by 20 full time employees which offer support for all water, wastewater (excluding WW Rec Plant), and stormwater operations.

1.1.6 Finance Division

The activities of this Division include:

- Financial planning
- Accounting
- Water and sewer rate development
- Revenue forecasts and collection
- Customer billing
- Customer service

1.1.7 Warehouse Group

This group oversees all warehouse functions for SLCDPU, with the exception of the Water Reclamation Plant. The warehouse is staffed by two lead-workers and one clerk. Most sewer repair materials and all misc. tools and other materials can be found in the warehouse. Any materials or tools not stocked can be found through contract vendors.

1.1.8 Support from Other City Agencies

The SLCDPU is assisted by other City government agencies. Legal, Procurement, Fleet Maintenance and Human Resource Management are just a few that the Department relies on to be able to provide the best services possible for its customers.

1.2 Sanitary Sewer Overflow Reporting - Chain of Communication

The chain of communication for reporting Sanitary Sewer Overflows is designed to comply with all regulations as currently required by the Utah State Division of Water Quality.

The Collections Maintenance group is alerted to potential sanitary sewer overflows through telephone calls originating from customers, regulatory agencies, SLCDPU employees, and other City or County agencies. The calls are received by the Dispatch Operations Center. Dispatch is in constant communication with Collections Maintenance group personnel, including supervisors and field crews. If in the event of a failed sewer lift station, the Dispatch Ops Center is notified via SCADA, which is monitored 24/7.

All calls are logged into the Cityworks computerized maintenance management system (CMMS). All potential sanitary sewer overflows are reported to a Wastewater Collections Field Supervisor and Wastewater Collections Manager and any on-call personnel (after hours). Collections Maintenance personnel and equipment are then sent to the site to address the problem area.

The Dispatch Center maintains an emergency contact list. One crew member is assigned to handle any emergency repairs after normal business hours (including weekends and holidays). The assigned crew is provided with pagers and/or hand held radios for immediate response. Other crews may be called in for larger events. The Lift Station Maintenance group has personnel on-call to maintain the lift stations in case of any lift station problems at those locations.

To comply with current State requirements, spills of raw wastewater that originate from a manhole, whether entering the waters of the U.S. or not; large volume overflows that affect many homes or businesses, a media event, or through a designated bypass, are reported to the Utah State Division of Water Quality. Notification of a spill to DWQ is made at the time of discovery, but no later than 24 hours. The WW Collections Manager or Division Superintendent make the call.

If a spill is confined to basement flooding, no formal report is required; however, the event may be included in the MWPP (Municipal Wastewater Planning Program) report provided to the State as part of its UPDES permit. Spill or SSO definitions as further defined by the State are given below.

SSO Definition

Sanitary Sewer Overflow (SSO): SSO's are classified by the State as follows:

- Class 1 (Significant): A back-up that is not caused by a private lateral plug or problem that:
 - Affects more than five private structures or,
 - Affects one or more public, commercial or industrial structure or,
 - May result in a public health risk to the general public or.
 - The spill volume exceeds 5,000 gallons, excluding those in single private structures or,
 - Discharges to Waters of the State or,
- Class 2 (Non-significant): A back-up not caused by a private lateral obstruction or problem that does not meet the Class 1 criteria.

SSO Reporting

The two classes of sanitary sewer overflows are to be reported as follows:

- Class 1 SSO: These SSOs shall be reported orally within 24 hrs and with a written report submitted to the DWQ within five days. These spills would also be included in the annual MWPP or USMP report.
- Class 2 SSO: These would not have to be reported within the 24 hour and five-day deadlines, but must be reported on an annual basis in the MWPP or USMP report for the previous year.

The standard operating instructions for responses to sanitary sewer overflows are presented later in this document and in Appendix H, which includes flow charts.

Part 2 – Legal Authority – Sewer Ordinance

The legal authority necessary for regulating the volume and type of flow entering the wastewater collection system is found in Salt Lake City Ordinance Title 17 Division II Wastewater Control and Sewer System as currently amended. This includes the Salt Lake City Wastewater Ordinance (Chapter 17.32). This ordinance, along with subsequent chapters, regulates the use of the City's wastewater system. It sets forth uniform requirements for persons who cause wastewater to be discharged into the collection and wastewater treatment system of the City and enables the City to comply with all applicable state and federal laws required by the Clean Water Act of 1977, as amended and the General Pretreatment Regulations (40 CFR 403), as amended, along with Utah State Code Title R317.

Sewer Ordinances can be found in Appendix B in this document.

2.1 Infiltration/Inflow Connection Control

Section 17.48.050 requires all connections made to the POTW sewer to be water tight and laterals installed by a licensed and bonded plumber, conforming to all applicable plumbing codes and inspected by the City's designee.

In 1997, the SLCDPU initiated an outside contract with ADS Environmental Services Inc, to address the infiltration/inflow issue through the completion of a system wide wastewater flow-monitoring study. This effort resulted in an estimate of sanitary flow, infiltration, and inflow for each of the 34 basins within the City. These estimates were incorporated into the current sewer modeling program. This study also performed a cost analysis to establish a value oriented Capital Improvement Program (CIP). This study serves as the basis for direction of the SLCDPU infiltration and inflow reduction efforts. Ongoing flow monitoring efforts continue to provide data for updating the modeling program and help drive the CIP.

2.2 Sewer Design and Construction

The SLC Wastewater Control Ordinance (Chapter 17.40) requires for City approval of construction designs for all wastewater facilities. All technical requirements are as per the Code of Waste Disposal Regulations, adopted by the Utah Water Quality Board, and other specific requirements as set forth by the City. The WEF Manual of Practice No. 9 is adopted as the general guideline for planning, design and construction of all POTW sewers.

2.3 Sewer Installation, Testing and Inspection

The SLC Wastewater Control Ordinance (Section 17.40.040) provides the authority for all construction inspection and approval for all phases of sewer

construction.

2.4 Satellite Systems

The SLCDPU receives wastewater flows from the University of Utah campus. As per the USMP, the University, as a state agency or political subdivision, is responsible for obtaining their own permit for its wastewater collection system and for any associated permit compliance under the USMP.

2.5 Pretreatment Program and Compliance

The SLC Wastewater Control Ordinance (Chapter 17.36 and associated sections) provides for the SLCDPU Wastewater Pretreatment Program. The program ensures that users that discharge to the public sewer system do so without adverse effects on the collection system or water reclamation facilities.

The Pretreatment Workgroup was developed to implement and enforce regulations to protect the citizens of Salt Lake City, the processes and equipment of the SLCDPU collection and treatment systems, and the receiving waters of the Great Salt Lake.

2.6 Sewer Use Ordinance

Chapters 17.32 – 17.72 of the SLC Wastewater Control Ordinance sets forth uniform requirements for persons who cause wastewater to be discharged into the wastewater collection and treatment system of the City and enables the City to comply with all applicable state and federal laws required by the Clean Water Act of 1977, as amended and the General Pretreatment Regulations (40 CFR 403) as amended.

2.6.1 Grease Trap Program

The Grease Trap Program is addressed in Section 17.36.140. This section requires all food establishments, or any company that exceeds the wastewater limits for fats, oil, and grease to have a grease recovery system as per the Utah Plumbing Code. All new interceptors must be inspected and approved by the City. The program is described in more detail in Part 4 of this document.

Some ordinances of note are:

Chapter 17.68 authorizes enforcement for violations to wastewater discharge prohibitions. Enforcement actions are described in this chapter where a variety of actions are available for enforcement, depending on the severity and cause of the violation.

Section 17.68.050 allows the SLCDPU Director to immediately halt a discharge that reasonably appears to violate any provisions of the Ordinance.

Section 17.69.030 defines bypassing and under what conditions it is permissible.

Section 17.52.230 gives authorized employees and representatives of the City the right to enter premises and obtain samples or records pertinent to discharges to the City's wastewater system.

Section 17.36.060 – 80 lists prohibited discharges specifically and those implied from state and federal pretreatment standards.

Section 17.36.90 is the basis for specific discharge limitations as determined by the Director or the State Water Quality Board.

Chapter 17.52 delineates the administration of the Industrial discharge permits. Additional requirements for significant industrial users are listed. Information that an industry must provide to receive a discharge permit is specified, as is the administration of the permitting system including conditions and procedures for permit modification. The specific contents of a permit are also in this chapter.

Section 17.52.160 contains reporting requirements. The authority to require specific types of reports from the industrial user are in this section, including: monitoring reports, compliance reports, and reports of changed conditions.

Section 17.36.120 requires users to provide pretreatment facilities, if necessary, to comply with discharge limitations. Requirements for maintenance and operation of the facilities are also in this section.

Chapter 17.72 covers Rates and Fee Structures. Charges to users are based on customer class and measured by strength of discharge of BOD, COS or TSS.

Part 3 – Measures and Activities

3.1 Maintenance Facilities and Equipment

The SLCDPU maintains several facilities to support the collection system and its maintenance program. Most of the crews are assigned to the Shops Complex and its associated buildings, which house all collection system crews, supervisors, managers, and support staff. Located on thirteen acres of property are located the Administrative Office building, the Shops Maintenance building and several support buildings and storage, parking and other out buildings. Grounds are also devoted to parking for the crew vehicles and trailers, equipment, materials, and supplies. The Administrative Office building is a 27,000 square foot facility, which houses administrative staff, engineering, customer service, GIS staff and records storage. The 36,000 square foot Shops building, houses all department maintenance crews, water operations crews, support staff, SCADA systems, 24/7 dispatch and also the warehouse.

At the Water Reclamation Plant, plant staff, operations and maintenance staff, pre-treatment staff, and laboratory personnel are assigned.

Lift Station crews work out of a separate facility on the west side of Salt Lake City where repair parts, O&M manuals, maintenance records, emergency portable generators and pumps are stationed. These crews maintain 35 wastewater lift stations throughout the City. There are three work crews and a supervisor that are assigned to check lift stations and keep them in good working order. These lift stations are constantly monitored by the Supervisory Control and Data Acquisition (SCADA) system which is maintained and monitored in the Shops Maintenance building. Maintenance records are also available on the Department's CMMS (Cityworks).

While the Wastewater Collections Maintenance workgroup has some construction capability, this function is usually limited to emergency repairs. If necessary, emergency repairs also can be performed by approved contractors through an accelerated procurement process.

Most construction projects are designed in-house by the Engineering Division. Consultants working through the Engineering Division design larger projects, such as sewer replacement or rehabilitation and lift station construction and upgrades. These consultants are procured through a normal bid process. Inspection services for the projects are handled by the Engineering Division. In general, contractors provide a one-year warranty for work performed, after which time operation and maintenance responsibilities revert to the SLCDPU.

The Wastewater Collections Maintenance crews use a wide and extensive variety of equipment including rubber tired backhoes, track hoes, front end loaders, dump trucks, pickup trucks, hydraulic jet cleaners, mechanical rodders,

vacuum/hp combo unit trucks, video inspection vans, portable video equipment, gas detectors, and safety equipment.

3.2 Collection System Maps – Geographic Information System

The SLCDPU maintains an AutoCAD-based mapping system of the entire wastewater collections system. This includes as-built drawings which include pipe size, type, date of installation, slope, MH invert elevations, flow direction, laterals, etc. Paper maps are available to crews in a large quick reference wall map and also in 11" X 18" books that are carried in the crew trucks. These maps are updated as additional information is received. Pipeline segments and manholes are assigned individual ID numbers to help facilitate identification and history maintenance. Computerized Tablets are used by crews for system inspection purposes, and access to the GIS system maps.

Original drawings, including lift station schematics, are maintained in the Engineering vault located in the 1530 South West Temple Administrative Office.

In 1991, the SLCDPU successfully converted from a manually drawn, paper mapping system, to a Geographic Information System (GIS) based system that is directly integrated with the Cityworks CMMS. The system allows access to virtually all information retained about a particular system element (such as technical data, related work orders, photographs, and videos).

The SLCDPU has also undertaken a program to obtain accurate positions for manholes and other facilities within the system through the use of Global Positioning System (GPS) technology. All survey work is completed through GPS technology. It is anticipated that maintenance crews will eventually have access to the Cityworks CMMS in their trucks to initiate and complete work orders and utilize GPS navigation technology to quickly and accurately locate manholes.

3.3 Information Management - Computerized Maintenance Management System

To manage a maintenance program, the Collections Maintenance group utilizes a computerized maintenance management system (CMMS) called Azteca Cityworks. This information management program is used for asset management, work order management, scheduled/preventive maintenance system, customer service, and parts inventory warehousing control. The system tracks all maintenance and repair work histories and SSO information including volume and cause. Asset systems being used include wastewater and water infrastructure. It also can report on various queries (lookups) and perform costing reports. With other report engines, such as Crystal Reports, custom reports can be developed. As discussed under Collection System Maps – GIS above, the CMMS program also interfaces with GIS mapping.

All hard copies of work orders are kept on file for a period of no less than five years. Examples of CMMS work order screens and hard copy work orders can be found in Appendix N.

3.4 Information Management - Overflow Reporting

The Utah State Division of Water Quality Division has currently defined reportable events as the following:

- Any overflow event that flows to waters of the U.S.
- Any overflow event that has the potential to flow to waters of the U.S.
- Any basement overflow event that may involve a large volume of raw sewage
- Any overflow event that may require media involvement

The SLCDPU has established a reporting method, as part of its Overflow Response Plan (Appendix H) to assure compliance with the reporting requirements in its permits. It delineates responsibilities from the moment the spill or violation is identified. Every employee in a supervisory role has been trained in these procedures.

If an overflow event does not fall in the “reportable” category, the event is still scrutinized to determine the cause so appropriate action(s) can be taken to correct the problem and put in place some method to lessen the possibility of it occurring in the future.

All overflow information is captured in the CMMS and hard copies are retained for a period of no less than 5 years.

3.5 Routine Preventive Operation and Maintenance

3.5.1 Collection System

The SLCDPU has more than 49,000 sewer connections in the incorporated Salt Lake City area. It is the responsibility of the Collections Maintenance group to maintain more than 650 miles of sewer lines to serve these customers. There are nineteen multi-functional crew members that are assigned to different daily functions that include cleaning, rodding, CCTV, manhole maintenance and inspection. Point repairs are also made by these crews as the need arises. A wide range of equipment is used to accomplish these tasks including high pressure cleaning trucks, HP/Combo Vacuum trucks, rodding machines, CCTV vans, portable lateral and MH inspection cameras, backhoes, dump trucks, and other equipment. There is always one employee on call 24 hours a day to response to trouble calls. All work, including emergency response, is captured on both service and maintenance work orders from the Cityworks CMMS and are

available for review in the Shops Maintenance office.

Routine maintenance and inspection of the sewer system in Salt Lake City is the responsibility of the Collections Maintenance group. Emphasis is placed on areas where roots, debris deposition, grease, or other problems within the pipeline restrict flow conditions with the potential for causing wastewater overflows and spills. Current cleaning goals call for 35% of the system to be cleaned annually. Scheduled maintenance work orders are automatically generated monthly by the CMMS that allows for system cleaning on a 2 - 4 year cycle, based on established criteria noted above. CCTV inspection goals call for 10% of the system to be inspected annually, but may also be a part of inspection cycles based on the aforementioned criteria. Scheduled maintenance work orders are also generated monthly to help meet the inspection goals. This effort is combined with a visual inspection of manholes throughout the system once every two years. Manholes in critical areas are inspected more frequently.

Examples of completed work orders and maps, along with construction standards and work group service goals are included in Appendices F, N, O and P. Appendix O contains cleaning and CCTV inspection maps.

3.5.2 Infiltration/Inflow Control

In 1997, the SLCDPU initiated an outside contract with ADS Environmental Services Inc, to address the infiltration/inflow issue through the completion of a system wide wastewater flow-monitoring study. This effort resulted in an estimate of sanitary flow, infiltration, and inflow for each of the 34 basins within the City. These estimates were incorporated into the current sewer modeling program. This study also performed a cost analysis to establish a value oriented Capital Improvement Program. This study serves as the basis for direction of the SLCDPU infiltration and inflow reduction current efforts.

As the study indicated, the hydraulic condition of the system was best assessed during wet weather events. The results of the monitoring indicated that the collections system is significantly impacted by storm induced flows. The analysis revealed that over 50% of storm induced flows were contributed by only 10 of the 34 basins. The conclusion reached was that 50% of the induced flows creating hydraulic burden on the system could be relieved by rehabilitation of less than 1/3 of the contributing basins. These basins were identified by ranking through a basin leak factor. Areas within the central City area, from the Avenues to the south City boundary were indentified as the ones requiring the most attention.

Through these recommendations made by the study, areas identified were further evaluated through inspection and mains rehabilitated as needed.

SLCDPU has 11 permanently installed flow monitor in the collection system, with plans for additional monitors to be placed in yet to be determined basins, three

monitors located at the 3 major trunk lines as they enter the Water Reclamation Plant, along with 18 temporary monitors which are installed as necessary and manhole inspection continues to help identify areas where I/I may be a problem. The Department maintains Marsh-McBirney flow meters for this purpose. Where serious problems are identified and point repairs can be made to address the problem, Collections Maintenance crews will affect the repairs. If a much larger problem is detected, the information is turned over to the Engineering Division for evaluation.

Other areas of I/I concerns is with private laterals. By ordinance, laterals are owned and maintained by individual property owners. Because of this, the ability to reduce I/I through private property issues is fraught with potential liability and other legal concerns. While some success has been encountered in dealing with individual residences, an acceptable approach to private systems has not yet been fully formulated.

A complete system Master Plan was developed and delivered to the Department in 2010 by Bowen Collins Engineering. In 2016, an implementation plan was developed by Waterworks Engineering, focusing on the City's west side.

3.5.3 Lift Stations

There are thirty-five wastewater lift stations currently included in the SLCDPU wastewater collection system. 10 of these stations services residential areas, where the remainder service industrial areas. The pumps range in size from 250 GPM to 2150 GPM and each station is designed with 2+ pumps to allow for redundancy. All stations are wet well/dry well units and some efforts have been made to standardize with respect to pump manufacturer to facilitate repairs. Six of the stations have on site secondary power source with automatic transfer of power within less than one minute of primary source failure. All other stations can be powered up in an emergency by one of the 18 mobile generators strategically stationed throughout the City. These generators are maintained under contract by an outside firm.

Data regarding the Wastewater Lift Stations within the system is located in Appendix M. This information describes each lift station, the size, capacity, year of installation and upgrade information.

Lift station maintenance histories are maintained in the Cityworks CCMS to aid in the development of an appropriate preventive maintenance program and provide data for station evaluation. Weekly, monthly, semi-annual, and annual maintenance activities are scheduled and tracked by the system.

Responsibility for lift station maintenance is divided among three 2 person crews and a supervisor. They are stationed at the Lift Station Maintenance Facility located on the west side of Salt Lake City. At this site, repair parts inventory is

maintained, along with copies of O&M manuals, maintenance logs, emergency generators and portable bypass pumps.

Monitoring of the lift station network is provided by a telemetry and SCADA system which generates and stores critical operational information, such as pump run times, power status, high/low alarms and other operational data. Utilizing advanced radio technology and back-up batteries in the event of a power failure, the system provides remote operational control of the facilities, a benefit during emergency or other abnormal conditions. All SCADA, including alarm status signals are provided to the 24/7 Water Operations Dispatch Center, which is monitored at all times. Should a station require immediate attention, the Dispatch Center will contact the Lift Station Supervisor or on-call person.

3.5.4 Hydraulic Cleaning/Television Inspection

Pipeline hydraulic cleaning and television inspection are performed as a part of routine maintenance throughout the entire system, but particularly in areas where deposition issues are chronic or in response to immediate flow problems. The hydraulic cleaning is especially effective in reducing material that becomes deposited in lines with minimal slopes and in areas of high commercial activity. Television inspection is an aide in identifying lines with obstructions, and with potential failure possibilities. Both cleaning and television inspection are performed by crews from the Collections Maintenance group.

Currently, cleaning and TV inspection is being conducted through the entire system, beginning with the far end of the system, working towards the opposite end. Identified trouble areas where grease, silt deposition, and roots are common, are placed on a rodding route, where cleaning frequencies are increased (see current goals, cleaning schedule and inspection schedule maps in Appendices F and O). The SLCDPU has revised its cleaning and TV inspection program based upon the recommendations found in the new Sewer Master Plan developed by Bowen Collins in 2010. SLCDPU TV inspection now utilizes PACP (Pipeline Assessment and Certification Program) and MACP (Manhole Assessment and Certification Program) coding, a nationalized pipeline inspection program, that allows utilities to assess its assets by determining criticality and condition, help determine corrective measures and help prioritize rehab/replacement projects. For cleaning, emphasis is to the more problem areas. Areas where less frequent or no problems exist, are cleaned on a less frequent basis. These plans are reviewed and revised every five years.

3.5.5 Root Control

The intrusion of roots into sewer lines is an ongoing concern of the SLCDPU. Extensive root intrusion, if allowed to continue without attention, can result in reduced system capacity and, ultimately, blockage of the pipe. Problems

associated with root intrusion are sometimes exacerbated by the presence of grease in the flow stream, which tends to attach to any roots present and cause more rapid impact on flow conditions.

Historically, these issues have been addressed through pipeline cleaning efforts by the Collections Maintenance workgroup, which generally consisted of mechanical removal of roots. The Department is also utilizing a foaming root control agent specifically constituted for root removal and control.

Areas identified as heavy in root intrusion are passed on to the Engineering Division for analysis and placement on the main rehabilitation program.

3.5.6 Grease Control

Grease control within the sanitary sewer system is generally accomplished through two basic mechanisms: grease is prevented from entering the system through enforcement of the ordinances governing the FOG Program; and grease which does enter the system is addressed by the Collections Maintenance group.

See Part 4 – Fats, Oils and Grease Program (FOG) for more detailed information.

3.6 Collection System and Treatment Facilities Capacity

Capacity requirements for the wastewater collection system serving Salt Lake City are discussed in the Sewer Master Plan developed by Bowen Collins Engineering. Wastewater treatment systems are described in the Wastewater Master Plan developed by Montgomery Watson Engineers in 1997. The Plan was based on projected demand for the service area over a 30 period and anticipated infiltration/inflow levels and organic loads. The Plan looks at 6 areas:

1. Growth Issues
2. Airport Issues
3. Sewer System Needs
4. Existing Plant Issue
5. Future Plant Issues
6. Financial Issues

A 7th area is also being currently analyzed, the construction of the State's new prison located west of the International Airport. A copy of the Sewer Master Plan is available for review at the SLCDPU Administrative Office.

3.7 Rehabilitation Identification and Prioritization

The SLCDPU WW Collections Maintenance Group and the Engineering Division meet monthly to determine the need for sewer rehabilitation projects and their

priority. This includes analysis of all inspection data generated through PACP and MACP coding.

For each project the following are discussed:

- Project Prioritization.
- Design assignments are made.
- The project status is determined and all impediments to its completion determined.
- The costs and projected completion date are updated.
- The timetable for each project is updated in graphical form each month, including:
 - Design percentage completed
 - Advertising date
 - Bidding timetable
 - Award of bid
 - Construction start date
 - Final completion date

See Appendix R for flow charts of CIP Process.

3.8 Training

The SLCDPU uses a formal training program offered by Salt Lake City and the Department as well as specialized Department technical and safety training programs. Courses are offered in computer skills, employee development, specialty and technical, and safety and loss prevention, among others. Specialized training for supervisors is included in the classes offered.

Additional specialized technical training classes for certification in Confined Space Entry, Trenching & Shoring, and Flagging. Also offered are classes in Defensive Driving, Back Injury Prevention, Work Zone Safety, and Competent Person. On the job training is provided and required for emergency sanitary sewer spill response procedures.

3.9 Safety Program

The SLCDPU employs a full-time Safety Program Manager who is responsible for the Department's Safety Program. The Water Reclamation Plant also employs a safety specialist for Plant operations. The goal of the Safety Program is to establish and maintain safe work practices in the SLCDPU based on all federal, state, and local laws, standards, codes, procedures, and guidelines. The Safety Program includes safety training classes, loss prevention programs, safety inspections, and accident investigations. The Safety Program Manager oversees the functions of the Department Workgroup Safety

Committee, which is made up of employee representatives from each major work in the Department, along with the Department Safety Committee comprising of employee representatives, Union representatives and Department Administration. The Manager also maintains the emergency procedures manual, and coordinates damage claims with the City's Risk Management office.

Safety policies and procedures are implemented with the approval of the Department's Administration. The SLCDPU has written safety policies which are accessible by all employees. Safety Training meetings are held weekly with all work groups to discuss existing safety policies and implementation of new safety procedures and policies.

3.10 Replacement Parts

The SLCDPU maintains a fully stocked warehouse with all necessary materials and equipment required to make emergency repairs. All of the field equipment is maintained in excellent working condition by the City's Fleet Management Division, which generates all maintenance schedules. The average age of the Department's equipment is less than 8 years.

Vehicles are serviced approximately every four months. Periodic vehicle servicing is scheduled and accomplished through Fleet. The Fleet Maintenance Division, along with the Department's Fleet Coordinator, keeps records of vehicle and serviceable equipment maintenance.

A complete inventory of replacement parts needed for maintenance of the sanitary sewer system is available at the Shops Storehouse. These inventories are controlled through the existing computerized maintenance management system, where inventories are replenished as required through the separate operating budget. When parts are taken out of stock and used it is noted on the work order for cost information and at the same time deducted from inventory. Materials are then charged out to individual cost centers. Periodically, a report is generated to determine the number of parts in stock at any particular moment. Purchasing contracts with various vendors throughout the valley are also in place in the event a replacement part is not available in the Shops Storehouse.

The Water Reclamation Plant has its own warehouse with similar functions as noted above. In addition, replacement parts for all sewer and stormwater lift stations are maintained at the Lift Station Maintenance Facility.

Each piece of plant equipment and lift station equipment has a record. In that record is found where that piece of equipment is installed or stored, if it is a spare, and which parts are required for repair.

3.11 Blue Stake Program

Under Utah State Code Title 54, Chapter 8a is the “Damage to Underground Utility Facilities Act – As Amended through 2011”. Within the act is the requirement for all Utilities within the State that owns or maintains underground facilities to become a member of a One Call Association, namely Blue Stakes of Utah, for the purpose of locating and protecting all underground facilities from damage as a result of excavation practices. Within the act are descriptions of requirements for owners, operators and excavators and resulting penalties for failure to comply with the law. SLCDPU is an association member and has on staff 7 full time utility locators for the purpose of marking and locating the Department’s underground facilities.

Part 4 – Fats, Oils and Grease Program (FOG Plan)

4.1 INTRODUCTION

The Salt Lake City Department of Public Utilities (City) has adopted a fats, oils, and grease (FOG) Control Plan to address the Sewer System Management Plan (SSMP) requirements, as outlined in Utah Administrative Rule R317-801-5.2 (See Attachment A). The FOG Control Plan is designed to support the City goal to have zero sanitary sewer overflows due to FOG. The FOG Control Plan helps achieve this goal by providing public outreach and education; rules and regulations prohibiting FOG discharges, requiring removal devices and routine maintenance/ recordkeeping; and a City-operated FOG evaluation plan maintenance schedule.

4.2 PLAN ELEMENTS

The City's FOG Control Plan incorporates the following elements in accordance with Utah Administrative R317-801-5.2.

a. An implementation plan and schedule for a residential and commercial public education outreach for the FOG control plan that promotes proper disposal of FOG

In order to promote proper FOG disposal, the City implements a public outreach program focused on residential, commercial, and industrial users. The program includes providing door hangers and/or mailers for residential problem areas, and evaluating/interfaces with commercial and industrial users under the City's Industrial Waste Survey component.

b. A plan for the disposal of FOG generated within the permittee's service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG

The Salt Lake County Health Department maintains a list of registered liquid waste haulers/recyclers, which can be found at the following address:

<http://www.slcohealth.org/programs/waterqualhazwaste/wastewater/registeredLiquidWaste.html>

c. Sewer collection system use ordinances, service agreements, or other legally binding methods, that prohibit FOG discharges to the system

In accordance with the City's Wastewater Control Ordinance, Section 17.36.060(B)(3)(a), & (b); no User shall introduce or cause to be introduced into the Publicly Owned Treatment Works (POTW) the following pollutants, substances, wastewater: Solids:

(a) Solid or viscous substances in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

(b) Solid or viscous pollutants in amounts which will interfere with the operation of the wastewater treatment facilities such as, but not limited to fats, oils and grease, garbage with particles greater than one-fourth inch (1/4") in any dimension, animal guts or tissues, paunch manure, bone hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinder, sand, spent lime, stone or marble dust, metal, glass, plastics, gas, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes;

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

The requirements to install grease removal devices are in the City's Ordinance. Specifically in Ordinance Section 17.36.140(A)(1), which states, interceptors are required for any new or old business where its building is newly constructed, added to or refurbished to the extent that a building permit is required under the law, for any food processing or preparation establishments, or any other User when, in the opinion of the Director, they are necessary for the proper handling of liquid wastes containing grease or any flammable wastes, sand and other harmful ingredients.

Design standards for interceptors are found in City Ordinance Section 17.36.140(A)(2) and Section 17.36.140 (D). Section 17.36.140(A)(2) states, interceptors shall be of a type and capacity which meets all applicable standards set forth in the Utah plumbing code, and all standards adopted by the Director, and shall be located as to be readily accessible for cleaning by the User and inspection by POTW. According

to Section 17.36.140 (D), all interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily removable covers, which, when bolted in place, shall be gastight and watertight.

The City Ordinance Section 17.36.140(D) states the maintenance requirements for grease removal devices, specifically; interceptors must be maintained in continuous efficient operation at all times by the User at the User's sole expense.

The requirements for best management practices are in the City Ordinance Section 17.36.090 (E), in which the Director may develop best management practices, by ordinance or in wastewater discharge permits, to implement local limits and the requirements of the Wastewater Control Ordinance. Section 17.32.090 of the City Ordinance also defines what best management practices are.

City Ordinance Section 17.52.160(G) contains the requirements for recordkeeping and reporting requirements. The section states, all Users not required to obtain a wastewater discharge permit shall provide appropriate reports to the Director as the Director may require.

e. FOG inspection, monitoring, and evaluation plan

The City's Wastewater Collections Maintenance Division continually inspects, monitors, and evaluates the City POTW through routine collection system maintenance activities including scheduled system cleaning, "rodding routes", CCTV inspections, and daily lift station inspections. Businesses in problem areas may expect a higher level of inspection and reporting requirements. Problem areas or "hot spots" identified by the Wastewater Collections Maintenance Division are communicated to the City's Pretreatment Department for further investigation and potential enforcement.

The Development Review Division evaluates and reviews submittals by Users to determine if a grease control device is required at the facility, and if the device meets the Director's requirements.

The Building Department inspects new grease removal devices when the devices are installed as part of building inspection.

The Pretreatment Division inspects the grease removal devices when a problem is reported from the Collections Maintenance Division. The inspection evaluates if the grease removal device is being maintained, and is plumbed correctly. The inspection also evaluates if the facility needs to implement best management practices.

f. Identification of resources to do inspections and enforce the FOG control plan

The City has allocated resources to the following departments:

- The Wastewater Collections Maintenance Division to routinely clean and maintain the City's Collection System including problem areas throughout the City's POTW.
- The Develop Review Division to evaluate and review submittals of Users.
- The Pretreatment Division to enforce the requirements of the Ordinance.
- The Building Department to inspect grease control devices as the device is installed.

g. A maintenance schedule for lines affected by FOG blockages

The City's Wastewater Collections Maintenance Division maintains a "Rodding Route" list to maintain the City's sewage collection system. The list is based on "hot-spot" areas throughout the City that typically require additional attention and maintenance. The list has several categories that are used to create maintenance work orders. Future FOG-related work orders are automatically scheduled following completion of the current work order. The Wastewater Collections Maintenance Division also relies on past history and CCTV data to update the list and adjust maintenance rotation intervals, as necessary.

Part 5 - Design and Performance Provisions

5.1 Sewer Line and Pump Requirements and Standards

The design and installation of sanitary sewer lines is governed by SLC 17.48 Building Sewers, Connections and Repairs and also Utah State Rule R-317-3. There are several sections within the City ordinance that provides for these standards:

- 17.48.010 – Design and Construction Specifications
- 17.48.020 – Sewer Specifications
- 17.48.050 – Connection POTW Sewer – Requirements
- 17.48.150 – Testing
- 17.48.200 – Survey and Inspection

Construction Standards, Specifications and Materials are defined in the latest editions of the Utah State APWA Manual for Specifications and Manual for Standard Drawings. Department modifications to these Standards are also defined and updated by the SLCDPU Engineering and O&M Divisions on an annual basis. The Department has also drafted specific practices related to design and inspection (See Appendix P). These standard drawings and specifications are the governing standards for all construction practices. Exceptions to these standards may be given upon approval of the Chief Engineer and the O&M Superintendent.

5.2 Inspection Procedures and Specifications

Inspection of all wastewater facilities within the City is provided by the SLCDPU Engineering Division, which includes eight inspectors, and is responsible for inspection and approval of private projects, most of which are dedicated to the City upon acceptance. Larger construction projects may be inspected by a private consultant team, which provides construction inspection and administration. The consultant team interacts with the SLCDPU staff directly on project construction issues, but reports ultimately to the Chief Engineer of the SLCDPU Engineering Division.

Inspection procedures are documented in Standard Practices Inspection Handbook for the Department (see Appendix P).

Part 6 - Monitoring, Measurement, and Program Modifications

6.1 Program Implementation and Effectiveness

The SLCDPU utilizes a computerized maintenance management system (CMMS) to more effectively administer the sanitary sewer maintenance program management efforts. This system includes modules used to track work orders, track histories, schedule preventive maintenance activities, and materials inventories. Data is written to the same database that is accessed by the GIS. This allows for both historical archiving and immediate retrieval of data matching selected sort keys. The CMMS software used was developed by Azteca Cityworks. This system, in addition to providing complete maintenance management capabilities, allows access to all maintenance records through graphical interface with the GIS.

A summary of the functionality of the system is provided below:

- Inventory capability for all water, sewer, storm water, and treatment facility assets.
- Asset Management
- Reporting and archiving of maintenance activities.
- Convenient accesses to historical information such as spills and spill locations.
- Preventive maintenance scheduling.
- Customer service calls tracking through the Dispatch Operations Center.
- Work order management.
- Costing of repair efforts, including manpower tracking.
- Storehouse inventory tracking and ordering.
- Graphical interface to GIS.
- SSO trend analysis

The WW Collections Maintenance group is alerted to corrective maintenance response through telephone calls originating from customers, environmental groups, regulatory agencies, and other City and County agencies. The calls are received by the Dispatch Operations Center, which is in constant communication with maintenance personnel, including both supervisors and field crews. The Dispatch Center operates 24 hours per day.

All calls are logged into the Cityworks CMMS. If the call is an emergency or potentially emergency in nature, it is reported to the Collections System Field Supervisors or Collections Manager in which the problem is identified (during normal working hours) or to on-call personnel (after hours, holidays and weekends). Appropriate maintenance personnel and equipment will then be sent to the site, normally accompanied by the supervisor, to address the problem area.

All calls received into the Dispatch Center generate a “Trouble Call” service request through the CMMS, which is received and reviewed by the field supervisor. The Service Request may be archived for future reference, combined with other Service Requests related to the same issue, or converted into a Work Order and scheduled for maintenance work by field crews. All calls or other inquiries are maintained in the CMMS database for future review and analysis.

Multiple wastewater crews, with support from water maintenance and stormwater maintenance crews, if needed, are available during normal working hours. Crews are multi-functional in nature and consist of the Lead person, Worker II and Worker I, and can be assigned either individually or with any combination of the staff, depending on the needs and assignments. Afterhours, holidays and on weekends, one crew member, along with a supervisor, is placed on on-call status and immediately available to address wastewater issues. In the event of severe problem, other crew members may be called in to address these emergencies.

6.2 Program Updates

The SLCDPU SSMP Program is updated based on reports generated at varying periods and as program policies and procedures evolve.

In addition to these reports, management, on a daily basis, reviews an internally generated work summary and individual work orders which show all the work activities, including any sanitary sewer overflows reported and responded to, that have occurred for the previous 24-hour period. Reports generated through the Crystal Report generator are also generated on a monthly basis with accompanying charts showing maintenance activity. Elements of the SMMP are measured through these reports.

On an annual basis, all spills that have occurred during the previous year are summarized and defined in the annual Municipal Wastewater Planning Program Self-Assessment report to the State. Trends, including frequency, location and spill volume are identified.

In addition to these reports, accounting reports also are generated to show expenditures versus budget. These reports are reviewed by the Division Superintendent and WW Collection Manager. Also, staff meetings are held weekly with Collections Maintenance crews and management to conduct training, safety talks, and coordinate maintenance activities. The Collections Manager and key staff and the Engineering Division key staff meet monthly to discuss and coordinate capital improvement program, rehabilitation program projects and other projects developed from reports generated by the Asset Management module of Cityworks. Finally, supervisory staff meetings are held with the Superintendent, all managers and supervisors within the Operations and Maintenance Division.

6.3 Program Summary

The SSMP program documents, appendices, and supporting periodic reports are updated as warranted and the any periodic report data are revised on a monthly basis. Thus the SSMP is viewed as a working document with the most current data available that reflects the collection system changed conditions.

6.4 SSO Trends

SSO location, frequency and volume amounts are tracked, charted and mapped on an annual basis for analysis. The analysis helps in making adjustments to the cleaning and inspection program. The most current trends tracked over a five year period can be found in Appendix Q.

Part 7 – Sewer Overflow Response Plan (SORP)

7.1 Awareness

The Dispatch Center maintains an emergency contact list showing who to contact in case of emergency. One crew member is placed on stand-by status, on a rotating basis, and is available to handle any emergency responses after regular business hours, on weekends, or on holidays. This individual is provided with a pager and/or hand held radios for immediate response. There are employees available to access the warehouse to provide supplies not carried on the crew trucks. The Lift Station Maintenance crew also has an employee on stand-by to maintain the lift stations in case of emergency after normal business hours.

7.2 Response

When a wastewater spill problem has been identified, response can be summarized as follows:

- Dispatch notifies supervisor or after hours crew.
- Crew responds to location, checks manholes and shoots (cleans) line.
- If the problem is associated with the City main, line is cleaned again and televised to determine problem.
- If basement(s) were affected by overflow, clean-up contractor is notified for immediate clean-up response, along with City's Risk Manager
- If there is no problem identified in City's main, matter turned over to property owner.

A more detailed procedure and flow chart of spill response, including definitions, notifications, post event evaluation, clean-up guidelines, reporting procedures etc. can be found in Appendices G, H and I.

In the event of large spill events, notification to local media contacts and door to door contact is made (see Appendix J).

7.3 Official Notification

To comply with current State requirements, spills of raw wastewater that originate from a manhole, whether entering the waters of the U.S. or not; large volume overflows that affect many homes or businesses, or a media event, or through a designated bypass, are reported to the Utah State Division of Water Quality. Notification of a spill to DWQ is made at the time of discovery, but no later than 24 hours. The Collections Manager or Division Superintendent will make the call.

If a spill is confined to basement flooding, no formal report is required; however,

the event is included in an annual monthly summary (MWPP) provided to the State.

7.4 Training

All SLCDPU Wastewater Collections Maintenance personnel have been trained as to the required overflow emergency response plan. Continued training is provided to all employees as they join the group and as they progress in their advancement.

7.5 Emergency Operations

The core function of the SLCDPU WW Collections Maintenance group is the operations and maintenance of the wastewater collection system. Point or emergency repairs may also be undertaken by these crews. If necessary, emergency repairs also can be performed by contractors through existing contracts or by way of an emergency expedited procurement process. SLCDPU personnel recognize the priority placed on the correction of sewer overflows and respond accordingly.

Part 8 - System Evaluation and Capacity Assurance Plan (SECAP)

8.1 Hydraulic Evaluation and Capacity Enhancement

The SECAP is divided into the following major components and descriptions:

8.1.1 Evaluation of the WW Collection system

- a) There are two plans that are the basis for wastewater system evaluation within the Department:
 - i. The first of these is an ongoing method or process of the evaluation of existing infrastructure for upgrade or rehabilitation, derived from maintenance activities, including contract large diameter pipe cleaning, flow monitoring, system condition assessments as part of the ongoing Asset Management Program, and also new development review. These include input from the Collections Maintenance group, system histories and evaluations, sewer system modeling, reports generated through Asset Management and development review. (See Section 3 and Appendix R for CIP Process)
 - ii. The second is the 2010 Wastewater System Master Plan for Salt Lake City, providing a strategy for long-term capacity enhancements needed for the conveyance system. Base flows and estimated I/I for each basin from the ADS flow monitoring study were used, along with growth projections, to determine ultimate capacity requirements throughout the interceptor network. The Master Plan has helped identify deficiencies in the system and has developed an implementation plan and schedule for project and funding planning. Short and long term plans are based from these recommendations (See 2010 Salt Lake City Sewer Master Plan and 2016 West side Master Plan Implementation).

8.1.2 Identification of system deficiencies

- a) A report, prepared quarterly, titled Month End Reports, graphically summarizes all routine preventive operations and maintenance activities designed to ensure full design capacity in the collection system. Key elements currently tracked include Manhole Adjustments, TV Inspection, Hydraulic Cleaning, Mechanical Rodding, Flow Meter Placements, Mainline Repairs and Total Trouble Calls. (See Appendix F for most current Year End Report)

- b) Description as noted above in 1)a.i.

8.1.3 CIP Program

- a) The SLCDPU Engineering Division maintains a 5-10 year Capital Improvement Plan (CIP), for all collection system improvements. The long-range plan includes the upgrade or rehabilitation of existing lines, the installation of new lines, and the installation of lift stations. (See current CIP)
- b) A mathematical computer model of the network was developed and the capacity of each sewer reach was compared with both existing and future peak flows. This model, maintained by the Department, serves as the basis for determining current capacity and long term hydraulic capabilities, including future dry weather peak flow conditions, as well as storm or wet weather events. The model is updated continually with data generated by flow monitoring, maintenance reports, new development construction, and CIP data.

8.2 Plan Updates

The Salt Lake City Council through an annual budget process provides funding for operation, maintenance, and upgrade of the sanitary sewer system from system revenues. Periodic budget openings may be requested on an as needed basis. Current FY budgets can be found in Appendix C.

Part 9 - Program Audits

The foregoing Sewer System Management Plan for the sanitary sewer system owned by Salt Lake City Department of Public Utilities reflects the Department's commitment to the protection of the environment and continued provision of exemplary customer service. As indicated throughout this document, the SLCDPU has committed and is prepared to further commit the resources necessary to provide vigilance over the wastewater system. Necessary funds and staffing are available through operating and capital budgets and required contractual arrangements are either already in place or can be readily accomplished. This document will be updated annually through revised or new text plus appendices, as may be required in order to reflect the Department's commitment to its mission and to satisfy federal, state and local regulatory requirements.

Reference to the CMOM Self Assessment Checklist can also be utilized as a screening tool to help identify general areas of strength and weakness (See Appendix K).

Any substantive changes to the SSMP are presented to and approved by the Public Utilities Advisory Committee.

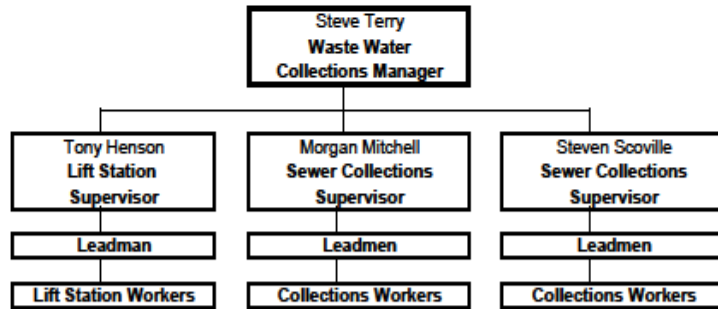
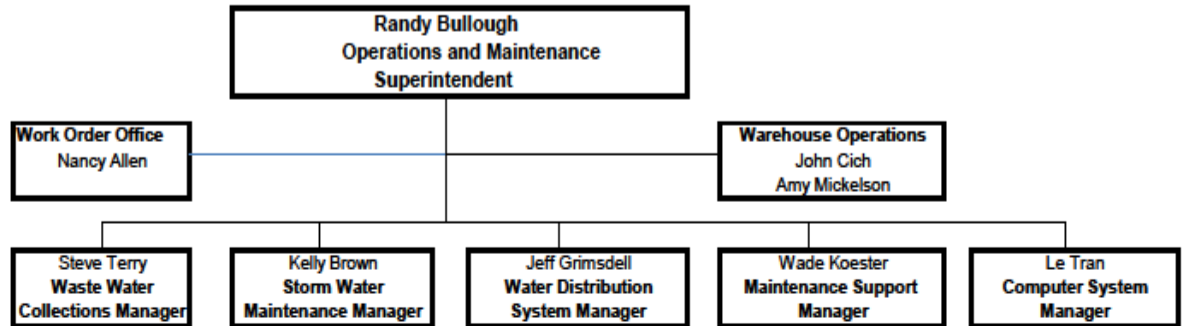
Part 10 - Plan Communications

The Base SSMP Program is available in the most current version on the SSMP link to the SLCDPU web site, www.slcgov.com/utilities, and at the SLCDPU Administrative Offices located at 1530 South West Temple in Salt Lake City, Utah. In addition, interested parties are welcome to provide input to the SSMP Program as it is implemented and revised.

Salt Lake City
Public Utilities
SSMP

Appendix A

Operations and Maintenance Organization Chart



Contact Information

Randy Bullough
Office: 801-483-6712

Steve Terry
801 -483-6759

Morgan Mitchell
Office: 801-483-6863

Steven Scoville
Office: 801-483-6759

Tony Henson
Office: 801-952-9036

Salt Lake City Corporation PUBLIC UTILITIES ORGANIZATIONAL STRUCTURE

**FISCAL YEAR
2018 - 2019**

**Laura Briefer
Director**

**Vacant
Position
Development
Manager**

**Gary Castle
Dept. Special
Projects Manager**

**Holly Mullin
Construction
Supervisor
Manager**

**Jesse Stewart
Deputy Director**

**Jamie Calko
Assistant
Secretary II**

**Wesling
Secretary
Manager**

**Kurt Spjut, C.P.A.
Finance
Administrator**

**Karyn Greenleaf
Property Agent
P.U. Records Program
Contracts & Construction**

**Development
Billed Lighting
Water Conservation
Water Resources
Water Rights
Hydrology**

**Finance
Billing
Customer Service
Meter Reading**

**Marian Rice
Water Quality &
Treatment
Administrator**

**Nick Kryger
GIS & IT System
Administrator**

**Jamie West
Water Reclamation
Manager**

**Randy Bulough
Operations/
Maintenance
Superintendent**

**Jason Brown,
P.E.
Chief Engineer**

**Water Quality
Pretreatment
Stormwater Quality
Regulatory Compliance
Construction & Control
Waterline Management
City Creek Water Treatment Plant
Parkway Water Treatment Plant
Big Cottonwood Water Treatment Plant**

**GIS
Records
Maps
Data Collection
Survey
Document Management
Public Utilities Web**

**Water Quality Treatment Plant
Safety Specialist**

**Water Maintenance
Stormwater
Sewer Water Maintenance
Littering
Waterlogging
Support Services
Water & Sewer**

**Engineering
Capital Improvement
Design
Inspection**

Salt Lake City
Public Utilities
SSMP

Appendix B

Chapter 3.36

NO FAULT UTILITIES CLAIMS

3.36.010 Short Title:

The ordinance codified in this chapter shall be known as the NO FAULT UTILITIES CLAIMS ORDINANCE. (Ord. 23-06 § 2, 2006)

3.36.020 Purpose:

The purpose of this chapter is to assist in the cleanup of real and personal property, and/or compensate persons for the loss of real or personal property, destroyed or damaged as the result of a break, leak, backup or other failure of city facilities, regardless of fault, within the restrictions, limitations and other provisions of this chapter. (Ord. 23-06 § 2, 2006)

3.36.030 Definitions:

Unless the context specifically indicates otherwise, the following terms and phrases, as used in this chapter, shall have the meanings hereinafter designated:

- A. "Actual cash value" means the actual, depreciated value of an item, and not the replacement value.
- B. "City" means Salt Lake City Corporation, a political subdivision of the state
- C. "City attorney" means the city attorney or his/her designee.
- D. "City facilities" means any culinary water, sanitary sewer or storm sewer pipeline, any irrigation water canal, and all related appurtenances, which are owned, operated and maintained by the department.
- E. "Cleanup" means all activities necessary to reasonably restore destroyed or damaged real and personal property to its pre-event condition, in accordance with cleanup criteria.
- F. "Cleanup contractor" means an independent disaster cleanup contractor, licensed to do business in the state.
- G. "Cleanup criteria" means cleanup standards, procedures and protocol established by the director pursuant to this chapter.
- H. "Department" means the city's department of public utilities.

- I. "Director" means the director of the department, or his/her designee.
- J. "Force majeure" means acts of God; acts of public enemies; insurrection; riots; war; landslides; lightning; earthquakes; fires; storms; floods; washouts; droughts; civil disturbances; explosions; acts of terrorism, sabotage; or any other similar cause or event not reasonably within the city's control.
- K. "Person or applicant" means any individual, partnership, firm, company, corporation, association, joint stock company, trust, estate or any other legal entity (except the United States government or any of its agencies, and the state and any of its agencies and political subdivisions) or their legal representatives, agents or assigns.
- L. "Private facilities" means any pipelines and related facilities which are owned and operated by a property owner, and which connect to city facilities.
- M. "Property owner" means the owner of the premises which has sustained a loss described in this chapter, or any person lawfully in possession of such premises. (Ord. 23-06 § 2, 2006)

3.36.040 Establishment Of Cleanup Criteria And Other Regulations:

The director shall, from time to time, establish cleanup criteria which shall constitute the standard for cleanup and payment under this chapter. In establishing such cleanup criteria, the director shall give due consideration to generally available health guidelines, recommendations from industry, governmental and academic experts, and other sources of guidance reasonably deemed by the director to be balanced, unbiased, and protective of health and safety. The director may establish such additional rules, regulations and procedures which are consistent with this chapter, as may be necessary or convenient in effecting the purposes of this chapter. (Ord. 23-06 § 2, 2006)

3.36.045 Cleanup Of Real And Personal Property:

- A. The director shall, in accordance with the city's standard procurement procedures, engage the services of one or more cleanup contractors to perform cleanup services at the direction of the director on an as needed basis.
- B. Upon discovering a break, leak, backup or other failure of city facilities, or any damage resulting from the same, a property owner shall immediately notify the director of such event.
- C. Upon notification of the occurrence of the event, the director shall contact a cleanup contractor under contract with the city pursuant to subsection A of this

section, and direct the cleanup contractor to perform all cleanup work at the premises, in accordance with established cleanup criteria.

D. In the event the property owner engages the services of a cleanup contractor prior to notifying the director of the event, the department may reimburse the property owner for actual expenses incurred by the property owner, but only up to the amount the department would have paid its own cleanup contractor under subsection C of this section.

E. In the event the damaged real or personal property cannot, in the judgment of the director, be reasonably restored to its pre-event condition, in accordance with the cleanup criteria, the department may pay to the property owner the estimated actual cash value, at the time of the event, of such property. Such value shall be determined by a professional appraiser engaged by the city for such purpose.

F. In no event shall the department pay, or reimburse the property owner for the payment of, special or consequential damages. (Ord. 23-06 § 2, 2006)

3.36.050 Application; Time Limitations:

Any request for cleanup under subsection 3.36.045C of this chapter, reimbursement of cleanup expenses under subsection 3.36.045D of this chapter, or payment of actual cash value under subsection 3.36.045E of this chapter, shall be made by filing a written application in such form as shall be prescribed by the director pursuant to section 3.36.040 of this chapter; provided that the initial request for cleanup may be made by contacting the director by telephone or other means, followed by a written application. Written applications shall be submitted to the city recorder within ninety (90) days after the occurrence of the event. (Ord. 23-06 § 2, 2006)

3.36.060 Application-Investigation And Recommendation:

Applications received by the city recorder shall be referred to the department for investigation and recommendation. The department's report shall be forwarded to the city attorney for determination under the criteria of this chapter. All payments authorized by the city attorney shall be made by the director solely from the appropriate enterprise fund managed by the director. (Ord. 23-06 § 2, 2006)

3.36.065 Qualification For Assistance:

An application or request for assistance or payment under this chapter shall qualify only if the director, after due inquiry or investigation, makes an affirmative determination that the event was the result of a break, leak, backup or other failure of city facilities, and that none of the following circumstances apply:

- A. The loss was the result of a force majeure which damaged the city facilities;
- B. The loss was caused by either an act or omission of the property owner, the property owner's agent, or a member of the property owner's family or business;
- C. The property owner failed to file a claim hereunder in a timely manner, or failed to comply with any other procedural requirements of this chapter;
- D. The loss was the result of intentional or negligent acts of third parties;
- E. The loss was the result of a break, leak, backup or failure of private facilities; or
- F. The loss is wholly covered by private insurance. (Ord. 23-06 § 2, 2006)

3.36.070 Reduction In Assistance:

The city may limit any assistance, or reduce any payment, under this chapter based upon any of the following:

- A. The property owner did not act responsibly to prevent, avoid or minimize the loss;
- B. The property owner is unable to fully substantiate or document the extent of the loss;
- C. The loss is partially covered by private insurance. (Ord. 23-06 § 2, 2006)

3.36.080 Payment Does Not Imply Liability:

- A. Any assistance or payment made under this chapter shall not be construed as, and does not imply, an admission of negligence or responsibility on the part of the city or the department for any damage or loss.
- B. Any assistance or payment made under this chapter is strictly voluntary on the part of the department. While it shall be the general policy of the city to follow the provisions of this chapter, the city shall not be required to do so. The city may, based on the particular facts and circumstances of an event, elect to reject a request for assistance hereunder. If a request for assistance under this chapter is not approved by the director within ninety (90) days of filing, it is deemed rejected. In the event a request hereunder is rejected, the property owner's recourse would be to proceed under the provisions of the Utah governmental immunity act and file a notice of claim thereunder. Nothing in this chapter shall be construed as an acknowledgment by the city that the property owner has a

meritorious claim under the Utah governmental immunity act, and the city reserves the right to assert any and all available defenses. The ninety (90) day notice period under this chapter shall not operate to extend the one year notice period under the Utah governmental immunity act. This chapter shall not in any way supersede, change or abrogate the Utah governmental immunity act, and its application to the city and the department, or establish in any person a right to sue the city under this chapter.

C. Any assistance or payment made under this chapter and accepted shall constitute a full and complete release of any and all claims against the city (including the department), its officers, employees and agents arising from the incident. (Ord. 23-06 § 2, 2006)

3.36.090 Budget Expenditures:

The department is authorized to provide for and include within each enterprise fund it manages a separate fund from which amounts may be drawn to make the foregoing assistance or payments. Each such separate fund shall be funded, in amounts deemed by the director to be sufficient for the purpose, from revenues accruing to each respective enterprise fund from all available sources, including regular service charges. The establishment and funding of such funds, and the expenditure of the amounts therein, shall be consistent with applicable law, and all applicable bond covenants of the city. (Ord. 23-06 § 2, 2006)

3.36.100 Claims From Other Governmental Agencies:

Notwithstanding any other provisions of this chapter, no application shall be accepted from the United States or any of its departments or agencies, the state or any political subdivision. (Ord. 23-06 § 2, 2006)

Salt Lake City Ordinance

SALT LAKE CITY WASTEWATER CONTROL ORDINANCE

Article I. General Provisions

17.32.010: SHORT TITLE:

This division shall be known as, and references in this division to "this chapter" shall be deemed to refer to, the *SALT LAKE CITY WASTEWATER CONTROL ORDINANCE*. The chapters within this code that specifically refer to the industrial pretreatment program are chapters 17.32, 17.36, 17.52, 17.68 and 17.69 of this title. (Ord. 68-11, 2011)

17.32.020: PURPOSE OF PROVISIONS:

A. It is necessary for the health, safety and welfare of the residents of the POTW to regulate the collection of wastewater and treatment thereof to provide for maximum public benefit. The provisions set forth in this division are uniform requirements for direct and indirect contributors into the wastewater collection and treatment system for the POTW, and enable the POTW to comply with all applicable local, state and federal laws.

B. The objectives are:

1. To prevent the introduction of pollutants into the POTW which will interfere with the operation of the POTW or contaminate the resulting sludge;
2. To prevent the introduction of pollutants into the POTW which will pass through the POTW, inadequately treated, into receiving waters or the atmosphere, or otherwise be incompatible with the POTW;
3. To protect both publicly owned treatment works personnel who may be affected by wastewater and sludge in the course of their employment and the general public;
4. To improve the opportunity to recycle and reclaim wastewaters and sludges from the POTW;
5. To provide for equitable distribution among users of the cost and operation of the POTW;
6. To provide for and promote the general health, safety and welfare of the citizens residing within the POTW; and
7. To enable the city to comply with its UPDES permit conditions, sludge use and disposal requirements, and any other federal or state laws to which the POTW is subject.

C. The provisions herein provide for the regulation of direct and indirect contributors to the POTW through the issuance of permits and through enforcement of general requirements for all users, authorize monitoring and enforcement activities, require user reporting, assume that existing user's capability will not be preempted, and provide for the setting of fees for the equitable distribution of costs resulting from the program established herein.

D. The provisions herein shall apply to the POTW and to persons outside the service area of the POTW who are, by contract or agreement with the POTW, users of the POTW. The provisions herein shall provide for enforcement and penalties for violations. (Ord. 68-11, 2011)

17.32.030: RULES AND REGULATIONS:

The director may, from time to time, adopt such rules, regulations and policies as shall be reasonably necessary to implement the provisions of this division and administer the wastewater treatment program of the city. (Ord. 68-11, 2011)

Article II. Definitions

17.32.040: DEFINITIONS, GENERALLY:

Unless the context specifically indicates otherwise, the following terms and phrases, as used in this division, shall have the meanings hereinafter designated in this article. (Ord. 68-11, 2011)

17.32.050: ABBREVIATIONS:

The following abbreviations shall have the designated meanings:

BMP	Best management practice
BOD	Biochemical oxygen demand
CFR	Code of federal regulations
CIU	Categorical industrial user
COD	Chemical oxygen demand
cP	Centipoise = 0.01 poise = cgs unit of absolute viscosity, <u>gm</u> sec x cm
EPA	The United States environmental protection agency or its successors
l	Liter
mg	Milligrams
mg/l	Milligrams per liter
POTW	Publicly owned treatment works
SIC	Standard industrial classification
SIU	Significant industrial user
SNC	Significant noncompliance
SWDA	Solid waste disposal act, 42 USC 6901 et seq., or its successor
TRC	Technical review criteria
TSS	Total suspended solids
UPDES	Utah pollutant discharge elimination system

(Ord. 68-11, 2011)

17.32.060: ACT OR THE ACT:

"Act" or "the act" means the federal water pollution control act, PL 92-500, also known as the clean water act, as amended, 33 USC section 1251 et seq. (Ord. 68-11, 2011)

17.32.070: APPROVAL AUTHORITY:

"Approval authority" means the state of Utah's department of environmental quality, division of water quality (DWQ) or its successor agencies. (Ord. 68-11, 2011)

17.32.080: AUTHORIZED OR DULY AUTHORIZED REPRESENTATIVE OF THE INDUSTRIAL USER:

A. If the user is a corporation:

1. The president, secretary, treasurer, or a vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or
2. The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for wastewater discharge permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. If the user is a partnership or sole proprietorship: a general partner or proprietor, respectively.

C. If the user is a federal, state, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.

D. The individuals described in subsections A through C of this section, may designate a duly authorized representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to the director. (Ord. 68-11, 2011)

17.32.090: BEST MANAGEMENT PRACTICES:

"Best management practices" or "BMPs" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in subsections [17.36.060A](#) and B of this title. BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage. BMPs also include alternative means (i.e., management plans) of complying with, or in place of certain established categorical pretreatment standards and effluent limits. (Ord. 68-11, 2011)

17.32.100: BIOCHEMICAL OXYGEN DEMAND (BOD):

"Biochemical oxygen demand (BOD)" means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five (5) days at twenty degrees centigrade (20°C), usually expressed as concentration (e.g., milligrams per liter [mg/l]). Laboratory determinations shall be made in accordance with methods set forth in 40 CFR 136 or its successor. (Ord. 68-11, 2011)

17.32.110: BUILDING OR SEWER LATERAL:

"Building or sewer lateral" means a sewer conveying the wastewater of a user from a residence building or other structure to a POTW sewer, including direct connections to a POTW sewer where permitted by the POTW. A sewer lateral is a building sewer owned by the user. (Ord. 68-11, 2011)

17.32.120: BUSINESS CLASSIFICATION CODE (BCC):

"Business classification code (BCC)" means a classification of dischargers based on the "1972 Standard Industrial Classification Manual", bureau of the budget of the United States Of America or its successor. (Ord. 68-11, 2011)

17.32.130: CATEGORICAL PRETREATMENT STANDARDS OR CATEGORICAL STANDARDS:

"Categorical pretreatment standard" or "categorical standard" means any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) of the act (33 USC section 1317) that apply to a specific category of users and that appear in 40 CFR chapter I, subchapter N, parts 405-471. (Ord. 68-11, 2011)

17.32.140: CATEGORICAL INDUSTRIAL USER (CIU):

"Categorical industrial user" means an industrial user subject to a categorical pretreatment standard or categorical standard. (Ord. 68-11, 2011)

17.32.150: CHEMICAL OXYGEN DEMAND (COD):

"Chemical oxygen demand (COD)" means a measure of the oxygen required to oxidize all compounds, both organic and inorganic, in water. Laboratory determinations shall be made in accordance with methods set forth in 40 CFR 136 or its successor. (Ord. 68-11, 2011)

17.32.160: CHLORINE DEMAND:

"Chlorine demand" means the amount of chlorine required to produce a free chlorine residual of 0.1 milligrams per liter at the end of the contact period on a sample, in conformance with the procedures described in standard methods set forth in 40 CFR 136 or its successor. (Ord. 68-11, 2011)

17.32.170: CITY:

"City" means the Salt Lake City Corporation, state of Utah. (Ord. 68-11, 2011)

17.32.180: COMPATIBLE POLLUTANT:

"Compatible pollutant" means biochemical oxygen demand, total suspended solids, pH and fecal coliform bacteria, plus any additional pollutants identified in the publicly owned treatment works' UPDES permit, where the publicly owned treatment works is designed to treat such pollutants and, in fact, does treat such pollutants to the degree required by the POTW's UPDES permit. (Ord. 68-11, 2011)

17.32.190: CONTROL AUTHORITY:

"Control authority" means Salt Lake City Corporation. (Ord. 68-11, 2011)

17.32.200: DAILY MAXIMUM:

"Daily maximum" means the arithmetic average of all effluent samples for a pollutant collected during a calendar day. (Ord. 68-11, 2011)

17.32.210: DAILY MAXIMUM LIMIT:

"Daily maximum limit" means the maximum allowable discharge limit of a pollutant during a calendar day. Where daily maximum limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day. (Ord. 68-11, 2011)

17.32.220: DIRECTOR:

"Director" means the director of Salt Lake City department of public utilities or his or her designated representative. (Ord. 68-11, 2011)

17.32.230: ENVIRONMENTAL PROTECTION AGENCY OR EPA:

"Environmental protection agency" or "EPA" means the U.S. environmental protection agency, or, where appropriate, the regional water management division director, the regional administrator, or other duly authorized official of said agency. (Ord. 68-11, 2011)

17.32.240: ENFORCEMENT RESPONSE PLAN (ERP):

"Enforcement response plan" means the policies and procedures developed by the control authority and accepted by the approval authority to track compliance and take enforcement actions against noncompliance with the industrial pretreatment program requirements and limitations. (Ord. 68-11, 2011)

17.32.250: EXISTING SOURCE:

"Existing source" means any source of discharge that is not a "new source". (Ord. 68-11, 2011)

17.32.260: FATS, OILS AND GREASE:

"Fats, oils and grease" (FOG) shall mean any fats, oils or grease of animal or plant origin having a potential to cause interference with or obstruction to the POTW. (Ord. 68-11, 2011)

17.32.270: FOOD PREPARATION AND PROCESSING ESTABLISHMENTS:

"Food preparation and processing establishments" means establishments engaged in the preparation of food or drink to be consumed on the premises and/or to be delivered or picked up for resale and/or consumption. (Ord. 68-11, 2011)

17.32.280: GARBAGE:

"Garbage" means solid wastes from the preparation, cooking and dispensing of food, and from handling, storage and sale of produce. (Ord. 68-11, 2011)

17.32.290: GRAB SAMPLE:

"Grab sample" means a sample which is taken from a waste stream on a onetime basis with no regard to the flow in the waste stream and over a period of time not to exceed fifteen (15) minutes. (Ord. 68-11, 2011)

17.32.300: HAZARDOUS WASTE:

"Hazardous waste" means any material having the characteristics identified under or listed pursuant to section 3001 of RCRA and listed in 40 CFR 261. (Ord. 68-11, 2011)

17.32.310: INCOMPATIBLE POLLUTANT:

"Incompatible pollutant" means all pollutants other than compatible pollutants as defined in section [17.32.180](#) of this chapter, or its successor. (Ord. 68-11, 2011)

17.32.320: INDIRECT DISCHARGE:

"Indirect discharge" means the introduction of pollutants into a POTW from any nondomestic source which is regulated under section 307(b), (c) or (d) of the act (including septic tank waste discharged into the POTW). (Ord. 68-11, 2011)

17.32.330: INDUSTRIAL USER OR USER:

"Industrial user" or "user" means a source of indirect discharge. (Ord. 68-11, 2011)

17.32.340: INDUSTRIAL WASTE:

"Industrial waste" means solid, liquid or gaseous wastes, including cooling water (except where exempted by UPDES permit), resulting from any industrial, manufacturing or business process, or from the development, recovery or processing of a natural resource. (Ord. 68-11, 2011)

17.32.350: INSTANTANEOUS LIMIT:

"Instantaneous limit" means the maximum or minimum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete, grab, or composited sample collected, independent of the industrial flow rate and the duration of the sampling event. (Ord. 68-11, 2011)

17.32.360: INTERFERENCE:

"Interference" means a discharge that, alone or in conjunction with a discharge or discharges from other sources, either inhibits or disrupts the POTW, its treatment processes or operations or its sludge process use or disposal and therefore is a cause of a violation of any requirement of the POTW's UPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with any of the following statutory provisions and regulations or permits issued thereunder or more stringent state or local regulations; section 405 of the clean water act; the solid waste disposal act (SWDA), including title II, more commonly referred to as the resource conservation and recovery act (RCRA); state regulations contained in any Utah state sludge management plan prepared pursuant to subtitle D of the SWDA; the clean air act; the toxic substances control act; and the marine protection research and sanctuaries act. (Ord. 68-11, 2011)

17.32.370: LOCAL LIMIT:

"Local limit" means specific discharge limits referred to in section [17.36.090](#) of this title and developed and enforced by the city upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in section [17.36.060](#) of this title and 40 CFR 403.5(a)(1) and (b). (Ord. 68-11, 2011)

17.32.380: MEDICAL WASTE:

"Medical waste" means isolation wastes, infectious agents, human or animal blood and blood products,

pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes. (Ord. 68-11, 2011)

17.32.390: MONTHLY AVERAGE:

"Monthly average" means the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (Ord. 68-11, 2011)

17.32.400: MONTHLY AVERAGE LIMIT:

"Monthly average limit" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (Ord. 68-11, 2011)

17.32.410: NEW SOURCE:

"New source" means:

A. Any building, structure, facility, or installation from which there is (or may be) a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under section 307(c) of the act that will be applicable to such source if such standards are thereafter promulgated in accordance with that section, provided that:

1. The building, structure, facility, or installation is constructed at a site at which no other source is located; or
2. The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
3. The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source, should be considered.

B. Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility, or installation meeting the criteria of subsection A2 or A3 of this section but otherwise alters, replaces, or adds to existing process or production equipment.

C. Construction of a "new source" as defined under this subsection has commenced if the owner or operator has:

1. Begun, or caused to begin, as part of a continuous on site construction program:
 - a. Any placement, assembly, or installation of facilities or equipment; or
 - b. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
2. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph. (Ord. 68-11, 2011)

17.32.420: NONCONTACT COOLING WATER:

"Noncontact cooling water" means water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product. (Ord. 68-11, 2011)

17.32.425: OIL AND GREASE:

"Oil and grease" means the total oil and grease measured in a wastewater sample by methods set forth in 40 CFR 136 or its successor. Oil and grease is composed of a mixture of all those polar and nonpolar materials which are soluble in hexane at pH 2 or less, and remain after boiling off the solvent. If an environmental sample is composed of nonpolar material (such as petroleum hydrocarbons), and polar materials (such as animal or vegetable oils and

fats), EPA method 1664A will directly quantify all the materials as hexane extractable materials (HEM). The silica gel treated hexane extractable material (SGT-HEM) procedure of the same EPA method will measure the nonpolar material (petroleum hydrocarbons) after the polar material is removed. The difference between the two (2) measurements will give the amount of polar material (animal and vegetable) present. (Ord. 68-11, 2011)

17.32.430: PASS-THROUGH:

"Pass-through" means a discharge which exits the POTW into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's UPDES permit, including an increase in the magnitude or duration of the violation. (Ord. 68-11, 2011)

17.32.440: PERSON:

"Person" means any individual, partnership, copartnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. This definition includes all federal, state, and local governmental entities. The masculine gender shall include the feminine, and the singular shall include the plural where indicated by context. (Ord. 68-11, 2011)

17.32.450: pH:

"pH" means a measure of the acidity or basicity of an aqueous solution, expressed in standard units. Theoretically pH equals the negative logarithm (base-10) cH, where cH is the concentration of hydrogen ions in grams per liter. Scale ranges from 0 to 14, pH 7 being neutral, less than 7, acidic, more than 7, basic. (Ord. 68-11, 2011)

17.32.460: POLLUTION OR POLLUTANT:

"Pollution" or "pollutant" means any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, medical wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal and agricultural wastes, and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor) including the manmade or man induced alteration of the chemical, physical, biological and radiological integrity of water. (Ord. 68-11, 2011)

17.32.470: PRETREATMENT:

"Pretreatment" means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration can be obtained by physical, chemical or biological processes, process changes, or by other means, except by diluting the concentration of the pollutants unless allowed by an applicable pretreatment standard. (Ord. 68-11, 2011)

17.32.480: PRETREATMENT REQUIREMENTS:

"Pretreatment requirements" means any substantive or procedural requirement related to pretreatment, other than a pretreatment standard imposed on a user. (Ord. 68-11, 2011)

17.32.490: PRETREATMENT STANDARDS OR STANDARDS:

"Pretreatment standard" or "standard" means any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the act, which applies to industrial users. This term includes prohibitive discharge limits established pursuant to 40 CFR 403.5. (Ord. 68-11, 2011)

17.32.500: PROHIBITED DISCHARGE STANDARDS OR PROHIBITED DISCHARGES:

"Prohibited discharge standards" or "prohibited discharges" means absolute prohibitions against the discharge of certain substances; these prohibitions appear in section [17.36.060](#) of this title. (Ord. 68-11, 2011)

17.32.510: PUBLIC SEWER:

"Public sewer" shall mean any sewer dedicated to public use and which is controlled by a public corporation or governmental agency. (Ord. 68-11, 2011)

17.32.520: PUBLICLY OWNED TREATMENT WORKS (POTW):

"Publicly owned treatment works (POTW)" means a treatment works, as defined by section 212 of the act (33 USC 1292), or its successor, which is owned by Salt Lake City Corporation having statutory authority to collect and treat sewage. This definition includes any sewers, pumping stations and appurtenances used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature and any conveyances, which convey wastewater to a treatment plant. Building and sewer lateral shall not be included in this definition. For the purposes of this division, "POTW" shall also include any sewers that convey wastewater to the POTW by persons

outside the POTW boundaries who are by contract or agreement with the POTW actually users of the POTW. (Ord. 68-11, 2011)

17.32.530: SANITARY SEWER:

"Sanitary sewer" means the pipe or conduit system, and appurtenances, for the collection, transportation, pumping and treatment of sewage. This definition shall also include the terms "public sewer", "sewer system", and "sewer". (Ord. 68-11, 2011)

17.32.540: SEPTIC TANK WASTE:

"Septic tank waste" means any sewage from holding tanks such as vessels, chemical toilets, campers, trailers, airplane holding tanks and septic tanks. (Ord. 68-11, 2011)

17.32.550: SEWAGE:

"Sewage" means human excrement and gray water (household showers, dishwashing operations, etc.) and any of the wastewater of the community which has been contaminated by use such that treatment is required before it may be safely discharged to the environment or reused. (Ord. 68-11, 2011)

17.32.560: SHALL, WILL AND MAY:

"Shall" and "will" are mandatory; "may" is permissive. (Ord. 68-11, 2011)

17.32.570: SIGNIFICANT INDUSTRIAL USER (SIU):

Except as provided in subsections C and D of this section, a "significant industrial user" is:

A. An industrial user subject to categorical pretreatment standards; or

B. An industrial user that:

1. Discharges an average of twenty five thousand (25,000) gpd or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater);
2. Contributes a process waste stream which makes up five percent (5%) or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or
3. Is designated as such by the city on the basis that it has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

C. The city may determine that an industrial user subject to categorical pretreatment standards is a nonsignificant categorical industrial user rather than a significant industrial user on a finding that the industrial user never discharges more than one hundred (100) gallons per day (gpd) of total categorical wastewater (excluding sanitary, noncontact cooling and boiler blowdown wastewater, unless specifically included in the pretreatment standard) and the following conditions are met:

1. The industrial user, prior to city's finding, has consistently complied with all applicable categorical pretreatment standards and requirements;
2. The industrial user annually submits the certification statement required in subsection [17.52.210B](#) of this title, together with any additional information necessary to support the certification statement; and
3. The industrial user never discharges any untreated concentrated wastewater.

D. Upon a finding that a user meeting the criteria in subsection B of this section has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the city may at any time, on its own initiative or in response to a petition received from an industrial user, and in accordance with procedures in 40 CFR 403.8(f)(6), determine that such user should not be considered a significant industrial user. (Ord. 68-11, 2011)

17.32.580: SIGNIFICANT NONCOMPLIANCE (SNC):

"Significant noncompliance (SNC)" shall be applicable to all significant industrial users (or any other industrial user that violates subsection C, D or H of this section) and shall mean:

- A. "Chronic violations of wastewater discharge limits", defined here as those in which sixty six percent (66%) or more of all the measurements taken for the same pollutant parameter taken during a six (6) month period exceed (by any magnitude) a numeric pretreatment standard or requirement, including instantaneous limits as defined herein;
- B. "Technical review criteria (TRC) violations", defined here as those in which thirty three percent (33%) or more of wastewater measurements taken for the same pollutant parameter during a six (6) month period equals or exceeds the product of the numeric pretreatment standard or requirement including instantaneous limits, as defined herein, multiplied by the applicable TRC (TRC equals 1.4 for BOD, TSS, fats, oils and grease, and TRC equals 1.2 for all other pollutants except pH);
- C. Any other violation of a pretreatment standard or requirement as defined herein (daily maximum, long term average, instantaneous limit, or narrative standard) that the director determines has caused, alone or in combination with other discharges, interference or pass-through, including endangering the health of POTW personnel or the general public;
- D. Any discharge of a pollutant that has caused imminent endangerment to the public or to the environment, or has resulted in the director's exercise of emergency authority to halt or prevent such a discharge;
- E. Failure to meet, within ninety (90) days of the scheduled date, a compliance schedule milestone contained in a wastewater discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance;
- F. Failure to provide within forty five (45) days after the due date, any required reports, including baseline monitoring reports, reports on compliance with categorical pretreatment standard deadlines, periodic self-monitoring reports, and reports on compliance with compliance schedules;
- G. Failure to accurately report noncompliance; or
- H. Any other violation(s), which may include a violation of best management practices, which the director determines will adversely affect the operation or implementation of the local pretreatment program. (Ord. 68-11, 2011)

17.32.590: SLUG LOAD OR SLUG DISCHARGE:

"Slug load" or "slug discharge" shall mean any discharge at a flow rate or concentration, which could cause a violation of the prohibited discharge standards in section [17.36.060](#) of this title. A slug discharge is any discharge of a nonroutine, episodic nature, including, but not limited to, an accidental spill or a noncustomary batch discharge, which has a reasonable potential to cause interference or pass-through, or in any other way violate the POTW's regulations, local limits or permit conditions. (Ord. 68-11, 2011)

17.32.600: STATE:

"State" means the state of Utah. (Ord. 68-11, 2011)

17.32.610: STANDARD INDUSTRIAL CLASSIFICATION (SIC):

"Standard industrial classification (SIC)" means a classification pursuant to the "Standard Industrial Classification Manual" issued by the executive office of the president, office of management and budget, 1972, or its successor. The "North American industry classification system (NAICS)" is similar to the SIC and means a classification pursuant to the office of management and budget, official 2007 U.S. NAICS Manual, as amended. (Ord. 68-11, 2011)

17.32.620: STORM SEWER:

"Storm sewer" means a sewer that carries only stormwater, surface water and groundwater drainage. (Ord. 68-11, 2011)

17.32.630: STORMWATER:

"Stormwater" means any flow occurring during or following any form of natural precipitation and resulting therefrom, including snowmelt. (Ord. 68-11, 2011)

17.32.640: SUBDIVISION:

A. "Subdivision" means the division of a tract, or lot, or parcel of land into three (3) or more lots, plots, sites or other divisions of land for the purpose, whether immediate or future, of sale or of building development or redevelopment; provided, however, that divisions of land for agricultural purposes or for commercial, manufacturing or industrial purposes shall be exempt. Further, the above definition shall not apply to the sale or conveyance of any parcel of land which may be shown as one of the lots of a subdivision of which a plat has theretofore been recorded in the office of the county recorder.

B. The word "subdivide" and any derivative thereof shall have reference to the term "subdivision" as herein defined. (Ord. 68-11, 2011)

17.32.650: TOTAL SUSPENDED SOLIDS OR SUSPENDED SOLIDS:

"Total suspended solids" or "suspended solids" means the total suspended matter that floats on the surface of or is suspended in water, wastewater or other liquids, and which is removable by laboratory filtering in accordance with methods set forth in 40 CFR 136 or its successor. (Ord. 68-11, 2011)

17.32.660: TOXIC POLLUTANT:

"Toxic pollutant" means any pollutant or combination of pollutants found to be toxic or stipulated as toxic in regulations promulgated by the administrator of the environmental protection agency under the act. (Ord. 68-11, 2011)

17.32.670: UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) PERMIT:

"Utah pollution discharge elimination system (UPDES) permit" means a permit issued pursuant to section R317-8 of the Utah administrative code, or its successor. (Ord. 68-11, 2011)

17.32.680: VISCOSITY:

"Viscosity" means the property of a fluid that resists internal flow by releasing counteracting forces. (Ord. 68-11, 2011)

17.32.690: WASTEWATER:

"Wastewater" means the liquid and water carried industrial or domestic wastes from dwellings, commercial buildings, industrial and manufacturing facilities and institutions, together with any infiltrating groundwater, surface water and stormwater that may be present, whether treated or untreated, which enters the POTW. (Ord. 68-11, 2011)

17.32.700: WASTEWATER DISCHARGE PERMIT OR PERMIT:

"Wastewater discharge permit" or "permit" means a control document issued by the city which authorizes the discharge of industrial wastewater into the POTW by an SIU. (Ord. 68-11, 2011)

17.32.710: WASTEWATER STRENGTH:

"Wastewater strength" means the quality of process wastewater discharged, as measured by its elements, including its constituents and characteristics. (Ord. 68-11, 2011)

17.32.720: WASTEWATER TREATMENT PLANT OR TREATMENT PLANT:

"Wastewater treatment plant" or "treatment plant" means that portion of the publicly owned treatment works designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste. (Ord. 68-11, 2011)

17.32.730: WATERS OF THE STATE:

"Waters of the state" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof. (Ord. 68-11, 2011)

17.32.740: ZERO DISCHARGE INDUSTRIAL FACILITY:

"Zero discharge industrial facility" means an industry which may be identified by the director as a "significant

industrial user", as defined herein, which has voluntarily elected or is required by the categorical pretreatment standard not to discharge any of its process wastewater to the POTW, but to dispose of it by other legal means. For the purposes of inspection, sampling and enforcement, a zero discharge industrial facility shall be considered an industrial user. (Ord. 68-11, 2011)

Chapter 17.36 GENERAL REQUIREMENTS

17.36.010: SUPERVISION OF POTW:

The POTW shall be supervised and directed by the director. (Ord. 68-11, 2011)

17.36.020: MORE STRINGENT LIMITATIONS; POTW RIGHTS:

The POTW reserves the right to establish more stringent limitations or requirements on discharges to the wastewater disposal system if deemed necessary to comply with the objectives presented in section [17.32.020](#) of this title, or its successor. (Ord. 68-11, 2011)

17.36.030: GENERAL DISCHARGE REGULATIONS:

A. Discharge Into POTW: All sewage shall be discharged to public sewers except as provided hereinafter.

B. Discharge Of Sewage: No person shall discharge any sewage from any premises within the POTW service area into and upon any public highway, stream, watercourse or public place, or into any drain, cesspool, storm or private sewer, except as provided for hereafter. (Ord. 68-11, 2011)

17.36.040: NONPOLLUTED WATERS DISCHARGED TO STORM SEWERS:

Nonpolluted stormwater, surface drainage, subsurface drainage, groundwater, roof runoff, noncontact cooling water or other nonpolluted water may be admitted to specifically designated storm sewers which have adequate capacity for the accommodations of such waters. No person shall connect to and/or use sanitary sewers for the above purposes without having first obtained the written consent of the director. (Ord. 68-11, 2011)

17.36.050: DISCHARGING SURFACE WATERS INTO SANITARY SEWERS:

No person shall cause to be discharged or make a connection which would allow any stormwater, surface drainage, groundwater, roof runoff, or noncontact cooling water to be admitted into any sanitary sewer, unless otherwise permitted in writing by the director. No person shall cause any of the above mentioned waters to be mixed with that person's industrial waste in order to dilute such industrial waste. (Ord. 68-11, 2011)

17.36.060: PROHIBITED DISCHARGE STANDARDS:

A. General Prohibitions: No user shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes pass-through or interference. These general prohibitions apply to all users of the POTW whether or not they are subject to categorical pretreatment standards or any other national, state, or local pretreatment standards or requirements.

B. Specific Prohibitions: No user shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:

1. Explosives: Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosive hazard or be injurious in any other way to the POTW or to the operation of the POTW. At no time shall two (2) successive readings on any explosion hazard meter, at the point of discharge to the POTW (or at any point in the system) be more than five percent (5%), nor any single reading over ten percent (10%) of the lower explosive limit (LEL) of the meter;
2. Fire Or Explosion: Pollutants which create a fire or explosion hazard in the POTW including, but not limited to, waste streams with a closed cup flashpoint of less than one hundred forty degrees Fahrenheit (140°F) (60°C) using test methods specified in 40 CFR 261.21 or its successor;

3. Solids:

- a. Solid or viscous substances in amounts which will cause obstruction to the flow in the POTW resulting in interference.
 - b. Solid or viscous pollutants in amounts which will interfere with the operation of the wastewater treatment facilities such as, but not limited to, fats, oils and grease, garbage with particles greater than one-fourth inch ($\frac{1}{4}$ " in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinder, sand, spent lime, stone or marble dust, metal, glass, plastics, gas, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes;
4. Low pH Limit: Any wastewater which will cause corrosive structural damage to the POTW, but in no case discharges with pH of less than 5.0, unless the POTW is specifically designed to accommodate such discharges;
5. High pH Limit: Any wastewater with a pH greater than 11.0 or otherwise causing corrosive structural damage to the POTW or equipment;

6. Toxic Pollutants:

- a. POTW Interference: Any pollutants including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW.
 - b. Toxic Pollutants: Any pollutants released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with wastewater treatment or sludge handling process, constitute a hazard to humans or animals, create an acute toxic effect in the receiving waters of the POTW, contaminate the sludge of the POTW systems, or exceed the limitations set forth in a categorical or local pretreatment standard or requirement;
7. Noxious Substances: Any waste containing noxious or malodorous liquids, in such quantities that, alone or in combination with other waste substances are sufficient to create a hazard for humans, animals or the environment, interfere detrimentally with sewage treatment processes, pass-through treatment facilities in concentrations exceeding discharge limitations, prevent entry into the sewers for their maintenance and repair, cause a public nuisance, or cause any hazardous condition to occur in the POTW;
8. Gaseous Substances: Any pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
9. Untreatable Substances: Any substance which may cause the POTW's effluent or any other product of the POTW, such as residues, sludges or scums, to be unsuitable for reclamation and reuse or to interfere with the reclamation process where the POTW is pursuing a reuse and reclamation program. In no case shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under section 405 of the act, or its successor; any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the solid waste disposal act, the clean air act, the toxic substances control act, or state criteria applicable to the sludge management method being used;
10. UPDES Permit Violation: Any substances which will cause the POTW to violate its UPDES and/or state disposal system permit or the receiving water quality standards;
11. Objectionable Color: Any wastewater with objectionable color not removed in the POTW treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions which consequently imparts color to the treatment plant's effluent, thereby violating the POTW's UPDES permit;
12. Heat: Any wastewater with heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds forty degrees Celsius (40°C) (104°F);
13. Radioactive Wastes: Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the director in compliance with applicable state or federal regulations;

14. Oil And Grease: Any wastewater containing petroleum oil, nonbiodegradable cutting oil, products of mineral oil origin or petroleum based grease, in amounts that will cause interference or pass-through;
15. Trucked Wastes: Trucked or hauled pollutants, except at discharge points designated by the POTW;
16. Waters: Stormwater, surface water, groundwater, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the director in a wastewater discharge permit;
17. Pretreatment Residue: Sludges, screenings, or other residues from the pretreatment of industrial wastes;
18. Medical Waste: Medical wastes in amounts or concentrations that would cause a violation of any one of the objectives included in subsection [17.32.020B](#) of this title;
19. Wastewater: Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail any toxicity test;
20. Detergents: Detergents, surface active agents, or other substances that might cause excessive foaming in the POTW;
21. Saltwater: Saltwater or brine from commercial or industrial establishments in concentrations that will interfere with wastewater collection, treatment or treated wastewater reuse including, but not limited to, commercial or industrial backwashes or similar waste streams resulting from the direct addition of salt;
22. Compounds For Pest Control: Any discharges containing compounds that are labeled for the control of pest species of any type, such as, but not limited to, acaricides, bactericides, fungicides, herbicides, insecticides, molluscicides, nematocides and rodenticides in concentrations that would cause interference or pass-through at the POTW or otherwise cause the POTW to violate its UPDES permit.

Pollutants, substances, or wastewater prohibited by this division shall not be processed or stored in such a manner that they could be discharged to the POTW. (Ord. 68-11, 2011)

17.36.070: NATIONAL CATEGORICAL PRETREATMENT STANDARDS:

Upon the promulgation of the federal national categorical pretreatment standard for a particular industrial subcategory, the federal standard, if more stringent than limitations imposed in this chapter for sources in that subcategory, shall immediately supersede the limitations imposed herein. Categorical industrial users must comply with the national categorical pretreatment standards found at 40 CFR chapter I, subchapter N, parts 405-471.

- A. Where a categorical pretreatment standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, the director may impose equivalent concentration or mass limits in accordance with subsections D and E of this section.
 - B. When the limits in a categorical pretreatment standard are expressed only in terms of mass of pollutant per unit of production, the director may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual industrial users.
 - C. When wastewater subject to a categorical pretreatment standard is mixed with wastewater not regulated by the same standard, the director shall impose an alternate limit in accordance with 40 CFR 403.6(e).
 - D. When a categorical pretreatment standard is expressed only in terms of pollutant concentrations, an industrial user may request that the city convert the limits to equivalent mass limits. The determination to convert concentration limits to mass limits is within the discretion of the director. The city may establish equivalent mass limits only if the industrial user meets all the conditions set forth in subsections D1a through D1e of this section.
1. To be eligible for equivalent mass limits, the industrial user must:

- a. Employ, or demonstrate that it will employ, water conservation methods and technologies that substantially reduce water use during the term of its wastewater discharge permit;
 - b. Currently use control and treatment technologies adequate to achieve compliance with the applicable categorical pretreatment standard, and not have used dilution as a substitute for treatment;
 - c. Provide sufficient information to establish the facility's actual average daily flow rate for all waste streams, based on data from a continuous effluent flow monitoring device, as well as the facility's long term average production rate. Both the actual average daily flow rate and the long term average production rate must be representative of current operating conditions;
 - d. Not have daily flow rates, production levels, or pollutant levels that vary so significantly that equivalent mass limits are not appropriate to control the discharge; and
 - e. Have consistently complied with all applicable categorical pretreatment standards during the period prior to the industrial user's request for equivalent mass limits.
2. An industrial user subject to equivalent mass limits must:
- a. Maintain and effectively operate control and treatment technologies adequate to achieve compliance with the equivalent mass limits;
 - b. Continue to record the facility's flow rates through the use of a continuous effluent flow monitoring device;
 - c. Continue to record the facility's production rates and notify the director whenever production rates are expected to vary by more than twenty percent (20%) from its baseline production rates determined in subsection D1c of this section. Upon notification of a revised production rate, the director will reassess the equivalent mass limit and revise the limit as necessary to reflect changed conditions at the facility; and
 - d. Continue to employ the same or comparable water conservation methods and technologies as those implemented pursuant to subsection D1a of this section so long as it discharges under an equivalent mass limit.
3. When developing equivalent mass limits, the director:
- a. Will calculate the equivalent mass limit by multiplying the actual average daily flow rate of the regulated process(es) of the industrial user by the concentration based daily maximum and monthly average standard for the applicable categorical pretreatment standard and the appropriate unit conversion factor;
 - b. Upon notification of a revised production rate, will reassess the equivalent mass limit and recalculate the limit as necessary to reflect changed conditions at the facility; and
 - c. May retain the same equivalent mass limit in subsequent wastewater discharge permit terms if the industrial user's actual average daily flow rate was reduced solely as a result of the implementation of water conservation methods and technologies, and the actual average daily flow rates used in the original calculation of the equivalent mass limit were not based on the use of dilution as a substitute for treatment pursuant to section [17.36.110](#) of this chapter. The industrial user must also be in compliance with section [17.69.030](#) of this title regarding the prohibition of bypass.
- E. The director may convert the mass limits of the categorical pretreatment standards of 40 CFR parts 414, 419, and 455 to concentration limits for purposes of calculating limitations applicable to individual industrial users. The conversion is at the discretion of the director.
- F. Once included in its permit, the industrial user must comply with the equivalent limitations developed in this section in lieu of the promulgated categorical pretreatment standards from which the equivalent limitations were derived.
- G. Many categorical pretreatment standards specify one limit for calculating maximum daily discharge limitations and a second limit for calculating maximum monthly average, or four (4) day average, limitations. Where such

standards are being applied, the same production or flow figure shall be used in calculating both the average and the maximum equivalent limitation.

- H. Any industrial user operating under a permit incorporating equivalent mass or concentration limits calculated from a production based standard shall notify the director within two (2) business days after the user has a reasonable basis to know that the production level will significantly change within the next calendar month. Any user not notifying the director of such anticipated change will be required to meet the mass or concentration limits in its permit that were based on the original estimate of the long term average production rate. (Ord. 68-11, 2011)

17.36.080: STATE PRETREATMENT STANDARDS:

State requirements and limitations on discharges shall apply when they are more stringent than federal requirements and limitations or those in this chapter. (Ord. 68-11, 2011)

17.36.090: LOCAL LIMITS:

- A. The director is authorized to establish local limits pursuant to 40 CFR 403.5(c). The director may impose mass limitations in addition to concentration based limitations for local limits.
- B. Local limits established by the director and approved by the state are listed in a separate document entitled "City Of Salt Lake City Corporation Local Limits". This document is incorporated in this chapter by reference.
- C. Local limits shall apply at the designated sampling point for users holding a valid wastewater discharge permit, otherwise, the local limits apply at the end of the user's sewer lateral pipeline at the point where the industrial wastewater is discharged to the POTW.
- D. Local limits are established to prevent pass-through and interference and shall be reviewed as needed. Any revision to the control authority's local limits shall be submitted for approval to the state. Upon state approval, the revised local limits shall be enforceable under the conditions of this division. Copies of the most recently state approved local limits shall be made available upon request through the office of the director.
- E. The director may develop best management practices (BMPs), by ordinance or in wastewater discharge permits, to implement local limits and the requirements of this division. (Ord. 68-11, 2011)

17.36.100: CITY'S RIGHT OF REVISION:

The city reserves the right to establish, by ordinance or in wastewater discharge permits, more stringent standards or requirements on discharges to the POTW consistent with the purpose of this division. (Ord. 68-11, 2011)

17.36.110: DILUTION OF DISCHARGES PROHIBITED:

No user shall ever increase the use of process water, or in any way attempt to dilute a discharge as a partial or complete substitute for adequate pretreatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable pretreatment standard or requirement. The director may impose mass limitations on users who are using dilution to meet applicable pretreatment standards or requirements, or in other cases when the imposition of mass limitations is appropriate pursuant to 40 CFR 403.6(c)(1). (Ord. 68-11, 2011)

17.36.120: PRETREATMENT REQUIREMENTS:

Users shall provide wastewater treatment as necessary to comply with this division and shall achieve compliance with all categorical pretreatment standards, local limits, and the prohibitions set out in section [17.36.060](#) of this chapter within the time limitations specified by EPA, the state, or the director, whichever is more stringent. Any facilities or equipment (e.g., continuous pH meters, ORP meters) necessary for ensuring consistent compliance shall be provided, operated, and maintained at the user's expense. Detailed plans describing such facilities, equipment and operating procedures shall be submitted to the director for review, and shall be acceptable to the director before such facilities are constructed and equipment installed. The review of such plans and operating procedures shall in no way relieve the user from the responsibility of modifying such facilities or equipment as necessary to produce a discharge acceptable to the city under the provisions of this division. Following completion of construction the director may request the user to provide copies of as built drawings to be retained by the director. Subsequent alterations or additions to such pretreatment or flow control facilities shall not be made without prior notice to the director. New sources shall install and operate all pollution control equipment required to meet applicable pretreatment standards prior to discharging to the POTW. (Ord. 68-11, 2011)

17.36.130: ADDITIONAL PRETREATMENT MEASURES:

- A. Whenever deemed necessary, the director may require users to restrict their discharge during peak flow periods, designate that certain wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage waste streams from industrial waste streams, and such other conditions as may be necessary to protect the POTW and determine the user's compliance with the requirements of this division.
- B. The director may require any person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage and flow control facility to ensure equalization of flow. A wastewater discharge permit may be issued solely for flow equalization.
- C. The director may require any user with the potential to discharge flammable substances to install and maintain an approved combustible gas detection meter. (Ord. 68-11, 2011)

17.36.140: GREASE, OIL AND SAND TRAPS OR INTERCEPTORS:

A. Requirements:

- 1. From and after the effective date hereof, grease, oil and sand interceptors, as described by the Utah plumbing code, hereinafter interceptors, shall be required, both for any new or old business where its building is newly constructed, added to or refurbished to the extent that a building permit is required under the law, for any food processing or preparation establishments, or any other user when, in the opinion of the director, they are necessary for the proper handling of liquid wastes containing grease, or any flammable wastes, sand and other harmful ingredients, except that such interceptors shall not be required for domestic dwellings.
 - 2. An interceptor shall be of a type and capacity which meets all applicable standards set forth in the Utah plumbing code, and all standards adopted by the director, and shall be located as to be readily accessible for cleaning by user and inspection by POTW employees.
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- B. Floor Drains: Any existing floor drain, such as those from interior auto maintenance shops, garages or machine shop facilities, that discharges into a storm drain system shall be plugged, or require the installation and maintenance of an interceptor, sample box and sanitary sewer connection. All new facilities will be required to meet these regulations.
 - C. Interceptor Construction: All interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily removable covers which, when bolted in place, shall be gastight and watertight.
 - D. Inspection, Approval, And Maintenance Of Interceptor: Where installed, interceptors must be inspected and approved by the city, and shall be maintained in continuous efficient operation at all times by the user at the user's sole expense.
 - E. Food Establishments: In the event a food processing or preparation establishment installs or has installed an interceptor pursuant to this section, the installation shall not in and of itself, relieve the user from complying with section [17.52.220](#) of this title. (Ord. 68-11, 2011)

17.36.150: ACCIDENTAL DISCHARGE/SLUG DISCHARGE CONTROL PLANS:

- A. The director shall evaluate whether each SIU needs an accidental discharge/slug discharge control plan or other action to control slug discharges within one year after the industrial user has been designated an SIU. The director shall reevaluate each SIU every two (2) years after the initial evaluation. The director may require any user to develop, submit for approval, and implement such a plan or take such other action that may be necessary to control slug discharges. Alternatively, the director may develop such a plan for any user. An accidental discharge/slug discharge control plan shall address, at a minimum, the following:
 - 1. Description of discharge practices, including nonroutine batch discharges;
 - 2. Description of stored chemicals;

3. Procedures for immediately notifying the director of any accidental or slug discharge, as required by subsection [17.52.160F](#) of this title; and
4. Procedures to prevent adverse impact from any accidental or slug discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response. (Ord. 68-11, 2011)

17.36.160: HAULED WASTEWATER:

- A. Septic tank waste, from domestic sources only, may be introduced into the POTW only at locations designated by the director, and at such times as are established by the director. Such waste shall not violate sections [17.36.060](#) through [17.36.090](#) of this chapter or any other requirements established by the city. The director may require septic tank waste haulers to obtain wastewater discharge permits.
- B. Septic tank waste haulers may discharge loads only at locations designated by the director. No load may be discharged without prior consent of the director. The director may collect samples of each hauled load to ensure compliance with applicable standards. The director may require the septic tank waste hauler to provide a waste analysis of any load prior to discharge.
- C. Septic tank waste haulers must provide a waste tracking form for every load. This form shall include, at a minimum, the name and address of the septic tank waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall certify that the wastes to be discharged are domestic in origin only and contain no industrial wastes or any wastes that are RCRA hazardous wastes.
- D. Wastewater from recreational vehicles and boats shall only be discharged at dump sites designated for such use. The city reserves the right to inspect records of individual wastewater dumps from the authorized operators of each designated dump site. Detailed plans describing such facilities and operating procedures shall be submitted to the director for review, and shall be acceptable to the director before such facilities are constructed. (Ord. 68-11, 2011)

17.36.170: REPAIR OR REPLACEMENT OF SEWERS; SEWER CONTRACTOR REQUIREMENTS:

No user not licensed as a plumber or licensed and bonded contractor, pursuant to the requirements hereof, shall engage in the business of repair or replacement of a building drain or building sewer, without first obtaining a permit from the POTW and filing a corporate surety bond with the POTW in an amount to be specified by the POTW, such that the principal and surety shall hold POTW harmless from any and all injuries to persons or damage to property, and particularly to the sewer mains, caused by or through the cleaning or removal of any stoppage in any drain or sewer, and further conditioned that the principal will faithfully observe all ordinances, rules and regulations of said POTW pertaining to plumbing and sewers. (Ord. 68-11, 2011)

17.36.180: PRIVATE FACILITIES; MANDATORY CONNECTION TO SEWERS:

- A. Connection Required When: The owner or the owner's agent of all houses, buildings or properties used for human occupancy, employment, recreation or other purposes, situated within the Salt Lake City sewer service area and abutting on any street, alley or right of way in which there is now located or may in the future be located a city sewer line, shall, when notified and required in writing by the city, at owner's expense, install suitable toilet facilities therein, and connect such facilities directly with the city sewer system in accordance with the provisions herein within ninety (90) days after date of official notice to do so, provided that the city sewer line is within three hundred feet (300') of the owner's property line.
- B. Discontinuance Of Privy Vaults, Cesspools And Septic Tanks:
 1. After date of official notice in subsection A of this section, no user, or his/her agent, or other person having charge of or occupying any property within three hundred feet (300') of a city sewer shall maintain or use or cause or permit to exist any privy vault, septic tank or cesspool upon such property without the city's written consent.

2. In no case shall any plumbing in any house or building not complying with subsection A of this section and official notice remain unconnected to any public sewer for more than ninety (90) days after written notice from the city.

C. Outhouses Prohibited: No user shall erect or maintain any outhouse or privy within the city sewer service area, except as licensed by the city. (Ord. 68-11, 2011)

17.36.190: PRIVATE SEWAGE DISPOSAL; LIMITATIONS:

A. Private Disposal Prohibited When:

1. No user shall construct, use or maintain any privy, privy vault, septic tank, cesspool or other facility intended or used for the disposal of sewage within the boundaries of POTW where POTW service is available within three hundred feet (300') of the property line of any property upon which any building, privy, privy vault, septic tank, cesspool or other facility as described above exists, except as provided in subsection B1 of this section.
2. No user shall construct, use or maintain any privy, privy vault, septic tank, cesspool or other facility intended or used for the purpose of disposal of sewage from any subdivision located within the boundaries of POTW.
3. Within ninety (90) days from the date POTW service becomes available within three hundred feet (300') of the property line of any buildings served by any private sewage disposal system, a direct connection shall be made to the POTW sewer by the owner at owner's expense in compliance with the provisions herein contained, and any septic tank, cesspool, privy or similar private sewage disposal facilities shall be immediately emptied and filled with suitable material.

B. Private Disposal Authorized When:

1. Where POTW service is not available within the limits provided in subsection A of this section, the building's sewer shall be connected to a private sewage disposal system complying with the provisions of the Salt Lake Valley health department.
2. Prior to commencement of construction of a private sewage disposal system, the user or his/her agent shall first obtain written permission from the director for submission to the Salt Lake Valley health department.
3. The user or his/her agent shall operate and maintain the private sewage disposal facilities at user's sole expense and in compliance with all applicable federal, state, and local laws, rules and regulations.
4. No statement contained in this section shall be construed to interfere with any additional requirements which may be imposed by the Salt Lake Valley health department, the Utah water quality board or the Utah state department of environmental quality. (Ord. 68-11, 2011)

17.36.200: PROHIBITED CONNECTIONS TO POTW:

No person, either in person or through an agent, employee or contractor, shall make, allow or cause to be made any sewer connection to the POTW for service, or for the purpose of servicing property outside the boundaries of the POTW, except upon the written approval of the director. Such connection to the POTW shall be made by a person who is either a bonded, state licensed sewer contractor or plumber who has obtained necessary sewer and street permits. (Ord. 68-11, 2011)

17.36.210: DISCONTINUANCE OF SERVICE:

Any user desiring to discontinue service shall notify the POTW in writing of such fact at least thirty (30) days before the date when such service shall be discontinued. Upon giving such written notice, the user shall not be responsible for bills incurred after the termination date specified in the notice. Any unused credit balance in favor of the customer as a result of an advance payment of bills or deposit will be promptly refunded upon discontinuance of service. (Ord. 68-11, 2011)

17.36.220: MANHOLE COVERS:

No user or other person shall open any POTW sewer manhole without permission from the director. (Ord. 68-11, 2011)

17.36.230: DAMAGING SEWER SYSTEM PROHIBITED:

No person shall damage, break or remove any part or portion of any POTW sewer system, or any sewer appliance or appurtenance, without the POTW's prior written consent. (Ord. 68-11, 2011)

Chapter 17.40

POTW SEWER CONSTRUCTION

17.40.010: DESIGN AND CONSTRUCTION MANUALS AND SPECIFICATIONS:

The size, slope alignment, materials of construction of a POTW sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing and backfilling the trench shall all conform to the requirements set forth in the code of waste disposal regulations, adopted by the Utah state water quality board pursuant to state law, and other specific requirements as set forth by the POTW. WEF "Manual Of Practice No. 9, Design And Construction Of Sanitary And Storm Sewer" (as revised), prepared by a joint committee of the Water Environment Federation and the American Society of Civil Engineers, is adopted as the general guideline for the planning, design and construction of all POTW sewers, unless modified by construction standards adopted by the POTW. All sewer main pipes installed in the public way shall be a minimum of eight inches (8") in diameter and minimum slope on sewer main pipeline shall be as follows, unless otherwise authorized in writing by the director:

<u>Diameter</u>	<u>Slope</u>
8 inch	0.40 percent
10 inch	0.30 percent
12 inch	0.20 percent
15 inch	0.15 percent
18 inch	0.10 percent
21 inch	0.09 percent
24 inch	0.08 percent
30 inch	0.06 percent

(Ord. 36-93 § 4, 1993: prior code § 37-10-1)

17.40.020: CONSTRUCTION; SEWER CONTRACTOR REQUIREMENTS:

The actual construction of the POTW sewer shall be conducted by a bonded sewer contractor licensed by the state of Utah. Prior to construction, the contractor must be approved by the director. (Ord. 36-93 § 4, 1993: prior code § 37-10-2)

17.40.030: EXCAVATIONS; SAFETY BARRICADES; RESTORATION OF SURFACES:

All excavations for POTW sewer installation shall be adequately guarded by the contractor with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored by the contractor in a manner satisfactory to the director or governing entity or agency. (Ord. 36-93 § 4, 1993: prior code § 37-10-3)

17.40.040: CONSTRUCTION; INSPECTION AND APPROVAL:

All phases of the POTW sewer construction shall be inspected and approved by the POTW. Failure to obtain the necessary inspections and approvals may result in the work being redone. All work shall be completed in accordance with the construction, testing and acceptance standards of the POTW. (Ord. 36-93 § 4, 1993: prior code § 37-10-5)

17.40.050: MAINTENANCE OF SEWERS:

All POTW mains, sewers and pipelines located within the public way, except building sewers, shall be maintained by the POTW. City owned pipelines located within easements may be maintained by the POTW pursuant only to contract. (Ord. 36-93 § 4, 1993: prior code § 37-10-4)

17.40.060: PETITIONING CONTRACTS:

All new main pipelines must be petitioned for to the public utilities director. All mains shall be extended, at a minimum, to the far end of the lot being served. All roads shall be subgraded prior to installation of the public utilities facilities. All applicable service connection fees shall be paid for each lot to be served thereby prior to installation of the main extension. All sewer mains and related facilities installed shall be subject to the acceptance of the city's department of public utilities. All conditions required by the city shall be the same as applicable sections of chapters 17.36, 17.44 and 17.48 of this title, or their successors. (Ord. 36-93 § 4, 1993; Ord. 8-90 § 3, 1990)

Chapter 17.44 CONSTRUCTION, CONNECTION AND REPAIR PERMITS

17.44.010: SEWER WORK; PERMIT REQUIRED:

No person shall commence or carry on the work of installing, repairing, altering or connecting any building sewer, directly or indirectly, to the POTW sewer, without first having received applicable excavation and/or sewer connection permits. (Ord. 36-93 § 5, 1993; prior code § 37-4-1)

17.44.020: PERMIT; APPLICATION FOR SEWER CONNECTIONS:

Application for permits for sewer connections must be made in writing by a licensed and bonded contractor or plumber, on an application blank furnished by the POTW. Any permit issued shall be subject to the rules and regulations of the POTW. (Ord. 36-93 § 5, 1993; prior code § 37-4-2)

17.44.030: ADDITIONAL SURVEYS OR INSPECTIONS; FEE:

In the event that the director finds the sewer connection at the building is not exposed when the inspector or surveyor visits the site to determine the materials used and/or elevation, or if the permittee has not given sufficient information when making application for a permit so that the survey can be completed, or if the permittee requests a change in the survey, an additional fee, as shown on the Salt Lake City consolidated fee schedule, shall be determined and charged by the POTW. (Ord. 24-11, 2011)

17.44.040: PERMIT; APPLICATION FOR REPAIRS AND REPLACEMENTS; FEE:

Application for permits for sewer repair or replacement of any sewer line must be made in writing by a licensed and bonded sewer contractor or plumber on an application furnished by the director. Repair or replacement of any sewer line shall be tested and inspected in accordance with standards set by the POTW. The fee shown on the Salt Lake City consolidated fee schedule shall be determined and collected by the POTW for each such inspection. (Ord. 24-11, 2011)

17.44.050: TRIAL SEWER SURVEY FEE:

In order to determine the feasibility of connecting a building to the POTW sewer, the property owner, or licensed and bonded plumber or sewer contractor may make an application for a trial sewer survey, the cost of which shall be set by the POTW and shown on the Salt Lake City consolidated fee schedule. Any payment made hereunder does not constitute payment for a permit to connect to the sewer. Such survey shall not be made until the fee is paid in full. (Ord. 24-11, 2011)

17.44.060: PERMIT; ISSUANCE CONDITIONS; SEWER ASSESSMENT PAYMENT:

- A. No permit for a sewer connection shall be issued until the POTW has been paid any required assessment or surcharge in addition to the connection fee.
- B. The director shall maintain a record of the payment of the assessments and fees, together with survey plats indicating the real property within POTW for which the sewer connection assessments and fees have been paid, and these records shall be open to public inspection during regular hours of the POTW. (Ord. 36-93 § 5, 1993; prior code § 37-4-15)

17.44.070: ASSESSMENTS IN ADDITION TO FEES:

The payment of any of the assessments or surcharges required by the POTW shall not relieve the owner of the payment of other fees required herein. (Ord. 36-93 § 5, 1993: prior code § 37-4-16)

17.44.080: PERMIT; NOT TRANSFERABLE:

No contractor or plumber shall use or allow his/her license to be used in any way for the purpose of procuring a permit for any person other than himself, herself, or such person's duly authorized representative. The duly licensed and bonded sewer contractor or plumber shall be responsible for any and all work done pursuant to the issuance of any permit specified hereunder, regardless of whether the work is actually done by the contractor or the contractor's duly authorized representative. (Ord. 36-93 § 5, 1993: prior code § 37-4-8)

17.44.090: TIME FOR COMPLETION OF WORK:

The work authorized by a permit hereunder shall be done with all possible speed and in accordance with POTW rules and regulations. If the work is not completed within sixty (60) days (unless a special extension is granted in writing by the POTW) the permit shall be void, no refund made for such permit, and a new permit must be obtained to finish the work. (Ord. 36-93 § 5, 1993: prior code § 37-4-9)

17.44.100: INSPECTION OF SEWER LINES; CORRECTIONS:

The inspection of sewer lines between the POTW sewer main and within three feet (3') of the building foundation shall be under the direction of the director. The POTW shall be notified on a regular working day at least twenty four (24) hours in advance of the time the permittee requests inspection. The entire length of the building sewer, including the junction at the POTW sewer shall be fully exposed. Any portion of the work not done in accordance with these requirements and the instruction of the POTW, or its inspectors, shall be corrected promptly. There shall be no backfilling until the inspection is made and the work accepted. No certificate of inspection shall be issued until the work is satisfactorily performed and accepted. (Ord. 36-93 § 5, 1993: prior code § 37-4-11)

17.44.110: REINSPECTION; ADDITIONAL FEE:

In the event that the inspector finds the connection not in conformity with POTW standards, or if any changes are necessary requiring another inspection, a charge to be set by the POTW and shown on the Salt Lake City consolidated fee schedule shall be collected for each such additional inspection. (Ord. 24-11, 2011)

17.44.120: FAILURE TO REMEDY DEFECTIVE WORK:

No further permit shall be issued to any licensed and bonded contractor or plumber who has failed to remedy defective work to the satisfaction of the director, after such contractor or plumber has been notified in writing. (Ord. 36-93 § 5, 1993: prior code § 37-4-7)

17.44.130: PERMIT; REVOCATION CONDITIONS:

The director may, at any time, revoke a permit because of defective work which has not been corrected after written notice and within the time specified therein by the director. (Ord. 36-93 § 5, 1993: prior code § 37-4-10)

17.44.140: STARTING WORK WITHOUT PERMIT; STOP WORK ORDER:

If any work requiring a permit is commenced without the necessary permits first having been obtained therefor, the POTW may immediately issue a stop work order until the proper permits are obtained, and such an offender may, in addition to any other penalties, be charged double the regular permit fee. (Ord. 36-93 § 5, 1993: prior code § 37-4-5)

17.44.150: SURVEY STAKES; REMOVAL OR COVERING PROHIBITED:

Survey stakes set by the POTW for the sewer connection must not be disturbed, removed or covered. (Ord. 36-93 § 5, 1993: prior code § 37-4-13)

17.44.160: SURVEY STAKES; RESETTING FEE:

In the event that such survey stakes are not available for the inspector to check the pipeline when inspection is required, the inspector may refuse to make an inspection of the work until stakes have been reset by the POTW and the fee to be set by the POTW and shown on the Salt Lake City consolidated fee schedule has been paid by the permittee for the restaking. (Ord. 24-11, 2011)

17.44.170: EXTENSIONS; APPLICATION AND ADVANCING OF EXPENSES:

Any person desiring to have the sewer mains within the city extended must advance the whole expense of such extension and the additional expenses necessary for sewer service or related facilities. Such person may make application to the city by petition containing a description of such proposed extension, accompanied by a map showing the location thereof, which petition shall also contain an offer to advance the whole expense of making the same, as said expense shall be certified to by the director, by either entering into a contract for installation by and all related costs to be borne by petitioner, or a contract to pay for such expense with the work to be done by or contracted for by the city. (Ord. 36-93 § 5, 1993: prior code § 37-4-17)

17.44.180: EXTENSIONS; STATEMENT OF COSTS:

Upon the receipt of such petition and map, and before the petition is granted, the mayor shall obtain from the director of public utilities a certified statement showing the whole cost and expense of making such extension. (Ord. 36-93 § 5, 1993: prior code § 37-4-18)

17.44.190: EXTENSIONS; CONSTRUCTION WORK:

If the mayor shall grant such petition, the petitioner shall either: a) enter into a contract with the city whereby the petitioner shall install the extension entirely at petitioner's expense, but pursuant only to plans and specifications prior approved by the director, or b) within thirty (30) days, or such other time as the director shall indicate after the granting thereof, deposit the amount of the cost and expense of making such extension, as certified by the director, with the city treasurer. Such work shall either be done by or contracted for by the city. (Ord. 36-93 § 5, 1993: prior code § 37-4-19)

17.44.200: EXTENSIONS; REFUND OF EXPENSES; CONDITIONS:

The certified cost of the petitioner's installation of the extension, or money deposited pursuant to section [17.44.170](#) or [17.44.190](#) of this chapter, or successor sections, may be partially or completely refunded, without interest thereon, only under the following conditions:

- A. During a period of fifteen (15) years from the date on which such an extension is completed and approved in writing by the city, the city will add a charge to be refunded to the petitioner, as set forth below, for each connection made to such extension pursuant to a written request for a service lateral connection thereto from a property owner.
- B. Said charge shall be a front footage charge prorated against the property to be served, based upon the cost of installation of such extension prorated over the total front footage of the petitioner's property fronting on the extension.
- C. In no event shall reimbursement for any extension hereunder exceed the amount of the deposit required therefor under section [17.44.190](#) of this chapter, or its successor, less the prorated front footage charge against petitioner's property to be served.
- D. Title to all facilities installed in connection with the extension, except service lines, shall vest in the city, and any easements and rights of way, if any, deemed necessary for such extension by the director of the department of public utilities, shall be conveyed without cost to the city prior to the commencement of any construction. (Ord. 36-93 § 5, 1993: Ord. 83-90 § 6, 1990: Ord. 59-87 § 5, 1987: prior code § 37-4-20)

17.44.210: RETURN OF CITY'S EXPENSES:

- A. During a period of fifteen (15) years from the date on which an extension is completed where the city has advanced all or part of the funds for such extension and has decided to obtain a refund of expense thereof from connections thereto, the city shall make an additional proportional charge based upon the following formula for any connection to such extension pursuant to a written request for service lateral connection thereto from a property owner.
- B. Such charge shall be a front footage charge prorated against the property to be served, based upon the said cost of installation of the extension prorated over the total front footage of the petitioner's property fronting on the extension. (Ord. 36-93 § 5, 1993: Ord. 83-90 § 7, 1990: Ord. 59-87 § 2, 1987: prior code § 37-4-21)

Chapter 17.48 BUILDING SEWERS, CONNECTIONS AND REPAIRS

17.48.010: DESIGN AND CONSTRUCTION SPECIFICATIONS:

The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in

excavating, placing of the pipe, jointing, testing and backfilling the trench shall all conform to the requirements of the building and plumbing code or other applicable laws, rules and regulations of federal, state, and local entities, and POTW construction standards. All building sewers larger than six inches (6") in diameter shall be approved in writing by the director. (Ord. 36-93 § 6, 1993: prior code § 37-3-3)

17.48.020: SEWER SPECIFICATIONS:

A. The size of a building sewer shall be four inches (4") or six inches (6") in diameter. The minimum slope shall be:

4 inch tile	2 percent
4 inch ductile iron or PVC	1.67 percent
6 inch concrete or tile	1 percent
6 inch iron or PVC	0.89 percent
8 inch concrete or tile	0.40 percent
8 inch iron or PVC	0.40 percent

B. Acceptable materials are:

1. Vitrified clay (tile);
2. Concrete over four inches (4") in diameter;
3. Minimum SDR 35 PVC;
4. Cast iron; and
5. Ductile iron.

C. Pipe alignment of the building sewer shall be as approved by the POTW. Deviation of this section may only be considered upon written request from the owner and plumber. Approval of any such request shall be in writing by the director. (Ord. 36-93 § 6, 1993: prior code § 37-3-11)

17.48.030: SEPARATE CONNECTION FOR EACH PREMISES:

Each separate building or premises shall have a separate connection to the main sewer line, except when deemed impracticable and so found in writing by the director. Each owner will bear and pay for the maintenance and repair of such owner's building or lateral sewer. Notwithstanding the above, where a dwelling is the rear of another building and on the same building lot and owned by the same party, the director may issue a sewer permit for a multiple connection. (Ord. 36-93 § 6, 1993: prior code § 7-3-1)

17.48.040: REUSE OF OLD BUILDING SEWERS:

Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the POTW, to meet all requirements herein, otherwise, old building sewers shall be plugged at the user's expense upon discontinuance of service. Services to be disconnected permanently shall be plugged at the wye or property line as determined by the POTW. The plug in the old building sewer must be approved and an inspection fee will be charged by the POTW. (Ord. 36-93 § 6, 1993: prior code § 37-3-2)

17.48.050: CONNECTION TO POTW SEWER; REQUIREMENTS:

No person shall make any connections to, or in any manner perform any work upon any of the mains, connections or appliances pertaining to the sewer facilities of Salt Lake City until such person shall have secured a license, been registered, and where applicable, filed a performance bond guaranteeing the installation of underground sewer facilities within the city service area. The applicant for the building sewer permit shall notify the director

when the building sewer is ready for inspection and connection to the POTW sewer. The connection shall be made by or under the supervision of the director or his/her representative. The connection of the building sewer to the POTW sewer shall conform to the requirements of the building and plumbing codes, or other applicable laws, rules and regulations of federal, state and local entities. All such connections shall be made watertight. A bonded licensed plumber shall install service laterals from the main to the property line at the center of the lot or such other location as is approved by the city. (Ord. 36-93 § 6, 1993; Ord. 8-90 § 4, 1990; prior code § 37-3-6)

17.48.060: BUILDING SEWER ELEVATION; LOW AREAS:

In all buildings where the elevation is too low to permit gravity flow to the POTW sewer, sanitary sewage discharge from such building shall be lifted by a POTW approved means and discharged to the sewer and operated and maintained by the user. (Ord. 36-93 § 6, 1993; prior code § 37-3-4)

17.48.070: SEPARATION FROM OTHER UTILITIES:

All utility lines or conduits shall be separated from the building sewer as required by state law. In addition, separation of culinary water line and sanitary sewer line shall be a minimum of three feet (3') of undisturbed ground from outside pipe diameter to outside pipe diameter. A sanitary sewer crossing above a culinary water line shall be of a material approved by the director and extend a minimum of ten feet (10') on either side of the water line without a joint. (Ord. 36-93 § 6, 1993; prior code § 37-3-8)

17.48.080: PIPE TO BE FREE OF DEFECTS:

All pipe shall be sound, free from holes or cracks, without traps, valves or other obstructions which might prevent or retard the free passage of air and sewage. (Ord. 36-93 § 6, 1993; prior code § 37-3-12)

17.48.090: CONNECTION OF UNLIKE PIPE; STANDARDS:

Any connection of pipes of unlike materials shall comply with the Utah plumbing code and the POTW construction standards. (Ord. 36-93 § 6, 1993; prior code § 37-3-10)

17.48.100: JOINT WHICH CONNECTS TO POTW SEWER; SPECIFICATIONS:

The connection of the "wye" onto the main sewer shall be entirely surrounded with a collar of a design specified by the POTW construction standards. Connection work shall be done only by the POTW, or in the presence of the POTW inspector. The trench shall not be backfilled until the building sewer line has been connected, tested and approved by the POTW inspector. (Ord. 36-93 § 6, 1993; prior code § 37-3-16)

17.48.110: CLEANOUT REQUIREMENTS:

A cleanout "wye" must be located immediately at the property line or as approved by the director. In all cases, the cleanout pipe from the "wye" to the surface of the finished grade must be iron or other material approved by the director, and on a slope of forty five degrees (45°). The cover must be a city director approved cleanout plug. Additional cleanouts shall be placed a minimum of fifty feet (50') apart along any four inch (4") building sewer, and every one hundred feet (100') along any six inch (6") building sewer, and at all other changes in direction. Cross supports for cleanouts shall be eighteen inches (18") below the cleanout tops. No waste or soil shall enter cleanout pipes. A test tee shall be required at or near the property line or wye as required by inspector. (Ord. 36-93 § 6, 1993; prior code § 37-3-13)

17.48.120: INSTALLATION EXPENSES:

All costs and expenses incidental to the installation and connection of the building sewer shall be borne by the applicant. The applicant shall retain or employ a licensed and bonded sewer contractor or plumber to make connection to and install a sewer. (Ord. 36-93 § 6, 1993; prior code § 37-3-5)

17.48.130: FEE; OPENING SEWER WHEN JUNCTION PIPE NOT AVAILABLE:

Where there is no junction pipe in the POTW sewer at the point where connection is desired to be made, the opening of the sewer and the installation of the junction pipe will be made by the POTW or its designee, if deemed necessary by the POTW, upon payment of the fee shown on the Salt Lake City consolidated fee schedule to cover the cost of the work. (Ord. 24-11, 2011)

17.48.140: FEE; REPLACING DAMAGED JUNCTION PIPE:

In case the junction pipe to the POTW sewer is broken off or damaged, it must be replaced. The installing of a new junction pipe will be made by the POTW or its designee upon payment of the fee shown on the Salt Lake City consolidated fee schedule to cover the cost of the work. (Ord. 24-11, 2011)

17.48.150: TESTING FOR LEAKS:

All building sewers shall be tested for leaks in the manner prescribed by POTW and in the presence of its inspector. Every joint shall be watertight before acceptance by the inspector. (Ord. 36-93 § 6, 1993; prior code § 37-3-15)

17.48.160: TRENCH SAFETY AND SURFACE RESTORATION:

Safety for all trench excavation and restoration shall be the sole responsibility of the person making the excavation. (Ord. 36-93 § 6, 1993: prior code § 37-3-14)

17.48.170: EXCAVATION BARRICADES AND PUBLIC SAFETY:

All excavations for building sewer installation shall be adequately guarded by the owner or the owner's representative with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored by the owner or the owner's representative in a manner satisfactory to the POTW and the street owner. (Ord. 36-93 § 6, 1993: prior code § 37-3-7)

17.48.180: EARTH COVER REQUIRED:

No lateral sewer line shall have less than two feet (2') of earth cover at finished grade and four feet (4') minimum over the mains, unless specifically authorized otherwise in writing by the director. (Ord. 36-93 § 6, 1993: prior code § 37-3-17)

17.48.190: MAINTENANCE RESPONSIBILITY:

All building sewers, including the connection to the POTW sewer, shall be maintained by the property owner. (Ord. 36-93 § 6, 1993: prior code § 37-3-9)

17.48.200: SURVEY AND INSPECTION:

Each building sewer will have a survey and inspection before it is accepted by the city public utilities. No survey shall be made until the inside rough plumbing has been accepted by building and housing services unless written permission is granted by the director. Any adjustments to the building sewer after such permission is granted will be at the property owner's expense. (Ord. 36-93 § 6, 1993)

Chapter 17.52 WASTEWATER DISCHARGE PERMITS

17.52.010: PERMIT REQUIREMENT:

- A. No SIU shall discharge wastewater into the POTW without first obtaining a wastewater discharge permit from the director, except that an SIU that has filed a timely application pursuant to subsection [17.52.020B](#) of this chapter may continue to discharge for the time period specified therein.
- B. The director may require other users to obtain wastewater discharge permits as necessary to carry out the purposes of this division.
- C. Any violation of the terms and conditions of a wastewater discharge permit shall be deemed a violation of this division and subjects the wastewater discharge permittee to the sanctions set out in sections [17.68.010](#) through [17.68.170](#) of this title. Obtaining a wastewater discharge permit does not relieve a permittee of its obligation to comply with all federal and state pretreatment standards or requirements or with any other requirements of federal, state, and local law. (Ord. 68-11, 2011)

17.52.020: PERMIT; PERMITTING PROCEDURES:

- A. Wastewater Analysis: When requested by the director, any new or existing user must submit information on the nature and characteristics of its wastewater, including production and disposal procedures, within thirty (30) days of the request by completing a wastewater survey questionnaire. The control authority may prepare a form for this purpose and may periodically require users to update the survey. Failure to complete this survey shall be a violation of this division.
- B. Existing Connections: Any user required to obtain a wastewater discharge permit who was discharging wastewater into the POTW prior to the effective date hereof and who wishes to continue such discharges in the future, shall, within ninety (90) days after said date, apply to the director for a wastewater discharge permit in accordance with section [17.52.030](#) of this chapter, and shall not cause or allow discharges to the POTW to continue after ninety (90) days of the effective date hereof except in accordance with a wastewater discharge permit issued by the director.

C. New Connections: Any user required to obtain a wastewater discharge permit who proposes to begin or recommence discharging into the POTW must obtain such permit prior to the beginning or recommencing of such discharge. An application for this wastewater discharge permit, in accordance with section [17.52.030](#) of this chapter, must be filed at least ninety (90) days prior to the date upon which any discharge will begin or recommence. (Ord. 68-11, 2011)

17.52.030: PERMIT; APPLICATION CONTENTS:

A. Users required to obtain a wastewater discharge permit shall complete and file with the POTW an application in the form prescribed by the POTW, accompanied by a fee as set forth in section [17.52.270](#) of this chapter. In support of the application, the user shall submit, in units and terms appropriate for evaluation, some or all of the following information:

1. Identifying Information:

- a. Name, address, telephone number and location (if different from the address) of applicant and owner of the premises (if different from the tenant when property is leased) from which industrial wastes are intended to be discharged,
- b. The name of an authorized representative duly authorized to act on behalf of the facility,
- c. Description of activities, facilities, and plant production processes on the premises.

2. Identifying Number: SIC number and/or NAICS number.

3. Environmental Permits: A list of any environmental control permits held by or for the facility.

4. Description Of Operations:

- a. A brief description of the nature, average rate of production (including each product produced by type, amount, processes, and rate of production), and standard industrial classifications of the operation(s) carried out by such user. This description should include a schematic process diagram, which indicates all points of discharge to the POTW from the regulated and unregulated processes and from dilute flows such as the domestic waste, boiler blowdown and noncontact cooling water, if any.
- b. Types of wastes generated, and a list of all raw materials and chemicals used or stored at the facility which are, or could accidentally or intentionally be, discharged to the POTW. Material safety data sheets (MSDSs) of all chemicals shall be included.
- c. Number and type of employees, hours of operation, and proposed or actual hours of operation.
- d. Type and amount of raw materials processed (average and maximum per day).
- e. Site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, floor drains, and appurtenances by size, location, and elevation, and all points of discharge. If deemed necessary by the POTW, such plans shall provide for separate systems for handling sanitary and industrial wastewater.

5. Discharges: Time and duration of discharges.

6. Monitoring Location: The location for monitoring all wastes covered by the permit.

7. Flow Measurement: Information showing the measured average daily and maximum daily flow, in gallons per day, and peak wastewater flow rates, including daily, monthly and seasonal variations, if any, to the POTW from regulated process streams and other streams, as necessary, to allow use of the combined waste stream formula set out in 40 CFR 403.6(e) to determine alternate limits as described in subsection [17.36.070C](#) of this title.

8. Measurement Of Pollutants:

- a. The categorical pretreatment standards applicable to each regulated process and any new categorically regulated processes for existing sources.
- b. The results of sampling and analysis identifying the nature and concentration, and/or mass, where required by the standard or by the director, of regulated pollutants in the discharge from each regulated process. Sampling and analysis of unregulated flows and dilute flows may also be required by the director for all pollutants suspected to be present in the flows.
- c. Instantaneous, daily maximum, and long term average concentrations, or mass, where required, shall be reported.
- d. Each required sample shall be representative of daily operations and shall be analyzed in accordance with procedures set out in section [17.52.170](#) of this chapter and 40 CFR part 136 as amended. Where the standard requires compliance with a BMP or pollution prevention alternative, the user shall submit documentation as required by the director or the applicable standards to determine compliance with the standard.
- e. Sampling must be performed in accordance with procedures set out in section [17.52.180](#) of this chapter.
9. Monitoring Waiver: Any requests for a monitoring waiver or a renewal of an approved monitoring waiver for a pollutant neither present nor expected to be present in the discharge based on subsection [17.52.160D2](#) of this chapter.
10. Additional O&M; Additional Pretreatment: If additional O&M and/or additional pretreatment will be required for the user to meet the pretreatment standard, then the application shall contain the shortest compliance schedule by which the SIU will provide such additional pretreatment and/or O&M. The completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard. The schedule shall be arranged and reported to the control authority as set out in subsection [17.52.160B](#) of this chapter.
11. Other Pertinent Information: Any other information as may be deemed necessary by the director to evaluate the permit application.
12. Signed Statement: A statement signed by an authorized representative of the industrial user as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

B. Incomplete or inaccurate applications will not be processed and will be returned to the user for revision. (Ord. 68-11, 2011)

17.52.040: ZERO PROCESS WASTEWATER DISCHARGE PERMIT:

Zero discharge industrial facilities as defined in section [17.32.740](#) of this title must apply for and obtain a zero process wastewater discharge permit. The director may require the completion of a wastewater analysis as described in subsection [17.52.020A](#) of this chapter. The application contents for a zero process wastewater discharge permit shall be the same as that for an industrial wastewater discharge permit as described in section [17.52.030](#) of this chapter. The zero process wastewater discharge permit shall require the permittee, to submit in December and June of each year, a written certification signed by an authorized representative that the facility has not discharged any process wastewater to the sanitary sewer in the last six (6) month period and does not intend to discharge process wastewater in the coming six (6) month period. Failure to submit this certification shall be deemed a violation of this division. Any detected discharge of process wastewater to the city's sanitary sewer system by a zero process discharge industrial facility at any time shall immediately subject the user to the enforcement remedies included in [chapter 17.68](#) of this title. The zero process wastewater discharge permit may contain other limitations and requirements as deemed necessary by the director and this division. The duration of zero process wastewater discharge permits shall be the same as wastewater discharge permits as defined in section [17.52.070](#) of this chapter. (Ord. 68-11, 2011)

17.52.050: APPLICATION SIGNATORIES AND CERTIFICATIONS:

- A. All wastewater discharge permit applications, user reports and certification statements must be signed by an authorized representative of the user and contain the certification statement in subsections [17.52.210A](#) and [17.52.030A](#)12 of this chapter.
- B. If the designation of an authorized representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for environmental matters for the company, a new written authorization satisfying the requirements of this section must be submitted to the director prior to or together with any reports to be signed by an authorized representative.
- C. A facility determined to be a nonsignificant categorical industrial user by the director pursuant to subsection [17.32.570C](#) of this title must annually submit the signed certification statement in subsection [17.52.210B](#) of this chapter. (Ord. 68-11, 2011)

17.52.060: PERMIT; DECISIONS:

- A. Incomplete or inaccurate applications will not be processed and will be returned to the user for revision.
- B. The director will evaluate the data furnished by the SIU and may require additional information. Within one hundred twenty (120) days of receipt of a complete permit application, the director will determine whether to issue a wastewater discharge permit. The director may conditionally approve or deny any application for a wastewater discharge permit. (Ord. 68-11, 2011)

17.52.070: PERMIT; DURATION:

- A. A wastewater discharge permit shall remain in effect until terminated by the POTW.
- B. All wastewater discharge permits shall be issued for a specified time period, not to exceed five (5) years from the effective date of the permit. A permit may be issued for a period less than five (5) years, or may be stated to expire on a specified date, at the discretion of the director. Each wastewater discharge permit shall indicate a specific date upon which it will expire. Any permit may be canceled or terminated for failure to comply with the requirements of this division. (Ord. 68-11, 2011)

17.52.080: PERMIT; CONTENTS:

A wastewater discharge permit shall include such conditions as are deemed reasonably necessary by the director to prevent pass-through or interference, protect the quality of the water body receiving the treatment plant's effluent, protect worker health and safety, facilitate sludge management and disposal, and protect against damage to the POTW.

A. Wastewater discharge permits shall contain:

1. A statement that indicates the wastewater discharge permit issuance date, expiration date and effective date (see section [17.52.070](#) of this chapter);
2. A statement that the wastewater discharge permit is nontransferable without prior notification to the city in accordance with section [17.52.110](#) of this chapter, and provisions for furnishing the new owner or operator with a copy of the existing wastewater discharge permit;
3. Effluent limits, including BMPs, based on applicable pretreatment standards;
4. Self-monitoring, sampling, reporting, notification, and recordkeeping requirements. These requirements shall include an identification of pollutants (or BMP) to be monitored, sampling location, sampling frequency, and sample type based on federal, state, and local law;
5. The process for seeking a waiver from monitoring for a pollutant neither present nor expected to be present in the discharge in accordance with subsection [17.52.160D](#)2 of this chapter;

6. A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedule may not extend the time for compliance beyond that required by applicable federal, state, or local law;

7. Requirements to control slug discharge, if determined by the director to be necessary; and

8. Any grant of the monitoring waiver by the director (subsection [17.52.160](#)D2 of this chapter) shall be included as a condition in the user's permit.

B. Wastewater discharge permits may contain, but need not be limited to, the following conditions:

1. Requirements for the payment of the then current unit charge or schedule of user charges and fees for the wastewater to be discharged to the POTW;
2. Limits on the average and/or maximum rate and time of discharge and/or requirements for flow regulation and equalization;
3. Requirements for the installation of pretreatment technology, pollution control, or construction of appropriate containment devices, designed to reduce, eliminate, or prevent the introduction of pollutants into the treatment works;
4. Requirements for the development and implementation of spill control plans in accordance with section [17.36.150](#) of this title or other special conditions including management practices necessary to adequately prevent accidental, unanticipated, or nonroutine discharges; facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the industrial user's own cost and expense. Review and approval of such plans and operating procedures shall not relieve the industrial user from the responsibility to modify the industrial user's facility as necessary to meet the requirements hereof. In the case of an accidental discharge, the industrial user shall implement the requirements set out in subsections [17.52.160](#)F1 through F4 of this chapter;
5. Requirements for installation and maintenance of inspection and sampling facilities including flow measurement devices as contained in section [17.52.220](#) of this chapter;
6. Requirements for the director to implement the judicially enforceable remedies outlined in sections [17.68.010](#) through [17.68.170](#) of this title according to the city's enforcement response plan;
7. Requirements for submission of technical reports or discharge reports;
8. Requirements for maintaining and retaining records relating to wastewater discharge, as specified by the POTW, and affording POTW access thereto;
9. Requirements for development and implementation of waste minimization plans to reduce the amount of pollutants discharged to the POTW;
10. Requirements for notification of the POTW of any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the wastewater treatment system. The city reserves the ability to accept or deny any proposed changes to the wastewater discharges at the facility;
11. Requirements for separate systems to handle sanitary and industrial wastewater, such that in the event that the user's industrial wastewater is or could cause an interference or a potential interference with the POTW, that the industrial wastewater could be severed, preventing discharge into the POTW and still allowing the user's sanitary wastewater to discharge into the POTW;
12. A statement that compliance with the wastewater discharge permit does not relieve the permittee of responsibility for compliance with all applicable federal and state pretreatment standards, including those which become effective during the term of the wastewater discharge permit;
13. Production rates where mass discharge limits are required; and

14. Other conditions as deemed appropriate by the director to ensure compliance with this chapter, and state and federal laws, rules, and regulations. (Ord. 68-11, 2011)

17.52.090: PERMIT; ISSUANCE APPEAL PROCESS:

Upon issuance of the wastewater discharge permit, any person including the applicant shall have forty five (45) days to file in writing objections to any term or condition of the permit and:

- A. If no objections are received by the city within this time, the permit is deemed to be accepted.
- B. In its objection, the appealing party must indicate the individual wastewater discharge permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to place in the individual wastewater discharge permit sections.
- C. If a timely objection is filed and agreement cannot be reached with the POTW, the POTW may submit to the director the proposed permit conditions and the written objections thereto.
- D. The effectiveness of the individual wastewater discharge permit shall not be stayed pending the appeal.
- E. The director shall establish such special permit conditions as he or she deems advisable to ensure the applicant's compliance with this division or applicable law or regulation, and direct the POTW to issue a wastewater discharge permit accordingly.
- F. Appeals of decisions made by the director may be brought before the public utilities advisory committee (PUAC), which may reevaluate the issues raised on appeal. Decisions of the PUAC shall be considered final administrative actions for purposes of judicial review.
- G. Decisions by the PUAC not to reconsider an individual wastewater discharge permit, not to issue an individual wastewater discharge permit, or not to modify an individual wastewater discharge permit shall also be considered final administrative actions for purposes of judicial review; if a decision is not made by the PUAC within ninety (90) days of receipt of a written request, such request will be deemed denied.
- H. Aggrieved parties seeking judicial review of the final administrative individual wastewater discharge permit decision must do so by filing a complaint with the state of Utah third district court within thirty (30) days of the date of final action. (Ord. 68-11, 2011)

17.52.100: PERMIT; MODIFICATIONS AND REVISIONS:

- A. The director may modify a wastewater discharge permit for good cause, including, but not limited to, the following reasons:
 - 1. To incorporate any new or revised federal, state, or local pretreatment standards or requirements;
 - 2. To address significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of the wastewater discharge permit issuance;
 - 3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
 - 4. Information indicating that the permitted discharge poses a threat to the POTW personnel, beneficial sludge use or the receiving waters;
 - 5. Violation of any terms or conditions of the wastewater discharge permit;
 - 6. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting;
 - 7. Revision of or a grant of variance from categorical pretreatment standards pursuant to 40 CFR 403.13;

8. To correct typographical or other errors in the wastewater discharge permit; or
9. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with section [17.52.110](#) of this chapter. (Ord. 68-11, 2011)

17.52.110: PERMIT; TRANSFER:

A. Wastewater discharge permits may be transferred to a new owner or operator only if the permittee gives at least sixty (60) days' advance notice to the director and the director approves the wastewater discharge permit transfer. The notice to the director must include a written certification by the new owner or operator which:

1. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes;
2. Identifies the specific date on which the transfer is to occur;
3. Acknowledges full responsibility for complying with the existing wastewater discharge permit; and
4. The conditions of the permit will not change.

B. Failure to provide advance notice of a transfer renders the wastewater discharge permit void as of the date of facility transfer. (Ord. 68-11, 2011)

17.52.120: PERMIT; SUSPENSION AND REVOCATION:

The director may revoke a wastewater permit for good cause, including, but not limited to, the following reasons:

- A. Failure to notify the director of significant changes to the wastewater prior to the changed discharge;
- B. Failure to provide prior notification to the director of changed conditions pursuant to subsection [17.52.160E](#) of this chapter;
- C. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;
- D. Falsifying self-monitoring reports or certification statements;
- E. Tampering with monitoring equipment;
- F. Refusing to allow the director timely access to the facility premises or records;
- G. Failure to meet effluent limitations;
- H. Failure to pay fines;
- I. Failure to pay sewer charges;
- J. Failure to meet compliance schedules;
- K. Failure to complete a wastewater survey or the wastewater discharge permit application;
- L. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or
- M. Violation of any pretreatment standard or requirement, or any terms of the wastewater discharge permit or this division.

Wastewater discharge permits shall be voidable upon nonoperation of a permitted facility, cessation of

operations or unreported transfer of business ownership. All existing wastewater discharge permits issued to a user are void upon the reissuance of a new wastewater discharge permit to that user. (Ord. 68-11, 2011)

17.52.130: PERMIT; REISSUANCE:

A user with an expiring wastewater discharge permit shall apply for a wastewater discharge permit reissuance by submitting a complete permit application, in accordance with section [17.52.030](#) of this chapter, a minimum of ninety (90) days prior to the expiration of the user's existing wastewater discharge permit. (Ord. 68-11, 2011)

17.52.140: SPECIAL AGREEMENTS AND CONTRACTS:

- A. Special User Agreement: No statement contained in this section shall be construed as prohibiting special written agreements between the POTW and any other user allowing industrial waste or wastewater of unusual strength or character to be admitted to the POTW, provided the user compensates the POTW for any additional costs of treatment. The POTW shall determine the wastewater criteria, and volume characteristics used to calculate any additional cost of treatment. In no case will a special agreement waive compliance with a pretreatment standard or requirement. However, the industrial user may request a variance from the categorical pretreatment standard from the EPA. Such a request will be approved only if the industrial user can prove that factors relating to its discharge are fundamentally different from the factors considered by EPA when establishing that pretreatment standard. An industrial user requesting a fundamentally different factor variance must comply with the procedural and substantive provisions in 40 CFR 403.13 and rule R317-8-8.17 UAC;
- B. Contracts With Other POTWs: Whenever there is excess POTW sewage treatment capacity, the POTW may contract with any other organized and established sewage treatment plant or with any other governmental agency or private enterprise for the discharge into the POTW from any part or parts thereof, or person living outside the boundaries of the POTW, upon such terms and conditions and for such periods of time as may be deemed reasonable. (Ord. 68-11, 2011)

17.52.150: REGULATION OF WASTE RECEIVED FROM OTHER JURISDICTIONS:

- A. If another municipality, special district, government entity, or other jurisdiction authority connects to or contributes wastewater to the POTW, the director shall enter into an interagency agreement with that entity.
- B. Prior to entering into an agreement required by subsection A of this section, the director shall request the following information from the contributing municipality:
1. A description of the quality and volume of wastewater discharged to the POTW by the contributing municipality;
 2. An inventory of all users located within the contributing municipality that are discharging to the POTW; and
 3. Such other information as the director may deem necessary.
- C. An intermunicipal agreement, as required by subsection A of this section, shall contain the following conditions:
1. A requirement for the contributing municipality to adopt a sewer use ordinance which is at least as stringent as this division and local limits, including required baseline monitoring reports (BMRs) which are at least as stringent as those set out in subsection [17.36.090E](#) of this title. The requirement shall specify that such ordinance and limits must be revised as necessary to reflect changes made to the city's ordinance or local limits;
 2. A requirement for the contributing municipality to submit a revised user inventory on at least an annual basis;
 3. A provision specifying which pretreatment implementation activities, including wastewater discharge permit issuance, inspection and sampling, and enforcement, will be conducted by the contributing municipality; which of these activities will be conducted by the city and which of these activities will be conducted jointly by the contributing municipality and the city;
 4. A requirement for the contributing municipality to provide the city with access to all information that the contributing municipality obtains as part of its pretreatment activities;

5. Limits on the nature, quality, and volume of the contributing municipality's wastewater at the point where it discharges to the POTW;
6. Requirements for monitoring the contributing municipality's discharge;
7. A provision ensuring the city access to the facilities of users located within the contributing municipality's jurisdictional boundaries for the purpose of inspection, sampling, and any other duties deemed necessary by the city; and
8. A provision specifying remedies available for breach of the terms of the intermunicipal agreement. (Ord. 68-11, 2011)

17.52.160: REPORTING REQUIREMENTS:

A. Baseline Monitoring Reports: Within either one hundred eighty (180) days after the effective date of a categorical pretreatment standard, or the final administrative decision on a category determination under 40 CFR 403.6(a)(4), whichever is later, existing CIUs currently discharging to or scheduled to discharge to the POTW shall submit to the director a report which contains the information listed in subsections A1 through A5 of this section. At least ninety (90) days prior to commencement of their discharge, new sources, and sources that become CIUs subsequent to the promulgation of an applicable categorical standard, shall submit to the director a report which contains the information listed in subsections A1 through A5 of this section. A new source shall report the method of pretreatment it intends to use to meet applicable categorical standards. A new source also shall give estimates of its anticipated flow and quantity of pollutants to be discharged.

Users described above shall submit the information set forth below:

1. Report Information: All information required in subsections [17.52.030](#)A1a, A3, A4a, and A7 of this chapter.
2. Measurement Of Pollutants:
 - a. The user shall provide the information required in subsections [17.52.030](#)A8a through A8d of this chapter;
 - b. The user shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph;
 - c. Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the user should measure the flows and concentrations necessary to allow use of the combined waste stream formula in 40 CFR 403.6(e) to evaluate compliance with the pretreatment standards. Where an alternate concentration or mass limit has been calculated in accordance with 40 CFR 403.6(e) this adjusted limit along with supporting data shall be submitted to the control authority;
 - d. Sampling and analysis shall be performed in accordance with sections [17.52.170](#) and [17.52.180](#) of this chapter;
 - e. The director may allow the submission of a baseline report which utilizes only historical data so long as the data provides information sufficient to determine the need for industrial pretreatment measures; and
 - f. The baseline report shall indicate the time, date and place of sampling and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant discharges to the POTW.
3. Compliance Certification: A statement, reviewed by the user's authorized representative as defined in section [17.32.080](#) of this title and certified by a qualified professional, indicating whether pretreatment standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required to meet the pretreatment standards and requirements.
4. Compliance Schedule: If additional pretreatment and/or O&M will be required for the user to meet the pretreatment standards, the shortest schedule by which the user will provide such additional pretreatment and/or O&M must be provided. The completion date in this schedule shall not be later than the compliance date established for the

applicable pretreatment standard. A compliance schedule pursuant to this section must meet the requirements set out in subsection B of this section.

5. Signature And Report Certification: All baseline monitoring reports must be certified in accordance with subsection [17.52.210A](#) of this chapter and signed by an authorized representative as defined in section [17.32.080](#) of this title.

B. Compliance Schedule Progress Reports: The following conditions shall apply to the compliance schedules required by subsections [17.52.030A10](#) of this chapter and A4 of this section:

1. The schedule shall contain progress increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable pretreatment standards (such events include, but are not limited to, hiring an engineer, completing preliminary and final plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation);
2. No increment referred to above shall exceed nine (9) months nor shall the total compliance period exceed eighteen (18) months;
3. The user shall submit a progress report to the director no later than fourteen (14) days following each date in the schedule and the final date of compliance including, as a minimum, whether or not it complied with the increment of progress, the reason for any delay, and, if appropriate, the steps being taken by the user to return to the established schedule; and
4. In no event shall more than nine (9) months elapse between such progress reports to the director.

C. Reports On Compliance With Categorical Pretreatment Standard Deadline:

1. Within ninety (90) days following the date for final compliance with applicable categorical pretreatment standards, or in the case of a new source following commencement of the introduction of wastewater into the POTW, any user subject to such pretreatment standards and requirements shall submit to the director a report containing the information described in subsections [17.52.030A7](#) and A8 of this chapter and A2 of this section. For users subject to equivalent mass or concentration limits established in accordance with the procedures in section [17.36.070](#) of this title, this report shall contain a reasonable measure of the user's long term production rate. For all other users subject to categorical pretreatment standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the user's actual production during the appropriate sampling period. All compliance reports must be signed and certified in accordance with subsection [17.52.210A](#) of this chapter. All sampling will be done in conformance with section [17.52.180](#) of this chapter.

D. Periodic Compliance Reports:

1. Except as specified in subsection D3 of this section, all SIUs must, at a frequency determined by the director submit no less than twice per year (June and December or on dates specified) reports indicating the nature, concentration of pollutants in the discharge which are limited by pretreatment standards and the measured or estimated average and maximum daily flows for the reporting period. In cases where the pretreatment standard requires compliance with a BMP or pollution prevention alternative, the user must submit documentation required by the director or the pretreatment standard necessary to determine the compliance status of the user.
2. The city may authorize an industrial user subject to a categorical pretreatment standard to forgo sampling of a pollutant regulated by a categorical pretreatment standard if the industrial user has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the industrial user. This authorization is subject to the following conditions:
 - a. The waiver may be authorized where a pollutant is determined to be present solely due to sanitary wastewater discharged from the facility provided that the sanitary wastewater is not regulated by an applicable categorical standard and otherwise includes no process wastewater;
 - b. The monitoring waiver is valid only for the duration of the effective period of the wastewater discharge permit, but in no case longer than five (5) years. The user must submit a new request for the waiver before the waiver can be granted for each subsequent wastewater discharge permit (see subsection [17.52.030A9](#) of this chapter);

- c. In making a demonstration that a pollutant is not present, the industrial user must provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes;
 - d. The request for a monitoring waiver must be signed in accordance with section [17.32.080](#) of this title, and include the certification statement in subsection [17.52.210A](#) of this chapter;
 - e. Nondetectable sample results may be used only as a demonstration that a pollutant is not present if the EPA approved method from 40 CFR part 136 with the lowest minimum detection level for that pollutant was used in the analysis;
 - f. Any grant of the monitoring waiver by the director must be included as a condition in the user's permit. The reasons supporting the waiver and any information submitted by the user in its request for the waiver must be maintained by the director for five (5) years after expiration of the waiver;
 - g. Upon approval of the monitoring waiver and revision of the user's permit by the director, the industrial user must certify on each report with the statement in subsection [17.52.210C](#) of this chapter, that there has been no increase in the pollutant in its waste stream due to activities of the industrial user;
 - h. In the event that a waived pollutant is found to be present or is expected to be present because of changes that occur in the user's operations, the user must immediately: Comply with the monitoring requirements of subsection D1 of this section, or other more frequent monitoring requirements imposed by the director, and notify the director; and
 - i. This provision does not supersede certification processes and requirements established in categorical pretreatment standards, except as otherwise specified in the categorical pretreatment standard.
3. The city may reduce the requirement for periodic compliance reports (see subsection D1 of this section) to a requirement to report no less frequently than once a year, unless required more frequently in the pretreatment standard or by the EPA/state, where the industrial user's total categorical wastewater flow does not exceed any of the following:
- a. 0.01 percent of the POTW's design dry weather hydraulic capacity, or five thousand (5,000) gallons per day, whichever is smaller, as measured by a continuous effluent flow monitoring device unless the industrial user discharges in batches;
 - b. 0.01 percent of the POTW's design dry weather organic treatment capacity; and
 - c. 0.01 percent of the POTW's maximum allowable headworks loading for any pollutant regulated by the applicable categorical pretreatment standard for which approved local limits were developed in accordance with section [17.36.090](#) of this title.

Reduced reporting is not available to industrial users that have in the last two (2) years been in significant noncompliance, as defined in section [17.32.580](#) of this title. In addition, reduced reporting is not available to an industrial user with daily flow rates, production levels, or pollutant levels that vary so significantly that, in the opinion of the director, decreasing the reporting requirement for this industrial user would result in data that are not representative of conditions occurring during the reporting period.

- 4. All periodic compliance reports must be signed and certified in accordance with subsection [17.52.210A](#) of this chapter.
- 5. All wastewater samples must be representative of the user's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of a user to keep its monitoring facility in good working order shall not be grounds for the user to claim that sample results are unrepresentative of its discharge.
- 6. If a user subject to the reporting requirement in this section monitors any regulated pollutant at the appropriate sampling location more frequently than required by the director, using the procedures prescribed in section [17.52.180](#) of this chapter, the results of this monitoring shall be included in the report.

E. Reports Of Changed Conditions: Each user must notify the director of any significant changes to the user's operations or system which might alter the nature, quality, or volume of its wastewater at least thirty (30) days before the change.

1. The director may require the user to submit such information as may be deemed necessary to evaluate the changed condition, including the submission of a wastewater discharge permit application under section [17.52.030](#) of this chapter.
2. The director may issue a wastewater discharge permit under section [17.52.130](#) of this chapter or modify an existing wastewater discharge permit under section [17.52.100](#) of this chapter in response to changed conditions or anticipated changed conditions.

F. Reports Of Potential Problems:

1. In the case of any discharge, including, but not limited to, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, a slug discharge or slug load, that might cause potential problems for the POTW, the user shall immediately telephone and notify the director of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the user.
2. Within five (5) days following such discharge, the user shall, unless waived by the director, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the user of any fines, penalties, or other liability which may be imposed pursuant to this division.
3. A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees who to call in the event of a discharge described in subsection F1 of this section. Employers shall ensure that all employees, who could cause such a discharge to occur, are advised of the emergency notification procedure.
4. SIUs are required to notify the director immediately of any changes at its facility affecting the potential for a slug discharge.

G. Reports From Unpermitted Users: All users not required to obtain a wastewater discharge permit shall provide appropriate reports to the director as the director may require.

H. Notice Of Violation/Repeat Sampling And Reporting: If sampling performed by a user indicates a violation, the user must notify the director within twenty four (24) hours of becoming aware of the violation. The user shall also repeat the sampling and analysis and submit the results of the repeat analysis to the director within thirty (30) days after becoming aware of the violation. Resampling by the industrial user is not required if the city performs sampling at the user's facility at least once a month, or if the city performs sampling at the user between the time when the initial sampling was conducted and the time when the user or the city receives the results of this sampling, or if the city has performed the sampling and analysis in lieu of the industrial user. If the city performs the sampling and analysis in lieu of the industrial user and a violation occurs, the city will perform the repeat sampling and analysis unless it notifies the user of the violation and requires the user to perform the repeat sampling and analysis.

I. Notification Of The Discharge Of Hazardous Waste:

1. Any user who commences the discharge of hazardous waste shall notify the POTW, the EPA regional waste management division director, and state hazardous waste authorities, in writing, of any discharge into the POTW of a substance which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the user discharges more than one hundred (100) kilograms of such waste per calendar month to the POTW, the notification also shall contain the following information to the extent such information is known and readily available to the user: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the waste stream discharged during that calendar month, and an estimation of the mass of constituents in the waste stream expected to be discharged during the following twelve (12) months. All notifications must take place no later than one hundred eighty (180) days after the discharge commences. Any

notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted under subsection E of this section. The notification requirement in this section does not apply to pollutants already reported by users subject to categorical pretreatment standards under the self-monitoring requirements of subsections A, C, and D of this section.

2. Dischargers are exempt from the requirements of subsection I1 of this section, during a calendar month in which they discharge no more than fifteen (15) kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen (15) kilograms of nonacute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a onetime notification. Subsequent months during which the user discharges more than such quantities of any hazardous waste do not require additional notification.
3. In the case of any new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the user must notify the director, the EPA regional waste management waste division director, and state hazardous waste authorities of the discharge of such substance within ninety (90) days of the effective date of such regulations.
4. In the case of any notification made under this section, the user shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.
5. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this division, a permit issued thereunder, or any applicable federal or state law. (Ord. 68-11, 2011)

17.52.170: ANALYTICAL REQUIREMENTS:

- A. All pollutant analyses, including sampling techniques, to be submitted as part of a wastewater discharge permit application or report shall be performed in accordance with the techniques prescribed in 40 CFR part 136 "guidelines establishing test procedures for the analysis of pollutants", and amendments thereto, unless otherwise specified in an applicable categorical pretreatment standard. If 40 CFR part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the director or other parties approved by EPA.
- B. All laboratory samples collected for this division shall be analyzed by a laboratory that is either certified by the Utah bureau of laboratory improvements or approved by the director. (Ord. 68-11, 2011)

17.52.180: SAMPLE COLLECTION:

Samples collected to satisfy reporting requirements must be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, based on data that is representative of conditions occurring during the reporting period.

- A. Except as indicated in subsections B and C of this section, the user must collect wastewater samples using twenty four (24) hour flow proportional composite sampling techniques, unless time proportional composite sampling or grab sampling is authorized by the director. Where time proportional composite sampling or grab sampling is authorized by the city, the samples must be representative of the discharge. Using protocols (including appropriate preservation) specified in 40 CFR part 136 and appropriate EPA guidance, multiple grab samples collected during a twenty four (24) hour period may be composited prior to the analysis as follows: For cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by the city, as appropriate. In addition, grab samples may be required to show compliance with instantaneous limits.
- B. Samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds must be obtained using grab collection techniques.
- C. For sampling required in support of baseline monitoring and ninety (90) day compliance reports required in subsections [17.52.160A](#) and C of this chapter a minimum of four (4) grab samples must be used for pH,

cyanide, total phenols, oil and grease, sulfide and volatile organic compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, the director may authorize a lower minimum. For the reports required by subsection [17.52.160D](#) of this chapter, the industrial user is required to collect the number of grab samples necessary to assess and assure compliance with applicable pretreatment standards and requirements. (Ord. 68-11, 2011)

17.52.190: DATE OF RECEIPT OF REPORTS:

For written reports that are mailed through a mail facility serviced by the United States postal service, such reports will be deemed to have been submitted on the date postmarked. For written reports that are shipped using other common reliable carriers, the carrier's pick up or ship date will be deemed the submittal date. If a postmark or pick up/ship date is not available, the date of receipt of the report shall govern. (Ord. 68-11, 2011)

17.52.200: RECORDKEEPING:

Users subject to the reporting requirements of this division shall retain, and make available for inspection and copying by the director, all records of information obtained pursuant to any monitoring activities required by this division, any additional records of information obtained pursuant to monitoring activities undertaken by the user independent of such requirements, and documentation associated with BMPs established under subsection [17.36.090E](#) of this title. Records shall include the date, exact place, method, and time of sampling, and the name of the person(s) taking the samples; the dates analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses. These records shall remain available for a period of at least five (5) years. This period shall be automatically extended for the duration of any litigation concerning the user or the city, or where the user has been specifically notified of a longer retention period by the director. (Ord. 68-11, 2011)

17.52.210: CERTIFICATION STATEMENTS:

- A. Certification Of Permit Applications, User Reports And Initial Monitoring Waiver: The following certification statement is required to be signed and submitted by users submitting permit applications in accordance with section [17.52.020](#) of this chapter; users submitting baseline monitoring reports under subsection [17.52.160A5](#) of this chapter; users submitting reports on compliance with the categorical pretreatment standard deadlines under subsection [17.52.160C](#) of this chapter; users submitting periodic compliance reports required by subsections [17.52.160D1](#) through [17.52.160D4](#) of this chapter, and users submitting an initial request to forgo sampling of a pollutant on the basis of subsection [17.52.160D2d](#) of this chapter. The following certification statement must be signed by an authorized representative as defined in section [17.32.080](#) of this title:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- B. Annual Certification For Nonsignificant Categorical Industrial Users: A facility determined to be a nonsignificant categorical industrial user by the director pursuant to subsections [17.32.570C](#) of this title and [17.52.050C](#) of this chapter, must annually submit the following certification statement signed in accordance with the signatory requirements in section [17.32.080](#) of this title. This certification must accompany an alternative report required by the director:

Based on my inquiry of the person or persons directly responsible for managing compliance with the categorical Pretreatment Standards under 40 CFR , I certify that, to the best of my knowledge and belief that during the period from , to , [months, days, year]:

(a) The facility described as [facility name] met the definition of a Non-Significant Categorical Industrial User as described in section [17.32.570 C](#);

(b) The facility complied with all applicable Pretreatment Standards and requirements during this reporting period; and

(c) The facility never discharged more than 100 gallons of total categorical wastewater on any given day during this reporting period.

This compliance certification is based on the following information.

- C. Certification Of Pollutants Not Present: Users that have an approved monitoring waiver based on subsection [17.52.160](#)D2 of this chapter must certify on each report with the following statement that there has been no increase in the pollutant in its waste stream due to activities of the user:

Based on my inquiry of the person or persons directly responsible for managing compliance with the Pretreatment Standard for 40 CFR [specify applicable National Pretreatment Standard part(s)], I certify that, to the best of my knowledge and belief, there has been no increase in the level of [list pollutant(s)] in the wastewaters due to the activities at the facility since filing of the last periodic report under section 17.52.160.D.

(Ord. 68-11, 2011)

17.52.220: MONITORING FACILITIES FOR INDUSTRIAL USERS:

- A. The director may require the industrial user to provide and operate, a control manhole or sample box or other monitoring equipment at the owner's expense approved by the director, at a point to be determined by the POTW where representative samples of all regulated discharges from the industry can be collected and flow measurements accurately made as necessary. The monitoring facilities shall be situated on the user's premises or such other location as allowed by the POTW. The POTW will be allowed to use these monitoring facilities to sample at any time and without notice in accordance with section [17.52.230](#) of this chapter.
- B. There shall be ample room in or near such monitoring manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the user. All devices used to measure wastewater flow and quality shall be periodically calibrated as specified by the director to ensure their accuracy, but at a minimum, the calibration shall occur per the manufacturer's requirements.
- C. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the user at the written or verbal request of the director and shall not be replaced. The costs of clearing such access shall be borne by the user.
- D. An industrial user may be required to provide at their expense a city approved instantaneous and totalizing approved flow meter on their industrial discharges if deemed necessary by the director.
- E. Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the POTW's requirements and all applicable local construction standards and specifications. The construction schedule shall be submitted to the POTW for prior approval, and construction shall be completed within a time specified by written notification from the POTW. (Ord. 68-11, 2011)

17.52.230: RIGHT OF ENTRY; INSPECTION AND SAMPLING:

The director or the duly authorized representatives shall have the right to enter the premises of any user to determine whether the user is complying with all requirements of this division and any wastewater discharge permit or order issued hereunder. All users shall allow the director or the duly authorized representatives ready access to all parts of the premises for the purpose of inspection, sampling, records examination and copying, and/or in the performance of any of its duties.

- A. Identification shall be provided by the director for all inspectors or other authorized personnel and these personnel shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.
- B. The POTW or other authorized regulatory agencies shall have the right to set upon the user's property or any other representative location such devices as are deemed necessary to conduct sampling inspection, compliance monitoring and/or metering of the user's operations.
- C. Where a user has security measures in force prior arrangements will be made with their security guards so that upon presentation of suitable identification, personnel from the POTW, city, county, state and EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.
- D. Unreasonable delays in allowing the director access to the user's premises shall be a violation of this division. (Ord. 68-11, 2011)

17.52.240: SEARCH WARRANT:

If the director or duly authorized officer or agent of the POTW has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this division, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program of the city designed to verify compliance with this division or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, the director may seek issuance of a search warrant from the third district court of the state of Utah. (Ord. 68-11, 2011)

17.52.250: CONFIDENTIAL INFORMATION AND TRADE SECRETS:

Information and data on a user obtained from reports, surveys, wastewater discharge permit applications, wastewater discharge permits, and monitoring programs, and from the director's inspection and sampling activities, shall be available to the public without restriction, unless the user specifically requests, and is able to demonstrate to the satisfaction of the director, that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets under the provisions of the Utah government records access and management act (GRAMA) or other applicable state law. Any such request must be asserted at the time of submission of the information or data. When requested and demonstrated by the user furnishing a report that such information should be held confidential, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public, but shall be made available immediately upon request to governmental agencies for uses related to the UPDES program or pretreatment program, and in enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics and other effluent data, as defined at 40 CFR 2.302 shall not be recognized as confidential information and shall be available to the public without restriction. (Ord. 68-11, 2011)

17.52.260: PUBLICATION OF USERS IN SIGNIFICANT NONCOMPLIANCE:

- A. The POTW shall publish annually, providing public notification in the largest daily newspaper published in Salt Lake City, a list of all industrial users which were in significant noncompliance with applicable pretreatment standards and requirements at any time during the previous twelve (12) month reporting period. All records relating to compliance with pretreatment standards shall be made available to officials of the EPA or approval authority and to the public pursuant to city policy and the Utah government records access and management act.
- B. The term significant noncompliance as defined in section [17.32.580](#) of this title shall be applicable to all SIUs (or any other industrial user that violates subsection [17.32.580C](#), D or H of this title). (Ord. 68-11, 2011)

17.52.270: FEES:

- A. When Due; Delinquency: The fees provided for in this section are separate and distinct from all other fees chargeable by the city. All fees shall become immediately due and owing to the city upon receipt of invoice for rendition of services or expenditure by the city and shall become delinquent if not fully paid within forty five (45) days after receipt.
- B. Permit Fees: Each wastewater discharge permit application filed pursuant to this division shall be accompanied by an application fee. The fees for these services are listed in a separate document entitled "Salt Lake City consolidated fee schedule". This document is incorporated in this chapter by reference.
- C. Fees For City Sampling And Laboratory Analyses Of Wastewater: When the city performs sampling and contracts with a certified laboratory for the analysis of an industrial user's wastewater discharge, the fees for these services are listed in a separate document entitled "Salt Lake City consolidated fee schedule". This document is incorporated in this chapter by reference.
- D. Fees For Demand Monitoring, Inspections And Surveillance: Costs incurred by the city for demand monitoring, inspection and surveillance procedures necessary as a result of a violation shall be chargeable and billed to the user whose conduct has necessitated such activity. The fees for these services are listed in a separate document entitled "Salt Lake City consolidated fee schedule". This document is incorporated in this chapter by reference.
- E. Administrative Fees: Fees for administrative efforts such as, but not limited to, conciliation and show cause meetings not otherwise specifically covered in this section, and the result of an administrative effort brought about as a result of a violation shall be chargeable to the user whose conduct has necessitated such activity. The fees for these services are listed in a separate document entitled "Salt Lake City consolidated fee schedule". This document is incorporated in this chapter by reference. (Ord. 68-11, 2011)

Chapter 17.56

MOBILE HOME PARKS, RECREATIONAL FACILITIES AND SUBDIVISIONS

17.56.010: SEWAGE FACILITIES; APPROVAL PREREQUISITE TO RECORDATION:

All persons, contractors, builders, operators, subdividers and developers shall conform with this chapter and regulations and shall apply to the POTW office for written approval of any proposed sewage collection facilities for their mobile home parks, subdivisions or other developments prior to recordation of their plats with any county recorders, and shall pay all required fees in a timely manner. (Ord. 36-93 § 8, 1993: prior code § 37-9-1)

17.56.020: DESIGN, CONSTRUCTION AND MAINTENANCE OF FACILITIES:

All sewage collection systems and appurtenant facilities for mobile home parks and subdivisions shall be designed, constructed and maintained in strict accordance with all applicable provisions of the rules and regulations adopted or amended and revised by the POTW. (Ord. 36-93 § 8, 1993: prior code § 37-9-3)

17.56.030: CONNECTION TO POTW SYSTEM PERMITTED WHEN:

Any mobile home park or subdivision hereafter constructed having sewage system and appurtenant facilities acceptable to the POTW within such mobile home park or subdivision, as the case may be, may, at the user's sole expense, upon payment of all required fees and subject to any written extension or reimbursement agreements which may be hereafter executed with the POTW, connect such sewage system and facilities directly with an existing POTW sewer at a location designated by the POTW and under POTW direction. (Ord. 36-93 § 8, 1993: prior code § 37-9-2)

17.56.040: NEW CONSTRUCTION:

Contracts for any new sewer construction must be made with the city and all applicable fees paid to the city prior to the commencement of any construction. (Ord. 36-93 § 8, 1993)

Chapter 17.60

PUMPING STATIONS

17.60.010: USER REQUIRING PUMPING TO DISCHARGE TO POTW:

Whenever any user makes application for any permits, approvals, subdivision, zoning or any other actions relating to property situated in areas either within or outside of the POTW which, when connected to the POTW's sewer collection or disposal system, will require the sewage to be pumped into the POTW system, the user thereof shall be required to pay the POTW all of the costs of the installation and maintenance of the required pumping station in the manner and in the amounts hereinafter provided in this chapter. (Ord. 36-93 § 9, 1993: prior code § 37-8-1)

17.60.020: PAYMENT FOR PUMPING STATION PREREQUISITE TO APPROVAL:

Notwithstanding the provisions of any other ordinance or regulation of the POTW now or hereafter enacted, the officers and personnel of the POTW dealing with the applications referred to in section [17.60.010](#) of this chapter, or its successor, are directed and authorized to withhold granting of the requested applications pending payment or entry by the applicant into an agreement whereby payments will be made to the POTW in reimbursement for the costs of such pumping stations. The officers and employees of the POTW are directed and authorized to refuse to furnish sewer services to the users until the agreements are fully consummated and there has been reimbursement and payment for all services and fees due and owing thereunder. (Ord. 36-93 § 9, 1993: prior code § 37-8-2)

17.60.030: PUMPING STATIONS AREAS; SURVEYS AND ESTABLISHMENT:

- A. The POTW is authorized to cause surveys or engineering studies to be made for the purpose of determining those areas either within or without the POTW which would require the installation and operation of pumping stations. The pumping station areas may include areas outside of the POTW limits which might, by

annexation, become a part of the POTW or which might require sewer services from the POTW for the purpose of preserving the health and welfare of residents adjacent to said areas.

- B. Based upon such studies, the POTW shall establish the pumping station areas and designate their confines in such manner as to enable landowners or users to determine whether or not they fall within the areas requiring sewage pumping stations. (Ord. 36-93 § 9, 1993: prior code § 37-8-3)

17.60.040: DESIGN AND CONSTRUCTION REQUIREMENTS:

- A. The POTW may cause a pumping station to be installed in a designated pumping station area in anticipation of the development of buildings or other uses within the near future, or it may cause such construction to occur upon receipt of applications from landowners or users who anticipate developments within the designated area or a portion thereof which will require the construction of a sewage pumping station.
- B. The construction of the pumping stations shall be of such size as the POTW may determine will be necessary to provide pumping to the entire area, even though pending applications before it involve only a portion of the pumping station area. All pump stations shall be planned, designed and constructed in accordance with applicable state laws. (Ord. 36-93 § 9, 1993: prior code § 37-8-4)

17.60.050: COSTS OF CONSTRUCTION; COMPUTING AND ALLOCATION:

- A. The costs of construction for pumping stations shall include costs of land acquisition, easements, legal services, direct labor and materials, costs of direct supervision and engineering services, plus an amount equal to ten percent (10%) of all of the foregoing costs for administrative services by the POTW.
- B. The costs of construction shall be allocated among the landowners and/or users of the sewage pumping service area in the same proportion that the total of each landowner's area bears to the total area of land situated within the pumping service area.
- C. The foregoing method of allocation of costs may be varied by action of the POTW when, in its judgment, it finds that unusual topography or other physical circumstances or the contemplated use or uses require a different method of allocating costs. If the pumping station is constructed prior to the filing of an application by a landowner or user, the costs of construction will be the actual costs expended as above described.
- D. If the pumping station has been constructed at the time the application is filed, then costs shall be the costs estimated by the director or which may be computed based upon contracts let to contractors or subcontractors to perform the construction. The estimated costs shall be used as the basis for establishing the amount of any payments required in advance until such time as construction is completed and actual costs are determined, at which time the costs shall be recomputed and allocated based upon the actual costs.
- E. Costs of operation and maintenance, as determined by the director, may be allocated among the users of the sewage pumping service area. (Ord. 36-93 § 9, 1993: prior code § 37-8-5)

17.60.060: COSTS OF CONSTRUCTION; PAYMENT METHODS:

At the time an application is made to the POTW, the POTW shall require the applicant to enter into an agreement with the POTW whereby the applicant will pay his/her share of the sewage pumping station construction costs at such time or times fixed by the POTW. The agreement may require the applicant user to pay a lump sum in cash, contribution of the facility or other option as may be determined will best fit the needs of the POTW. The agreement shall provide, in the event the applicant user fails to make the payments, as provided, the POTW may refuse to provide services until such time as payment has been made. (Ord. 36-93 § 9, 1993: prior code § 37-8-6)

17.60.070: PUMPING STATIONS ARE PROPERTY OF POTW:

Regardless of the manner in which construction of the sewer pumping station has been achieved, whether by direct action upon the part of the POTW or by action of any applicant, the pumping station shall be deemed the property of the POTW. All maintenance after acceptance shall be performed by the POTW or its designee. (Ord. 36-93 § 9, 1993: prior code § 37-8-7)

Chapter 17.64 FEES AND CHARGES

17.64.010: PAYMENT RESPONSIBILITY; BASIS AND PURPOSE OF CHARGES:

- A. Each user shall pay all fees and charges required by the POTW. Appropriate surcharges will be imposed. It is the purpose of this chapter to provide for the payment of all POTW costs, maintenance and operation from the users. The total annual cost of equipment replacement, maintenance, necessary modifications, power, sampling, laboratory tests, and a reasonable contingency fund. The charges will be based upon the quality and quantity of user's wastewater, and also upon the POTW's capital and operating costs to intercept, treat and dispose of wastewater.
- B. The applicable charges shall be set forth in a schedule of rates for the POTW. The schedule of rates and charges shall be adjusted from time to time by the POTW, which shall be prior approved by the city public utilities advisory board and council to equitably apportion such costs among the users of the POTW. (Ord. 36-93 § 10, 1993: prior code § 37-6-1)

17.64.020: FEES AND CHARGES; SCHEDULE 1:

- A. The POTW's fees and charges are set forth on the Salt Lake City consolidated fee schedule which may be amended from time to time.
- B. When recommended by the city's director of public utilities and approved by the public utilities advisory committee, the director may waive sewer connection fees in an amount equal to the city's water reservoir fee for service within the city only to subsidized elderly, homeless or underprivileged housing where said housing is being provided by and a waiver is applied therefor by the federal, Utah state, city, county governments or their agencies and nonprofit corporations. (Ord. 24-11, 2011)

17.64.030: CLASSIFICATION OF USERS:

The users of the POTW may be divided into various classifications, including, but not limited to, single dwelling units, duplexes, multiple dwelling units and nonresidential. Further classifications may be established by the POTW for each nonresidential user class. (Ord. 36-93 § 10, 1993: prior code § 37-6-2(1))

17.64.040: AUTHORITY TO ADOPT FEES:

The POTW may adopt fees to be shown on the Salt Lake City consolidated fee schedule which may include, but are not to be limited to, the following:

- A. Fees for all POTW costs, including maintenance and operation;
- B. Fees for reimbursement of costs of setting up and operating the POTW's pretreatment program;
- C. Fees for monitoring, inspections and surveillance procedures, to include, but not be limited to, laboratory analysis;
- D. Fees for reviewing accidental discharge procedures and construction;
- E. Fees for industrial waste permit;
- F. Fees for filing appeals;
- G. Fees for treatment of excessive compatible pollutants;
- H. Fees for connection;
- I. Fees for repairs and disconnection;

J. Fees for inspections and surveys;

K. Fees for development and expansion;

L. Fees for noncompliance;

M. Other fees as the POTW may deem necessary to carry out the requirements contained herein. (Ord. 24-11, 2011)

17.64.050: ANNUAL REVIEW OF EACH USER'S SERVICE CHARGE:

(Rep. by Ord. 72-98 § 12, 1998)

17.64.060: ANNUAL NOTIFICATION OF RATES AND CHARGES:

Each user will be notified, at least annually, in conjunction with a regular bill, of the rate and that portion of the user charges which are attributable to wastewater treatment services. (Ord. 36-93 § 10, 1993: prior code § 37-6-2(8))

17.64.070: COMBINATION BILLINGS:

Where POTW provides culinary water, the wastewater treatment charges may be combined for billing purposes with charges for water services rendered. (Ord. 36-93 § 10, 1993: prior code § 37-6-2(4))

17.64.080: CHARGES FOR DISCONTINUING OR RESTORING SERVICES:

In the event POTW service to any building or premises in the POTW is shut off, a fee to be set by the POTW shall be charged for restoring sewer service. (Ord. 36-93 § 10, 1993: prior code § 37-6-2(5))

17.64.090: TOXIC POLLUTANTS OR DAMAGE TO FACILITIES; PAYMENT OF COSTS:

When a user's discharge causes an obstruction or damages the POTW or when because of the nature of the discharge, increases the costs of maintaining the POTW system or managing the effluent or the sludge of the POTW, the user shall pay for the cost. In addition to remunerative charges, discharges in violation of this chapter will leave the discharger liable to additional fines and penalties. Injunctive relief may be sought through the courts, and criminal penalties of up to five thousand dollars (\$5,000.00) per day or more may be imposed. (Ord. 36-93 § 10, 1993: prior code § 37-6-2(6))

17.64.100: RESPONSIBILITY FOR CHARGES:

The owner of any premises connected to and discharging into the POTW, and any tenant or other user of such premises, shall be jointly and severally liable for all fees and charges for sewer service at such premises. (Ord. 72-98 § 13, 1998: Ord. 36-93 § 10, 1993: prior code § 37-6-3(1))

17.64.110: BILLING PROCEDURES AND RATES:

The city shall cause billings for wastewater treatment charges, and/or water, to be rendered periodically at rates established as set out in section [17.72.030](#), "Schedule 1; Rates And Fees", of this title, as amended, or its successors. (Ord. 36-93 § 10, 1993: prior code § 37-6-3(2))

17.64.120: COLLECTION OF COSTS; PARTIAL PAYMENTS:

The POTW shall receive and collect the sewer fees and charges levied under the provisions of this chapter. In the event of partial payment, the POTW may apply said payment to any sums due for water and/or sewer fees or charges. (Ord. 36-93 § 10, 1993: prior code § 37-6-3(4))

17.64.130: DELINQUENT PAYMENTS; RECOVERY BY CIVIL ACTION; SERVICE TERMINATION:

Fees and charges levied in accordance with this chapter shall be a debt due to the POTW. If this debt is not paid within thirty (30) days after billing, it shall, at the POTW's option, be deemed delinquent and subject to penalties, and may be recovered by civil action, and the POTW shall have the right to terminate sewer and/or water service and enter upon private property for accomplishing such purposes. (Ord. 36-93 § 10, 1993: prior code § 37-6-3(3))

17.64.140: DELINQUENT PAYMENTS; TAX LIEN AUTHORITY:

To the extent authorized by Utah law, the POTW may, in addition to any and all other remedies provided herein, impose a tax lien on the premises being served, to recover all delinquent fees and charges. (Ord. 72-98 § 14, 1998: Ord. 36-93 § 10, 1993: prior code § 37-6-3(5))

17.64.150: RESTORATION OF SERVICE; CONDITIONS:

Sewer service shall not be restored until all charges, including the expense of termination and restoration of service, shall have been paid. (Ord. 36-93 § 10, 1993; prior code § 37-6-3(6))

Chapter 17.68 ENFORCEMENT REMEDIES

17.68.010: NOTIFICATION OF VIOLATION:

Whenever the director finds that any user has violated or is violating any provision of this division, or any wastewater discharge permit, order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, the director may serve upon said user a written notice of violation. Such written notice shall be served in person or by certified mail, return receipt requested. Within ten (10) calendar days after the receipt of such notice, an explanation for the violation and a plan for the satisfactory correction and prevention thereof, which shall include specific required actions, shall be submitted by the user to the director. Submission of this plan in no way relieves the user of liability for any violations occurring before or after receipt of the notice of violation. Nothing in this section shall limit the authority of the director to take any action, including emergency actions or any other enforcement action, without first issuing a notice of violation. (Ord. 68-11, 2011)

17.68.020: CONSENT ORDERS:

The director is hereby empowered to enter into consent orders, assurances of compliance, or other similar documents establishing an agreement with any user responsible for noncompliance. Such orders will include specific action to be taken by the user to correct the noncompliance within a time period specified by the order. Consent orders shall be judicially enforceable. (Ord. 68-11, 2011)

17.68.030: SHOW CAUSE HEARING:

The director may order any user which causes or contributes to violation(s) of any provisions of this division, or any wastewater discharge permit or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, to appear before the director and show cause why a proposed enforcement action should not be taken. Notice shall be served on the user, which notice shall specify the time and place for the meeting, the proposed enforcement action, the reasons for such action, and a request that the user show cause why this proposed enforcement action should not be taken. Such written notice shall be served in person on any authorized representative of the user, or by certified mail, return receipt requested, at least seven (7) days prior to the hearing. Whether or not the user appears as ordered, immediate enforcement action may be pursued following the hearing date. A show cause hearing shall not be a prerequisite for taking any other actions against the user. (Ord. 68-11, 2011)

17.68.040: COMPLIANCE ORDERS:

When the director finds that a user has violated or continues to violate any provision of this division, or any wastewater discharge permit, order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, the director may issue an order to the user responsible for the violation directing that the user come into compliance within a specified time. If the user does not come into compliance within the time provided, sewer service may be discontinued. Compliance orders may also contain other requirements to address noncompliance, including additional self-monitoring, and management practices designed to minimize the amount of pollutants discharged to the POTW. A compliance order may not extend the deadline for compliance established for a pretreatment standard or requirement, nor does a compliance order release the user of liability for any violation, including any continuing violation. Issuance of a compliance order shall not be a prerequisite to taking any other action against the user. (Ord. 68-11, 2011)

17.68.050: CEASE AND DESIST ORDERS:

When the director finds that a user has violated or continues to violate any provision of this division, any wastewater discharge permit, rule, order, or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, or that the user's past violations are likely to recur, the director may issue an order to the user directing it to cease and desist all such violations and directing the user to:

A. Immediately comply with all requirements; and

- B. Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and/or terminating the discharge. Issuance of a cease and desist order shall not be a bar against or a prerequisite to taking any other action against the user. (Ord. 68-11, 2011)

17.68.060: ADMINISTRATIVE FINES:

- A. Notwithstanding any other section of this division, any user found to have violated, or continues to violate any provision of this division, or any wastewater discharge permit, or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, may be fined in an amount not greater than ten thousand dollars (\$10,000.00) per day, as determined by the director in his reasonable discretion. Such fines shall be assessed on a per day, per violation basis. In the case of monthly or other long term average discharge limits, fines shall be assessed for each day during the period of violation. In determining the amount of civil liability, the director shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the user's violation, corrective actions by the user, the compliance history of the user, and any other factor as justice requires.
- B. The POTW may charge a user for the costs of preparing administrative enforcement actions, such as notices and orders, which charge may be assessed whether or not a fine under subsection A of this section is also imposed. The POTW may recover reasonable attorney fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred.
- C. Assessments for fines and/or administrative costs may be added to the user's next scheduled sewer service charge, and the director shall have such other collection remedies as may be available for other service charges and fees.
- D. Unpaid charges, fines, assessments and penalties shall, after sixty (60) calendar days, be assessed an additional penalty of ten percent (10%) of the unpaid balance. Thereafter, interest on any unpaid balances, including penalties, shall accrue at a rate of one percent (1%) per month. A lien against the individual user's property will be sought for unpaid charges, fines, and penalties.
- E. Users desiring to dispute such fines or assessments must file a written request for the director to reconsider the fine or assessment, along with full payment thereof within thirty (30) days of being notified of the fine or assessment. The director may convene a hearing on the matter within fourteen (14) days of receiving the request from the user. In the event the user's appeal is successful, any amounts paid by the user to the POTW shall be returned to the user, without interest.
- F. The imposition of an administrative fine, assessment or other charge shall not be a prerequisite for or bar against taking any other action against the user. (Ord. 68-11, 2011)

17.68.070: EMERGENCY SUSPENSIONS:

The director may order the immediate suspension or shutoff of a user's discharge (after informal notice to the user), whenever such suspension or shutoff is necessary in order to stop an actual or threatened discharge which reasonably appears to present or cause a risk of an imminent or substantial: a) damage to the POTW, b) endangerment to the health or welfare of any residents of the POTW, c) interference with the operation of the POTW, or d) endangerment to the environment. Any user notified of a suspension of its discharge shall immediately stop or eliminate its contribution. In the event of a user's failure to immediately comply voluntarily with the suspension order, the director shall take such steps as deemed necessary, including immediate severance of the sewer connection, to enforce such order. The director may allow the user to recommence its discharge when the user has demonstrated to the satisfaction of the director that the period of endangerment has passed, unless the termination proceedings set forth in section [17.68.080](#) of this chapter are initiated against the user. A user that is responsible, in whole or in part, for any discharge presenting imminent endangerment, shall submit to the director a detailed written statement describing the causes of the harmful contribution and the measures taken to prevent any future occurrence, prior to the date of any show cause or termination of discharge hearing under sections [17.68.030](#) and [17.68.080](#) of this chapter. Nothing in this section shall be interpreted as requiring a hearing prior to any emergency suspension under this section. (Ord. 68-11, 2011)

17.68.080: TERMINATION OF DISCHARGE:

In concert with the wastewater discharge permit revocation provisions in section [17.52.120](#) of this title, any user committing any of the following acts or omissions is subject to termination of discharge:

- A. Violation of any provisions of this division or any wastewater discharge permit, or order, rule or regulation or any pretreatment standard or requirement, issued or promulgated hereunder;
- B. Failure to accurately report the wastewater constituents and characteristics of its discharge;
- C. Failure to report significant changes in operations or wastewater volume, constituents and characteristics prior to discharge;
- D. In the event a duly authorized officer or agent of the POTW is refused admission to a user for any reason, the director may cause sewer service to the premises in question to be discontinued until the POTW agents have been afforded reasonable access to the premises and pretreatment system to accomplish the inspection and/or sampling;
- E. Failure to attain compliance within thirty (30) days of issuance of a compliance order under section [17.68.040](#) of this chapter;
- F. In the event of actual or threatened discharges as described in section [17.68.070](#) of this chapter;
- G. Violation of the pretreatment standards in sections [17.36.020](#) through [17.36.110](#) of this title.

The user will be notified of the proposed termination of its discharge and be offered an opportunity to show cause under section [17.68.030](#) of this chapter why the proposed action should not be taken. Exercise of this option by the director shall not be a bar to, or a prerequisite for, taking any other action against the user. (Ord. 68-11, 2011)

17.68.090: INJUNCTIVE RELIEF:

Whenever a user has violated a pretreatment standard or requirement or continues to violate any provisions of this division, or any wastewater discharge permit, or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, the director may petition the third district court of the state of Utah for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the wastewater discharge permit, or order, rule, regulation or other requirement imposed by this division on activities of the user. In addition, the city may recover reasonable attorney fees, court costs, and other expenses of litigation by appropriate legal action against the user found to have violated any provision hereof, or of any wastewater discharge permit, or order, or any other rule or regulation issued or promulgated hereunder. Such other action as appropriate for legal and/or equitable relief may also be sought by the director including a requirement for the user to conduct environmental remediation. A petition for injunctive relief need not be filed as a prerequisite to or a bar against taking any other action against a user. (Ord. 68-11, 2011)

17.68.100: CIVIL PENALTY PASS-THROUGH RECOVERY:

In the event that a user discharges such pollutants which cause the POTW to violate any conditions of its UPDES permit and the POTW is fined by the EPA, the state of Utah or Salt Lake County for such violations, then such user shall be fully liable for the total amount of the fines and civil penalties assessed against the POTW by the EPA or the state of Utah or Salt Lake County and administrative costs incurred.

- A. A user who has violated, or continues to violate, any provision of this division, a wastewater discharge permit, or order issued hereunder, or any other pretreatment standard or requirement may be liable to the city for a maximum civil penalty of ten thousand dollars (\$10,000.00) per violation, per day. In the case of a monthly or other long term average discharge limit, penalties shall accrue for each day during the period of the violation.
- B. The director may recover reasonable attorney fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the city.
- C. In determining the amount of civil liability, the court may take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the user's violation, corrective actions by the user, the compliance history of the user, and any other factor as justice requires.

- D. Filing a suit for civil penalties shall not be a bar against, or a prerequisite for, taking any other action against a user. (Ord. 68-11, 2011)

17.68.110: REFERRAL TO STATE OF UTAH FOR ACTION; CRIMINAL PROSECUTION:

Violations of any pretreatment standards, requirements, or permit conditions may constitute an offense subject to criminal prosecution. Violations shall be classified no less than a class B misdemeanor.

- A. A user who wilfully or negligently violates any provision of this division, a wastewater discharge permit or order issued hereunder, or any other pretreatment standard or requirement shall, upon conviction, be guilty of a misdemeanor, punishable by a fine of not more than twenty five thousand dollars (\$25,000.00) per violation, per day, or imprisonment for not more than six (6) months, or both.
- B. A user who wilfully or negligently introduces any substance into the POTW which causes personal injury or property damage shall, upon conviction, be guilty of no less than a class B misdemeanor and be subject to a penalty of at least twenty five thousand dollars (\$25,000.00), or be subject to imprisonment for not more than six (6) months, or both. This penalty shall be in addition to any other cause of action for personal injury or property damage available under state law.
- C. A user who knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to this division, wastewater discharge permit or order issued hereunder, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this division shall, upon conviction, be punished by a fine of not more than fifty thousand dollars (\$50,000.00) per violation, per day, or imprisonment for not more than six (6) months, or both.
- D. In the event of a second conviction, a user shall be punished by a fine of not more than fifty thousand dollars (\$50,000.00) per violation, per day, or imprisonment for not more than six (6) months, or both.

The POTW may refer to the state criminal violations of any pretreatment standards or permit conditions. The Utah attorney general's office will offer Salt Lake County the option to prosecute the violator. Should Salt Lake County decline, the state, at its discretion, may initiate appropriate criminal action. The POTW shall assist the Utah attorney general's office or Salt Lake County any way it can with appropriate support for the action taken. (Ord. 68-11, 2011)

17.68.120: PERFORMANCE BONDS:

The director may decline to reissue a wastewater discharge permit to any user which has failed to comply with the provisions of this division, or of any previous wastewater discharge permit, order, rule or regulation issued or promulgated hereunder, unless such user first files a satisfactory bond, payable to the POTW, in a sum not to exceed a value determined by the director to be necessary to achieve consistent compliance. (Ord. 68-11, 2011)

17.68.130: LIABILITY INSURANCE:

The director may decline to reissue a wastewater discharge permit to any user which has failed to comply with the provisions of this division, or of any previous wastewater discharge permit or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, unless the user first submits proof that it has obtained financial assurances sufficient to restore or repair damage to the POTW caused by its discharge. (Ord. 68-11, 2011)

17.68.140: WATER SUPPLY SEVERANCE:

Whenever a user has violated or continues to violate the provisions of this division, or of any wastewater discharge permit, or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, water service to the user may be discontinued. Service will only recommence, at the user's expense, after it has satisfactorily demonstrated its ability to comply. (Ord. 68-11, 2011)

17.68.150: PUBLIC NUISANCES:

Any violation of the provisions of this division, or of any individual wastewater discharge permit, or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, is hereby declared a public nuisance and shall be corrected or abated as directed by the director. Any person(s) creating a public nuisance shall be subject to the provisions of this code governing nuisances, including reimbursing the city for any costs incurred in removing, abating or remedying said nuisance. (Ord. 68-11, 2011)

17.68.160: CONTRACTOR LISTING:

Users which are found to be in significant noncompliance with any provisions of this division, or of any wastewater discharge permit, or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, are not eligible to receive a contractual award for the sale of goods or services to the POTW. Existing contracts for the sale of goods or services to the POTW held by a user found to be in significant noncompliance with any provisions of this division, or of any wastewater discharge permit or order, rule or regulation issued or promulgated hereunder, or any other pretreatment standard or requirement, may be terminated at the discretion of the POTW. (Ord. 68-11, 2011)

17.68.170: REMEDIES NONEXCLUSIVE:

The remedies provided are not exclusive remedies. The director reserves the right to take any, all, or any combination of these actions against a noncompliant user. Enforcement of pretreatment violations will generally be in accordance with the city's enforcement response plan. However, the director reserves the right to take other action against any user when the circumstances warrant. Further, the director is empowered to take more than one enforcement action against any noncompliant user. These actions may be taken concurrently. (Ord. 68-11, 2011)

Chapter 17.69 AFFIRMATIVE DEFENSES

17.69.010: UPSET:

- A. For the purposes of this section, "upset" means an exceptional incident in which there is unintentional and temporary noncompliance with categorical pretreatment standards because of factors beyond the reasonable control of the user. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- B. An upset shall constitute an affirmative defense to an action brought for noncompliance with categorical pretreatment standards if the requirements of subsection C of this section are met.
- C. A user who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - 1. An upset occurred and the user can identify the cause(s) of the upset;
 - 2. The facility was at the time being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures;
 - 3. The user has submitted the following information to the director and treatment plant operator within twenty four (24) hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within 5 days):
 - a. A description of the indirect discharge and cause of noncompliance;
 - b. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
 - c. Steps being taken and/or planned to reduce, eliminate and prevent recurrence of the noncompliance.
- D. In any enforcement proceeding, the user seeking to establish the occurrence of an upset shall have the burden of proof.
- E. Users shall have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with categorical pretreatment standards.
- F. The user shall control production of all discharges to the extent necessary to maintain compliance with categorical pretreatment standards upon reduction, loss, or failure of its treatment facility until the facility is

restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost or has failed. (Ord. 68-11, 2011)

17.69.020: PROHIBITED DISCHARGE STANDARDS:

A user shall have an affirmative defense to an enforcement action brought against it for noncompliance with the general and specific prohibitions in section [17.36.060](#) of this title, with the exception of the fire or explosion hazards or low pH, listed in subsections [17.36.060B2](#) and [B4](#) of this title, if it can prove that it did not know or have reason to know that its discharge, alone or in conjunction with discharges from other sources, would cause pass-through or interference and that either:

- A. A local limit exists for each pollutant discharged and the user was in compliance with each limit directly prior to, and during, the pass-through or interference, or
- B. No local limit exists, but the discharge did not change substantially in nature or constituents from the user's prior discharge when the POTW was regularly in compliance with its UPDES permit, and in the case of interference, was in compliance with applicable sludge use or disposal requirements. (Ord. 68-11, 2011)

17.69.030: BYPASS:

A. Definitions: For the purposes of this section:

BYPASS: The intentional diversion of waste streams from any portion of a user's treatment facility.

SEVERE PROPERTY DAMAGE: Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

B. Conditions To Allow Bypass: A user may allow any bypass to occur which does not cause pretreatment standards or requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of subsections C and D of this section.

C. Bypass Notification:

1. If a user knows in advance of the need for a bypass, it shall submit prior notice to the director, at least ten (10) days before the date of the bypass if possible.
2. A user shall submit oral notice of an unanticipated bypass that exceeds applicable pretreatment standards to the director within twenty four (24) hours from the time it becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the user becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times and, if the bypass has not been corrected, the anticipated time it is expected to continue. The user shall also set forth in writing the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. The director may waive the written report on a case by case basis if the oral report has been received within twenty four (24) hours.

D. Bypass Prohibition; Exception:

1. Bypass is prohibited, and the director may take enforcement action against a user for a bypass, unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c. The user submitted notices as required under subsection C of this section.

2. The director may approve an anticipated bypass, after considering its adverse effects, if the director determines that it will meet the three (3) conditions listed in subsection D1 of this section. (Ord. 68-11, 2011)

Chapter 17.72 SCHEDULES

17.72.010: SCHEDULE 1; TOXICS; NONEXCLUSIVE:

(Rep. by Ord. 72-98 § 18, 1998)

17.72.020: SCHEDULE 2; LOCAL LIMITS:

(Rep. by Ord. 72-98 § 19, 1998)

17.72.030: SCHEDULE 1; RATES AND FEES:

A. Purpose: For the purpose of defraying the cost of construction, reconstruction, maintenance and operation of the city sewer system, there are hereby imposed the charges shown on the Salt Lake City consolidated fee schedule upon all persons and premises receiving sewer collection and treatment services.

B. Definitions:

CUSTOMER CLASS: The classification or classifications applicable to each customer of the sewer system for purposes of calculating such customer's service charge under this chapter, based on the applicable range of the strength of such customer's waste discharge, as measured by BOD and TSS, as follows:

Customer Class	BOD (mg/l)	TSS (mg/l)
1	<300	<300
2	300 - 600	300 - 600
3	601 - 900	601 - 900
4	901 - 1,200	901 - 1,200
5	1,201 - 1,500	1,201 - 1,500
6	1,501 - 1,800	1,501 - 1,800
7	>1,800	>1,800

More than one class may apply to a customer at the same time. For example, a customer may be in class 2 for BOD, and in class 4 for TSS. The director shall assign class designations to customers based upon the nature of the facility owned or operated by the customer, and estimates based on sample measurements taken from similar facilities. Any customer may, at its expense, demonstrate that actual BOD or TSS discharges differ from the director's estimates, and the director shall assign such customer to a different class or classes, accordingly. Such

actual measurements shall be conducted in accordance with procedures established by the director.

DUPLEX: A single building containing two (2) independent dwelling units.

DWELLING UNIT: A building or other structure or portion thereof, in which: 1) an individual resides as a separate housekeeping unit, or 2) a collective body of persons (doing their own cooking) resides as a separate housekeeping unit in a domestic bond based upon birth, marriage, domestic employment or other family relationship, as distinguished from a boarding house, lodging house, club, fraternity, motel or hotel.

MULTIPLE DWELLING: Any building or other structure, having four (4) or more dwelling units therein, including a mobile home park.

SERVICE CHARGE: The charge for sewer collection and treatment services levied on all users of the public sewer system, as calculated pursuant to this chapter.

SERVICE TO MULTIPLE BUILDINGS: Sewer service to multiple buildings shall be governed the same as section [17.16.200](#) of this title.

SINGLE DWELLING UNIT: A building containing one dwelling unit.

TRIPLEX: A single building containing three (3) independent dwelling units.

C. Sewer Charges:

1. a. Each sewer customer in classes 1 to 6 shall be charged a monthly service charge equal to the greater of: 1) the cumulative flow rate, BOD rate and TSS rate per one hundred (100) cubic feet of metered water usage during the winter period, as shown on the Salt Lake City consolidated fee schedule, or 2) a minimum charge shown on the Salt Lake City consolidated fee schedule. The average monthly water meter readings during the consecutive months of November, December, January, February and March (hereinafter "winter months"), shall be the basis for sewer billings for the twelve (12) month period beginning July 1 and ending June 30, immediately following such winter months.
- b. Each customer in class 7 and all other classes that are monitored separately shall be charged a monthly service charge based on actual discharge strength. The flow component will be charged at a rate shown on the Salt Lake City consolidated fee schedule per one hundred (100) cubic feet of metered water used during the billing period. The charges for COD, BOD and TSS will be billed on actual pounds of discharge as shown on the Salt Lake City consolidated fee schedule.

Either a BOD or COD charge will be assessed, but not both. When there is an unexplained difference between the two (2) test results of COD and BOD the higher of the two will be used. Nothing in this section shall authorize discharges in excess of the maximum local limit concentrations established by the director pursuant to section [17.36.090](#) of this title.

- c. In cases where little or no water is used during one or more of the winter months, such that the average metered usage during such winter months cannot be reasonably assumed to reflect typical monthly usage for an account, the director may use other consumptive information specific to such account to determine average monthly minimum usage for sewer billing purposes.
- d. Meter readings for sewer billing purposes shall only include meters which measure water entering the sewer system.
- e. In the case of sewer users whose water usage is based in whole or in part on water sources other than the city, the city may require installation of a city approved meter, at the sewer user's expense, on the well(s) or other sources of water supply, for measurement by the city during the winter months to determine the sewer user's water use during the winter months.
- f. For each single-family dwelling sewer user using water other than city water and desiring not to install a water meter as provided above, the director may waive the meter requirement, in which event the user will be charged for sewer service as provided in subsection E of this section.

D. Metering Of Sewage Flows:

1. Meters will be allowed in sewer lines when the user is permitted or required by the director to have the sewage flow subject to the following requirements:

- a. The charges for sewer service will be based upon the actual sewer meter readings rather than upon the average of said winter readings.
- b. The user will furnish, install and maintain at user's expense a meter pursuant to the city's standards and specifications.

E. New Sewer Accounts:

1. For new sewer accounts, until the data required by subsection C1a of this section is available the monthly sewer rates shall be as shown on the Salt Lake City consolidated fee schedule.

- a. For class 7 customers, new accounts shall be treated in the same manner as established accounts under subsection C1b of this section.

F. Service Charge Adjustment:

- 1. The director may provide for adjustments as needed to ensure equitable service charges. Such adjustments may be made where excessive quantities of culinary water pass through the water meter, but are consumed on the premises and do not enter the sewer system. In each such instance, the user will have the burden of providing evidence of such inequities by showing that the quantity of water not entering the sewer, but passing through the meter, exceeds twenty percent (20%) of the total flow in order to merit such consideration by the director. Each such adjustment proposed to be made by the director shall first be presented to the public utilities advisory committee for review and recommendation, following which review and recommendation the director shall make a final determination.
- 2. Additionally, the director may make adjustments under the following conditions due to faulty inside plumbing. All adjustments will be determined by prior usage. When the charge is not based on preceding usage and has not been established on winter average the charge will be determined as outlined in this section or its successor.
 - a. When defective plumbing has caused the average winter water consumption to exceed the previous year's average by twenty five percent (25%) or more, there may be an adjustment made based on prior usage. The customer must provide to the director evidence that plumbing repairs were made within thirty (30) days of notification from the city. Such evidence may be in the form of a statement detailing the repairs made and the date of completion. The adjustment shall be made following the determination by the director that the repairs have resulted in decreased water consumption.
 - b. In the event of a customer's unexplainable large increase in water consumption during the months of November through March of any year, the director may make adjustments to any account when there has been a twenty five percent (25%) increase or more in usage during the winter months. Any adjustment may be made only after an in depth review of the account has been completed, and based solely on the merits of each individual request, and the circumstances surrounding the request.
 - c. The director may make adjustments to the account of a single-family residence, if the user or a user's tenant who has also signed the agreement for water service has temporary additional (2 or more) people living at the residence during all or part of the "winter meter readings" period and it has caused the average winter water consumption to exceed the previous year's average by twenty five percent (25%) or more. Such adjustment may be made by using the following guidelines:
 - (1) For one month or less, no adjustment will be allowed;
 - (2) For more than one month to twelve (12) months, the charge will be based on the new average winter water use for the number of months said additional people were in the residence;
 - (3) For all months following the period when said additional people are not in the residence, the charge will be based upon the previous year's established average use, or the fee shall be as outlined in subsection F2d of this section, or its successor subsection.

- d. All adjustments will be determined by the sewer charge of the preceding year. When the charge for the preceding year is not established on winter average, the charge will be determined as outlined in subsection F2c of this section, or its successor subsection.

G. Sewer Service Fees: The director shall charge, and the city shall collect the fees shown on the Salt Lake City consolidated fee schedule.

1. Special industrial and commercial uses, including car washes, laundromats, etc., as determined by the city's public utilities director, shall be charged the fee shown on the Salt Lake City consolidated fee schedule per equivalent fixture unit, as specified in the uniform plumbing code.
2. Connection fees on property with prior development:
 - a. When a residential building is demolished and the existing lateral is used for the same property, there is no new sewer connection fee for the property when residential use or building type is same as prior to demolition. After five (5) years from date of demolition no credit will be given for prior sewer connection fees. After five (5) years from demolition the property owner will be required to pay all connection fees.
 - b. When a commercial building such as a hotel, motel, industrial building, etc., is demolished the sewer fee shall be based and charged on new additional use pursuant to the applicable fee shown on the Salt Lake City consolidated fee schedule. After five (5) years from date of demolition no credit will be given for prior sewer connection fees. After five (5) years from demolition the property owner will be required to pay all connection fees required by the city.
3. Temporary sewer connections may only be made by approval of the director. Temporary connections cannot exceed twenty four (24) months. The fee for each temporary connection shall be shown on the Salt Lake City consolidated fee schedule. All other applicable fees will be effective for temporary connections. (Ord. 24-11, 2011)

Salt Lake City
Public Utilities
SSMP

Appendix C

**O AND M LIFT STATIONS
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10100

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2275	LAUNDRY & LINEN SUPPLIES	2,000	2,040	2,081
2278	GROUNDS SUPPLIES	2,000	2,040	2,081
2279.01	CITY BUILDING SUPPLIES	44,000	44,880	45,778
2295	SAFETY EQUIPMENT	500	510	520
2298	SMALL TOOLS & EQUIPMENT(< \$5000)	17,170	17,513	17,864
TOTAL - OPERATING & MAINTENANCE		84,770	86,465	88,195
2331.02	ELECTRICAL POWER FOR PUMPING	52,000	53,040	54,101
2332.01	NATURAL GAS	3,400	3,468	3,537
2336.04	TELEPHONE - DUCT RENTAL	8,000	8,160	8,323
SUB TOTAL - CHARGES & SERVICES		63,400	64,668	65,961
2521	OVERTIME MEALS	500	510	520
2521	OVERTIME MEALS	200	204	208
2549.14	WORKER'S COMP. MEDICAL	5,000	5,100	5,202
2982.02	INVENTORY ISSUES	1,000	1,020	1,040
2997	INTERFUND CHARGES	15,000	15,300	15,606
SUB TOTAL - OTHER CHARGES & SERVICES		21,700	22,134	22,577
TOTAL - CHARGES & SERVICES		85,100	86,802	88,538
COST CENTER TOTAL		771,690	787,123	802,866

**O AND M LIFT STATIONS
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10100

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2111.01	EXECUTIVE ANNUAL BASE PAY	71,208	72,632	74,085
2111.02	EXECUTIVE LONGEVITY PAY	1,200	1,224	1,248
2111.09	EXECUTIVE OTHER PAY	7,920	8,078	8,240
2113	EXECUTIVE OVERTIME PAY	2,268	2,313	2,360
2141.01	OP/MAINTENANCE BASE PAY	278,544	284,115	289,797
2141.02	OP/MAINTENANCE LONGEVITY PAY	3,200	3,264	3,329
2141.09	OP/MAINTENANCE OTHER PAY	27,120	27,662	28,216
2143	OP/MAINTENANCE OVERTIME PAY	12,849	13,106	13,368
SUB TOTAL - SALARIES & WAGES		404,309	412,395	420,643
2191.10	EMPLOYEE BENEFITS - FICA	29,776	30,372	30,979
2191.14	410K DEFERRED BENEFIT	2,604	2,656	2,709
2191.15	EMPLOYEE BENEFITS - STATE RET. NON.C.	66,728	68,063	69,424
2191.18	EMPLOYEE BENEFITS - 501C9 OPEB	5,736	5,851	5,968
2195	EMPLOYEE BENEFITS - INSURANCE	82,692	84,346	86,033
2195.01	HSA - CITY CONTRIBUTION	9,975	10,175	10,378
SUB TOTAL - EMPLOYEES BENEFITS		197,511	201,461	205,490
TOTAL - PERSONAL SERVICES		601,820	613,856	626,133
2221	STATIONARY SUPPLIES	200	204	208
2225	COMPUTER SUPPLIES	3,400	3,468	3,537
2243	PARTS NON MOTIVE	15,000	15,300	15,606
2267	PAINT & PAINTING SUPPLIES	500	510	520

**O AND M LIFT STATIONS
2018 - 2019 BUDGET**

MAINTENANCE:
MARK STANLEY

52-10101

CIP 52

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19
2720.05	LIFT STATIONS	1,410,000	2,331,000
2720.10	MAINTENANCE & REPAIR SHOPS	60,000	-
2760.30	TELEMETERING EQUIPMENT	-	10,000
TOTAL CAPITAL		1,470,000	2,341,000

**COLLECTION SYSTEM
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10600

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2111.01	EXECUTIVE ANNUAL BASE PAY	138,828	141,605	144,437
2111.02	EXECUTIVE LONGEVITY PAY	372	379	387
2113	EXECUTIVE OVERTIME PAY	5,100	5,202	5,306
2141.01	OP/MAINTENANCE ANNUAL BASE PAY	494,988	504,888	514,986
2141.02	OP/MAINT.LONGEVITY PAY	3,000	3,060	3,121
2141.09	OP/MAINT.OTHER PAY	19,560	19,951	20,350
2143	OP/MAINT.OVERTIME PAY	20,400	20,808	21,224
2151.01	CLERICAL ANNUAL BASE PAY	46,632	47,565	48,516
2151.02	CLERICAL LONGEVITY PAY	1,500	1,530	1,561
2165	SALARY CAPITALIZATION	(91,800)	(93,636)	(95,509)
SUB TOTAL - SALARIES & WAGES		638,580	651,352	664,379
2191.10	EMPLOYEE BENEFITS - FICA	53,928	55,007	56,107
2191.14	DEFERRED BENEFIT 401K	4,056	4,137	4,220
2191.15	EMPLOYEE BENEFITS - ST RET. NON. C.	122,940	125,399	127,907
2191.18	EMPLOYEE BENEFITS - 501C9 OPEB	10,284	10,490	10,699
2195	EMPLOYEE BENEFITS - GROUP LIFE INS	117,264	119,609	122,001
2195.01	HSA - CITY CONTRIBUTION	14,625	14,918	15,216
SUB TOTAL - EMPLOYEES BENEFITS		323,097	329,559	336,150
TOTAL - PERSONAL SERVICES		961,677	980,911	1,000,529
2211	BOOKS	400	408	416
2221	STATIONERY SUPPLIES	400	408	416
2222	SPECIAL FORMS	1,000	1,020	1,040
2225	COMPUTER SUPPLIES	2,000	2,040	2,081
2243	PARTS NON MOTIVE	42,000	42,840	43,697

**COLLECTION SYSTEM
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10600

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2249	REPAIR MATERIALS SEWER	50,000	51,000	52,020
2274	JANITORIAL SUPPLIES	250	255	260
2275	LAUNDRY & LINEN SUPPLIES	6,000	6,120	6,242
2279.01	CITY BUILDING SUPPLIES	5,000	5,100	5,202
2283	ASPHALT SAND & GRAVEL	6,000	6,120	6,242
2290	PUBLIC WORKS PERMITS	1,000	1,020	1,040
2292	CHEMICALS	58,000	59,160	60,343
2295	SAFETY EQUIPMENT	4,500	4,590	4,682
2298	SMALL TOOLS & EQUIPMENT(< \$5000)	38,000	38,760	39,535
T O T A L - O P E R A T I N G & M A I N T E N A N C E		214,550	218,841	223,218
2325	CHEMICAL ANALYSIS	500	510	520
2329	OTHER PROF. & TECH SERV	1,000	1,020	1,040
2331	ELECTRICAL POWER	1,200	1,224	1,248
2331.02	ELECTRICAL POWER FOR PUMPING	1,800	1,836	1,873
2332.01	NATURAL GAS	950	969	988
2333	WATER	11,000	11,220	11,444
2333.02	STORM WATER	500	510	520
2333.04	STREET LIGHTING FUND FEES	1,500	1,530	1,561
2336.05	TELEPHONE - EMERGENCY CIRCUIT	2,200	2,244	2,289
2339	COMPUTER EQUIP MAINT	1,800	1,836	1,873
2396	WASTE DISPOSAL	25,000	25,500	26,010
SUB TOTAL - CHARGES & SERVICES		47,450	48,399	49,367
2513	EQUIPMENT RENTAL	15,000	15,300	15,606
2514	BARRICADES RENTAL	15,000	15,300	15,606
2521	OVERTIME MEALS	3,000	3,060	3,121
2523	IN CITY CONVENTION & WORKSHOP	11,250	11,475	11,705

**COLLECTION SYSTEM
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10600

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2525	OUT OF TOWN TRAVEL	6,000	6,120	6,242
2549.14	WORKER'S COMP MEDICAL	10,000	10,200	10,404
2982.02	INVENTORY ISSUES	18,000	18,360	18,727
2997	INTERFUND CHARGES	(150,000)	(153,000)	(156,060)
SUB TOTAL - OTHER CHARGES & SERVICES		(71,750)	(73,185)	(74,649)
T O T A L - CHARGES & SERVICES		(24,300)	(24,786)	(25,282)
COST CENTER TOTAL		1,151,927	1,174,966	1,198,465

**WATERSHED PATROL
2018 - 2019 BUDGET**

CIP 51

WATER QUALITY:
MARIAN RICE

51-00601

Manager
Patrick Nelson

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19
2730.20	LANDSCAPING	822,000	217,000
TOTAL CAPITAL		822,000	217,000

**MOBILE CAMERA INSPECTION
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10800

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2111.01	EXECUTIVE ANNUAL BASE PAY	93,132	94,995	96,895
2111.02	EXECUTIVE LONGEVITY PAY	650	663	676
2141.01	OP/MAINTENANCE ANNUAL BASE PAY	409,272	417,457	425,807
2141.02	OP/MAINTENANCE LONGEVITY PAY	3,350	3,417	3,485
2141.09	OP/MAINTENANCE OTHER PAY	16,920	17,258	17,604
2143	OP/MAINTENANCE OVERTIME PAY	17,839	18,195	18,559
2165	SALARY CAPITALIZATION	(5,100)	(5,202)	(5,306)
SUB TOTAL - SALARIES & WAGES		536,063	546,784	557,719
2191.10	EMPLOYEE BENEFITS - FICA	40,062	40,863	41,681
2191.14	DEFERRED BENEFIT 401K	8,610	8,782	8,958
2191.15	EMPLOYEE BENEFITS - STATE RET. NON. CT.	83,903	85,581	87,293
2191.18	EMPLOYEE BENEFITS - 501C9 OPEB	7,524	7,674	7,828
2195	EMPLOYEE BENEFITS - GROUP INSURANCE	103,368	105,435	107,544
2195.01	HSA - CITY CONTRIBUTION	12,525	12,776	13,031
SUB TOTAL - EMPLOYEES BENEFITS		255,992	261,112	266,334
T O T A L - PERSONAL SERVICES		792,055	807,896	824,054
2225	COMPUTER SUPPLIES	5,500	5,610	5,722
2243	PARTS NON MOTIVE	40,000	40,800	41,616
2298	SMALL TOOLS & EQUIPMENT	8,000	8,160	8,323
T O T A L - OPERATING & MAINTENANCE		53,500	54,570	55,661
2329	OTHER PROFESSIONAL & TECH SERVICES	15,000	15,300	15,606
2331	ELECTRICAL POWER	500	510	520
2332.01	NATURAL GAS	350	357	364
2521	OVERTIME MEALS	1,500	1,530	1,561

**MOBILE CAMERA INSPECTION
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-10800

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2527.01	CELL PHONE ALLOWANCE	312	357	364
2549.14	WORKER'S COMP. MEDICAL	5,000	5,100	5,202
TOTAL - CHARGES & SERVICES		22,662	23,154	23,617
COST CENTER TOTAL		868,217	885,620	903,332

**FLEET MAINTENANCE
2018 - 2020 BUDGET**

52

MAINTENANCE:
MARK STANLEY

52-11000

Manager
Steve Terry

OBJECT ACCOUNT NUMBER	OBJECT ACCOUNT TITLE	BUDGET 2017-18	FORECAST 2018-19	FORECAST 2019-20
2329	OTHER PROFESSIONAL & TECH SERVICES	10,000	10,200	10,404
2339	COMPUTER EQUIP MAINT	26,300	26,826	27,363
2342	COMMUNICATIONS MAINTENANCE	15,000	15,300	15,606
2390.01	FLEET DISCRETIONARY MOTOR FUEL	130,000	132,600	135,252
2390.10	FLEET MAINT: REPAIR	180,000	183,600	187,272
2390.11	FLEET MAINT: PREV MAINT	30,000	30,600	31,212
2390.12	FLEET MAINT: ACCIDENT	500	510	520
2390.13	FLEET MAINT: ELECTIVE	1,500	1,530	1,561
2390.16	FLEET MAINT: EPA CHARGE	6,000	6,120	6,242
	SUB TOTAL - CHARGES & SERVICES	399,300	407,286	415,432
2998	INTRADEPARTMENTAL CHARGES	(75,000)	(76,500)	(78,030)
	GOVERNMENTAL TRANSACTIONS	(75,000)	(76,500)	(78,030)
	TOTAL - CHARGES & SERVICES	324,300	330,786	337,402
	COST CENTER TOTAL	324,300	330,786	337,402

SEWER UTILITY CIP BUDGET SUMMARY
For Fiscal Year 2017-18

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	BUDGET YEAR 2017-18
52-10401	2710.10		LAND	
10401		2015-0481	500 SOUTH LAND PURCHASE	340,000
10401			LAND EASEMENT FOR 700 SOUTH SEWER LINE	250,000
10401		2016-0887	SHURTLEFF AND ANDREWS SECONDARY ACCESS	450,000
				1,040,000
52-10101	2720.10		MAINTENANCE & REPAIR SHOPS - 2720.10	
10101	52490790	2016-0956	S&A LIFT STATION STORAGE IMPROVEMENTS	60,000
				60,000
52-10101	2720.05		LIFT STATIONS - 2720.05	
			LIFT STATION ASSET MANAGEMENT PROGRAM	
10101	52490788	2015-0642	ANNUAL SYSTEM WIDE LIFT STATION CONDITION ASSESSMENT & ASSET MANAGEMENT PRIOR	200,000
				200,000
			LIFT STATION RENEWAL/REPLACEMENT PROGRAM	
10101	52490782		EAST LIFT STATION AT AIRPORT	100,000
10101	52490789	2015-0414	ANNUAL PUMP REPLACEMENT (VARIOUS)	50,000
10101	52490758	2015-0266	4000 WEST LIFT STATION UPGRADE/REPLACEMENT (SS12)	750,000
10101	52490780	2015-0263	1700 NORTH LIFT STATION REHABILITATION (SS03)	280,000
10101	52490778	2015-0264	SOUTH LIFT STATION (SS05)	30,000
				1,210,000
			TOTAL LIFT STATIONS	1,410,000
52-11201	2720.30		TREATMENT PLANTS	
11201	524905330	2015-0707	CHLORINE BUILDING ALARM SYSTEM	75,000
11201	524905305	2015-0709	SCADA PHASE III CONSTRUCTION	337,500
11201	524905280	2015-0710	REPLACEMENT OF MCC2A AT THE PRE-SEDIMENTATION BUILDING - CONSTRUCTION	1,125,000
11201	524905284		DATA ENTRY AND REPORTING SYSTEM	230,000
	524905334	2016-1160	UPGRADE EMERGENCY GENERATORS AT THE PUMP STATION	1,900,000
	524905335		WRF MASTER PLAN IMPLEMENTATION - CAPITAL PROJECT SUPPORT	36,000
11201	52540053	2015-0708	ATMOSPHERIC MONITORING REPLACEMENT PROGRAM	25,000
11201	52540057	2016-1281	COGEN ENGINE OVERHAUL	700,000
	52540064		VFD REPLACEMENT	1,200,000
11201	524905272	2015-0404	INFLUENT SCREENINGS BUILDING AT THE INFLUENT PUMP STATION	6,362,000
11201	52540052	2015-0500	TRICKLING FILTER REHABILITATION	2,000,000
11201	52540058	2015-0502	CAPITAL ASSET REHABILITATION AND UPGRADES	1,300,000
11201	52540059	2015-0503	ELECTRICAL UPGRADES	1,000,000
11201	52540060	2016-1276	REPLACEMENT OF SCADA SERVERS AND NETWORK SWITCHES	250,000
11201	52540061	2016-1277	REPLACEMENT OF CENTER COLUMN AND RECOATING SUPERSTRUCTURE AND GATE REPLACEMENT ON GRAVITY THICKENER #2	350,000
11201	524905211	2015-0640	FACILITY BUILDING PAINTING (CORROSION PROTECTION PROGRAM)	250,000
11201	52466	2016-1139	REROOFING WEST STORAGE BUILDING	50,000
11201	52540062	2016-1138	HVAC REPLACEMENTS	30,000
11201	52540063	2016-1136	ASPHALT POT HOLE REPAIR AND SLURRY SEAL	250,000

SEWER UTILITY CIP BUDGET SUMMARY
For Fiscal Year 2017-18

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	BUDGET YEAR 2017-18
				17,470,500
			NUTRIENT PROJECTS	
11201	524905271	2015-0505	BIO-SOLIDS MECHANICAL DEWATERING	5,764,000
				5,764,000
			TOTAL TREATMENT PLANTS	23,234,500
52-10401	2730.14		COLLECTION LINES	
			COLLECTION SYSTEM ASSET MANAGEMENT PROGRAM	
10401	525002770	2015-0703	BECK STREET TRUNK LINE CONDITION ASSESSMENT/PRE-DESIGN	600,000
10401	525002771	2015-0705	ORANGE STREET TRUNK LINE CONDITION ASSESSMENT/PROJECT PRE-DESIGN	156,000
				756,000
			FLOW MONITORING/I&I PROGRAM	
10401	525002756	2015-0646	WEST SIDE INFLOW & INFILTRATION STUDY	350,000
10401	525002741	2015-0651	ANNUAL HYDRAULIC MODEL CALIBRATION	250,000
10401	525002740	2015-0649	PERMANENT FLOW METERS	250,000
10401	525002755	2016-1249	BASIN 28 I&I ANALYSIS	350,000
				1,200,000
			CITY, COUNTY, STATE AND MISC. DRIVEN PROJECTS	
10401	525002738	2015-0654	PRISON RELOCATION UTILITIES AND DEVELOPMENT SUPPORT	1,500,000
10401	525002738	2016-1262	NW QUADRANT CF INFRASTRUCTURE SUPPORT SERVICES	250,000
	525002753		900 WEST - NORTH TEMPLE TO 950 SOUTH	600,000
	525002760		WEST TEMPLE - NORTH TEMPLE TO 400 SOUTH	350,000
10401	52520017	2015-0263	700 N I-15 BYPASS FOR INSPECTION OF EXISTING LINE	272,000
10401	525002764	2016-0743	1300 EAST - SEWER	340,000
10401	525002681		WILMINGTON AVENUE SANITARY SEWER	15,800
10401	525002759	2016-0893	SIMPSON AVE FROM HIGHLAND AVE TO 1300 E TO I-80 ON-RAMP CIPP INSTALLATION	144,500
				3,472,300
			PIPE RENEWAL & REPLACEMENT PROGRAM	
10401	525002699	2015-0676	800 W - FROM 200 N TO 241 N WEST SIDE	45,000
10401	525002701	2015-0677	500 S - FROM 1600 E TO 1569 E	65,000
10401	525002702	2015-0331	H STREET - NINTH AVENUE TO 575 NORTH	60,000
10401	525002703	2015-0304	200 NORTH AT 200 WEST - SW CORNER TO SE CORNER	25,000
10401	525002704	2015-0305	200 NORTH - WEST TEMPLE TO MAIN STREET	30,000
10401	525002705	2015-0332	300 WEST - 500 NORTH TO 600 NORTH (WEST SIDE)	110,000
10401	525002706	2015-0341	VILLAGE CIRCLE	100,000
10401	525002707	2015-0342	CHICAGO STREET - SOUTH TEMPLE TO NORTH TEMPLE	52,000
10401	525002708	2015-0333	WEST CAPITOL STREET - COLUMBUS STREET TO ZANE AVENUE TO WALL STREET	100,000
10401	525002709	2015-0334	EIGHTH AVENUE - D STREET TO E STREET	35,000
10401	525002710	2015-0335	H STREET - EIGHTH AVENUE TO SEVENTH AVENUE TO I STREET	90,000
10401	525002711	2015-0336	I STREET - SIXTH AVENUE TO TENTH AVENUE	150,000
10401	525002712	2015-0337	SIXTH AVENUE - I STREET TO H STREET TO FIFTH AVE	70,000

**SEWER UTILITY CIP BUDGET SUMMARY
For Fiscal Year 2017-18**

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	BUDGET YEAR 2017-18
10401	525002713	2015-0338	DARWIN STREET - ZANE AVENUE TO GIRARD AVENUE	50,000
10401	525002714	2015-0339	HAROLD GATTY DRIVE (525 N) - 5700 WEST TO 5780 WEST	60,000
10401	525002715	2015-0340	ARAPEEN DRIVE - SUNNYSIDE AVENUE TO KOMAS DRIVE	101,700
10401	525002716	2015-0346	PENNROSE DRIVE - MILITARY WAY TO PENNROSE DRIVE	61,200
10401	525002720	2015-0347	900 EAST - SOUTH TEMPLE TO 100 SOUTH TO 800 EAST	135,000
10401	525002721	2015-0348	900 EAST (WEST SIDE) 200 SOUTH TO 100 SOUTH TO WINDSOR CT	100,800
10401	525002722	2015-0349	DOUGLAS STREET (WEST) - 300 SOUTH TO 200 SOUTH	94,500
10401	525002723	2015-0351	KENSINGTON AVENUE - 600 EAST TO 700 EAST	45,900
10401	525002724	2015-0352	WILSON AVENUE - 300 EAST TO 400 EAST	63,900
10401	525002725	2015-0354	THIRD AVENUE - J STREET TO H STREET	71,100
10401	525002726	2015-0355	FIRST AVENUE - C STREET TO E STREET	70,200
10401	525002727	2015-0356	"B" STREET AT SOUTH TEMPLE	44,100
10401	525002728	2015-0360	CANYON ROAD - THIRD AVENUE TO 270 NORTH	59,400
10401	525001758	2015-0361	200 EAST AT 400 SOUTH - NW CORNER OF INTERSECTION	24,750
10401	525002729	2015-0476	VIRGINIA STREET SEWER REHAB FROM FAIRFAX DR TO FEDERAL HEIGHTS DR.	51,300
10401	525002636	2015-0479	MAIN STREET SEWER REHABILITATION FROM 700 S (NWC) TO 800 S (SWC)	228,600
10401	525002730	2015-0714	500 E FROM 800 S TO 900 S	63,900
10401	525002731	2015-0471	REDWOOD ROAD SEWER REHAB FROM 1400 NORTH TO 1690 NORTH	235,800
10401	525002732	2015-0328	J STREET SEWER REHAB FROM 500 NORTH TO 400 NORTH	27,360
10401	525002667	2015-0474	1700 EAST SEWER REHAB FROM 1300 SOUTH TO HARRISON (1380 S)	42,750
10401	525002667	2015-0475	CHANDLER CIRCLE SEWER REHAB (PRIVATE AREA BACK OF PROPERTY)	46,000
10401	525002733	2015-0673	ALLEY BETWEEN 1200 E AND ELIZABETH ST - 300 S TO 200 S	66,000
10401	525002734	2015-0323	200 EAST - 400 SOUTH TO 500 SOUTH (EAST SIDE)	79,500
10401	525002735	2015-0469	2700 SOUTH - 900 EAST TO GREEN STREET	328,000
10401	525002367	2015-0301	INDEPENDENCE BOULEVARD MIAMI ROAD	53,000
10401	525002772	2015-0725	WEST CAPITOL ST - 490 N TO 520 N	64,500
10401	525002773	2015-0726	CENTER ST - 425 N TO 500 N	109,050
10401	525002774	2015-0728	ALLY BETWEEN LAKE ST AND 800 E MH 02282 - 02460	144,000
10401	525002775	2015-0729	1ST AVE - 350 E TO 320 E	66,300
10401	525002776	2015-0730	3RD AVE - F ST TO E ST	40,500
10401	525002777	2015-0298	1500 SOUTH - PIONEER ROAD (2700 W) TO 2450 WEST	30,000
10401	525002778	2015-0299	1500 SOUTH - BENNETT ROAD (2025 W) TO WALLACE ROAD (1950 W)	20,000
10401	525002779	2015-0308	500 SOUTH - MARCH STREET (2935 W) TO 3025 WEST	37,500
10401	525002744	2016-0833	2300 EAST SEWER REHAB FROM EAST TO WEST SIDE OF FOOTHILL BLVD	20,000
10401	525002629	2015-0344	REDWOOD ROAD - PAXTON AVENUE TO CALIFORNIA AVENUE	150,000
10401	525002780	2016-0840	4600 WEST DIVERSION CONDITION ASSESSMENT/PRE-DESIGN	150,000
10401	525002630	2015-0679	CALIFORNIA AVENUE - REDWOOD ROAD TO UTAH STREET	78,000
				4,036,610
			POINT REPAIR PROGRAM (VARIOUS LOCATIONS)	
10401	525002781	2016-0904	600 N STAR CREST DR POINT REPAIRS	150,000
10401	525002782	2016-0898	3620 WEST 500 SOUTH POINT REPAIR	40,000
				190,000
			MANHOLE REHAB PROGRAM (VARIOUS LOCATIONS)	
10401	525002783	2015-0470	500 SOUTH STATE STREET - VAULT/MANHOLE REPAIR	70,000
				70,000
			OTHER PROJECTS	
10401		2015-0376	ON-CALL TASK ORDER GENERAL CONSTRUCTION SERVICES (VARIOUS LOCATIONS)	300,000

SEWER UTILITY CIP BUDGET SUMMARY
For Fiscal Year 2017-18

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	BUDGET YEAR 2017-18
10401	52520035	2015-0485	EMERGENCIES - CONTRIBUTIONS BY DEVELOPERS	500,000
	52510022	2016-0850	SHURTLEFF AND ANDREWS DUE DILIGENCE SURVEY	50,000
	52510023	2016-1267	COLLECTION SYSTEM PROJECTS GENERAL SUPPORT - TASK 2	600,000
			PROGRAM MANAGEMENT SERVICES - TASK 1	382,000
			RENEW PUBLIC OUTREACH PROGRAM (COLLECTIONS)	150,000
				1,982,000
			MASTER PLAN IMPLEMENTATION PROGRAM	
10401	525002524	2015-0279	500 SOUTH INTERCEPTOR - ORANGE TO 1000 WEST	7,500,000
10401	525002698	2015-0286	MP12A - 700 SOUTH CAPACITY UPGRADES - 4850 WEST TO 3400 WEST	10,500,000
10401	52490785	2016-1260	500 SOUTH DIVERSION, PHASE II (PUMP STATION)	12,000,000
10401	525002770	2016-0950	MP13 - BECK STREET TRUNK REPLACEMENT FROM 500 SOUTH AND STATE STREET TO 700 SOUTH AND 300 EAST	60,000
10401	525002376		1800 NORTH BECK STREET TO THE PRETREATMENT PLANT	3,300,000
10401	525002423	2015-0320	MP8A - 1500 SOUTH - 2700 WEST TO REDWOOD ROAD	400,000
10401	52490787	2015-0269	MP12D - 700 SOUTH LIFT STATION (SS 10)	11,000,000
10401	525002518	2016-0926	MP11 - STATE STREET AND 500 SOUTH DIVERSION IMPROVEMENT	40,000
10401	525002577	2016-0849	MP15 - 700 SOUTH INTERCEPTOR CAPACITY UPGRADE	40,000
10401	525002584	2016-0905	MP7 - 100 SOUTH 1200 EAST DIVERSION FOR CAPACITY	30,000
				44,870,000
			TOTAL COLLECTION LINES	56,576,910
52-10401	2730.20		LANDSCAPING	
10401	525002689		NORTHWEST OIL DRAIN	333,333
				333,333
			TOTAL CAPITAL IMPROVEMENTS	82,654,743
	2750.10		AUTOMOBILES & TRUCKS	
12201			Electric Club Car Qty. 4	64,000
10801			Transit Van w/Upfit	37,400
10101			3/4 Ton Truck w/Service Body 4X4	37,500
				138,900
	2750.30		FIELD MAINTENANCE EQUIP.	
10801			BACKHOE EXCHANGE	9,000
				9,000
	2760.50		OFFICE FURNITURE & EQUIPMENT	
11301			Server replacement "SLCIWRDB"	10,000
11701			Core Switch	5,400
				15,400
	2760.90		OTHER NON-MOTIVE EQUIPMENT	
12201			Washer Compactor for Primary Sludge Screens	110,000

SEWER UTILITY CIP BUDGET SUMMARY
For Fiscal Year 2017-18

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	BUDGET YEAR 2017-18
10601			Vanguard System	28,000
				138,000
			TOTAL CAPITAL OUTLAY	301,300
			GRAND TOTAL	82,956,043

SEWER UTILITY CIP BUDGET

[illegible]

SEWER UTILITY CIP BUDGET
Five Year Projected Budget 2018-2022

COST CENTER	PROJECT NUMBER	CIP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2018-2017	BUDGET YEAR 2017-18	2018-19	2019-20	2020-21	2021-22	DELAYED
11201	5240056		REPLACE AC UNIT IN TRICKLING FILTER BUILDING	1,200						
11201	5240057		NETWORK UPGRADE PHASE II	27,762						
11201	5240058		REPLACE 100 FEET OF 2 INCH SCHEDULE 40 WATER LINE	0						
11201	5240059		REPLACE 12 DIAMETER X 32 PRE-SEGMENTATION GRIOT CONVERTER	8,689						
11201	5240060		REPLACEMENT OF EXISTING DIOESTER GAS FLARES	0						
11201	5240061		INFLUENT PUMP STATION BUILDING REHAB	37,791						
11201	5240062		PRETREATMENT BAY	964						
11201	5240063		NUTRIENT PROJECT PRE-DESIGN	548,649						
11201	5240064		WAS MECHANICAL THICKENING BUILD	110,000						
11201	5240065		WRT LABORATORY REMODELING	31,141						
11201	5240066		VARIOUS	0						
11201	5240067		WRT MASTER PLAN IMPLEMENTATION CAPITAL PROJECT SUPPORT	36,000						
11201	5240068		WRT MASTER PLAN IMPLEMENTATION REPLACEMENT PROGRAM	75,000						
11201	5240069		COORDINATING COUNCIL	0						
11201	5240070		WRT REPAIRS	1,200,000						
11201	5240071		2018-2022 TRICKLING FILTER REHABILITATION	1,207,737						
11201	5240072		2018-2022 TRICKLING FILTER REHABILITATION	1,000,000						
11201	5240073		2018-2022 CAPITAL ASSET REHABILITATION AND UPGRADES	0						
11201	5240074		2018-2022 ELECTRICAL UPGRADES	0						
11201	5240075		2018-2022 REPLACEMENT OF SCADA SERVERS AND NETWORK SWITCHES	0						
11201	5240076		2018-2022 FUEL ISLAND AND TRUCK SCALE	0						
11201	5240077		2018-2022 REHAB OF VERTICAL TURBINE PUMPS	0						
11201	5240078		2018-2022 REPLACEMENT OF CENTER COLUMN AND RECOATING SUPERSTRUCTURE AND GATE REPLACEMENT	0						
11201	5240079		2018-2022 FACILITY BUILDING PAINTING (CORROSION PROTECTION PROGRAM)	0						
11201	5240080		2018-2022 REPAIRS TO WEST STORAGE BUILDING	0						
11201	5240081		2018-2022 HVAC REPLACEMENTS	0						
11201	5240082		2018-2022 REPLACEMENT OF CHLORINE LIQUID PIPING	0						
11201	5240083		2018-2022 ASPHALT POT HOLE REPAIR AND BLURRY SEAL	0						
11201	5240084		2018-2022 YARD LIGHTING UPGRADES	0						
11201	5240085		2018-2022 BODMAS FUELED TEST FEASIBILITY STUDY	0						
11201	5240086		2018-2022 NUTRIENT PROJECTS	0						
11201	5240087		2018-2022 NUTRIENT PROJECTS	0						
11201	5240088		2018-2022 NUTRIENT PROJECTS	0						
11201	5240089		2018-2022 NUTRIENT PROJECTS	0						
11201	5240090		2018-2022 NUTRIENT PROJECTS	0						
11201	5240091		2018-2022 NUTRIENT PROJECTS	0						
11201	5240092		2018-2022 NUTRIENT PROJECTS	0						
11201	5240093		2018-2022 NUTRIENT PROJECTS	0						
11201	5240094		2018-2022 NUTRIENT PROJECTS	0						
11201	5240095		2018-2022 NUTRIENT PROJECTS	0						
11201	5240096		2018-2022 NUTRIENT PROJECTS	0						
11201	5240097		2018-2022 NUTRIENT PROJECTS	0						
11201	5240098		2018-2022 NUTRIENT PROJECTS	0						
11201	5240099		2018-2022 NUTRIENT PROJECTS	0						
11201	5240100		2018-2022 NUTRIENT PROJECTS	0						
11201	5240101		2018-2022 NUTRIENT PROJECTS	0						
11201	5240102		2018-2022 NUTRIENT PROJECTS	0						
11201	5240103		2018-2022 NUTRIENT PROJECTS	0						
11201	5240104		2018-2022 NUTRIENT PROJECTS	0						
11201	5240105		2018-2022 NUTRIENT PROJECTS	0						
11201	5240106		2018-2022 NUTRIENT PROJECTS	0						
11201	5240107		2018-2022 NUTRIENT PROJECTS	0						
11201	5240108		2018-2022 NUTRIENT PROJECTS	0						
11201	5240109		2018-2022 NUTRIENT PROJECTS	0						
11201	5240110		2018-2022 NUTRIENT PROJECTS	0						
11201	5240111		2018-2022 NUTRIENT PROJECTS	0						
11201	5240112		2018-2022 NUTRIENT PROJECTS	0						
11201	5240113		2018-2022 NUTRIENT PROJECTS	0						
11201	5240114		2018-2022 NUTRIENT PROJECTS	0						
11201	5240115		2018-2022 NUTRIENT PROJECTS	0						
11201	5240116		2018-2022 NUTRIENT PROJECTS	0						
11201	5240117		2018-2022 NUTRIENT PROJECTS	0						
11201	5240118		2018-2022 NUTRIENT PROJECTS	0						
11201	5240119		2018-2022 NUTRIENT PROJECTS	0						
11201	5240120		2018-2022 NUTRIENT PROJECTS	0						
11201	5240121		2018-2022 NUTRIENT PROJECTS	0						
11201	5240122		2018-2022 NUTRIENT PROJECTS	0						
11201	5240123		2018-2022 NUTRIENT PROJECTS	0						
11201	5240124		2018-2022 NUTRIENT PROJECTS	0						
11201	5240125		2018-2022 NUTRIENT PROJECTS	0						
11201	5240126		2018-2022 NUTRIENT PROJECTS	0						
11201	5240127		2018-2022 NUTRIENT PROJECTS	0						
11201	5240128		2018-2022 NUTRIENT PROJECTS	0						
11201	5240129		2018-2022 NUTRIENT PROJECTS	0						
11201	5240130		2018-2022 NUTRIENT PROJECTS	0						
11201	5240131		2018-2022 NUTRIENT PROJECTS	0						
11201	5240132		2018-2022 NUTRIENT PROJECTS	0						
11201	5240133		2018-2022 NUTRIENT PROJECTS	0						
11201	5240134		2018-2022 NUTRIENT PROJECTS	0						
11201	5240135		2018-2022 NUTRIENT PROJECTS	0						
11201	5240136		2018-2022 NUTRIENT PROJECTS	0						
11201	5240137		2018-2022 NUTRIENT PROJECTS	0						
11201	5240138		2018-2022 NUTRIENT PROJECTS	0						
11201	5240139		2018-2022 NUTRIENT PROJECTS	0						
11201	5240140		2018-2022 NUTRIENT PROJECTS	0						
11201	5240141		2018-2022 NUTRIENT PROJECTS	0						
11201	5240142		2018-2022 NUTRIENT PROJECTS	0						
11201	5240143		2018-2022 NUTRIENT PROJECTS	0						
11201	5240144		2018-2022 NUTRIENT PROJECTS	0						
11201	5240145		2018-2022 NUTRIENT PROJECTS	0						
11201	5240146		2018-2022 NUTRIENT PROJECTS	0						
11201	5240147		2018-2022 NUTRIENT PROJECTS	0						
11201	5240148		2018-2022 NUTRIENT PROJECTS	0						
11201	5240149		2018-2022 NUTRIENT PROJECTS	0						
11201	5240150		2018-2022 NUTRIENT PROJECTS	0						
11201	5240151		2018-2022 NUTRIENT PROJECTS	0						
11201	5240152		2018-2022 NUTRIENT PROJECTS	0						
11201	5240153		2018-2022 NUTRIENT PROJECTS	0						
11201	5240154		2018-2022 NUTRIENT PROJECTS	0						
11201	5240155		2018-2022 NUTRIENT PROJECTS	0						
11201	5240156		2018-2022 NUTRIENT PROJECTS	0						
11201	5240157		2018-2022 NUTRIENT PROJECTS	0						
11201	5240158		2018-2022 NUTRIENT PROJECTS	0						
11201	5240159		2018-2022 NUTRIENT PROJECTS	0						
11201	5240160		2018-2022 NUTRIENT PROJECTS	0						
11201	5240161		2018-2022 NUTRIENT PROJECTS	0						
11201	5240162		2018-2022 NUTRIENT PROJECTS	0						
11201	5240163		2018-2022 NUTRIENT PROJECTS	0						
11201	5240164		2018-2022 NUTRIENT PROJECTS	0						
11201	5240165		2018-2022 NUTRIENT PROJECTS	0						
11201	5240166		2018-2022 NUTRIENT PROJECTS	0						
11201	5240167		2018-2022 NUTRIENT PROJECTS	0						
11201	5240168		2018-2022 NUTRIENT PROJECTS	0						
11201	5240169		2018-2022 NUTRIENT PROJECTS	0						
11201	5240170		2018-2022 NUTRIENT PROJECTS	0						
11201	5240171		2018-2022 NUTRIENT PROJECTS	0						
11201	5240172		2018-2022 NUTRIENT PROJECTS	0						
11201	5240173		2018-2022 NUTRIENT PROJECTS	0						
11201	5240174		2018-2022 NUTRIENT PROJECTS	0						
11201	5240175		2018-2022 NUTRIENT PROJECTS	0						
11201	5240176		2018-2022 NUTRIENT PROJECTS	0						
11201	5240177		2018-2022 NUTRIENT PROJECTS	0						
11201	5240178		2018-2022 NUTRIENT PROJECTS	0						
11201	5240179		2018-2022 NUTRIENT PROJECTS	0						
11201	5240180		2018-2022 NUTRIENT PROJECTS	0						
11201	5240181		2018-2022 NUTRIENT PROJECTS	0						
11201	5240182		2018-2022 NUTRIENT PROJECTS	0						
11201	5240183		2018-2022 NUTRIENT PROJECTS	0						
11201	5240184		2018-2022 NUTRIENT PROJECTS	0						
11201	5240185		2018-2022 NUTRIENT PROJECTS	0						
11201	5240186		2018-2022 NUTRIENT PROJECTS	0						
11201	5240187		2018-2022 NUTRIENT PROJECTS	0						
11201	5240188		2018-2022 NUTRIENT PROJECTS	0						
11201	5240189		2018-2022 NUTRIENT PROJECTS	0						
11201	5240190		2018-2022 NUTRIENT PROJECTS	0						
11201	5240191		2018-2022 NUTRIENT PROJECTS	0						
11201	5240192		2018-2022 NUTRIENT PROJECTS	0						
11201	5240193		2018-2022 NUTRIENT PROJECTS	0						
11201	5240194		2018-2022 NUTRIENT PROJECTS	0						
11201	5240195		2018-2022 NUTRIENT PROJECTS	0						
11201	5240196		2018-2022 NUTRIENT PROJECTS	0						
11201	5240197		2018-2022 NUTRIENT PROJECTS	0						
11201	5240198		2018-2022 NUTRIENT PROJECTS	0						
11201	5240199		2018-2022 NUTRIENT PROJECTS	0						
11201	5240200		2018-2022 NUTRIENT PROJECTS	0						
11201	5240201		2018-2022 NUTRIENT PROJECTS	0						
11201	5240202		2018-2022 NUTRIENT PROJECTS	0						
11201	5240203		2018-							

SEWER UTILITY CIP BUDGET

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	PART YEAR 2015-2017	BUDGET YEAR 2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	DELTED
10401	525002756	2015-0048	WEST SIDE INFLOW & INFILTRATION ST/LOT	0	355,100						
10401	525002757	2015-0052	EAST SIDE INFLOW & INFILTRATION (46) ST/LOT	0	0	200,000			250,000		
10401	525002758	2015-0053	ANNUAL HYDRAULIC MODEL CALIBRATION	133,000	200,000	100,000			150,000	100,000	600,000
10401	525002759	2015-0054	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002760	2015-0055	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002761	2015-0056	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002762	2015-0057	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002763	2015-0058	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002764	2015-0059	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002765	2015-0060	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002766	2015-0061	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002767	2015-0062	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002768	2015-0063	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002769	2015-0064	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002770	2015-0065	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002771	2015-0066	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002772	2015-0067	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002773	2015-0068	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002774	2015-0069	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002775	2015-0070	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002776	2015-0071	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002777	2015-0072	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002778	2015-0073	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002779	2015-0074	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002780	2015-0075	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002781	2015-0076	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002782	2015-0077	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002783	2015-0078	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002784	2015-0079	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002785	2015-0080	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002786	2015-0081	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002787	2015-0082	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002788	2015-0083	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002789	2015-0084	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002790	2015-0085	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002791	2015-0086	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002792	2015-0087	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002793	2015-0088	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002794	2015-0089	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002795	2015-0090	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002796	2015-0091	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002797	2015-0092	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002798	2015-0093	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002799	2015-0094	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002800	2015-0095	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002801	2015-0096	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002802	2015-0097	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002803	2015-0098	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002804	2015-0099	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002805	2015-0100	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002806	2015-0101	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002807	2015-0102	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002808	2015-0103	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002809	2015-0104	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002810	2015-0105	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002811	2015-0106	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002812	2015-0107	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002813	2015-0108	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002814	2015-0109	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002815	2015-0110	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002816	2015-0111	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002817	2015-0112	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002818	2015-0113	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002819	2015-0114	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002820	2015-0115	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002821	2015-0116	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002822	2015-0117	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002823	2015-0118	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002824	2015-0119	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002825	2015-0120	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002826	2015-0121	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002827	2015-0122	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002828	2015-0123	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002829	2015-0124	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002830	2015-0125	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002831	2015-0126	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002832	2015-0127	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002833	2015-0128	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002834	2015-0129	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002835	2015-0130	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002836	2015-0131	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002837	2015-0132	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002838	2015-0133	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002839	2015-0134	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002840	2015-0135	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002841	2015-0136	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002842	2015-0137	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002843	2015-0138	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002844	2015-0139	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002845	2015-0140	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002846	2015-0141	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002847	2015-0142	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002848	2015-0143	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002849	2015-0144	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002850	2015-0145	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002851	2015-0146	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002852	2015-0147	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002853	2015-0148	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002854	2015-0149	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002855	2015-0150	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002856	2015-0151	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002857	2015-0152	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002858	2015-0153	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002859	2015-0154	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002860	2015-0155	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002861	2015-0156	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002862	2015-0157	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002863	2015-0158	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002864	2015-0159	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002865	2015-0160	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002866	2015-0161	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
10401	525002867	2015-0162	ANNUAL HYDRAULIC MODEL CALIBRATION	0	200,000	100,000					
1040											

SEWER UTILITY CIP BUDGET
Five Year Projected Budget 2019-2022

COST CENTER	PROJECT NUMBER	CIP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2018-2019	BUDGET YEAR 2019-20	2020-21	2021-22	DELAYED
10401	525002448		700 SOUTH - MAIN STREET TO STATE STREET (SOUTH SIDE) (MH 01003 TO 21462)	30,493				
10401	525002453		700 SOUTH - MAIN STREET TO 500 WEST (NORTH SIDE)	172,700				
10401	525002461		CENTER STREET SEWER REHAB FROM 500 N TO APRICOT AVENUE (MH 01006 TO 03054)	49,854				
10401	525002465		EMERSON CANYON ROAD SEWER REHAB FROM 200 EAST TO 1000 EAST (MH 02004 TO 20322)	174,972				
10401	525002700		1000 WEST - 500 NORTH TO 500 NORTH (WEST SIDE)	0	110,000			
10401	525002705		2015-0332 VILLAGE DRIVE - SOUTH TEMPLE TO NORTH TEMPLE	0	52,000			
10401	525002706		2015-0331 VILLAGE DRIVE - SOUTH TEMPLE TO NORTH TEMPLE	0	52,000			
10401	525002709		2015-0335 WEST CARROLL STREET - COLUMBUS STREET TO ZANE AVENUE TO WALL STREET	0	80,000			
10401	525002710		2015-0334 BORTH AVENUE - D STREET TO E STREET	0	80,000			
10401	525002711		2015-0335 H STREET - EIGHTH AVENUE TO SEVENTH AVENUE TO I STREET	0	80,000			
10401	525002712		2015-0336 I STREET - EIGHTH AVENUE TO TENTH AVENUE	0	80,000			
10401	525002713		2015-0337 SIXTH AVENUE - I STREET TO H STREET TO FIFTH AVENUE	0	80,000			
10401	525002714		2015-0338 DARWIN STREET - ZANE AVENUE TO GIRARD AVENUE	0	80,000			
10401	525002715		2015-0339 MAROLD GATTY DRIVE (325 N) - 5700 WEST TO 5700 WEST	0	80,000			
10401	525002716		2015-0340 PEANROSE DRIVE - SUNNYSIDE AVENUE TO KOMAS DRIVE	0	80,000			
10401	525002717		2015-0341 PEANROSE DRIVE - MILITARY WAY TO PENROSE DRIVE	0	80,000			
10401	525002718		2015-0342 1000 EAST - SOUTH TEMPLE TO 100 SOUTH TO 100 EAST	0	80,000			
10401	525002719		2015-0343 1000 EAST (WEST SIDE) 200 SOUTH TO 100 SOUTH TO WINDSOR CT	0	80,000			
10401	525002722		2015-0349 OGDEN STREET (WEST) - 300 SOUTH TO 200 SOUTH	0	80,000			
10401	525002723		2015-0351 KENNINGTON AVENUE - 400 EAST TO 700 EAST	0	80,000			
10401	525002724		2015-0354 THIRD AVENUE - J STREET TO H STREET	0	80,000			
10401	525002725		2015-0355 WILSON AVENUE - 300 EAST TO 400 EAST	0	80,000			
10401	525002726		2015-0356 FIRST AVENUE - C STREET TO E STREET	0	80,000			
10401	525002727		2015-0358 W STREET AT SOUTH TEMPLE	0	80,000			
10401	525002728		2015-0360 CANYON ROAD - THIRD AVENUE TO 270 NORTH	0	80,000			
10401	525002729		2015-0361 270 NORTH - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002730		2015-0362 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002731		2015-0363 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002732		2015-0364 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002733		2015-0365 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002734		2015-0366 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002735		2015-0367 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002736		2015-0368 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002737		2015-0369 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002738		2015-0370 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002739		2015-0371 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002740		2015-0372 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002741		2015-0373 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002742		2015-0374 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002743		2015-0375 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002744		2015-0376 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002745		2015-0377 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002746		2015-0378 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002747		2015-0379 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002748		2015-0380 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002749		2015-0381 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002750		2015-0382 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002751		2015-0383 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002752		2015-0384 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002753		2015-0385 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002754		2015-0386 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002755		2015-0387 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002756		2015-0388 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002757		2015-0389 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002758		2015-0390 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002759		2015-0391 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002760		2015-0392 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002761		2015-0393 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002762		2015-0394 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002763		2015-0395 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002764		2015-0396 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002765		2015-0397 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002766		2015-0398 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002767		2015-0399 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002768		2015-0400 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002769		2015-0401 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002770		2015-0402 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002771		2015-0403 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002772		2015-0404 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002773		2015-0405 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002774		2015-0406 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002775		2015-0407 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002776		2015-0408 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002777		2015-0409 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002778		2015-0410 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002779		2015-0411 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002780		2015-0412 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002781		2015-0413 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002782		2015-0414 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002783		2015-0415 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002784		2015-0416 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002785		2015-0417 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002786		2015-0418 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002787		2015-0419 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002788		2015-0420 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002789		2015-0421 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002790		2015-0422 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002791		2015-0423 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002792		2015-0424 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002793		2015-0425 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002794		2015-0426 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002795		2015-0427 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002796		2015-0428 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002797		2015-0429 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002798		2015-0430 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002799		2015-0431 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002800		2015-0432 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002801		2015-0433 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002802		2015-0434 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002803		2015-0435 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002804		2015-0436 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002805		2015-0437 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002806		2015-0438 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002807		2015-0439 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002808		2015-0440 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002809		2015-0441 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002810		2015-0442 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002811		2015-0443 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002812		2015-0444 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002813		2015-0445 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002814		2015-0446 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002815		2015-0447 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002816		2015-0448 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002817		2015-0449 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002818		2015-0450 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002819		2015-0451 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002820		2015-0452 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002821		2015-0453 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002822		2015-0454 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002823		2015-0455 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002824		2015-0456 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002825		2015-0457 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002826		2015-0458 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002827		2015-0459 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002828		2015-0460 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002829		2015-0461 1000 WEST - 1000 WEST TO 1000 WEST	0	80,000			
10401	525002830		2015-046					

SEWER UTILITY CIP BUDGET
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COST CENTER	PROJECT NUMBER	CIP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2018-2019	BUDGET YEAR 2019-20	2019-20	2020-21	2021-22	DELETED
10401	325002779	2015-4208	500 SOUTH - MARCH STREET (24IN W/ 10' TO 302' WEST	0	37,500	0			
10401	325002744	2016-4803	2200 EAST SEWER REMAINS FROM EAST TO WEST SIDE OF FOOTHILL BLVD.	0	20,000	0			
10401		2016-4903	800 S AND 1000 E LATERAL CONNECTIONS AND UPSTREAM IMPROVATION	0		46,000			
10401		2015-4721	300 W - 550 S TO 600 S	0		216,000			
10401		2016-4893	ELGIN AVE FROM 600 E TO 800 E CIP INSTALLATION	0		144,000			
10401		2015-4318	700 SOUTH - 3700 WEST TO IRON DOSE PLAZA (3800 W)	0		151,250			
10401	325002679	2015-4244	RETIRED ROAD - PAXTON AVENUE TO CALIFORNIA AVENUE	0	150,000				
10401	325002760	2016-4844	4000 WEST DIMENSION CONDITION ASSESSMENT/RE-DESIGN	0	150,000				
10401	325002630	2015-4318	1500 SOUTH - INDUSTRIAL ROAD (1000 W) TO 1700 WEST	0		163,000			1,292,000
10401		2015-4678	CALIFORNIA AVENUE - REINWOOD ROAD TO UTAH STREET	0	78,000	0			
10401		2016-4873	DOOLEY COURT	0		54,000			
10401		2016-4900	350 AVE D TO E STREET	0		0			95,000
10401		2015-4731	MAIN ST - 320 N TO 340 N	0		0			13,000
10401		2016-4861	8TH AVE FROM 580 E TO 1617	0		0			96,000
10401		2016-4860	400 WEST FROM 100 NORTH TO 140 NORTH (WEST SIDE) CIP INSTALLATION	0					202,000
10401		2016-4903	1000 S - 9TH STREET (1000 W)	0					42,000
10401		2016-4894	CIP SEWER ON FOOTHILL DR	0					21,000
10401		2016-4894	CIP SEWER ON FOOTHILL DR	0					11,000
10401		2016-4892	CIP SEWER ON UNATCHIKO FROM 1300 SOUTH TO VILLAGE CIRCLE	0					21,000
10401		2016-4893	CIP SEWER FOOTHILL ON AND 1300 SOUTH	0					33,000
10401		2016-4894	CIP SEWER 2300 EAST AND FOOTHILL DR	0					14,000
10401		2016-4894	CIP SEWER LINE ON CHANDLER DR FROM MH 22070 TO MH 22668	0					12,000
10401		2016-4895	CIP SEWER LOGAN WAY AND 1700 SOUTH	0					22,000
10401		2016-4897	CIP SEWER ON 700 EAST FROM 2700 SOUTH TO CRYSTAL AVE	0					20,000
10401		2016-4898	CIP SEWER ON 800 WEST 100 SOUTH	0					20,000
10401		2016-4898	CIP SEWER 600 WEST 100 SOUTH	0					36,000
10401		2016-1001	CIP SEWER ON BROADMOOR ST FROM ELM AVE TO 1700 SOUTH	0					18,000
10401		2016-1002	CIP SEWER ON 2300 EAST FROM STRINGHAM AVE TO BERNARDINE DR	0					23,000
10401		2016-1003	CIP SEWER ON LYNNWOOD DR	0					22,000
10401		2016-1004	CIP SEWER 2000 EAST AND COUNTRY CLUB DRIVE	0					24,000
10401		2016-1005	CIP SEWER ON P 8TH STREET FROM 4TH AVE TO 3RD AVE	0					24,000
10401		2016-1006	CIP SEWER ON P 8TH STREET FROM 4TH AVE TO 3RD AVE	0					24,000
10401		2016-1007	CIP SEWER ON 1ST AVE FROM 1ST STREET TO U STREET	0					23,000
10401		2016-1011	CIP SEWER ON 1000 EAST FROM FERNWAY AVE TO 100 SOUTH	0					21,000
10401		2016-1012	CIP SEWER ON 1000 EAST FROM FERNWAY AVE TO 100 SOUTH	0					21,000
10401		2016-1013	CIP SEWER ON 800 SOUTH AND 1000 EAST	0					18,000
10401		2016-1014	CIP SEWER ON 800 SOUTH 1100 EAST	0					18,000
10401		2016-1015	CIP SEWER ON 1200 EAST AND 700 SOUTH	0					18,000
10401		2016-1017	CIP SEWER ON 1200 EAST AND 700 SOUTH	0					23,000
10401		2016-1018	CIP SEWER ON BUNNYBORN AVE FROM CORNOR ST TO 2200 EAST	0					10,000
10401		2016-1019	CIP SEWER ON MCNEAN AVE AND FOOTHILL BLVD	0					10,000
10401		2016-1019	CIP SEWER ON FOOTHILL DRIVE AND 2300 EAST	0					10,000
10401		2016-1020	CIP SEWER ON LAIRD AVE	0					9,000
10401		2016-1021	CIP SEWER ON BROWNING AVE AND 1700 EAST	0					14,000
10401		2016-1024	CIP SEWER LOGAN AVE	0					13,000
10401		2016-1026	CIP SEWER ON 1600 EAST FROM LOGAN AVE TO 1700 SOUTH	0					20,000
10401		2016-1027	CIP SEWER GARFIELD AVE FROM 1900 EAST TO 1700 EAST	0					24,000
10401		2016-1028	CIP SEWER OF 1800 EAST FROM 800 SOUTH AND 800 SOUTH	0					17,000
10401		2016-1030	CIP SEWER ON HARVARD AVE AND MCLELLAND	0					18,000
10401		2016-1031	CIP SEWER BACKLOT BETWEEN PAXTON AVE AND FREMONT AVE	0					18,000
10401		2016-1032	CIP SEWER ON 800 SOUTH FROM 700 EAST TO LAKE ST	0					17,000
10401		2016-1033	CIP SEWER ON EMPSON AVE FROM 1100 EAST TO 1000 EAST	0					21,000
10401		2016-1033	CIP SEWER ON 2700 SOUTH AND IMPERIAL ST	0					7,000
10401		2016-1036	CIP SEWER ON 100TH ST BETWEEN 2500TH AVE AND HUDSON AVE	0					10,000

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COST CENTER	PROJ. SECT. NUMBER	CIP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2018-2019	BUDGET YEAR 2019-20	2018-20	2019-20	2020-21	2021-22	DELETED
10401		2016-1156	CIPP SEWER ON 14TH SOUTH CANTERBURY DR	0						17,000
10401		2016-1159	CIPP SEWER ON 15TH SOUTH DEVONSHIRE DR	0						18,000
10401		2016-1160	CIPP SEWER FROM 1785 SOUTH FOOTHILL DR TO BLAINE AVE	0						18,000
10401		2016-1162	CIPP SEWER ON EMERSON AVE FROM 2000 EAST TO FOOTHILL	0						21,000
10401		2016-1170	CIPP SEWER BETWEEN 1811 SOUTH FOOTHILL AND 1945 SOUTH FOOTHILL DR	0						14,000
10401		2016-1245	CIPP SEWER ON 2102 SOUTH BETWEEN MCLELLAND ST AND 1102 EAST	0						17,000
10401		2016-1244	CIPP SEWER ON A STREET FROM FOURTH AVE TO FIFTH AVE	0						25,000
10401		2016-1196	CIPP SEWER FROM 2402 EAST KENSINGTON AVE TO 2448 EAST KENSINGTON AVE	0						44,000
10401		2016-1199	CIPP SEWER ON 800 EAST FROM PARKWAY AVE TO PARKMONT CIR	0						17,000
10401		2016-1201	CIPP SEWER ON 800 EAST BETWEEN 2558 SOUTH AND STRATFORD	0						17,000
10401		2016-1203	CIPP SEWER ON 800 EAST BETWEEN 2600 S 800 EAST	0						17,000
10401		2016-1204	CIPP SEWER ON 800 WEST BETWEEN 100 SOUTH AND 200 SOUTH	0						16,000
10401		2016-1205	CIPP SEWER ON 800 WEST BETWEEN RIVERSIDE AND 1000 WEST	0						21,000
10401		2016-1206	CIPP SEWER ON 800 WEST BETWEEN 1000 WEST AND 1000 WEST	0						14,000
10401		2016-1211	CIPP SEWER AT PARKLEY WAY AND MAPLEWOOD DR	0						18,000
10401		2016-1212	CIPP SEWER ON GARFIELD AVE FROM 2301 EAST GARFIELD TO CONNER ST	0						16,000
10401		2016-1220	CIPP SEWER ON HANBELL ST FROM WILMINGTON AVE TO PARKLEY CANYON BL	0						15,000
10401		2016-1221	CIPP SEWER SAGAR HOUSE PARK (1000 E 1100 S)	0						21,000
10401		2016-1227	CIPP SEWER ON 800 EAST BETWEEN PARKMONT CIR AND STRATFORD	0						18,000
10401		2016-1237	CIPP SEWER ON CLAYSON AVE FROM 1300 EAST TO ALDEN ST	0						32,000
10401		2016-1238	CIPP SEWER ON 1000 EAST BETWEEN 2700 SOUTH AND 3800 SOUTH	0						13,000
10401		2016-1240	CIPP SEWER ON MCLELLAND ST AT CRANDALL AVE	0						24,000
10401		2016-1250	CIPP SEWER ON H STREET BETWEEN 8TH AVE AND 6TH AVE	0						22,000
10401		2016-1252	CIPP SEWER ON 200 NORTH BETWEEN 500 WEST AND 600 WEST	0						12,000
10401		2016-1254	CIPP SEWER 745 SOUTH GUARDSMAN WAY	0						20,000
10401		2016-1255	CIPP SEWER 180 E SOUTH RANDOLPH ROAD AND ROUNDTOP DR	0						22,000
10401		2016-1257	CIPP SEWER 2448 EAST LOGAN WAY	0						7,000
10401		2016-1263	16TH AVE - FROM M ST TO L ST	0						22,000
10401		2016-1267	1600 W 100 N TO 100 S BOTH SIDES	0						16,000
10401		2016-1267	1600 W 300 - 400 N EAST SIDE	0						42,000
10401		2016-1268	CIPP SEWER LINE REPLACEMENT FROM 446 EAST TO 516 EAST ON NORTH HILLS DR	0						26,000
10401		2016-1269	CIPP SEWER LINE REPLACEMENT FROM 1038 EAST NORTH SCOTTSVILLE DR TO 782 NORTH NORTHLAN	0						9,000
10401		2016-1269	1560 E BLAINE TO 1000 S	0						10,000
10401		2016-1273	ROXBURY ROAD FROM 1441 S TO 1300 S	0						16,000
10401		2016-1274	SOUTH TEMPLE FROM 1410 EAST TO 1380 EAST	0						16,000
10401		2016-1282	100 WEST FROM 250 NORTH TO 200 NORTH	0						40,000
10401		2016-1287	CIPP SEWER ON BLAINE AVE FROM 800 E TO 900 E CIPP REPAVALATION	0						20,000
10401		2016-1289	CIPP SEWER ON BLAINE AVE FROM FOOTHILL DR TO WAGATCH	0						18,000
10401		2016-1294	CIPP SEWER BLAINE AVE 2600 EAST	0						18,000
10401		2016-1295	CIPP SEWER ON FOOTHILL DR FROM LAUREL HURST DR TO PASCHAL CIRCLE	0						22,000
10401		2016-1297	CIPP SEWER LINE FROM 300 WEST TO 300 WEST ON REED AVE	0						21,000
10401		2016-1297	CIPP SEWER LINE ON 200 WEST FROM 900 NORTH TO GRAPD AVE	0						11,000
10401		2016-1297	CIPP SEWER VIRGINIA ST FROM MH 21062 TO POPPINGTON WAY	0						21,000
10401		2016-1297	CIPP SEWER ON SEVENTH AVE FROM H STREET TO 1ST STREET	0						13,000
10401		2016-1297	CIPP SEWER IN INTERNATIONAL CENTER ON MIL ARMSTRONG ROAD	0						8,000
10401		2016-1297	CIPP SEWER ON DONNER WAY AND DONNER CIRCLE	0						7,000
10401		2016-1297	CIPP SEWER ON OAK HILLS WAY	0						23,000
10401		2016-1298	CIPP SEWER ON COURSE DR FROM JAFEN CIRCLE TO OAK HILLS DR	0						26,000
10401		2016-1298	CIPP SEWER ON ROXBURY RD FROM SHERWOOD DR TO NOTTINGHAM WAY	0						16,000
10401		2016-1298	CIPP SEWER ON WILTON WAY TO SHERWOOD DR	0						19,000
10401		2016-1298	CIPP SEWER ON ROXBURY ROAD	0						15,000
10401		2016-1298	CIPP SEWER ON APACHE CIRCLE	0						

SEWER UTILITY CIP BUDGET

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2016-2017	2016-19	2018-21	2015-22	DELETED
10401			2016-1036 CIPP SEWER ON HOLLYWOOD AVE FROM 600 EAST TO LINCOLN ST	0				22,800
10401			2016-1036 CIPP SEWER ON 2108 SOUTH FROM 1900 EAST TO PRETOWN ST	0				19,800
10401			2016-1040 CIPP SEWER ON 800 EAST FROM SOUTH TEMPLE TO 180 SOUTH	0				20,000
10401			2016-1041 CIPP SEWER ON 600 SOUTH FROM 500 EAST TO 600 EAST	0				21,000
10401			2016-1042 CIPP SEWER ON 600 SOUTH 600 EAST	0				3,900
10401			2016-1044 CIPP SEWER ON 300 WEST FROM ORCHARD PL TO 600 SOUTH	0				22,800
10401			2016-1047 CIPP SEWER ON EMERSON AVE BETWEEN 2108 EAST AND 2300 EAST	0				19,800
10401			2016-1048 CIPP SEWER ON ROOSEVELT AVE AND 2300 EAST	0				14,000
10401			2016-1050 CIPP SEWER ON WEST CAPITOL AND ZANE AVE	0				9,000
10401			2016-1058 CIPP SEWER ON DARWIN ST FROM GIRARD AVE TO ZANE AVE	0				26,800
10401			2016-1059 CIPP SEWER ON 1008 SOUTH BURNVILLE DR	0				27,800
10401			2016-1057 CIPP SEWER ON A STREET FROM FIRST AVE TO SECOND AVE	0				16,000
10401			2016-1070 CIPP SEWER ON 1008 EAST FROM 1000 EAST AND 1000 SOUTH	0				21,800
10401			2016-1076 CIPP SEWER ON 200 SOUTH BETWEEN 900 EAST AND 1000 EAST	0				10,000
10401			2016-1081 CIPP SEWER ON 1000 EAST BETWEEN 200 SOUTH AND 300 SOUTH	0				9,000
10401			2016-1094 CIPP SEWER ALLEY WEST OF 400 E BETWEEN 800 SOUTH AND 900 SOUTH	0				26,800
10401			2016-1090 CIPP SEWER ON GRACE CT AND VAN LAMAS AVE	0				27,800
10401			2016-1091 CIPP SEWER ON ALLEY EAST OF 300 EAST BETWEEN 800 SOUTH AND 900 SOUTH	0				20,800
10401			2016-1094 CIPP SEWER ON 1700 EAST AND PAULEY'S CANYON BLVD	0				18,800
10401			2016-1096 CIPP SEWER ON FOURTH AVE FROM A STREET TO B STREET	0				18,800
10401			2016-1098 CIPP SEWER ON THIRD AVE FROM D STREET TO F STREET	0				21,800
10401			2016-1099 CIPP SEWER ON THIRD AVE FROM E STREET TO F STREET	0				19,800
10401			2015-1097 CIPP SEWER ON J STREET BETWEEN THIRD AVE AND FOURTH AVE	0				26,800
10401			2015-1098 CIPP SEWER ON SECOND AVE BETWEEN F STREET AND G STREET	0				21,800
10401			2015-1099 CIPP SEWER ON B STREET FROM FIRST AVE TO SECOND AVE	0				23,000
10401			2016-1102 CIPP SEWER ON K STREET FROM SOUTH TEMPLE TO FIRST AVE	0				25,000
10401			2016-1100 CIPP SEWER ON E STREET BETWEEN FIRST AVE AND SECOND AVE	0				13,000
10401			2016-1120 CIPP SEWER ON 500 EAST BETWEEN SOUTH TEMPLE AND 160 SOUTH	0				16,800
10401			2016-1124 CIPP SEWER ON SLADE PL AND 300 EAST	0				9,000
10401			2016-1125 CIPP SEWER ON 300 SOUTH AND 300 EAST	0				9,000
10401			2016-1130 CIPP SEWER ON 400 EAST BETWEEN 500 EAST AND 600 EAST	0				21,800
10401			2016-1137 CIPP SEWER ON 400 SOUTH BETWEEN 500 EAST AND 600 EAST	0				21,800
10401			2016-1180 CIPP SEWER ON 700 EAST FROM 300 SOUTH TO 400 SOUTH	0				9,000
10401			2016-1181 CIPP ON A STREET BETWEEN SOUTH TEMPLE AND FIRST AVE	0				21,800
10401			2016-1182 CIPP SEWER ON 200 EAST BETWEEN 200 SOUTH AND 300 SOUTH	0				26,800
10401			2016-1183 CIPP SEWER ON 200 WEST FROM 2300 NORTH TO 3500 NORTH	0				26,800
10401			2016-1187 CIPP SEWER ON 200 SOUTH BETWEEN 1600 EAST AND 300 SOUTH	0				15,000
10401			2016-1188 CIPP SEWER ON 200 SOUTH BETWEEN RICHARD ST AND STATE ST	0				12,000
10401			2016-1110 CIPP SEWER ON 200 SOUTH BETWEEN WEST TEMPLE AND MAIN ST	0				14,000
10401			2016-1130 CIPP SEWER ON 400 SOUTH BETWEEN MAIN ST AND CACTUS ST	0				13,000
10401			2016-1131 CIPP SEWER ON MEMO AVE AND 800 EAST	0				17,000
10401			2016-1135 CIPP SEWER ON 650 EAST SIXTEENTH AVE	0				17,000
10401			2016-1138 CIPP SEWER ON NORTHCHEST DR BETWEEN 18 STREET AND ALLOWAY RD	0				18,000
10401			2016-1130 CIPP SEWER ON G STREET BETWEEN TENTH AVE AND ELEVENTH AVE	0				25,000
10401			2016-1141 CIPP SEWER ON G STREET BETWEEN EIGHTH AVE AND NINTH AVE	0				24,000
10401			2016-1142 CIPP SEWER ON A STREET FROM SIXTH AVE TO SEVENTH AVE	0				22,000
10401			2016-1145 CIPP SEWER AT 2820 EAST COURIER DR	0				14,000
10401			2016-1147 CIPP SEWER ON 2725 EAST ST MARY'S WAY	0				16,000
10401			2016-1148 CIPP SEWER AT 2020 EAST SHERRWOOD DR	0				15,000

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COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2015-2017	BUDGET YEAR 2017-18	2016-17	2015-16	2014-15	2013-14	DELETED
10401		2016-0996	CIPP SEWER 1700 SOUTH AND FOOTHILL RD	0						22,050
10401		2016-1000	CIPP SEWER ON 1700 SOUTH INDUSTRIAL ROAD	0						7,000
10401		2016-1002	CIPP SEWER ON BRYAN AVE FROM 1005 EAST TO 1100 EAST	0						27,000
10401		2016-1023	CIPP SEWER ON 1702 EAST FROM WOOD AVE TO MILTON AVE	0						7,000
10401		2016-1025	CIPP SEWER 1700 SOUTH 1102 EAST	0						20,000
10401		2016-1026	CIPP SEWER ON 1102 EAST FROM MICHIGAN AVE TO HERBERT AVE	0						27,000
10401		2016-1024	CIPP SEWER ON WHITLOCK AVE FROM HIGHLAND DR TO DOUGLAS ST	0						27,000
10401		2016-1032	CIPP SEWER ON 201 EAST AND 100 SOUTH	0						27,000
10401		2016-1042	CIPP SEWER ON 100 SOUTH 1414 STREET	0						4,000
10401		2016-1028	CIPP SEWER N7E TOMAHAWK DR TO CAHILLER DRIVE (BACKLOT)	0						10,000
10401		2016-1035	CIPP SEWER ON ARTIC CT AND 500 NORTH	0						20,000
10401		2016-1027	CIPP SEWER ON NORTH MAIN STREET FROM 300 NORTH TO AFRICOT AVE	0						10,000
10401		2016-1060	CIPP SEWER ON 801 EAST FROM SIMPSON AVE TO WILMINGTON AVE	0						10,000
10401		2016-1061	CIPP SEWER ON N STREET FROM SECOND AVE TO THIRD AVE	0						24,000
10401		2016-1063	CIPP SEWER ON N STREET FROM SECOND AVE TO THIRD AVE	0						27,000
10401		2016-1064	CIPP SEWER ON SECOND AVE FROM P ST TO Q ST	0						24,000
10401		2016-1065	CIPP SEWER ON U STREET FROM SECOND AVE TO THIRD AVE	0						26,000
10401		2016-1066	CIPP SEWER ON P STREET BETWEEN FIRST AVE AND SECOND AVE	0						20,000
10401		2016-1069	CIPP SEWER ON Q STREET FROM FIRST AVE TO SECOND AVE	0						27,000
10401		2016-1070	CIPP SEWER ON FIRST AVE FROM Q ST TO R ST	0						26,000
10401		2016-1072	CIPP SEWER ON T STREET FROM FIRST AVE TO SECOND AVE	0						25,000
10401		2016-1073	CIPP SEWER ON SOUTH TEMPLE FROM N ST TO Q ST	0						12,000
10401		2016-1074	CIPP SEWER ON SOUTH TEMPLE FROM P ST TO Q ST	0						20,000
10401		2016-1075	CIPP SEWER ON SOUTH TEMPLE FROM FEDERAL WAY TO WALCOTT ST	0						20,000
10401		2016-1076	CIPP SEWER ON 900 EAST FROM SOUTH TEMPLE TO 100 SOUTH	0						12,000
10401		2016-1079	CIPP SEWER ON 200 SOUTH 1300 EAST TO UNIVERSITY	0						13,000
10401		2016-1082	CIPP SEWER ON LINDEM AVE AND 1000 EAST	0						12,000
10401		2016-1093	CIPP SEWER ON 900 EAST BETWEEN 300 SOUTH AND 400 SOUTH	0						13,000
10401		2016-1094	CIPP SEWER ON GILMER DR	0						17,000
10401		2016-1095	CIPP SEWER ON 1900 EAST FROM HERBERT AVE TO YALE AVE	0						19,000
10401		2016-1097	CIPP SEWER ON 1700 SOUTH AND 1700 EAST	0						13,000
10401		2016-1098	CIPP SEWER ON PAYETTE AVE AND WEST TEMPLE B	0						20,000
10401		2016-1100	CIPP SEWER ON 800 EAST FROM SOUTH TEMPLE TO 100 SOUTH	0						13,000
10401		2016-1101	CIPP SEWER ON B STREET FROM SOUTH TEMPLE AND FIRST AVE	0						13,000
10401		2016-1102	CIPP SEWER ON 100 SOUTH 1300 EAST	0						16,000
10401		2016-1110	CIPP SEWER ON 500 EAST FROM 500 SOUTH TO 300 SOUTH	0						11,000
10401		2016-1115	CIPP SEWER ON 200 NORTH BETWEEN WEST TEMPLE AND ALMOND ST	0						16,000
10401		2016-1122	CIPP SEWER ON EDGEHILL ROAD AND LITTLE VALLEY ROAD	0						17,000
10401		2016-1123	CIPP SEWER ON 700 EAST EIGHTEENTH AVE	0						23,000
10401		2016-1124	CIPP SEWER ON NORTMCOT WAY AND EIGHTEENTH AVE	0						19,000
10401		2016-1126	CIPP SEWER ON TERRACE HILLS DR BETWEEN NORTHEAST DR AND NORTH BONNEVILLE	0						13,000
10401		2016-1129	CIPP SEWER ON H STREET BETWEEN ELEVENTH AVE AND TWELFTH AVE	0						25,000
10401		2016-1131	CIPP SEWER ON H STREET BETWEEN TENTH AVE AND ELEVENTH AVE	0						27,000
10401		2016-1132	CIPP SEWER ON NINTH AVE BETWEEN K STREET AND L STREET	0						13,000
10401		2016-1140	CIPP SEWER ON DORCHESTER DR FROM BRIEWICK RD TO SANDRUM RD	0						26,000
10401		2016-1142	CIPP SEWER ON B STREET FROM SIXTH AVE TO SEVENTH AVE	0						27,000
10401		2016-1144	CIPP SEWER ON 600 WEST FROM 400 NORTH TO 300 NORTH	0						20,000
10401		2016-1145	CIPP SEWER ON DONNER WAY FROM THACKERAY PL TO SHADESPRINT PL	0						12,000
10401		2016-1152	CIPP SEWER ON KEMBRIDGE AVE AND BEACON DR	0						13,000
10401		2016-1153	CIPP SEWER ON CANTERBURY DR FROM LANCASTER DR TO MILTON WAY	0						22,000

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COST CENTER	PROJECT NUMBER	CIP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2018-2017	BUDGET YEAR 2017-18	2018-19	2019-20	2020-21	2021-22	DELATED
10403		2016-1105	CIP2 SEWER 1513 SOUTH DEVONSHIRE DR TO LANCASTER DR	0						14,000
10403		2016-1106	CIP2 SEWER ON LITE DR FROM MIAMI HILL CIRCLE TO EAGLE WAY	0						10,000
10403		2016-1107	CIP2 SEWER ON COMANCHE DR AND EAGLE WAY	0						5,000
10403		2016-1108	CIP2 SEWER ON WASATCH DR BETWEEN 1702 SOUTH AND SKYLINE DR	0						20,000
10403		2016-1109	CIP2 SEWER FROM 1811 SOUTH FOOTHILL TO 1975 SOUTH FOOTHILL	0						10,000
10403		2016-1187	CIP2 SEWER ON LOGAN WAY AT 1706 SOUTH	0						10,000
10403		2016-1188	CIP2 SEWER ON BLAKE AVE AND TEXAS ST	0						10,000
10403		2016-1207	CIP2 SEWER ON INDUSTRIAL AVE AND 1702 SOUTH	0						7,000
10403		2016-1208	CIP2 SEWER FROM 2206 EAST COMMERCIAL DR TO WYOMING ST	0						20,000
10403		2016-1212	CIP2 SEWER ON 2000 EAST BETWEEN WILSON AVE AND DOWNINGTOWN AVE	0						20,000
10403		2016-1214	CIP2 SEWER FROM 1808 EAST DOWNINGTOWN AVE TO 1801 EAST	0						23,000
10403		2016-1215	CIP2 SEWER ON 2100 EAST FROM WILSON AVE TO DOWNINGTOWN AVE	0						14,000
10403		2016-1216	CIP2 SEWER ON 2000 EAST FROM DOWNINGTOWN AVE TO GARFIELD AVE	0						14,000
10403		2016-1218	CIP2 SEWER ON 1706 SOUTH FROM 1801 EAST TO 1800 EAST	0						19,000
10403		2016-1219	CIP2 SEWER ON 1706 EAST AND WILSON'S CANYON BL	0						4,000
10403		2016-1220	CIP2 SEWER ON 1800 EAST BETWEEN 1706 SOUTH AND 1702 SOUTH	0						17,000
10403		2016-1231	CIP2 SEWER ON BEVELLY AVE AND 1400 CLAYVILLE AVE	0						22,000
10403		2016-1241	CIP2 SEWER ON HUDSON AVE BETWEEN 1800 EAST AND 1400 EAST	0						22,000
10403		2016-1242	CIP2 SEWER ON SYLVAN AVE BETWEEN 1800 EAST AND 2003 EAST	0						13,000
10403		2016-1245	CIP2 SEWER ON THIRD AVE AT CANTON ROAD	0						18,000
10403		2016-1246	CIP2 SEWER ON STATE STREET BETWEEN 126 N AND 206 NORTH	0						24,000
10403		2016-1249	CIP2 SEWER ON C STREET BETWEEN 5TH AVE AND 600 W	0						20,000
10403		2016-1250	CIP2 SEWER ON 300 NORTH BETWEEN 555 WEST AND 600 WEST	0						17,000
10403		2016-1256	CIP2 SEWER ON UNIVERSITY BLVD (500 S) FROM 1500 EAST TO GARDEMAN WAY	0						224,000
10403		2015-0309	100 SOUTH - 3415 WEST TO 3600 WEST	0						19,000
10403		2015-0864	CIP2 SEWER PIPE FROM 1492 EAST TOMAHAWK DRIVE	0						246,000
10403		2015-0855	CIP2 SEWER PIPE FROM 1536 E TOMAHAWK DR TO CHANDLER DR	0						9,000
10403		2016-0831	ELON AVE 1000 E - 350 E	0						14,000
10403		2016-0967	R/N CIP2 SEWER LINE FROM CAMBRIDGE WAY TO 1330 EAST PERRY'S HOLLOW	0						21,000
10403		2016-0974	CIP2 SEWER ON 1000 WEST FROM TALMAN DR TO 185 NORTH	0						24,000
10403		2016-0977	CIP2 SEWER BONNEVILLE DR	0						21,000
10403		2016-0980	CIP2 SEWER ON COURSHIP DRIVE	0						22,000
10403		2016-0982	CIP2 SEWER AT ST. MARTIN'S WAY AND COURSHIP DRIVE	0						18,000
10403		2016-0983	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						18,000
10403		2016-0984	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						16,000
10403		2016-0985	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0986	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0987	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0988	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0989	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0990	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0991	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0992	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0993	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0994	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0995	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0996	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0997	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0998	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-0999	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1000	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1001	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1002	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1003	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1004	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1005	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1006	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1007	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1008	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1009	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1010	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1011	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1012	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1013	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1014	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1015	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1016	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1017	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1018	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1019	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1020	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1021	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1022	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1023	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1024	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1025	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1026	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1027	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1028	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1029	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1030	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1031	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1032	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1033	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1034	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1035	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1036	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1037	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1038	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1039	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1040	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1041	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1042	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1043	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1044	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1045	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1046	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1047	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1048	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1049	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1050	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1051	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1052	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1053	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1054	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1055	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1056	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1057	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1058	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1059	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1060	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1061	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1062	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1063	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1064	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1065	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1066	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1067	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1068	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1069	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1070	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1071	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1072	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1073	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1074	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1075	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1076	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1077	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0						13,000
10403		2016-1078	CIP2 SEWER ON 11TH AVE FROM PROINA ST TO U ST	0				</		

SEWER UTILITY CIP BUDGET
Five Year Projected Budget 2018-2022

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2015-2017	BUDGET YEAR 2017-18	2015-16	2016-17	2017-18	2018-19	2019-20	DELETED
			TOTAL COLLECTION LINES	2,831,455	4,232,610	4,161,256	7,157,850	8,873,428	8,680,000	37,432,482	
10401	521602743	2015-0473	MANHOLE REPAIR PROGRAM VARIOUS LOCATIONS	0	70,000	350,000			550,000	550,000	8,576
10401		2015-0474	MANHOLE REPAIR PROGRAM VARIOUS LOCATIONS	0	70,000	350,000			550,000	550,000	1,256,216
			OTHER PROJECTS								
10401	52150015	2015-0475	ON-CALL TASK ORDER GENERAL CONSTRUCTION SERVICES VARIOUS LOCATIONS	2,800	300,000	350,000			300,000	1,660,000	
10401	52150015	2015-0476	EMERGENCIES - CONTRIBUTIONS BY DEVELOPER	0	500,000	550,000			500,000	2,660,000	
10401	52150022	2015-0480	BIART LEFT AND ANDREWS DUE DULGENCE SURVEY	0	50,000						
10401	52150023	2015-0481	COLLECTION SYSTEM PROJECTS GENERAL SUPPORT - TASK 2	0	500,000						
10401	52150024	2015-0482	PROGRAM MANAGEMENT SERVICES - TASK 1	342,600							
10401	52150025	2015-0483	COLLECTION SYSTEM HAS MITIGATION IMPLEMENTATION PROJECT	118,895	0						
10401	52150026	2015-0484	TDS REDUCTION PROGRAM	0	150,000	151,000			200,000		
10401	52150027	2015-0485	VIEWER PUBLIC OUTREACH PROGRAM (COLLECTIONS)	170,899	1,261,000	520,000	850,000	400,000	1,000,000	4,000,000	
			MASTER PLAN IMPLEMENTATION PROGRAM								
10401	521601707	2015-0486	CLANCA STREET	5,000,000							
10401	521601708	2015-0487	8 PERMANENT FLOW MONITORS PER MASTER PLAN	331,857							
10401	521601709	2015-0488	500 SOUTH INTERCEPTOR - CHANGE TO 1000 WEST	2,651,604	7,500,000						
10401	521601710	2015-0489	ORANGE STREET NO TEMPLE TO 5TH SOUTH PHASE B - 3000	106,200	0						
10401	521601711	2015-0490	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601712	2015-0491	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601713	2015-0492	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601714	2015-0493	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601715	2015-0494	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601716	2015-0495	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601717	2015-0496	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601718	2015-0497	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601719	2015-0498	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601720	2015-0499	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601721	2015-0500	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601722	2015-0501	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601723	2015-0502	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601724	2015-0503	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601725	2015-0504	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601726	2015-0505	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601727	2015-0506	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601728	2015-0507	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601729	2015-0508	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601730	2015-0509	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601731	2015-0510	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601732	2015-0511	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601733	2015-0512	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601734	2015-0513	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601735	2015-0514	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601736	2015-0515	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601737	2015-0516	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601738	2015-0517	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601739	2015-0518	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601740	2015-0519	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601741	2015-0520	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601742	2015-0521	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601743	2015-0522	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601744	2015-0523	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601745	2015-0524	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601746	2015-0525	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601747	2015-0526	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601748	2015-0527	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601749	2015-0528	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601750	2015-0529	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601751	2015-0530	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601752	2015-0531	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601753	2015-0532	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601754	2015-0533	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601755	2015-0534	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601756	2015-0535	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601757	2015-0536	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601758	2015-0537	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601759	2015-0538	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601760	2015-0539	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601761	2015-0540	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601762	2015-0541	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601763	2015-0542	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601764	2015-0543	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601765	2015-0544	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601766	2015-0545	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601767	2015-0546	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601768	2015-0547	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601769	2015-0548	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601770	2015-0549	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601771	2015-0550	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601772	2015-0551	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601773	2015-0552	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601774	2015-0553	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601775	2015-0554	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601776	2015-0555	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601777	2015-0556	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601778	2015-0557	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601779	2015-0558	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601780	2015-0559	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601781	2015-0560	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601782	2015-0561	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601783	2015-0562	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601784	2015-0563	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601785	2015-0564	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601786	2015-0565	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601787	2015-0566	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601788	2015-0567	1000 SOUTH CAPACITY UPGRADES - 4500 WEST TO 2400 WEST	1,326,700	18,500,000	500,000					
10401	521601789	2015-0568	1000 SOUTH CAPACITY UPGRADES - 4								

SEWER UTILITY CIP BUDGET
Five Year Projected Budget 2018-2022

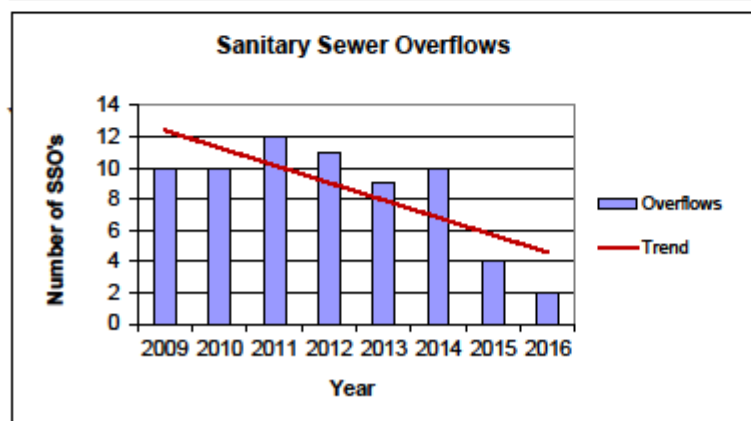
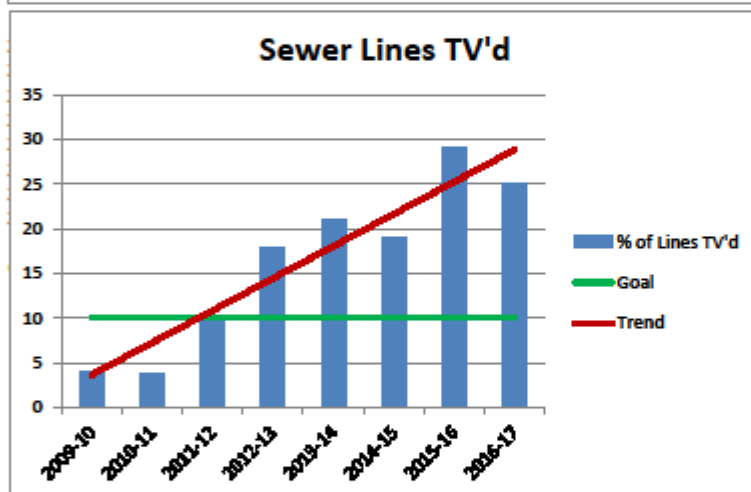
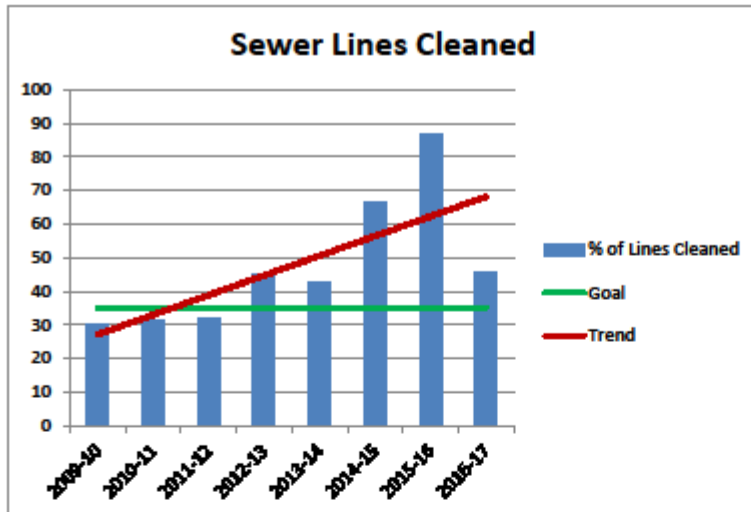
COST CENTER	PROJECT NUMBER	CIP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2015-2017	BUDGET YEAR 2017-18	2018-19	2019-20	2020-21	2021-22	DELETED
10401		2014-0015	MP23 - 1200 EAST FROM 100 SOUTH TO 900 SOUTH	0						247,483
10401		2015-0060	SATELLITE TREATMENT PLANT	15,712,381	44,870,000	32,310,000	28,620,000	23,188,750	25,873,500	408,500,000
				19,035,035	56,570,710	35,177,250	40,198,000	29,427,750	35,873,500	562,056,222
			Total Collection System							
	2230-20		LAKESIDE PARK	0	313,313					3,372,790
10401	525-002898		NORTHWEST OIL DRAIN	0	232,233	0	0	0	0	3,372,790
				24,340,352	82,854,743	87,765,150	81,276,000	64,817,150	80,334,500	1,251,985,472
			TOTAL CAPITAL IMPROVEMENTS		99,086,916	38,152,250	41,873,000	30,762,000	36,278,000	
10601	2750-10		AUTOMOBILES & TRUCKS							
10601			1/4 TON COLORADO 4X4 EXT CAB							
10601			1/2 TON PICKUP							
10601			3/4 TON PICKUP	18,271						
10601			3/4 TON GMC WORKFORCE BODY	34,410						
10601			1/2 TON GMC WORKFORCE BODY	40,215						
10601			1/2 TON GMC WORKFORCE BODY		64,000					
10601			Transit Van w/air	37,400						
10601			3/4 Ton Truck w/Service Body 4X4	32,000						
			1/2 X 86" TRUCK BODY ON VEHICLE 55181	44,150						
			2017 FORD F250 TRANSIT VAN	38,000						
12301			VARIOUS	234,150	138,800	102,000	100,000	600,000	100,000	500,000
						105,000	100,000	100,000	100,000	500,000
10601	2750-30		FIELD MAINTENANCE EQUIP.		9,000	8,000	6,000	8,000	10,000	50,000
10601			BACKHOE EXCHANGE							
10601			REPAID OLD CCTV VAN			400,000	400,000	400,000	400,000	2,000,000
10601			VARIOUS	15,000						
10601			HP JETTER W/MAINTENANCE	370,000						
10601			PUMP TRUCK - LARGE DIAMETER PIPE CLEANING MACHINE	900,000						
10601			ROBOCAT 800 STEER	70,962						
				3,725,962	5,500	400,000	400,000	400,000	430,000	2,000,000
12301	2750-20		IRRIGATION PLANT EQUIPMENT							
12301			COMPRESSORS AND BLOWERS			70,000	70,000	70,000	70,000	
12301			PUMPS			150,000	150,000	150,000	150,000	
11101			THEME SCENERY MUFFLE FURNACE							
11101			APRIS METTER TOLEDO ANALYTICAL BALANCE							
11101			LACHAT HATCH 2-CHANNEL FM + D CONFIGURATION							
12301			VARIOUS							
				0	0	225,000	225,000	225,000	225,000	1,100,000
11101	2750-30		TELEMETRY EQUIPMENT							
10101	555-00406		TELEMETRY UPGRADE - REPLACE			15,000	10,000	15,000	10,000	20,000
10101			SCADA SYSTEM REPLACE	35,013						
			WAVE SOFTWARE	35,013	0	10,000	10,000	10,000	10,000	70,000
	2750-10		OFFICE FURNITURE & EQUIPMENT							

SEWER UTILITY CIP BUDGET
Five Year Projected Budget 2018-2022

COST CENTER	PROJECT NUMBER	CAP REQUEST NUMBER	PROJECT DESCRIPTION	PAST YEAR 2016-2017	BUDGET YEAR 2017-18	2016-17	2016-17	2015-16	DELETED
11201			Beverly replacement "SALVADORE"		10,000				
11201			Gate Switch	20,000	\$ 400				
12201			VARIOUS	20,000	20,000	20,000	20,000	20,000	100,000
				20,000	20,000	20,000	20,000	20,000	100,000
10001	2200-09		OTHER MOTOR VEHICLE EQUIPMENT						
12201			TOW ALONG CRIMINAL MOTOR						
12201			STATIONARY BAMPER WRECKLOUSE	7,665					
12201			PAT-HOGEN PROTECTION SYSTEM	100,000					
12401			VARIOUS MOTOR VEHICLE EQUIPMENT	23,707					
			SUBMIT ACUSTIC INSPECTION EQUIPMENT	29,120					
			CORRECT MANIPULATOR CUTTER	12,200					
			NOISE CANCELING HEARING PROTECTION COM SYSTEM	50,000					
			IF GUNMAN RUMPLE PUMP WITHRAILER	29,900					
			SIX NOISE CANCELING HEARING PROTECTION COM SYSTEMS	10,700					
			TWO NOISE CANCELING HEARING PROTECTION COM SYSTEMS	10,700					
			PANORAMIC THERMAL IMAGINATION EQUIPMENT	193,445					
			UPGRADE FOR A TL CAMERA EQUIPMENT	23,251					
12201			UPGRADE LASER ANTI-CRACK EQUIPMENT		110,000			150,000	750,000
12201			Vehicle Computer for Primary Storage Server(s)		20,000				
10001			Vanguard System						
				452,107	130,000	-	160,000	100,000	850,000
			TOTAL CAPITAL OUTLAY	2,167,322	201,500	910,000	970,000	\$20,000	4,820,000
			GRAND TOTAL	26,697,624	12,996,543	63,772,248	63,770,000	81,344,500	1,051,614,472
			Critically Impaired:						
			5. Significant number of customers or critical facilities affected						
			A. Some customers affected						
			3. Service restored with repair/replacement within 6-24 hours						
			3. Moderate adverse impact if asset fails						
			1. Low loss of facility due to impact of failure						
			Condition Legend:						
			5. Failed or failing - Repair provided in next year						
			A. Failure expected in 1-5 years - In 1-5 years						
			3. Deteriorating but service not threatened						
			2. Good						

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Appendix F



2016 - 2017 Monthly Sewer Activity Report

	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	TOTAL	MIL.
Mainlines	SSO	0	2	0	0	0	0	0	0	0	0	0	2	
	Block	0.00	565.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	565.88	
	Clean-Root	173838.11	42175.02	67954.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283967.44	53.7
	Cut & Foam													
	Root Foam	37143.33	29421.73	21612.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	88177.53	
	Televis	85704.54	95562.05	121007.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	302274.06	5
	Repair													
	Install													
Manholes	Replace	3	6	0	0	0	0	0	0	0	0	0	9	
	Rehab	3	3	4	0	0	0	0	0	0	0	0	10	
	Adjust	0	7	5	0	0	0	0	0	0	0	0	12	
	Inspect	1371	1210	1284	0	0	0	0	0	0	0	0	3865	
	Replace & Install	1	0	0	0	0	0	0	0	0	0	0	1	
	Repair	0	1	0	0	0	0	0	0	0	0	0	1	
	Trouble													
	Calls	19	27	24	0	0	0	0	0	0	0	0	70	
	Swr Adj (Wtr)	0	4	18	0	0	0	0	0	0	0	0	22	

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Appendix G



Salt Lake City Department of Public Utilities Overflow Clean Up Guidelines

D Purpose

The purpose of these guidelines is to offer broad clean up criteria and procedures for the restoration of homes, buildings, other structures and their contents after an overflow event.

Due to the unique circumstances surrounding each event, differing criteria and procedures may be used, in lieu of these guidelines, based on acceptable industry and environmental health standards as determined by the Department and the City's Risk Management Division, in consultation with the Salt Lake Valley Health Department.

II) Scope

These guidelines describe general procedures to be followed by Department personnel and/or the City's contractor during evaluation and remediation of homes, buildings, other structures and their contents after an overflow event from City-owned and operated water, sanitary sewer, storm water or irrigation water facilities. These guidelines do not purport to describe the circumstances under which a clean-up response is warranted or required. That decision will be made by the Director, in consultation with the City Attorney and the

City's Risk Manager, based upon applicable City ordinances, including the no-fault ordinance, a preliminary evaluation of the City's potential liability based on negligence or other legal theories, and other similar factors. Instead, these guidelines govern the nature and scope of the City's clean up response once a decision to respond has been made. They are not intended to preclude other procedures approved on a case-by-case basis by the Director, as provided below in Part III.

III) Guidelines

Response by City Crews

Upon becoming informed of an alleged event, Department crews will respond to the site and inspect the City lines to determine if the event is due to the failure of a public or private facility. If the event is determined to be due to a failure of a private facility, crews will notify the property owner of its findings and advise the owner to contact a private contractor to correct the problem. If the event is determined to be the result of a failure of the City's facilities, Department crews shall effect the repairs to the City facility. Department crews may also provide a limited initial clean up response, such as pumping flooded basements, sandbagging or removing mud and debris.

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Appendix H

SLCDPU Sewer Overflow Response Plan (SORP)

Definitions:

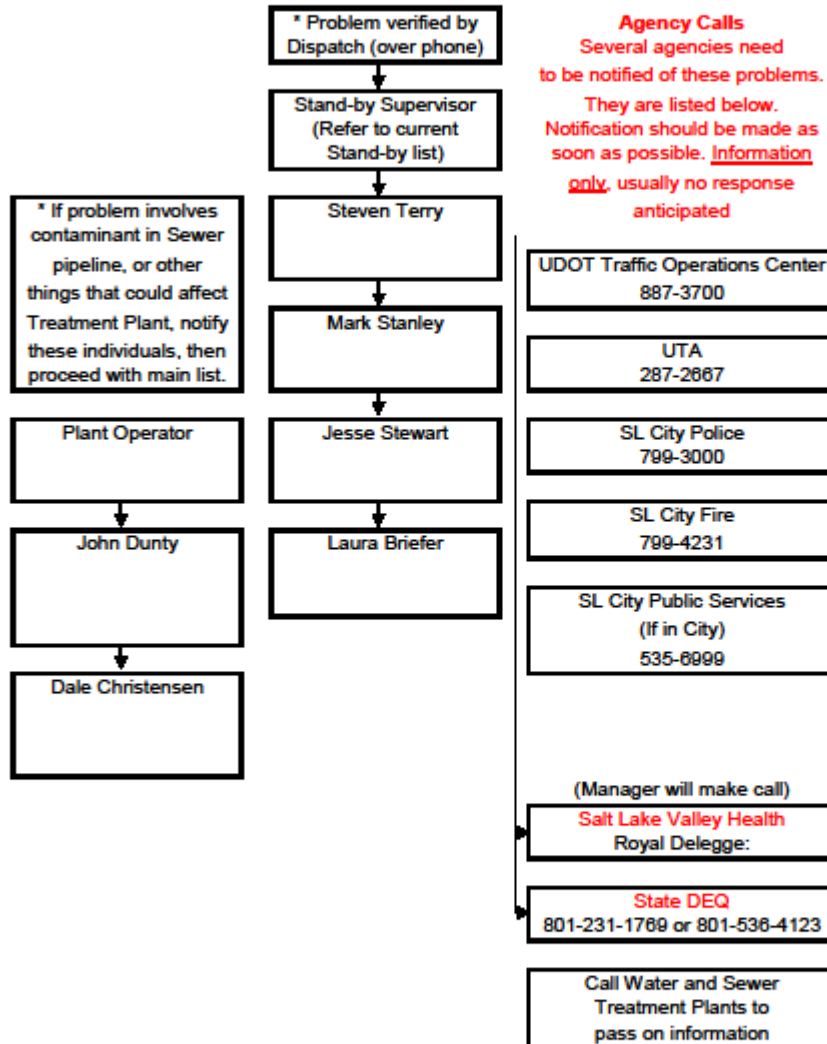
- **Backups:** Any event that may cause sewage to backup into City owned line or private lateral
- **Blockage:** Any obstruction that may cause a backup.
- **Private lateral backups:** Any event that may cause sewage to backup into private property outside of mainline (from point of connect to house)
- **Sanitary Sewer Overflow (SSO):** SSO's are classified by the State as follows:
 - **Class 1 (Significant):** A back-up that is not caused by a private lateral plug or problem that:
 - Affects more than five private structures or,
 - Affects one or more public, commercial or industrial structure or,
 - May result in a public health risk to the general public or.
 - The spill volume exceeds 5,000 gallons, excluding those in single private structures or,
 - Discharges to Waters of the State or,
 - **Class 2 (Non-significant):** A back-up not caused by a private lateral obstruction or problem that does not meet the Class 1 criteria.

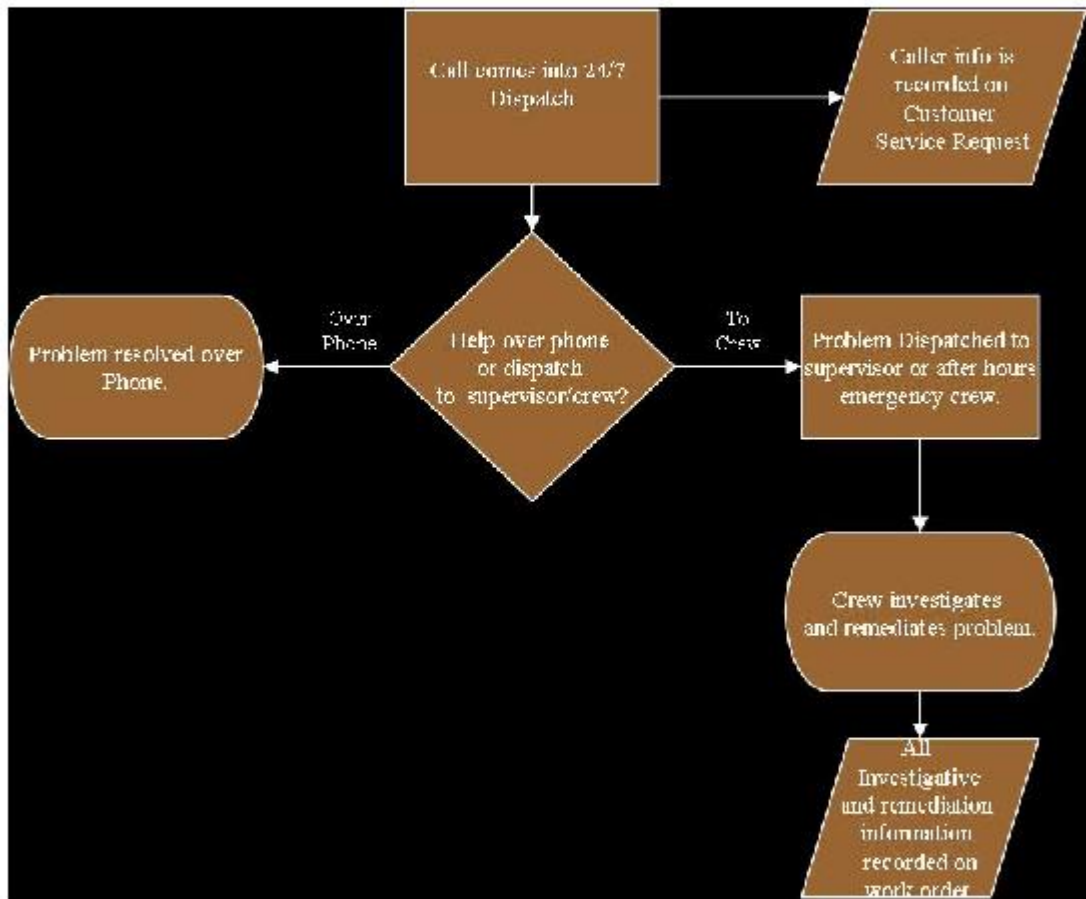
The response to calls of sewer backups or potential sewer overflows is as follows:

1. Once a call comes into the 24/7 Dispatch Operations Center (801-483-6700), the problem is dispatched out to the Field Supervisor, or if after hours, the emergency standby crew.
 - Caller information and problem is recorded on the Customer Service Request generated by the Cityworks CMMS.
2. The Supervisor will immediately assign a crew to respond or the emergency stand-by crew will respond.
3. The response crew will check both upstream and downstream manholes for flow or surcharging
 - If there is a sign of a blockage (surcharged manhole), crew will shoot the line with the hydraulic high pressure cleaning hose and nozzle to clear the blockage. The line will then be shot again to assure cleaning.
 - If there is no sign of a blockage, the crew will shoot the line to verify initial findings.
4. If there is no blockage found, the matter is turned over to the property owner and recorded as a private lateral backup.
5. If there is a blockage in the City's line, and basement flooding is a result, the crew will notify the Dispatch Center to call the City's contract clean-up contractor (Utah Disaster Kleen-up 866-483-5911). The City's Risk Manager will also be notified to follow-up claims processing. The blockage will be recorded as a SSO.
6. If the SSO results in raw sewer leaving the manhole, proceed to step 10.
7. Sewer mains that are found to be blocked will be televised to determine cause of the blockage.

Last Updated 9/26/2014 by Mark Stanley

MAJOR SEWER PROBLEM Class 1 SSO or Media Event





Sewer Overflow Volume Estimation Procedures

Sewer overflows volumes, regardless of type, will be estimated in the following manner:

Basement Flooding:

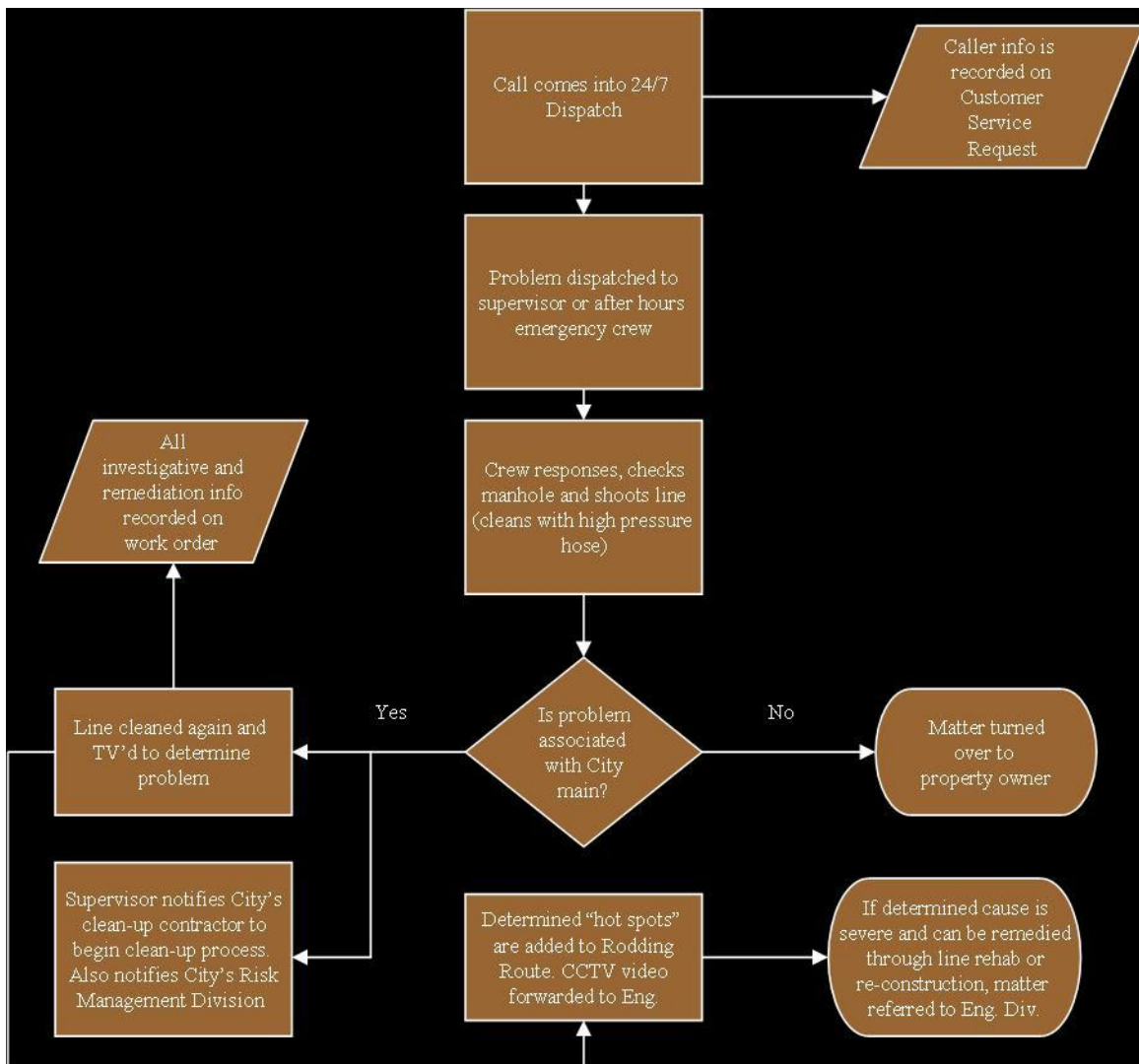
1. Calculate floor square footage times depth of water = cubic feet.
2. Take cubic foot measure and times by 7.48 to achieve gallons.
 - a. Example: Basement measures 35' x 20' and depth of spill was 6"
 - b. $35' \times 20' = 700$ square feet.
 - c. $700 \text{ square feet} \times .5 \text{ (6")} = 350$ cubic feet
 - d. $350 \text{ cubic feet} \times 7.48 \text{ (gallons per cubic foot)} = 2618$ gallons

Street Flooding

1. Calculate square footage of area flooded times depth of water = cubic feet.
2. Take cubic foot measure and times by 7.48 to achieve gallons.
 - a. Example: Area measures 15' x 10' and depth of spill was 1"
 - b. $15' \times 10' = 150$ square feet.
 - c. $150 \text{ square feet} \times .08333 \text{ (1")} = 12.5$ cubic feet
 - d. $12.5 \text{ cubic feet} \times 7.48 \text{ (gallons per cubic foot)} = 93.5$ gallons

Estimated volumes will be recorded on the work order for the particular event and input into Cityworks CMMS.

Last Updated 9/26/2014 by Mark Stanley



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Appendix I

Regulatory Agency Notification Procedure

To comply with current State requirements, the following will apply:

Sanitary Sewer Overflow Reporting

The following guidelines are given to assist in the reporting of sanitary sewer overflows
Two-tiered Utah Division of Water Quality reporting:

SSO or Backup Classification – SSO's or backups shall be categorized into two classes, based upon significance and severity as follows. The purpose of classifying the SSOs is to enable a differentiation in reporting requirements for the two classes:

Class 1 (Significant): An SSO or backup that is not caused by a private lateral plug or problem that:

- (a) affects more than five private structures or,
- (b) affects one public, commercial or industrial structure or,
- (c) may result in a public health risk to the general public or,
- (d) the spill volume exceeds 5,000 gallons, excluding those in single private structures or,
- (e) discharges to Waters of the State or,

Examples of Class 1 SSO's or Backups:

- Backups into more than five residential basements where the cause is not from private laterals.
- A backup into a commercial institution, like a restaurant, or other such business
- Spills into publicly accessible areas where the liquid or residual contamination may constitute a threat to public health (for example, anytime sewage leaks out a manhole cover in a street or a park).
- All spills of over 5,000 gallons
- All spills which reach Waters of the State.
- Spills which have a significant potential to contaminate ground water.

Class 2 (Non-significant): An SSO not caused by a private lateral obstruction or problem that does not meet the Class 1 criteria.

Examples of Class 2 SSOs:

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Appendix J

Public Notification

After having consulted with the Salt Lake Valley Health Department, in the event of large spill events or where general public health is of concern, notification to local media contacts and door to door contact shall be made.

- Door to door contact shall be made and information provided regarding the spill itself, location, who may be affected, and what precautions, if any, should be taken.
- Communication made to the media should follow procedures outlined in the Department's *Emergency Communications and Media Management Plan*.

This Plan can be found in the Department's *SLCDPU Emergency Operations Plan*.

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Appendix K

2016 Wastewater Collection System Audit

Utility Name:	Salt Lake City Department of Public Utilities	Utility Contact Name:	Auditor:	Mark Stanley	Steven Terry
Utility Address:	Utility Contact Phone Number:	Date:	11/14/2017	801-483-6759	1530 South West Street, Salt Lake 84115
Utility Contact Email:			Steven.Terry@slcgov.com		
System Size: Large?			X		
Medium?					
Small?					
Select One!					
SSO Evaluation			Total Number of SSOs		
Fiscal Year 2013-14		8	Dry weather SSOs	Wet weather SSOs	Comments
Fiscal Year 2014-15		8		NA	
Fiscal Year 2015-16		2		NA	
Operator Certification Calculation					
Miles of Sewer			652		
5			Certified Wastewater Collection System Operators		
Sewer System Employees			28		
Employee/Certified Employee Ratio			18%		
Number of Crew Leaders that are Certified Wastewater Collection System Operators			3		
Total Number of Sewer System Crews			4		
Certified Crew Leader/Crew Ratio			75%		
System Performance Calculation					
SSOs in Fiscal Year 2015-16	2		0.31		per hundred miles of sewer
SSOs in Fiscal Year 2014-15	8		1.23		per hundred miles of sewer
SSOs in Fiscal Year 2013-14	8		1.23		per hundred miles of sewer
AUDIT FORM GRADE GUIDANCE					
0.0 = Not Demonstrated			Cells to be filled in by auditors.		
1.0 = Poor			All others cells are locked to protect text and formulas.		
2.0 = Good					
3.0 = Best					
Audit grades not limited to whole numbers.					
Grades to the 10th of point can be awarded. Example: 2.5.					
An individual line grade cannot exceed 3.0.					

2016 Wastewater Collection System Audit

Utility Name:	Salt Lake City Department of Public Utilities	Utility Contact Name:	Auditor:	Mark Stanley	Steven Terry
Utility Address:	Utility Contact Phone Number:	Date:	11/14/2017	801-483-6759	1530 South West Street, Salt Lake 84115
Utility Contact Email:			Steven.Terry@slcgov.com		
System Size: Large?			X		
Medium?					
Small?					
Select One!					
SSO Evaluation			Total Number of SSOs		
Fiscal Year 2013-14		8	Dry weather SSOs	Wet weather SSOs	Comments
Fiscal Year 2014-15		8		NA	
Fiscal Year 2015-16		2		NA	
Operator Certification Calculation					
Miles of Sewer			652		
5			Certified Wastewater Collection System Operators		
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2016 Wastewater Collection System Audit

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System Size: Large?					
Medium?			X		
Small?					
Select One!					
SSO Evaluation	Year	Total Number of SSOs	Dry weather SSOs	Wet weather SSOs	Comments
Fiscal Year 2013-14		8		NA	
Fiscal Year 2014-15		8		NA	
Fiscal Year 2015-16		2		NA	
Operator Certification Calculation					
Miles of Sewer			652		
5			Certified Wastewater Collection System Operators		
Sewer System Employees			28		
Employee/Certified Employee Ratio			18%		
Number of Crew Leaders that are Certified Wastewater Collection System Operators			3		
Total Number of Sewer System Crews			4		
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SSOs in Fiscal Year 2015-16	2		0.31		per hundred miles of sewer
SSOs in Fiscal Year 2014-15	8		1.23		per hundred miles of sewer
SSOs in Fiscal Year 2013-14	8		1.23		per hundred miles of sewer
AUDIT FORM GRADE GUIDANCE					
0.0 = Not Demonstrated			Cells to be filled in by auditors.		
1.0 = Poor			All others cells are locked to protect text and formulas.		
2.0 = Good					
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Audit grades not limited to whole numbers.					
Grades to the 10th of point can be awarded. Example: 2.5.					
An individual line grade cannot exceed 3.0.					

2016 Wastewater Collection System Audit

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Utility Address:	Utility Contact Phone Number:	Date:	11/14/2017	801-483-6759	1530 South West Street, Salt Lake 84115
Utility Contact Email:			Steven.Terry@slcgov.com		
System Size: Large?					
Medium?			X		
Small?					
Select One!					
Grade			Comments		
Maintenance Program - Mains and Manholes (45% of Grade)					
Planned and Preventive Maintenance			28.5		
Maintenance program with scheduling			3.0		
Sewer line inspection program			3.0		
Manhole inspection program			3.0		
Sewer cleaning program			3.0		
Record keeping of inspection, cleaning, etc.			3.0		
Percent of system cleaned per year (10% or greater = Good)			3.0		
Monitoring hydrogen sulfide and control			2.0		
Rehabilitation: Sewer lining program			3.0		
Rehabilitation: Manhole program			2.5		
Inspection CCTV, video capability			3.0		
Fats, Oils, and Grease			10.5		
Schedule and frequency of grease trap Inspections			2.5		
Program implemented			3.0		
Program tracking and documentation			3.0		
Measure performance and success			2.0		
Reactive or Emergency Maintenance			12.0		
Percent of crew time spent reactive maintenance			3.0		
Performance tracking and measurement of reactive maintenance			3.0		
Response time performance measured			3.0		
Adequate crews and equipment for after hours response			3.0		
Facilities, Parts, and Equipment Maintenance			9.0		
Facilities to conduct (prepare and stage out of) preventive and reactive maintenance work efforts			3.0		
Equipment inventory tracked			3.0		
Parts inventory tracked			3.0		

2016 Wastewater Collection System Audit

Utility Name:	Salt Lake City Department of Public Utilities	Utility Contact Name:	Auditor:	Mark Stanley	Steven Terry
Utility Address:	Utility Contact Phone Number:	Date:	11/14/2017	801-483-6759	1530 South West 1 Street, Salt Lake City 84115
Utility Contact Email:			Steven.Terry@slcgov.com		
System Size: Large? Medium? Small?			X		
Select One!					
TOTAL MAINTENANCE PROGRAM SECTION	60.0			Maximum Points This Section = 63	
Grade					
Operations Program - Pump Stations and Force Mains (25% of Grade)					
Pump Stations, Lift Stations, and Force Mains	16.5			Maximum Pts This Sub-Section = 18	
3.0				Inspection schedule of pump stations	
3.0				Preventive maintenance of pumps	
2.5				Adequate back-up power at pump stations	
3.0				Force mains - air relief valve inspections and maintenance	
3.0				Predictive maintenance	
2.0				Odor Control	
TOTAL OPERATION PROGRAM SECTION	16.5			Maximum Points This Section = 18	
Grade					
Capacity Program (15% of Grade)					
Engineering and Sewer System Capacity Program	22.5			Maximum Pts This Sub-Section = 24	
3.0				Computer modeling of system or calculation method	
2.5				I/I (infiltration/inflow) monitoring and reduction program	
3.0				Flow monitoring program and procedures	
3.0				Field investigations and testing (smoke, dyed water, lamping, camera, sonar)	
3.0				Analysis of data (GIS, database, spreadsheet)	
3.0				New construction installation, testing, and inspection to assure capacity	
2.0				Capacity certification methodology	
3.0				Map, database, or GIS indicating surcharge and overflow situations	
TOTAL CAPACITY PROGRAM SECTION	22.5			Maximum Points This Section = 24	

2016 Wastewater Collection System Audit

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Utility Address:	Utility Contact Phone Number:	Date:	11/14/2017	801-483-6759	1530 South West 1 Street, Salt Lake City 84115
Utility Contact Email:			Steven.Terry@slcgov.com		
System Size: Large? Medium? Small?			X		
Select One!					
TOTAL POINTS			202.0		
Section	Points per Section		% of Grade		Points for Section
Management Program (15% of Grade)	103.0		15%		15.45
Maintenance Program - Mains and Manholes (45% of Grade)	60.0		45%		27.00
Operations Program - Pump Stations and Force Mains (25% of Grade)	16.5		25%		4.13
Capacity Program (15% of Grade)	22.5		15%		3.38
202.0	100.0%		49.95		Point Score
53.55 = Maximum Score					
Form revised: 11/14/2016	93.3%				Percent Score

Salt Lake City
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Appendix M

SANITARY SEWER LIFT STATIONS

SS01	Westpoint	1890 West 1125 North
SS02	New Rose Park	1805 West Independence Blvd
SS03	1700 North	1700 North Redwood Road
SS04	North Lift	925 North 2200 West
SS05	South Lift	2250 West North Temple
SS06	Gate 1	Between main terminal and Delta Terminal
SS07	Cannon	1510 South 1000 West
SS09	Bonneville	962 South Shire cliff Road
SS10	700 South	4650 West 700 South
SS11	Delta C-8	C-8 Concourse @ Airport
SS12	40 th West	South of Airport Observation Deck
SS13	900 North	895 North Redwood Road
SS14	350 North	330 North 4800 West
SS15	600 North	595 North 4800 West
SS16	Billy Mitchell	450 North Billy Mitchell Rd.
SS17	5300 West	5300 West North Temple
SS18	Ameilia Earhart	5850 West Ameilia Earhart Dr.
SS19	Centenial	4130 West 1820 South
SS20	Pioneer	1100 South Pioneer Rd.
SS21	Industrial	1850 West Industrial Road
SS22	Deicer #1	3900 West 2200 North
SS23	Deicer #2	3600 West 2200 North
SS24	Deicer #3	2800 West 2200 North
SS25	Deicer #4	2200 West 1995 North
SS26	Fuel Farm	West Of Delta Terminal
SS27	Concord	1304 South Concord Street
SS28	500 West	1750 South 500 West
SS29	North Cove	355 East Canyon Oaks Way
SS30	West Lift	1200 North 3800 West
SS31	California Pl.	1064 West Modesto Ave.
SS32	Smith & Loveles	4000 West No. Temple (observation deck)
SS33	Westport	5700 West 300 South
SS34	Apollo	121 North Apollo Rd.
SS35	Nintech	3800 West California Ave.
SS36	Legacy	6375 West 300 South

STATION	12/04	MANUFACTURER	PUMPS	SIZE	G.P.M.	VOLTS	H.P.	AMPS	R.P.M.	V.F.D.	YEAR	REBUILT
Billy Mitchell		Gorman-Rupp	2	4"	300	480 Yes	7 1/2	8.4	1153	yes	1991	1994
Bonneville		Fairbanks Morse	2	4"	290	240 Yes	7 1/2	20	1750	No	1988	pumps 6/05
California Pl.		Gorman-Rupp	2	4"	300	240 Yes	5	13	1035	No	1997	
Cannon		Gorman-Rupp	2	4"	250	240 Yes	3	8.4	750	No	1988	1992
Centennial		Gorman-Rupp	2	8"	1200	240 Yes	30	72.4	1008	yes	1991	
Concord		Gorman-Rupp	2	8"	1100	480 Yes	10	24	650	No	1964	2001
Concord		Gorman-Rupp				Nat. Gas				No	1964	2001
Deicer #1-#4		Gorman-Rupp	2	6"	600	480 No	7 1/2	8		Yes	1992	
Delta C-8		Flygt	2	4"	404	480 Yes	5	7.6	1705	No	1980	1997
Fuel Farm		Flygt	2	4"	341	480 Yes	5			No	1980	2004
Gate #1		Gorman-Rupp	2	4"	300	480 Yes	15	19	1460	Yes	1980	2006
Industrial		Flygt	2	4"	360	480 Yes	3.7	five	1750	No	1939	2002
New Rose Park		Hydramatic	2	6"	900	240 Yes	5	14	870	yes	1967	1995
North Cove		Flygt	2	4"	370	240 Yes	12	33	1760	No	1992	2003
North Lift		Gorman-Rupp	2	6"	500	480 Yes	10	25.4	950	no	1958	1989/2000
Pioneer Rd.		Gorman-Rupp	2	6"	500	240 Yes	10	25.2	963	Yes	2000	2000
South Lift		Hydramatic	2	4"	300	240 Yes	5	14	1100	No	1995	
West Point		Fairbanks-Morse	2	6"	800	480 Yes	7 1/2	12	1160	No	1985	2001pmps
West Lift		Gorman-Rupp	2	4"	300	480 Yes	7 1/2	10.3	1750	Yes	1994	
350 North		Gorman-Rupp	2	10"	2143	480 Yes	30	38	1776	Yes	2006	
350 North		Gorman-Rupp	0	0		Nat. Gas				No	2006	
5th West		Gorman-Rupp	2	4"	250	240 Yes	7 1/2	20.6	1155	No	1995	
6th North		Hydramatic	2	4"	300	480 Yes	5	7.6	1150	No	1982	1989
7th South		E.M.U.	2	4"	510	480 Yes	10	16	1140	Yes	1991	
7th South		Flygt	2	6"	850	480 Yes	7.4	9.4	1755	Yes	2002	
9th North		Gorman-Rupp	2	6"	900	480 Yes	15	21	1090	Yes	1984	1989-94
17th North		Hydramatic	2	6"	1000	480 Yes	15	14	900	No	1977	1998
40th West		Gorman-Rupp	2	8"	1000	480 Yes	30	40	1070	Yes	1986-89	
40th West		Smith-Loveless	2	6"	800	480 Yes	10	14		No	1976	
53rd West		Hydramatic	2	6"	900	480 Yes	10	13.6	800	yes	1976	1989-98
5850 West		Gorman-Rupp	2	6"	900	480 Yes	15	19	1050	Yes	1982	1996
5850 West		Gorman-Rupp	0	0		Nat. Gas			1800	No	1996	
Westport		Gorman-Rupp	2	10"	2000	480 yes	25	30.1	1766	Yes	2005	
Westport		Gorman-Rupp	0	0		Nat. Gas	30		1800	No	2005	
Apollo		Gorman-Rupp	2	6"	640	480	25	30.1	1785	Yes	2007	
Apollo		Gorman-Rupp	0	0		Nat. Gas				No	2007	
Nintech		Gorman-Rupp	2	6"	591	480	20	25.2	1765	Yes	2007	
Nintech		Gorman-Rupp	0	0		Nat. Gas				No	2007	

Salt Lake City
Public Utilities
SSMP

Appendix N



SALT LAKE CITY PUBLIC UTILITIES
SERVICE REQUEST

DATE PRINTED: 10/17/08 2:46 PM

Description: SEWER TROUBLE CALL

Code: NYC

Request Number: 880481

Map Number

Priority: 2

BARRICADES YES NO

WORK ORDER: Y N

Problem Address: 926 S MCCLELLAND ST

Customer Address / Coordinate: 1040 E

Date / Time Reported: 10/17/2008 2:37:39 PM

Supervisor:

Initiated By: KUWADA, DENNIS

Dispatched To: BROADHEAD, RYAN
10/17/2008 2:34:25 PM

Caller Information

Service # 2650026 Number of Calls: 1

Call	Name		Home Address	Home Phone	Work Phone	Other Phone
11441	SAKONJU	SAKONJU	926 S MCCLELLAND ST	8013882534		

Meter Location / Comments: 4S%NIHL 3E%WK

Crew Instructions:

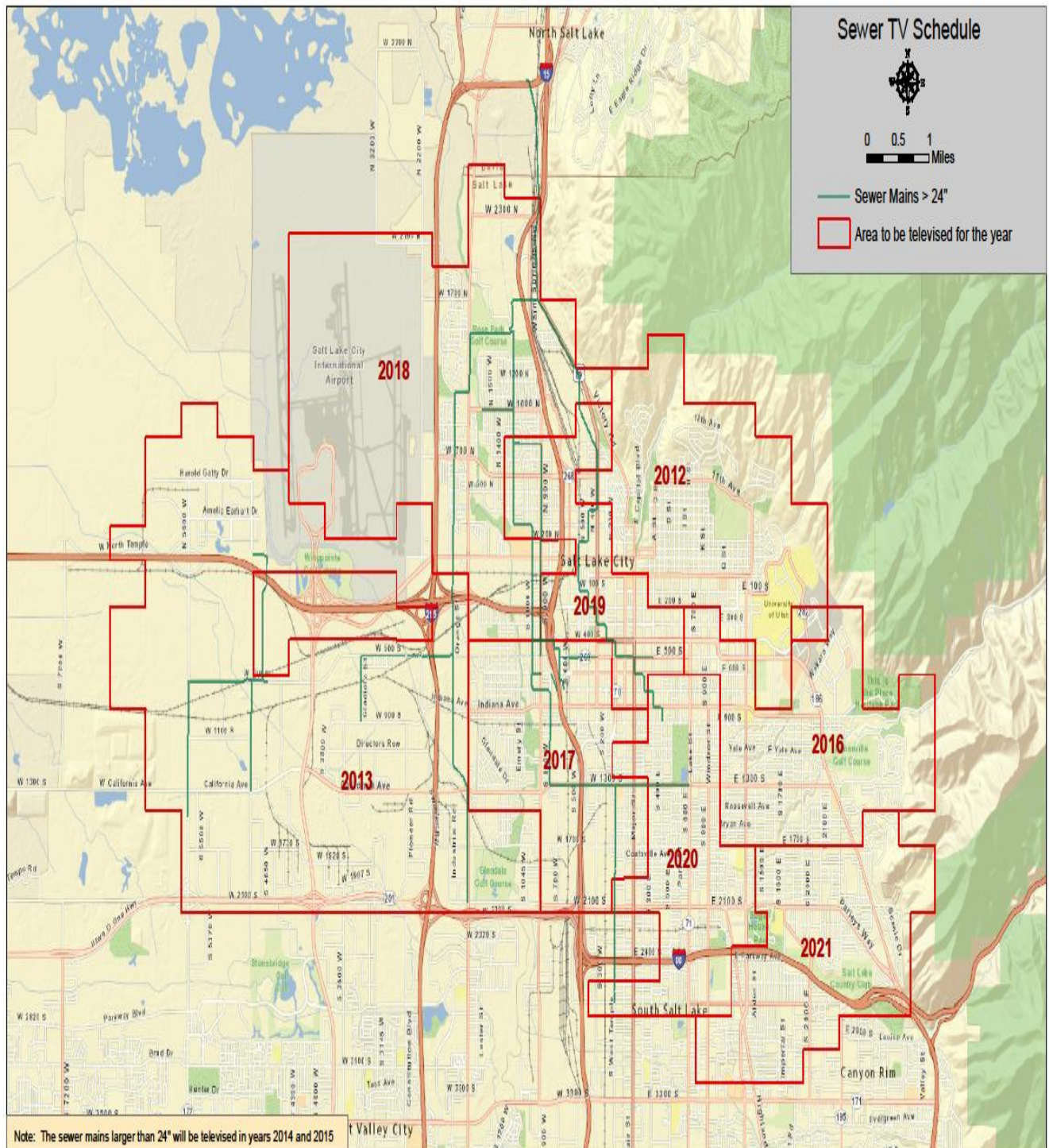
By KUWADA, DENNIS: 10/17/2008 2:37:39 PM

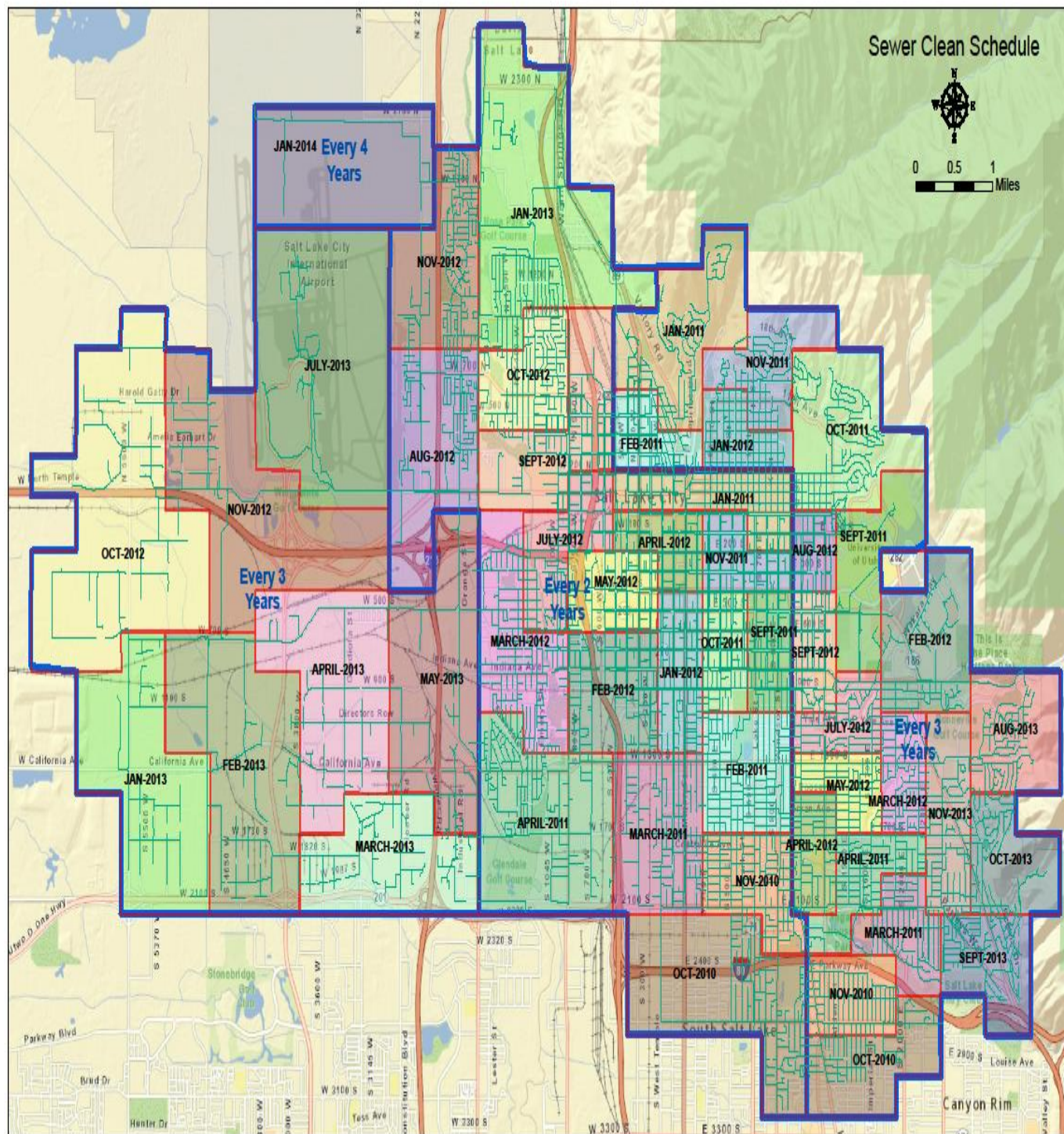
owner reports small amount of water in basement when showering. Just had pipes rooted in August. Need check from street

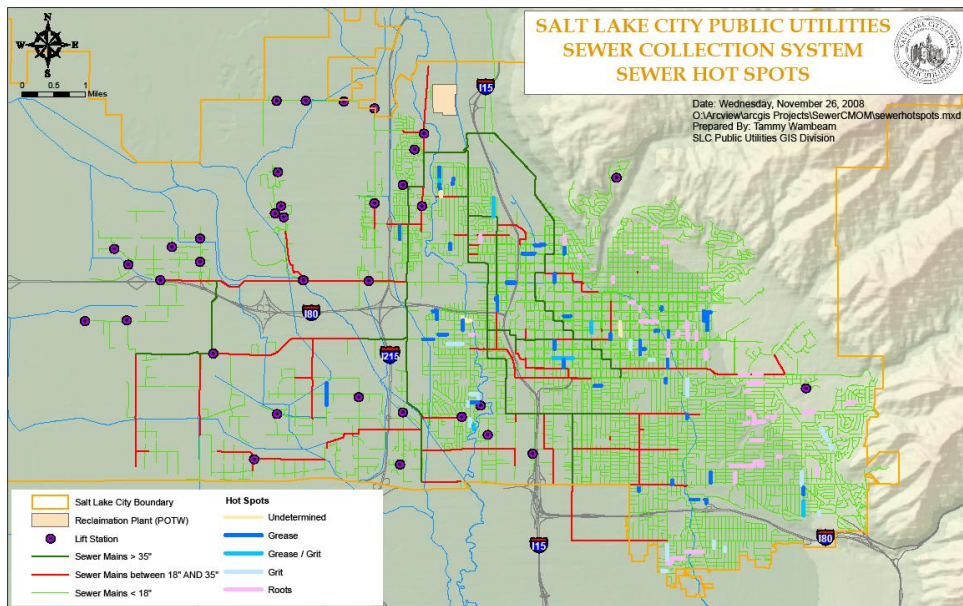
03213 63219

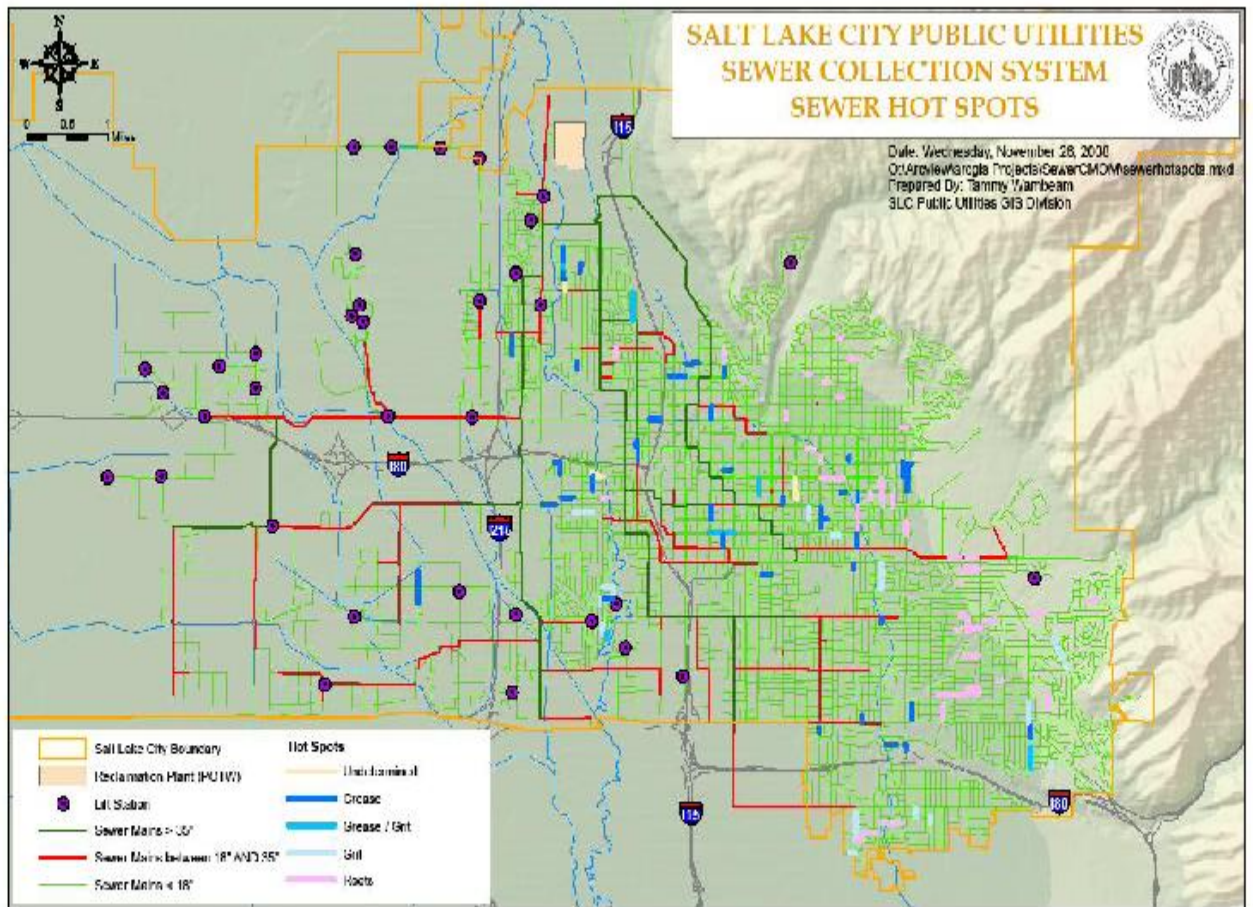
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Appendix O









Salt Lake City
Public Utilities
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Appendix P

STANDARD PRACTICES

for
Salt Lake City Public Utilities

January 5, 2010

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PU:CCall:/

cc: Jeff Niermeyer, Tom Ward, Engineering Staff, Contracts, Maintenance, City Eng.,
Airport Eng., file/B/Eng.

¹ Changes and revisions may be made to some of the standard practices from time to time and new standards will be added as needed. If you have questions, check for current version.

STANDARD PRACTICES

for

Salt Lake City Public Utilities

January 5, 2010

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A APPENDIX – Attachments for Standard Practice #2 63

PU:CCall:/

cc: Jeff Niermeyer, Tom Ward, Engineering Staff, Contracts, Maintenance, City Eng., Airport Eng., file/B/Eng.

1 Changes and revisions may be made to some of the standard practices from time to time and new standards will be added as needed. If you have questions, check for current version.

SLCPU Standard Practice 1 1/5/2009

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SLCPU Standard Practice 1 1/5/2009

STANDARD PRACTICE #1

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: January 14, 2010

SUBJECT: Trench Backfill Requirements (APWA Section 33 05 20)

Trench Zone **Trench Zone Material**

2-inch minus – Granular Backfill Borrow (APWA 31 05 13)

Notes: Material must be free of slag or recycled asphalt.

T_w Material can be 2-inch minus pit run material.

Pipe Zone **Pipe Zone Material (12" above to 6" below the pipe)**

Dry conditions – Grade $\frac{3}{4}$ UTBC (APWA 32 11 23) ²

Pipe ¹ *Wet conditions* - 2" minus sewer rock (APWA 31 05 13) ³

Note: Material must be free of slag or recycled asphalt.

Springline

Stabilization Material (starts 6" below pipe)

Stabilization 2" minus sewer rock (APWA 31 05 13)

Note: Material must be free of slag or recycled asphalt

Table 1 – Pipe zone material and minimum pipe zone width.

Pipe Material Pipe Zone Material Min. Pipe Zone Top Width (T_w)

PVC 3/4" minus well graded ² $T_w = OD + 24" \cdot 36"$

HDPE-N12 3/4" minus well graded ⁵ $T_w = OD + 24" \cdot 36"$

DI 3/4" minus well graded ² $T_w = OD + 24" \cdot 36"$

Concrete 3/4" minus well graded ² $T_w = OD + 24" \cdot 36"$

-
1. Center pipe in trench.
 2. Variations must be approved in advance by Chief Engineer.
 3. 2" minus sewer rock can be used in areas below water table when approved in advance by Chief Engineer.
 4. Outside diameter of the pipe.
 5. 2" minus material not permitted with PVC or HDPE pipe.
-

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STANDARD PRACTICE #2

SALT LAKE CITY PUBLIC UTILITY

TO: All Dept. personnel involved in construction inspection

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: December 17, 1999

SUBJECT: Project Inspection Standards

Types of construction projects within Salt Lake City Public Utilities:

- Water construction
- Sewer construction
- Drainage construction
- Development construction (city and county)
- In-house construction with maintenance crews
- Public Services contract construction
- Airport contract construction

- County contract construction
- UDOT contract construction
- UTA contract construction (TRAX and commuter rail)
- Specialty projects

What is the role of the inspector?

The project inspector –

- is the administrator of the project paperwork,
- starts and finishes the documentation,
- provides continuous quality control,
- represents the City on the project and looks out for City interests.
- is responsible for the success of their assigned construction projects.

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When should inspectors be on-site for inspection?

The project inspector should be on the job site at appropriate times to

–

- observe contractors procedures on the first day of construction.
- observe and document construction conditions, i.e. weather, soil conditions, equipment, personnel, installation methods and procedures, etc.
- observe installation methods and insure that construction meets or exceeds City standards.
- approve and inspect materials, i.e. fittings (valves, etc.) pipe (PVC, DI, CIPP liner, etc.), bedding materials, etc.
- monitor critical contractor work items (i.e. sewer by-pass pumping, etc.).
- monitor progress and measure bid quantities.
- check all bid schedule items.
- observe changed conditions.
- conduct water shut-downs.
- collect water samples.
- observe certain operational or long-term maintenance elements -

Minimum Inspector duties on all projects:

1. Reviews – As a member of a design team provide peer review when requested on all construction projects (***plan-in-hand*** site review for project constructability).
2. Measurement and payment – All pay items need to be measured as per description in specifications. This is done prior to progress payments and the final project closeout.

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3. Document -- **Document in writing** anything that affects payment,

warrantee, contract time, non-compliance with specifications, etc. (see following section on measurement and payment documentation).

4. Change orders – Working with the project engineer and designer accurately describe and process change orders.
 5. Visit all active construction projects assigned to you at least daily to allow for communication between the Contractor and the City.
 6. Conduct scheduled water shutdowns. The Contractor should not be turning our valves.
 7. The inspector should carry a set of plans and specifications with them at all time.
 8. Keep a daily diary of all project inspections.
 9. Act as “point person” for all communication between the Contractor and the City.
 10. Make sure all materials testing for acceptance is accomplished by the Contractor.
 11. Submit acceptance test results applicable to trench backfill, roadbase, asphalt and concrete work to agency having jurisdiction.
 12. Make sure the official contracts project file has all documentation.
- Measurements and payment documentation
1. Take enough measurements to document **all** pay items listed in the project ***bid schedule***.
 2. Asphalt saw cut thickness will be measured and documented in the project inspectors’ diary on a daily basis.
 - In the City, minimum asphalt thickness is existing thickness plus one inch.

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- Asphalt should be measured by the inspector and Contractor together.
3. On waterline projects, provide an open trench so accurate survey measurements can be made of the actual pipe and fittings installed.
 4. Check grade of sewer and storm drain installations frequently.
 5. Check minimum cover for waterline and service laterals. Provide a minimum of 4 feet ground cover from the top of the water main to finished grade or as noted on the plans, detail drawings or as directed by the Engineer.
 6. Unless otherwise noted, minimum trench widths for water, sewer and storm drains will be as noted on Standard Practice #1.
- What are the Department Administration responsibilities?

1. Provide appropriate training for all department personnel involved in inspection and safety procedures so that the minimum standards described in this document are met in all instances.
 2. Provide cross training for Engineering designers and field maintenance personnel on construction inspection skills and duties.
 3. Provide proper equipment so quality work can be performed.
 4. Be available to resolve and approve change orders in a timely manner.
 5. Provide safety equipment as needed.
-

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Inspection Process (Contractor work):

1. Peer review of plans and specifications by inspector and another designer. Particular attention should be given to the project manual *Bid Schedule 00 43 00*. Standardized unit price descriptions will be used (see **(1) standard unit price descriptions**).
2. Pre-bid meeting conducted by the project manager (see **(2) pre-bid agenda**).
3. Bid received by City Recorder at 2:00 PM on Wednesdays at City and County Building.
4. Bid tabulation by Contracts Specialist within five working days after bid opening (see **(3) bid abstract** example).
5. Evaluation of bid and recommendation for award by project manager within 5 working days after bid opening.
6. Intent to Award bid by Department of Public Utilities Director (see **(4) intent to award letter** example).
7. Submission of bonds and Insurance by Contractor within 10-days after award letter (see **(5) insurance checklist**).
8. Pre-construction meeting set up within 10 working days after award. This is conducted by the project manager (see **(6) pre-construction agenda**).
9. Construction work order (CWO) issued in Project Tracker by Contracts Specialist (Linda Allred) for water, sewer and drainage projects and Contracts (Peggy Garcia) for subdivisions (see **(7) CWO**).

10. Contractor submittals are reviewed and approved in writing by design engineer, designer, inspector and maintenance (see **(8) Submittals form**).

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11. Notification letters are prepared by Contracts Specialist (see **(9) notification letter** example) and distributed to affected customers by Contractor.

12. Start date for construction will generally be within 45 days of bid opening or adjusted according to City needs.

13. Compile project summary sheet (see **(10) Project Summary form**)

and place in the project file located in the Contracts office vault.

14. Prepare daily inspection reports (see **(11) Daily Report form**) and

attend weekly construction meetings with Contractor as necessary.

15. Collect appropriate quality control testing information from the Contractor or the testing company that it has hired for this purpose and perform separate City testing as necessary to verify the results (see **(12) Quality Control** in the specifications). These results should be filed in the Public Utilities project file with copies given to the appropriate Public Way agency (City, County, or UDOT). The approximate number of test results are as follows -

- Proctors, Marshall's and gradations – one for each different material used.

- In-place density tests (nuclear tests) – the number of randomly located tests for water, sewer and drainage pipe trenches are based on **one test per 200 feet of trench per 8-inch lift**. In a normal water trench this is about 4 tests at different random depths every 200 feet of trench or about **16 tests per block**. The appropriate number of passing tests should be documented in the project file.

- The project inspector can request tests at any location where the compaction seems to be low.

16. Order surveys of all piping and coordinate with the surveyors so the pipe is exposed and assessable to them.

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17. Process change orders as needed. **Inspectors are responsible for project change orders and have "ownership" of them from beginning to end.** The project engineer and designer should assist in

evaluating change orders.

- No payment can be made to the Contractor for change order items until all the paperwork is completed.
 - Three kinds of change orders are (1) changed condition (initiated by contractor), (2) change of scope (initiated by the City) and (3) design deficiency (initiated by either the contractor or City).
 - Inspectors to prepare paperwork and recommend pricing. On larger change orders the project engineer, Engineering Administrator, Financial Administrator, Deputy Director and Director should be made aware of the construction problem and consulted at this stage of the negotiations.
 - Contracts Specialist to type paperwork for change orders (see **(13) change order form**).
 - Signatures on the change order form to be obtained by inspector — inspector, designer, design team leader, and Contractor. Contracts Specialist will get signatures from Engineering Administrator, Deputy Director, Financial Administrator and Director for final processing.
 - Goal of the designer and inspector is to keep CO's **less than 2%**.
 - Goal is to process all change orders in less than five days.
18. Contract payments are to be processed by inspector for all contract or change order items (see **(14) payment request form**). For normal payments the inspector will review and approve measured pay items, sign off for payment approval and give the payment form to the Contracts Specialist. No other signatures are required.
19. Contracts Specialist to prepare and process payment requests.
-

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20. Final walk-through and close-out of project by inspector -
- A final walk-through on the project is held with the Contractor, inspector, maintenance representative and other affected parties.
 - Punch list is prepared.
 - Certificate of Substantial completion (see example **(15) Certificate of Substantial completion letter**).
 - Punch list to be prepared by inspector and Contractor and attached to the certificate of substantial completion letter (see **(16) punch list**).
 - Punch list items to be completed in the time stated in paragraph 2.3 of the Agreement (00 52 00). Usually this would be less than **14 DAYS**.
 - Final payment is not made until the punch list items are certified as complete by the inspector.

- One year correction period (warranty) starts with date on substantial completion letter.
 - The inspector should have been doing his paperwork all along so this step is to simply pull things together.
 - **Close out change order** prepared using an Excel spreadsheet (see **(17) project closeout** example).
 - Finalized quantities and document final pay amounts.
 - Notify GIS group (GIS Supervisor) of completion of the new construction and update the maps in Contracts, Maintenance and Distribution.
 - Should be completed while punch list items are being completed.
21. Final paper work –
- Fill out project completion report and put **ALL** project paperwork in the Contract office project construction file (see **(18) project completion report form**).
-

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· **Close out files and all CWO's.**

22. One year correction period (warranty) inspection –

- Completed 11 months after letter of Substantial Completion.
- Contracts Specialist will notify inspector of the warranty at the 11-month time.
- Final warranty sign off is made by the inspector on the project completion report in the Contracts file and Contracts Specialist is notified to send out a release letter to the Contractor (see **(19) warrantee release** letter).

Inspection Process (In-house construction work):

1. Peer review and pre-construction evaluation by a team of engineering and maintenance personnel to determine if the work can best be done in-house.
2. Maintenance or construction work order (WO) issued.
3. Start construction.
4. Inspection is done by the construction supervisor. The in-house crews will meet the same construction standards as Contractors.
5. Maintenance Supervisor will be notified so department surveyors so that as-built surveys can be made while fittings, manholes, etc. are exposed.
6. Hold weekly construction meetings as necessary.
7. Complete appropriate quality control testing as necessary.
8. Inform Engineering of unusual or changed conditions.
9. Final walk through of project.

- Prepare punch list (prepared by those who operate the facility)
 - Punch list items to be completed in TWO WEEKS.
10. Final close out of project by construction supervisor –
-

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- Notify GIS group (GIS Supervisor) of completion of the new construction and update the maps in Contracts, Maintenance and Distribution.

- Close out all WO's.
- Should be completed in ONE WEEK.

11. Final paper work –

- Project completion report (form)
- Close out all WO's

12. One-year correction period inspection will be made by those who operate the facility about 1-year after construction is completed.

Maintenance Administrator will be notified of any operational deficiencies and modifications to in-house construction procedures will be made as necessary.

Minimum Survey Standards

1. Inspector and design team responsibilities – All project surveys will be

scheduled by the project inspector through assigned Surveyor.

Enough lead-time is given so the surveys can be done in an orderly fashion. If problems occur in scheduling surveys, the project inspector will be responsible to locate all fittings and take appropriate measurements. This information will be given to the surveyors and included on the final survey notes.

- No waterline work will be buried until the survey is completed.
 - No sewer wyes will be buried until the survey has been completed.
 - The project General Notes, as shown on the plans, will include a note that the Department surveyors will be notified 24-hours in advance of needing project as-built surveys. Inspector will coordinate.
-

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- Project inspector will be responsible for making sure that all project surveys are completed.

- Surveys will be done by trained personnel.

2. Waterline survey –

- Minimum water surveys will include measuring as-built horizontal and vertical location of all fittings.

- This will be done while the pipes are exposed.
- Several visits to the project site are anticipated.

3. Meter survey – If a meter location is substantially moved (different + station), the project inspector will notify the surveyors and a meter survey will be done. If the surveyors are not available, the project inspector will make the necessary measurements and turn those notes into Surveyor.

4. Sewer Survey –

- Minimum sewer surveys of mainline extensions will include tying down the as-built horizontal and vertical location of all manholes, wyes, grade changes, etc.
- This will include measurements from the manhole ring down to the flowline invert.
- This survey of sewer mainline replacements and new mainline extensions will generally be done after construction is substantially complete.

5. Sewer lateral survey –

- Minimum sewer lateral surveys are done as a courtesy to the property owner (**trial survey**), to obtain elevations at the tie-in point on the mainline and estimate lateral elevations at the property line.
- This information is helpful on future designs.
- Records of these surveys are kept in the contract office files.

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6. Storm drain survey –

- Minimum surveys of new storm drains will include tying down the as-built horizontal and vertical location of all manholes, grade changes, catch basins, clean out boxes, etc
- This will include measurements from the manhole, cleanout box, or catch basin ring down to the flowline invert.
- This survey will generally be done after construction is substantially complete.

7. GIS database – Information from all surveys are given to GIS Supervisor within 30-days of substantial completion of the project. This information is then added to the GIS database within 60-days of substantial completion of the project.

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STANDARD PRACTICE #3

SALT LAKE CITY PUBLIC UTILITY

TO: All developers and contractors doing work within the right-of-way for the Jordan & Salt Lake and East Jordan

canals

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: April 18, 2001

SUBJECT: Jordan and Salt Lake Canal Standards

The Jordan & Salt Lake Canal is owned, operated and maintained by Salt

Lake City Department of Public Utilities (SLCPU). A Utility Permit Agreement must be processed and approved through the Property Division of Public Utilities prior to any access and work within the canal property limits, including crossings of roadway, utilities and other facilities. In general, SLCPU owns the canal property outright, which extends 33 feet each side from centerline of canal (66 foot property width).

UTILITY PERMIT AGREEMENT: Canal Utility Permit Agreements shall be

processed and approved through SLCPU prior to any work within the Canal property. Contact: **Department Property Manager (801-483-**

6769). The general Utility Permit Agreement requirements are:

1. Design drawings, specifications, and calculations submitted and approved.
2. Legal description of canal crossing as an exhibit to the Utility Permit Agreement, including the County Sidwell number.
3. Utility Permit Agreement signed and notarized.
4. Permit Fee (\$500 or as determined by the Director).

DESIGN

Design shall be completed and stamped by an engineer registered in the

State of Utah, and shall be accompanied by survey data and hydraulic calculations as noted in the design criteria noted herein.

Design plans shall be submitted to Salt Lake City Public Utilities and written approval received by the Department prior to construction.

Design criteria –

- Slope = 1 foot per mile (0.0189% or 0.0002 ft/ft)
- Capacity, Qc:

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- Canal crossings shall convey 150 cfs with no more than 0.2 feet of backwater through the proposed canal crossing structure (irrigation delivery flows)
- Canal crossings shall convey 300 cfs without submergence of proposed canal crossing structure (storm overflow capacity)

- Survey: Design shall be based upon actual design survey cross sections taken a minimum of 200 feet upstream and downstream of the canal, at the proposed culvert inlet and outlet, and at possible transition loss locations.
- Hydraulic analysis: Provide HY8 or equivalent hydraulic analysis. Results should confirm the proposed structure meets the above design capacity requirements under upstream and downstream flow control conditions using existing channel cross sections as defined above.
- Size and construction of box culverts: The minimum box culvert dimensions shall be 5-1/2 feet high x 22-feet wide. The structure shall be designed for H-20 loading. Larger sizes may be required to meet the special site conditions. Culverts shall have at least a 6-inch thick concrete bottom and tapered wing wall at the upstream and downstream ends. The upstream and downstream floor shall have a concrete cutoff wall extending at least 3-feet below the channel invert. All concrete structures shall be installed upon 18-inches of select structural fill as approved by the engineer. All concrete construction joints shall have a 2-inch x 4-inch keyways or 6-inch water-stop at all concrete construction joints.
- Erosion protection: Install apron riprap with $D_{50} = 12$ -inch to limits 12-feet from outlet face at channel bottom and sides. Upstream and downstream transition sections from culvert to open channel shall have $D_{50} = 12$ -inch riprap for full limits of transition.
- Grate: A removable, child-safe trash rack grate is required if culvert structure is more than 100 feet long.
- Access: Provide 14-foot driveway approaches with lockable gate on both sides of canal crossing. Approaches shall have space to park one vehicle off the roadway while unlocking the gate.
- Utility crossings:
 - Excavation of the canal banks and invert is strictly forbid, except where open channel is being replaced by box culvert.
 - Utility pipe crossings under the canal shall be encased and installed by boring methods under the canal. Top of casing shall be a minimum of 4-feet below the canal invert elevation. Casing inside diameter shall be equal to the carrier pipe OD plus 6-inches, minimum. Casing limits shall be a minimum of 5-feet horizontal distance from the outside edge of box culvert or top of

canal bank, plus a 2:1 excavation slope. In most instances, the casing limits are the full property extent.

- **Materials:** Provide manufacturer certification that precast concrete components are designed for appropriate dead and live load conditions with an HS-20 load rating as a minimum. Cast-in-place concrete canal structures shall be designed and stamped by a licensed structural engineer. Structural calculations shall be submitted for review.

CONSTRUCTION

1. Construction period: No work allowed is allowed on the canal or within

the canal property from March 1st through October 1st to preserve and maintain irrigation delivery obligations.

2. Drainage control during construction: Contractor shall be responsible

to convey all existing upstream storm drainage flows through the construction site during construction period in accordance with a temporary diversion plan approved by SLC Public Utilities. Contractor shall be liable for all damage resulting from his failure to adequately convey storm drainage flows or any other Contractor impact to site. Construction drainage or debris shall not be allowed to enter the canal. Permanent storm drain connections (discharge) into the canal are strictly forbidden.

3. Coordination: Salt Lake City Public Utilities **Irrigation Supervisor (483-6784)**, shall be contacted a minimum of two weeks prior to construction.

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STANDARD PRACTICE #4

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: June 2, 2000

SUBJECT: Flushing and de-chlorination

Purpose:

The purpose of this procedure is to assure that drinking water containing

high dosages of chlorine is not willfully discharged into any natural

waterway or stormdrain that discharge into any natural waterway where it could be harmful to wildlife, fish or aquatic life. When a new main water line is disinfected with a high dosage of chlorine, it is necessary to dechlorinate the water as it is being discharged. This standard applies to all aspects of department operations including construction, maintenance, main replacements and general operations. All construction work done for Public Utilities falls under this requirement.

Guiding principles:

- Highly chlorinated water will be discharged to sewer manholes. The appropriate requests and approvals will be obtained prior to discharge. De-chlorination of the water will be done if requested by the sewer company.
- Projects involving large volume discharges (i.e. storage reservoirs, large disinfected pipelines, etc.) that could possibly reach a live stream will require a plan to be submitted and approved by the State DEQ.
- At no time will chlorinated water, even treated drinking water, be released to a live stream.
- Routine system cleaning, flushing, and hydrant testing does not require dechlorination if in your best professional judgment, the location is far enough away from live stream that the flow will not impact the stream.
- Every employee is charged with the obligation to properly treat and dispose of chlorinated water.
- When necessary, de-chlorination will be done chemically using sodium thiosulfate. A de-chlorination ratio of 1:4 (1 pound of sodium thiosulfate to 4 pounds chlorine) will be used.

SLCPU Standard Practice 20 1/5/2009

De-chlorination procedure:

1. Determine the volume of water to be discharged.
2. Determine the chlorine residual in the water.
3. Determine the expected discharge flow rate.
4. With the assistance of the Water Quality Administrator or designee determine how much de-chlorination chemical will be needed and the proper drip/injection rate.

Date_____ Time_____ Chlorine Residual _____
Date_____ Time_____ Chlorine Residual _____
Date_____ Time_____ Chlorine Residual _____
The above procedure was followed, all data is correct.
By_____ Date_____

SLCPU Standard Practice 22 1/5/2009
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SLCPU Standard Practice 23 1/5/2009

STANDARD PRACTICE #5

SALT LAKE CITY PUBLIC UTILITY

TO: Whom it may concern

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: January 19, 2010

SUBJECT: Standard Plans and approved materials

Standard Plans

This document changes provisions specified in the Manual of Standard Plans published by the Utah Chapter of the American Public Works Association (APWA) 2007 Edition (available for download at www.utaht2.usu.edu).

Unless the Chief Engineer gives a written variance, the following modifications to the APWA **standard plans** will apply to work performed for Salt Lake City Public Utilities (SLCPU):

Table 1 – Modification to the standard plans for water system

STD PLAN # DESCRIPTION MODIFICATION

381 Trench backfill Refer to Salt Lake City Public Utility (SLCPU) - Standard Practice #1. Maximum depth for magnetic marking tape is 18 inches.

382 Pipe zone backfill Refer to SLCPU – Standard Practice #1 and notes given in Table 3 – Modification to the standard plans for stormwater system

502 27" frame & cover Use smooth surface "cross-hatch" pattern class 35 lid.

511 Fire hydrant · The auxiliary valve is required to be connected to the fitting at the fire hydrant. No exceptions.

· If the pipe connecting the main to the hydrant is greater than 16 feet, a second shutoff valve is required at the fire hydrant.

· For new main installations, an additional valve may be installed on the tee at the main connection for ease of installation. This is in addition to the valve required at the fire hydrant.

521 ¾" & 1" meter · No material is to be backfilled inside meter box.

· Use 21" meter boxes unless otherwise required by the Chief Engineer.

· No CMP meter boxes.

· No boxes to be located in traffic areas unless required by Chief Engineer.

522-529 Various sized meters See SLCPU standard drawings for Contractor checklist.
Use the following dimensions on all meter boxes:

- 5-foot minimum clear space from gravel floor to concrete roof
- 18-inch minimum clear space from wall to fittings
- 6 to 12-inch minimum from gravel floor to piping
- Thrust restraint required on all pipe penetrations.

543 Not used

551 $\frac{3}{4}$ " & 1" service taps · Depth of service line is 48" minimum (60" in special areas on the east bench)

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- Tap will be at 10 or 2 o'clock position.
- Taps shall be a minimum of 36" apart. No taps within 36" of end of pipe.

552 1-1/2" & 2" service taps

- B – 2-piece cast iron roadway valve box with lid is required.
- H – Type K-soft copper.

- Taps shall be a minimum of 36" apart. No taps within 36" of end of pipe.

571 2" washout valve · Increase washout pipe size to 3" minimum

572 Detector check valve · Fitting D will be MJ x flange

574 Cover collar Concrete supports required under traffic box.

575 Air release valve Not used – refer to SLCPU drawing. Use PVC piping above air released valve

Table 2 - Modification to the standard plans for sewer collection system STD PLAN # DESCRIPTION MODIFICATION

381 Trench backfill Refer to SLCPU – Standard Practice #1.

382 Pipe zone backfill Refer to SLCPU – Standard Practice #1 and notes given in Table 3 – Modification to the standard plans for stormwater system

402 30" frame & cover Use smooth surface "cross-hatch" pattern class 35 lid.

- Low profile (1") rings are **not** allowed.

411 Manhole · 5-foot minimum manhole diameter required.

- Eccentric manhole cones are **not** allowed.
 - Lateral connections directly to the manhole are **not** allowed.
 - Ramneck manhole section joint sealant and concrete grouting of manhole section joints is required.
 - On precast manhole bases provide base with neoprene or rubber coupling system and stainless steel clamps
- 412 Invert cover · 2"x4" bracing only required at manholes with pipe entering above the mainline flowline.
- Normal manholes will have the invert cover supported by the manhole "shelf".

431 Sewer lateral connection

- Prior Public Utilities approval and permit required for all lateral installations.

- Salt Lake City will provide and install wye.

- 24-hour notice required.

- Stainless steel straps required.

432 Sewer lateral relocation

- Note 2- Salt Lake City will provide & install wye.

- Material under bottom of obstruction will be loosely compacted $\frac{3}{4}$ " minus well graded granular material or sand. Flowable fill not allowed.

433 Pipe drop Alternate 2 – **not** used unless approved in writing by Chief Engineer.

Table 3 - Modification to the standard plans for stormwater system
STD PLAN # DESCRIPTION MODIFICATION

302 30" frame & cover Use smooth surface "cross-hatch" pattern class 35 lid.

303 44" frame & cover Use smooth surface "cross-hatch" pattern class 35 lid.

310 48" grate & frame Not used

315 Catch basin Do not use Type B. Use two Type A boxes separated by ten feet.

SLCPU Standard Practice 25 1/5/2009

315 (cont.) Note: Contractor to make back wall of box behind curb face opening as detailed.

317 Curb inlet/outlet Not used. Use 331 as modified by SLCPU.

316 Combo Box Use SLCPU modification to this combo box detail

320 Debris grate inlet Not used

321 Automatic flap gate Modify to include a clean-out box and lid over the flap gate.

322 Curb outlet Not used

323 Access control rack Engineer's permission required

330 Cleanout box Not used

331 Cleanout box Use SLCPU detail for this.

332 Cast-in-place manhole

Use with round 303 lid and **not** rectangular lids. See SLCPU detail.

341 Precast manhole Engineer's permission required

360 Plastic Form Not used

361 Concrete grade rings Standard grade rings are acceptable

373 Concrete pier Engineer's permission required

381 Trench backfill Refer to SLCPU – Standard Practice #1.

382 Pipe zone backfill Refer to SLCPU – Standard Practice #1

- Pipe zone material will be Grade $\frac{3}{4}$ " material as specified

in APWA Section 32 11 23 – Crushed Aggregate Base.

An exception may be granted for concrete pipe being installed below the water table. In these cases, the fill material below the pipe springline may be 2 inches minus sewer rock when approved in advance by the Chief Engineer. Sewer rock is not allowed with PVC and HDPE-N12 pipe.

- In all cases, backfill in the pipe zone above springline of pipe will be Grade $\frac{3}{4}$ " material ($\frac{3}{4}$ " minus well graded material) as specified in APWA Section 32 11 23 – Crushed Aggregate Base.

· The thickness of Type B – haunch material will be 6-inches below the outside diameter of the pipe.

Approved Materials

Unless the Maintenance Administrator gives a written variance, the following **materials** will be used on installations maintained by SLCPU:

Table 4 – Approved materials for use on the water system

STD PLAN # DESCRIPTION MODIFICATION

All Main line pipe material

- Ductile iron – class 52 cement mortar lined
- PVC – SDR 18 (C-900) diameters 8" to 12", AWWA C-905 and C-909 (when specified) for larger diameters

Notes: (1) Other materials may be considered but they require prior written approval by Maintenance Administrator, (2) Ductile iron pipe and Grade S Nitrile rubber gasket (AWWA C111) required in hydrocarbon contaminated areas

All Service line pipe material

Type K soft copper
27" Frame and cover
– smooth surface
D&L A-1005

SLCPU Standard Practice 26 1/5/2009

502 "waffle" pattern Olympic MHU-1000

503

38" Frame and double cover – smooth surface "cross-hatch" pattern

D&L A-1426

Notes: (1) Valves larger than 16" require larger ring and cover. Maintenance Administrator will specify size. (2) Contractor to provide 1" diameter lifting hole and pry notch in larger lids.

511 Hydrant Mueller Centurion (A-423)

M & H 129 (SLC Specs)

Clow 2500

Clow Medallion

Waterous WB-67

AVK 2700

AVK 2780

EJIW WaterMaster 5CD250

511 Two piece cast iron

valve box (screw

type)

Tyler 6850

D&L M-9042

Olympic VBU-8310

511 Two piece cast iron

valve box (slip type)

D&L M-8042

Olympic VBU-8210

Tyler 6855

511 Gate valve Resilient wedge gate valve AWWA C509 NRS
 511, 552, 574 Ductile iron traffic
 box
 Spanish Fork Foundry SVB 090
 D&L M-9009
 521 Meter box cover Ford X32
 Tyler 6150 with 1-1/32" bronze bolt
 521 Meter box (notched
 out)
 Rigid PVC
 Corrugated Polyethylene
 Amcor 1830 WMB concrete
 521 3/4" meter setter Mueller B-2470 with tie bar – 21" riser
 Ford VB-73-21W-44-33-G or Q
 AY McDonald 21D321WXTT33
 521 1" meter setter Mueller B-2470 with tie bar – 21" riser
 Ford VB-74-21W-44-44-G or Q
 AY McDonald 21-421WXTT44
 521 Meter insulation Ford meter pit insulation blanket
 523, 525, 529 Top section of valve
 box with lid
 D&L M-80 series
 551 Corporation stop Mueller B-25008
 Ford FB1000-3-G or Q (3/4")
 Ford FB1000-4-G or Q (1")
 AY McDonald 4701BQ or BT
 551 & 552 Service saddle for DI
 pipe
 Ford 202B
 Ford FC202
 Ford 202BS
 551 Service saddle for ROMAC 202N

SLCPU Standard Practice 27 1/5/2009
 PVC and AC pipe Ford FC202 for C900 PVC
 Ford 202BS for C900 PVC
 Ford 202BSD for C900 PVC
 Ford S90
 552 Two piece cast iron
 roadway valve box
 D&L M-9145
 Olympic 6870
 Castings, Inc. 145-R
 552 Ball valve corp. stop Ford FB1100-6-TA-G or Q (1-1/2")
 Ford FB1100-7-TA-G or Q (2")
 AY McDonald 4104BQ or BT
 572 Gate valve (MJ x
 flange)
 Gate valve AWWA C509 NRS
 572 Detector check valve Hersey Model DC or approved equal

Table 5 – Approved materials for use on the sewer collection system

STD PLAN # DESCRIPTION PART NUMBER

All Pipe Materials Reinforced Concrete – class III (18" through 96")

Non-reinforced Concrete – class 3 (8" through 15")

PVC – SDR 35 (4" through 27")

Notes: (1) Other materials may be considered but they
 require prior written approval by Maintenance Administrator.

(2) Special concrete mix may be required for concrete pipe or a poly lining for additional protection from hydrogen sulfide gas. (3) Rubber O-ring gaskets as per ASTM C-433.

402 30" Frame and cover
 – smooth surface
 "cross-hatch"
 pattern
 D&L Supply A-1180,
 Olympic MHU-1060
 402 Special Lid D&L Supply A-1181,
 Olympic MHU-1070
 Note: Required if surface water can enter manhole.

411 5' diameter pre-cast concrete manhole bases
 Prior approval by Chief Engineer required.
 411 Manhole section joint sealant
 Ramneck
 Note: Concrete grouting of manhole section joints is required.
 411 Manhole gaskets Elastomeric rubber (ASTM C 443)
 411 Manhole adapter/water stop gasket
 Romac LCT
 431 Pipe coupling Fernco neoprene couplings, adapter, bushings
 431 Inline integral wye fittings
 Factory fabricated
 431 Lateral connections Inserta Tee
 Note: For connections to 18" and larger sewer mains only.

SLCPU Standard Practice 28 1/5/2009

Table 6 – Approved materials for use on the stormwater system

STD PLAN # DESCRIPTION PART NUMBER

All Pipe materials Reinforced Concrete – class III
 HDPE-N12 pipe
 HDPE smooth wall SDR 21 (use for lining and Class A bedding installations)
 Note: Other materials used only after approval by Chief Engineer.

302 30" Frame and cover
 – smooth surface
 "cross-hatch"
 pattern
 D&L Supply A-1180 (vented)
 D&L Supply A-1181 (solid)
 Olympic MHU-1060 & MHU-1070
 303 44" Frame and cover
 – smooth surface
 "cross-hatch"
 pattern
 D&L Supply A-1460,
 304 48" Cover and frame
 – smooth surface
 "cross-hatch"

pattern
D&L Supply H-1801,
305 51" Cover and frame
– smooth surface
"cross-hatch"
pattern
D&L Supply H-1810
308 Grate and frame
with adjustable curb
box
D&L Supply I-3518
309 47-3/4" Grate and
frame
D&L Supply I-1803
321 Automatic flap gate TIDEFLEX or equal all rubber check valves required

SLCPU Standard Practice 29 1/5/2009

STANDARD PRACTICE #6

SALT LAKE CITY PUBLIC UTILITY

TO: All designers

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: March 13, 2001 (revised 4/4/05)

SUBJECT: Waterline prioritization and replacement

Purpose:

The purpose of this standard is to assure that waterline replacement is evaluated and considered on all road reconstruction projects.

Guiding principles:

1. We should consider the opportunity to replace old waterlines whenever City or County streets are reconstructed and we have funding.
2. We should use pipe materials appropriate for the site conditions.
3. We should replace steel and other metal pipe that has been placed on the westside of Salt Lake City and in other corrosive areas of our service area with PVC pipe.
4. We should replace AC pipe whenever possible.

Procedure:

Waterline replacement should be considered on a case-by-case basis based on site-specific soils conditions and other factors. General rules for

areas east and west of Main Street are given below. These are only presented as general guidelines.

If the existing pipe is less than 12-inches in diameter in a commercial or

industrial area or 8-inches in a residential area, the pipe is to be replaced

with a minimum of 12-inches in diameter for commercial or industrial

areas or 8-inch minimum for residential areas.

SLCPU Standard Practice 30 1/5/2009

East of Main Street —

If the pipe is a metal pipe, older than 80 years and funding is available in

the 5-year budget; the pipe should be replaced as part of the City Engineering project, regardless of break history.

If the pipe is a metal pipe, newer than 80 years and funding is available

in the 5-year budget; other factors should be considered in making a decision—i.e. break history, pipe type, pipe size, impact of the proposed

construction, fire flow, type of new road surface (concrete vs. asphalt), etc.

If the pipe is PVC, the decision will be made based on the break history,

pipe size and the impact of the proposed construction.

The replacement standard is Ductile Iron pipe (cement mortar lined Class

52). This standard will be modified if local conditions show high groundwater and corrosive organic soils.

West of Main Street —

If the pipe is a metal pipe, older than 50 years and funding is available in

the 5-year budget; the pipe should be replaced as part of the City Engineering project, regardless of break history.

If the pipe is a metal pipe, newer than 50 years and funding is available

in the 5-year budget; other factors should be considered in making a decision—i.e. break history, pipe type, pipe size, impact of the proposed

construction, fire flow, type of new road surface (concrete vs. asphalt), etc.

If the pipe is PVC, the decision will be made based on the break history,

pipe size and the impact of the proposed construction.

The replacement standard is to use PVC pipe (C-900 or 909) with locator tape or wire.

SLCPU Standard Practice 31 1/5/2009

STANDARD PRACTICE #7

SALT LAKE CITY PUBLIC UTILITY

TO: All Department personnel involved in project design

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: March 30, 2005

SUBJECT: Design Standards

Types of design projects:

- Water contract construction
- Public Services contract construction
- Sewer contract construction
- County contract construction
- Drainage contract construction
- UDOT contract construction
- Airport contract construction
- Development construction (city and county)
- In-house construction with maintenance crews
- Specialty projects (i.e. light rail or developments)

Minimum Design Standards:

1. Provide peer review on all construction projects (*plan-in-hand* site review for project constructability).
2. Work with the project inspector to keep change orders less than 3% of bid price.
3. Prepare good quality, understandable plans and specifications for CIP projects.
4. Keep a log of the project communications and decisions.
5. Meet DEQ design requirements – i.e. 10' spacing between water and sewer lines.

SLCPU Standard Practice 32 1/21/2010

What are the department administration responsibilities?

1. Provide appropriate training for all department personnel involved in design so that the minimum standards described in this document are met in all instances.
2. Provide cross training for Engineering designers and field maintenance personnel on construction inspection skills and duties.

CAD standards (See A-20 CAD Standards):

1. Project drawing standard size for the project manual is 11" x 17" (half scale).

2. Minimum font size is 0.1 inch.
3. Other standards as required.

Specification standards:

1. APWA (2007) standard specifications and Standard Plans as modified by Standard Practice #5, contained herein.

2. AWWA standards

3. DEQ standards

4. Other standards as written for and required by special project requirements.

Design Process (CIP project):

1. Project is placed on the CIP list by maintenance, engineering or others.

2. Project scoping document is prepared by Mike Lewis.

3. Projects are prioritized and placed on the 5-year plan (see Figure 1 CIP

Budget Process).

4. Project is assigned to a design team.

5. Project manager and designer identify a bid date and a work plan.

6. Complete the design.

SLCPU Standard Practice 33 1/5/2009

7. Peer review of plans and specifications by inspector and another designer.

Particular attention should be given to the project Bid Schedule and constructability. Standardized unit price descriptions will be used (see **standard unit price descriptions**).

8. Advertise the project.

9. Pre-bid meeting conducted by the project designer (see example **pre-bid agenda**).

10. Bid received by City Recorder at 2:00 PM on a Wednesdays at City and County Building.

11. Bid tabulation within 5 working days after bid opening (see **bid abstract** example).

12. Evaluation of bid and recommendation for award by project manager within 2 working days.

13. Award of bid by Department Director (see **award letter** example). The

Contractor has ten days to complete all the bond and insurance submittals.

14. Hold pre-construction meeting after Contract has been approved. This is conducted by the Team Leader (see example ***pre-construction agenda***).
 15. Construction management and inspection is done by the inspector assigned to the design team with assistance from designers. During construction, problems are resolved as a team with the inspector taking the lead. Improvements are incorporated into the design processes to eliminate future problems.
 16. Notice to precede letter is sent to the Contractor by Contract Specialist.
 17. Attend construction progress meetings as necessary (larger more complex projects).
 18. Participate in the change orders process:
-

SLCPU Standard Practice 34 1/5/2009

- Inspectors responsible for anticipating change orders and have ownership of them from beginning to end. The project designer should assist in evaluating change orders.
 - No payment can be made to the Contractor for change order items until all the paperwork is completed.
 - Three kinds of change orders are (1) changed condition (initiated by contractor), (2) change of scope (initiated by the City) and (3) design deficiency (initiated by either the contractor or City).
 - Inspectors to draft paperwork and recommend pricing. On larger change orders the project manager, Engineering Administrator, Deputy Director and Director should be made aware of the construction problem and consulted at this stage of the negotiations.
 - Contracts Specialist to type paperwork (see ***(13) change order form***).
 - Signatures on the change order form to be obtained by inspector — inspector, designer, design team leader, and Contractor. Contracts Specialist will get signatures from Engineering Administrator, Deputy Director, Financial Administrator and Director for final processing.
 - Goal of the designer and inspector is to keep CO's less than 2%.
 - Goal is to process all change orders in less than five days.
19. Participate in the final walk through of project.

- Help inspector prepare punch list (see **punch list**).

Design Process (In-house construction work):

1. Prepare project plan sheet or other construction documentation drawings.
2. Pre-construction evaluation and determination that work can best be done in-house.

SLCPU Standard Practice 35 1/5/2009

3. Coordinate the construction with the construction supervisor. The inhouse crews will meet the same construction standards as Contractors.
 4. Attend weekly construction meetings as necessary.
 5. Review unusual or changed conditions field conditions with construction supervisor.
 6. Attend final walk through of project.
- Prepare punch list (prepared by those who operate the facility)

SLCPU Standard Practice 36 1/5/2009

SLCPU Standard Practice 37 1/5/2009

STANDARD PRACTICE #8

SALT LAKE CITY PUBLIC UTILITY

TO: Contractors who install cables in public streets

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: April 18, 2001

SUBJECT: Cable installations

1. Cable installations near SLC Public Utilities facilities need to provide a minimum of **3 feet clear** horizontal distance between waterlines and drainage lines and the cable and a minimum of **5 feet clear** horizontal distance between sewerlines and the cable. The clear horizontal distance is outside to outside distance between the SLC Public Utilities facility and the cable conduit. Vertical clearance for perpendicular crossings requires that no cable be located within the space from **18-inches above or 12-inches below** the utility. Steve Pack, SLC Public Utilities Engineering Division, will review these plans. As much as possible, these reviews will be completed within 48 hours of written request.
2. There may be times when these clearances cannot be met. In those

cases, The SLCPU Cable Coordinator will take the lead in resolving issues and working out a location that works for Public Utilities maintenance. SLCPU Cable Coordinator will work with the Public Utilities Maintenance Administrator and participate with City Engineering to help resolve issues with the Cable Company. City Engineering will issue and administer the permit.

3. Based on the franchise or other agreement between the City and the

Cable Company, any cable installations that interfere with a City pipeline, or are otherwise required to be moved, will be subject to relocation at the Cable Company's expense. In the County, based on the fact that generally the City waterline will predate the installation of cable lines, any cable installations that interfere with a City pipeline, or is otherwise required to be moved by the terms of any agreement, will be subject to relocation at the cable company's expense.

4. Any proposed cable that crosses any easements or property controlled by Public Utilities will require a Public Utilities permit. SLCPU Cable Coordinator will coordinate these issues with the Public Utilities Property Manager and follow the established process for these requests. These include Jordan & Salt Lake Canal, Goggin Drain, and other canals and drains.

SLCPU Standard Practice 38 1/5/2009

5. Any proposed cable that crosses any easements or property controlled by Salt Lake County Flood Control will require a County permit. Within the City these include—City Creek, Red Butte Creek, Emigration Creek, Parley's Creek, Lee Drain, Goggin Drain, Surplus Canal, City Drain, Sewage Canal, CWA #2, CWA #3, CWA #1, 4th Avenue storm drain, and 8th South storm drains.

SLCPU Standard Practice 39 1/5/2009

STANDARD PRACTICE #9

SALT LAKE CITY PUBLIC UTILITY

TO: Contractors who work on Public Utilities waterlines

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: March 14, 2001

SUBJECT: Water service kills

"Killing" of a water service is defined as removing all Tee's and tapping sleeves (saddle) and replacing with a sleeve and a section of pipe. Smaller services will be "killed" by turning the main cock and cutting and

crimping the pipe next to the main cock.

SLCPU Standard Practice 40 1/5/2009
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SLCPU Standard Practice 41 1/5/2009

STANDARD PRACTICE #10

SALT LAKE CITY PUBLIC UTILITY

TO: Designers and inspectors

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: May 1, 2001

SUBJECT: Cable Conflicts

We have had problems in the past with conflicts between our facilities and cable facilities.

On future projects, please be careful to identify these conflicts and enforce

the terms of the Franchise Agreement. This means that when conflicts occurs on a City street covered by the Franchise Agreement, the cable company will be required to move their facility and bear all costs. A conflict

is defined as their facility being located within the 1:1 excavation envelop

around our facilities.

Please notify the cable company at the time you identify a conflict and send

a written notice to them requiring them to make necessary modifications to

their system prior to our construction. Typically, this will give the cable company about two months (bidding and award period) to make their system modifications.

SLCPU Standard Practice 42 1/5/2009
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SLCPU Standard Practice 43 1/5/2009

STANDARD PRACTICE #11

SALT LAKE CITY PUBLIC UTILITY

TO: Designers and inspectors

ISSUED BY: Charles H. Call, Jr., P.E., Chief Engineer

ISSUE DATE: March 10, 2005 revision

SUBJECT: Sewer Lateral Repair Methods

Physical replacement of the sewer lateral by normal "cut and fill" methods is acceptable. Newer in-situ pipe replacement methods will be allowed on a case-by-case basis. The Contractor should fill out a form provided by SLCPU

Contracts office prior to doing any work and following the steps given below:

Cured-in-place pipe liner —

1. TV videotape — The lateral will be TV videotaped before and after the liner installation.
 - a. The pre-installation tape is to verify that the lateral pipe is sound and has not deflected more than 8%, there are no sags in the grade, that it is clean and to obtain good measurements of the length. The pre-installation tape will be submitted to and reviewed by Sewer Engineer **prior** to doing the project.
 - b. The post-installation video will be on the same tape and be provided to the City for documentation.
2. Standards — Complete installation according to all APWA and Salt Lake City Standards.
3. Submittals — Provide product submittals to the City for review and approval.
4. Permits — Obtain all permits and pay all fees. Salt Lake City will provide an inspector.
5. Repair — Properly repair existing lateral at any location that is dug up to insert the liner.
6. Contractor responsible and liable for all additional overtime costs for Public Utilities employees due to the contractor's failure to complete the project within normal working hours.

SLCPU Standard Practice 44 1/5/2009

HDPE pipe bursting —

1. TV videotape — The lateral will be TV videotaped before and after the liner installation.
 - a. The pre-installation tape will be submitted to and reviewed by Sewer Engineer **prior** to doing the pipe bursting.
 - b. The post-installation video will be on the same tape and provided as documentation to the City of the completed work.

2. Standards — Complete installation according to all APWA and Salt Lake

City Standards.

3. Submittals — Provide product submittals to the City for review and approval. The minimum approved HDPE insert pipe will be SDR 17 PE 3408.

4. Installation Standards — Entry pit length shall be as small as possible.

The HDPE pipe is not to be deflected greater than the maximum amount as defined by the pipe manufacturer. Provisions for pipe expansion, contraction and elongation due to stress are to be provided. Provide written description and or material submittal of how this is addressed. Pipe is not to be stressed beyond limits as defined by the manufacturer and ASTM D3350. Provide appropriate equipment gauges.

5. Permits — Obtain all permits and pay all fees. Salt Lake City will provide an inspector.

6. Repair — Properly repair existing lateral at any location that is dug up to insert the liner.

7. Contractor responsible and liable for all additional overtime costs for Public Utilities employees due to the contractor's failure to complete the project within normal working hours.

SLCPU Standard Practice 45 1/5/2009

STANDARD PRACTICE #12

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: March 30, 2005 revision

SUBJECT: Commissioning Waterlines

Purpose:

The purpose of this procedure is to assure that new water mains are properly tested and approved before service is provided to our customers.

This standard applies to all aspects of department operations including construction, maintenance, main replacements and general operations. All

construction work done for Public Utilities falls under this requirement.

Guiding principles:

- Both AWWA Standard C651-99 – Disinfecting Water Mains and applicable

Utah State standards will be followed.

- Two consecutive sets of samples will be taken from the new main at least 24-hours apart (see AWWA Standard C651-99 Section 5.1). One set of samples will be collected at the end of every 1,200 feet of main and any branches. These samples will be tested for bacteriological quality as per NELAC Standards.

- Samples will be chilled between collection and delivery to the Salt Lake City laboratory as per NELAC Standards.

Water line commissioning procedure:

1. Prevent contamination from entering the line during storage, construction or repair. For new construction, keep a plug on the end of the pipe except for when you are installing the next section of pipe.
2. Disinfect the line by placing granular or tablet chlorine (10 to 25 mg/l concentration for 24-hours) in the line during installation and filling the line with water.
3. De-chlorinate the line or dispose of it in an acceptable manner and flush the line (see Standard Practice #4).

SLCPU Standard Practice 46 1/5/2009

4. Complete a hydrostatic test of the line according to AWWA Standards for the type of pipe used (i.e. for ductile iron pipe use AWWA Standard C600). This will include connecting an external pump to the pipe and applying a hydrostatic pressure as established for the project by the Chief Engineer. This will be at least 150 psi at the lowest point of the line. This pressure will be maintained within 5 psi for 2-hours and the amount of makeup water will be measured. The amount of makeup water shall be less than 1.5 gallons and 2.2 gallons per 1,000 feet of pipe for 8- and 12-inch pipe, respectively.
5. Flush after hydrostatic test and let the line sit for at least 16-hours before collecting a water sample.

6. Collect a water sample, place it in a cooler and deliver to the lab.
7. The lab will set-up the sample at 1:00 PM every work day.

Samples

delivered to the lab prior to noon each day will be included in the test group. Results of the tests will be available by noon the following day. The analyst will call the person listed on the sample test request form (see attached form). For samples collected on weekends and holidays, make special arrangements directly with the lab.

8. If the first sample is good, then a second sample is collected after 24-

hours, placed in a cooler and delivered to the lab. If the first sample is bad, then the line is flushed and allowed to sit for at least 16-hours before another sample is collected.

9. The lab will process the next samples and report the results to the person

listed on the sample test request form.

10. Once two acceptable samples have been obtained, the line is accepted and services can be connected.

NOTE: Sampling protocol for new water mains:

1. Obtain sample bottle and cooler from testing laboratory to be used.
 2. Tap main within 5-feet of the end of the line to be tested.
 3. Starting with a de-chlorinated pipeline, flush the test tap.
 4. Fill and cap the sample bottle tightly (see note below).
 5. Complete the paper work, fill out the sample label.
 6. Put the bottle on blue ice in a cooler and transport to the laboratory for analysis.
- Note: Be careful not to touch the rim or inside of the cap. Use a steady stream out of the tap. Do not rinse the bottle or allow anything but the water into the bottle. Do not touch the inside of the bottle with the tap or your hands.
-

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STANDARD PRACTICE #13

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: March 28, 2005

SUBJECT: Commissioning large service and fire lines

Purpose:

The purpose of this procedure is to assure that large service and fire lines are properly tested and approved before they are put into service for our

customers.

This standard applies to all aspects of work done to install large private service and fire lines.

Guiding principles:

- Both AWWA Standard C651-99 – Disinfecting Water Mains and applicable Utah State standards will be followed.
- Two consecutive sets of bacteriological samples will be taken from the service line at least 24-hours apart (see AWWA Standard C651-99 Section 5.1). These samples will be tested as per NELAC Standards.
- Samples will be chilled between collection and delivery to the Salt Lake City laboratory or a certified private laboratory as per NELAC Standards.

Commissioning procedure:

1. Prevent contamination from entering the line during storage, construction or repair. For new construction, keep a plug on the end of the pipe except for when installing the next section of pipe.
2. Disinfect the line by adding chlorine granules or tablets at the time of installation (25 ppm).
3. Fill the line and let sit for 24-hours.
4. Dispose of chlorinated water and flush the line in an acceptable manner (see notes below) so that chlorine residual is equal to that of existing system residual.
5. Pressure test the line as per industry standards.

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6. Flush again and let line sit overnight (at least 16-hours).
7. Take bacteriological sample (first test).
8. If first test passes, take another bacteriological sample no less than 24-hours from the time first sample was taken.
9. If second test passes, line can be activated upon Department authorization. Contractor to submit certification and copies of all test results to the Department.

Notes:

- Highly chlorinated water will be discharged to sewer manholes. The appropriate requests and approvals will be obtained prior to discharge. De-chlorination of the water will be done if requested by the appropriate sewer agency.
- When necessary, de-chlorination will be done chemically using sodium thiosulfate. A de-chlorination ratio of 1:4 (1 pound of sodium thiosulfate to 4 pounds chlorine) will be used.
- At no time will chlorinated water be released to a live stream.

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Contractor Certification Form
Large Services and Fire lines

DATE: _____
 CONTRACTOR NAME: _____ Phone _____
 CONTRACTOR ADDRESS: _____
 PROJECT ADDRESS: _____
 OWNER: _____ Phone _____

Contractor Certification:

I hereby certify that the service line installed at the above mentioned address was properly tested using the protocol given in this standard practice and is documented by the attached bacteriological tests.

By _____ Date _____

Notes:

Attachment: Test results (two tests take at least 24-hours apart)
 Routing within Salt Lake City Public Utilities:
 Contracts file (original), Arlene Larsen, Florence Reynolds (Water Quality Administrator), Inspector, Salt Lake City Building & Housing

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A partial list of the certified private laboratories for the bacteriological tests is as

flows:

Chemtech/Ford Chemical Laboratory

ATT: David Gayer

6100 S Stratler

Salt Lake City, Utah 84107

(801) 262-7299

Timpview Analytical Labs

ATT: Dee Freeman

1165 N 1600 W

Orem, Utah 84057

(801) 227-7340

Earth New Consulting, Inc.

ATT: William Reyns

3930 Washington Blvd.

South Ogden, Utah 84403

(435) 621-5510

Richards Laboratory

ATT: Dean Richards

55 E Center St

Pleasant Grove, Utah 84062

(801) 355-5579

To be analyzed in the City lab the sample has to arrive before noon for the test

results to be available the next day (i.e. sample dropped off Monday at 9 AM, analyzed on Monday results on Tuesday PM). If the sample arrives later in the day

they may be held back and analyzed the following day which extends the turn

around time for results (i.e. samples dropped off Monday at 4 PM, analyzed on

Tuesday, results on Wednesday about noon).

Note: If the test fails the Contractor is required to re-chlorinate and re-sample until

the line passes. A passing test is required before the City will accept the installation. This certification form is the documentation that the tests passed.

SAMPLING PROTOCOL FOR LARGE SERVICE LINES AND FIRE LINES:

1. Pick up sample bottle and cooler from testing laboratory to be used.
2. Make a tap within 5 feet of the end of the line to be tested.
3. Starting with a de-chlorinated pipeline, flush the test tap.
4. Fill and cap the sample bottle tightly (see note below).
5. Complete the paper work, fill out the sample label.
6. Put the bottle on blue ice in a cooler and transport to the laboratory for analysis.

Note: Be careful not to touch the rim or inside of the cap. Use a steady stream out

of the tap. Do not rinse the bottle or allow anything but the water into the bottle. Do not touch the inside of the bottle with the tap or your hands.

STANDARD PRACTICE #14

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: April 26, 2005

SUBJECT: Hydrostatic testing of water lines

Purpose:

The purpose of this procedure is to assure that water lines are properly tested and approved before they are put into service for our customers.

This standard applies to all aspects of work done to water lines.

Guiding principles:

- Both AWWA Standards and applicable Utah State standards will be followed. Refer to Section 33 08 00 as modified below.

- Hydrostatic testing is done before bacteriological tests are collected as

noted on Standard Practice #12 and 13.

Hydrostatic testing procedure:

(1) Repair all visible pipe leakage prior to hydrostatic testing.

(2) Expel all air from the line prior to pressure testing. This may require

several cycles flushing and pressurizing before running the acceptance test.

(3) Complete an acceptance hydrostatic test of the line according to AWWA Standards for the type of pipe used (i.e. for ductile iron pipe use AWWA Standard C600-93 and for PVC use C605). This will include connecting an external pump to the pipe and applying a hydrostatic pressure of at least 200 psi at the lowest point of the line. (Note: Static pressure will reduce at a rate of 0.433 psi per foot of elevation above the low spot.)

(4) Maintain 200 psi pressure until the City inspector says that the test is acceptable.

(5) A full test requires that 200 psi is maintained within 5 psi for 2-hours

and the amount of makeup water is measured. (Note: Makeup water for a two hour test shall be less than 1.5 gallons and 2.2 gallons per 1,000 feet of pipe for 8- and 12-inch pipe, respectively, or as indicated by applicable AWWA charts.)

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STANDARD PRACTICE #15

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: August 25, 2006

SUBJECT: Tree pruning and root cutting

Purpose:

The purpose of this procedure is to assure that trees are protected on our projects and that they are properly taken care of when pruning or root cutting is necessary. This standard applies to all aspects of work done on our projects.

Guiding principles:

APWA Sections 32 01 91 and 32 01 93 will be followed with the following additional guidance.

TREE PRUNING PRACTICES ON UTILITY PROJECTS

Efforts should be taken to minimize impact to adjacent trees and root system; however this may not always be possible. When necessary follow these standards.

PRUNING LIMBS

Thinning cuts are the preferred method of tree pruning. The final cut should be located outside the branch bark ridge and the branch collar.

TREE ROOTS

If the decision to cut roots is made they should be cut with the same diligence that's applied to cutting branches. Backhoes, trenchers, and other ripping and shredding devices should not be used to sever tree roots. Roots selected for cutting should be severed with a circular root-cutting or rockcutting saw at an angle that minimizes the surface area of the wound

created. The cut surface should be smooth and the surrounding bark-like tissue securely attached to the wood beneath. The location of the cut depends on the desired result. If the purpose of the cut is to stimulate the production of new roots, cut the root in a manner that leaves a stub. If the purpose is to eliminate the root and discourage regrowth, cut at the point of attachment with another root. Do not leave a stub.

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Prior to any root cutting, carefully check the condition of the tree and root crown. If there is evidence of stress, past root cutting, decay, discoloration, insect activity, or cracking contact the Urban Forester. If none of these characteristics are detected, count the number of crown roots visible and determine their general direction of growth. Make sure to take into account the direction of prevailing winds, proximity of surrounding improvements and the trees current and future size. The number and direction of anchorage roots must be taken into consideration before deciding which, if any, to cut. If possible avoid or minimize root cutting. If cutting is required generally no more than one-fourth of the crown root system should be involved in any single root cutting activity. If the decision is made to cut a root, it should be completely severed and removed. Roots should not be "notched". If the root survives and develops wound-wood the conflict between the root and its surrounding will likely reoccur. If the tree's defensive system is unable to compartmentalize the area of defect, then the effort to save the root has failed. Likewise, if the decision is made to cut a root, a length of at least four feet

should be removed. If only a small length is removed the two pieces of root may reattach and resume growth. It's important to limit the size, location and number of roots selected for cutting. When possible avoid cutting surface roots on mature trees that are 4 to 6 inches in diameter or larger; deep tensioning and contraction roots; and multiple cuts. In advance of root cutting, soil excavation, or site alterations secure as much soil volume within the root zone as possible with protective fencing and/or deep layers of mulch. The trees should be hydrated throughout the term of construction and post-construction. Following construction ensure regular water is provided to compensate for reduced capacity if roots with removed and/or for altered soil volume or conditions.
PU:CCall:/1/21/2010

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STANDARD PRACTICE #16

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: August 1, 2005

SUBJECT: Raising Manholes, Clean-out and Water Valve Boxes

Purpose:

The purpose of this procedure is to assure that raising manholes, clean-out boxes and water valve boxes on overlay projects is done properly. This standard applies to all aspects of work done to facilities owned and operated by SLC Public Utilities.

Guiding principles:

- Minimize future maintenance problems

Procedure for raising boxes:

(1) Contact SLC Public Utilities Sewer Maintenance Supervisor at 801-483-6727 prior to doing any work to raise or lower manholes, clean-out boxes and valve boxes. An inspector will be assigned.

(2) For sewer manholes:

- a. Clean out sewerline prior to construction activity and place invert cover.
 - b. Set offset control points for future locating.
 - c. Adjust the grade below finished grade or milling depth. This may require removing a grade ring.
 - d. Invert the manhole lid and fill with cold mix asphalt.
 - e. Perform milling and overlay process.
 - f. Locate manhole and cut out the diameter plus one foot.
 - g. Place grade rings and position to match cross slope of road using hangers from 2x4's or some other acceptable method. Set grade of manhole to be about ½-inch below finished asphalt grade. The most important thing to accomplish is to get concrete bearing and support under the frame. Blocking the frame in place using rocks or bricks is not allowed.
 - h. Place concrete collar to hold manhole ring in place.
 - i. Remove invert cover as soon as possible.
-

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(3) For storm drain clean-out boxes:

- a. Clean out storm drain prior to construction activity and place invert cover.
- b. Set offset control points for future locating.
- c. Adjust the grade below finished grade. This may require cutting off the walls of the clean-out box.
- d. Invert the cover and fill with cold mix asphalt.
- e. Perform milling and overlay process.
- f. Locate cleanout and cut out the new asphalt.
- g. Pour new walls for the cleanout box and position frame to match cross slope of road. Set grade of cleanout box lid ½-inch below finished asphalt grade. The most important thing to accomplish is to get bearing and support under the frame and position it in the new wall of the box.
- h. Clean out all construction debris from cleanout box.

(4) For water valve boxes:

- a. Clean out valve box prior to construction activity.
- b. Set offset control points for future locating.
- c. Adjust the grade below finished grade by lowering the slip frame. This may require jack-hammering around the valve box.
- d. Invert the cover and fill the top with cold mix asphalt.
- e. Perform planning or overlay process.
- f. Locate valve box and cut out the diameter plus one foot.
- g. Position to match grade of road. Set grade of valve box to be

½-inch below finished asphalt grade.
h. Place concrete collar to hold valve box in place.
i. Clean out valve box as necessary.
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STANDARD PRACTICE #17

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: November 30, 2007

SUBJECT: Standard Fire Hydrant Colors

Purpose:

The purpose of this procedure is to standardize the color of fire hydrants to match their flow capacity during a peak summer day. This standard applies to all aspects of work done to facilities owned and operated by SLC Public Utilities.

Standard:

Salt Lake City Public Utilities hereby adopts the fire hydrant color scheme as given in AWWA C502-05, Appendix B. The tops and nozzle caps of hydrants are to be painted as follows:

Table 1. Fire Hydrant Color Codes

Color Class Flow (gpm)²

#7724 Sail **Blue** AA Over 1500

#7538 Hunter **Green** A 1000 to 1499

Orange B 500 to 999

#7765 Regal **Red** C Less than 500

Black Inactive or dry hydrant

Hydrant colors shall signify only the approximate capacity of the individual

hydrant as tested alone and not the capacity when more than one hydrant in

the vicinity is in use. The marking of the hydrant is not to be considered as

in any way guaranteeing the capacity indicated by the color.

PU:CCall:

² Gallons per minute water flow at 20 pounds per square inch residual pressure for peak summer demand.

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STANDARD PRACTICE #18

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: April 21, 2008

SUBJECT: Disinfection Large Water Connections

Purpose:

The purpose of this procedure is to standardize the disinfection procedure for closure connections for large water pipes.

Standard:

- (1) Access the pipe through manway provided for welding and grouting of the closure connections.
- (2) Work is to be done with care at all times to not contaminate the piping.
- (3) Upon completion of the welding and grouting of the pipe a thorough wash down will be performed by the following procedure:
 - a. A 200 PPM chorine solution will be applied to the interior pipe surfaces and joints using a sprayer.
 - b. This will be accomplished a minimum of one hour prior to filling the pipe.
 - c. The person who will washing down the interior of the pipe shall wear Tvyek coverall protective suit, rubber boots and a respirator that are all disinfected with a chlorine solution.
 - d. Every effort shall be made to not introduce any contaminants to the interior of the pipe during this wash down operation.
- (4) Flush two exchanges of water through the new pipe section after the work has been done.

PU:CCall:/1/21/2010

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STANDARD PRACTICE #19

SALT LAKE CITY PUBLIC UTILITY

TO: All contractors doing work for SLCPU

FROM: Charles H. Call, Jr., P.E., Chief Engineer

DATE: April 21, 2008

SUBJECT: Waterline Installations in Hydrocarbon Contaminated Areas

Purpose:

The purpose of this procedure is to standardize pipe installation standard and procedures for installing waterlines in known or suspected hydrocarbon contaminated areas (petroleum products consisting of diesel, gasoline, etc.).

Standard:

- (1) The pipe material will be ductile iron pipe.
- (2) The gaskets will be **Grade S Nitrile rubber gasket** (AWWA C111) which are resistant to hydrocarbon deterioration.
- (3) In areas where the soils are corrosive, the polyethylene sleeve will be used.
- (4) If other contaminants are present, the pipe manufacturer recommendations should be followed.

PU:CCall:/1/21/2010

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APPENDIX 1 – Attachments for Standard Practice #2

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A-1 Standard Unit Price Descriptions (see DOCUMENT 00 43 00)

Standard measurement and payment descriptions will be as follows:

WATER

1. Bid Item No. ?? - Ductile Iron Pipe, [SIZE], Class 52

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the size and class indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the pipe from center to center of fittings, with no deduction for fittings.

b. Payment Covers: installation of ductile iron pipe of the size and class indicated, including gaskets, bolts and nuts, tees, bends, sleeves, transition couplings, reducers, plugs, and caps; washout valve assemblies; joint retaining devices; miscellaneous fittings; greasing and wrapping all exposed fittings, bolts and nuts; pipeline dewatering; sewer pipeline repair if disturbed by contractors operations; capping or plugging of the existing water pipe(s) to be abandoned; [removal of the existing water pipe(s), fittings and structures;] [abandonment of the existing water pipe(s), fittings and structures;] salvaging and/or abandoning existing valves; disinfection and commissioning pipeline.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

2. Bid Item No. ?? - P.V.C. Pipe, [SIZE], SDR 18

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the sizes and types indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the pipe from center to center of fittings, with no

deduction for fittings.

b. Payment Covers: installation of P.V.C. pipe of the sizes and classes indicated, including gaskets, bolts and nuts, tees, bends, sleeves, transition couplings, reducers, plugs, and caps; washout valve assemblies; joint retaining devices; miscellaneous fittings; greasing and wrapping all exposed fittings, bolts and nuts; pipeline dewatering; concrete thrust restraints; locating wire and/or magnetic locating tape; sewer pipeline repair if disturbed by contractors operation; capping or plugging of the existing water pipe(s) to be abandoned; [removal of the existing water pipe(s), fittings and structures;] [abandonment of the existing water pipe(s), fittings and structures;] salvaging and/or abandoning existing valves; disinfection and commissioning pipeline.

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There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

3. Bid Item No. ?? - Steel Pipe, [SIZE], Schedule [??]

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the sizes and schedules indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the pipe from center to center of fittings, with no deduction for fittings.

b. Payment Covers: installation of steel pipe of the sizes and schedules indicated, including gaskets, slip-on welded flanges, bolts and nuts, tees, bends, sleeves, transition couplings, reducers, plugs, and caps; washout valve assemblies; joint retaining devices; welding as required; miscellaneous fittings; epoxy lining, coating and tape wrap; greasing and wrapping all exposed fittings, bolts and nuts; pipeline dewatering; concrete thrust restraints; sewer pipeline repair if disturbed by contractors operation; capping or plugging of the existing water pipe(s) to be abandoned; [removal of the existing water pipe(s), fittings and structures;] [abandonment of the existing water pipe(s), fittings and structures;] salvaging and/or abandoning existing valves; disinfection and commissioning pipeline.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

4. Bid Item No. ?? - PCCP Pipe, [SIZE] [Gage ??]

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the size indicated in the Bid Schedule.

Unless indicated otherwise, measurement to be along the pipe from center to center of fittings, with no deduction for fittings.

b. Payment Covers: installation of Pretensioned Concrete Cylinder Pipe (PCCP) pipe of the size indicated, including gaskets, insulation kits, electrolysis monitoring station(s), flanges, welded joints, joint bonding fasteners, bolts and nuts, tees, outlets, manways, bends, sleeves, transition couplings, reducers, plugs, caps; blow-off valve assemblies, drain assemblies; mud plugs, grout plugs, joint grouting; joint retaining devices; miscellaneous fittings; greasing and wrapping all exposed fittings, bolts and nuts; pipeline dewatering; concrete thrust restraints; capping or plugging of the existing water pipe(s) to be abandoned; removal or abandonment of the existing water pipe(s), fittings and structures; salvaging and/or abandoning existing valves; disinfection and commissioning pipeline.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

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5. Bid Item No. [??] - Gate Valve, [SIZE] [TYPE]

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed Gate Valve of the size and type indicated.

b. Payment Covers: installation of each Gate Valve of the size and type indicated including, nuts, bolts, gaskets; 2 pc. cast iron screw type valve box, [traffic] lid; greasing and wrapping all exposed fittings, bolts and nuts; adjustment of valve box lid(s) to final grade, concrete, concrete collars; and connection to existing and/or new water pipes.

6. Bid Item No. [??] - Tapping Sleeve and Valve, [SIZE]

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed Tapping Sleeve and Valve of the size indicated.

b. Payment Covers: installation of each tapping sleeve and valve of the size indicated including, bolts, nuts, gaskets; 2 pc. cast iron screw type valve box, [traffic] lid; greasing and wrapping all exposed fittings, bolts and nuts; adjustment of valve box lid(s) to final grade, concrete, concrete collars; and connection to existing and/or new water pipes.

7. Bid Item No. [??] - Butterfly Valve, [SIZE]

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed

Butterfly Valve of the size indicated.

b. Payment Covers: installation of each butterfly valve of the size indicated including, bolts, nuts, gaskets; [run arounds;] [concrete valve box;] greasing and wrapping all exposed fittings, bolts and nuts; adjustment of valve box lid(s) to final grade, concrete, concrete collars; and connection to existing and/or new water pipes.

8. Bid Item No. [??] - Automatic Air Release Valve Assembly

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed Automatic Air Release Valve Assembly.

b. Payment Covers: installation of each automatic air release valve assembly, including shut-off valve; automatic air release valve; brass riser pipe(s); miscellaneous fittings; concrete valve box; greasing and wrapping all exposed fittings, bolts and nuts; adjustment of valve box lid(s) to final grade, concrete, concrete collars; and connection to existing and/or new water pipes.

9. Bid Item No. [??] - Pressure Reducing Valve Assembly, [SIZE]

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a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed Automatic Pressure Reducing Valve Assembly of the size indicated.

b. Payment Covers: installation of each pressure reducing valve assembly, including pressure reducing valve; isolation valves; bypass with valves; steel pipe; gaskets, slip-on welded flanges, bolts and nuts; thrust restraints; miscellaneous fittings; concrete valve box; adjustment of valve box lid(s) to final grade, concrete, concrete collars; and connection to existing and/or new water pipes.

10. Bid Item No. [??] - Water Main Loop, [SIZE & TYPE] Pipe

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed water main loop of the size and type pipe indicated.

b. Payment Covers: installation of pipe of the size and type indicated, including gaskets, bolts and nuts, bends, sleeves, transition couplings; joint retaining devices; miscellaneous fittings; greasing and wrapping all exposed fittings, bolts and nuts; additional saw cut and removal of trench pavement, excavation, pipe dewatering, and roadbase outside the typical

trench section due to the additional excavation required for the installation of the loop; concrete thrust restraints; disinfection and commissioning pipeline.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

11. Bid Item No. [??] - Replacement of Existing Water Service, [SIZE]

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each existing water service replaced of the size indicated.

b. Payment Covers: replacement of water service of the size indicated including, installation of type "K" copper pipe of the size indicated; [service saddle clamp;] corporation stop [with 2 piece cast iron valve box with traffic lid]; [meter yoke;] [custom meter setter;] [meter box with [ductile iron] [cast iron] cover;] adapters necessary for a watertight connection to the existing service pipe within four feet of the residential side of the meter box; [concrete thrust restraints;] capping or plugging of the existing water service(s) to be abandoned; removal or abandonment of the existing water service(s), and fittings; flushing the service prior to acceptance; adjustment of valve box lid(s) and meter box lid to final grade.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

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12. Bid Item No. [??] - Replacement of Existing Water Service, [SIZE] [TYPE] Pipe

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each existing water service replaced of the size and type indicated.

b. Payment Covers: replacement of water service of the size indicated, installation of pipe of the size and type indicated; tees, gate valves, bends, fittings; [slip-on welded flanges;] concrete meter box with cast iron ring and cover(s); adapters necessary for a watertight connection to the existing service pipe within four feet of the residential side of the meter box; - pipe dewatering; [concrete thrust restraints;] capping or plugging of the existing water service(s) to be abandoned; removal or abandonment of the existing water service(s), and fittings; flushing the service prior to acceptance; adjustment of valve box lid(s) and meter box lid to final grade.

There will be no payment for over excavation unless approved

in written form by the ENGINEER prior to the excavation.

13. Bid Item No. [??] - Reconnection of Existing Water Service, [SIZE]

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each existing water service reconnected of the size indicated.

b. Payment Covers: reconnection of water service of the size indicated, installation of type "K" copper pipe of the size indicated; [service saddle clamp;] corporation stop [with 2 piece cast iron valve box with traffic lid]; adapters necessary for a watertight connection to the existing service pipe; - [concrete thrust restraints;] capping or plugging of the existing water service(s) to be abandoned; removal or abandonment of the existing water service(s), fittings and structures; flushing the service prior to acceptance; adjustment of valve box lid(s).

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

14. Bid Item No. [??] - Reconnection of Existing Water Service, [SIZE] [TYPE] Pipe

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each existing water service reconnected of the size and type pipe indicated.

b. Payment Covers: reconnection of water service of the size and type indicated, installation of type pipe of the size indicated, tees, gate valves, bends, fittings, [slip-on welded flanges,] concrete meter box with cast iron ring and cover(s), adapters necessary for a watertight connection to the existing service

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pipe, pipe dewatering, [concrete thrust restraints,] capping or plugging of the existing water service(s) to be abandoned, removal or abandonment of the existing water service(s), fittings and structures, flushing the service prior to acceptance, adjustment of valve box lid(s).

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

15. Bid Item No. [??] - New Water Service, [SIZE]

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed new water service of the size indicated.

b. Payment Covers: installation of new water service of the size indicated, installation of [SIZE] type "K" copper pipe, [service

saddle clamp,) corporation stop [with 2 piece cast iron valve box with traffic lid,) [meter yoke,) [custom meter setter,) meter box with [ductile iron] [cast iron] cover,) [adapters necessary for a watertight connection to the existing service pipe within four feet of the residential side of the meter box,) - [concrete thrust restraints,) fittings and structures, flushing the service prior to acceptance, adjustment of valve box lid(s) and meter box lid to final grade.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

16. Bid Item No. [??] - New Water Service, [SIZE] [TYPE] Pipe

a. Measurement: Measured and paid for on a per each basis.

Measurement to be by actual field count of each installed new water service of the size indicated.

b. Payment Covers: installation of new water service of the size indicated, tees, gate valves, bends, fittings, [slip-on welded flanges,) concrete meter box with cast iron ring and cover(s), [adapters necessary for a watertight connection to the existing service pipe within four feet of the residential side of the meter box,) pipe dewatering, [concrete thrust restraints,) fittings and structures, flushing the service prior to acceptance, adjustment of valve box lid(s) and meter box lid to final grade.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

17. Bid Item No. [??] - Reconnect Existing Fire Hydrant

a. Measurement: Measured and paid for on a per each basis.

Measurement to be by actual field count of each existing fire hydrant reconnected.

b. Payment Covers: reconnect existing fire hydrant to new water main, pipe, tees, bends, adapters, sleeves, fittings, gaskets,

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couplings, and reducers of the size and type required, gate valve(s) with 2 pc. cast iron valve box(es) [with traffic lid(s)], approved joint restraining device(s), bolts and nuts, greasing and wrapping all exposed fittings, bolts and nuts, pipeline dewatering, concrete thrust restraints, [concrete box repair,) capping or plugging of the existing water pipe(s) to be abandoned, removal or abandonment of the existing water pipe(s), adjustment of valve box lid(s) to final grade, concrete, concrete collars.

There will be no payment for over excavation unless approved

in written form by the ENGINEER prior to the excavation.

18. Bid Item No. [??] - New Fire Hydrant

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each new fire hydrant installed.

b. Payment Covers: installation of new fire hydrant, with ductile iron, P.V.C. or epoxy lined and coated (exterior of pipe maybe tape wrapped) flanged steel pipe. Gate valve(s) with 2 pc. cast iron screw type valve box(es), [traffic lid(s)], tees, sleeves, bends, miscellaneous fittings, gaskets, bolts, nuts, approved joint restraining devices, greasing and wrapping all exposed fittings, bolts and nuts, pipeline dewatering, concrete thrust restraints, disinfection and commissioning pipeline, adjustment of valve box lid(s) to final grade, concrete, concrete collars; painting.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

19. Bid Item No. [??] - Abandon Existing Concrete Valve Box(es)

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each existing concrete valve box abandoned.

b. Payment Covers: salvage cast iron rings and covers, [breaking off top of concrete valve box,] [salvage valve dome and gate assembly,] pipeline dewatering.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

SANITARY SEWER

1. Bid Item No. ?? - Concrete Sanitary Sewer Pipe, [SIZE], Class [??]

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the sizes and classes indicated in the Bid

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Schedule. Unless indicated otherwise, measurement to be along the pipe from center to center of manholes, or other structures, or to the end of pipe where no structures exist, with no deduction for fittings.

b. Payment covers: installation of concrete sanitary sewer pipe of the sizes and classes indicated, including couplings, gaskets, [weye connections,] adapters, plugs; capping or plugging of the existing sanitary sewer pipe(s) to be abandoned; [removal of the existing sanitary sewer pipe(s) and structures;]

[abandonment of the existing sanitary sewer pipe(s) and structures;] water service loops; temporary sewer connections; by-pass pumping of sewage; connection of the existing sanitary sewer to the new sanitary sewer; connecting new sanitary sewer pipe to existing structures; cleaning new pipe prior to acceptance by OWNER, commissioning pipelines. There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

2. Bid Item No. ?? - P.V.C. Sanitary Sewer Pipe, [SIZE], SDR 35

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the sizes and type indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the pipe from center to center of manholes, or other structures, or to the end of pipe where no structures exist, with no deduction for fittings.

b. Payment covers: installation of P.V.C. sanitary sewer pipe of the sizes and classes indicated, including couplings, gaskets, [wye connections,] adapters, plugs; capping or plugging of the existing sanitary sewer pipe(s) to be abandoned; [removal of the existing sanitary sewer pipe(s) and structures;] [abandonment of the existing sanitary sewer pipe(s) and structures;] water service loops; temporary sewer connections; by-pass pumping of sewage; connection of the existing sanitary sewer to the new sanitary sewer; connecting new sanitary sewer pipe to existing structures; cleaning new pipe prior to acceptance by OWNER, commissioning pipelines. There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

3. Bid Item No. ?? - CIPP Liner Installation in Existing [SIZE] Pipe

a. Measurement: Measured and paid for on a lineal foot basis. Measurement to be by actual field measurement of lineal feet of Cured-In-Place-Pipe (CIPP) liner installed to the nearest foot, for sizes indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the existing pipe from center to center of manholes, catch basins or other structures.

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b. Payment Covers: engineering design of the liner; field verification of lengths and sizes of existing sanitary sewer pipe; **[cleaning the existing sanitary sewer pipe including removal of all roots and deposits,**

accumulations or protrusions that would interfere with the proper installation of the CIPP liner]; television inspection before and after the installation of the liner; installation of the liner; by-pass pumping of sewage.

4. Bid Item No. ?? - Slip Line Existing [SIZE] Pipe

a. Measurement: Measured and paid for on a lineal foot basis. Measurement to be by actual field measurement of lineal feet of existing pipe slip lined to the nearest foot, for sizes indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the existing pipe from center to center of manholes, catch basins or other structures.

b. Payment Covers: cleaning the existing sanitary sewer pipe; field verification of lengths and sizes of existing sanitary sewer pipe; television inspection before and after the slip lining operation; slip lining the existing pipe; by-pass pumping of sewage.

5. Bid Item No. ?? - Pipe Bursting of Existing [SIZE] Pipe & Install [SIZE] O.D. HDPE SDR 17 Pipe

a. Measurement: Measured and paid for on a lineal foot basis. Measurement to be by actual field measurement of lineal feet of Pipe Bursting to the nearest foot, for sizes indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the existing pipe from center to center of manholes **[or connections]**.

b. Payment Covers: field verification of lengths and sizes of existing sanitary sewer pipe; pipe bursting of existing pipe; television inspection before and after the pipe bursting; removal of all obstructions in the existing pipe that will hinder the bursting process; by-pass pumping of sewage; installation of HDPE sanitary sewer pipe of the size and class indicated, including couplings, gaskets, adapters; capping or plugging of the existing sanitary sewer pipe(s) to be abandoned; temporary sewer connections; by-pass pumping of sewage; connection of the existing sanitary sewer to the new sanitary sewer; connecting new sanitary sewer to existing structures; cleaning new pipe prior to acceptance by OWNER, pressure testing pipelines, commissioning pipelines.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

6. Bid Item No. ?? - Sanitary Sewer Manhole, [SIZE], Complete

- a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed sanitary sewer manhole of the size indicated.
- b. Payment Covers: installation of each manhole of the size indicated; additional saw cut and removal of trench pavement, excavation, and roadbase outside the typical trench section due to the additional size of manhole; adjustment of ring and cover to final grade, concrete, concrete collars, concrete grade rings; and connection to existing and/or new sanitary sewer pipes.

7. Bid Item No. ?? - Sanitary Sewer Lateral, [SIZE & TYPE], Complete

- a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed sanitary sewer lateral of the size and type indicated.
- b. Payment Covers: installation of sanitary sewer lateral(s) of the size and type indicated; Salt Lake City Department of Public Utilities sewer connection and permit fees; [wye connection to the [new] [existing] sanitary sewer main;] sanitary sewer pipe , fittings, couplings and bends of the size and type specified; cleanouts; asphalt.

8. Bid Item No. ?? - Restoration of Pipe Connections

- a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of pipe connections restored.
- b. Payment Covers: locating each pipe connection to be restored and cutting liner for restoring connection.

9. Bid Item No. ?? - Cleaning Existing Pipe, Complete

- a. Measurement: Measured and paid for on a Lump Sum basis.
- b. Payment Covers: cleaning the existing sanitary sewer pipe including removal of all roots and deposits or accumulations that would interfere with the proper installation of the [CIPP] [PE] liner.

10. Bid Item No. ?? - Obstruction Removal

- a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each obstruction removed and the restoration of the site of the obstruction removal.
- b. Payment Covers: removal or repair of each obstruction; asphalt; by-pass pumping of sewage.
There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

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c. This item to be used at the discretion of the ENGINEER.

11. Bid Item No. ?? - Reconnect Sanitary Sewer Lateral(s), [TYPE], Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of reconnected sanitary sewer lateral(s).

b. Payment Covers: reconnection of sanitary sewer lateral(s); [wye connection to the [new] [existing] sanitary sewer main;] sanitary sewer pipe, fittings and bends of the type indicated.

12. Bid Item No. ?? - Relocate Sanitary Sewer Lateral(s), [TYPE], Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of relocated sanitary sewer lateral(s).

b. Payment Covers: relocation of sanitary sewer lateral(s); [wye connection to the [new] [existing] sanitary sewer main;] sanitary sewer pipe, fittings and bends of the type indicated.

STORM DRAIN

1. Bid Item No. ?? - CONCRETE STORM DRAIN PIPE, [SIZE], CLASS [??]

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the size and class indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the pipe from center to center of manholes, catch basins or other structures, or to the end of pipe where no structures exist, with no deduction for fittings.

b. Payment covers: installation of concrete storm drain pipe of the size and class indicated, including couplings, gaskets, adapters, plugs; capping or plugging of the existing storm drain pipe(s) to be abandoned; removal or abandonment of the existing storm drain pipe(s) and structures; water service loops; temporary sewer connections; by-pass pumping of storm water; connection of the existing storm drain to the new storm drain; reconnection of existing laterals into the new storm drain manholes; connecting new storm drain to existing structures; cleaning new pipe prior to acceptance by OWNER, commissioning pipelines.

There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.

2. Bid Item No. ?? - Storm Drain Manhole No. [??], Complete

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a. Measurement: Measured and paid for on a per each basis.

Measurement to be by actual field count of each installed storm drain manhole of the number indicated.

b. Payment Covers: installation of each storm drain manhole of the number indicated; additional saw cut and removal of trench pavement, excavation, and roadbase outside the typical trench section due to the additional size of manhole; adjustment of ring and cover to final grade, concrete, concrete collars, concrete grade rings; and connection(s) to existing and/or new storm drain pipes.

3. Bid Item No. ?? - Storm Drain Curb Inlet Catch Basin, Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed storm drain curb inlet catch basin.

b. Payment Covers: installation of each storm drain curb inlet catch basin; connection to existing and/or new storm drain pipes.

4. Bid Item No. ?? - Storm Drain Curb Outlet No. 1, Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed storm drain curb outlet No. 1.

b. Payment Covers: installation of each storm drain curb outlet No. 1; connection to existing and/or new storm drain pipes.

5. Bid Item No. ?? - Curb Inlet Box for Irrigation, Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed curb inlet catch for irrigation.

b. Payment Covers: installation of each storm drain curb inlet catch basin; connection to existing and/or new storm drain pipes.

6. Bid Item No. ?? - Irrigation Box Type [A] [B], Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed irrigation box of the type indicated.

b. Payment Covers: installation of each irrigation box of the type indicated; connection to existing and/or new storm drain pipes.

7. Bid Item No. ?? - Storm Drain Catch Basin No. 1 Single Grate Curb Opening, Complete

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a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed

storm drain catch basin No. 1 single grate curb opening.

b. Payment Covers: installation of each storm drain catch basin No. 1 single grate curb opening; connection to existing and/or new storm drain pipes.

8. Bid Item No. ?? - Storm Drain Catch Basin No. 2 Double Grate Curb Opening, Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed storm drain catch basin No. 2 double grate curb opening.

b. Payment Covers: installation of each storm drain catch basin No. 2 double grate curb opening; connection to existing and/or new storm drain pipes.

9. Bid Item No. ?? - Clean Out Box Type [??], Complete

a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each installed clean out box of the type indicated.

b. Payment Covers: installation of each clean out box type [??]; additional excavation, and roadbase outside the typical trench section due to the additional size of the structure; adjustment of frame and cover to final grade, concrete, concrete collars; and connection to existing and/or new storm drain pipes.

MISCELLANEOUS

1. Bid Item No. ?? - Trench Stabilization Material

a. Measurement: Measured and paid for by the cubic yard as calculated by the engineer, using the depth required by the engineer, the bottom trench width of the typical trench section and the length of the trench.

b. Payment Covers: installation of trench stabilization material.

c. This item to be used at the discretion of the engineer.

2. Bid Item No. [??] - Concrete Curb and Gutter Replacement

a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the type of curb and gutter indicated in the Bid Schedule.

b. Payment Covers: removal and disposal of the existing curb and gutter, installation and compaction of the untreated base course, forming, placing, finishing, and testing of the concrete, replacement of concrete curb and gutter of the type indicated.

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c. Asphalt tie-in to be paid under the bid item for asphalt trench restoration.

3. Bid Item No. [??] - Curb Return Removal, Installation of Handicap Access Ramp

- a. Measurement: Measured and paid for on a per each basis. Measurement to be by actual field count of each curb return removed and replaced with a handicap access ramp of the type indicated.
- b. Payment Covers: removal and disposal of the existing curb & gutter, and sidewalk, installation and compaction of the untreated base course, installation of a concrete handicap ramp of the type indicated including forming, placing, finishing, and testing of the concrete.
- c. Asphalt tie-in to be paid under the bid item for asphalt trench restoration.

4. Bid Item No. [??] - Concrete Sidewalk Replacement

- a. Measurement: Measured and paid for on a square yard basis.
- b. Payment Covers: removal and disposal of the existing sidewalk, installation and compaction of the untreated base course, forming, placing, finishing, and testing of the concrete, replacement of concrete sidewalk.

5. Bid Item No. [??] - Asphalt Trench Restoration

- a. Measurement: Measured and paid for on a cubic yard basis as calculated by the engineer, as shown on Standard Plan No. 255.
- b. Payment Covers: placing, compacting, and compaction density testing of the asphalt trench restoration material, tack coat, adjusting all street fixtures not specified elsewhere to final grade, concrete, and restriping and marking the new pavement.
- c. Maximum width for payment shall be [??] feet.

6. Bid Item No. [??] - Seal Coat Trench

- a. Measurement: Measured and paid for on a square yard basis as calculated by the engineer.
- b. Payment Covers: placing, compacting, and compaction density testing of the seal coat material, tack coat, adjusting all street fixtures not specified elsewhere to final grade, concrete, and restriping and marking the new pavement.

7. Bid Item No. [??] - UDOT Excavation Permit Fee and Inspection Charge

- a. Measurement: Measured and paid for on a Lump Sum basis.

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- b. Payment Covers: Payment to be a lump sum amount and is to be the actual fee assessed to the contractor for the excavation permit and the UDOT inspection. Contractor to provide the actual billing invoice he receives from the Utah Department of

Transportation. The lump sum amount shown on the bid schedule is an estimate for bidding purposes only.

8. Bid Item No. [??] - Excavation Permit Fee

- a. Measurement: Measured and paid for on a Lump Sum basis.
- b. Payment Covers: Payment to be a lump sum amount and is to be the actual fee assessed to the contractor for the excavation permit. The lump sum amount shown on the bid schedule is an estimate for bidding purposes only. [Construction start date to be after April 1, 20[??], unless prior approval is obtained.]

9. Bid Item No. [??] - Removal/Abandonment of Existing [TYPE] Pipeline

- a. Measurement: Measured and paid for on a lineal foot basis, to the nearest foot, for the removal of pipeline of the type indicated in the Bid Schedule. Unless indicated otherwise, measurement to be along the pipe, with no deduction for fittings.
 - b. Payment Covers: removal and disposal of existing pipeline and fittings, [salvage valve dome and gate assembly,] salvage cast iron rings and covers, pipeline dewatering, capping or plugging of the existing pipeline(s) to be abandoned in place, water service loops, by-pass pumping, temporary connections. There will be no payment for over excavation unless approved in written form by the ENGINEER prior to the excavation.
- END OF DOCUMENT

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A-2 Example Pre-bid Agenda

PRE-BID MEETING AGENDA

PROJECT NAME & NUMBER: Big Cottonwood Tanner Fire Flow Improvements, Phase II

located at various locations within the corporate boundaries of Holladay City primarily along Walker Lane and Cottonwood Lane between Highland Drive and Holladay

Boulevard, Project No. 513301977

MEETING PLACE: Public Utilities Engineering Conference, Room 101

DATE & TIME: Tuesday, September 22, 2009 at 11:00 A.M.

1. INTRODUCTION:

A. OWNER REPRESENTATIVES

CHIEF ENGINEERING ADMIN: Charles H. Call, P.E. – (801) 483-6840

PROJECT ENGINEER: Robert Sperling, P.E. – (801) 483-6888

DESIGNER: Keith Larson, P.E. – Bowen, Collins & Associates – (801) 495-2224

2. BRIEF DESCRIPTION OF THE WORK:

Installation of approximately 6,540 linear feet of new 12-inch Ductile Iron Pipe, Class 52 and connect to existing 6-inch and 8-inch waterlines. Install or reconnect 12 fire hydrants in various locations. Enclose a portion of the East Jordan Canal with 5'x3' reinforced box culvert including transitions to and from culvert.

3. INSTRUCTION TO BIDDERS:

A. **CONTRACT TIME:** As per Agreement Section 00 52 00-3 of the project manual – 50 calendar days.

B. **LIQUIDATED DAMAGES:** As per Agreement Section 00 52 00-3 the project manual

- \$500.00 for each day that expires after the contract time until the work is substantially complete.

C. **WORKING HOURS (START & STOP):** Based on 40 hr. work week, Monday through Friday.

D. **UTILITY COORDINATION:** Contractor is responsible to notify Blue Stakes (801) 208-2100 for all utility locations.

E. **TESTING & CERTIFICATION REQUIREMENT:** Contractor is required to have their

own quality control, see Section 01 45 00 of the Project Manual.

F. **CONSTRUCTION STAKING:** Contractor is responsible for own construction staking and layout.

G. **MEASUREMENT & DOCUMENTATION OF QUANTITIES:** Coordinate with the City inspector and field person on site.

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H. **SAFETY:** Contractor is responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The selected contractor will be required to submit a letter to the City describing the hazards present on the project and his plan to mitigate those hazards.

P. BID OPENING:

A. Bid Documents: Section 00 41 00, 1.6A identifies all forms comprising the bid documents. Also, See Work Environment Form, Document 00 43 40. Submit Bid to the City Recorder's Office - 451 South State Street, Room 415 or in City Council Chambers, Room 315. Bid Opening is September 30, 2009 at 2:00 P.M., in the City Council Chambers, Room 315.

B. Bid Bonds required or Certified Check: The bond amount must equal at least 5 percent of the total amount of the bid.

C. The Bid shall contain an acknowledgement of receipt of all Addenda. The addenda numbers must be filled in on the Bid Form.

D. The bidder must use only the Bid Form and Bid Schedules bound in the Contract Documents. The complete Contract Documents (excluding the Drawings) should be submitted as the Bid.

4. GENERAL DISCUSSION/QUESTIONS:

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A-3 Bid Abstract

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A-4 Example of Award Letter

October 26, 2009

Rolfe Excavating & Construction Co.

P.O. Box 900430

Sandy, Utah 84090

Gentlemen:

Written bids were received on September 30, 2009, for the Big Cottonwood Tanner Fire

Flow Improvements, Phase II located at various locations within the corporate boundaries of

Holladay City primarily along Walker Lane and cottonwood Lane between Highland Drive

and Holladay Boulevard, Project No. 513301977. Your total base bid in the amount of \$860,714.90 is low bid and is accepted by Salt Lake City Corporation. Please submit to this

office within (10) days the following:

1. Obtain three project manuals for signing and approval. Furnish the required performance and payment bonds using the City provided documents 00 61 13 and 00

61 14. Also, complete Document 00 52 00.

2. Furnish the required insurance naming your company and Salt Lake City Corporation

as an additional insured. Follow the attached insurance instruction sheet.

3. Furnish a Certificate of Workmen's Compensation obtained from your own insurance company.

4. Return all three (3) signed project manuals to Salt Lake City Department of Public Utilities, Engineering Office, 1530 South West Temple, Salt Lake City, Utah 84115, Attn: Linda Allred.

The City has been awarded a grant to reimburse the City for this project, and is in the

process of obtaining final grant approvals. In order to assure the grant reimbursement is

not jeopardized, the City does not intend to sign the final construction agreement and issue

an authorization to proceed until the City's NEPA approvals have been received from the US

Bureau of Reclamation (USBR). The City anticipates that the USBR will provide these approvals in December.

If you have any questions, please call Charles H. Call at (801) 483-6840.

Sincerely,

Jeffrey T. Niermeyer

Director

lka

Attachments

cc: File

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A-5 Insurance Checklist
SALT LAKE CITY CORPORATION
INSURANCE CHECKLIST

Contractor: _____ **Contract #** _____

Term of Contract: _____

In order to meet City's requirements, all certificates of insurance must include the following:

- _____ 1) Issuance Date.
- _____ 2) Name and address of Producer (Insurance Agent).
- _____ 3) Name and address of Insured (the entity with whom the City is dealing i.e. entering contract, issuing a permit, etc.). In the case of a subdivision development contract, the named insured must be identical with the developer with whom the City has contracted.
- _____ 4) Name of Company(ies) Affording Coverage.
- _____ 5) A listing of commercial insurance policies to include at a minimum:
 - a. Commercial General Liability insurance showing coverage limits of at least \$2,000,000 per occurrence with a \$3,000,000 general aggregate and \$3,000,000 products and completed operations aggregate.
 - b. Commercial Auto Liability insurance showing a combined single limit of \$2,000,000 per occurrence or \$1,000,000 liability per person, \$2,000,000 liability per occurrence, and \$250,000 property damage.
 - c. Workers' Compensation Insurance with statutory coverage limits.
- Note: The above policy and limit requirements are standard and should be sufficient for most contracts. Some contracts may require different coverage limits. They may also require additional or substitute types of insurance. In such cases, consult with the Office of the City Attorney or Risk Management in order to ensure that the City is properly protected.
- _____ 6) Effective dates of the policies covering the period of the grant, license, permit, etc.
- _____ 7) Salt Lake City Corporation listed as "Additional Insured."
- _____ 8) Salt Lake City Corporation listed as "Certificate Holder."
- _____ 9) The "Cancellation" block must have the number 30 written in the blank so that it

reads as follows:

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF

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ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

- _____ 10) Certificate must not contain any language which would detrimentally affect the

interests of Salt Lake City Corporation.

____11) An original signature of an agent, broker or other representative authorized by all

companies to issue certificates," (not a copy or stamp) **OR** a computer generated laser signature with a letter from the insurance company (letter to be kept on file in the department issuing the contract) stating that the signature on the certificate is a computer generated laser signature and that it will constitute an official signature which will bind the Company.

In addition to the foregoing, the following steps must be taken by the City representative monitoring the contract, permit, etc.:

____12) Verify that:

(a) the company(ies) affording coverage is listed on the most current circular entitled "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds," published by the U.S. Department of the Treasury in the *Federal Register*;

OR

(b) the insurer is rated with an A- or better rating with AM Best as verified online at <http://www.ambest.com/>, or, if the Internet is not available, in the most recent edition of *Best's Key Rating Guide* to property-casualty insurers in the United States. The rating must be at least as high as that required by the terms of the contract.

AND – If the contract is construction related

(c) the insurer is included in the AM Best Financial Size Categories equal to or greater than VII.

____13) Verify that the Company(ies) Affording Coverage is currently licensed by the Utah

Insurance Commissioner to do business in Utah.

____14) Verify that the Insured company doing business with the City is registered and is

currently in good standing with the Utah Department of Commerce.

____15) Verify that the following statement has been added to all Certificates received

from Workers' Compensation Fund of Utah: (They no longer do this)

IF CANCELLATION IS INITIATED BY THE WORKERS'

COMPENSATION FUND OF UTAH A THIRTY DAY NOTICE WILL BE

ISSUED TO YOU. A POLICYHOLDER MAY CANCEL THE POLICY

WITH NO PRIOR NOTICE; IN THESE INSTANCES, PRIOR

NOTIFICATION TO YOU WILL NOT BE POSSIBLE.

____16) In the case of payment and performance bonds required by subdivision and construction contracts, the bonds must cover the developer with whom the City has contracted (using the same name as shown in the contract) and must cover all contractors and subcontractors hired by the developer.

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____17) In the case of payment and performance bonds, verify that the providers of bonds

are qualified to do business in the State of Utah and that they meet the rating standards for insurers set forth above.

Completed by:

(Signature)

Title:

Division or Department:

Date:

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A-6 Example Pre-construction Agenda

PRE-CONSTRUCTION MEETING AGENDA

PROJECT NAME & NUMBER: Big Cottonwood Tanner Fire Flow Improvements,
Phase II

located at various locations within the corporate boundaries of Holladay City along
Walker

Lane and Cottonwood Lane between highland Drive and Holladay Blvd., Project No.
513301977

MEETING PLACE: Public Utilities Engineering Conference, Room 101

DATE & TIME: Tuesday, December 8, 2009 @ 11:00 A.M.

1. INTRODUCTION

A. OWNER REPRESENTATIVES

CHIEF ENGINEERING ADMINISTRATOR: Charles H. Call – (801) 483-6840

PROJECT ENGINEER: Robert Sperling – (801) 483-6888

DESIGNERS: Bowen, Collins & Associates – (801) 495-2224

Keith Larson, P.E. & Andrew McKinnon

INSPECTOR: Ryan Bagshaw, (801) 483-6891 Office, (801) 641-8932 Cell

SURVEY: Matt Briggs – (801) 483-6766

B. CONTRACTOR: _____

C. ADDRESS: _____

D. PROJECT MANAGER: _____

E. PROJECT SUPERINTENDENT: _____

2. ADMINISTRATIVE CHANNELS

LINES OF COMMUNICATION 1. INSPECTOR

SHALL BE FROM 2. PROJECT SUPERINTENDENT

3. PROJECT ENGINEER

4. CHIEF ENGINEER

5. ADMINISTRATION

3. **PROGRESS PAYMENTS:** Per General Conditions, Section 00 72 00, Part 14.2 -
Progress payments shall not be processed more often than once a month. Final
payments will not be made until punch list items are completed and approved by the
inspector.

4. **CONTRACT CHANGE ORDERS:** As Per General Conditions, Section 00 72 00,
Part 10.1C&E – No money will be paid to the contractor for any new or additional
labor, materials or equipment furnished, unless it is made in writing and executed
by the owner and contractor.

5. **SUBMITTALS:** Contractor shall submit to engineer, work plan procedures,
progress
schedule, preliminary shop drawings schedule, and mobilization plan.

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6. **PERMITS:** Contractor is responsible to obtain all necessary permit(s) and comply
with

all requirements. Holladay City – 4580 South 2300 East, (801) 272-9450. Inspector –

Tosh Kano, (801) 244-6103.

7. **QUALITY CONTROL:** Contractor is responsible for own quality control program, see Section 01 45 00 of the project manual.

8. **SAFETY & PROTECTION PLAN:** Contractor is responsible for maintaining, and supervising all safety precautions and programs in connection with the work. The City requires a letter from the Contractor describing the hazards present on the project and

his plan to mitigate those hazards.

9. **SUPPLIERS:**

Pipe -

Asphalt -

Concrete -

Trench Stabilization Material -

Box Culvert -

10. **SUBCONTRACTORS:** As per Modifications to the General Conditions, Section 00 73 10, Part 5.2(4). In the event any work is subcontracted, the Contractor shall require its subcontractor, at no cost to the City, to secure and maintain all minimum insurance coverages required of the contractor.

11. **CONTRACT TIME:** See Section 00 52 00 -3 of the Project Manual – 50 Calendar Days.

12. **START DATE:**

13. **RESIDENT NOTIFICATIONS:** The Contractor is required to distribute a written notice to all occupants located in the construction area at least 48 hours prior to construction and 72 hours for commercial occupants.

14. **UTILITY NOTIFICATIONS & BLUE STAKES:** Contractor is responsible to notify Blue Stakes (801) 208-2100 for utility locations 48 hours prior to construction.

15. **SURVEY STAKES:** Contractor is responsible for own construction staking and layout.

16. **PLAN QUESTIONS/GENERAL DISCUSSION:**

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A-7 Construction Work Order

See Contracts Specialist

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A – 8 Submittal Form

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A-9 Example Notification Letter

M E M O R A N D U M

TO: Residents

FROM: Salt Lake City Department of Public Utilities

Jeffry T. Niermeyer, Director

DATE: January 4, 2010

**RE: Big Cottonwood Tanner Fire Flow Improvements, Phase II
Project No. 513301977**

Salt Lake City Department of Public Utilities will be constructing the Big Cottonwood Tanner Fire Flow Improvements, Phase II from January through

April 2010. This project involves installation of approximately 6,540 linear

feet of 12-inch water main and approximately 250 linear feet of 8-inch water

main located at various locations within the corporate boundaries of Holladay

City primarily along Walker Lake and Cottonwood Lane between Highland

Drive and Holladay Boulevard. Additionally, new fire hydrants at various

locations will be installed.

Traffic and on-street parking will be affected when construction is on your

street. It would be appreciated if you do not park on the street during construction.

The contractor for the work is Rolfe Excavating & Construction Company.

Their phone number is (801) 255-6710. Kim Rolfe is the project manager

and Kurt Rolfe is the project superintendent.

The SLC Public Utilities inspector is Ryan Bagshaw, his phone number is

(801) 483-6891 Office or (801) 641-8932 Cell. Robert Sperling is the project engineer, his phone number is (801) 483-6888.

If you have any questions about this project or concerns during the construction, please call our inspector or Linda Allred at (801) 483-6763 or

Stephanie Hansen at (801) 483-6781.

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A-10 Project Summary Form

See A-18 and front of Daily Log Book and Notice to Supervisors
NTS - BCT Fire Flow Improvements, Project No. 513301977

Contractor's Notice to Proceed – January 7, 2010

The contractor will start construction on the box culvert and work on the new canal crossing on the East

Jordan Canal during January & February. The water line work will be done during warmer weather and

should be completed before April 15, 2010.

Project Name & Location: Big Cottonwood Tanner Fire Flow Improvements, Phase II located at various

locations within the corporate boundaries of Holladay City primarily along Walker Lane and Cottonwood

Lane between Highland Drive and Holladay Boulevard, Project No. 513301977

Bid Amount: \$860,714.90

Account No: 51-01301-2773.10

Contractor: Rolfe Excavating & Construction Company

P.O. Box 900430

Sandy, Utah 84090

Phone: (801) 255-6710

Project Manager: Kim Rolfe – (801) 244-8453

Project Superintendent: Kurt Rolfe – (801) 231-4018

Owner Representatives

Chief Engineering Administrator: Chuck Call - (801) 483-6840

Project Engineer: Robert Sperling – (801) 483-6888

Designers: Bowen, Collins & Associates (801) 495-2224

Keith Larson, P.E. & Andrew McKinnon

Inspector: Ryan Bagshaw – (801) 483-6891 Office, (801) 641-8932 Cell

Backup Inspector: Chad Stratton – (801) 483-6738 Office, (801) 330-0960 Cell

Survey: Matt Briggs – (801) 483-6766

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A-11 Daily Report Form

SLCPU Standard Practice 102 1/5/2009

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A-12 Quality Control

See Section 01 45 00 Quality Control in the Project Manual

The Contractor is required to provide a "Quality Control Program Manager"

who will monitor the quality of the work. For our projects this is usually

someone from a soils testing lab who will be taking density tests and

reporting those results.

Trench compaction – We have installed a lot of pipe over the recent years

and we plan to continue to have an aggressive capital improvement program. Your individual effort on these projects is appreciated. There have, however, been some trench failures problems on some of our projects.

In an effort to correct this problem we will be emphasizing trench inspection

in regard to the following:

a) A certified Proctor (soil moisture vs. density curve) will be required for

all material used in the trench.

b) Compaction will be closely monitored and test results will be required

before progress payments will be made. The Contract testing requirement is 1 test per 200 lineal feet for each 8-inch lift (see Section 33 05 20 paragraph 1.8 B.). The test results will be summarized by the Contractor's testing company. As a minimum these summary sheets will show (see Section 01 45 00 Part 1.6 C.) but not be limited to:

i) date,

ii) project station,

iii) depth,

iv) material tested and

v) percent density of all tests and retests taken.

Trench compaction will be done in lifts not to exceed 8-inch loose thickness.

Service line documentation and "as-built" drawings –

Documentation

of the work done on individual water service lines has been poor and submittal of red-lined "as-built" plans. In an effort to do better, we will provide an extra set of plans for the Contractor to mark up and include a

summary sheet of all the expected work on water services in the Project

Manual. The Contractor will be required to keep a record of the changes to

this project. Final payment will not be made until this information is submitted to the City by the Contractor.

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A-13 Change Order Example

ENGINEERING CONSTRUCTION CHANGE ORDER

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

CO #: #1

Requested by: CHC

Representing: Public Utilities

Date Requested:

3/09/09

Project Number: 51410096 (Original contract work - Tanner Diversion Structure, Project No. 5129214)

Description: Big Cottonwood intake structure repair located at 3400 East Big Cottonwood Canyon Road

Date Approved

March 9, 2009

This document amends the above referenced contract dated Jan. 21, 2009 between Salt Lake City

Corporation and J. Lynn Roberts & Sons, Inc. All other provisions of the contract remain unchanged

and, except as specified herein, apply to the work defined. The prices set forth include all overhead

and profit and represent the full cost to the City for the work. The time provided for completion of the

contract is unchanged, increased, decreased by calendar days.

Method of Payment

Unit Price

Force Amount

XX Lump Sum

OTHER

Estimated

Fixed Fee

Original Contract Price: \$39,893.00

Total All Prior CO'S: \$ -0-

Pending CO's: \$ -0-

This CO : \$ 6,791.00

Proposed Contract Amount: \$46,684.00

Percentages:

All Prior CO'S: 0 %

Pending CO's: %

This CO : NA %

Description of change and summary of costs:

Original contract work - Tanner Diversion Structure, Project No. 5129214

The lump sum price for the above noted project is \$6,791.00.

This work includes mobilization/de-mobilization; bonds and insurance; saw cut, removal of

existing wall in damaged area, forming and reconstructing the wall in-kind as shown on the

attached drawing including using a bonding agent; and concrete cylinder testing.

Reason for Change:

This work is at the Big Cottonwood Water Treatment Plant and is being added to the Contractor for the Little Cottonwood Diversion Structure. This price was the low price of

several different Contractor bids for this work. It is being done as a change order for the

City convenience and because this was the low bid of several Contractors.

Inspector Date Designer Date

Contractor Acceptance Date Public Utilities Director Approval Date

Engineer Approval Date Finance Division Approval Date

Contracts Office Date Mayor Approval Date

I:\CHC\Forms\co.doc Form revised 8/24/00

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ENGINEERING CONSTRUCTION CHANGE ORDER

JUSTIFICATION

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

FOR INTERNAL USE ONLY

CO #: #1

Requested by: CHC

Representing: Public Utilities

Date Requested:

3/09/09

Project Number: 51410096 (Original

contract work - Tanner Diversion

Structure, Project No. 5129214)

Description: Big Cottonwood intake

structure repair located at 3400 East

Big Cottonwood Canyon Road

Date Approved

March 9, 2009

I. Reason for the change:

REASON DESCRIPTION

Scope Change This is an extra project added to the original Contract work.

It was the City's convenience to do this as a change order.

Changed Condition

Design Deficiency

II. What work process is the root cause of this change order? (Examples: planning, design, construction management, etc.)

This is regular maintenance repair work at the Big Cottonwood WTP. It was the City's convenience to do this as a change order as part of an existing Contract.

III. What is being done to insure that this problem does not occur again?

NA

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A-14 Pay Request Form

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A-15 Example Notice of Substantial Completion

April 19, 2010

Rolfe Excavating & Construction, Inc.

P.O. Box 900430

Sandy, Utah 84090

RE: Notice of Substantial Completion Big Cottonwood Tanner Fire Flow Improvements, Phase II located in Holladay City along Walker Lane and Cottonwood Lane between Highland Drive and Holladay Boulevard, Project No. 513301977

Gentlemen:

The work performed under the project contract was reviewed on April 15, 2010, and is declared substantially complete. The date of substantial completion of a project or specified area of a project is the date when the construction is sufficiently completed in accordance with the contract documents so the City can use or occupy the project as specified in the contract. The contractor's general warranty and guarantee will start from this date.

According to our inspector, Ryan Bagshaw, no punch list was required and

the final inspection was done on April 15, 2010.

If you have any questions, please call Ryan Bagshaw at (801) 483-6891.

Very truly yours,

Jeffrey T. Niermeyer

Director

lka

cc: Chuck Call, Robert Sperling, Ryan Bagshaw, Mark Stanley, File

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A-16 Punch List

See Contracts Specialist

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A-17 Project Close-out Change Order

See Contracts Specialist

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A-18 Project Completion Report Form

See in the front of the Daily Log book

**SALT LAKE CITY PUBLIC UTILITIES
CONSTRUCTION PROJECT SUMMARY FORM**

PROJECT NAME: _____

PROJECT NUMBER: _____

LOCATION: _____

CONTRACTOR: _____

ADDRESS: _____

PHONE NUMBERS: _____

PROJECT INSPECTORS: _____

PROJECT ENGINEER: _____

Prebid Meeting Date: _____ Bid Opening Date: _____

Contract Approval Date: _____ Notice to Proceed Date: _____

Preconstruction Meeting Date: _____ Preconstruction Photos: _____

Original Contract Period: _____ Time Extensions (if any): _____

Scheduled Completion Date: _____

Date Contractor requested substantially complete status: _____

Date of substantial completion (time stops): _____

Punch list mailed: _____

Contractor notified of final acceptance (punch list complete): _____

Project turned over to Public Utilities Maintenance Division on: _____

As built drawings submitted: _____

Manuals of Operation & keys submitted: _____

End of Warranty Period (1 year after punch list completion): _____

Warranty inspection held on _____, letter sent to contractor

Original Contract Amount: _____ Liquidated Damages (if any): _____

Revised Contract Amount: _____ Penalties (if any): _____

Total Payment Amount: _____ Overrun Authorization: _____

Comments:

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A-19 Example Warrantee Release Letter

April 19, 2011

Rolfe Excavating & Construction, Inc.

P.O. Box 900430

Sandy, Utah 84090

RE: Notice of Final Acceptance Big Cottonwood Tanner Fire Flow Improvements, Phase II located in Holladay City along Walker Lane and Cottonwood Lane between Highland Drive and Holladay Boulevard, Project No. 513301977

Gentlemen:

The one year warranty period has been completed on the above noted project and no discrepancies or deficiencies have been found. Except for

latent discrepancies, fraud or gross mistakes amounting to fraud, Salt Lake

Public Utilities considers the project complete and issues this Notice of Final

Acceptance.

Thank you for your work on this project. It has been a pleasure working

with you.

Sincerely,

Jeffrey T. Niermeyer

Director

lka

cc: Chuck Call, Robert Sperling, Ryan Bagshaw, Mark Stanley, File

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A-20 CAD Design Standards

SLCPU CAD System File Structure:

All PC's are networked or tied to each other which means that any user account or file can be accessed from the network **System Files** from any workstation. All user accounts are located on the NT file server call "slcipudata2". Each user has a unique directory on the system and each account uses its own user directory (you are the only one that can create or modify files within your directory). In each user directory resides other directories that you will use. In your unique directory in the "**Cad**" directory is where you need to create and store your AutoCAD drawings. By storing your files on the server they will be backed up regularly and can be restored if they are lost or corrupted. In your unique directory in the Cad directory you should make other directories to help organize your work. You could either make facility divisions such as Water, Sewer and Storm Drain or you could simply make each project its own subdirectory by EWO number i.e.; EWO2345 or Project number i.e.; 535002134. Within each of these subdirectories you can keep any information pertaining to that particular project, such as cad drawings, survey information, excel spreadsheets, specifications, etc. The "**sys_cad**" directory is a system directory that contains files and drawings that all users might need to use on their drawings. All users can copy files or drawings from sys_cad and place the copy into the appropriate directory or drawing, **you can not copy anything back into the sys_cad directory.** Only a systems administrator can copy drawings and files back into the sys_cad directory. Once you have copied a drawing or file from sys_cad into your user directory you become the owner of the copy, the original drawing or file is still in the sys_cad directory. On a PC sys_cad is a separate directory that is mounted on which ever drive contains "slcipu2data".

Archived Drawing Files:

Drawings of projects that are completed need to be archived so that we have a permanent backup of the completed files that pertain to each completed project. The completed files along with a text file giving a brief description of what is in each of the files i.e.; AutoCAD title sheet, plan and profile, details, etc. When you have completed the design and the project is being constructed you should assemble your files and prepare them to be archived. In order for your files to be placed within the directory, you need to contact one of the system administrators to do this. Archived drawings will be located in "slcipu2data (usually the "O:" drive, but could be different)\Cad\Archive – Cad Drawings", these drawings will be stored here so that in the future you or someone else can use them as a reference or a continuation of the project.

Note, only a system administrator can copy them back to the \Archive subdirectory. Each archived project will be given its own directory named

EW0#### where #### represents the project EWO number. The final

version of each sheet (the version used to bid the project) will be located in the EW0#### directory, along with any other drawings or related files.

File Names – Names for files that are to be archived need to be changed into the following format using model space:

####s\$.dwg

Where #### represents the project EWO number, followed by the letter "s",

\$\$ represents the sheet or drawing number.

Examples:

1. File 1607s2.dwg would be drawing or sheet 2.
2. File 80s12.dwg would be drawing or sheet 12.

You may want to use a different naming convention if you are using "layout" space for your drawings. You could use the project number or engineering

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work order number then "main" for the drawing name and then each of the layout tabs will named "sheet 1", sheet 2, and so on.

AutoCAD Design Standards:

We have setup a template for new AutoCAD drawings based on our format of layers, pen styles, etc. You should start a drawing using this template; it will

start with all of the available layers, and line types you are likely to use in your

project. The template you should be using for most utility designs is "PU_ENG.dwt" located in

"I:\Common Files\ACAD ITEMS\.

The following layers and line types will automatically be incorporated in your

drawing if you use this template. You may want to setup other layers if you have a need.

Layer Names - The following information should be placed on the following layers:

W## - existing water facilities. Where ## is optional and represents water main size.

PW## - proposed water facilities. Where ## is optional and represents water main size. Text can be placed on this layer or layer **PW##T**.

SS## - existing sanitary sewer facilities. Where ## is optional and represents sewer main size.

PSS## - proposed sanitary sewer facilities. Where ## is optional and represents sewer main size. Text can be placed on this layer or layer **PSS##T**.

UTIL - all other existing utilities.

Note: utilities can be placed on their own layers as follows.

GAS - existing gas facilities.

TEL - existing telephone facilities.

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SD - existing storm drain facilities.

UPL - existing electric facilities.

CTV - existing cable TV facilities.

CL - center line information.

ML - monument line information.

BL - base line information.

PL - property line information.

CGS - curb, gutter, and sidewalk information.

ASPH - existing edge of asphalt/roadway information.

RW - right of way and easement information.

Each layer has been set up with appropriate line types and colors and all are

on the current acad1.dwg prototype drawing.

Line Types - The following line types are available to use in any AutoCAD or

DCA drawing in addition to the standard line types provided by AutoCAD.

MONUMENT - similar to a dashed line with shorter dashes.

PROPERTY - same as AutoCAD standard phantom line type.

UTILITY1 - line with breaks in it, each break is large enough to place a single letter in it.

UTILITY2 - line with breaks in it, each break is large enough to place a two letters in it.

UTILITY3 - line with breaks in it, each break is large enough to place a three letters in it.

PROPOSED - similar to a dashed line with larger dashes.

Using Colors in AutoCAD Designs - If you are making a plot that will be

used to run prints from you should remember that blue does not reproduce

very well on a print. Blue is good to use for profile elevation lines or lines that

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need to be shown but can be placed in the background such as topography.

Green and red will show up almost as dark as black.

The way we have setup our pen assignments, the color of the line, object, etc.

determines what size of pen will be used to plot that line, or object it is important to keep in mind how you want the line or object to look when

printed. Center lines, monument lines, hidden lines, etc. should be drawn so that a .25 pen is used to plot them. It is very important to use the correct size of pen when plotting text. The following guideline should be used for determining what pen you use (what color you make the text) for different sizes of text.

PLOTTED TEXT SIZE PEN SIZE

Less than .10" .25
.10" to .15" .35
.15" to .20" .50
Larger than .20" .70

Note: **PLOTTED TEXT SIZE** is the size the text appears on your finished plot.

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A-21 CONTRACTOR'S SAFETY PLAN

Safety plan – Prior to award the Contractor will be required to submit a written description of the hazards present on the project and what they will do to mitigate those hazards. This will constitute the "safety plan" for the project. This will require the Contractor to think specifically about each project. Additionally it is assumed that the Contractor will have a more complete formal written safety program and that regular safety meetings will be held with his workers. The safety issues normally involved in our pipeline projects are shown on the following checklist.

CONTRACTOR'S SAFETY PLAN

Salt Lake City – Department of Public Utilities

Reviewed By _____ Date _____
Contractor _____ Dated _____

The Contractor is responsible to provide a Safety Plan that addresses the specific requirements of the Contract. They should analyze the planned methods of operation and incorporate any additional specific or unique safety requirements into

their Plan. The Contractor is responsible to ensure that all applicable safety regulations are addressed as part of their Safety Plan. The Safety Plan shall include, but is not limited to, the following guidelines:

General Provisions

1. Acknowledgement / Contractor's Company Policy Statement – Contractor is totally responsible for compliance with and OSHA and EPA regulations and relevant to their contracted work with the Department of Public Utilities, including compliance with all Federal, State, and Local codes and requirements, which require a place of employment that is free of unsanitary or hazardous conditions that would expose an employee to unhealthy or unsafe environment.
2. On-site accident and incident reports – The Contractor's procedures for completing on-site accident investigation, reporting and incident reporting, including the immediate report of serious accidents (i.e., fatalities, accident due to excavation collapse, amputations, accident requiring the hospitalization of two or more employees, etc.) to the Department of Public Utilities.

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3. Toolbox Safety Meetings – Form for reporting attendance and subjects covered in pre-job safety orientations, training to job hazard analysis for specific job-site activities, weekly toolbox safety meetings, etc.
4. Sub-Contractors – The General Contractor is responsible to make sure all Sub-Contractor safety procedures comply with their Safety Plan.
5. Plans and actions for providing medical service – Contractor personnel to be trained in first aid and CPR. Also, the following emergency numbers are to be posted at the work site:

Fire or Ambulance Telephone _____

Police Telephone _____

Job Site Safety

1. Safety Inspections – Designation of Contractor's Safety Representative, for the project. (Note: the contractor safety representative must meet the OSHA 29CFR 1926.32 (f) definition for "competent person" in all areas of the contractor's scope of work for the project).
2. Personal Protection Equipment – List of personal protection equipment required for all employees (i.e. hard hats, long pants, shirts with sleeves that completely cover the upper body and arms, at least to mid-bicep, safety glasses, hearing protection, respirator use, high visibility (orange) vests for employees working in traffic or around equipment, etc.)
3. Safety Training – Company policies for initial safety orientation training of all employees and plans for continued on-the-job safety education for all employees, including weekly toolbox safety meetings, training to specific job hazard analysis, etc.
4. Housekeeping – Company job site housekeeping rules or regulations.
5. Safe Site Working Conditions – Plans for providing adequate lighting, ventilation, noise control, and personal protective equipment, etc.

Special Provisions (all projects)

1. Mitigation of Traffic Hazards – Traffic control and marking of hazards, including a barricading plan – covering or barricading excavations, wall openings and floor openings. (i.e. traffic intersections, utilities, prohibited areas). Procedures for working safely in traffic areas; i.e., use of hard hats, highly visible clothing (orange vests, etc.). Flagging procedures if required for the project, etc.
 2. Excavation Safety – Excavations including sloping and/or shoring protection based on class “C” soil criteria, guarding, barricades, spoil pile
-

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placement and excavated (waste) material storage. Ladders used for trench access & egress, including ladder types and anchors to be utilized, etc.

3. Equipment Safety – Testing and inspecting equipment, and the provision of backup alarms for backhoes, dozers, forklifts, man lifts, cranes, etc.

Use of and testing & inspection of equipment.

4. Hazardous Communication Program – Including a written program for the training of employees in the proper handling, storage and use of chemicals to be used on the job, labeling requirements, the use of material safety data sheets, etc.

5. Storm Water Pollution Prevention Plans – Including a written statement for the control of all storm water generated from the project area, etc.

6. Dust and Noise Control – Including the control of fugitive dust unnecessary noise.

7. Confined Space Program – Including a written program, entry permit forms, training for attendants, entrants, entry supervisors, atmospheric testing equipment, emergency extraction equipment, etc.

8. Other Project Specific Requirements –

Special Provisions (if required for the project)

1. Respiratory Protection program – Including a written program covering training requirements, medical evaluations, fit testing, hazard analysis, competent person training and availability, industrial hygiene sampling, etc.

2. Fire Prevention plans, including flammable/combustible liquids or gases – Storage and use requirements and procedures, placement and training for fire extinguisher use, etc.

3. Provisions for drinking water and sanitary site provisions – Including the provision of portable toilets, frequency at which toilet will be cleaned with soap and water, and sterilized.

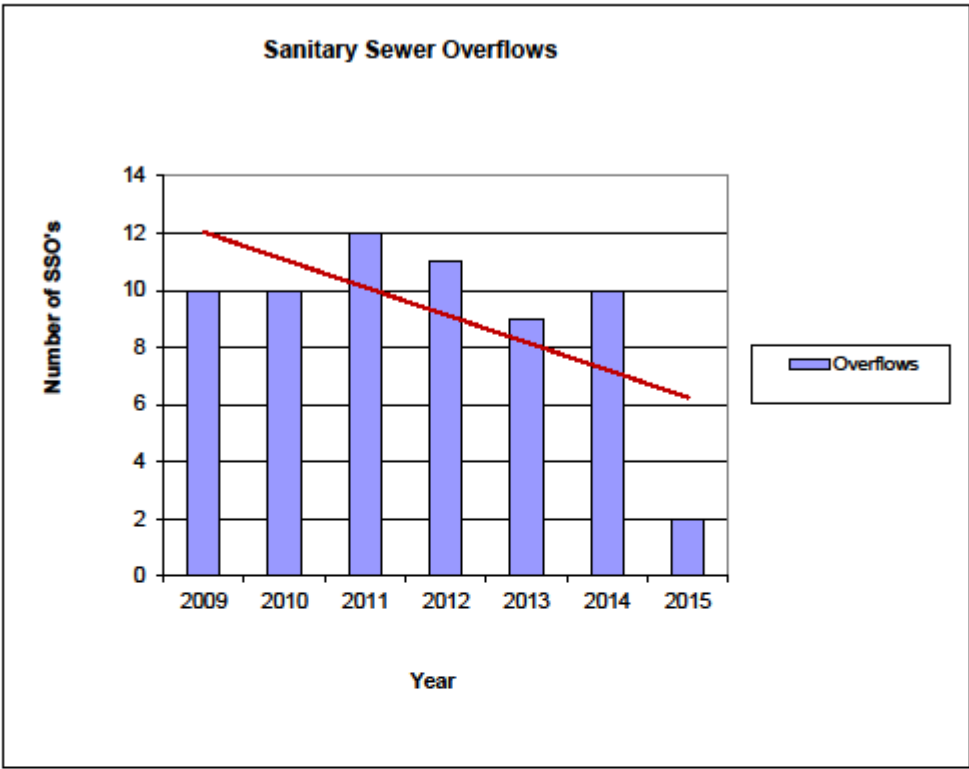
4. Electrical Safety and Lockout/Tagout procedures – Including checking, testing and training for the use and care of electrical tools and appliances for the required ground and installation of electrical circuits, lockout / tagout work, etc. in accordance with the OSHA and the National Electric Code.
-

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5. Fall Protection – Use of fall protection methods, lifelines and lanyards when necessary.
6. Hot Work – Providing welding protection, including shields, fire extinguishers, ventilation, hot work permits and fire watches.
7. Blasting Plan – Plan that includes procedures for blasting, permits, explosives handling, explosive storage, explosive transportation, hole loading, blast signals, and blaster qualifications.

Salt Lake City
Public Utilities
SSMP

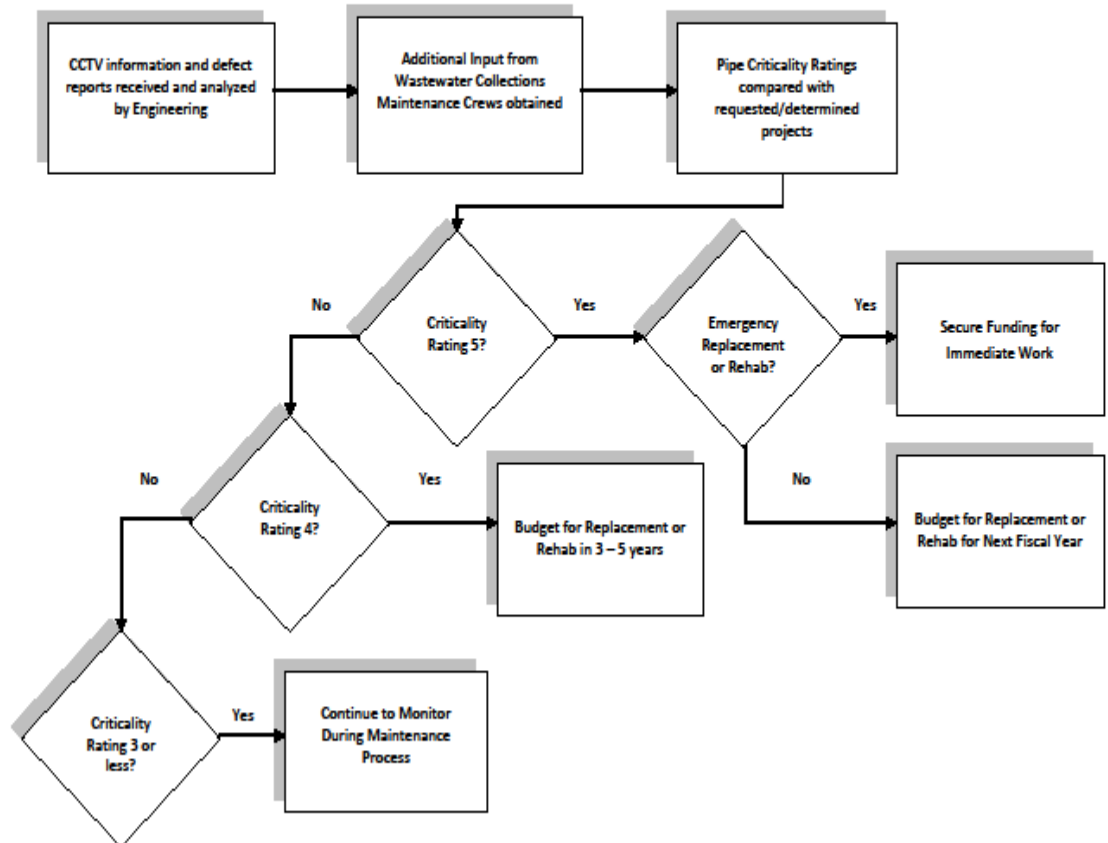
Appendix Q



Salt Lake City
Public Utilities
SSMP

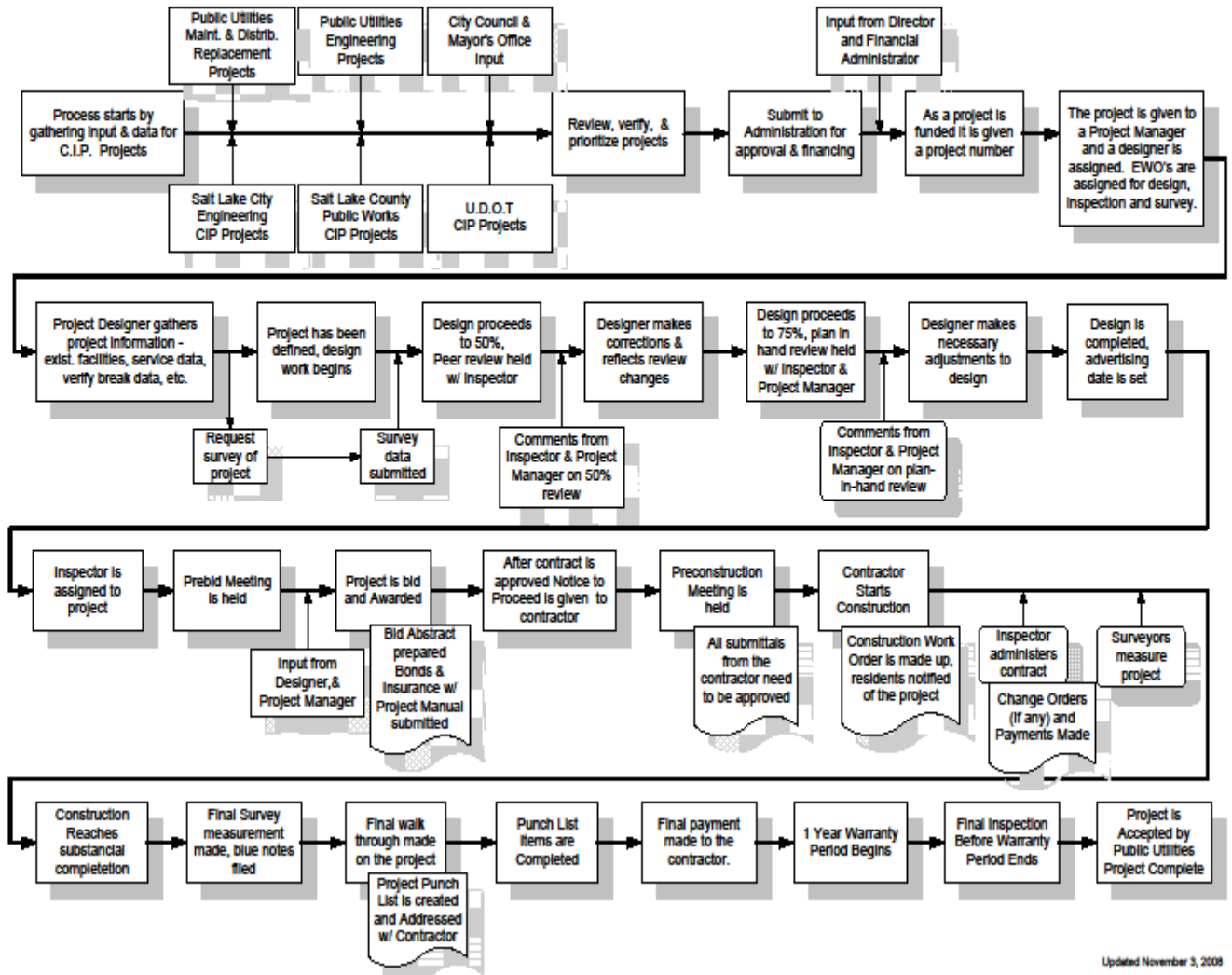
Appendix R

**Salt Lake City Department of Public Utilities
Capital Improvement Process Flow Chart
Initial Information Gathering and Project Prioritization
Wastewater System Projects**



Salt Lake City Corporation
Public Utilities Department

Capital Improvement Project - Process Flow Chart



Updated November 3, 2008